EVALUATION REPORT

Evaluation of UNICEF's District Health Systems Strengthening Initiative in Uganda (2019–2022)

Final Report

January 2023

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United Nations Children's Fund
Three United Nations Plaza
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For further information, please contact:

Evaluation Office
United Nations Children's Fund
Three United Nations Plaza
New York, New York 10017
evalhelp@unicef.org

PREFACE

This is the final report for the evaluation of the District Health Systems Strengthening Initiative (DHSSi). DHSSi was a multi-year initiative implemented in Kenya, Tanzania, Malawi, and Uganda, led by the United Nations Children's Fund (UNICEF) Eastern and Southern Africa Regional Office (ESARO) under a grant agreement with the Bill and Melinda Gates Foundation (BMGF). An evaluation of this initiative was carried out by Oxford Policy Management. This is the evaluation report for DHSSi in Uganda.

The central evaluation team comprised Gabrielle Appleford (team lead), Kate Gooding (qualitative methods lead), Bilal Hakeem (quantitative methods expert), Abraham Ngowi (quantitative analyst), Kritika Singh (research assistant), and Cathy Cantelmo (project management and analyst). The Uganda country research team was led by Professor Stella Neema with Dennis Bataringaya providing research assistance. Quality assurance support was provided by Professor Sophie Witter and Sean O'Leary. Additional specialist inputs were provided by Muhsin Sheriff.

The evaluation was managed by the UNICEF ESARO Evaluation Section. Oversight was provided by the Evaluation Reference Group, chaired by ESARO; this group reviewed all evaluation deliverables, including this report.

We would like to thank UNICEF ESARO, UNICEF Uganda country office and implementing partners for their assistance with the evaluation, and all evaluation participants for generously making time for interviews and group discussions.

The Evaluation Manager is Martina Bennett (mbennett@unicef.org) and the current Project Manager for OPM is Kate Gooding (kate.gooding@opml.co.uk).

Contents

LIST OF TABLES

ACRONYMS

ACW	Annual comprehensive workplan
ANC	Antenatal care
BNA	Bottleneck analysis
CAO	Chief Administrative Officer
DHIS2	District Health Information Software
DHT	District Health Team
DHMT	District Health Management Team
DHSS	District health system strengthening
DHSSi	District Health Systems Strengthening initiative
DQA	Data quality assessment
DSC	District Service Commission
EBP	Evidence-based planning
EPI	Expanded programme on immunization
FPD	Foundation for Professional Development
HISP	Health Information Systems Program
HMIS	Health management information system
HSS	Health system strengthening
ICCM	Integrated community case management of childhood illness
LGPA	Local Government Performance Assessment
MoFPED	Ministry of Finance, Planning and Economic Development
MoH	Ministry of Health
NGO	Non-government organization
OECD- DAC	Organization for Economic Cooperation and Development - Development Assistance Committee
PAMAT	Planning and Management Assessment Tool
PBS	Programme Budgeting System
PEA	Political economy analysis
PIAP	Programme Implementation Action Plan
PNC	Postnatal care
RBF	Results-based financing
RHITES	Regional Health Integration to Enhance Services
RMNCAH	Reproductive, maternal, newborn, child and adolescent health
RMNCH	Reproductive, maternal, newborn, and child health
ToT	Training of trainers
UCO	UNICEF Uganda country office

UHSS	Uganda Health Systems Strengthening
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VHT	Village Health Team
WHO	World Health Organization

EXECUTIVE SUMMARY

This is the final report of a three-year evaluation of the District Health Systems Strengthening Initiative (DHSSi), designed to assess progress against outcomes and to inform ongoing implementation, future investment and scale-up.

Background

DHSSi supported sub-national health systems strengthening across 24 pilot districts in Kenya, Malawi, Tanzania and Uganda. The overall aim of DHSSi was to improve sub-national evidence-based planning (EBP) and management practices, and to promote scale-up of effective approaches in each country. These changes were in turn expected to contribute to a reduction in health system bottlenecks, and ultimately, improved coverage of high-impact health interventions. DHSSi was funded under a grant agreement between UNICEF and the Gates Foundation (BMGF), and ran from January 2019 until June 2022. Two international partners provided support across countries: the Foundation for Professional Development (FPD), and the University of Oslo Health Information Systems Programme (HISP).

The design was refined to best suit each country's priorities and operating environment. In Uganda, decentralization of health service delivery to district government increased demands on District Health Team (DHT) capacity. An increase in the number of districts in Uganda created additional need for capacity development because many new DHTs had less experience and greater resource constraints.

Responding to this situation, DHSSi in Uganda worked to support DHT capacity and strengthen district management. A primary focus was strengthening EBP, including supporting use of bottleneck analysis (BNA) to develop Annual Comprehensive Workplans (ACWs) and supporting reviews, working to operationalize a DHIS2 BNA Application, and work with district biostatisticians on activities such as data quality assessments and supervision to improve underlying data quality. DHSSi also worked to address human resource vacancies through support for recruitment by District Service Commissions (DSCs). During Y3, new work began to address district management training, initially by revising a government management manual. DHSSi also worked to assess health system capacity through developing and implementing the District Health System Strengthening (DHSS) Progression Model. Activities focused on 10 districts, with additional work at national level.

Evaluation purpose, objectives and methods

The evaluation purpose was a) to improve intervention design and management, and b) to inform decisions about future investment and scale-up by establishing evidence of the results and impact. The purpose was primarily formative, focused on establishing lessons for future programming.

Specific objectives were to assess whether interventions were implemented according to the work plan and the strength of implementation, to examine district health governance and management capacity, and to identify lessons learned and recommendations.

The primary expected users are UNICEF (ESARO and Uganda CO) and BMGF. Other key audiences include the MoH in Uganda, and other agencies working on health systems strengthening in Uganda and in East and Southern Africa and more broadly.

The evaluation approach was theory-based and aligned to DHSSi's theory of change (ToC). The evaluation involved three annual rounds of data collection, analysis and reporting, starting in 2020, with the third round in 2022. Evaluation questions were structured using criteria of relevance, coherence,

efficiency, effectiveness, sustainability, and impact. Evaluation methods included document review, observation of a DHSSi workshop, key informant interviews with international, national, and district stakeholders (primarily DHTs, the MoH, implementing partners (IPs), UNICEF staff, and in year 1, also with development partners, the national Health Service Commission and wider local government), and group discussions with DHTs. Planning practice was assessed partly through use of the Planning and Management Assessment Tool (or PAMAT), a rubric used by the evaluation team to assess areas such as use of evidence-based approaches, stakeholder engagement, review and implementation of plans.

The evaluation was guided by United Nations Evaluations Group ethical standards for evaluation. Ethical considerations influenced the entire process, from team recruitment and management to data collection, storage, analysis, and reporting. The Makerere University School of Social Sciences Research Ethics Committee in Uganda approved the evaluation design. The evaluation was conducted by Oxford Policy Management (OPM) and managed by the UNICEF Eastern and Southern Africa Regional Office (ESARO) Evaluation Section. Oversight was provided by an Evaluation Reference Group, chaired by ESARO and including UNICEF country offices, national government representatives and other expert stakeholders.

Evaluation findings

Relevance: The Ministry of Health (MoH) welcomed DHSSi support for EBP as relevant and as strengthening capacity and awareness of planning. There was growing MoH involvement in the EBP activities over the course of DHSSi, and a new planning template developed by the MoH over Y2-Y3 increased alignment with government systems, government ownership and relevance of support to district planning. However, the MoH did not see the BNA App or Progression Model as a priority.

DHTs saw BNA as supporting their work and described DHSSi as significantly improving their annual plans. However, applying EBP and completing ACW was not always prioritized by DHTs, in part due to insufficient integration with government budgeting systems. The new MoH planning template increased alignment between the ACW and district budget, so strengthening the potential effect of support to district planning on district budgets, but there were continued gaps in DHT motivation and commitment to complete ACWs.

Government saw DHSSi support to strengthen district recruitment as a priority given high levels of acting positions and gaps in DHT composition. New work to review the government management manual was aligned with MoH interest and there were indications of MoH leadership in this area.

DHSSi activities were tailored to the Ugandan situation during inception through a landscaping exercise, albeit with some limitations in the analysis. Investment in reflection and stakeholder discussion over the course of DHSSi supported ongoing learning and contextual relevance.

Coherence: Several other partners were supporting district planning and reviews in Uganda, including in the DHSSi districts. There was some coordination with DHSSi at district level, and the national Health System Strengthening (HSS) Reflection Meeting organized in Y3 brought together multiple development partners and government bodies. However, further coordination of partner support was needed, including to streamline different planning processes and to integrate quarterly reviews, which sometimes focused on specific service areas of interest to funding partners. The Progression Model was not sufficiently aligned with government systems and requirements.

In relation to alignment with UNICEF strategies, district system strengthening is a core focus for UCO, and support to EBP and recruitment remained relevant for UCO's future strategy as part of this systems strengthening agenda. However, UCO planned some shifts in the approach to strengthen alignment with the strategy, as well as changes to increase the likely impact of UCO's support to EBP on district practice.

Efficiency: Core district EBP support was largely implemented each year of DHSSi. However several activities were delayed, and some activities were not undertaken due to constraints such as insufficient funds, COVID-19 and lack of a district IP combined with limited UCO availability EBP workshop content was well-received, and DHTs appreciated MoH and peer facilitation of EBP workshops. A strength of workshops was participation by members of the district executive, which helped with gaining political support and linking plans to government budget processes. However, only a small number of DHT members were trained, which reduced engagement in EBP and brought risks related to staff turnover; DHTs thought all DHT members and more sub-district and facility managers should be involved. Regional workshops allowed exchange of experience and streamlined facilitation time but reduced the number of district participants, and DHTs thought additional district staff or partners should be included. Workshops were too short to complete plans and developing plans often required significant follow-on support. The EBP training of master trainers (ToT) was rated highly, but some topics were rushed.

Effectiveness: DHTs described DHSSi support as significantly strengthening their approach to planning. DHSSi contributed to use of BNA and development of plans in focal districts through training and financial support for workshops. In some districts, DHSSi primarily enabled continuation of EBP rather than a step-change in approach, due to EBP support prior to DHSSi. There was progress in aligning ACWs with funding systems in Y3, via MoH development of a new planning template. However, there were continued gaps in application of BNA and overall quality of planning; for example, with varied levels of BNA use, gaps in specificity and logic for causal analysis and prioritization, and inconsistent integration of activities identified through BNA within annual workplans and budgets. There were also gaps in completion of plans, due to insufficient DHT prioritisation of planning and in Y3, also due to a change in the government planning template.

Involvement of district partners in planning varied between years and districts, but was seen by DHTs as insufficient. ACW included some partner funding, but there were continued concerns about insufficient partner flexibility and alignment with district plans. DHSSi sought to strengthen partner alignment through partner mapping and stakeholder meetings in some years, but partner involvement in EBP workshops supported by DHSSi was limited.

Community engagement took place through channels such as community dialogues and input from Health Unit Management Committees (HUMCs), and some DHTs reported increased community input over the course of DHSSi. Community engagement was not an area of direct DHSSi focus, but HUMCs were represented in some DHSSi workshops, and UCO supported community dialogues through other programme funding.

All districts held quarterly performance reviews, and DHTs saw these reviews as driving improvement by providing an opportunity to identify areas of low performance, plan corrective action, and coordinate with partners to secure their support. However, reviews often focused on performance indicators, and review of activities planned in ACW was inconsistent. DHSSi supported quarterly reviews in some districts, and DHTs appreciated this support. Implementation of annual workplans was affected by shortages of government and partner funding and events such as COVID-19. All DHTs reported some discussion of underserved groups during district planning. However, equity was not systematically considered as part of situation analysis, and relatively few activities to address equity were included in district plans and budgets. Equity was included in EBP training materials, but the influence of DHSSi on consideration of equity appeared limited, and government and IPs saw equity as an area requiring further guidance.

Support for DSCs facilitated recruitment of health staff in some districts, but there was little evidence of DSC support reducing DHT vacancies, and ongoing vacancies and high workloads for those in acting positions continued to hamper performance of expected DHT responsibilities.

Sustainability: BNA was included in national planning guidelines prior to DHSSi, and integrated in the new MoH planning template used in Y3, supporting institutionalization. However, there was not clear government leadership or capacity to sustain and scale up EBP, with support for district training seen as dependent on donors. The national EBP ToT aimed to develop regional networks for future EBP support, but progress was limited by insufficient funding to follow up the training and feasibility of regional support networks remained uncertain.

DHTs reported capacity to conduct BNA independently, and involvement of DHT members in the ToT brought skills to train other district staff. However, continued EBP depends on DHT motivation, and consistent future commitment to planning may require additional demand from government or funding systems. Strategies for sustainability of district recruitment and management training had not been developed.

Conclusions, lessons and recommendations

DHSSi made important progress during each year of implementation, with positive achievements related to all evaluation criteria. There were some challenges and areas where design and implementation required strengthening or where further action was needed to support full achievement of outcomes.

The experience of implementing DHSSi in Uganda generated several lessons about effective approaches and areas for consideration in similar work to strengthen subnational planning and management. Key lessons related to the following:

1. **The value of involving government as facilitators in training workshops**, to demonstrate government ownership, provide expertise, and to support peer communication and explanation.
2. **Balancing government and IP roles**, in particular ensuring effective communication with government and development of government capacity when working through IPs.
3. **Involving wider district government in EBP training**, to encourage political support for EBP and to facilitate alignment of ACW with financing systems.
4. **The value of dedicated space for stakeholder discussion to reflect on learning**, including meetings with government and other partners to review learning and agree on future action.
5. **The potential value of explicitly linking EBP with wider performance management frameworks** that are institutionalized and motivate DHT action, to support sustainability and scale.
6. **Balancing technical EBP with stakeholder participation**, ensuring that a focus on data analysis does not exclude engagement by facility staff, communities or district staff with less confidence.

The evaluation provides recommendations for consideration by the UNICEF Uganda Country Office (UCO), and Annex A reports progress on Year 1 (Y1) and Year 2 (Y2) recommendations. Recommendations were formulated for UCO, to discuss and implement together with the MoH and other partners, and are summarized below.

1. **Use of BNA:** Drawing on experience with BNA and the App for 2023-24 planning, discuss future direction and relevance of BNA and the App with all relevant MoH departments and working groups, with open consideration of different options. This discussion should cover feasibility of the App in relation to current information systems and usability by district teams. If meeting discussions conclude that there should be continued work on the App, support MoH capacity to manage the App for sustainability. This may require extension of the contract with HISP. To identify efficiencies and

support implementation of solutions identified through BNA, future EBP training should emphasize use of problem analysis for efficient use of district funding.

2. **Supporting high-quality planning:** Work with MoH to streamline the MoH HMIS001 planning template, such as focusing only on critical priority information that is likely to change each year, or using summaries of information already collected through other systems. Review planning templates and guidance to support development of a comprehensive workplan, including clarifying integration between BNA, other problem analysis in the plan and other planned district activities (i.e. those not identified through use of BNA). Support partner involvement during problem analysis and prioritisation, and discuss feasible, cost-effective training and workshop formats with the MoH, districts and regional teams.
3. **Sustainability:** Ensure detailed discussion of feasible approaches to sustainability with MoH, regional and district teams, for work with DSCs, future management training and EBP. In support of sustainability and scaling, work with national and subnational government to strengthen coordination of partner support to district planning processes, including at district level to enhance complementarity and efficiency.
4. **Strengthen incentives for planning:** Advocate with the MoH, Ministry of Finance, Planning and Economic Development and results-based funding partners to support use of annual workplans in determining district budgets. Draw on district and health financing expertise within UCO's social policy team to support this engagement. Draw on DHSSi political economy analysis (PEA) findings and other evidence to identify mechanisms for strengthening DHT accountability for effective planning. Advocate with government to include guidance on DHT responsibility for planning within future leadership and management capacity building.
5. **Strengthen review of annual plans:** Work with MoH on an integrated approach to monitoring all ACW activities, ensuring the approach is suited to DHT monitoring needs and capacities and integrated within routine government systems.

1 BACKGROUND

1.1 Introduction

This is the final report of a three-year evaluation of the District Health Systems Strengthening Initiative (DHSSi) in Uganda. DHSSi was implemented over 2019-2022 by UNICEF in collaboration with national government and implementing partners, with the aim of strengthening subnational health planning and management. Oxford Policy Management was commissioned to conduct the evaluation.

The report starts by explaining the context for DHSSi and the need to strengthen subnational management, and describes DHSSi design and activities. It then describes the evaluation approach and methods. Findings chapters are organized based on the evaluation criteria of relevance, coherence, efficiency, effectiveness and sustainability. The final report sections provide lessons learned, overall conclusions and recommendations. The annexes provide further details on evaluation processes and methods and some areas of findings, and quantitative impact information.

1.2 Country context

There has been **progress on child health in Uganda**, with improvements in areas such as vaccination coverage, malaria treatment and neonatal and under 5 mortality[1]. However, **major challenges remain** in meeting Sustainable Development Goal (SDG) 3, with many health indicators significantly below the SDG target. Under-five mortality was estimated at 42.1 per 1,000 live births in 2021, maternal mortality was 284 per 100,000 in 2020, and the Universal Health Coverage Service Index is estimated at 49[2]. Overall spending on health remains inadequate, with current health expenditure of US$34 per capita compared to a global average of US$1,177 and an average for sub-Saharan Africa of US$74. [3] In addition, the proportion of total health spending allocated to primary health care (PHC) has declined, from 42% in 2018/19 to 35% in 2020/21.[4] There is continued reliance on donor funding, which constitutes 41% of current health expenditure[5], with the majority provided off-budget.[6] Within overall performance, there are **marked disparities between districts** in health system capacity, service provision and health outcomes[7]. There are also **disparities between population groups** in health risks, service access and health outcomes[8]. For example, the MoH Strategic Plan indicates variation by age and gender in service

[1] The Sustainable Development Goals Center for Africa and Sustainable Development Solutions Network, *Africa SDG Index and Dashboards Report 2020*. SDG Center for Africa and Sustainable Development Solutions Network, Kigali and New York, 2020.
[2] World Health Organization, 'Global Health Observatory', <https://data.who.int/indicators/i/9A706FD>; UN Inter-agency Group for Child Mortality Estimation, 'Uganda Country Profile', <https://data.unicef.org/country/uga/>, accessed 25 June 2023; WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division, *Trends in maternal mortality 2000-2020,* WHO, Geneva, 2023.
[3] World Health Organization, 'Global Health Expenditure Database', <https://apps.who.int/nha/database/ViewData/Indicators/en>, accessed 7 April 2023.
[4] UNICEF, *Safeguarding Public Investments in Health in the Advent of Covid 19,* UNICEF Uganda, Kampala, 2023.
[5] World Health Organization, 'Global Health Expenditure Database', : <https://apps.who.int/nha/database/ViewData/Indicators/en>, accessed 7 April 2023.
[6] UNICEF, *Safeguarding Public Investments in Health in the Advent of Covid 19,* UNICEF Uganda, Kampala, 2023.
[7] Ministry Of Health, *Annual Health Sector Performance Report Financial Year 2020/21*, MoH, Kampala, 2022.
[8] Ministry Of Health, Strategic Plan 2020/21 - 2024/25, MoH, Kampala, 2020.

coverage for HIV, and highlights the need to address gender-based violence and gender norms that affect women's health and access to care.[9] There are particular risks for adolescent girls: teenage pregnancies are among the top causes of death for adolescent girls, and more common in rural (27%) than urban areas (19%).[10]

Improving child and maternal health and achieving SDG 3 requires stronger PHC and health system strengthening, as recognized in the global declaration on PHC launched at the fortieth anniversary of the Alma-Ata declaration in late 2018[11]. Within the health systems strengthening agenda, there has been **increasing focus on adequate capacity among sub-national health management teams** to operationalize national health strategies and ensure they respond to local conditions and community needs. Indeed, health management, leadership and governance capacity at the sub-national level, where health policies are implemented, are widely cited as critical to health system performance[12].

In Uganda, the **importance of adequate management capacity at district level has been heightened by decentralization**. Health system decentralization to local governments was introduced in 1997, after the introduction of the Local Government Act. This Act and its subsequent amendments decentralized service delivery and devolved governance of a significant proportion of health sector activities to district government, including promotion and prevention, clinical care, disease monitoring and surveillance, environmental and public health as well as overall planning and management. This placed new responsibilities on district managers, with District Health Office staff, and specifically DHTs, now responsible for planning, organization and management of health services within the district.

A rapid increase in the number of districts in Uganda has increased the scale of work to strengthen DHT and wider local government capacity. The number of districts increased steadily during the 2000s, from 33 in 1980, to 78 in 2005 and 136 in 2020, as successive new districts were carved out of existing districts. This has created additional complexity, as some new DHTs lack adequate capacity and experience to manage and monitor health services and allied functions. The increase in districts has also taken place without a commensurate increase in operational resources, contributing to staff shortages and to wider under-resourcing that reduce districts' ability to fulfil service delivery functions.[13] The MoH strategy highlights significant gaps in District Health Office staffing, with only 69% (2019/2020) of approved positions filled, hindering supervision of district health services and capacity to operate effectively. Challenges are exacerbated by lack of a regional structure to provide support and oversight to districts.

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[9] Ministry Of Health, Strategic Plan 2020/21 - 2024/25, MoH, Kampala, 2020.
[10] UNICEF, *Safeguarding Public Investments in Health in the Advent of Covid 19,* UNICEF Uganda, Kampala, 2023.
[11] World Health Organization, 'Declaration of Astana', *Global Conference on Primary Health Care*, WHO, 2018.
[12] World Health Organization, *Managing the health millennium development goals: the challenge of management strengthening: lessons from three countries*, WHO, Geneva, 2007; Daire J, Gilson L, Cleary S., 'Developing leadership and management competencies in low and middle-income country health systems: a review of the literature', RESYST Working Paper, RESYST, London, 2014; Egger D, Travis P, Dovlo D, Hawken L., Strengthening Management in Low-Income Countries, WHO, 2005; Cassels A, Janovsky K, 'Management development for primary health care: A framework for analysis', *International Journal of Health Planning and Management*, 6(2), 1991, pp.109-124; Kwamie A, Dijk H van, Agyepong IA, 'Advancing the application of systems thinking in health: realist evaluation of the Leadership Development Programme for district manager decision-making in Ghana', *Health Research Policy and Systems*, 12(1):29, 2014.
[13] UNICEF, *Safeguarding Public Investments in Health in the Advent of Covid 19,* UNICEF Uganda, Kampala, 2023.

These challenges and **the need for health system strengthening and PHC are reflected in the Uganda Ministry of Health Strategic Plan**. The overall goal of the strategy is to 'strengthen the health system and its support mechanisms with a focus on Primary Health Care to achieve Universal Health Coverage by 2030'.[14] The importance of adequate management is also highlighted: Objective 1 is to 'strengthen health sector governance, management and coordination for UHC', and Objective 2 is to 'strengthen human resources for health management and development'. Recognizing the responsibilities of district health managers, including for planning, supporting local government in district health management, evidence-based planning and budgeting is indicated as an area of work under Objective 1, and the strategy identifies a need for further work and capacity building 'to ensure that local governments develop comprehensive annual workplans and strategic plans'. The strategy also notes the high level of external funding and need for coordination, including integration of partner activities into strategic and operational planning and budgeting, even when funding is not provided via government.

1.3 Object of the evaluation

1.3.1 The regional DHSSi design

DHSSi supported sub-national health systems strengthening across 24 pilot districts in Kenya, Malawi, Tanzania, and Uganda, under a grant agreement between the health section of UNICEF Eastern and Southern Africa Regional Office (ESARO) and BMGF. DHSSi ran from January 2019 until June 2022, although with some activities continuing until the end of 2022. The total budget was US$ 9,536,604. The overall **aim of DHSSi was to improve EBP and management practices at the sub-national level, and to promote the scale-up of effective approaches in each country**. These changes were in turn expected to contribute towards a reduction in health system bottlenecks, and ultimately improved coverage of high-impact health interventions. Through improved coverage, the ultimate intended beneficiaries of DHSSi were communities in the DHSSi focal districts. By strengthening health systems, DHSSi sought to support UHC and achievement of SDG 3. DHSSi can also be seen as contributing to SDG 17: strengthen the means of implementation and revitalize the global partnership for sustainable development, with UNICEF working with a range of national and international partners, including government, the Gates Foundation, NGOs and academic institutions to support health system strengthening. In addition, DHSSi's aims related to the progressive realization of the right of the child to the enjoyment of the highest attainable standard of health (article 24 of the Convention on the Rights of the Child and General Comment No. 15 (2013) of the UN Committee on the Rights of the Child). In terms of UNICEF corporate objectives, the focus on district planning and management aligned with the UNICEF Strategy for Health (2016 – 2030), and with a commitment to strengthening PHC systems within the recent UNICEF Strategic Plan (2022 - 2025).

DHSSi's design comprised support to use of evidence for district planning; execution of evidence-informed plans, through improved health management capacity; performance management, including through review of district plans; stakeholder engagement and consensus building; health governance and accountability; and a reduction of barriers to practising good management. **The DHSSi theory of change** (ToC) (see Figure 1) describes how improvements across these functions are expected to translate into key intended outcomes, and the **results framework** (RF) specified intermediate outputs and intermediate and primary outcomes, and provided indicators to assess their achievement (see Annex A).

As described through the ToC and RF, DHSSi had two primary outcomes, supported by five intermediate outcomes. Capacity building for districts in data use for decision making and management was expected to support intermediate outcomes of (1) improved data use for planning, monitoring and course

[14] Ministry Of Health, Strategic Plan 2020/21 - 2024/25, MoH, Kampala, 2020.

correction, and (2) improved execution of health operational plans. Work to address barriers to good management practice and strengthen governance and accountability supported the intermediate outcome of (3) an enhanced enabling environment for good district management practices (including institutionalization). These steps were supported by efforts to leverage investment in health information systems and support new apps for data analysis, which were expected to result in (4) improved use of data investments to support sub-national planning. The final intermediate outcome (5) was evidence generation to inform programme design, adaptation, scale-up and sustainability.

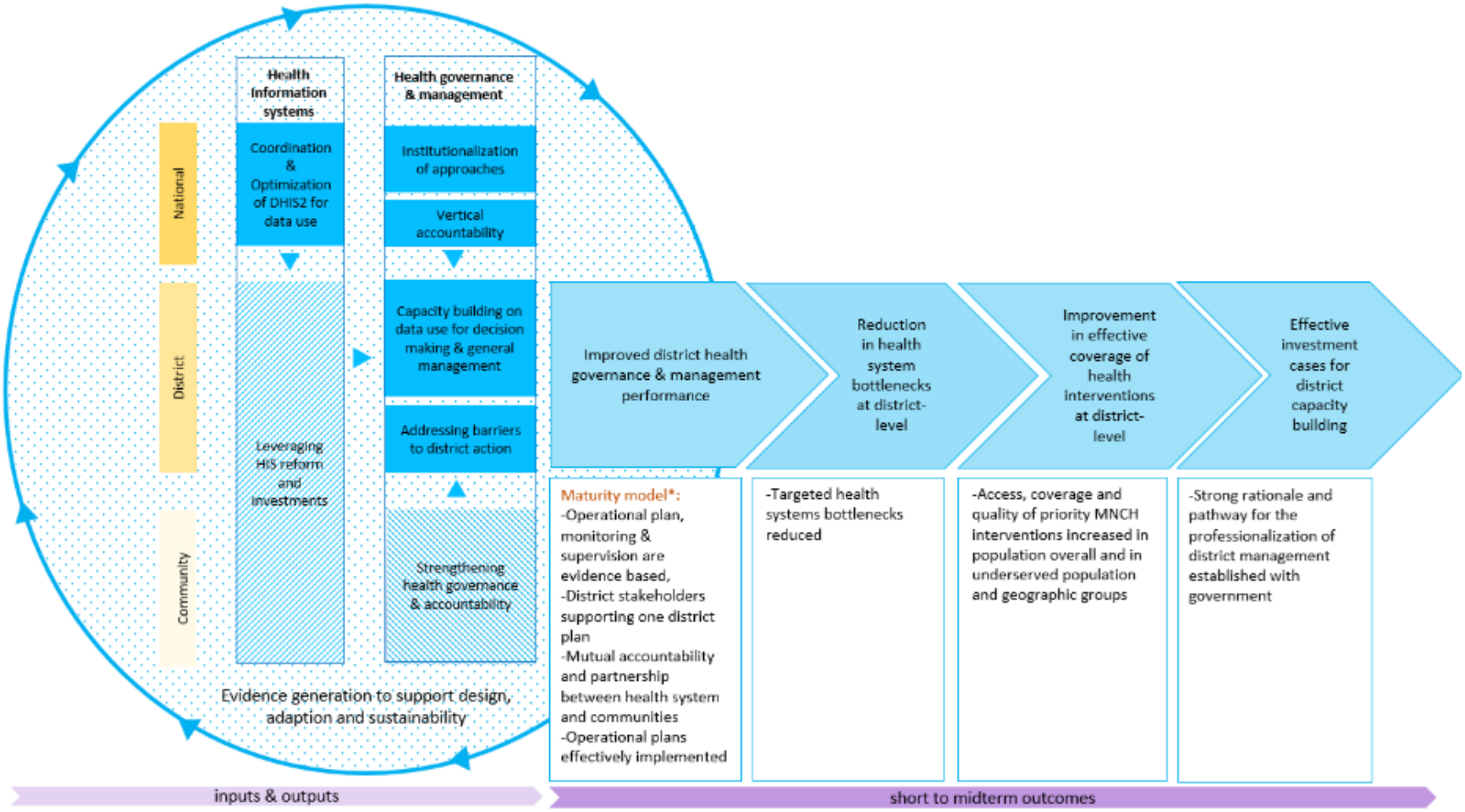
Achievement of these intermediate outcomes was expected to result in the two primary outcomes: (1) improved district health governance and management performance, which is assessed by looking at reduction in bottlenecks and improvements in population-based coverage of focal health interventions; and (2) scaling up the DHSSi approach through institutionalization, partner leveraging, and developing investment cases for the professionalization of sub-national health management.

To support district planning, **DHSSi employed an evidence-based planning (EBP) approach incorporating bottleneck analysis (BNA).** This approach involves situation analysis, identifying bottlenecks and underlying causes, identifying and prioritizing solutions, developing an implementation plan, and monitoring performance. Bottlenecks are identified by considering six determinants of effective coverage related to supply, demand and quality. Indicators for each determinant are assessed for tracer interventions that represent a package of interventions or interventions delivered through the same platform (for example, clinical, outreach or community-based services). Root causes are identified using the 'five whys' technique. Equity is incorporated through considering 'equity stratifiers' (such as age, gender and location) as part of situation analysis, identification of bottlenecks, causal analysis, and during prioritisation. BNA is based on a framework developed by Tanahashi[15]. It is a core part of UNICEF's approach to health system strengthening and has been used by UNICEF throughout the world[16].

To facilitate BNA, **DHSSi supported integration of a BNA application in DHIS2** to expedite analysis through data synthesis and visualization. Activity in this area involved mapping relevant health interventions and indicators to contextualize the App for national configuration, working in consultation with national stakeholders.

[15] Tanahashi, T, 'Health service coverage and its evaluation', *Bulletin of the World Health Organization*, 56.2, 1978.
[16] UNICEF, *The UNICEF Health Systems Strengthening Approach,* UNICEF, New York, 2016.

Figure 1 DHSSi theory of change



1.3.2 DHSSi in Uganda

DHSSi activities in Uganda were implemented from January 2019 to December 2022 (with some preparatory work in late 2018 and reporting in early 2023)**.** The DHSSi budget allocated to UCO was US$1,469,159.

DHSSi design in Uganda responded to decentralization of health service delivery to district government and the consequent need for increased DHT planning and management capacity. DHSSi activities to strengthen district planning built on a previous BMGF-funded initiative in Uganda called Community and District Empowerment for Scale-up (CODES), implemented as a randomized controlled trial from 2014. CODES introduced a systematic approach to EBP and BNA in selected districts, supporting DHTs to prioritize bottlenecks and to use district-specific data for planning and monitoring. Based on experience with CODES, UNICEF began to mainstream EBP across their target districts (UCO had 35 target districts at DHSSi inception, reduced to 29 under a new country programme that began in 2021). DHSSi contributed to this expansion, supporting EBP in 10 districts: Kiryandongo, Lamwo, Oyam, Iganga, Bugweri, Kamuli, Kikuube, Kasese, Isingiro, Ntungamo.

These DHSSi districts were selected together with the MoH. Their health status reflected criteria for the wider pool of UCO target districts from which DHSSi districts were drawn. Prior to 2018, UCO's target areas were driven primarily by equity considerations in terms of poor health rates and districts hosting refugee populations. In 2018, UCO revised its target geographical focus to include districts that have the worst health outcomes in terms of volume as well as rates, so also targeting districts that contribute the highest numbers of people with poor health outcomes (bulk districts). District selection for DHSSi represents a mix of equity and bulk districts. The DHSSi districts were also selected to overlay existing and expected UCO resources for reproductive, maternal, newborn, and child health (RMNCH) program support and community system strengthening from FCDO, SIDA and Rockefeller.

Activities to support effective planning varied between districts, but included annual training in EBP (including BNA) and support to develop annual district plans (titled Annual Comprehensive Work plans (ACW) on a government planning template introduced for 2022-23 planning, but formerly called One Health plans or Annual Integrated Operational Plans), and support for stakeholder meetings and reviews of the annual plan. DHSSi also involved complementary support for district biostatisticians to strengthen data quality, for example supporting routine data quality assessment and supervision.

At national level, DHSSi supported configuration of the DHIS2 BNA App as part of the ToC components on leveraging health information system reform and investment and coordinating and optimizing DHIS2 for data use. Work on the App included indicator mapping and consultation followed by ongoing work to operationalize the App in Uganda.

Alongside support to district EBP, DHSSi worked to address health system staffing gaps at DHT and facility level. This work was designed as part of the ToC components on strengthening accountability and reducing barriers to action. The initial landscaping analysis indicated a mature health management environment and suggested the primary barriers to effective management were weak accountability structures and vacancies in key DHT roles rather than technical capacity. In response, DHSSi Uganda included work to reduce district vacancies via supporting revision of the national District Service Guidelines for health worker recruitment, including through a stakeholder workshop in Y1, and support for the District Service Commissions (DSCs) that manage recruitment in some DHSSi districts. DSC support included orientation on their roles, supporting meetings, and assisting with recruitment.

The original UCO implementation plan indicated further work to build accountability via strengthening the capacity of higher-level district political and executive structures to demand and provide accountability for the health sector, specifically targeting the Chief Administrative Officer (CAO), District Council, District

Executive Committee and the Secretary for Health. UCO planned to design specific activities in this area based on a political economy analysis (PEA), undertaken by John Hopkins and Makerere universities. As with other countries, delays with the PEA contributed to limited progress, and detailed activities to strengthen accountability were not designed or implemented during DHSSi implementation.

While the original landscaping exercise suggested management skills were not a primary constraint to effective performance, skills gaps later emerged as a persistent barrier, with training schemes not functioning as expected. DHSSi consequently initiated support to subnational health management training over Y3, with a first step being work with government to update a manual on subnational health management, supported by FPD.

DHSSi in Uganda also included development and implementation of the District Health Systems Strengthening (DHSS) Progression Model, a tool to assess district performance across the six World Health Organization (WHO) health system building blocks. The Model was developed by Makerere University and piloted in 2019. IPs were then trained, and a baseline assessment was conducted in Y1 (covering nine of the 10 DHSSi districts; Oyam was included in the June 2019 pilot). A further assessment was conducted in 2021. Action plans were developed with DHTs to address areas of low performance.

While the core focus of DHSSi activities was the district level, there was also work at national level to strengthen the enabling environment for health planning and management, and to promote national ownership, scale-up, and sustainability. Through this work, DHSSi sought to engage closely with the MoH and other relevant government ministries, including providing input to planning guidelines; supporting development of a BNA manual during 2019; and organizing an annual health system strengthening reflection meeting to share program learning, evaluation findings and other relevant information with government and other stakeholders and to collectively agree areas for future action.

Activities conducted over 2019-22 are indicated in Table 1**Error! Reference source not found.**.

Table 1 DHSSI Uganda activities over Y1-Y3

	Year 1	Year 2	Year 3
National EBP activities	• Revision of the 2016 District Planning Guidelines – Health Supplement and development of a BNA manual in 2019 • A national ToT EBP workshop in October 2019, facilitated by FPD and UNICEF, for Baylor-Uganda, AVSI, Oyam DHT, the MoH and UNICEF zonal offices • Work on the BNA app, including review of BNA indicators and user testing	• Online EBP refresher training for IPs and MoH in September 2020, by UNICEF and FPD • Ongoing work with HISP on the BNA App • Health System Strengthening (HSS) Reflection Meeting in May-June 2021, to discuss experience and political economy analysis (PEA) and evaluation findings • Work by a consultant attached to MoH to assess a sample of ACWs, develop monitoring tools and provide additional ACW support for some districts • Support to MoH to align the ACW with the new planning guidelines and budget system and develop the new HMIS001 planning template.	• National EBP training of master trainers (ToT) in Feb 2022, with support from FPD and participants from MoH, Baylor-Uganda, AVSI, CUAMM, Makerere and Mbarara universities, regional referral hospitals and some DHTs • Ongoing work with HISP on the BNA App • HSS Reflection Meeting in May 2022 • Wider policy work through MoH engagement on policies for partner coordination and health worker staffing
District EBP activities	• Cascade training and support for district EBP through workshops for Baylor-Uganda and AVSI districts (no support in Oyam) • One-day orientation on health information systems in Oyam • Financial support for performance review meetings in AVSI districts and Oyam, and support for use of the bottleneck action trackers for review in Baylor-Uganda districts • Training district biostatisticians on the new DHIS2 system, in	• EBP training workshops in November-December 2020 for most districts, with Oyam's workshop in March 2021 • Follow-up workshops in some districts to review draft plans • Support for a quarterly performance review and partner coordination meeting in most districts • Support on data quality, such as providing data collection tools and supporting data quality assessments (DQA) by biostatisticians	• Regional EBP workshops covering all DHSSi districts (and some non-DHSSi districts): - Masaka October 2021 – Oyam, Iganga, Bugweri - Nebbi October 2021 – Kiryandongo and Lamwo - Masaka Jan 2022 – Isingiro, Ntungamo, Kasese - Iganga Jan 2022 – Kamuli - Fort Portal January 2022 – Kikuube • A second training workshop for other DHT members in Lamwo in March/April 2022, in Pader (cost-shared between AVSI and DHSSi) • Follow up support to some districts by Baylor-Uganda and AVSI to complete ACWs

	January 2020		• Finalization workshop in Mbarara in June/July 2022, covering Kasese and some other districts Support for quarterly or annual reviews in some districts • Support for data quality such as training in HMIS tools, DQA, data cleaning, or facility supervision by biostatisticians in the 7 districts with an IP
National leadership and management activities	• Supporting revision of the District Service Guidelines for health worker recruitment, including a stakeholder workshop. The guidelines were finalized in June 2020 and UNICEF supported the cost of printing		• Work to support district management training, including working with a consultant and FPD to draft revisions on a MoH district management manual
District leadership and management activities	• Work with DSCs, including orientations on their roles, supporting meetings, and assisting with recruitment (particularly in Ntungamo and Isingiro)	• Support for DSCs; this varied between districts but included ethics training; support for quarterly meetings, advertising and interviews; and regional analysis of human resource gaps	• Support to DSC recruitment activities in several districts, such as orientation and funding for meetings (e.g. Isingiro, Kasese, Ntungamo)
Health system monitoring	• Development and piloting of the DHSS Progression Model (partly prior to DHSSi), training in the Model for IPs, and a baseline district assessment	• UCO and IPs supported DHTs to review actions agreed in the 2020 Progression Model assessment	• DHSS Progression Model assessment in October – November 2021

Key stakeholders and implementing partners

At regional level, UNICEF's main technical partner for DHSSi was the Foundation for Professional Development (FPD), an accredited service provider for professional development that provides technical assistance for development of training curricula and strategies for improving the professional skills of health managers.

At country level, DHSSi design and implementation in Uganda was managed by the UNICEF CO in close partnership with government, Ips and the regional UNICEF ESARO office. At national level, UNICEF worked with the MoH on activities related to EBP and management, and with the national Health Service Commission on revision of recruitment guidelines. UCO worked with HISP to develop the DHIS2 BNA App. At district level, UCO worked with Baylor-Uganda as an IP in Isingiro, Kamuli, Kasese, Kikuube, and Ntungamo, and also in Iganga and Bugweri until these districts were removed from the set of UNICEF focus districts under a new Uganda Country Programme (2021-25), following which, UCO provided direct support. AVSI supported implementation in Lamwo and Kiryandongo, and UCO provided direct support to Oyam. In some cases, IPs supported EBP outside their focus districts when UCO needed additional capacity (e.g. AVSI supported some EBP activities in Oyam). District level targets for DHSSi activities include DHTs, DSCs and the district executive.

Key roles for the technical and implementing partners are provided in Table 2**Error! Reference source not found.**. Activities often involved input from several partners, and this table is restricted to key responsibilities; each organization often provided some technical input or support in other areas.

Table 2 DHSSi partner roles

Partner	Geographic scope	Key roles
HISP	Regional/cross-country partner for DHSSi and national-level activity in Uganda	Configuration and operationalization of the BNA DHIS2 App.
FPD	Regional/cross-country partner for DHSSi and national-level activity in Uganda	Initial landscaping exercise on healthcare management Support for development of EBP training materials, for Uganda and other DHSSi countries and as a global resource Support to review a Government of Uganda management manual, via a national FPD consultant.
Baylor-Uganda	District-level support: Iganga, Bugweri, Kamuli, Kikuube, Kasese, Isingiro, and Ntungamo	EBP support Support to DSCs on recruitment
AVSI	District-level support: Lamwo, Kiryandongo	EBP support Support to DSCs on recruitment
Uganda: University of Makerere	National and district level	Development and use of the DHSS Progression Model

1.3.3 Consideration of equity, gender and rights in DHSSi design and implementation

As explained above, selection of focus districts for UCO, and through that for DHSSi, considers equity in terms of health outcomes and refugee-hosting districts. At a more specific level within the DHSSi design, consideration of equity and gender is most explicit in relation to the EBP process. As noted above, the EBP approach encourages consideration of equity, including consideration of gender-based differences, as part of situation analysis to understand variations in coverage between groups and locations, and in prioritisation of solutions to district bottlenecks, with prioritisation criteria related to equity. This in turn is intended to improve equitable health service coverage. UNICEF sought to strengthen information on equity in regional EBP training materials over the course of DHSSi, in response to evaluation findings that indicated a gap in this area.

In relation to the gender balance among participants in DHSSi-supported activities, selection of participants focused on official positions, inviting people with the remit to apply or support EBP. For example, in Uganda, this was often the district biostatistician, district health officer (DHO) and an assistant DHO, although for some workshops a much larger group were included. As such, gender balance in participation was not a primary focus for DHSSi, in line with the focus on institutional capacity and practice rather than individual beneficiaries.

DHSSi was not conceived with an explicit human rights-based approach, with the focus on institutional systems. However, the aim of strengthening district accountability relates to a rights-based understanding of the role of duty bearers. As explained above, activities explicitly focused on strengthening accountability were intended to be developed based on PEA findings, and delays in the PEA meant work in this area was largely undeveloped during DHSSi. In Uganda, however, the work to support recruitment for district health staffing was also designed as strengthening district government accountability.

The DHSSi RF includes an indicator on community engagement in planning, an important part of accountability and rights-based practice, supporting the right to participation for populations served by the health system as the rights holders. Support for community involvement was originally proposed by UNICEF as an area of DHSSi activity, but this was removed during initial planning due to budget constraints. In some countries, including Uganda, there was some work on community engagement via other funding, including orienting the Health Unit Management Committees in some districts.

More broadly, while not explicitly related to accountability in the DHSSi activity plan, work to strengthen district planning and review of annual plans can be understood as supporting the responsibilities of duty bearers, in this case DHTs. In addition, as above, efforts to strengthen health service coverage via more effective district planning and management relate to the right to the highest attainable standard of health, and are ultimately intended to strengthen services for communities as the rights-holders.

2 EVALUATION PURPOSE AND METHODS

2.1 Evaluation purpose and objectives

This is the final report of a three-year evaluation of DHSSi, designed to assess progress against outcomes and to inform ongoing implementation, future investment and scale up. As described in the Terms of Reference (ToRs), the evaluation purpose was a) to improve intervention design and management, and b) to inform decisions about future investment and scale-up by establishing evidence of the results and impact. The purpose was primarily formative, focused on establishing lessons for future programming, but this final evaluation report also provides a summative assessment of DHSSi's contribution and extent to which intended outcomes were met across all years of DHSSi implementation.

The ToR (see Annex B) indicate specific objectives as follows:

i. To provide an assessment of the results of the DHSSi against all set objectives at the end of Phase I with a view to design Phase II of the initiative based on the main learnings and results of Phase I. The evaluation will follow the Organization for Economic Co-operation and Development (OECD)'s Development Assistance Committee (DAC) criteria: relevance, effectiveness, efficiency, impact and sustainability. It will specifically:
    - assess if the interventions were implemented according to the work plan and measure the strength of implementation with a view to foster appropriate adaptation throughout the course of the implementation of Phase I
    - examine district health governance and management capacity using a maturity model to understand if interventions are contributing to improvements in the domains of operational planning, supportive supervision, performance management, stakeholder engagement & consensus building, accountability to communities, human resource management, supply management, financial management, quality improvement and execution of plans
    - identify key lessons learned and provide actionable and evidence-based recommendations to improve and scale-up interventions during Phase II.
ii. Establish necessary baseline information in intervention and control districts during Phase I to demonstrate the causal effect of improvement in sub-national health management on sub- national population-level health intervention coverage (impact indicators) during Phase II. Health impact indicators will especially track the situation of underserved groups, including girls and women.

These specific objectives were modified during inception through evaluability assessment and discussion with UNICEF on priority information needs and the DHSSi intervention focus areas. In particular, assessment of improvement in management did not cover all areas indicated in the ToR because some indicated areas were not a focus for UNICEF activities (e.g. quality improvement and supervision). In addition, baseline information was only provided for intervention districts because evaluability assessment indicated that quasi-experimental approaches to assessing causal impact were unlikely to be feasible. The revised specific objectives (as set out in the inception report) were therefore to:

- Assess whether interventions were implemented according to the work plan and measure the strength of the implementation.
- Examine district health governance and management capacity.
- Identify key lessons learned and provide actionable and evidence-based recommendations for improvements and scale-up.

Note that findings related to the original ToR objective ii are included in **Error! Reference source not found.** because they are intended to serve as a baseline for future work rather than as part of the evaluation of DHSSI over 2019-22. The DHSSI Phase II anticipated during inception is no longer taking place, so these baseline data can be used for other programmes rather than DHSSI specifically.

2.2 Users and uses of the evaluation

The primary expected audiences for the evaluation are UNICEF (ESARO and Uganda CO) and BMGF. Other key audiences include the MoH in Uganda, DHTs, and other agencies working on health systems strengthening in Uganda and in East and Southern Africa and more broadly. Related to the purpose of improving DHSSi design and management, a first use of the evaluation was to inform ongoing implementation by UCO and the government in Uganda, including through annual reflection and planning meetings for DHSSi activities. In relation to the purpose of informing decisions about future investment and scale-up, a second use of the evaluation was to support planning for future work by UNICEF and BMGF, including decisions on future programmes in Uganda and through cross-country learning for ESARO and COs in other DHSSi countries. The evaluation can also be used to inform other organizations in design of initiatives to support district management.

2.3 Evaluation criteria, scope and focus

The evaluation used the OECD-DAC criteria for evaluating development effectiveness as an overarching framework, specifically relevance (is the intervention doing the right things?), coherence (how well does the intervention fit?), effectiveness (is the intervention achieving its objectives?), efficiency (how well are resources used?), sustainability (will the benefits last?) and impact (what difference is the intervention making?). Coherence was added to the OECD-DAC criteria after the ToRs were first released, and the evaluation team reviewed and re-structured the draft evaluation questions to address this criterion.

Assessment of impact was designed primarily to inform RF reporting and to serve as a baseline for the evaluation of both phases of DHSSi, because changes in coverage were expected to occur over a longer timeframe than covered by this evaluation. However, some qualitative information on change in bottlenecks was included in the final evaluation round to provide preliminary insights on the role of BNA and district plans in bottleneck reduction and conditions affecting change (see 6.4).

In relation to scope and focus, the **evaluation focused on selected DHSSi activities, with the focus varying between countries and years**. In each country and at regional level, DHSSi activities were revised by UNICEF during the inception period and adapted during implementation, and as such, the ToR did not provide detailed specification of evaluation scope in relation to different DHSSi activities. Instead, the focus was discussed and agreed with UNICEF during inception and for each evaluation round. As a multi-country evaluation, the evaluation focused on core activities that were relatively common across countries, particularly support for district EBP and management capacity. Some activities were not fully evaluated or excluded from the evaluation either due to implementation status (with some activities not implemented or only minimally implemented, particularly work on the enabling environment and accountability); or because evidence via the evaluation was a lesser priority for UNICEF considering restrictions on the evaluation scope and sample.

In Uganda, as agreed with UNICEF, the **evaluation focused on EBP as the main area of district-level implementation and national activity** over 2019–22. Support for DSCs was only minimally evaluated. During Y1, the National Health Service Commission and some DSC members were interviewed, but DHSSi support for DSCs had not focused on the evaluation sample districts, so could not be assessed. In later evaluation rounds, views on support for DSCs were restricted to perspectives from the DHT and IPs

due to limits on the feasible number of interview participants and UCO's priority information needs. Efforts to strengthen accountability via the role of higher district structures were not evaluated because, as noted in 1.2, activities in this area were not developed during DHSSi implementation. In addition, work to strengthen district management training only began in Y3 and was restricted to revision of the government manual, and as such, this was not a priority focus for the evaluation. The role of the Progression Model was not a priority evidence need for UCO because the Model is assessed through partnership with Makerere University, so the evaluation provided only minimal light touch assessment, considering views from national and local government on the Model's relevance and alignment with other monitoring tools. Similarly, support for biostatisticians to conduct DQA and associated activities was not a priority evidence need for UCO (and not a priority for cross-country evaluation, because this activity was only implemented by DHSSi in Uganda).

The evaluation examined DHSSi implementation from the start of DHSSi in 2019 up to the time of data collection in 2022 (July-August 2022 in Uganda). The evaluation therefore covered the full DHSSi timeframe up to the planned end date of June 2022. The evaluation data collection covered three of the ten districts where DHSSi is implemented (see 2.5).

2.4 Evaluation matrix and key evaluation questions

The evaluation questions were structured using the DAC criteria of relevance, coherence, efficiency, effectiveness and impact; see Table 3, with the full list of questions in Annex C.

The evaluation questions correspond to the DHSSI ToC. Specifically, questions on efficiency relate to DHSSI outputs, including delivery of EBP and management capacity building activities and activities related to leveraging HMIS investments, enhancing the enabling environment and strengthening accountability; questions on effectiveness primarily assess progress on the intermediate outcomes of improved data use for planning, monitoring and course correction and improved execution of health operational plans, and also address aspects of the ToC component on barriers to district action and an enhanced enabling environment (primarily related to support for district recruitment in Uganda); questions on sustainability relate to the ToC intermediate outcome of an enhanced enabling environment for good district management practices, particularly institutionalization, and as a longer-term aim, the primary outcome of scaling up the district health system strengthening approach; and questions on impact relate to the primary outcomes of reduction in bottlenecks and improved coverage of high impact health interventions.

Table 3 Evaluation questions

OECD-DAC criteria	Evaluation questions
Relevance (Is the intervention doing the right things?)	To what extent is DHSSi's design aligned with the priorities and needs of national and district governments? To what extent does the DHSSi ToC hold under implementation?
Coherence (How well does the intervention fit?)	To what extent is DHSSi coherent with other interventions targeting district health teams? To what extent is there internal coherence with DHSSi?
Efficiency (How well are resources being used?)	To what extent were DHSSi interventions implemented as planned? What are the relative strengths and disadvantages of different DHSSi implementation models?
Effectiveness (Is the intervention achieving its objectives?)	To what extent is DHSSi on course to achieve its objectives? What changes have occurred due to DHSSi at district level?

Sustainability (Will the benefits last?)	To what extent have systems and resources been developed to sustain results independently of UNICEF support?
Impact (What difference does the intervention make)?	To what extent is DHSSi on course to achieve its intended outcomes? [Information for later analysis, post-DHSSi]

The **preliminary evaluation questions in the ToR were revised through discussion with UNICEF**. This revision included adjustments for clarity and scope, to focus on the highest priority information needs. As part of this refinement, it was agreed that information on the costs and cost-effectiveness of DHSSi activities was a lesser priority for evaluation stakeholders and that conducting a cost-effectiveness or value for money assessment would not be optimal use of evaluation resources. Assessment of efficiency instead focused on understanding whether activities were implemented as planned, and factors that enabled or hindered implementation. See the evaluation Inception Report for full details on changes to the ToR questions. Some **further revisions were made following the Y1 evaluation**, in light of priority areas of DHSSi activity and information needs. In particular, a question on how clearly DHSSi's objectives and the means to achieving them are understood by key stakeholders was removed as this information was not needed by UNICEF. Further, a question under efficiency on 'the relative strengths and disadvantages of different DHSSi implementation models' and a sub-question under sustainability on how different implementation models compare in terms of their effectiveness and scalability were in practice combined, as the strengths and weaknesses relate in part to effectiveness and sustainability. These questions were only included in the cross-country synthesis because the models varied between DHSSi countries, so relative strengths and weaknesses were identified based on cross-country comparison. The evaluation question on the ToC (under relevance) was also considered based on cross-country experience for the synthesis report, and so is not included in this Uganda country report.

Among the remaining questions, the level of focus varied between countries and years, in line with DHSSi implementation status, the level of DHSSi activity in different areas and changing information needs. For example, there was more focus on relevance and coherence in Y1, reflecting the relatively recent design and early stage of activities and stakeholder engagement, a growing focus on effectiveness as implementation progressed over Y2, and increased focus on sustainability in Y3 as DHSSi reached its final year of implementation.

2.5 Evaluation approach and methods

The evaluation used a mixed-methods, theory-based approach aligned to the DHSSi ToC developed by UNICEF, as indicated above in relation to the evaluation questions. The approach involved assessing contribution by examining evidence for the presence of outputs and outcomes along the ToC chain, the processes through which DHSSi contributes to outcomes, and the conditions that affect progress, as well as stakeholder perceptions regarding the significance of and role played by DHSSi. Within this approach, the evaluation brings together data from several qualitative and quantitative methods, summarized below (with further details in the inception and Year 1 synthesis report). The complete evaluation matrix is provided in Annex C.

The theory-based approach was a revision to the proposal in the ToR for a quasi-experimental evaluation. This change was based on evaluability considerations, which precluded feasible quasi-experimental design, and the value of a theory-based approach for ongoing learning. This revision was discussed and agreed with UNICEF and the Evaluation Reference Group during the inception period.

During inception, the evaluation team worked with ESARO and UNICEF Cos to clarify components of the ToC and to develop more specific country-level activities, outcomes and assumptions. This did not

involve a change to the overall ToC diagram or evaluation framework, but provided background for the evaluation team on the planned activities, aims and context, which informed data collection.

The evaluation took place over three rounds of fieldwork, in October-December 2020, October-December 2021, and July-August 2022. The original structure in the ToR was a baseline assessment in late 2019, with two annual rounds of a process assessment in 2020 and 2021, and a midline and summary assessment before June 2022. In discussion with UNICEF, this approach was revised to align the evaluation phases with national annual planning cycles, with the baseline assessment included as part of the overall Year 1 evaluation round, and a change in timelines for the final 2022 assessment to capture the full 2021-22 planning cycle. The first evaluation round considered development of 2019-20 and 2020-21 ACWs and review and implementation of the 2019-20 ACW; evaluation round 2 considered development of the 2021-22 ACW and review and implementation of the 2020-21 ACW; and round 3 considered development of the 2022-23 ACWs, and implementation of 2021-22 ACWs. The evaluation examined DHSSi implementation over 2019-2022, with the second and third evaluation rounds examining activities conducted since the previous year's data collection and up to the time of that year's data collection. This final report describes progress over Y3 and builds on findings from each evaluation round to provide a consolidated assessment.

In Uganda, fieldwork for each evaluation round was conducted in three of the ten districts where DHSSi is implemented: Kasese, Lamwo, and Oyam. Districts were selected during inception to include different Ips (with Baylor-Uganda implementing DHSSi in Kasese, AVSI in Lamwo, and UCO supporting implementation directly in Oyam). The districts also represented different geographical zones, particular health system needs (e.g. Lamwo is a refugee hosting district), and different starting points in terms of DHSSi experience (e.g. UCO support to DHSSi was new in Oyam and Lamwo but not in Kasese).

2.5.1 The PAMAT

We examined changes in district planning and management practice using the Planning and Management Assessment Tool (PAMAT), a rubric developed by the evaluation team to assess district planning and management practice over domains related to key practices targeted by DHSSi, including problem analysis and prioritisation, stakeholder engagement, review and implementation of plans, and district management practice (see Annex D). The PAMAT scores were used to calculate some RF indicators. The evaluation team agreed scores based on information from document review, interviews and group discussions (see below for information on these methods). The Y1 PAMAT had seven domains, but this was streamlined for Y2 onwards to focus on information required for RF indicators. In particular, a domain on broader use of health information beyond planning was not assessed as this was not part of the RF or an area of priority DHSSi focus.

For Uganda, the evaluation team provided training to DHSSi Ips and UCO to conduct the PAMAT assessment in the seven DHSSi districts not covered by the evaluation. In Y1 and Y2, UCO and Ips conducted the PAMAT, and the evaluation team conducted quality assurance of completed PAMATs, including triangulation against district plans. In Y3, this approach was adapted, with the evaluation team completing domains related to development of plans based on document review, and UCO and Ips collecting information for other domains, with scores then reviewed by the evaluation team.

The PAMAT scores were used primarily for RF reporting, but also considered for the evaluation analysis to suggest trends in district practice. The scores were, however, a broad judgement rather than precise quantitative assessment (see 2.8**Error! Reference source not found.**), and in line with this, the evaluation findings draw primarily on the qualitative evidence and analysis behind PAMAT scores rather than the numbers.

2.5.2 Qualitative data collection methods, sampling and analysis

Document review provided information on DHSSi activities and district planning practice. The review covered DHSSi programme documents (e.g., quarterly reports, training and workshop reports), district-level documents (including ACW for each year, as well as planning and review meeting minutes and other relevant documentation), and national documents such as policy guidelines (see Box 1 for the range of documents reviewed). Information from these documents was used to tailor data collection tools, and to provide evidence for assessment of district planning practice and other evaluation questions.

Box 1: Documents used for the evaluation

- National government planning guidelines and any additional guidance e.g. HMIS001 government planning template and the BNA manual
- National government health policies and strategies (e.g. MoH Strategic Plan)
- Reports from national workshops (e.g. the Health System Strengthening Reflection Meetings)
- District ACW for 2019-20, 2020-21, 2021-22, and 2022-23
- Any additional records of district EBP and priority setting, for example separate BNA analysis Excel files
- EBP training materials
- Agendas, presentations, reports and minutes from district planning and review meetings and workshops
- DHT meeting minutes
- DHSSi documents, including the landscaping report, quarterly and annual reports, workplans, IP reports, meeting or workshop reports, and implementation logs completed by UNICEF Cos or Ips that indicated the activities conducted
- UNICEF publications, such as the health system strengthening strategy and global strategy
- Relevant material from other organizations, for example evaluations or reports that provided additional information on district planning and management activities and system

Interviews were held with national and district stakeholders. Participants were selected based on their involvement in DHSSi activities (including familiarity with national or district DHSSi activities on planning and recruitment), and their involvement in district planning. Specific participants were identified through discussion with UNICEF, Ips and document review (for example, attendance lists for DHSSi workshops). National interviews were conducted with UCO, DHSSi Ips (Baylor-Uganda and AVSI), and representatives from the MoH. District interviews were conducted with DHT members, particularly District Health Officers and biostatisticians (the latter were selected as they had most direct engagement in EBP and preparation of plans). Additional interviews were conducted for some rounds in accordance with priority information needs agreed with UCO. Specifically, in Y1, interviews included national and district development partners or health NGOs to understand coherence and stakeholder engagement in district planning; members of the district executive (e.g. assistant CAO) to understand their views on relevance and potential activities related to accountability; and the national Health Service Commission and DSC representatives for information on activities to support recruitment. At international level, interviews were conducted with ESARO, FPD, BMGF (in Y2) and the UNICEF headquarters (in Y3) on areas such as learning and DHSSi alignment with organizational strategies; this data was used primarily for the cross-country evaluation synthesis report but also provided some information related to activities in Uganda. See **Table 4** for further information on the interview sample. Most interviews were conducted by the Uganda research team, with cross-country interviews and some interviews with UCO conducted by the

central evaluation team. Interviews were remote or in-person depending on local COVID-19 guidelines and respondent preferences. Please see the evaluation inception report and Y1 synthesis for the interview topic guides.

A group discussion was held with DHT members in each evaluation sample district, to discuss district planning and management practice (based on PAMAT domains), experience of DHSSi activities, and in Y3, change in prioritized bottlenecks. As for interviews, group discussion participants were selected based on information from UCO, Ips and documents, with a focus on participants who had been involved in DHSSi activities and district planning. Please see the evaluation inception report for the group discussion topic guides.

Sampling of participants for interviews and group discussions was purposive, focusing on key DHSSi stakeholders with the information needed to answer the evaluation questions. As described above, the sample included a range of perspectives, including national and district government, IPs, UNICEF and additional views from development partners in Y1 (see also limitations in 2.8).

Observation of one day of a DHSSi EBP workshop was conducted in Y2, to provide additional insights into district practice and DHSSi implementation. The Uganda evaluation team lead observed part of an EBP/BNA training workshop organized by DHSSi for three districts, including presentations and group work on parts of the EBP process (particularly situation analysis). An observation checklist was used, tailored to the specific activity, and detailed notes were taken during observation and expanded afterwards. The checklist included areas of information related to the evaluation questions (for example, aspects of planning such as discussion of equity, use of disaggregated data, approaches to BNA and causal analysis, as well as questions related to participant engagement). Observation data helped to triangulate information from document review and interviews.

Reliability of qualitative data was ensured through audio recording (in adherence to the ethical principles described below, including informed consent); detailed transcription to enable accurate interpretation; facilitating openness during discussions and considering the position of participants, including potential influences on what was said, to allow careful interpretation; comparison of audio recordings against transcripts to spot-check quality; and ongoing discussion with country team leaders and research assistants to support future transcription and interviews, and to build on emerging findings.

Table 4 Summary of fieldwork in Uganda[17]

Activity	Year 1	Year 2	Year 3
Planning meeting with UNICEF CO	13th August followed by several meetings to discuss the approach to conducting the PAMAT activity and Progression Model fieldwork	17th September 2021	27th April 2022
Fieldwork dates	October – November 2020	October – November 2021	July – August 2022
National interviews (Several interviews involved two or more participants, so the actual number of people interviewed is higher;	8 interviews: UCO, Health Service Commission, MoH, development partner representative, AVSI (2) and Baylor-Uganda (2)	5 interviews: UCO, MoH (2), AVSI, and Baylor-Uganda	7 interviews: UCO (2), MoH (3), AVSI and Baylor-Uganda

[17] Individual interview and group discussion participants are not listed to protect confidentiality.

there were follow up interviews with some participants to cover all information required, so the total number of interview discussions is higher)	(including national and district IP staff)		
District interviews	17 KIIs: Oyam: 6 interviews Lamwo: 5 interviews Kasese: 6 interviews Including DHT, district executive, District Service Commission, NGOs operating in the district:	7 interviews: 2 DHT members in Kasese and Oyam, 3 DHT members in Lamwo	6 interviews: 2 DHT members per district
PAMAT focus group discussion (participants were DHT members)	3 group discussions, 1 per sample district	3 group discussions, 1 per sample district	3 group discussions, 1 per sample district
Observation	N/A	BNA Refresher Training for Oyam, Iganga & Bugweri in Masaka, 7th October 2021	Notes from the Y2 observation were also used for Y3 evaluation, because the workshop related to development of 2022-23 plans

Qualitative analysis was ongoing during data collection: the country team lead and research assistant and the core evaluation team conducted regular debrief discussions to support data quality and build on emerging issues, for example via revision of topic guides. All interviews and group discussions were audio recorded and transcribed. Transcripts, together with observation notes and information from the document review, were then analysed using a framework analysis approach. Framework analyses is increasingly used for policy research and evaluations because it provides an efficient, transparent and systematic way to compare and combine data[18]. The approach is also useful for conducting analysis across teams.

The framework matrix is a table with key themes related to the evaluation questions in column headings and sources of data in each row (with one row for each document, interview, PAMAT discussion or meeting observation). Relevant information from the data source is then copied or summarized into the relevant matrix cell. When all data is added, the findings in relation to each evaluation question and theme are consolidated in a summary row. For DHSSi, one matrix was used for data from each sample district (bringing together all the data on that district), with a further matrix for national level data. This allowed initial within-case district level understanding before cross-case analysis. To support consistent use of the matrix, detailed training was provided and early draft matrices were reviewed and discussed among the evaluation team. Discussion of draft findings within the evaluation team supported reliability of later analysis.

[18] Ritchie J, Spencer L., 'Qualitative data analysis for applied policy research', in *Analysing qualitative data,* edited by Bryman A, Burgess R, Routledge, London, 1993, pp.173-94.

2.5.3 Quantitative data gathering and analysis

Quantitative data was used to assess change in bottlenecks prioritized by DHTs, and change in coverage of key health interventions, related to the evaluation questions on impact and associated RF indicators.

RF indicator 1A is the number and percentage of target districts that have reduced priority bottlenecks identified at baseline. This indicator was calculated by analysing data in standardized UNICEF Excel templates used by DHTs to conduct BNA as part of the EBP process. To provide monitoring data, UCO worked with district stakeholders to update figures on performance of indicators related to the bottlenecks prioritized by DHTs in each year of DHSSi implementation, providing figures for performance at baseline and at the end of the corresponding financial year. The evaluation team then analysed this information to identify the number of bottlenecks that had been reduced (see Annex J).

RF indicator 1B is the number and percentage of target districts that improved coverage of priority health interventions. To calculate this indicator, nine indicators of population-level coverage outcomes related to maternal and child health were selected during the inception period, based on availability of data across the DHSSi countries. Within this set, the number of indicators included for each country and in each year of analysis varied slightly depending on data availability. DHIS2 data on these core coverage indicators were extracted and analysed each year to identify districts with improvements in coverage. For DHSSi, reliable data was only available on absolute population numbers covered by each intervention, and not on the proportion of population covered. Consequently, Uganda was omitted from RF indicator reporting and instead data are presented as absolute numbers/data elements (see Annex I and J).

The results of the quantitative analyses are presented in Annex J. For information on detailed steps for quantitative analysis, including information on data availability, steps to assess data quality and clean data, and data quality issues, see Annex I. Note that the quantitative analysis is not used within the main evaluation findings because UNICEF requested this data to serve as a baseline for future activities and not to assess DHSSi implementation over 2019-22.

2.5.4 Consideration of equity and human rights in the evaluation

Gender and equity were a key part of the evaluation analysis, and through this, consideration of the extent to which DHSSi supported achievement of the right to the highest attainable standard of health for all children and the SDG principle of Leave No One Behind. The evaluation included a specific question on equity under the criteria of effectiveness, considering the extent to which district planning and management considered underserved groups. In particular, and in line with the way equity was considered within DHSSi design and activities, data collection and analysis considered the level of attention to gender, equity, and marginalized groups within sub-national planning (see section 6.3).

To support this assessment**, equity was included as an explicit criterion within the PAMAT**: criteria 1b was ‘Identification of priorities incorporates equity analysis (underserved populations and locations)’. District performance on this criteria was assessed by reviewing the extent to which underserved or marginalized groups were considered during situation analysis and identification of priority activities; use of disaggregated data, including as part of BNA; and inclusion of activities to address inequities and target underserved groups and locations within the district plan and budget (for example, considering adolescents, people with disabilities, refugees and internally displaced persons, the poorest people, gender variations and action on gender-based violence, older people, orphans and vulnerable children, and hard to reach areas).

As for other dimensions of the PAMAT, performance was assessed via discussion with DHTs and review of district plans. This involved, for example, asking DHTs about any specific groups considered during

planning, use of data on these groups and inclusion of activities to reach these groups; and reviewing district plans to identify use of disaggregated data and reference to underserved groups within documented situation analyses and inclusion of relevant activities within the activity plans and budgets. To understand the role of DHSSi in supporting discussion of equity, DHTs were also asked about areas such as any changes in discussion of equity since the previous year and what led to these changes, and whether they had received any training or support for equity analysis, including through DHSSi workshops. DHSSi training materials were also reviewed for content on equity analysis. Information on equity was also considered throughout other evaluation methods. For example, the observation checklist included questions in areas such as use of disaggregated data and consideration of underserved groups during training activities, and interviews with IPs, national government and UNICEF asked about consideration of equity in EBP training and planning.

The DHSSi RF did not include a specific indicator on gender or equity. However, the evaluation team **integrated consideration of equity within assessment for RF indicator** *1.1 Improved data use for planning, monitoring and course correction among target district health management teams in project countries, indicator A) #/% of target districts where evidenced based planning practice improved*. Reporting for this indicator was based on PAMAT scores for 6 criteria related to effective EBP, including PAMAT 1b on equity analysis.

The evaluation team also considered scope to integrate equity and gender within assessment of progress in service coverage. Ideally, the quantitative assessment of changes in coverage would have included disaggregated data to understand variations by gender, age or other stratifiers. Feasibility of disaggregating quantitative findings to indicate coverage for underserved groups was examined during inception, but this was not possible due to a lack of disaggregated data in DHIS2. The quantitative analysis of coverage indicators did, however, focus on outcomes pertaining specifically to women and children, including indicators such as antenatal care (ANC) coverage. As noted above, data on impact was not a primary focus for this evaluation because change in service coverage was expected to be a long-term process, beyond this phase of DHSSi. As such, the evaluation focused on more immediate change in district management practice, and additional primary data collection to obtain disaggregated coverage data was not part of the evaluation scope.

While communities were the ultimate intended beneficiaries of DHSSi, the immediate beneficiaries and targets of DHSSi activities were institutional, including DHTs and higher levels of government. As noted above, **selection of participants for DHSSI workshops focused on official positions rather than gender balance**. Participants were relatively senior district or national officials, included by virtue of their professional position. In line with this emphasis on institutional practice rather than individual beneficiaries, assessment of participation in DHSSi activities focused primarily on whether relevant positions were included (e.g. health facility staff or NGO stakeholders) rather than gender balance or other individual characteristics. In addition, participant lists were often unavailable or did not indicate participants' gender (and gender was not always clear from participant names), limiting accurate assessment. However, to provide some assessment, the evaluation conducted rapid review of gender balance for a selection of available attendance lists. In addition, in Y1, interviews and group discussions asked about the effect of gender balance among DHTs on consideration of equity in planning (this was not repeated in Y2 and Y3 because new information was unlikely and other aspects of equity were considered a higher priority given the approach to gender and equity in DHSSi design and the information needed to answer the evaluation questions).

As noted in 1.3, DHSSi was not conceived with an explicit human rights-based approach in its design or implementation, but **the aims of strengthening district accountability relate to a rights-based understanding of the role of duty bearers**. More broadly, as noted in 1.3, efforts to strengthen health service coverage relate to the right to the highest attainable standard of health. Community engagement,

an important component of accountability and rights-based practice, was included as an indicator in the DHSSi RF, though as noted in 1.3, DHSSi did not include activities in this area. In line with this design, specific consideration of a rights-based approach within the evaluation focused on assessment of progress in DHT accountability and community engagement in planning.

Within the DHSSi RF, accountability is considered via indicator 1.3 *Enhanced enabling environment for good district management practices addressing key barriers in project countries (institutionalization and government ownership, accountability etc.)*. This includes indicators related to functionality of the DHIS2 scorecard App and conducting PEA (these indicators were assessed by UNICEF rather than the evaluation team). **The RF also includes a specific indicator on district accountability for Uganda** (and not for other DHSSi countries): RF indicator *A) #/% of districts that have had local government accountability capacity for health built,* and *B) % of DHT positions in target Ugandan districts that are vacant.*

Indicator A) was assessed by the evaluation team via a **specific domain on DHT management practice in the PAMAT**, considering criteria related to a constituted DHT with clear job descriptions, effective role performance, DHT meetings, and engagement with the wider district executive. These criteria were developed based in part on relevant indicators in the DHSS Progression Model developed under DHSSi, as a context-adapted tool. As for other PAMAT domains, these criteria were assessed based on discussion with the DHT (and with the district executive in Y1) and document review, particularly DHT meeting minutes.

Community engagement in planning was also assessed via a specific PAMAT criteria, considering the level of input from citizen representatives, via meetings or other efforts to gather citizen views, degree of decision-making power, and inclusion of citizen views and priorities in the final district plan. Again, this was assessed based on interviews and focus groups with the DHT and review of documents, particularly attendance lists for planning meetings. PAMAT scores were used to support calculation of the RF indicator, and the associated data were also used to provide information on community engagement as a key part of effective EBP (see Section 6.1.2).

Although accountability and community participation were part of the RF and PAMAT assessment, activities explicitly focused on strengthening accountability (building the capacity of higher-level district structures and addressing district staffing as noted in 1.3) were not a primary focus for the evaluation. This was because, as noted above, activities with the higher district structures were not developed over the course of DHSSi implementation, and work with DSCs was a lower priority for evidence than support to EBP (the main area of district-level implementation). In addition, DHSSi activities did not include direct support for community engagement.

Overall, explicit attention to gender, equity and a rights-based approach within DHSSi design and implementation was relatively limited, reflecting the focus on institutional strengthening. Consequently, while the evaluation included a specific focus on equity and aspects of a rights-based approach, consideration of these areas was proportionate with the level of focus in DHSSi's institutional approach.

Equity was also considered during data collection, for example by recognizing that gender roles or organizational hierarchies may affect confidence to speak during focus group discussions. This was managed through careful group facilitation to encourage input from all participants, and by interviewing the most senior DHT officials (such as the district health officer) separately rather than as part of the group.

2.6 Ethical issues

The evaluation was guided by United Nations Evaluations Group ethical standards for evaluation. Ethical considerations influenced the entire process, from team recruitment and management to data collection, storage, analysis, and reporting. Specific approaches and steps to ensure an ethical evaluation included the following:

- Transparent communication of all aspects of the evaluation in written reports and stakeholder discussions, including procedures, findings and limitations.
- Ensuring the entire evaluation team had the required skills, including areas such as expertise in health system strengthening, quantitative analysis and DHIS2, and qualitative data collection and analysis, and providing training in advance of fieldwork, including in ethical procedures. There were no conflicts of interest, with evaluation team members not standing to benefit from future work based on the evaluation findings.
- Seeking formal approval of the evaluation design from national ethics review committees in each country, with approvals renewed before commencing Y2 and Y3 fieldwork. For Uganda, this was the Makerere University School of Social Sciences Research Ethics Committee. The approval letter is provided in Annex K.
- Supporting informed consent from all evaluation participants. This included providing clear information on the evaluation purpose, use of data and procedures for confidentiality in advance of interviews, group discussions and observation, providing an opportunity for questions, and seeking explicit consent, including for recording. Participants were provided with contact details for any questions or concerns regarding the evaluation.
- Ensuring confidentiality, including by storing all data securely, using participant identification numbers rather than names, and by avoiding use of identifying information within reports. Given the small number of stakeholders involved, particularly at national level, complete confidentiality is difficult to ensure. Participants were told openly about this risk and asked to indicate any information that they saw as particularly sensitive and would not want to be attributed to their organization or to them as individuals. Particular care was then taken in reporting this information to avoid attribution.
- Respecting participant preferences and local norms, for example by working with national research teams with understanding of local contexts and ensuring interviews and group discussions were arranged in ways that suited participant preferences.
- Supporting inclusion of different voices. While the evaluation sample was limited, within group discussions, facilitators encouraged input from all participants to hear the full range of views.
- Ensuring participant and research team safety, including following COVID-19 procedures and providing emergency contact numbers.
- Following OPM's safeguarding policies and protocols, including ensuring that all evaluation team members understood the need to report any concerns, suspicions, allegations or incidents that indicated actual or potential abuse of vulnerable people.
- Supporting the benefit of the evaluation for participants by working with UNICEF to maximize the relevance of evaluation findings, to develop actionable recommendations and to disseminate the evaluation results.

2.7 Evaluation management and governance

The evaluation was conducted by Oxford Policy Management (OPM) and managed by the UNICEF Eastern and Southern Africa Regional Office (ESARO) Evaluation Section. Technical oversight was provided by an Evaluation Reference Group, chaired by the ESARO Evaluation Section and including UNICEF country offices, national government representatives and other expert stakeholders. Preliminary findings and recommendations for each evaluation round were discussed with UNICEF to ensure accuracy and relevance. Feedback from these discussions was incorporated in the evaluation reports.

The OPM cross-country evaluation team included a central team with a team leader and qualitative and quantitative experts, who led design and analysis, and four country team leaders based in each DHSSi country, who led primary qualitative research, supported by a research assistant. The evaluation team was supported by a project manager for day-to-day management of the evaluation, with high-level strategic oversight provided by a senior project director. A senior peer reviewer and a pool of quality assurance experts provided high-level quality assurance throughout the evaluation.

2.8 Evaluation limitations and opportunities

As with all evaluations, this evaluation faced several constraints in relation to data availability, feasible fieldwork scope and other areas. Limitations were considered in the analysis and reporting.

In relation to **quantitative data**, limitations included some DHIS2 data being unavailable or unreliable (see Annex I). Quantitative data on bottlenecks provided via Cos, designed to be collected as part of UNICEF's monitoring system, also had some missing information, and late provision of data reduced opportunities to correct gaps. For example, issues included inconsistency between the bottlenecks specified in the monitoring data provided and those prioritized by DHTs in their annual plans, inconsistent or unclear dates, and some missing values. Mitigation strategies included working with ESARO to develop a Standard Operating Procedure to guide data provision by Cos, technical support to UNICEF to assess quality and provide accurate information, and cross-reference to district plans or EBP analysis to provide missing information. In some cases, ideal or fully reliable information could not be obtained within the evaluation timelines, and it was agreed with UNICEF that analysis would use the information provided by Cos, albeit with some limitations.

There were difficulties with complete and timely provision of **documents** related to DHSSi implementation, as well as government documents, including district annual plans in advance of fieldwork. This hindered preparation of topic guides and fieldwork, the quality of document review, and timelines for analysis. To reduce the risk of late document provision, the list of required documents was provided several weeks in advance, with regular reminders. Given delays, document analysis extended during the fieldwork period, particularly in Y2 and Y3. In practice, this did not cause significant difficulties as the most critical documents needed to support fieldwork were obtained in advance of data collection.

Sampling of key informants was agreed with Cos. Additional interviews with wider local government (including the higher-level district executive, planner and DSC) and with other development or implementing partners at district or national level were only conducted in Y1, with Y2 and Y3 fieldwork focusing on core DHSSi stakeholders to prioritize and align with evaluation timelines and resources. Further interviews with these stakeholders in Y2 and Y3 would have provided additional insights on the perceived relevance of DHSSi, coherence, effectiveness and sustainability, including information on alignment with wider district processes and with other development initiatives, stakeholder engagement in planning, and the DHSSi support for DSC recruitment. As a partial mitigation measure, views on DHSSI support for DSCs were obtained from DHT members, some of whom were aware of the DSC activities.

Observation of the DHSSi district EBP training workshop provided important insights, helping to triangulate information in documents and stakeholder interviews (for example, on discussion of equity and the time needed for planning). However, observation was restricted to one day (partly due to timeframes and contract agreements), and additional observation (for example of an entire workshop, other district planning meetings and activities for other districts or in other years) would have provided wider information.

PAMAT scores should be considered as a broad indication of status rather than precise quantitative measurement. The PAMAT uses a standardized rubric to assess quality of planning, to allow cross-country comparison. Definitions were based on UNICEF guidelines and discussion with UNICEF, but in some cases, national government or UNICEF CO guidance to district teams may not fully align with the rubric. A standardized approach was retained because the quality of national guidelines varies (indeed, DHSSi sought to influence these guidelines to ensure they support effective EBP). Reliability of scoring was also affected by gaps in documentary data (for example, reports from district reviews were often unavailable); variation between what is documented in plans and the level of discussion or analysis during planning (partly due to planning templates); and reliance on accounts from DHT members for some criteria due to lack of documentary evidence. Where documents were unavailable, scoring considered whether interviews and group discussion provided convincing evidence that a practice was implemented (for example, describing use of dashboards during quarterly reviews, even if review reports or presentations were not available to verify this), and whether documentation is an essential part of effective practice (for example, if the DHT did not complete the relevant sections of a planning template, the score would be reduced). Rigorous assessment of the extent to which annual district plans were implemented was also not possible due to lack of documentation. Reliability of scoring was supported by repeated close reading of documents and transcripts, and through peer review within the evaluation team to ensure consistency. For Uganda, a particular limitation was reliance on Ips and UCO to provide evidence and draft PAMAT scores for seven of the ten DHSSi districts; despite training and detailed guidance, the evidence provided was often insufficient to justify the proposed score, or inconsistent with evidence in district planning documents. There were also some indications of variation in scoring between different IP or UCO staff. The evaluation team addressed this limitation to the extent possible through triangulation against information in documents or other sources, where available. In addition, the evaluation findings relied primarily on PAMAT data from the three DHSSi districts where PAMATs were completed by the evaluation team (where evidence for the PAMAT was more complete and reliability was known), with the remaining seven district PAMATs used primarily for RF reporting.

For Y3, the evaluation included **qualitative discussion with DHTs on change in prioritized bottlenecks** and factors affecting this. This analysis was challenging due to inconsistencies between data sources (such as DHT claims about the role of BNA and documented plans) and data gaps; careful reading and triangulation across transcripts and documents helped to reveal inconsistencies and to avoid unwarranted acceptance of statements from a particular source. Significant additional fieldwork would be needed to fully understand the effect of BNA, DHSSi and district plans on change in bottlenecks; for example, in-depth discussion with a range of relevant district stakeholders, document review on other initiatives targeting the same bottlenecks, and detailed comparison of plans against earlier years (the latter was done to some extent, but comprehensive assessment would require additional documents and time). Additional analysis would also provide further understanding of the extent of change in district plans resulting from using BNA and DHSSi support, for example, comparing district budgets from years before and after DHSSi training to assess the level of change in planned activities and any cost savings. This analysis was outside the evaluation scope.

The **COVID-19 pandemic** began prior to the first round of evaluation fieldwork. This meant that some interviews and group discussions were conducted online, in accordance with local health guidelines and

consideration of participant and research team safety. We found that the remote online approach did not significantly affect quality of discussion or participation, due to facilitator and participant familiarity with online discussion. Quality of remote interviews and group discussions was also supported by sufficient preparation and training time to consider potential risks, additional evaluation team support for facilitation, and adequate testing and time to resolve for technical difficulties.

3 RELEVANCE: IS DHSSI DOING THE RIGHT THINGS?

3.1 Does DHSSi align with national health sector priorities?

In each evaluation round, the **MoH saw DHSSi support as important for building district planning capacity and increasing attention to planning**: '*the support has been critical in revitalizing the planning aspect'* (Y3 MoH01). BNA had been part of national planning guidelines since 2016. Despite this, BNA was not embedded and reported levels of adoption were low at DHSSi inception.[19] The MoH saw BNA as providing a way to actualize EBP, and as increasing DHT interest in and use of data: '*they came with a system that can allow evidence-based planning in our setup … before that, evidence-based planning was just a song but nobody could clearly formulate how it should be done… because of that, districts have begun taking a keen interest in their data'* (Y2 MoH02). The MoH led presentations on BNA during some regional EBP training for Y3, and BNA was incorporated within a new government planning template (HMIS001) developed by the MoH for the 2022-23 ACW, indicating continued MoH perceptions of relevance and ownership of BNA. The MoH saw this new government planning template as significantly increasing government ownership and alignment of EBP with government systems: the EBP approach supported by DHSSi was described as previously running in parallel, but HMIS001 linked the plan to the government budgeting systems (see 2.2). This increased the potential impact of support for district planning, and so its relevance for the MoH and districts.

However, there was **less support for the BNA App**, which the MoH did not see as a priority. UCO and Ips saw the App as important to automate preparation of BNA charts, so allowing more DHT time for analysis and discussion of solutions. However, App finalization was slow (see 4.1), and the App was not yet functional. During Y3 EBP workshops, weak internet access hindered use of DHIS2 data for BNA and access to the App, particularly because the App is a large file. When DHTs could access the App, data was often missing because the App had not yet been populated. The MoH also noted gaps in data for population size, sub-counties, human resources and commodities, which meant most indicators *'are not running well'* (Y3 MoH02), and they thought too few indicators were included. Given these constraints, one MoH respondent suggested effort should instead focus on strengthening the DHIS2 reproductive, maternal, newborn, child and adolescent health (RMNCAH) scorecard, as both more feasible and easier for district teams to interpret. In Y2, the MoH also suggested that UNICEF should have supported health information activities prioritized in the MoH strategic plan rather than focusing on the BNA App: while BNA tools *'are good and worth considering … there were things in the strategy that were never implemented that would have been for us very critical'* (Y2 MoH01). For some MoH stakeholders, perceived relevance of the App was affected by insufficient involvement in its development. The MoH Health Information Division was the primary contact for the App, and the Planning department described this as *'a structural error'* by UCO that meant planning officials lacked information on the App, and that it had not been designed in a way that met their needs: '*So we see it in the system, we leave it there*' (Y3 MoH 01). UCO considered that the App was feasible, and thought that progress in App development and the underlying DHIS2 data during 2021 would support use of the App for development of 2023-24 plans (after DHSSi) and so strengthen stakeholder perceptions of the App's relevance.

[19] See the 'Review of Implementation of the Bottleneck Analysis Approach in the Development of District Annual Workplans, 10th – 21st December 2018' (UNICEF, 2019). The report finds that out of ten districts sampled for this review in Uganda, only two were using BNA in developing annual workplans.

Another area of government concern regarding DHSSi's relevance related to **a perceived gap in attention to monitoring and implementation of ACW**. Particularly in Y2, the MoH emphasized that DHSSi had focused too much on development of ACW, whereas the main gaps in district practice related to ongoing data use and monitoring to adjust plans and support implementation. The MoH encouraged more focus on this ongoing monitoring of ACW implementation, and at both Y2 and Y3, they saw it as an area with insufficient DHSSi attention. They suggested that improved monitoring would require capacity for data use beyond biostatisticians, and structured tools to record implementation. Their view may partly reflect a lack of information on DHSSi activities, as some district reviews were supported using DHSSi funds. However, DHSSi support for reviews was inconsistent, and work planned by UCO to strengthen monitoring tools was at an early stage (see Annex F Y2:3).

Among some MoH stakeholders, particularly at Y1, there was also **some skepticism about whether DHSSi's focus on planning was relevant to reducing health system bottlenecks**. The primary problems in district performance mentioned by the MoH were gaps in health system 'hardware', such as infrastructure, health workers, and funding. DHSSi support was seen as helpful for identifying local problems, but not for actually addressing bottlenecks or tackling hardware gaps: *'DHSSI is more on soft things… they are more on training and giving out money for training… UNICEF cannot reduce the bottlenecks, definitely'* (Y1 MoH04). They saw direct support such as funding equipment as more effective to address bottlenecks. DHSSi aims to build government capacity to tackle bottlenecks, rather than providing resources to address bottlenecks directly (other UNICEF programmes provide more direct hardware support). However, this perception of DHSSi in relation to MoH concerns about hardware indicated perceived limits to DHSSi's value and relevance for stakeholder priorities.

There was **some MoH dissatisfaction with the level of involvement and communication on DHSSi** activities. This related in part to DHSSi's approach of working with NGOs as Ips. Particularly in Y2, MoH reported insufficient involvement in and information on district activities led by DHSSi Ips, with concerns that IP approaches may not follow MoH guidance. MoH reports of no or minimal contact with Ips at Y2 were at odds with IP accounts indicating MoH participation in the Y2 DHSSi workshops; without meeting records, this was difficult to verify. Engagement improved for Y3, when the **MoH reported increased engagement in DHSSi activities** and several MoH staff presented at the regional EBP workshops. However, the MoH felt **communication remained insufficient.** In particular, they emphasized that UCO had not shared a workplan indicating activities for each quarter, with the MoH instead only informed of activities when called to take part.

The MoH also **saw the division of roles between the MoH and Ips as unclear and inappropriate**. They advised that UCO should specify which activities would be done by NGOs or the MoH and provide more support for central MoH planning functions. In particular, the MoH emphasized that coordination and scale up were government roles that required support and that should not be left to NGOs. They also requested more support for the MoH to monitor district implementation of ACW. UCO provided some support for central MoH functions, particularly working with a consultant during Y2 to develop assessment tools that could support MoH quality assurance of ACW. However, UCO saw government use of these tools as uncertain given strained MoH capacity: as recognized by the MoH, the high number of districts in Uganda meant the MoH team could not provide country-wide support to ACW development or review with current staff and resources.

Turning to other DHSSi activities, **the MoH saw DHSSi support for biostatisticians (for example, training and support for routine DQA and supervision) as in line with national needs**. They considered that this support contributed to improved data quality, alongside contributions to data quality and use from multiple other partners and the MoH.

DHSSi support for recruitment was aligned to MoH concerns about staff vacancies and a high number of unconfirmed DHT positions. In Y1, the MoH noted that quality of planning depends in part on whether the district has an established DHT with confirmed rather than acting positions. The national Health Service Commission also welcomed UCO's support with developing and disseminating recruitment guidelines. However, stakeholder interviews also indicated limits to what DHSSi support for DSCs could achieve. In particular, district recruitment was not just limited by DSC functioning, but also by insufficient funding for wages, competition from more lucrative positions in other sectors, and unattractive locations. DHSSi targeted recruitment of positions already on the wage bill, and so recognized this constraint.

Support for DHT management skills was at a relatively early stage, having begun in Y3 with support to review a government management manual. However, the **MoH saw this work as highly relevant because management skills were needed by district teams, and currently insufficient.** The MoH noted that management skills were not taught during pre-service training, civil service induction courses were no longer held due to lack of funds, former training institutes were not operational, and there was a lack of management guidelines. DHSSi support focused on updating an outdated MoH management training manual, so focused on existing MoH processes, strengthening relevance. There were indications of MoH leadership, in identifying the need to revise the manual, drafting the ToR, critically appraising and redirecting the work to improve relevance (see 5.1), and reviewing the inception report.

In relation to the ToC component of **strengthening district accountability**, support for DSC recruitment was designed to support accountability, but other activities to address accountability were not developed during DHSSi implementation (as explained in 1.3). However, discussions with the MoH and other national stakeholders as well as the inception period landscaping report indicated the relevance of work to address accountability and governance. In particular, stakeholders noted that effective governance was critical for DHT decision space and performance and for DSC recruitment, with a need for increased accountability among district institutions and management of political influence from elected officials. This indicates the relevance of considering accountability and governance in future district system strengthening activities.

The MoH did not see the Progression Model as currently relevant (see Annex FY2:4a). While they thought the Model could be useful to indicate health system gaps, they saw it as too detailed and insufficiently practical, and as having limited scalability. Use of the Model only in UCO districts also reduced national relevance, and the MoH preferred to use the MoH District League Table or Local Government Performance Assessment (LGPA)[20], both of which provided national coverage. Y1 interviews suggested some interest in the Model from another development partner, who planned to adapt and scale up the model, but this had not developed by the time of the Y3 evaluation.

3.2 Does DHSSi align with district needs and priorities?

District views on specific aspects of the DHSSi support for planning, including timing, participants, content, and sufficiency of support, are discussed in Section 5. Here, we summarize views on the overall relevance of DHSSi activities.

In each year**, DHTs saw DHSSi support for EBP as making a significant contribution to district work**. DHTs described plans as important (see 6.4) and they saw **BNA as increasing analysis and data**

[20] The District League Table is an annual ranking of all districts produced by the MoH, based on indicators related to health service coverage and quality and local government management. The LGPA is conducted under the Office of the Prime Minister and examines indicators related to district accountability and performance, including in health and other social sectors. The LGPA scores affect funding to district governments.

use and ensuring planned activities responded to specific local problems. This contributed to a move away from planning just based on routine activities and earlier plans: BNA helped DHTs to *'think wider and broader'* (Y3 Lamwo PAMAT) and to *'plan based on the priority of the district, not just what we think should be done'* (Y3 Kasese PAMAT). By making planning more targeted and effective, DHTs saw BNA as helping to improve coverage indicators and consequent performance on the MoH District League Table; for example, Lamwo DHT credited BNA with improving their League Table position. BNA also helped DHTs to monitor improvements and provided evidence that could mobilize partner funding for planned activities.

DHTs saw DHSSi training and technical assistance as bringing **new skills and knowledge** on BNA and other aspects of MoH planning and budgeting processes, which built capacity and helped DHTs to follow planning guidelines.

> *'Like the BNA – it may not be known by some other districts, but for us they [UNICEF] built capacity, we know how to do the situation analysis'* (Y1 Kasese DHT04)
>
> *'AVSI was there with us…guiding us on the way of making the One Health plan and how to come up with bottlenecks' (Y2 Lamwo DHT03)*
>
> *'It has improved our perception of planning and our ability to identify problems and look at gaps and give solutions' (Y2 Oyam DHT01)*

DHTs also saw DHSSi as **changing attitudes to planning**, with more awareness of the need to use data and ensure activities are included in plans. *'*'Y3 DHSSi support in particular was seen as widening DHT involvement, with more DHT members now familiar with and engaged in BNA and planning. The potential for EBP to improve League Table performance (noted above) contributed to increased DHT engagement: in Oyam, a significant drop in district position meant *'DHT members are looking for how to improve…So when you call people to do causal analysis, you actually get a positive response'* (Y3 Oyam KII02). DHSSi **funding for planning or review meetings** was also welcomed.

Overall, DHTs saw the combination of new knowledge, skills, attitudes and funding for workshop time as significantly strengthening their plans: *'they guided us in the planning process, reviewing the data, reviewing previous plans, and all aspects…the quality of our plan this year is better, and that is really due to UNICEF support*' (Y3 Oyam KII01).

'*'*Despite DHT comments on the importance of plans, value of EBP, and increased DHT engagement, there were **continued gaps in motivation for planning**. For example, failure to complete the 2022-23 ACWs in Kasese and Lamwo (see 5.1**Error! Reference source not found.**) resulted partly from insufficient DHT prioritization, DHTs often needed considerable encouragement from Ips to develop plans, and several DHT members and Ips noted difficulty in securing DHT time for EBP without workshops outside the district, indicating insufficient commitment to undertake planning as part of routine DHT responsibilities. Particularly in Kasese, the wider DHT also relied on the biostatistician to drive planning: *'the biostat is the one to call us all the time to submit, I want us to find a way of owning these things'* (Y3 Kasese PAMAT). When asked about the most important and relevant activities supported by UCO or Ips, several DHT members highlighted direct support for implementation, such as on nutrition or neonatal care, despite the interview question asking about activities related to planning. Similarly, DHT priorities for improving district health services related to hardware, and their comments on weaker areas of DHT performance often focused on areas such as monitoring services, supervision, coordination and understaffing rather than planning. This suggests planning was not always seen as an underlying driver of improved services and that wider contextual challenges, particularly insufficient resources, were a more pressing concern for DHTs.

One issue reducing DHT prioritisation of planning was insufficient integration with budgeting systems. District budgets were allocated through the Ministry of Finance, Planning and Economic

Development (MoFPED) Programme Budgeting System (PBS), and central government funding to the DHT did not depend on ACW development. DHTs prioritized the MoFPED template that determined funding rather than ACWs, and ACWs were generally prepared too late to inform the January PBS deadline. DHTs instead tended to base PBS submissions on previous budgets, or on guidelines or knowledge of the minimum care package rather than analysis of district performance (noted in Kasese), and without reference to plans (noted in Oyam). As well as reducing the incentive for EBP, lack of PBS alignment potentially reduced use of ACW to inform implementation over the financial year, as spending decisions were guided by PBS budget lines.

Over Y2 and Y3, **DHSSi and the MoH worked to align ACW with the PBS** by emphasizing the link and early timing in EBP training, and the new government template prepared for 2022-23 ACW (HMIS001) linked the plan to the PBS as well as the new Programme Implementation Action Plan (PIAP) codes[21]. There were indications of improving alignment between ACW and the PBS at district-level for 22-23 (see Section 6.1.1). In line with this, at Y3, DHTs saw DHSSi training in EBP as changing their approach to budgeting: '*Previously, we would just budget for different activities to get money, and the actual planning was not there. But with support from UNICEF, we start with planning, and then from the plan, that's where we get our budget'* (Y3 Oyam KII03).

Districts also received funds through **results-based financing** (RBF). DHTs were required to develop separate 'performance improvement plans' for RBF, leading to duplication with ACW. Over Y2 and Y3, the MoH worked to align RBF support with ACW, with the aim of making ACW a requirement for RBF funding (so incentivizing ACW completion and streamlining planning). DHT comments on the role of RBF in motivating staff and prompting action, including planning, suggest this integration with RBF could motivate development of ACW*: 'you're paid according to your output… you are required to do a performance improvement plan…that results based financing should be the core, the byword of sustainability'* (Y2 Kasese DHT01) (see Annex F Y1:6).

In relation to other areas of DHSSi activity, **DHSSi support on data quality was seen as highly relevant** by Lamwo and Kasese DHTs, and credited with improving data quality, facility use of data, and district staff capacity. For example, Lamwo DHT thought that AVSI support for DQA and associated mentoring of health facility staff had improved data quality and analysis of data by health facilities. Oyam DHT saw support for data quality as important, and a Y1 DHIS2 training under DHSSi was appreciated as raising awareness of new DHIS2 tools. Further support from UCO was requested by Oyam DHT, but this was not provided under DHSSi.

Only some DHT members were aware of DHSSi DSC activities (see 6.2 for their views). However, **understaffing was a concern for DHTs** and the wider district executive, and ongoing human resource shortages (as evidenced in the Human Resources for Health situation analysis prepared by DHSSi IPs) indicate the **relevance of work on recruitment**. High DHT vacancy rates were particularly evident in Lamwo, where only two of eight DHT members were fully appointed (at Y2). DHTs noted that gaps in district staffing led to high workloads and difficulty in performing roles such as supervision. Some acting DHT members retain other responsibilities, such as facility management, leading to incomplete performance of service delivery or DHT roles. Acting members also have less authority and confidence to demand more effective performance from other staff. This suggests DHSSi work on recruitment is relevant and in line with DHT priorities.

The Progression Model was welcomed by some DHT members as supporting DHT management (see6.2). In particular, some district biostatisticians saw the Model as providing comprehensive analysis across health system pillars, indicating expected standards and gaps that should be addressed, and as a

[21] The PIAP was linked to a change in the government system from sector to programme-based planning, through which health was moved under a wider human capital programme.

guide to expected DHT roles, with indicators that DHT members could use to monitor their own performance. However, some DHT members had limited familiarity with the Model, perhaps because only biostatisticians and one or two other members participated in Progression Model assessments, and the Model sometimes appeared confused with other performance management tools, suggesting it was not well known (see Annex F Y2:4a for further information).

3.3 How have DHSSi interventions adapted during implementation to fit different or changing contexts?

DHSSi activities were adapted in several ways during inception and implementation, including initial tailoring to understanding of needs, changes in response to emerging learning and ongoing monitoring, and adaptations to address contextual challenges.

In relation to understanding of needs, during inception, **DHSSi activities were adapted based on the initial management landscaping exercise**. In particular, based on conclusions that sufficient management training existed and that weak DHT performance resulted from insufficient accountability and staffing rather than skills, early DHSSi plans for leadership training were replaced with work to strengthen accountability and address vacancies. Early use of the Progression Model also found gaps in staffing, further encouraging UCO's plans to work with the Service Commissions and address DHT composition. However, while staffing gaps and accountability remained concerns, stakeholder discussions over Y2 suggested that the early conclusion of adequate management training and skills was misplaced. **In response to this emerging learning, UCO adapted DHSSi plans to include work on management skills** (including revision of the management training manual and planned DHT training). This shift indicates ongoing adaptation, but also suggests that initial management landscaping required deeper contextual analysis.

There were several other examples of strategic shifts in response to emerging learning, including more focus on alignment between EBP and budget systems in later years. This strategic **adaptation was supported by significant investment in learning** and reviewing experience, particularly through annual organization of HSS Reflection Meetings. These meetings brought together Ips, MoH and DHTs, and for 2022 partners, to review programme experience, PEA and evaluation findings, other analysis and government approaches, and to discuss future strategies. **UCO or Ips also adapted DHSSi activities in response to ongoing monitoring.** For example, UCO provided additional support to one IP in Y1 when they identified difficulties with implementation, and Ips provided further support to DHTs when they realized ACW were not being developed as anticipated. **Changes in the wider context also required shifts in the DHSSi approach**, identifying alternative strategies when external challenges limited progress. For example, a government DHIS2 upgrade and revision of HMIS tools delayed work on the BNA App in Y1 (see 5.1). To allow continued use of historical datasets within the App, UCO worked with HISP and the MoH to integrate the DHIS2 systems, using resources from the Rockefeller Foundation.

While there were many examples of adapting, **some action planned in response to emerging learning was not implemented or delayed**. For example, UCO planned to support revision of planning guidelines in Y2 to address stronger links with budget systems and clearer integration of BNA (partly in response to Y1 evaluation findings), but this was not done by UCO due to lack of funds (the MoH HMIS001 template developed for Y3 then partially addressed this need). Similarly, work on management skills was identified as important and planned in Y2, but delayed by funding and restricted to revising the manual rather than supporting DHT training workshops (see 5.1). Several other changes planned in response to early evaluation findings were also not taken forward (see Annex F).

One area needing further adaptation to context was the EBP training material supported by FPD.

Ips noted insufficient local customization of examples in Y1, and UCO noted in Y2 that changes such as new government priorities and approaches (as with a move from sector to programme planning over Y2-Y3) required ongoing adaptation so that materials matched current systems. Sufficient tailoring of training materials required in-depth knowledge of the district context, and UCO suggested that future external support should focus on building capacity of Ugandan universities to work with the MoH on developing training content, for EBP or leadership and management: this would *'make it more agile so it can easily adjust to changes within the government and country*' (Y2 UCO). For Y3, UCO and other stakeholders felt materials were sufficiently contextualized, in part due to MoH development of some materials (see 5.2); however, adequate contextualization of materials from the start is important for future work.

4 COHERENCE: HOW WELL DOES DHSSI FIT?

4.1 To what extent is DHSSi coherent with other interventions targeting district health teams? How is DHSSi effectiveness influenced by other interventions?

Several other development partners supported district planning, data use, management and accountability in Uganda over 2019-22**,** including in DHSSi districts. In particular, USAID supported district planning, management, and governance, but there were also initiatives by other partners and NGOs, including processes related to RBF.

At national level, there was some **ongoing exchange of information with other development partners**. In particular, UNICEF was part of key partner coordination fora such as technical working groups, and had discussed potential joint work with USAID. There were gaps in the effectiveness of early coordination efforts; for example, in Y1, USAID did not have details of DHSSi activities and was unaware of geographic overlap, despite some discussions having been held. In Y3, UCO placed more intentional focus on coordination and exchange of information via the **Health System Strengthening Reflection Meeting** organized by UCO in May 2022. Meeting participants included several development partners and government departments (including the World Bank, USAID Regional Health Integration to Enhance Services (RHITES) and Uganda Health System Strengthening (UHSS) programmes, Enabel, several UN and large bilateral development agencies, the National Planning Authority and Ministries of Local Government and Finance, Planning and Economic Development as well as multiple MoH departments). The high number of different partners and wide government representation constituted a significant success, and the meeting report indicated substantive debate and multiple recommendations for future approaches. Weak partner coordination was discussed at the Reflection Meeting, with recommendations for MoH action to strengthen coordination.

At district level, several other partners supported quarterly or annual reviews and planning meetings in DHSSi districts. For example, in Y3, some partners supported additional meetings to develop the 22-23 ACW, supplementing the workshops organized by DHSSi. There was some coordination and cost-sharing between DHSSi and other partners at district level, particularly for reviews. There was also some cost-sharing with other DHSSi IP activities, including with Baylor-Uganda's PEPFAR programme for some review meetings and DQA activities, and with AVSI for an additional EBP training in Lamwo. This coordination enabled more efficient use of DHSSi funding, and support to planning from other partners contributed to the outcomes targeted by DHSSi by facilitating development and review of district plans and stakeholder engagement in planning. However, responsibilities for harmonizing DHSSi activities at district level were not clearly agreed (UCO saw district coordination as a role for Ips, but some Ips thought coordination was the responsibility of government or took place nationally), and there was scope for more explicit coordination between DHSSi and other partners to avoid duplication, maximize efficiency and ensure complementarity (see Annex F Y1:5 and 6.1.2 for further information, including UCO work to support partner coordination).

However, **coordination of district support for planning remains insufficient**. In particular, there are Overall, there were significant weaknesses in district-level **coordination of partner support for planning and in harmonization of planning processes, and this remained an area of difficulty, though with some improvement in Y3**. DHTs were involved in multiple planning processes, including the annual RBF Performance Improvement Plans noted in 3.2; strategic or annual plans for specific programme areas, such as HIV and malaria; facility PHC plans; and partner plans, as well as the ACW

and PBS. While some DHTs said other plans were integrated in the ACW, reports by a DHSSi consultant in Y2 noted that activities in programme plans (such as HIV) were often not incorporated in ACW. Document review of ACWs also indicated that integration of activities developed through other planning processes was inconsistent, with some ACW only covering activities identified through BNA. As well as different processes to develop district plans, there were sometimes multiple review meetings supported by different partners on their focus areas, such as nutrition or HIV as well as the broader reviews related to RBF. In Kasese, quarterly HIV reviews supported by Baylor-Uganda's PEPFAR project over Y3 added to this picture, although Baylor-Uganda reported efforts to review indicators beyond HIV. Programme-specific reviews hindered efficient use of DHT time, integrated service delivery approaches and coordination of partner funding. Kasese DHT was working to address this by liaising with partners to hold integrated, DHO-led reviews: '*we need to have joint performance review meetings, because we are spending more time in performance review meetings by the partners'* (Y3 Kasese KII02). While not addressing all planning processes, the MoH efforts to align ACW and RBF processes during Y2 and Y3 (noted in 3.2) aimed to address some of these overlaps, specifically integrating the RBF Performance Improvement Plans and ACW. The MoH also suggested that the new government planning template, HMIS001, would facilitate coherent partner support by providing a clear, unified government direction.

With particular relevance for work on BNA and the BNA App, there were **several other partner initiatives on HMIS data,** including work by Jhpiego to develop a curriculum on data analysis and use, and UHSS support to develop an online dashboard that integrates different data sources. The MoH also noted that the BNA App was one of several within DHIS2, and they requested that any training to use the App should be integrated, covering all DHIS2 Apps and not just those supported by DHSSi: *'I have no problem promoting the use of the BNA tool, but I would like to promote it in a comprehensive framework, considering the merits of all the other tools that we have in the DHIS'* (Y2 MoH01). This remained an area for coordination at Y3. In Y3, the MoH indicated that the Health Information, Innovation and Research technical working group was working to harmonize different partner information systems with DHIS2, and this forum provided an opportunity for UCO to ensure alignment of the BNA App.

Other partners were also supporting activities related to recruitment and management. For example, in Y1, Oyam DSC reported support with recruitment from partners such RHITES and an NGO. There has also been management training for DHTs by other district partners, including on human resources and financial management in Kasese through RBF programmes, and training for the DHT and health facility managers in leadership, governance and management by RHITES North Lango in Oyam. UNICEF was planning to support district management training at the time of the Y3 evaluation, so this **will require coordination with training supported by other partners** to avoid duplication.

Beyond specific partner support to EBP and management, there were many other partner activities that involved DHTs in DHSSi districts, which sometimes delayed DHSSi activities; this indicates the high level of DHT time required for different partner programmes and the need for streamlining.

4.2 How does DHSSi align with UNICEF strategies and interventions?

The support for EBP and data quality provided through DHSSi are part of a package of district health systems strengthening interventions that UCO support in multiple districts. **Interactions between DHSSi activities and UCO support for EBP in other districts enabled efficiency, wider cross-district learning and scale**. For example, in Y1, UCO was supporting EBP in eight districts in Karamoja with FCDO support, and in nine districts in the West Nile region through Sida funds. Some DHSSi workshops included Sida and FCDO districts, which helped to share experience across districts and Ips. More generally, design of UCO's district health system strengthening package was '*heavily influenced'* (Y2 UCO) by experience through BMGF-funded activities since 2011, including DHSSi. In terms of scale, in

the 10 DHSSi districts, other donor funding is combined with the BMGF grant to implement district health system strengthening activities, allowing DHSSi to reach a higher number of districts.

There were also **mutual benefits between DHSSi and other UCO programmes within the DHSSi districts**. DHSSi activities were part of a wider package of UCO support, including other health system strengthening activities (such as support for community engagement) and programmes in areas such as HIV and nutrition. Through funding for these other programmes, DHSSi Ips implemented a range of activities such as quality improvement, health worker training, community dialogues, and support to community health information systems. Some of these activities had the potential to support EBP. In particular, community dialogues could feed into problem analysis and prioritisation (see 6.1.2), and work on community health data, if effective, would improve data availability for planning.

Vice versa, EBP support was intended in part to provide an enabling environment for service delivery initiatives: the district health system strengthening package (as provided through DHSSi and other UCO funding) was described as a 'bedrock' for other UCO programmes (Y2, UCO). In particular, UCO saw **district planning as providing direction for other UCO support to the district**, by indicating district priorities, work by other partners and consequently gaps that UCO and Ips could address. DHTs appreciated UCO support for activities indicated in district plans and saw this funding as enabling implementation (addressing some of the concerns for hardware noted in 3.2). However, UCO funding for activities prioritized by DHTs during EBP brought a risk that DHTs' anticipation of UCO support would influence district BNA and prioritisation towards known areas of UCO interest. There were different views on the **extent to which UCO support responded to, rather than influenced, ACWs**. Several DHT members emphasized that identification of district priorities was based on data, and praised UCO for being flexible rather than bringing predetermined activities. However, there were **indications of UCO programming influencing ACWs and DHT prioritisation.** This included DHTs proposing activities *'based on experience of what they fund'* (Y2 Kasese PAMAT) or identifying detailed activities within broad areas of programming determined by UCO, and more direct influence, with DHTs prioritizing specific activities that Ips indicated would be funded. UCO and Ips were aware of this tension and considered that **effective EBP facilitation** could reduce the influence of expected UCO and IP interests. UCO funding for planned activities also brought a risk that DHTs would **rely on UCO to fund ACW and activities identified through BNA**, rather than seeking to identify low-cost activities, efficiencies or other sources of funding. There were clear indications that some DHTs expected UCO to fund activities identified through BNA workshops, which reduces the potential for BNA to drive efficient use of district funding, and potentially hinders sustainability of district action.

In relation to alignment with UCO strategy, UCO saw district system strengthening as a core programme approach, for health and other sectors, and senior management saw DHSSi as *'the main systems flagship'* (Y3 UCO KII02). However, at Y3, there were **plans to adjust the future approach to district EBP support** to address concerns about both relevance for UCO's mandate, and value for improving services. First, supporting overall district planning required significant UCO effort, which could reduce resources for the core focus on children. Given this, UCO had started to liaise with WHO for wider work on district health system strengthening, so that UCO could retain more resources for work specifically focused on children.

Second, there were more fundamental concerns that limited district health budgets and insufficient district control over government and partner funds mean that support to district planning did not generate the intended outcomes. A high proportion of government funding is allocated to staff and supplies, which are determined nationally, and coordination of much partner funding also takes place in Kampala rather than at district level. New World Bank support for pooled funding at district level (under discussion in Y3) could help to address the district resource gap, but UCO saw this as a longer-term prospect. Given limited district funding, **UCO planned to rebalance future support towards facilities**, which often have more

resources than the district. This shift fits with a focus on primary health care in UNICEF's new global strategy. However, UCO planned to continue some district-level support, and the DHSSi team felt district health system strengthening aligned with the new primary health care focus. There was also ongoing reflection on the future approach to BNA. Views varied within UCO, but some staff saw the scorecard as potentially a more productive and sustainable focus given the difficulty and complexity of compiling information for BNA and need for IP support.

In relation to work on recruitment, **DHSSi support to DSCs aligned clearly with future UCO strategy: human resources for health had become a key focus** for the UCO Child Survival and Development programme, due to acute staff shortages, limited engagement from other development partners, and potential to generate change given local government control over recruitment of most staff within the district. Given this alignment, UCO planned to continue DSC support under other grants. UCO had also used other funding to complement district level work through national activities on human resources. This included supporting the launch of the new government Human Resources for Health Strategic Plan, supporting the National Health Service Commission, for example providing a server, promoting MoH understanding of official recruitment procedures, and engaging in policy on revision of staffing norms (designed to rebalance staff numbers in relation to need).

5 EFFICIENCY: HOW WELL ARE RESOURCES BEING USED?

5.1 To what extent were DHSSi interventions implemented as planned? What factors enabled and hindered implementation?

DHSSi plans evolved over time, including adapting earlier plans in light of experience and ongoing learning (as described in 3.3). Assessment of whether interventions were implemented as planned therefore focused on the activities UCO indicated in annual implementation plans and interviews, rather than the exact activities indicated in plans developed at inception stage.

Overall, **many planned activities were implemented**, as described below. Progress was enabled by previous UCO experience in the districts, which provided existing relationships and networks, and by national government support, in particular re-appointment of a MoH official with previous EBP experience during 2020. Helpful and responsive support from UCO was also noted by one IP as facilitating progress. Some planned activities were delayed or not implemented due to internal organizational issues and factors related to the district and national contexts, as explained below.

Core support to annual district plans through EBP workshops was implemented for each DHSSi district, with the exception of EBP support for Oyam in Y1. Although three Oyam DHT members attended an EBP training workshop, a planned district EBP workshop did not take place, and the DHT did not develop an ACW for 2020-21. This **gap in implementation was partly due to DHSSi being implemented directly by UCO in Oyam**, without an IP, and insufficient UCO capacity and presence in Oyam to provide adequate support. In addition, there were difficulties related to delays in the DHT accessing funding for workshops (partly due to district financial systems); COVID-19 (which prevented workshops, and the district then asked for DHSSi funds be reallocated to COVID-19); and a change in DHT leadership (an acting DHO attended the EBP training, and the new DHO was unfamiliar with EBP and busy with other activities associated with the new role). Without the workshop, district leaders were not oriented on BNA, and this affected support for and development of the 2020-21 ACW. Some other activities anticipated by Oyam DHT were also not conducted, including support to data quality. UCO saw the lack of a DHSSi IP in Oyam, and for Y3 in some other DHSSi districts, as a continuing challenge for DHT engagement and progress on EBP. However, the Y3 evaluation found that Oyam DHT made faster progress on the 2022-23 ACW than evaluation sample districts that did have an IP, which suggests IP support within the district is not necessarily a determining factor. Oyam's progress is likely to have resulted in part from a motivated biostatistician, but was also assisted by support for planning workshops from non-DHSSi partners (see Annex F Y1:8).

In districts with Ips, there **were gaps and delays in EBP support due to limited initial EBP experience among Ips and delays in IP funding.** The DHSSi Ips had not previously used BNA, so they required additional technical support and time for training. Growing IP familiarity with EBP in Y2, partly through the 2020 refresher training, enabled progress. In Y1, delays in project start-up and transfer of funding to new Ips meant EBP training was later than planned, and in Y2, a break in IP funding disrupted activities: partly due to a new UCO Country Programme and delayed approval of new annual Partner Cooperation Agreements, Baylor-Uganda did not have a grant agreement from January to mid-April 2021. This meant some Baylor-Uganda staff had to leave their jobs, and activities that could have supported planning during that period (such as additional follow-up support for DHTs) were not undertaken. In Y3, funding constraints limited some IP activities to support EBP, including support for quarterly reviews.

ToT for DHSSi Ips was undertaken as planned, including training in Y1 and online refresher training in Y2. However, there were **delays in implementing a wider national ToT to build national capacity on BNA and EBP**. This 'master trainer' ToT workshop was planned in Y1 but not conducted due to UCO refocusing staff time on COVID-19 and social distancing restrictions, and then not conducted in Y2 due to insufficient funding. UCO managed to organize the ToT in Y3, but planned follow-up activities did not take place. The ToT was designed to develop regional networks for ongoing support to district EBP, and UCO planned to build on the ToT through meetings with regional teams, followed by organization of regional trainings, but these steps were not undertaken due to lack of funds (see 7.1).

Progress on the BNA App was also slower than anticipated (see 3.1). Indicator mapping and consultation on the BNA App were conducted in Y1, but final configuration of the App and roll-out were delayed by a national decision to revise HMIS tools and delays in switching to the new tools, which affected progress on the App in 2019 and required work to develop alternative systems and integrate historical data (see 3.3). As well as challenges with the DHIS2 system, UCO thought the difficulties resulted partly from contracting via UNICEF headquarters and Oslo University, such that UCO lacked full control over HISP's work at country level. Work on the App was also delayed by UCO focusing on COVID-19 in 2020. Delays in finalizing the App meant some related activities were postponed or adapted; for example, support for district biostatisticians to produce dashboards using the BNA and scorecard apps was planned in Y1, but switched to training on the new DHIS2 system and tools. Training on the BNA App was then planned in Y2, but not undertaken due to insufficient funding.

In relation to work on **district accountability**, as discussed in 1.3, activities to strengthen accountability via work with higher-level district structures were not planned in detail or implemented, in part due to delays with the PEA. Planned support for district recruitment was partly implemented including work with the national Health Service Commission to revise recruitment guidelines, and some support for DSCs. However, in Y2, work with DSCs in some districts was delayed by elections that brought changes in DSC membership, so that DSC meetings could not be organized until the new DSC was constituted. Support to DSCs was also restricted in Y2 and Y3 by the high cost of DSC meetings and insufficient UCO funding. The effectiveness of DSC support for district recruitment was limited by an insufficient government wage bill (see 3.2 and 6.2); UCO planned a wage bill analysis in Y2, but this was not undertaken due to insufficient UCO funds.

Support for DHT management training was planned in Y2 but not undertaken due to insufficient funds, and then not undertaken in Y3 due to delays with revision of the district management manual intended to support training. The revised district management manual was initially planned for development by September 2021, but the first draft was only prepared by the FPD consultant in March 2022. The MoH rejected this draft, advising that preparatory work was needed to define the focus, improve alignment with district structures, and secure approval from a working group or steering committee. MoH also thought the consultant hired by FPD had insufficient knowledge of MoH systems, so a new consultant, approved by MoH, was hired. UCO initially planned to use the manual for district management training by July 2022, but delays in developing the manual meant this training had not been conducted by the time of the Y3 evaluation.

This description of progress indicates **several factors that hindered implementation, including COVID-19, funding constraints and changing government systems**. In relation to COVID-19, restrictions on meetings, safety concerns, and government focus on COVID-19 in Y1 and Y2 delayed some district EBP and DSC activities and limited participation in planning workshops. Some funds and UCO and IP staff time were also redirected to the COVID-19 response. In relation to funding, DHSSi activities and the district health system strengthening package were implemented through combined support from BMGF for DHSSi and funding other donors. Particularly in Y2, funding cuts from other donors and reallocations to COVID-19 hindered implementation. As suggested above, there were also

challenges related to national and district factors, such as a change in the DHIS2 system and district elections. Another national factor was a change in the government planning approach, with a move to a new programme planning over Y2-Y3. A lack of clarity on the new process created uncertainty about the required approach to DHSSi support for 2022-23 ACWs, delaying preparations.

5.2 Were interventions delivered with the planned and required timing, reach, content, and strength?

This section focuses on EBP support, as support to DSCs was not a primary focus for the evaluation and other management activities had not been implemented at district level (see Section **Error! Reference source not found.**).

In relation to **timing**, EBP workshops were generally intended to take place in October–December, in line with the government planning cycle. Particularly in Y1, workshops were behind schedule due to delays in project start-up and transfer of funding to Ips, and EBP workshops were only held in February–March 2020. For some districts, later workshops to complete ACW were held in July–September 2020, after implementation of plans should have begun, and several months after district budget submissions. Timing improved in Y2, with EBP workshops taking place in November-December 2020 for all districts except Oyam, where the workshop was delayed to March, after the budget had been submitted. In Y3, EBP workshops were held in October for districts supported by AVSI and UCO, and in January for districts supported by Baylor-Uganda (including Kasese). While Baylor-Uganda and Kasese DHT did not have concerns about timing, some MoH staff saw January as too late and recommended starting support earlier, and there were also different views among DHT members about whether workshops in December (for Y2) and October (for Y3) were sufficiently early; different views suggest timing needs discussion with DHTs. In relation to **reach**, invited stakeholders generally attended EBP training workshops, and **a perceived strength was involvement of key district executive officials and political figures**, including CAOs or their representatives, councillors, district planners and finance officers (specific participants varied between districts and years; for example, the regional EBP workshop that was observed included district planners but not other council members). When wider council members attended, this built understanding between the DHT and council and generated political support for EBP: *'many stakeholders got to know how we come up with what we do and there was also ownership*' (Y3 Kasese DHT02). Involving the district planner also facilitated alignment of planning with budgeting, including the link to the PBS, PIAP and RBF in Y3. There were, however, drawbacks of wider stakeholder participation: in Y3, one MoH representative suggested workshop participation should focus on the DHT members who undertake planning, because providing information for district leaders who are less immediately involved takes significant workshop time.

An ongoing limitation was that EBP workshop participation was generally restricted to the biostatistician and one or two other DHT members from each district. EBP **skills consequently remained limited to a few DHT members**, and although other DHT members may have been present in planning workshops, they tended to rely on a few DHT members and particularly the biostatistician to conduct BNA: *'when it comes to that part of using the bottleneck, majority didn't know. So mostly they just sit and wait until after you have finished'* (Y2 Lamwo DHT02). When asked about core aspects of the ACW process, such as why particular intervention areas were selected for BNA, DHT members often suggested asking the biostatistician as the person involved. Limited EBP skills among the wider DHT reduced use of BNA in planning. Training only a small number of people also increased the risk of districts losing EBP skills due to staff leaving, and the high reliance on the biostatistician created a particular skills and information gap in the event of staff turnover (as found in Iganga over Y2, where the DHT struggled to retrieve BNA documents developed for planning from the former biostatistician).

To widen skills, **DHTs requested that training should include the whole DHT** so that they understand the ACW and EBP process. In Y3, the number of district participants was higher for some regional EBP workshops, for example there were around 20 participants from Kasese, including sub-district staff as well as representation of district and regional leaders. However, the Kasese DHT still felt some district team members were missing, such as the accountant, and several programme focal points sent representatives, which meant additional discussion was then required at district level to liaise with the main programme leads. For both Lamwo and Oyam, the main DHSSi workshops only had five participants from each district, but **subsequent workshops were held that broadened engagement.** For Lamwo, AVSI and UCO cost-shared a second EBP training for a wider group of DHT members, and for Oyam, RHiTES North Lango and UHSS supported a regional workshop (March 2022) that included the DHT, other DHO staff and several district partners, including UNICEF.

As well as covering all DHT members, DHTs thought **EBP training needed extending to sub-district and facility managers**, to bring frontline understanding for causal analysis, and to help facilities to develop their plans (a view shared by some in the MoH). See 6.6 for further discussion. Some DHTs also requested increased **community** involvement (see 6.1.2).

Workshop location and structure affected participation. EBP workshops were often held outside districts, partly to motivate attendance, and often combined districts in a regional workshop. The **regional approach to workshops** was appreciated by DHTs for enabling **exchange of learning between district**s, and Ips saw this model as both **saving facilitation time and costs**, and **supporting DHT engagemen**t by taking them away from the district setting. One MoH official also saw these workshops as giving district teams time to concentrate and '*think out of the box'* (Y3 MOH03). However, some DHT members noted that **workshops outside the district limit participation** by both the district team and council officials, and holding workshops within the district could make wider DHT participation affordable: *'it would be nice to have them here so we have a wider group that the team comes to train'* (Y3 Oyam DHT01). A key **MoH respondent thought regional workshops should be replaced by mentoring**, using district visits to support DHTs; the latter approach was used in Enabel support to districts, and seen as more effective. Some DHT members also thought that workshops just for one district would improve engagement and discussion, compared to the regional workshops: *'when you sit alone as a district with a mix of people from different areas, you better understand your situation, you find people waking up and contributing positively and giving in their ideas'* (Kasese Y2 DHT02).

As noted in Section 2.5.4, assessment of workshop participation focused on official positions rather than gender balance, in line with DHSSI's primary considerations for workshop attendance. Rapid review of a selection of participant lists suggests participation was usually skewed towards men, reflecting gendered health system hierarchies (with more men in senior positions). The gender balance varied significantly between districts and workshops; for example, in Y3, two out of five participants from Oyam attending the EBP training workshop were women, compared to just five out of 27 participants for Kasese[22].

Content of regional EBP workshops was generally seen as strong, with a high level of technical knowledge from facilitators. DHTs particularly **welcomed facilitation by senior MoH officials**, for providing guidance on government procedures, and Ips saw **MoH facilitation** as important to motivate EBP and demonstrate government ownership. **Facilitation by DHT members from other districts** also worked well: the Y2 Oyam workshop was facilitated by the Moyo Assistant DHO along with AVSI, and this

[22] EBP Masaka workshop 2021 participant list; Baylor-Uganda (2022) TRIP REPORT: Five-Day Workshop to Develop Integrated District Health Plans (One-Health Plans) for Isingiro, Ntungamo and Kasese districts from 24/01/2022 to 28/01/2022. The group was larger for the Kasese workshop because it involved a wider selection of district officials, facility managers and other stakeholders, whereas the Oyam workshop was limited to representation of the DHT and wider executive.

peer approach helped communication and explanation: *'he was very insightful, because he is talking to the fellow ADHO, and they understand what they should do'* (Y2 Oyam DHT02). Gaps in training quality were reported primarily by Ips during Y1, and included insufficient customization of training materials (see3.3); delays in finalizing the BNA App and poor internet access in some venues, which reduced time to practise BNA; and a need to balance theory with more time on practical application of BNA (addressed through changes to the workshop agenda in Y2, see Annex F Y1:9).

In relation to **sufficiency** of support, participants and trainers felt the Y1 IP ToT and the regional and district workshops for DHTs were too short to adequately learn and apply EBP techniques. BNA skills grew among DHT members who attended workshops each year, but turnover and insufficient skills sharing within DHTs reduced opportunities to reinforce learning, and the Y3 workshop reports and IP interviews continued to indicate that it takes significant time for DHT members to understand BNA. DHTs in the evaluation districts did not mention difficulty in understanding BNA during Y3 training and reported capacity to undertake BNA without external support (see 7.2), but observation of one regional EBP workshop indicated various difficulties in development and use of BNA charts (for example, related to indicators and denominators), and more difficulties may have been experienced by other DHTs. A further constraint was **limited time in Y3 workshops, which meant that some presentations were rushed and districts only completed early steps** of their ACW. To support EBP skills and to encourage DHTs to complete their ACW, DHTs and Ips suggested that more follow-on support was needed after the main EBP workshop. Some follow-on support was provided, but this varied between Ips and years, and IPs thought **additional follow-on support was needed**, including soon after the main training workshop to sustain momentum. In some cases there was also support for later meetings from other partners (see Annex F Y1:5). The **need for additional support reflected gaps in DHT motivation to complete plans** (see 3.2 and 6.1). Even with follow-on support, however, there were notable gaps in ACW completion and quality (see 6.1).

The Y3 **training of master trainers** was attended by the Ips, some DHTs, the MoH and universities. DHTs and Ips **praised the workshop content as comprehensive and informative**. However, there were concerns about **the agenda being too crowded** for the time available, particularly given that some participants were new to EBP. It was also suggested that the MOFPED should have been present, for guidance on budgeting and the link to PIAPs.

Particularly in Y1 and Y2, there were specific concerns about **insufficient support in Oyam**, where UCO provided direct support rather than working with Ips. As described in 5.1, a combination of insufficient UCO capacity and other factors meant some planned Y1 activities were not held, and in Y2, Oyam DHT described technical and financial support from UCO as *'very scanty'* (Y2 Oyam DHT02), with a lack of support for planned activities such as reviews, HMIS training and DQA. See Annex F recommendation Y1:8.

6 EFFECTIVENESS: IS DHSSI ACHIEVING ITS OBJECTIVES?

6.1 What changes in district planning have occurred due to DHSSi at district level?

Assessment of change in district planning relates to intermediate outcomes in the DHSSi ToC, specifically improved data use for planning, monitoring and course correction, and improved execution of district health plans.

Quality of district planning was examined in each evaluation round, considering ACW developed over that year of DHSSi, and review and implementation of ACW developed the previous year that were then being implemented. The Y1 evaluation assessed development, implementation and review of 2019-20 ACWs, which were developed before DHSSi began, and development of 2020-21 ACWs, the first plans supported by DHSSi. The Y2 evaluation examined implementation of 2020-21 ACWs, and development of 2021-22 ACWs, and the Y3 evaluation examined implementation of 2021-22 ACWs and development of 2022-23 ACWs.

Development, implementation and review of ACWs were considered based on PAMAT domains, including use of BNA, causal analysis, attention to underserved groups, prioritization, inclusion of prioritized activities within ACWs, stakeholder involvement, ACW review and implementation, and examined using data from group discussions, interviews and document review.

As explained in Section 2, use of the PAMAT for evaluation findings primarily involved the qualitative data and analysis underlying the PAMAT assessment, rather than quantitative analysis of the scores. PAMAT scores are in Annex G. Attention to underserved groups was examined as part of the assessment of district planning, and findings are discussed in Section 6.3. Analysis of the quality of district planning focused on the three evaluation districts, but similar findings were recorded in PAMATs for the remaining DHSSi districts.

As noted in 3.2, DHTs saw DHSSi support for biostatisticians to conduct DQA and associated activities as strengthening quality and analysis of routine district data. This support for data quality was not a focus for the evaluation (as explained in 0), so it was not possible to adequately assess the results and as such, the evaluation does not report on effectiveness of this DHSSi activity.

6.1.1 Development of ACWs

DHTs in each district appreciated DHSSi's financial and technical support for district planning via regional EBP workshops and follow up meetings or assistance. All DHTs saw DHSSi support as building capacity for planning (particularly data use) and as strengthening the quality of planning since 2019 (see 3.2).

While DHTs reported that DHSSi improved their plans, document review and detailed discussion in interviews and focus groups suggested that the extent of improvement varied between districts and was sometimes limited, and that improvement was inconsistent, with examples where quality of planning deteriorated between years.

In Kasese and Lamwo, DHSSi appeared to enable continued EBP, rather than significant change in planning. Both districts used BNA for the baseline 2019–20 plans (developed before DHSSi training).

While DHTs said that DHSSi helped to strengthen planning, their also reported using BNA for some time and said the approach to planning had not changed (*'The processes for 2019–20 and 2020–21 are the same ... It's the third year for us using BNA, so there isn't a big change, this is what we have been doing'*, Y1 Kasese PAMAT), or described improvement as happening over previous years, rather than during DHSSi *('we used to just rely on the old plans, but for the last three years, we have been using the data we generate from facilities to inform our planning'*, Y2 Lamwo DHT02). For these districts, there was limited overall change in PAMAT scores for quality of ACWs over baseline to Y3: the quality of plan documents for 2019–20 (baseline) and in 2020–21 (DHSSi Year 1) was similar, and in later years, there were areas where quality declined as well as improved (see below).

Improvement in planning was most evident in Oyam, due to a low 2019 baseline: the 2019-20 ACW was largely identical to that of Kasese (to the extent of including the names of some facilities in Kasese), suggesting the DHT lacked either skills, time, or interest to fully engage with planning in 2018-19. Y1 progress remained limited, as the 20-21 ACW was not completed (partly due to limited DHSSi support for reasons explained in 5.1). Later DHSSi support and EBP training therefore had potential to make a significant contribution, and there was marked improvement in Oyam's planning in Y2: the 2021 EBP workshop provided technical support and a forum for people to come together and develop the 2021-22 ACW: *'there was the whole week for planning which made an improvement in our plan*' (Y2 Oyam PAMAT). **Changes in PAMAT scores compared to previous years often reflected the extent to which plans were completed, whether plans indicated new analysis (rather than repeating sections from previous years), and whether other documents provided evidence of BNA**. For example, in relation to change between Y1 and Y2, causal analysis and prioritisation for Kasese's 2020-21 ACW were largely identical to the 2019-20 ACW; these sections were updated for 2021-22, providing more evidence of new analysis. This may have been because DHSSi supported a full planning workshop for Kasese's 2021-22 ACW, whereas only a short finalization workshop was held in Y1. For Lamwo, documented quality of planning declined between Y1 and Y2: although the DHT described using the BNA planning steps, the 2021-22 ACW did not include causal analysis or prioritisation, BNA charts were identical to those for 2020-21, and budgeted activities were very similar to the previous year. There were similar variations between Y2 and Y3. In Oyam, the prioritization table was completed in the 2022-23 ACW, an improvement from the ACW provided in Y2, and in Lamwo, there was evidence of new causal analysis and prioritization in the BNA Excel for 2022-23 (although information on BNA, causal analysis and prioritization was largely missing in the ACW). In contrast, some scores declined because associated ACW sections were incomplete: information on BNA was incomplete in Kasese's ACW, and in both Lamwo and Kasese, the activity plan and budget were incomplete. Similarly, the 2022-23 ACW section on BNA was not filled for four of the other six DHSSi districts for which a plan was available (with no plan provided for Bugweri).

As this suggests, despite DHSSi support, there were continued **gaps in quality of ACW**. This finding was supported by other reviews of district ACW: the DHSSi consultant's review of ACW during Y2 (covering 2021-22 ACW for Lamwo, Kasese, Oyam and 9 other UCO-supported districts, including some under DHSSi) reported similar issues, noting incomplete sections and *'major problems'* in problem analysis, activity plans, and monitoring and evaluation sections[23].

These issues suggest **insufficient quality assurance**, within DHTs and by Ips. Gaps in review of final plans were also indicated by inconsistent accounts of planning from Ips and in some cases DHTs, compared to ACW documents. For example, in Y2, AVSI reported working with the Lamwo district health information officer to ensure the 2021-22 ACW was properly completed. However, as above, the ACW

[23] UNICEF, 'Report on Assessing the Progress of the Development of District Health Annual Work Plan FY 2021/2022, Key Challenges, and Recommendations for Improvement', UNICEF Uganda, 2022.

was missing key sections. Document review indicated similar issues outside the evaluation focus districts[24]. This may reflect weak documentation, but also suggests insufficient quality assurance. The DHSSi consultant's assessment during Y2 provided some monitoring and generated learning, but only covered some districts. The **monitoring tools** prepared by the consultant were designed to support quality assurance, but these tools required further clarification and tailoring[25], and the process and capacity to use these tools was not established.

Incomplete 2022-23 plans partly resulted from the **additional work required for the new government HMIS001 planning template**, with extra work needed to master a new format and to compile district data. DHTs saw HMIS001 as **streamlining the link to budgeting** (see below), and providing a comprehensive situation analysis. However, they had **concerns about the volume of information required**, and difficulty in getting some information. HMIS001 includes over 20 tables for situation analysis, taking up over 90 pages in Kasese's ACW. Combined with the revised format for activity plans and budgets, some DHT members saw this as making HMIS001 more difficult and time-consuming, particularly as it was the first year of use. However, incomplete plans also resulted from **prioritization of other activities by DHT members** and difficulty in securing their time for planning, particularly in Lamwo and Kasese (reflecting the challenges with motivation indicated in 3.2).

A related change for 2022-23 planning was that the MoH discouraged **use of the EBP Excel template**, preferring that districts focus on HMIS001. UCO and Ips saw the Excel template as compatible with HMIS001, serving as a working document to facilitate BNA calculations, and it was used for 2022-23 planning in several DHSSi districts. Kasese DHT in particular wanted to continue using the Excel template because it eased their work, for example by automatically bringing together BNA on different programme areas in the consolidated plan sheet. They suggested that MoH should support use of the Excel template alongside HMIS001: '*if this template is given to Ministry of Health to champion the dissemination, and they own it, as a Ministry of Health tool, it would support us districts…it guides us very well, the BNA template'* (Kasese KII02).

Turning to specific aspects of planning (assessed via the PAMAT), **BNA charts** were almost always developed, though in some cases not updated from the previous year. BNA was applied to some but not all key UNICEF priority areas, and the number of programme areas with documented use of BNA varied between districts (for example, five in Lamwo, six in Kasese and over 10 in Oyam for 2022-23 ACW; this constituted a slight increase in Lamwo, significant increase in Oyam, and reduction in Kasese compared to Y2). EBP guidelines advise use of BNA for intervention areas that are shown as underperforming, but this was not consistently followed**.** In some districts, the programme areas where BNA was applied differed between the BNA Excel and the ACW, primarily reflecting incomplete plans.

Application of BNA was affected by data availability and skills. On the former, DHTs indicated that lack of DHIS2 data in some programme areas (such as health promotion, non-communicable diseases, and neglected tropical diseases) prevented BNA. However, the number and range of interventions where BNA was used varied between districts, suggesting scope for wider use of BNA within DHIS2 availability. In relation to skills, as noted in 5.2, there were concerns that few DHT members fully understood BNA,

[24] For example, the IP-completed Y2 PAMAT for Kamuli reported full use of BNA for 2021-22, but the BNA charts, causal analysis and workplan were largely identical to 2020-21, and the workplan and budget were labelled as 2019-20, providing little evidence of new analysis.

[25] For example, there were potential gaps in the tools, including comparison against previous plans to identify 'copy and paste'; the rubric was not fully defined; the tools do not refer to integration of activities identified through BNA with other district activities; and indicated standards may not fit district needs (e.g. a requirement to include 20 prioritised solutions), or may not be essential for effective planning (e.g. the tools required a SWOT rather than Potentials, Opportunities, Constraints and Challenges matrix, which reduces flexibility and is unlikely to affect quality of planning).

and DHT discussions suggested gaps in understanding.

In relation to **causal analysis**, DHTs used the 'whys' approach to identify root causes. Causal analysis was broadly logical and provided some specificity, but logic was unclear in some cases, and some documented causes were broader and less underlying (for example, referring to community attitudes or inadequate sensitization, funding, and staffing). Alignment of causal analysis with evidence was also sometimes unclear. For example, 'negative attitudes of pregnant mothers' was indicated as a cause of low ANC attendance, but attendance is likely to reflect a complex mix of cultural and socioeconomic factors.

DHTs generally used a prioritization matrix with scoring for activities based on criteria such as feasibility, affordability, acceptability, and equity. However, this matrix was sometimes not completed, and when used, there was often limited differentiation in scoring (with many solutions and criteria scoring 3). In addition, activities identified as lower priority were still sometimes included in the action plan and budget, so it was not clear that prioritisation consistently helped to reduce possible activities in line with resources. The **link between the BNA exercise, prioritisation table, and final action plan was often unclear**, and **BNA was not fully streamlined or integrated with the wider analysis in ACWs.** For example, in some cases, the programmes where BNA was applied differed from those in the prioritisation matrix, and programmes in the final activity plan were different again, such that the activity plan did not consistently link to situation analysis and prioritisation. Activity plans are expected to include activities beyond those identified through BNA (as BNA is only used for a small number of high priority or tracer areas). However, there were evident inconsistencies, for example with some programme areas examined through BNA not included in the prioritisation matrix, and some programmes in the prioritisation matrix not evident in the final plan. For 2022-23, most DHSSi districts had not completed the activity plan and budget section of HMIS001 in the documents available, which meant it was not possible to assess whether activities derived through BNA were included.

DHTs generally reported that plans aligned closely with district priorities. Some mentioned a need to also follow ministerial priorities or the influence of district political structures (particularly on locations for new infrastructure), but they suggested it was possible to work within and negotiate these requirements. Partner interests were also discussed as influencing plans (see 6.1.2).

In relation to alignment between the plan and budget, as described in 2.2, ACW were often completed after district PBS submissions. There was significant **progress in aligning the plan and budgets for 2022-23**, facilitated by the new HMIS001 (see 3.2), and by guidance from district planners and the MoH during and after EBP workshops (5.2). This guidance and HMIS001 also supported consideration and integration of funding from RBF and partners. Oyam DHT emphasized that the Y3 EBP training brought a step-change in their understanding of integration, with activities derived from BNA, other programme plans, RBF and partner funding now combined as one plan in HMIS001 and the budget submission: *'It finally clicked, I finally understood how to bring together all the different components and have just one plan and bring BNA in the middle'* (Oyam KII02). All districts reported that their budgets were developed based on the plans in Y3. As activity plans were incomplete in some districts, it was not clear how plans were used for earlier stages of budgeting, but final budgets had not yet been submitted in all districts at time of the Y3 evaluation (budget submissions were delayed in many districts for 2022-23, partly linked to the move to PIAPs and reconfiguration of government budgeting systems). Difficulties with the online budgeting system were particularly mentioned in Lamwo, with repeated errors that the DHT worried would affect alignment with the plan.

These findings suggest the ToC causal chain link from capacity building in data use to development of evidence-based district plans was not consistently realized, due to a range of factors related to both DHSSi design and implementation and aspects of the district and national context.

6.1.2 Stakeholder engagement

Stakeholder engagement was assessed as part of the PAMAT, considering involvement of district health partners and community engagement in planning.

Partner involvement was a particular emphasis for DHSSi in Uganda, through the idea of an integrated plan that should bring together activities from all district health stakeholders. DHTs were encouraged to include partner activities and funds in their plan, and to include unfunded priorities that partners could be asked to support. DHSSi supported partner mapping to feed into ACW, and some plans included partner-funded activities.

The main forum for partner input to ACW was usually a district budget conference, where priorities were shared and partners were asked to support unfunded priorities. This conference takes place at a relatively late stage in the planning process, once activities are planned. The Uganda MoH BNA manual recommends earlier stakeholder participation as part of the BNA process to support the quality of causal analysis: partner involvement in EBP provides additional expertise for problem analysis and prioritisation, and can help to generate a shared understanding of district priorities, which can in turn support alignment of partner funding with the ACW. There was **some partner participation in DHSSi-supported EBP workshops, but this was generally limited.** For example, in Y2, some partners attended the EBP workshops for Oyam and Lamwo, but Lamwo DHT in particular considered attendance to be insufficient compared to the number of active partners in the district: *'only a few came*' (Y2 Lamwo DHT02). In Y3, apart from DHSSi Ips and Save the Children for Kasese, **district partners did not attend the regional DHSSi EBP workshops, which DHTs saw as a gap** (participants were indicated in documents, interviews and group discussions, and through observation of the regional EBP workshop for Oyam).

Where DHSSi supported **district reviews**, these sometimes provided an **additional forum for partner engagement.** DHTs indicated that partners contributed to understanding of problems through discussion in quarterly reviews, and learning from these reviews was then sometimes used during planning meetings. Reviews also provided a forum to seek partner funding. In Y1, for example, Oyam DHT saw a review meeting supported by DHSSi as improving partner coordination and identifying areas where partners could help. DHSSi also supported some partner coordination meetings, which districts are expected to hold quarterly. These meetings do not directly relate to ACW but can provide relevant information on partner activities that DHTs can use when planning.

Beyond DHSSi, **other initiatives supported some partner engagement.** For example, for 2022-23 ACW, partners were involved in a regional planning workshop supported by RHITES North Lango for Oyam. This workshop provided a forum for partners to contribute to problem analysis and to identify areas for partner funding, which helped the DHT to develop an integrated plan covering all activities. There was also some partner engagement via other district government or DHT activities, such as input via a district consultative committee in Lamwo, and Kasese DHT asking partners to share their plans so they could be attached to HMIS001.

Improved partner engagement since 2019 was particularly noted by Oyam DHT. This was partly linked to a broader change in planning (away from just developing a budget, see 3.2), but also resulted from the regional workshop supported by RHITES for 2022-23 ACWs. Lamwo DHT members also reported some improvement in partner engagement since 2019, with more partner attendance at district budget consultative meetings. However, there were some **concerns about insufficient partner input in all districts**. Gaps in development partner involvement were also noted in the PEA report, HSS Reflection Meeting and Y2 assessment by the DHSSi consultant. Issues included insufficient sharing of plans and budgets by partners and low attendance at planning meetings, or attendance by staff without the decision-making authority to adjust budgets and activities, as well as limited engagement in early

planning stages such as BNA. Lack of information sharing, and in particular limited sharing of partner budgets, hindered DHT planning: *'we don't know the budget. We are planning in the air. This gives us a challenge in projecting how much we ought to plan for and what we should plan'* (Y2 Kasese PAMAT). While ACW were intended to include all partner activities, gaps in partner participation and information sharing meant some partner activities were not included: some partners '*typically do parallel things'* (Y2 Lamwo DHT03) and further work is needed to ensure *'one plan, one implementation, one M&E* [monitoring and evaluation] *framework'* (Y2 Oyam PAMAT).

In relation to **alignment of partner funding**, there were examples of partners providing support to unfunded activities indicated in ACW or responding to DHT requests for support, but insufficient alignment of partner budgets was widely reported. DHTs saw some partners as promoting activities that were not DHT priorities and as having limited flexibility to support activities prioritized by the district: *'Partners come with pre-set programmes from their funders. … we might not get them to support activities that are not in their minds'* (Y1 Kasese DHT 03).

To address these gaps, the DHSSi consultant developed a **stakeholder coordination checklist** during Y2, covering areas such as partner memorandum of understanding and engagement in planning. However, systems to use the checklist were unclear, and there was no evidence of its use to support Y3 planning.

At national level, **UCO sought to promote partner coordination through input to the new MoH COMPACT agreement**, which outlines how development partners should harmonize and align with the MoH. In particular, during Y3, UCO promoted approaches for coordinated EBP, such as partner participation in development, monitoring and review of district plans. This is a **longer-term approach** and there is ongoing discussion about the COMPACT agreement, but with potential to support partner engagement in planning.

In relation to community engagement, all three districts reported some community input to planning. The reported approach varied between districts and years, but tended to include some community meetings, Health Unit Management Committee (HUMC) input to health facility or sub-district planning, and some community representation in the main district planning meetings, including through elected representatives or community development officers as well as HUMCs. Particularly in Oyam and Lamwo, the DHT described increasing community input since 2019. For example, for 2022-23 planning in Oyam, community dialogue meetings were held at health facilities with the HUMC, CSOs and other community representatives, using the community scorecard, and these discussions were used to inform the ACW.

Community engagement was **not an area of direct DHSSi focus**. However, **HUMCs were represented in some regional EBP workshops** (e.g., Isingiro and Ntungamo in Y3), and **Ips supported community dialogues through other UCO funding**, providing information that DHTs and facilities could use in district planning. There was also some support for community engagement from other partners. For example, partners such as RHITES supported community dialogues in Oyam and invited the DHT, providing an opportunity to hear community concerns.

Despite improvements, communities did not have decision-making power in planning, and DHTs suggested that there should be more community representation in planning meetings or more work to identify community views. There were some suggestions that DHSSi should provide more support for community engagement, with more emphasis on bottom-up planning that starts from the community: *'we need to plan from what is happening in the community, embracing the priorities of our community so that it becomes our basis for planning'* (Y2 Kasese PAMAT).

6.1.3 Review and implementation of 2021-22 ACWs

As for other components of planning, review and implementation of ACW were assessed as part of the PAMAT.

All **districts held quarterly performance reviews**, though not always on time, and COVID-19 disrupted schedules and reduced the number of participants in some districts in 2020. DHTs discussed using data during reviews and examining progress on indicators, and there was some use of **data visualization through** the RMNCAH scorecard. DHTs saw reviews as a key process driving improvement, through providing an opportunity to identify and plan action on areas of low performance, and to coordinate with partners and secure their support (as noted above). They thought reviews had improved since 2019, for example with improvements in setting action points, involvement of the wider district executive, more use of data, or more serious engagement from district health managers. While DHTs saw quarterly reviews as important and as improving, these **reviews** tended to focus on **assessing key performance indicators, linked to RBF, rather than directly assessing progress with the activities planned in ACWs**. Ips and some DHT members saw this as an area needing improvement. In Kasese in Y3, there was specific review of planned activities, with a biannual review focused on the ACW. However, the DHT felt further improvement was required, including development of systems to document implementation of planned activities (the financial reporting system did not allow specific activity tracking).

Reviews were supported by different district partners. **DHSSi provided funding for quarterly or annual reviews in some districts**, with the level of support varying between years. Ips reported encouraging a focus on ACW rather than just key performance indicators, but as with other quarterly reviews, DHSSi-supported reviews did not always focus on explicit monitoring of activities in the ACW. For example, a Y3 AVSI-supported review in Kiryandongo focused on facility RMNCAH performance and lessons on quality of care, and in Kasese, Y3 quarterly reviews were cost-shared with Baylor-Uganda's PEPFAR project and focused on HIV. There was some additional support to review progress on bottlenecks, for example UCO worked with a small group of DHT members in Kasese to review progress on BNA indicators in Y3. **Use of the BNA Excel to monitor progress appeared limited overall**, but Oyam DHT referred to using the Excel in District Health Management Team[26] meetings and facility reviews, and saw it as providing a clear way to track activities. Some indicators related to bottlenecks were also considered in the main quarterly reviews, allowing assessment of progress. To strengthen reviews and support implementation, UCO planned to support tools for ACW monitoring; initial work was conducted with AVSI in Y3, but progress was delayed (see Annex F Y2:3).

Assessment of ACW implementation was based on DHT reports on implementation of the overall plan and of specific activities related to bottlenecks. Estimates varied significantly between DHT members, for example from 50-90% in Kasese in Y3, and lack of documentation prevented rigorous assessment. There were some DHT reports of improved implementation, for example due to fewer delays in receiving funding and more attention to the ACW in Y3, but the varied estimates and lack of documentation hindered reliable assessment of change. In general, Y3 implementation appeared similar to Y2 at somewhere between 50-80%.

Implementation was assisted by support from partners and regular performance review, and DHTs saw UCO as enabling implementation through support for reviews and through technical support or funding to implement planned activities.

Barriers to implementation indicated by DHTs were primarily related to funding, including insufficient budget ceilings, and government, RBF and partner funds being less than expected or delayed. Some

[26] In Uganda, the District Health Management Team (DHMT) refers to a wider body that includes stakeholders beyond district government health managers.

DHTs also mentioned difficulties related to budgeting systems, including regulations such as a set amount that can be released at a time, and insufficient alignment with the MoFPED budgeting and Integrated Financial Management System. Implementation was also hindered by redirection of resources towards emerging needs and unexpected events, including Ebola and floods for Kasese, and COVID-19 in all districts in 2020. Distancing restrictions prevented some activities such as outreach, government funds were reallocated to COVID-19, DHT time was needed for the response, and partner activities and funding were reduced (the Kasese 2020–21 plan noted that donor funding was 51% of the projected amount for the last financial year, as partner activities stopped due to COVID-19). Implementation was also affected by insufficient dissemination and awareness of the ACW among focal points.

There were examples of effective management helping to overcome funding gaps. For example, Kasese DHT reported using strategies such as integrating activities or reducing frequency to manage reduced budgets: *'Resources are never adequate. But you work within them … You improvise on reducing the required funds to implement the activity. Like EPI [expanded programme on immunization], where we are meant to deliver vaccines to all health centre IIIs, but because of a lack of resources we end up delivering them to selected points where health workers will come'* (Y1 Kasese PAMAT).

The value of reviews and examples of effective management supporting implementation suggest the ToC design of strengthening execution through support for data-based monitoring and management capacity is valid. However, as the description above suggests, realization of this outcome was affected by partial implementation of associated activities (including more limited support for reviews than anticipated, as above, and limited progress on some areas of activity to strengthen management and accountability, see 5.1), and by wider aspects of the enabling environment (notably funding).

6.2 What changes in district leadership and management have occurred due to DHSSi at district level?

Assessment of change in district leadership and management relates to the DHSSi ToC activity areas on capacity building for districts in general management, and work to address barriers to good management practice and strengthen governance and accountability. These steps aimed to support the intermediate outcomes of improved execution of operational plans (described in the previous section) and an enhanced enabling environment for good district management practices, including institutionalization.

Evaluation of DHSSi contributions to district leadership and management was restricted to light-touch assessment of support to recruitment by DSCs, due to information on EBP effectiveness being a higher priority and because activities related to high-level district accountability and district management skills were not implemented at district level during DHSSi (see Section 0).

DHT management performance was, however, assessed as part of PAMAT scoring, as scores were needed for the DHSSi RF (indicator 1.3.2 *Uganda supports governmental mechanisms for enhancing accountability for results,* A) *#/% of districts that have had local government accountability capacity for health built*). PAMAT assessment focused on clear job descriptions and role performance, regular DHT meetings with documented minutes and action points, and DHT involvement in district executive structures. Overall, there was a minor improvement in scores for the PAMAT management domain, particularly for regular DHT meetings, but many scores stayed the same from Y1 to Y3. Some changes in scores related to the evidence available (for example, whether minutes could be seen), and so may not have reflected actual change in practice.

DHT members reported having clear **job descriptions.** Role performance was generally reported as high, and in Y3, some DHT members suggested that **role performance** had improved due to more focus on performance appraisals. However, many DHT members were in acting positions, which meant

additional workloads and, in some cases, lower decision-making confidence or authority (as noted in 3.2). Resource constraints also limited role performance, for example in Y1, all DHT saw supervision as insufficient due to a lack of fuel as well as limited time around other activities. There were examples of effective leadership and management helping to overcome resource constraints and enable implementation of expected DHT duties. For example, in Kasese in Y1, the DHT was attempting to share supervision with sub-district managers to ease the workload (although sub-district supervision was also limited by funds). National stakeholders and Ips saw DHT experience, commitment, and leadership as important for performance, and suggested that these qualities all tend to be lower when DHTs have vacancies and rely on acting positions.

DHTs reported **regular meetings**, sometimes weekly and usually every month, and minutes generally indicated action points and timelines. In the three sample districts, regular meetings and coordination among the DHT were identified as areas of recent improvement in Y1. For example, the Kasese DHT described meeting more often, which helped coordination and in turn teamwork, collective responsibility, and implementation of activities. The DHT also reported that meetings had become more organized, with use of action points, which made them shorter and easier to fit around other activities. In some districts, meetings became more frequent during the initial phases of the COVID-19 pandemic to enable emergency coordination, and then became less regular as COVID-19 became more routine. There were indications of slight improvement in meeting documentation in some districts.

All DHTs were represented in **regular meetings with the wider district executive**, such as technical planning committee meetings and cross-sector council meetings. DHTs, and the wider Council during Y1 interviews, generally saw the relationship as working well, including effective communication, support from the executive to address issues raised by the DHT (for example, funding an ambulance in one district), and ability to consult the executive where needed.

These management practices were not a primary focus for DHSSi during the implementation period, but there were some **indications of the DHSS Progression Model contributing to improved DHT management**. While partly designed to assess and guide UCO support, the Model can support DHT management through facilitating reflection and development of action points. In Kasese, for example, the DHT saw the Progression Model as contributing to ongoing identification of gaps and strategies for improvement. Some changes were reported as resulting from use of the Model, including more documentation of DHT processes and activities in Kasese and attention to DHT recruitment in Kasese and Lamwo. However, DHTs also suggested that some areas indicated in the Model depend on action by other levels, such as dissemination of guidelines by MoH: *'there are certain things they want districts to have when districts have no control over them. And in the end, they affect our score'* (Y2 Kasese DHT02). This may limit the influence of the Model on DHT management without feedback loops to influence higher-level action. A further limitation was that, as noted in 3.2, there was limited familiarity with the Progression Model and only a small number of DHT members participated in meetings to use the Model, reducing its potential influence on practice.

There were also **indications of DHSSi contributing to district management through involvement of the wider district executive in DHSSi workshops**. Some DHTs saw council involvement in the EBP workshops as helping to strengthen relationships (as noted in 5.2). Similarly, Oyam DHT saw the Y1 DHSSi-funded training for district leaders and the DHT on health information systems as building collaboration with the executive and supporting the role of the wider council as a source of advice (specifically on human resource management).

DHSSi support for DSCs was designed to address vacancies in the DHT and wider health workforce, as a means of enabling stronger performance through an enhanced enabling environment. Oyam and Kasese DHTs noted UCO support for DSC meetings or discussion between the DHO, CAO and DSC,

and reported that improved DSC functionality had enabled recruitment. Reports from DSC meetings indicated recruitment of various health cadres, including nurses and midwives in Kasese and Isingiro, and clinical officers, laboratory staff and other health cadres in Ntungamo. However, data were not available to show overall change in staffing levels. At district management level, support for DSCs did not improve DHT vacancies in the evaluation districts over 2019-22: DHT vacancies increased in Lamwo and Oyam over Y1-Y3 (due to transfers and the death of a DHT member), and Kasese DHT filled one position, but this was not due to DHSSi. However, DSC engagement, and use of the Progression Model, were seen as contributing to promotion of the acting DHO in Lamwo.

Progress in recruitment and district staffing was affected by availability of funds, with a limited government wage bill; change in DSC positions, which delayed activities (related to elections, see 5.1); by appointment of senior positions (such as the DHO) requiring ministry engagement, such that this could not be addressed just via DSCs; and by staffing norms that did not match workloads. UCO discussion on staffing norms with the MoH, ongoing at the time of the Y3 evaluation, aimed to address some of these constraints.

Beyond DHSSi, DHTs saw several other factors as contributing to improvements in DHT role performance and coordination, including training in a range of areas, support and supervision from the executive, and support from other partners with required resources, such as transport for supervision. Low performance on health indicators and the significance of the district population size were also seen as driving DHT motivation in Oyam: *'We usually want to perform well – we've had a comment that Oyam contributes most of the indicators in the northern region … If we don't work together as a team, we will not be able to get this, and motivated by the fact that we are covering almost half of the region's population, we push*' (Y1 Oyam DHT 07). In Lamwo, the absence of a DHO and COVID-19 – circumstances that might be expected to hinder DHT management – were seen as having strengthened motivation, cooperation, and coordination with other partners. COVID-19 led to frequent taskforce coordination meetings with partners, and without a DHO, DHT members felt a greater need for teamwork and mutual support: '*The going of our former DHO has also made every member of the DHT feel that we now need each other more … people are together because we know the only way is to tap from everybody's expertise.'* (Y1 Lamwo DHT 01).

6.3 To what extent does district planning and management consider underserved groups?

In line with the way underserved groups are included within DHSSi activities and the overall evaluation focus on EBP (as the activity area with most implementation), consideration of underserved groups was examined in relation to planning processes rather than other areas of management.

As described in Section 1, the DHSSi EBP process aims to support equitable health service coverage through encouraging attention to underserved groups or locations as part of situation analysis and prioritisation. This was assessed via the PAMAT, using data from group discussions, document review, interviews and observation.

All DHTs reported **some discussion of equity during planning**, for example in relation to adolescents, refugees, disability or remote locations, and some relevant activities were included in plans and budgets. Overall, however, there was **not systematic consideration of variation in health needs and access for different groups during planning.**

Background situation analysis in some plans included some reference to equity issues, for example noting issues of teen pregnancy or refugee populations. However, few groups were mentioned, and their needs were not comprehensively discussed. Situation analyses included a few relevant indicators (for

example on youth and refugees), and some disaggregated data, but routine information systems generally only provided disaggregation by age, gender and location, and not by other categories such as disability. In some cases, information was obtained from other sources (for example, community dialogues or the government community department), or via other district partners (for example, in Y3, a district partner supported analysis of health, water and sanitation needs in refugee camps in Kasese). In many cases, it was not clear that disaggregated data and information on equity included in situation analyses were fully analysed, for example with indicators disaggregated by gender but no discussion of the implications. In Y3, Kasese DHT discussed more use of data to understand variation in performance between locations for 2022-23 planning, but beyond location, there was no evidence of using disaggregated data to understand variations in coverage.

The EBP approach includes use of a **prioritisation matrix with criteria related to equity**. The exact criteria used varied between years and districts; for example, some matrices had just one overall criteria of equity, whereas other matrices had three criteria: does it benefit the poor more, does it address gender disparities, and is it a human rights issue. The new HMIS001 template developed by government did not include the prioritisation table, but the matrix was incorporated in the Excel BNA analysis file used by DHTs as part of Y3 DHSSi EBP activities, and some districts (e.g. Oyam) included this prioritisation matrix in their version of the 2022-23 HMIS001 plan. In each year, however, there was **little differentiation in scoring on equity**; for example, in Y3, almost all scores on equity in the matrix were 3. This suggests insufficient consideration of which activities would reach the poorest or women. In addition, DHT discussions suggested that **scoring was not clearly based on an understanding of equity as about addressing disparities**; for example, the Kasese DHT reported that equity scoring considers *'reaching the bigger population and providing equal services to the people'* (Y2 Kasese PAMAT), rather than whether activities targeted the poorest or underserved groups.

Follow-through from consideration of equity in situation analysis to identifying and funding solutions was often unclear. In general, few relevant activities were included in district plans, and equity issues considered in background information were not clearly addressed in planned activities. For example, the 2020-21 Lamwo situation analysis included a table on people with disabilities, but there was no clear analysis of needs or activities within the plan. In Y3, incomplete ACW meant it was not possible to assess actual inclusion of relevant activities in activity plans and budgets for Lamwo and Kasese. In Oyam, some budgeted activities addressed equity, but apart from outreach, all related to HIV (e.g., key populations) and were partner funded.

Discussion with DHTs suggested there was more awareness of groups who may require specific support and more work to meet their needs than documented in the ACW. For example, Oyam DHT reported plans for age-based group ANC sessions and health worker training on reproductive services for adolescents during the Y2 data collection, but these activities were not clearly indicated in the 2021-22 ACW.

Some DHTs and IP staff thought that consideration of equity has improved since 2019, for example with more discussion of disability and adolescent pregnancy (prompted in part by a rise in adolescent pregnancy during COVID-19). In general, however, DHTs, national government and Ips thought that **equity required more attention**, and reported a lack of detailed guidance: *'we haven't come up with a clear model of how that should be done… We haven't got a clear methodology'* (Y2 MoH 02). In general, respondents (including IPs, DHTs and district NGOs) did not consider that DHT gender balance affected consideration of equity. Respondents in some districts pointed to relatively equal gender balance in the DHT, and consideration of equity was seen as depending on other factors. Some suggested that gender relations may affect whose voice was heard in planning discussions, but this was not a consistent view; additional observation of planning workshops would be required to understand the extent and influence of DHT gender dynamics.

The **influence of DHSSi on consideration of equity appeared overall limited**. EBP training materials included some guidance material on equity and some DHTs recalled equity being discussed in DHSSi workshops, but equity was not a strong focus for EBP training. Observation of the October 2021 Masaka EBP workshop for Oyam, Iganga and Bugweri also noted little to no discussion of equity or variation in coverage between groups: DHTs did not mention equity or underserved groups when presenting their situation analyses, and the facilitators did not ask questions about this. In addition, as above, it was not evident that the prioritisation matrix included in the EBP process to support consideration of equity was used effectively.

6.4 To what extent has DHSSi reduced priority bottlenecks and improved coverage of priority health interventions?

Within the DHSSI ToC, intermediate outcomes of improved planning and execution of plans are expected to support the primary outcomes of reduction in bottlenecks and improved coverage. For the final Y3 evaluation round, we considered links between these intermediate and primary outcomes by examining the contribution of BNA and ACWs to reduction in bottlenecks and improved coverage. Quantitative assessment of change in bottlenecks and coverage is provided in Annex J. In this section, we report DHT views on progress with a sample of bottlenecks identified for their 2021-22 ACWs, and factors affecting progress. Details on the bottlenecks discussed and district team comments are provided in Annex H, with this section providing a brief summary. Tracing change in bottlenecks faced several challenges, including inconsistent and incomplete data (see Annex H), so findings are indicative rather than definitive.

Each DHT reported improvement in several bottlenecks prioritized in their 2021-22 ACWs, and improvements were **attributed in part to activities prioritized during BNA**. In many cases, **other initiatives that were not planned through BNA also contributed** to improvement, including initiatives by the DHT and partners, and partner support was often important for improvement. In several cases, other initiatives were a key incentive for action to improve performance on indicators selected for BNA, particularly the District League Table and links to RBF funds. All districts highlighted discussion of relevant indicators during quarterly performance reviews as important for driving progress (see also 6.1.3).

Some bottlenecks were reported to have worsened or to have changed little. This was sometimes because the associated activities were not implemented, or due to factors beyond immediate DHT control, such as supply from the National Medical Stores.

All DHTs indicated that BNA was important for planning action on bottlenecks. In some cases, BNA helped to identify problems, but more often, overall problems were already known, and BNA enabled further analysis and identification of relevant action. In line with this, DHTs often referred to the five whys as the most useful step in BNA. Sometimes activities indicated as solutions through BNA were already planned or required by policy, but BNA helped in other ways, such as by justifying proposed action, including to partners; highlighting the magnitude of problems, which increased prioritization; and documenting issues, which then supported review and monitoring.

In addition to asking about specific bottlenecks, we asked DHTs about the key factors driving improved health services in the district since 2020, and the role of ACWs within this. Primary **causes of improved service delivery** included areas such as partner support, teamwork among district staff, MoH and partner capacity building for district staff, RBF, and the performance reviews as described above.

Some DHT members indicated planning as the most important factor for improvement, including both the process of using evidence to plan, and inclusion of activities within the ACW. For example, Lamwo DHT discussed using data and BNA as leading to a stronger plan that in turn improved service delivery: *'many*

things have changed for the better as far as service delivery is concerned. When I look at how the changes came about, I would draw the bottom line to be on how we have been doing our planning' (Y3 Lamwo DHO). Many other DHT members saw **planning as underpinning or supporting other key drivers of improvement**. Including activities within ACW was seen as generating improvement by providing direction for activities, informing allocation of government budgets, supporting resource mobilization from partners, and strengthening review and monitoring. The integrated approach to planning, incorporating partner activities, was also indicated as important for improvement. In addition, some DHT members indicated that activities could only or more easily be implemented if included in ACWs (including due to some partner support being based on plans), and that planned activities had to be implemented. For example, Oyam DHT reported that Health Assistants did not previously have a clear role in supervising Village Health Teams (VHTs), but the DHT identified a need for VHT supervision through BNA on integrated community case management (ICCM), and *'once we put it in our plan, we definitely needed to implement it'* (Y3 Oyam KII02).

However, some DHT members noted that plans did not always bring improvements, as some activities are not implemented, and saw other reasons for improvement as equally or more important: *'the influence of the plans, if I were to rate them, I'd say workplans is about 50%. The influence of other factors, including some external support from partners, it would be 50%'* (Y3 Oyam KII01).

6.5 What is the relative significance of different DHSSi components in contributing to outcomes, through what mechanisms? What aspects of context influence the effects?

Summarizing from the analysis above, key processes or mechanisms through which DHSSi contributed to stronger planning included **introduction of new skills and tools for analysis**, specifically BNA; sharing of information on planning and budgeting processes and on good practice in other districts; providing **funding for workshops** that allowed district staff to spend time on planning and reviews; **supporting partner coordination** through popularizing the idea of an integrated plan and through funding meetings with partners (which in turn supported allocation of resources); and to some extent, increasing **motivation for planning**. DHSSi also enabled progress through **support for national learning and stakeholder discussion on future steps**, with the HSS reflection meetings generating discussions that led to improvement (for example, around links between plans and budgets).

Progress on stronger planning was **influenced by DHSSi scope and processes**, and by **district and national conditions**. For example, use of regional workshops limited the number of participants from each district and so spread of planning skills (5.2), and use of BNA was hindered by slow progress on the App, partly a result of the information environment (3.1 and 5.1). MoH interest in BNA and planning supported progress, including through integration of BNA within the national MoH planning template (3.1).

In relation to mechanisms underpinning the effects on bottlenecks, **BNA supported more detailed understanding of poor performance**, increased **focus on the prioritized interventions**, and in some cases, facilitated **resource mobilization** (see 6.4). Conditions affecting progress on bottlenecks included availability of **funding** (and DHT effort to secure funding), including via direct UCO support; **wider regional or national conditions**, such as drug stockouts; and presence of other initiatives not related to BNA.

6.6 Have there been any positive or negative unintended consequences as a result of DHSSi interventions?

DHSSi has supported other work by Ips. In particular, Baylor-Uganda noted that involvement in DHSSi brought understanding of different approaches to district health system strengthening that they could apply in other projects, and that their service delivery activities benefited from DHSSi system strengthening, particularly improved district health data quality through DQAs and more health workers through DSC support: *'for us, it's really been a plus'* (Y3 IP01). AVSI also noted that DHSSi brought some additional methods that could be applied in their other work on district system strengthening and evidence use.

A potential unintended consequence is a decline in **facility engagement in planning** in some districts. Reports of facility involvement varied between districts. In Oyam and Lamwo, DHTs described facility input as having increased. However, in Kasese, the DHT reported that there was previously a high level of joint discussion on planning between facilities, health sub-districts and the DHT through a series of meetings at different levels. This was replaced by district-level DHIS2 analysis through BNA. While EBP was appreciated, the shift away from facility planning was seen as reducing ownership: *'somehow these plans are good, but actually owning them down like formerly, based on the theory of decentralization, it is not that way'* (Y3 Kasese PAMAT). Rather than meetings and joint discussion, facilities now primarily just shared their plans with the DHT. Understanding facility involvement would require additional research, including interviews with facilities. Trends in participation in planning are likely to be part of wider shifts; for example the PEA noted increasing reliance on district biostatisticians due to the focus on DHIS2 data for planning. There are also likely to be other meetings where facilities provide input to problem analysis and prioritisation, for example during quarterly reviews. However, **an emphasis on EBP could risk reinforcing reliance on a core district-level team, unless balanced by other strategies for wider participation**, so this is an area for consideration.

7 SUSTAINABILITY: WILL THE BENEFITS LAST?

7.1 Is there evidence of institutionalization of DHSSi interventions at national level?

In relation to the **DHSSi ToC**, evaluation questions on sustainability relate primarily to the intermediate outcome of an enhanced enabling environment for good district management practices, including institutionalization, and the primary outcome of scaling up the DHSSi approach through institutionalization, partner leveraging, and laying the groundwork for sustaining health management capacity. Institutionalization can be considered in terms of integration in national guidelines, government ownership, and clear strategies and resourcing for continuation of activities and scale-up.

For EBP, BNA was included in MoH planning guidelines and **MoH development of the HMIS001 template in Y3 represented significant progress in institutionalization**. The new template incorporated BNA supported use of the plan for budgeting, and reinforced EBP as a government approach: '*previously the thinking was that this was UNICEF work, but this time around, this tool coming from the Ministry being labelled HMIS001 template, districts really took it serious and realized it was part and parcel of what they're supposed to do'* (Y3 IP01). The MoH stressed that all districts and partners would now need to follow the new template. DHTs also commented on **increased MoH leadership**, including the position of HMIS001 as an MoH form and MoH roles in providing guidance during and after EBP workshops, with BNA now promoted by MoH and not just a UNICEF approach.

While BNA was integrated in MoH guidance, the **App was not yet institutionalized**. Development of the BNA App was still undertaken by HISP. The MoH managed other DHIS2 applications and believed they would have capacity to manage the BNA App, but they were not aware of any discussion on handover from HISP to government. Given limited MoH confidence in and ownership of the BNA App (see 3.1), sustainability of the App appeared uncertain, although as noted in 3.1, UCO thought experience over the next planning round will demonstrate the App's potential.

In relation to sustainability and scale up of EBP support to districts, the MoH did not have funding to conduct further DHT training: *'I know the budget of the government – If this support is withdrawn, automatically I would have challenges'* (Y2 MoH02). DHSSi experience indicated a need for repeated training to establish skills, increasing the funding required to build EBP skills nationwide. Insufficient MoH staff capacity to support all districts (see 3.1) also limited options for scale up by the MoH.

Recognizing constraints on national MoH capacity, a key focus for UCO was the **development of master trainers and regional support teams**, including regional referral hospitals, universities, and some NGO Ips. This approach would transfer the primary responsibility for EBP training from UCO-funded Ips to teams led by the MoH. The master training was conducted in Y3, and some regional teams had initiated work, including support to district and facility planning in Acholi region (with the Oyam biostatistician involved as a trainer). However, **lack of funding to convene regional teams had so far limited progress** (see 5.1). Working with regional referral hospitals was in line with the MoH Supportive Supervision Strategy, under which these hospitals are intended to provide technical support to districts, but there were concerns about feasibility as referral hospitals **lack resources to conduct district-level EBP support**. MoH saw relying on these hospitals as *'wishful thinking'* (Y3 MoH 01) due to lack of funding as well as insufficient experience and authority to support district planning.

Involvement of universities in the ToT was designed partly to support **integration of EBP in pre-service training**. UCO was planning meetings with the two universities that attended the ToT to discuss this further. UCO saw transition of FPD support and skills in developing EBP training materials to local universities as an important process for sustainability, but there had not been progress on this at the time of the Y3 evaluation.

Support for planning from other partners could enable scale up, and MoH indicated working with USAID and Enabel to support some districts. However, **MoH thought further funding was needed**, including to support EBP training for urban local authorities, and to monitor implementation of plans. The HSS Reflection Meeting recommended a return to pooled basket funding for health, including to support planning, as a way to increase resources and government decision space. Implementation of this recommendation was uncertain given partner hesitations around pooled funding, but the approach could enable scale up.

Activities to support routine data quality (such as support for supervision by biostatisticians) were described by government as '*standard deliverables of a biostatistician'* (Y2 MoH01). As such, sustainability depended on allocation of government funding, rather than adoption of new approaches. MoH had funding from other partners for work on health information, enhancing sustainability of data quality activities: *'if UNICEF stop funding we might struggle, but the work will continue, maybe somewhat reduced*' (Y2 MOH01).

In relation to district management skills and accountability, **MoH indicated that they would need partner funds to conduct management training**. Funding had not been identified at the time of the Y3 evaluation. For work on recruitment, DSC meetings are expected government activities. Baylor-Uganda thought DSC meetings would be less frequent without UCO funding, but AVSI noted that withdrawal of UCO funds would have little effect because DHSSi only covers a small proportion of DSC meeting costs.

7.2 Is there evidence of integration of DHSSi interventions at district level?

At district level, **key issues for institutionalization and continued use of EBP are skills, workshop costs and motivation**.

In relation to skills, in Y1, some DHT members indicated a need for further training, but in Y2 and Y3, there was more confidence, and **in Y3 all DHTs indicated capacity to conduct BNA independently, without partner support**. Continued gaps in quality, reliance on biostatisticians, staff turnover and DHT suggestions that a wider pool of district staff needed EBP skills suggest further training may be needed. However, DHT members in the evaluation focus districts attended the Y3 ToT, which increased their capacity to train additional DHT members and staff at lower levels. DHTs suggested that external support may still be needed if there are changes to the planning system, and Oyam and Lamwo DHTs mentioned that **partner support could facilitate spread of skills to the wider DHT or sub-district levels**.

In relation to **workshop costs**, DHTs indicated that they could use **government or RBF funds** to support planning. Support from other partners was also mentioned, particularly for review meetings.

In relation to motivation. DHTs indicated that they would continue using EBP and described plans as a priority. However, difficulty in securing DHT time for planning indicated **gaps in motivation** (see 2.2). This was highlighted in Kasese: in terms of capacity, '*we are there, we can do it…It's just all about commitment by the team'* (Y3 Kasese KII02). Demand for plans from the DHO, CAO and MoH was seen as important for future DHT commitment. Separate budget systems reduced motivation to develop ACW (3.2), and as such, making ACW a requirement to access funding would support DHT commitment. Work

to align ACW with the PBS and RBF systems over Y3, including plans to make HMIS001 a condition for RBF, could therefore strengthen the incentives for DHTs to spend time on planning and support sustainability.

7.3 How has sustainability been considered as part of DHSSi processes?

UCO **identified some strategies to support sustainability during early stages of DHSSi**, including integration of BNA in government guidelines, working with existing structures such as the DSCs, involving MoH in workshop facilitation, building the pool of EBP trainers through a national ToT, and integrating EBP in pre-service curricula. **Several of these strategies were implemented**, but the national ToT was delayed until Y3, and UCO saw regional training networks and pre-service training as a longer-term agenda, for further work after DHSSi. At the time of the Y3 evaluation, there were **not yet clear plans for sustainability of work on management or recruitment**. UCO planned to continue some support for district EBP, management training and recruitment via other funding, including as part of the country focus on primary health care (see 4.2).

There were indications of insufficient stakeholder discussion of sustainability, at national and district levels. MoH reported that plans for sustainability after DHSSi had not been clearly discussed by UCO: *'we don't even know when this current funding is ending'* (Y3 MoH KII01). Most **DHT members also indicated that support for future planning had not yet been discussed**, with UCO or within the DHT. For both national and district levels, this may reflect UCO plans to continue support via other funding, but more discussion could have supported increased government leadership in planning for sustainability.

8 CONCLUSIONS, LESSONS AND RECOMMENDATIONS

This section provides conclusions, lessons learned and recommendations for DHSSi in Uganda.

8.1 Conclusions

DHSSi made important progress during each year of implementation. During Y3, notable developments included progress in integrating district plans and budgets, and initiation of work on subnational management capacity training. Considering progress throughout DHSSi implementation, this section summarizes conclusions for each evaluation criteria.

Section 2. Relevance: The MoH saw DHSSi support for EBP as relevant and as strengthening capacity and awareness of planning. There was growing MoH involvement in the EBP activities over the course of DHSSi, and a new planning template developed by the MoH over Y2-Y3 increased MoH ownership (3.1). However, the MoH did not see the BNA App or Progression Model as a priority (3.1). DHTs saw BNA as supporting their work and described DHSSi as significantly improving their annual plans. However, applying EBP and completing ACW was not always prioritized by DHTs, in part due to insufficient integration with government budgeting systems (3.2). The new MoH planning template increased alignment between the ACW and district budget, so strengthening the potential effect of support to district planning on district budgets, but there were continued gaps in DHT commitment to complete ACWs (3.2).

Government saw DHSSi support to district recruitment as a priority given high levels of acting positions and gaps in DHT composition (3.1, 3.2). The more recent support for subnational management training aligned with MoH interest and there were indications of MoH leadership (3.1). DHSSi activities were tailored to the Ugandan situation during inception through a landscaping exercise, albeit with some limitations in the analysis. Significant investment in reflection and stakeholder discussion supported ongoing learning and contextual relevance (3.3).

Section 3. Coherence: Several other partners were supporting district planning and reviews, including in the DHSSi districts. The Y3 HSS reflection meeting enabled sharing of learning with multiple partners and government bodies at national level, and there was some coordination between DHSSi and other partners at district level. However, further coordination of partner support to district planning processes was needed, including to streamline and integrate different planning processes and quarterly reviews (4.1).

In relation to alignment with UNICEF strategy, district system strengthening was a core focus for UCO, and DHSSi aligned with a focus on PHC system strengthening in UNICEF global strategies. Some shifts in the approach were planned to strengthen alignment, including more focus on facility level support. There were complementarities between DHSSi and similar UCO support for other districts, and with other UCO programmes within DHSSi districts (4.2).

Section 4. Efficiency: Core district EBP support was largely implemented each year of DHSSi. However several activities were delayed, and some activities were not undertaken due to constraints such as insufficient funds, COVID-19 and lack of a district IP combined with limited UCO availability (5.1). EBP workshop content was well-received, and DHTs appreciated MoH and peer facilitation of EBP workshops. A strength of workshops was participation by members of the district executive, which helped political support and links to budgeting. However, only a small number of DHT members were trained, which reduced engagement in EBP and brought risks related to staff turnover; DHTs thought all DHT members

and more sub-district and facility managers should be involved. Regional workshops allowed exchange of experience and streamlined facilitation time but reduced the number of district participants. Workshops were also too short to complete ACW, and developing plans often required significant follow-on support. The Y3 EBP training of master trainers (ToT) was rated highly, but some topics were rushed (5.2).

Section 5. Effectiveness: DHTs described DHSSi support as significantly strengthening their approach to planning (6.1). DHSSi contributed to use of BNA and development of plans in focal districts through training and financial support for workshops. In some districts, DHSSi primarily enabled continuation of EBP rather than a step-change in approach, due to EBP support prior to DHSSi. There was progress in aligning ACWs with funding systems in Y3, via MoH development of a new planning template. However, there were persistent gaps in application of BNA and overall quality of planning; for example with varied levels of BNA use, gaps in specificity and logic for causal analysis and prioritization, and inconsistent integration of activities identified through BNA within annual workplans and budgets. There were also gaps in completion of plans, with particular delays in Y3 due to a change in the MoH planning template as well as insufficient DHT prioritization of annual planning (6.1.1).

Involvement of district partners in planning varied between years and districts, but was seen by DHTs as insufficient. DHSSi sought to strengthen partner alignment through partner mapping and stakeholder meetings in some years, but partner involvement in DHSSi EBP workshops was limited. District plans included some partner funding, but there were continued concerns about insufficient partner flexibility and alignment with district plans (6.1.2).

Community engagement took place through channels such as community dialogues and input from HUMCs, and some DHTs reported increased community input over the course of DHSSi. Community engagement was not an area of direct DHSSi focus, but HUMCs were represented in some DHSSi workshops, and UCO supported community dialogues through other programme funding (6.1.2).

All districts held quarterly performance reviews, and DHTs saw these reviews as driving improvement by providing an opportunity to identify areas of low performance, plan corrective action, and coordinate with partners to secure their support. However, quarterly reviews focused on performance of key indicators, rather than progress on activities in the ACW. DHSSi supported quarterly reviews in some districts, and DHTs appreciated this support. Implementation of annual workplans was affected by shortages of government and partner funding and events such as COVID-19 (6.1.3).

All DHTs discussed some underserved or marginalized groups during planning, but there was not systematic consideration of variation in coverage or groups needing particular attention, and relatively few activities to address inequity were included in district plans. EBP training included some discussion of equity, but the overall influence of DHSSi on consideration of underserved groups appeared limited, and government and Ips saw equity as an area requiring further guidance (6.3).

Support for DSCs facilitated recruitment of health staff in some districts. However, ongoing DHT vacancies and high workloads for those in acting positions continued to hamper performance of expected responsibilities (6.2). There were some indications that use of the Progression Model could support DHT performance through review of gaps and action planning, but the Model was not a focus for the evaluation, so this requires further assessment (6.2).

Section 6. Sustainability: BNA was included in national planning guidelines prior to DHSSi, and integrated in the new MoH planning template used in Y3, supporting institutionalization. However, there was not clear government leadership or capacity to sustain and scale up EBP, with support for district training seen as dependent on donors. The national EBP ToT in Y3 aimed to develop regional networks for future EBP support, but progress was limited by insufficient funding to follow up the training, and feasibility of regional support networks was uncertain (7.1). DHTs reported capacity to conduct BNA

independently, and involvement of DHT members in the ToT brought skills to train other district staff. However, continued EBP depends on DHT motivation, and DHT accountability for effective planning is likely to require additional demand from central government or district authorities, as well as requirements through funding systems (7.2). Strategies to sustain DSC recruitment and management training had not been developed (7.3).

8.2 Lessons learned

Cross-country lessons were identified in each year of the evaluation, based on findings from each DHSSi country, and included in the annual synthesis reports. The lessons below are tailored to learning from Uganda, building on effective practices as well as some identified challenges.

1. The value of involving government as facilitators in training workshops
For some EBP workshops, staff from the national MoH and in some cases other DHTs were involved as facilitators, particularly in Y2 and Y3. MoH facilitation helped to demonstrate government ownership, so encouraging DHT use of EBP, and the MoH also had expertise to provide guidance on relevant processes (such as budgeting). Facilitation by DHT members from other districts also had benefits, because these officials were in similar positions to the DHT trainees and the peer approach helped communication and explanation. Relying on national MoH staff has drawbacks in terms of cost and scalability, so peer facilitation from district staff may be a particularly applicable model.

2. Balancing government and IP roles
Closely linked to the first lesson above, DHSSi experience indicates the need to balance implementation via Ips with strong government coordination and development of government capacity. UCO worked through international NGOs in most districts. EBP training for these Ips spread EBP skills and working through government may not have been feasible (for example, due to limited MoH availability). However, working through NGOs has risks for sustainability and there were MoH concerns regarding NGOs playing what they saw as the government's role. Increased communication and government involvement in workshops over the course of DHSSi improved relationships, indicating the need to complement working via NGO Ips with effective government coordination. Focusing DHSSi NGO IP efforts from the start on developing government capacity to facilitate EBP training and workshops (a strategy used in some other DHSSi countries) would support future government leadership and sustainability.

3. Involving wider district government for political support and alignment with financing systems
EBP workshops often included the district planner and in some cases the CAO or their representative. District planners play a key role in preparing district budgets, and their involvement helped to ensure DHTs understood the finance and budget systems and to link the plans developed via EBP with the wider government budget system. Involving the CAO, as the highest district authority, helped to provide political support for the EBP process and to strengthen understanding between the DHT and wider council.

4. Dedicated space for stakeholder discussion to reflect on learning and agree future action
UCO organized an annual health system strengthening reflection meeting to discuss programme developments, findings from the evaluation and PEA, and other relevant information, including in some cases information on new policies or other developments with relevance for district planning. The meetings brought together Ips, some DHTs and different parts of national government, and in Y3, also included other development partners. The meeting provided a forum to review progress and agree recommendations and actions. This helped to adapt DHSSi activities during implementation and to make progress on some key agendas, such as closer integration of the EBP and budgeting processes.

5. Creating explicit links between EBP and wider performance management frameworks

In Uganda, the MoH District League Table is an established ranking of district performance that motivates DHT action. For some DHTs, the value of BNA was linked to its perceived potential to improve health indicators that affect League Table performance. Other performance management systems also motivate district action, for example, the LGPA was highlighted by DHTs as significant for their work. These existing frameworks already have national coverage and government backing, and some of their focus areas and indicators relate to aspects of DHT management targeted by DHSSi. Working with these frameworks was not part of DHSSi design, but there is an opportunity to make more explicit links as part of a strategy to incentivize effective EBP and management and to support sustainability and scale.

6. **Inclusive planning processes: balancing technical analysis with wider stakeholder participation**

DHTs reported that EBP training can increase awareness of the value of planning among wider district teams and support engagement in the planning process. However, there are also risks that a technical approach to EBP can reduce stakeholder participation in planning. Planning tools and methods that require significant training can reduce participation among district staff with less familiarity and confidence, and a focus on DHIS2 data contributes to reliance on staff who have more access to and familiarity with this data (particularly the district biostatisticians). The focus on routine health information has also been prioritized over facility and community input. EBP activities that rely on workshops outside the district pose a further barrier to inclusion, as they reduce the number of participants. To support inclusive planning processes, it is important to understand when support for EBP widens engagement and where approaches exclude stakeholders, and to combine support for data use with stakeholder engagement. This in turn can support planning based on all relevant forms of evidence (including community perspectives) and wider ownership of district plans.

8.3 Recommendations

The recommendations below were developed following the final evaluation round through discussion with UCO and ESARO. They were also shared with the MoH and DHTs for their feedback. The recommendations are for action by UCO, in discussion with government and other partners, and were all identified as priorities for future work following DHSSi. Several recommendations from the Y1 and Y2 evaluation reports remain relevant, such as communication with MoH, coherence of the Progression Model, quality assurance, consideration of equity, and support for monitoring; see Annex F for details.

1. **Rationale:** BNA is appreciated by DHTs and included in MoH guidelines, but MoH do not see the App as a priority, and it is not yet fully functional or compatible with information systems and district internet access. Without the App, preparation of BNA charts remains time-consuming. DHTs particularly value the five whys step in BNA, and there may be potential in combining this step with use of the RMNCAH scorecard. The potential for BNA (and other problem analysis) to drive efficiencies and deliver tangible savings has not been realized, with DHTs focusing on using BNA to secure partner funds.

    - Drawing on experience with BNA and the App for 2023-24 planning, discuss future direction and relevance of BNA and the App with all relevant MoH departments and working groups, with open consideration of different options. This discussion should cover feasibility of the App in relation to current information systems and usability by district teams.
    - If meeting discussions conclude that there should be continued work on the App support MoH capacity to manage the App for sustainability. This may require extension of the contract with HISP.

- To support the potential for BNA to identify efficiencies and implementation of solutions identified through BNA, future EBP training should emphasize use of problem analysis for efficient use of district funding.

2. **Rationale:** The HMIS001 template is welcomed by DHTs as an MoH tool and for supporting integration with the budget system. However, the high volume of information required made planning time-consuming and more difficult, and reduced time for discussion of priorities and solutions. In addition, while HMIS001 includes BNA, incorporation of analysis from BNA within activity plans and budgets, and inclusion of other district and partner activities within the plan, remained inconsistent. DHTs saw partner involvement in district planning as insufficient, and more partner input could support analysis and alignment of partner activities. Effective use of BNA and completion of plans were also affected by workshop structure: regional workshops allowed exchange of experience and MoH guidance for a higher number of districts, but they restrict participation, and plans were not completed during workshops, requiring substantial later follow up and delaying submission.

    - Work with MoH to streamline the HMIS001 template, such as focusing only on critical priority information that is likely to change each year, or using summaries of information already collected through other systems.

    - Review planning templates and guidance to support development of a comprehensive workplan, including clarifying integration between BNA, other problem analysis in the plan and other planned district activities.

    - Support partner involvement during problem analysis and prioritisation, to strengthen analysis and alignment of partner activities.

    - Discuss feasible, cost-effective training and workshop formats with MoH, districts and regional teams. The approach may vary between districts in line with their existing capacity. Identification of options could draw on models used in other countries, such as a national workshop for a small number of staff from each district to provide updates on ACW procedures, refresher training and exchange of experience, followed by district-level workshops. Regional workshops supported by the new regional teams could enable a similar approach.

3. **Rationale:** MoH reported a lack of discussion on future support to EBP. Use of regional team for scaling EBP support is not yet clearly agreed and feasible, and there were no clear strategies for sustainability and scale up of management training and DSC support without UCO funding. Several partners support district planning, reviews, management and data use, with risks of duplication and potential for more complementarity. MoH see HMIS001 as having potential to support alignment of partner approaches, but coordination will be important for effective scaling.

    - Ensure detailed discussion of feasible approaches to sustainability with MoH, regional and district teams, for work with DSCs, management training and EBP.

    - Work with national and subnational government to strengthen coordination of partner support to district planning processes, including at district level to enhance complementarity and efficiency.

4. **Rationale:** DHTs report enthusiasm for EBP, but in practice, incomplete plans and reliance on partner-funded workshops indicate significant gaps in commitment. The new MoH planning template is intended to reinforce the rationale for planning through alignment with the budget system, but this will require continued government support and integration with other funding streams, such as results-based finance.

    - Advocate with the MoH, Ministry of Finance, Planning and Economic Development and results-based funding partners to support use of annual workplans in determining district budgets. Draw

on district and health financing expertise within UCO's social policy team to support this engagement.

- Draw on PEA findings and other evidence to identify mechanisms for strengthening DHT accountability for effective planning, for example through engagement with district authorities and linking effective planning to local government and health sector assessment systems (e.g. working with government to discuss options for explicit inclusion of HMIS001 completion within the District League Table or LGPA scoring).
- Advocate with government to include guidance on DHT responsibility for planning within future leadership and management capacity building.

5. **Rationale:** Review of annual workplans was often limited. Quarterly performance reviews focus on change in key indicators, and there are often multiple district reviews for different programme areas. Use of the BNA Excel for monitoring was also inconsistent.
    - Work with MoH on an integrated approach to monitoring all ACW activities, ensuring the approach is suited to DHT monitoring needs and capacities and integrated within routine government systems.

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ANNEX A DHSSi Results framework

Indicators assessed through the evaluation are in bold.

Table 5 DHSSI Results Framework Indicators

ID			Outcome/Output	Indicator(s)
1	-	-	Improve district health governance and management performance in target districts in Kenya, Malawi, Tanzania and Uganda.	**A) #/% of target districts that have reduced priority bottlenecks identified at baseline (by number of bottlenecks, up to 10)** **B) #/% of target districts that have improved the coverage of priority health interventions (by number improved up to 5)**
-	1.1	-	Improved data use for planning, monitoring and course correction among target district health management teams in project countries.	**A) #/% of target districts where evidenced based planning practice improved*** **B) #/% of target districts where quarterly performance management practice improved***
-	-	1.1.1	Project countries have configured the bottleneck analysis app in national DHIS2 instances.	A) #/% of project countries where the BNA app is operational in DHIS2 B) #/% of target districts that used the BNA app during their last planning cycle
-	-	1.1.2	Project countries have built local institutional capacity to support districts to improve data use for planning, monitoring and course correction in line with UNICEF's evidence-based planning methodology.	A) Updated Evidence Based Planning training package available. B) #/% of project countries where at least 1 institution is competent in building districts capacity on evidence-based planning. C) # of non-UNICEF facilitators capacitated to facilitate evidence-based planning using updated training package
-	-	1.1.3	Project countries have built the capacity of target districts on evidence-based planning and monitoring linked to annual MoH planning cycles (2019, 2020, 2021) and target districts use the evidence-based planning and monitoring methodology to inform annual health plans.	**#/% of target districts that use bottleneck analysis to inform annual health plans**
-	-	1.1.4	Districts in project countries not directly supported by DHSSi/BMGF funds that use evidence-based planning and monitoring methodology to inform annual health plans.	A) # of non-DHSSi/BMGF districts that use bottleneck analysis to inform annual health plans. B) #/% of all districts nationally that use bottleneck analysis to inform annual health planning
-	1.2	-	Improved execution of health operational plans among target district health management teams in project countries.	**% of target districts where at least 50% of key activities linked to bottleneck reduction were executed during the last year**
-	-	1.2.1	Project countries have a training package/learning tools and methodologies in place to administer	#/% of project countries that have training curricula/learning tools in place to support in-

			in-service training on health management that speaks to country-specific needs.	service capacity development on district health management.
-	-	1.2.2	Project countries have built the capacity of target districts on health management.	A) #/% of target districts whose health management team been trained in health management under this initiative. B) #/% of managers in target districts in who have been trained in health management under this initiative. C) #/% of district health management team members in target districts who have demonstrated improved knowledge of management practices following capacity building training. D) #/% of target facilities in Tanzania that have been trained in basic management skills linked to duties. E) #/% of health management team members in target facilities in Tanzania who demonstrated improved knowledge of management practice following capacity building strategy
-	1.3	-	Enhanced enabling environment for good district management practices addressing key barriers in project countries (institutionalization and government ownership, accountability etc.).	A) #/% of project countries that have functional DHIS2 scorecard app in place to support review of relative sub-national performance **B) #/% of target districts that include citizen perspectives in annual planning processes**. C) # of project countries where political economy of health management practices is assessed D) # of project countries where political economy of health management assessment recommendations are actioned.
-	-	1.3.1	Kenya and Tanzania incorporate evidence-based planning approach into national guidelines.	# of project countries that have incorporated evidence-based planning into the national planning guideline
-	-	1.3.2	Uganda supports governmental mechanisms for enhancing accountability for results.	**A) #/% of districts that have had local government accountability capacity for health built** B) % of DHT positions in target Ugandan districts that are vacant
-	1.4	-	Improved use of data investments to support sub-national health planning.	# of target districts that adopt innovative data applications based on initial testing in select districts
-	-	1.4.1	Tanzania strengthens health sector coordination of health information systems investments.	# of quarters during which the HDC steering group meets to discuss progress on workplan
-	-	1.4.2	New methods of data use explored to improve sub-national health programming.	A) Tanzania documents feasibility assessment for inclusion of socio-economic status and demographic indicators in electronic immunization register. B) Malawi and Kenya document use of

				inclusion and use of GIS-modelled health accessibility data in DHIS2 to inform sub-national planning.
2	-	-	Scaling up the DHSS approach through institutionalization, partner leveraging and laying the groundwork for sustaining health management capacity by developing investment cases for the professionalization of sub-national health management that include proposed pathways for institutionalization in Kenya, Malawi, Tanzania and Uganda.	A) # of project countries that scale up the DHSS approach through institutionalization, partner leveraging and/or laying the groundwork for professionalization of health management. B) see indicators for 1.1.4 and 1.3.1
-	2.1	-	Evidence generation to inform program design, adaptation, scale- up and sustainability of strategies.	# of reports, articles and briefs developed to inform programming
-	-	2.1.1	Project countries conduct baseline assessment to document current DHMT data use practices, management skill needs and enabling environment constraints to good management.	4 country baseline results summarized in report/article
-	-	2.1.2	Project implementation plans revised	Cross-country and country-specific implementation plans complete based on baseline findings (target 5)
-	-	2.1.3	Implementation research questions investigated and findings documented.	# of briefs developed summarizing findings of implementation research (target to be determined during inception period)
-	-	2.1.4	Cross-country learning exchange facilitated through online platform, webinars and project meetings.	A) # of webinars conducted per year B) # of engagements on online platform C) # of cross-country meetings held
-	-	2.1.5	Effectiveness of the DHSS model assessed and documented in project countries.	Endline assessment report complete
-	-	2.1.6	Audio-visual storylines about the importance of district health management developed to support investment cases.	# of audiovisual storylines developed

ANNEX B ToR

Assignment: First phase of a multi-year evaluation of UNICEF's District Health Systems Strengthening Initiative in Kenya, Malawi, Tanzania and Uganda, from August 2019 to June 2022

Commissioning office: Evaluation Section of UNICEF Eastern and Southern Africa Regional Office (UNICEF ESARO)

1. Overview

The Evaluation Section of UNICEF Eastern and Southern Africa Regional Office (UNICEF ESARO) seeks to hire a highly qualified international evaluation partner from August 2019 to June 2022 for a multi-year evaluation of a 4-country initiative – Kenya, Malawi, Tanzania and Uganda – on District Health Systems Strengthening (DHSS). This health initiative and the evaluation are part of a Grant Agreement between the Health Section of UNICEF ESARO and the Bill and Melinda Gates Foundation (BMGF).

These terms of reference include the background of UNICEF's DHSS work, a description of the evaluation expectations, including purpose, objectives, scope, questions, methodologies, timelines, deliverables, management arrangements, required competencies and how to complete and submit an offer for the design and conduct of the evaluation during an initial period of 3 years. UNICEF has provisionally conceptualized this multi-year evaluation in 2 phases: a first phase that will take place between August 2019 and June 2022 (3 years) and a second phase that will be initiated once the second phase of the interventions begin (after 2022).

The evaluation design will be agreed between the evaluation partner, UNICEF and BMGF in August-September 2019, and baseline assessments in the four countries will be conducted in October-November 2019, before the actual start of the implementation (ex-ante) to permit a rigorous measure of the main changes and impacts of the initiative that are outlined in the results framework, using a quasi-experimental design.

2. Context and background

Although Sub-Saharan Africa has made substantial progress in reducing the number of maternal and child deaths in the past few decades, Eastern and Southern Africa (ESA) remains the sub-region with the second highest under-five mortality and maternal mortality in the world. In 2015/16, in these 21 countries alone, over 1.1 million children did not survive until their fifth birthday, an average of 2,700 child died every day, and about 70,000 women died during pregnancy and childbirth.

Since the mid-2000s, there has been increasing recognition that global health progress cannot be sustained without strengthening health systems. Weak health systems have been cited as a major impediment to achieving full scale-up and quality delivery of health interventions that reduce morbidity and mortality. The 2014/15 West Africa Ebola epidemic further illustrated the consequences of limited investment in health systems. Despite global and regional policy consensus that strengthening health systems is a key strategy for achieving Universal Health Coverage (UHC), this approach remains weak in most ESA countries.

Health management and governance capacity at the sub-national level, where health policies and strategic plans are operationalized, is critical to the performance of health systems. Good management has been characterized as 'software' that enables system 'hardware,' such as health infrastructure, personnel and medical technologies, to function. In low and middle-income countries (LMIC), strong management capacity is even more important in order to promote efficiency and progress, given resource scarcity. Nonetheless, health management in the ESA region, particularly at sub-national levels, is under-supported and has proved complex to tackle.

The Health Section of UNICEF ESARO was recently awarded a three-year grant, from January 2019 to December 2021, for a value of about $8,000,000, by the Bill and Melinda Gates Foundation (BMGF) to support the sub-national/district health systems strengthening initiative (DHSSi) in four countries: Kenya, Malawi, Tanzania and Uganda. The purpose of the initiative is to improve evidence-based health management practices in target districts and to work with Ministries of Health (MoH) to chart the professionalization of sub-national health management, building on the lessons generated during the grant period.

By supporting the strengthening of district health management and governance, a key leverage point for strengthening the overall health systems, this investment seeks to contribute to national strategies to achieve UHC in line with Sustainable Development Goal 3 – ensure healthy lives and promote wellbeing for all ages. In support of the SDGs, UNICEF has also developed a new global, agency-wide Strategy for Health, 2016-2030. The Strategy envisions a world where no child dies from a preventable cause, and all children reach their full potential in health and well-being. In order to achieve this, all health programmes supported by UNICEF aim to identify underserved groups and address inequities, including gender inequality, in health outcomes. Finally, this investment seeks to contribute to the progressive realization of the right of the child to the enjoyment of the highest attainable standard of health (art. 24 of the Convention on the Rights of the Child) and General Comment No. 15 (2013) of the UN Committee on the Rights of the Child.

The specific elements of the problem that UNICEF's DHSSi will address are: weak health management and governance at the sub-national levels, sub-optimal data use practices for effective planning, and lack of enabling environments that support strong management and governance. This initiative responds directly to identified gaps in countries' abilities to effectively scale-up proven, high impact primary health care (PHC) interventions and achieve UHC; gaps that are due to limited capacity on data use for management decision making and general management skills needed to optimally implement plans. It builds on the achievements of UNICEF's work under the Institutional Strengthening Support in Programme Monitoring and Response (PMR) Initiative in the ESA region funded by the BMGF (2015-

2018). Further, it speaks directly to the BMGF Integrated Delivery Team's strategy to accelerate the launch, delivery, use and impact of life-saving and life-changing health products and services by strengthening PHC management through investment in health system middle managers.

With the DHSSi, UNICEF has designed a multi-faceted intervention to build sub-national health governance and management capacity that is linked to the performance of a district health teams core functions with respect to: 1) use of evidence (data) for operational planning, 2) plan execution, 3) performance management, 4) stakeholder engagement and consensus building, 5) accountability and 6) reduction of barriers related to the exercise of good management practices. By improving sub-national health management and governance capacity, UNICEF aims to support the reduction in health system bottlenecks and improve coverage of high impact health interventions. Interventions will be executed in 24 districts across the four countries during Phase I of the initiative (January 2019 to December 2021). Phase II of the initiative will be implemented based on the results of Phase I, after 2022. Nature of interventions and coverage of Phase II will be decided at a later stage.

As part of UNICEF's evidence-based planning methodology, which will be employed in all target districts under this initiative during Phase I, health system bottlenecks will be identified, and district teams will establish plans to resolve them. Indicators representing bottlenecks, particularly for demand and quality determinants of coverage in the bottleneck analysis methodology, will be collected through routine information systems. During Phase I of the initiative, UNICEF aims to hone interventions in target districts and to initiate the groundwork for scale-up by promoting institutionalization of approaches in governmental systems, building capacity in national institutions to own approaches and supporting MoH

and partner alignment around approaches. More details on the DHSSi interventions by country are in Annex 1. Results framework and theory of change are also respectively in Annex 2 and 3.

This initiative will be managed by UNICEF health teams at the regional and country-levels. District health management teams will be the primary target for capacity building under this grant. The Foundation for Professional Development (FPD) – which is an accredited service provider for continuous professional development by the Medical and Dental Professions Board of the Health Professions Council of South Africa – will be a key partner of UNICEF under this initiative. It will act as a technical resource to UNICEF, Ministries of Health and local institutions in project countries. For instance, it will support the development and/or revision of management curricula for sub-national health managers and identify/design appropriate methodologies for building capacity in UNICEF's target districts. In each project country, UNICEF will identify, and contract selected institutions with national standing that are well positioned to support capacity building on health management, including through accredited programmes. In some contexts, appropriate partners will be civil service training institutes supported by government who have the mandate for training health managers. In other contexts, they may be schools of public health or medicine or a partnership between health-focused universities and government training institutes. FPD will provide input to the selection of institutional partners, though contracts will be directly managed by UNICEF. To date, BMGF has supported UNICEF work on improving the quality of maternal and newborn care in multiple countries in the region. This collaboration will continue under the DHSSi and a new global partnership for health between BMGF and UNICEF that is expected to be concretized in the coming next years.

UNICEF has also set aside funds in the grant budget for recruiting an evaluation partner that will design and conduct a comprehensive multi-year evaluation of the DHSSi. UNICEF has provisionally conceptualized the evaluation in two phases. The first phase of the evaluation will take place during a three-year period, from August 2019 to June 2022, and the second phase of the evaluation will be initiated once Phase II of the initiative is launched (after 2022). The first phase of the evaluation will begin in the third quarter of 2019 with the agreement on the evaluation design between BMGF, UNICEF and the evaluation partner (August-September 2019) and the initiation of baseline assessments in the four countries (October-November 2019)[27]. The process evaluation component of the evaluation (or monitoring) will be conducted in each country, once a year, in 2020 and 2021. This periodic monitoring conducted on an annual basis will collect qualitative information on the uptake and quality of implementation. The midline assessments in the four countries will take place during the first quarter of 2022. They will permit an analysis of key changes and results compare to the situation at baseline. A systematic analysis of the assembled components of the first phase of the evaluation will be available before the end of June 2022.

An important expectation of this multi-year evaluation is to search for impacts and establish the *causal effect* of change in district health governance and management performance on population-level health intervention coverage (these population-level intervention coverage indicators or impact level indicators will be selected by the evaluation partner and UNICEF during the inception stage, following the review of available and comparable health data in the 4 countries). The 2019 baseline assessments should include relevant data in intervention and control districts to permit the identification of impacts by the endline assessments during the second phase of the evaluation. For now, it is envisioned that *attributable change* will be examined during the endline assessments that will take place during the second phase of the evaluation, in intervention and control districts. The 2022 midline assessments that will be conducted in

[27] Please note that the exact timing of the baseline assessments will depend on the time required to secure the approval of the Institutional Review Board in each country. However, baseline information needs to be collected prior to implementation (ex-ante) and results available to feed into the 2020 annual report to BMGF that is due in February of the same year.

intervention areas only will however include an analysis of the degree of change in coverage outcome using existing health data.

3. Evaluation purpose and target audience

This multi-year evaluation is planned as part of UNICEF's Grant Agreement for DHSSi with the Bill and Melinda Gates Foundation (See Annex 1 that includes a presentation of key expected results and Annex 2 for the detailed Results Framework).

The overall evaluation purpose of the multi-year evaluation is twofold: (1) to improve intervention design and management and (2) to inform decisions about future investment and scale-up by establishing evidence of result and impact.

During the first phase of the evaluation, August 2019 to June 2022, the evaluation will examine the relevance, effectiveness, efficiency and sustainability of the interventions to achieve set results. It will also establish necessary baseline data in intervention and control districts to measure the impact of improved sub-national health management on sub-national population-level health intervention coverage during the second phase of the evaluation (after 2022).

The results of the evaluation are expected to be used by immediate stakeholders, from communities to district-level health authorities and service providers to national health policy makers. Participants in the initiative, UNICEF and the BMGF are expected to gain knowledge that can be used to strengthen and scale-up future District Health Systems Strengthening initiatives (DHSSi) in the Eastern and Southern Africa Region and inform policy advocacy.

4. Evaluation objectives

The objectives of the evaluation are as follows:

10. To provide an assessment of the results of the DHSSi against all set objectives at the end of Phase I with a view to design Phase II of the initiative based on the main learnings and results of Phase I. The evaluation will follow the OECD's Development Assistance Committee (DAC) criteria: relevance, effectiveness, efficiency, impact and sustainability. It will specifically:

- assess if the interventions were implemented according to the work plan and measure the strength of implementation with a view to foster appropriate adaptation throughout the course of the implementation of Phase I;
- examine district health governance and management capacity using a maturity model (example of maturity model provided in Annex 3) to understand if interventions are contributing to improvements in the domains of operational planning, supportive supervision, performance management, stakeholder engagement & consensus building, accountability to communities, human resource management, supply management, financial management, quality improvement and execution of plans;
- identify key lessons learned and provide actionable and evidence-based recommendations to improve and scale-up interventions during Phase II.

II. Establish necessary baseline information in intervention and control districts during Phase I to demonstrate the causal effect of improvement in sub-national health management on sub-national population-level health intervention coverage (impact indicators) during Phase II. Health impact indicators will especially track the situation of underserved groups, including girls and women.

The inception stage of the evaluation will propose an overall evaluation design that will permit to answer the initial evaluation questions for Phase I and Phase II that are proposed in the Section below.

10. Preliminary evaluation questions and scope

Building on the theory of change and taking into account the context of the four different countries, the inception report will refine the main questions being asked by the evaluation. These questions should relate to the following evaluation criteria: relevance, effectiveness, efficiency, sustainability and impact.

Preliminary evaluation questions are as follows:

During the first phase of the evaluation (August 2019 – June 2022):

Relevance:

- To what extent is the DHSSi aligned with national priorities as well as with UNICEF Regional Priorities for 2018-2021, UNICEF Strategic Plan for 2018-2021 and UNICEF Health Strategy for 2016-2030?
- To what extent is the DHSSi theory of change holding throughout the implementation?
- To what extent are the DHSSi interventions necessary and sufficient to address critical bottlenecks in intervention districts?
- To what extent are the DHSSi interventions adequate to address health needs, especially of underserved groups, including girls and women?

Effectiveness:

- Based on the maturity model, to what extent are district-level health governance and management practices improving?
- How are the interventions affecting changes in governance, management practices and bottlenecks reduction in intervention districts? Is it creating unintended consequences?

Efficiency:

- To what extent were interventions implemented in a timely manner?
- To what extent were resources used according to the model?
- What structural, administrative or procedural bottlenecks impaired UNICEF ability to deliver on expected results?
- Which of the implementation models used to support institutionalization of interventions in the four countries is fit for purpose? What is the cost of the model? Can it be scaled up?

Sustainability:

- What indications are there that the expected results can be sustained and taken forward independently of UNICEF support?
- To what extent is UNICEF strategy supporting long-term buy-in and ownership by duty bearers?

During the second phase of the evaluation (after 2022):

Impact

- Are target health interventions' population coverage (at the district-level) increasing and is this change due to the interventions? Are health outcomes of underserved groups, including girls and women, progressing?

This multi-year evaluation is envisioned to take place in two phases: a first phase that will take place between August 2019 and June 2022 (3 years) and a second phase that will be initiated once the second phase of the interventions begins (after 2022). The first phase of the evaluation comprises of baseline assessments in interventions and control districts in the four countries, to be conducted before the start of the actual implementation; periodic monitoring that will occur once in a year in 2020 and 2021 in intervention districts; and midline assessments in intervention districts in the four countries, to be conducted at the start of 2022. The first phase of the evaluation will be completed after an analysis of the assembled components of the evaluation during 2019-2022. The second phase of the evaluation will be designed at a later stage. However, it will include endline assessments in interventions and control districts in the four countries, to be conducted before the end of Phase II.

10. Evaluability

Evaluative challenges to be considered include the availability and quality of existing health data in the four countries to be used by the evaluation. The inception phase of the evaluation will include an assessment of existing health data in the four countries and indicate how they can be used by the evaluation. Another challenge includes the identification of a credible counterfactual for the baseline and endline assessments. The 24 interventions districts were selected purposively, using various criteria and the identification of comparison districts in the four countries may not be straightforward, as there may be structural differences between intervention and non-intervention areas, at the outset or arising during the implementation period. The evaluation partner will need to develop a methodology that considers data quality issues and the identification of a credible counterfactual.

10. Evaluation approach and methodology

UNICEF has provisionally conceptualized this multi-year evaluation in two phases. The first phase will assess the relevance, effectiveness, efficiency and sustainability of the interventions in achieving the results identified in the results framework (Annex 2). The second phase will search for the impacts of the DHSSi using a quasi-experimental design, possibly an interrupted time-series design – although the commissioner of the evaluation is interested in exploring other suitable design options with the evaluation partner.

In the evaluation offer, the tenderer will propose a precise combination of methods to be mobilized to ensure a reliable assessment of expected results during phase I as well as the search for impacts during phase II. Noteworthily, the tenderer should consider the preference of the commissioner to the utilization of existing routine and other health data and the collection of supplementary qualitative data over the implementation of additional surveys. In each country, non-intervention/comparison districts will be selected. The evaluation partner is expected to determine relevant criteria for selection of comparison districts in each country.

During the first phase of the evaluation (August 2019 to June 2022), it is envisioned that the evaluation will have the following components:

10) <u>Inception, Design Refinement and Tool Development</u>

During the inception phase (August-September 2019), the evaluation partner will prepare a detailed evaluation design considering the objectives of the evaluation and indicative evaluation questions during Phase I and Phase II. It will include the type of combination of methods that will be used for the different components of the evaluation and ensure tentative evaluation questions can be answered. It will include an assessment to determine the availability and quality of existing health data, propose the most appropriate population-level intervention coverage indicators to search for impacts, and identify appropriate control districts. It will include a formative component in the countries to identify the key components of the maturity model and refine the model with UNICEF. It will present a data analysis plan,

an evaluation matrix, data collection instruments and field work plans in the four countries. UNICEF will provide inputs to proposed plans and tools. The evaluation firm will then present the final design and plans to all DHSSi stakeholders via a webinar.

2) Baseline Assessments

The purpose of baseline assessments is twofold. First, to establish a benchmark against which to assess changes in district health management and governance practices, health system bottlenecks and intervention coverage, which are operationalized as key indicators in the results framework. Secondly, to elucidate factors related to the context and enabling environment that should be taken into account during implementation and analysis.

The evaluation partner, with support of its local partner and UNICEF Country Offices, will secure research and ethical clearance for the evaluation in each country setting. The evaluation partner will conduct baseline assessments in each country setting. Data collection should be timed to precede annual planning processes in each country, which will begin in October-November 2019 and run through January 2020 (staggered by country). The evaluation partner will report to UNICEF on progress with baseline roll-out on any issues encountered. It will collect data; clean and prepare data for analysis; and develop country-specific slide sets on findings and develop one cross-country baseline assessment report. The partner is expected to share all data collected and any scripts developed for analysis with UNICEF.

3) Periodic Monitoring

For changes in management and governance practice, UNICEF proposes to use a maturity model approach, which would necessitate the collection of non-routine information about the status of management and governance practices on an annual basis[28]. For changes in bottlenecks and improvements in coverage of target health interventions, routine data could be used, with some assessment of its quality/reliability.

The evaluation partner will be expected to quality assure all data collected during periodic monitoring and store data in a shared data management space with UNICEF. The partner will be expected to develop an annual data report in line with UNICEFs' results framework for the grant.

The results framework will be supplemented by additional questions that will help track implementation progress and contextual factors. For example, an implementation log will record the number of training and coaching sessions at the district-level and how they are administered. This implementation log will facilitate a regular assessment of whether implementation is on track and establish the degree of fidelity to initial plans. It will allow that the strength of implementation is accounted for in the analysis.

Similarly, a log of contextual factors that may affect district performance will also be captured to understand the role of potential confounders and effect modifiers on the intervention and whether these factors affect intervention and control districts differently over time. These factors will be assessed initially through the baseline assessments and they will be updated through annual monitoring and reporting.

4) Midline Assessments:

This component will take place during the first quarter of 2022, once the implementation of Phase I is concluded (December 2021). It will generate and analyze data about how well the interventions were delivered and produced the expected changes. It will show what was achieved compared to the set results of Phase I and findings will be used to decide future direction of Phase II. The 2022 midline

[28] A maturity model has been developed by Uganda Country Office. During the inception phase, it is expected that the evaluation partner will test the model in the other three countries and refine the maturity model as needed. An example of maturity model is provided in Annex 3 of these terms of reference.

assessments will also need to include an analysis of the degree of change in health coverage outcome using existing health data. The evaluation partner will develop country-specific slide sets on findings and develop one cross-country midline assessment report. The partner is expected to share all data collected and any scripts developed for analysis with UNICEF.

5) Systematic Analysis:

At last, this analysis will assemble the results of the different components of the first phase of the evaluation to establish the level of confidence or otherwise in the findings of the evaluation. Data from baseline, periodic monitoring and midline will be used to present key evaluation findings, lessons learned and recommendations.

The evaluation partner will use baseline and midline assessments, monitoring, qualitative and cost data to evaluate the adequacy of the DHSSi project in meetings its objectives. The analysis plan established at the outset of the project will be updated to account for any needed changes in the evaluation approach and shared with the evaluation reference group for review and comment, prior to analysis. The deliverable of Phase I systematic analysis will be country-specific slide sets detailing country findings and recommendations and a cross-country evaluation report detailing cross-country findings and recommendations.

10. Ethical considerations

The evaluation partner, with support from its local partner, will prepare and submit all required documents for ethical and research clearance in each of the countries using national level mechanisms for ethical and research reviews. The evaluation partner will follow the 2008 UNEG Ethical Guidelines[29] to ensure the quality of the evaluation process.

9. Management arrangements

The evaluation partner will be recruited by, and report to the ESARO Evaluation Section under the overall oversight of the ESARO Regional Director. For the day-to-day management of the CPE, the Evaluation Section will appoint an Evaluation Manager who will be accountable to the Regional Evaluation Adviser. Each Country Office will appoint a Focal Point who will act as the primary liaison with the Evaluation Manager and will facilitate the data collection and evaluation process at the country level.

The Evaluation Manager will work with ESARO-Health Section to constitute an Evaluation Reference Group (ERG), comprising key stakeholders of this evaluation. The ERG has an advisory capacity whose primary role is to review evaluation milestones (terms of reference, inception report, draft reports) and to provide comments. The ERG Secretariat will maintain a written record, as part of an audit trail, of all ERG comments, which the evaluation team is expected to respond to in writing (agree – actions taken; disagree – justification). The ERG will be chaired by the Evaluation Manager.

The evaluation firm will provide updates on the progress of the evaluation as requested by UNICEF. Reports/deliverables meeting UNEG quality standards will be required at each payment schedule (payment schedule is outlined in the table in Section 10 of the terms of reference). All reports will be subject to a satisfactory rating by an external quality assurance facility contracted by UNICEF-Evaluation Section, using quality assurance checklists that will be made available upon request. Structure and content of each deliverable/report will be discussed at the start of each phase (inception, baseline assessment, periodic report, midline assessment, systematic analysis). All deliverables will be written in English and include an executive summary.

[29] http://www.uneval.org/document/guidance-documents

The evaluation partner will lead the design and day-to-day implementation of the evaluation, ensure that the design, sample selection procedures, collected data, and analysis are of high quality. They will be responsible for the collection and management of all required non-routine data.

10. Deliverables, Timeframe and Payment Schedule

Components	Deliverables	Tentative timeframe	Payment schedule
1	Formative assessment in the 4 countries to: 1) identify the key components of the maturity model with a view to refine/ finalize the maturity model with UNICEF for the evaluation; 2) examine the availability and quality of existing health data in the four countries (including with a view to propose population-level intervention coverage indicators to search for impacts) and 3) determine how to select control districts. Inception meeting/ workshop in Nairobi to present the initial thinking and considerations for the overall evaluation design.	Presentation completed by week 3.	
	Evaluation design (draft and final), including baseline protocol, tools and fieldwork plans for baseline assessments	Inception report complete and final by week 5 DELIVERABLE 1: Notes: sample of inception report available in Annex 4, quality assurance checklist for UNICEF report available in Annex 5 and UNEG quality assurance checklist available at http://www.uneval.org/document/guidance-documents	15% for 2019 inception report
2	Baseline data assessments (4 countries)	By week 10 (before start of implementation in October – November 2019)	
	Report process, challenges, lessons learned).	By week 12	
	For quantitative data: scripts used for cleaning and analysis. For qualitative data: coded	By week 14	

	data files and analysis framework		
	Draft country-specific slide sets on baseline findings	By week 16	
	Final country-specific slide sets and draf6 cross-country baseline report Meeting/workshop in Nairobi to present the results of the baseline assessments.	By week 18	
	Final cross-country baseline report	By week 20 (by December 2019). DELIVERABLE 2	20% for 2019 cross-country baseline report
3	Draft and final plans for periodic data collection	Final by week 22	
	Draft and final quantitative and qualitative tools for data collection (maturity model)	Final by week 24	
	Enumerator data collection manuals for quantitative and qualitative data collection (maturity model)	By week 26	
	Annual reports on process evaluation findings Meeting/workshop in Nairobi to present the results of each annual assessment	2020 and 2021 monitoring reports to be available respectively by December 2020 and 2021. DELIVERABLES 3 and 4	15% for December 2020 Monitoring Report 15% for December 2021 Monitoring report
4	Draft and final analysis plan for midline assessments	By November 2021	
	Draft and final tools for midline assessment	By December 2021	
	Midline assessments completed	By February 2022	
	Completed raw midline data files	By February 2022	
	Draft and final country-specific slide sets with findings and recommendations	Final by March 2022	
	Draft and final cross-country midline evaluation report	Final by April 2022 DELIVERABLE 5	15% for 2022 Midline Evaluation Report
	Online meeting to present the		

	results of the midline assessments.		
	Draft and final evaluation report, including an analysis of the assembled components of the evaluation. Meeting/ workshop in Nairobi to present the results of the evaluation.	Final by June 2022 DELIVERABLE 6 Notes: 2010 UNEG quality assurance checklist for final evaluation report available at http://www.uneval.org/document/guidance-documents	20% for 2022 Final Evaluation Report

11. Evaluation team composition and required competencies

The core of the evaluation team should include a lead evaluator (principal investigator) who has experience working on health impact evaluations and health systems research, a lead expert on quantitative methodology and a lead expert on qualitative methodology.

Besides, as indicated in Section 8 of the terms of reference, the evaluation partner will be responsible for preparing and submitting all required documents for ethical and research clearances in each country using national level mechanisms for ethical and research reviews. Having a national partner or a national team member in the team that can facilitate these clearance processes is a must.

The arrangement of necessary human resources including research assistants, enumerators and data entry clerks must be well defined in the technical and financial offer. The financial offer should include all eligible costs (fees, travel expenses, etc.) of the evaluation team. The evaluation partner is also expected to work independently and regular overhead costs relating to office space and equipment should be included in the financial offer.

Experience required for the core member of the evaluation team:

- Demonstrable experience in design and implementation of public health evaluations, ideally with experience in health systems specifically, and experience evaluating interventions in humanitarian settings.
- Demonstrable experience in quasi-experimental data analysis from prior evaluations, including the use of such techniques/methods as interrupted time series, matched controls, propensity score matching and development of synthetic control.
- In depth understanding of health programming in low and middle-income contexts, preferably in the Eastern and Southern Africa region.
- Experience in conducting mixed method research approaches including quantitative and qualitative research and analysis. Successful demonstration of management of evaluation team and collaboration with evaluation stakeholders.

Language Required for the Consultancy:

- Excellent spoken and written fluency in English required.

Other Skills and Attributes:

- Excellent analytical, research and report writing skills.
- Good communication and relationship-building skills.

- The institutional contractor must provide UNICEF with a Certificate of Incorporation/ documentation that this is a registered company or institution.

12. Intellectual property

All outputs of the evaluation project, including data, analysis, and findings, are considered to be the sole property of UNICEF. Any further use of the data and publication of results can only take place under UNICEF's explicit agreement.

13. Technical and financial offer

These terms of reference are sent to the evaluation firms that are on long term agreement (LTA) with UNICEF ESARO. As such, the technical offer should be more concise than the usual technical proposals that are submitted during open bidding process. It should address the following areas:

- Evaluation experience of the evaluation firm in low and middle-income countries, especially when related to health programming (ideally health systems strengthening) and related to the countries of interest for this evaluation, max 3 pages
- Experience and qualifications of lead evaluator (principal investigator) and lead experts for both quantitative and qualitative components (include CVs as Appendix); max 3 pages
- Brief profile and/or experience (evaluation, health, research and ethical approval mechanisms) of the local evaluation partner or team member for each country, max 3 pages for each country
- Proposed approach to meeting the deliverables in the ToR (methodology and implementation plan); max 5 pages
- Description of other key personnel (include CVs as appendix); max 2 pages
- Any other issues relevant to the TORs; max 2 pages

The financial offer should use the cost parameters from the Long-Term Agreement for Services with UNICEF ESARO Evaluation Section and contain the following:

- Time commitments for Principal Investigator (lead evaluator), other 2 Lead Experts, and other proposed team members
- Time commitments for each national partner or team member
- Participation in fieldwork trainings, testing of tools, data collection and workshop meetings and any other foreseen travels by the evaluation firm

The financial offer should include all eligible costs (fees, travel expenses, etc.) of the evaluation team. The evaluation partner is also expected to work independently and regular overhead costs relating to office space and equipment should be included in the financial offer.

ANNEX C Evaluation questions and matrix

Questions in italics were either deprioritized or examined through cross-country analysis in the synthesis report, and consequently they are not part of the Uganda evaluation report.

Table 6 Evaluation questions and matrix

OECD-DAC criteria	Evaluation questions	Sub-questions	Data and methods	Related RF outcomes and indicators. *Only italicized indicators are estimated through the evaluation.* *Many indicators potentially relate to several evaluation criteria and questions; we have placed RF indicators where they are most relevant. The list is restricted to the most relevant RF indicators rather than the full list.*
Relevance (Is the intervention doing the right things?)	• To what extent is DHSSi's design aligned with the priorities and needs of national and district governments? • To what extent does the DHSSi ToC hold under implementation?	a) Does DHSSi align with national health sector priorities? b) Does DHSSi align with district needs and priorities? c) How have DHSSi interventions adapted during implementation to fit different or changing contexts? *d) To what extent have DHSSi's assumptions underpinning the ToC held*	Document review Key informant interviews PAMAT group discussions	
Coherence (How well does the intervention fit?)	• To what extent is DHSSi coherent with other interventions targeting district health teams? • To what extent is there internal	a) To what extent is DHSSi aligned with other interventions, including government processes? b) How is DHSSi's effectiveness influenced by other interventions?	Document review Key informant interviews PAMAT group discussions	

	coherence with DHSSi?	*c) How clearly are DHSSi's objectives, and the means of achieving them, understood by the key stakeholders?* d) How does DHSSi align with UNICEF strategies and interventions?		
Efficiency (How well are resources being used?)	• To what extent were DHSSi interventions implemented as planned? • *What are the relative strengths and disadvantages of different DHSSi implementation models?*	a) What factors enabled DHSSi to be implemented as planned? b) What factors inhibited DHSSi being implemented as planned? c) Were interventions delivered with the planned and required timing, reach, content, and strength?	Document review Key informant interviews PAMAT group discussions Observation	Intermediate Output 1.1.1: Project countries have configured the bottleneck analysis app in national DHIS2 instances. • #/% of project countries where the BNA app is operational in DHIS2 • #/% of target districts that used the BNA app during their last planning cycle Intermediate Output 1.2.1: Project countries have a training package/learning tools and methodologies in place to administer in-service training on health management that speaks to country-specific needs. • #/% of project countries that have training curricula/learning tools in place to support in-service capacity development on district health management Intermediate Output 1.2.2: Project countries have built the capacity of target districts on health management. • #/% of target districts whose health management team been trained in health management under this initiative. • #/% of managers in target districts in who have been trained in health management under this initiative. • #/% of district health management team members in target districts who have

				demonstrated improved knowledge of management practices following capacity building training. • #/% of target facilities in Tanzania that have been trained in basic management skills linked to duties. • #/% of health management team members in target facilities in Tanzania who demonstrated improved knowledge of management practice following capacity building strategy
Effectiveness (Is the intervention achieving its objectives?)	• To what extent is DHSSi on course to achieve its objectives? • What changes have occurred due to DHSSi at district level?	a) To what extent is DHSSi contributing to stronger district health planning and management practice? b) To what extent does district planning and management consider underserved groups? c) What is the relative significance of different DHSSi components in contributing to outcomes, and through what mechanisms? d) What aspects of individual, district, and national contexts influence the effects of DHSSi activities on district health planning and management practice, and bottleneck reduction? e) Have there been any positive or negative unintended consequences as a result of DHSSi interventions?	Document review Key informant interviews PAMAT group discussion Observation	Intermediate Outcome 1.1: Improved data use for planning, monitoring and course correction among target district health management teams in project countries • *#/% of target districts where evidenced based planning practice improved* • *#/% of target districts where quarterly performance management practice improved* Intermediate Output 1.1.3: Project countries have built the capacity of target districts on evidence-based planning and monitoring linked to annual MoH planning cycles (2019, 2020, 2021) and target districts use the evidence-based planning and monitoring methodology to inform annual health plans. • *#/% of target districts that use bottleneck analysis to inform annual health plans* Intermediate Outcome 1.2: Improved execution of health operational plans among target district health management teams in project countries. • *% of target districts where at least 50% of key activities linked to bottleneck*

				reduction were executed during the last year Intermediate Outcome 1.3: Enhanced enabling environment for good district management practices addressing key barriers in project countries (institutionalization and government ownership, accountability etc.). • *#/% of target districts that include citizen perspectives in annual planning processes.* • # of project countries where political economy of health management assessment recommendations are actioned Intermediate Output 1.3.2: Uganda supports governmental mechanisms for enhancing accountability for results. • *A) #/% of districts that have had local government accountability capacity for health built (Uganda)* • B) % of DHT positions in target Ugandan districts that are vacant
Sustainability (Will the benefits last?)	• To what extent have systems and resources been developed to sustain results independently of UNICEF support?	a) Is there evidence of institutionalization of DHSSi interventions at national level? b) Is there evidence of the integration of DHSSi interventions at district level? c) How has sustainability been considered as part of DHSSi's processes? *d) How do different implementation models*	Document review Key informant interviews PAMAT group discussion	Intermediate Output 1.1.4: Districts in project countries not directly supported by DHSSi/BMGF funds that use evidence-based planning and monitoring methodology to inform annual health plans. • # of non-DHSSi/BMGF districts that use bottleneck analysis to inform annual health plans. • #/% of all districts nationally, that use bottleneck analysis to inform annual health planning

		compare in terms of their effectiveness and scalability?		Intermediate Output 1.3.1: Kenya and Tanzania incorporate evidence-based planning approach into national guidelines • # of project countries that have incorporated evidence-based planning into the national planning guideline (Kenya and Tanzania) Intermediate Output 1.1.2: Project countries have built local institutional capacity to support districts to improve data use for planning, monitoring and course correction in line with UNICEF's evidence-based planning methodology. • Updated evidence-based planning training package available • #/% of project countries where at least 1 institution is competent in building districts capacity on evidence-based planning. • # of non-UNICEF facilitators capacitated to facilitate evidence-based planning using updated training package Primary Outcome 2: Scaling up the DHSS approach through institutionalization, partner leveraging and laying the groundwork for sustaining health management capacity by developing investment cases for the professionalization of sub-national health management that include proposed pathways for institutionalization in Kenya, Malawi, Tanzania and Uganda. • # of project countries that scale up the DHSS approach through institutionalization, partner leveraging and/or laying the groundwork for professionalization of health management.

Impact (What difference does the intervention make)?	• To what extent is DHSSi on course to achieve its intended outcomes? [Information for later analysis, post-DHSSi]	a) To what extent has DHSSi improved coverage of priority health interventions? b) To what extent has DHSSi improved coverage of priority populations (such as women, girls, and other vulnerable groups) and underserved locations? c) To what extent has DHSSi reduced priority bottlenecks?	Assessment of changes in coverage using routine data sources - DHIS2 analysis Assessment of reduction in targeted bottlenecks – analysis of data from UNICEF routine reporting on the outcomes of the BNA process in districts	Primary Outcome 1: Improve district health governance and management performance in target districts in Kenya, Malawi, Tanzania and Uganda. • *#/% of target districts that have* improved *the coverage of priority health interventions (by number improved up to 5)* • *#/% of target districts that have reduced priority bottlenecks identified at baseline (by number of* bottlenecks*, up to 10)*

ANNEX D PAMAT

A few minor changes were made to the PAMAT in Y2 and Y3 to clarify the wording of some criteria. The version below is the Y3 PAMAT. Note that the term 'DHMT' was used as a generic term across DHSSi countries as the term used for regional DHSSi design; in Uganda, assessment focused on the DHT.

Table 7 The PAMAT

Criteria		1	2	3	4
1. Evidence-based prioritization	**1a. Health bottlenecks are identified using BNA** (i.e. using data on the 6 determinants of effective coverage to identify bottlenecks and based on situation analysis to identify tracer interventions)	BNA is not used to identify health bottlenecks	BNA is used but in a limited way (e.g. only limited use of BNA charts, UNICEF guidelines are not adhered to, only used in a minority of reproductive, maternal, newborn, and child health (RMNCH) areas) and weak situation analysis	BNA is used to identify health bottlenecks for most RMNCH areas and mostly in line with UNICEF guidelines (e.g. using BNA charts), moderate quality situation analysis	BNA is done as per UNICEF guidelines/training content across all or almost all key RMNCH areas, and there is high quality situation analysis
	1b. Identification of priorities incorporates equity analysis (underserved populations and locations)	No or very limited evidence of considering different groups, beyond hard-to-reach locations - no indication in the plan of coverage or services for adolescents, people with disabilities, refugees/IDPs, poorest people, gender variations, elderly	Some evidence of considering different groups e.g. references within situation analysis, causal analysis, or activities, but only a few groups are considered (e.g. only some of adolescents, people with disabilities, refugees/internally displaced persons (IDPs), poorest people, gender variations, elderly as well as hard to reach areas), and few if any relevant activities are included in the plan	Moderate consideration of different groups as part of planning - attention to several key groups in the plan, some variations in coverage between groups or locations are indicated, and the plan includes several activities to reach underserved groups (e.g. adolescents, people with disabilities, refugees/IDPs, poorest people, gender variations, elderly as well as hard to reach areas)	Thorough consideration of different groups as part of planning - identification of at least some bottlenecks uses data on different groups, and actions to address variations and target underserved groups are included in the plan, covering all or most of the key groups (e.g. adolescents, people with disabilities, refugees/IDPs, poorest people, gender variations, elderly as well as hard to reach areas)
	1c. Causal analysis is undertaken to inform action on bottlenecks NOTE: If DHMT did not use BNA approach, consider causal analysis	Causal analysis is not undertaken	Causal analysis is undertaken in a limited way (e.g. this is broad not specific on exact causes, logic is unclear, only	Causal analysis is undertaken and broadly sound (e.g. some level of detail on specific underlying causes, logic is clear in most place, used in most key RMNCH areas, but may be	Causal analysis is undertaken as per the guidelines/training content (e.g. sub-district analysis, high level of detail, clear logic, underlying causes

	of problems identified in other ways. For example, another systematic approach to examining data or stakeholder meeting to identify problems. Focus on whether the DHMT examined underlying causes of problems, not on how the problems were identified. If there was no systematic process of identifying underlying causes, score 1		used in a minority of RMNCH areas)	some gaps in specificity or logic or lack of sub-district analysis)	identified, all or almost all key RMNCH areas)
	1d. Key activities identified to tackle bottlenecks are appropriately prioritized NOTE: If the DHMT did not use a BNA approach, consider prioritization of activities identified by the DHMT in other ways (e.g. through another systematic approach to examining data or a stakeholder meeting to identify needs). Focus on prioritization, not on how the long list of potential activities was identified. If there was no systematic process of identifying potential activities and then selecting priorities, score 1.	No evidence of any discussion on priorities, all activities identified go in the plan;	Some information on considering priorities and dropping some activities, including reference to criteria - but no firm evidence of using criteria in the plan	Clear evidence that a set of criteria were used to prioritize activities, but there are gaps in logic or in rigorous application of criteria, and the final list of activities is not clearly feasible within available resources (e.g. prioritization table is included in the plan but logic is sometimes unclear, long list of activities)	Prioritization criteria are applied effectively (e.g. scoring has been considered with care or evidence) and result in a list of activities that is manageable within district resources (human, financial, material)

2. Annual work plan	**2a The district plan includes activities identified through the BNA prioritization process** NOTE: If the DHMT did not use a BNA approach, consider inclusion of activities identified and prioritized through another systematic analysis process (e.g. through another systematic approach to examining data, or a stakeholder meeting to identify problems and priorities). Focus on whether the district plan is based on the analysis examined under Domain 1. If there was no systematic process of identifying problems, causes and priorities to inform the plan, score 1.	Few if any activities prioritized through BNA are indicated in the activity plan	Some high priority activities identified through BNA are included in the plan but some are missing and there is no clear explanation/logic for the disconnect; lack of logical flow between causal analysis, prioritization and final action plan	Most high priority activities from BNA are in the plan, but there is a lack of clear rationale/logical process for other activities in the plan (i.e. activities not identified through BNA) or these other activities are not considered district priorities	All or almost all high priority activities identified through BNA are in the plan, there is a clear logic for other activities in the plan (e.g. they are identified through a process of causal analysis), and planned activities are seen as in line with district priorities
3. Stakeholder and community involvement	**3a. The district plan is developed in collaboration with district development partners engaged in health service delivery e.g. FBOs, NGOs, other development agencies**	District plans are not developed in collaboration with other district stakeholders	The district plan is developed with limited collaboration of other district stakeholders (e.g. fewer than half of the relevant organizations are involved, or they make minimal input)	The district plan is developed with moderate collaboration of other district stakeholders (e.g. some key stakeholders missing, or only involved in some of the critical steps)	The district plan is developed with broad collaboration with other district development partners (e.g. all or almost all relevant partners are involved at key steps, good attendance at planning meetings)
	3c. Citizens have a significant degree of involvement in annual planning decisions	Citizen representatives are not informed of district annual planning processes or do not provide any input	Limited involvement e.g. citizen representatives have few or no organized opportunities to provide input to planning, limited attendance at meetings,	Moderate involvement e.g. citizen representatives have regular opportunities to provide input to planning or substantial work to gather citizen view to inform planning, but no decision-making power	Citizen representatives are collaborators in priority setting and development of plans and given equal voice and decision-making power as government officials

			limited gathering of citizen input to inform planning		
4. Activity execution	**4a. Key activities identified in the district plan are implemented within the target year**	No / very few priority activities indicated in district plan are implemented - <25%	Some priority activities indicated in district plan implemented - 25-49%	Most priority activities implemented - 50-75%	All or almost all priority activities implemented - >75%
5. Performance review of the annual plan	**5a. There is a regular review of district plans and appropriate course correction**	There is no review of district plans between annual planning rounds	The plan is reviewed at least once between annual planning rounds (e.g. after 6 months) but there is no evidence of course correction (no identification of action required in response to the review) and/or the review does not include specific discussion of progress on activities set out in the district plan	The plan is reviewed at least once between annual planning rounds (e.g. after 6 months), including specific assessment of progress on planned activities as part of the review, and with some identification of action required in response	The plan is reviewed at least once between annual planning rounds (e.g. after 6 months), including specific assessment of progress on planned activities as part of the review, and all or almost all action required in response to the review is documented and followed up.
	5b. BNA and/or other data/evidence are used to assess progress NOTE: If there was no review of the district plan, score 1.	BNA and/or other data/evidence is not referred to during district plan reviews	BNA and/or other data/evidence is referred to but lacks analysis or presentation e.g. only used for a few areas, without graphs or other visual approach	BNA and/or other data/evidence is referred to based on some analysis and presentation, but without sufficient analysis/presentation to clearly show progress and gaps (e.g. tables/graphs but no targets, scorecards) or only for some programme areas	BNA and/or other data/evidence forms the basis of the review; this is done using the BNA Action Tracker or other form of visualization and in ways that clearly show gaps/challenges e.g. considering progress against targets, and for most or all programme areas
6. Management accountability	**Uganda only 6a. The district health management team (DHMT) has clear roles and responsibilities**	The district health team does not have defined roles and responsibilities (e.g. there is no job description for DHT members)	Roles and responsibilities are defined only in a limited way (e.g. job description gives a broad remit only, and roles are not specific)	The DHT has clearly defined roles and responsibilities (e.g. set out in a JD) but these are not consistently followed	The constituted DHT executes its roles and responsibilities as set out in a clear job description and as per defined guidelines and frameworks
	Uganda only 6b. The DHMT meets on a regular basis	The DHT does not meet regularly (less than twice a year)	The DHT meets only occasionally (less than once per quarter)	The DHT meets on regularly (at least once per quarter)	The DHT meets every month or almost every month (at least 10 times per year)

	Uganda only 6c. The content of DHMT meetings and decisions are documented with clear action points	Meetings are not documented	Meetings are documented but not substantively	Meeting minutes and decisions/actions documented but do not have a timeframe or accountable agent	Meeting minutes and decisions/actions are documented with a timeframe and accountable agent
	Uganda only 6d. The DHMT is represented in key high level, cross-sector district governance meetings	The DHT is not represented in other key district governance meeting	The DHT has limited representation in other key district governance meetings (e.g. in exceptional cases)	The DHT has moderate representation in other key district governance meetings (e.g. invited but meetings are irregular)	The DHT is actively engaged in key district governance meetings (e.g. standing member, regular meetings)

ANNEX E Topic Guides

Generic topic guides for use in each DHSSi country were developed during inception were further refined and tailored to each country context and participant for the Y1, Y2 and Y3 evaluation rounds. At each round, guides were also adjusted based on the document review, and then adapted during fieldwork in response to emerging themes and effective approaches. The generic topic guides are available in the Inception and Y1 Synthesis reports, and topic guides for Uganda are available upon request.

ANNEX F PROGRESS ON Y1 AND Y2 RECOMMENDATIONS

The Y1 and Y2 evaluations proposed several recommendations, which were discussed and adapted through discussion with ESARO and the UCO. UCO provided further updates and reprioritization on some Y1 recommendations following the Y2 evaluation. It is not expected that all recommendations will have been implemented at this point, as some are longer term agendas. Here, we report on steps taken towards recommendations, and where relevant, provide comments on the likely relevance of planned or implemented responses and further suggestions to strengthen future work.

Table 8: Progress on Y1 recommendations

UCO Plan		Year 2 Evaluation findings and comments	Year 3 Evaluation findings and comments
Recommendation 1	Strengthen alignment between EBP and budgeting systems to reinforce the underlying rationale and motivation for Evidence Based Planning. This may require closer engagement of\ the Ministry of Local Government, MoFPED, and DLGs	Over Y2, DHSSi and MoH have worked to align the ACW and PBS, by emphasizing the link to the PBS and early timing in EBP training, and developing a planning template that helps districts convert ACWs into PBS budget categories (see 2.2). UCO and MoH also plan to revise the planning guidelines to clarify the link to the PBS, as well as to align with the new programme planning approach. Support for review and revision of guidelines is not possible within current UCO funding; UCO are working with MoH to encourage support from other partners. MoH has also discussed making ACWs a requirement for government funding, but this requires further discussion with MoFPED. DHSSi supported a consultant to review ACWs and develop monitoring tools that could be used by MoH, UCO and other partners to assess district plans. This support was designed to strengthen MoH capacity for supportive supervision of district planning, though MoH capacity to use these tools is not yet clear. MoH were part of planning workshops in some UCO-supported districts. Further support to MoH supervision was not possible within UCO funding, but UCO	There was significant progress in alignment to budgets in Y3, through MoH development of a new planning template (HMIS001) and support for DHTs in aligning plans to budget codes. Including through involvement of district planners. However plans were often incomplete, and this misalignment in timing with budget submissions suggests further effort may be needed to ensure plans are prepared in time to inform budgets.
UCO Y2 response	Agree		
UCO Y2 comment			
Planned action steps	• Share and discuss the recommendations with the Ministry of Health and the MoF desk officer in the Ministry of Health • Improve guidance (manual/training) on how to integrate priorities identified through the evidence-based planning process into the district budgets.		

	• Support the Ministry of Health, Ministry of Finance and Ministry of Local government to develop a template (excel or other format) to clearly link the annual operational plans and the PBS system • Support the MoH and MoLG to intensify supportive supervision especially during the planning period to support DHT to engage with the planning process.	supported partner coordination, which in turn contributed to funding from other partners for MoH supervision visits to some districts.	
Recommendation 2	Guideline revisions also provide an opportunity to enhance advice on integrating bottleneck analysis with other areas of problem analysis and prioritization in the plan, and to integrate BNA action trackers with other monitoring processes.	As above, funding has not been available to support revision of guidelines. Review of 2021-22 plans indicates continued inconsistency in application of BNA within ACWs, including examples of one activity and budget table for activities identified through BNA and a separate table for other activities; implementation plans and budgets that are restricted to activities developed through BNA rather than including other routine activities; and examples with no or very limited clear inclusion of activities prioritized through BNA in the costed implementation plan. The DHSSi-funded consultant developed some additional EBP guidance (based on the BNA manual). However, these guidelines, and the new ACW HMIS 001 template, do not clearly indicate whether or how activities not identified through BNA (e.g. routinely required services or those from other programme plans) should be included in the	The new MoH HMIS001 template incorporates BNA. However, the BNA Excel template was not supported by MoH, and there were different views on its future use, with some suggestions for increased MoH promotion of the Excel to facilitate BNA. Plans were incomplete for most districts at the time of the evaluation, which hindered assessment of integration of BNA with other sections of the plan and particularly with the activity plan and budget. Core bottlenecks indicators were often considered during quarterly performance review, but other monitoring of bottlenecks (and associated actions) was inconsistent.
UCO Y2 response	Agree		
UCO Y2 comment	UCO will need to work closely with the MoH and relevant ministries and stakeholders in order to improve the guidance on planning.		
Planned action steps	Resource mobilization to support the revision of the guidelines following the		

	change from sectors to programme-based budgeting	implementation plan alongside activities identified through BNA. Consistency in formats and flow from analysis to actions and budgets could be supported by further developing the planning template for future years, building on the new HMIS001 template with guidance on how activities identified through BNA or through other processes should be incorporated. Streamlining with activities identified through other plans may also be supported by guidance on selection of areas for BNA, considering whether problem analysis has already been conducted as part of other planning processes. New templates will also need to be adapted to the programme planning approach. Completion of the BNA action trackers (EBP analysis template) over 2020-21 was inconsistent. The template does not appear to be consistently used and updated by DHTs, or routinely integrated in quarterly review processes (5.1.3). This suggests further work is needed to align and integrate tools for tracking progress on priority bottlenecks with other monitoring systems (see 7.2).	
Recommendation 3	Use forthcoming regional planning meetings led by the MoH to support a harmonized approach across ministries and clear government direction on the approach and tools.	The recommendation to use regional meetings was originally a suggestion from UCO. As suggested by UCO, these meetings may not be the appropriate forum. The rationale behind this recommendation was alignment between the ACWs and budgeting process; this is discussed in Recommendation 1 above.	No further comments.
UCO Y2 response	Partially Agree		
UCO Y2 comment	Regional planning meeting (in their current form) are still sectoral as such it does not present an opportunity to		

	harmonize –. UCO will advocate for the appropriate inclusion and representation during these regional meetings.		
Planned action steps	Advocate for the expansion of the Regional Planning Meetings to ensure appropriate representation		
Recommendation 4	Address DHT leadership and oversight to reinforce demand for good planning and management, including building on PEA findings and working with local government.	The PEA findings were discussed at the HSS Reflection Meeting. The PEA highlighted problems that were already known to the DHSSi team, including issues of public financial management as well as political influence on allocation of resources. UCO feel that addressing many issues is beyond the scope of DHSSi, and in some areas, solutions are unclear, and the report did not point to specific feasible actions. A further dissemination meeting with stakeholders to develop an action plan was planned with the PEA team, but this had not yet been held at the time of evaluation feedback due to COVID-19 restrictions. Management skills were not initially considered as an area for DHSSi investment in Uganda, because the landscaping exercise conducted during inception by FDP suggested that sufficient capacity was in place. UCO have since recognized that although the institutions to train district leadership exist, they are not functioning optimally, with gaps in pre-service training, induction programmes, and recruitment procedures (noted in the HSS Reflection Meeting report). MoH also see DHT management as requiring support (see 2.1). The HSS meeting identified action points related to MoH support for DHT leadership	PEA findings were discussed at the HSS reflection meeting in May 2022, with discussion and recommendations. Initial work on management training was undertaken, through support to revise the MoH management manual. Other specific interventions based on the PEA have not yet been designed.
UCO Y2 response	Agree		
UCO Y2 comment			
Planned action steps	• Design interventions based on the outcome of the PEA exercise and if necessary, cost them. • Integrated interventions designed in the UCO menu of HSS interventions package • Support the MoH to develop/update a management manual • Support resource mobilization (through UCOs role as convener at the national level) to support regular management training		

		and management training, but UCO has not been able to take this work forward due to funding constraints.	
Recommendation 5	Work with the government and directly to more deliberately engage with key partners, including at district level, to enhance complementarity and reduce potential duplication.	The Y1 evaluation noted that several other partners work on planning and management, creating opportunities for alignment and complementarity, but also risks of duplication. The HSS Reflection Meeting report notes the importance of improved coordination, and indicates that UCO is working with other health development partners to promote alignment. Y2 fieldwork also indicated work on EBP by several other partners, including support for reviews. Costs are sometimes shared between partners, and DHSSi IPs have liaised with other partners to coordinate support, enhancing efficiency. Support from other partners has also enabled reviews in Oyam, where DHSSi has not yet funded reviews. Some partners prefer to support reviews for their programme focus, such as HIV, when instead 'the review should be integrated', covering all district health activities and 'not only for one development partner' (Kasese DHT01). However, partners were generally reported as funding the standard quarterly performance reviews. Other partners have also supported work on data quality and planning (e.g. work by RHITES and GIZ in Oyam, and through Baylor-Uganda's HIV programme in Kasese). If well-coordinated, these partner activities have potential to contribute to DHSSi outcomes. At national level, UCO have sought to develop synergies through encouraging MoH to identify other partners who may be able to support activities related to DHSSi that are	The Y3 HSS reflection meeting included a wide range of development partners, supporting future coherence. At district level, there was some co-funding of activities at district level. Some other district partners also supported additional meetings to develop the 22-23 ACW, but it was not evident that UCO or IPs had discussed coordination in advance with these partners to agree on requirements for planning and which partner would provide what support. Partner involvement in district level DHSSi-supported EBP activities was limited.
UCO Y2 response	Agree		
UCO Y2 comment	This is already in progress – we have already engaged at the HDP level as well as at the Ministry of Health level. This continues to be a key activity for UCO		
Planned action steps	• Present to the HDPs the need for collaboration at the district level by implementing partners • Support the Ministry of health to organize a partners round table to support coordination at the district level • Monitor implementation of agreements from the partners round table on coordination		

		not possible within current funding, such as revision of planning guideline and management training. In relation to the specific action steps, a presentation was made to the Health Development Partners and two partner roundtables were held, contributing to collaboration with Enabel for funding some activities in the West Nile region. Continued effort is needed to monitor commitments made by partners in these roundtables.	
Recommendation 6	Clarify links between RBF planning, the Integrated plans, and other district planning systems, and explore other ways that RBF may incentivize or discourage effective planning, data use, and management. Engage with RBF partners to understand potential complementarities, including in planning tools.	As noted in Y1, districts develop 'performance improvement plans' to receive RBF funds, leading to duplication with ACWs. Over Y2, there has been work to align RBF support with the ACWs and avoid duplication in planning. MoH report discussing streamlining with partners supporting RBF, and securing agreement that RBF funds should be based on ACWs (including BNA) rather than a separate performance improvement plan. RBF indicators have also been included in the new ACW template developed by MoH, to support integration. Although there has been progress in discussion with RBF partners, a new RBF scheme is beginning (the Uganda Intergovernmental Fiscal Transfer project, implemented by MoFPED with World Bank funding), so sustained integration may require further discussion. Other partners have noted a need for more alignment and integration around RBF processes (e.g. PATH https://www.path.org/resources/utilization-public-health-financing-ugandas-primary-health-care-program/), or are working to review the RBF experience (e.g. ThinkWell with BMGF funding through Strategic	Information on RBF was shared during Y3 EBP training, and DHTs indicated more integration with RBF for 22-23. MoH is engaging with RBF partners and hopes to make HMIS001 submission a requirement for RBF funds.
UCO Y2 response	Agree		
UCO Y2 comment			
Planned action steps	Organize a meeting with the RBF lead to discuss integration		

		Purchasing for Primary Health Care), so there may be value in extending discussion to identify any synergies with other initiatives underway. Beyond aligning the ACW and RBF planning process, there is scope to examine potential complementarities between RBF assessment frameworks and effective district planning and management. For example, indicators examined through RBF could incentivize and reinforce effective management practice; or there may be scope for the RBF assessment to incorporate practices or approaches encouraged through DHSSi (such as timely completion of an ACW), so creating additional incentives for DHTs to implement these practices/approaches.	
Recommendation 7	Invite early partner engagement in EBP to support causal analysis and understanding of DHT prioritization. Work with national funders to facilitate district partner input.	While expanding capacity to support EBP has value, and DHSSi has supported some additional training over 2020-21, this recommendation was aimed at district health partners being engaged in development of ACWs. Y1 findings suggest partners are often engaged only to share their planned activities or for the DHT to request partner funding for planned activities, rather than working with the DHT to jointly identify bottlenecks, causes and priorities. Involving district partners in these earlier stages could strengthen problem analysis by bringing additional evidence and ideas, and encourage joint ownership of priorities (and consequent funding). Partner involvement for 2021-22 planning varied between districts. Most partners were involved through budget conferences rather than as part of problem analysis, though partner engagement in reviews also provides information to inform planning. There were	See comments on recommendation 5; there was limited partner involvement in BNA within DHSSi-supported meetings.
UCO Y2 Response	Agree		
UCO Y2 comment	This activity is already under way through partners working with UNICEF – an activity will be planned to support EBP capacity building among both Ips and private consultants and Academia		
Planned action steps	Hold orientation meeting with new PCA partners Hold training for MoH Departments, DLGs and Implementing Partners		

	Strengthen capacity of the HSS team to support direct implementation	some positive experiences of improved partner engagement and alignment with plans, but also concerns about partners supporting activities that are not district priorities (see 5.1.2 and Annex B).	
Recommendation 8	Consider the advantages and disadvantages of different operational models. With direct support, consider approaches to ensuring sufficient capacity for district support.	The Y1 evaluation noted particular difficulty in supporting progress in Oyam, where lack of an implementing partner meant reliance on stretched UCO capacity. Additional staff have since been recruited to the UCO team, and AVSI also provided support to Oyam. However, Oyam DHT feel support remains insufficient (see 4.2) The DHT saw Oyam as at a significant disadvantage compared to districts with IPs, reporting that UCO funding had not arrived whereas AVSI, Baylor-Uganda and CUAMM received funding and were supported to conduct activities: 'we haven't really got any support from UNICEF, to be able to strengthen our systems' (Oyam DHT02). The DHT suggested that UCO should allocate a staff member to focus on Oyam, in the same way that other districts have IPs. Models involving IP also bring challenges; in particular, MoH feel there is insufficient coordination between IPs and MoH (see 2.1), and relying on an IP to drive forward activities could potentially reduce DHT leadership: Oyam DHT note that without an IP, 'we just do that on our own' (Oyam DHT02). Building district capacity to facilitate workshops could potentially support transition away from IP support (see 6.2). There are also indications of gaps in reporting between DHTs, IPs and UNICEF, including uncertainty or inconsistent information on planning processes and activities undertaken in each district, and a	The current model of working via IPs has limitations in terms of oversight and sustainability. In relation to oversight, availability of documents to the evaluation team improved in Y3, but there were still gaps, and indications that documents were not readily available within UCO. We also identified some discrepancies in IP reports, suggesting a need for more UCO review of reports, and there were some inconsistencies between information from IPs in reports and interviews and evidence from discussion with DHTs and review of district plans (for example on the extent to which 22-23 ACWs were complete). UCO were often uncertain about exact activities conducted, likely reflecting limited staff time in relation to the number of districts supported In terms of sustainability, UCO suggested that future work should engage via national and regional government structures, rather than NGO IPs (see section 6.3). UCO consider that lack of an IP in some districts reduced effectiveness and DHT completion of plans, given insufficient MoH and UCO time to support districts. However, the ACW was in fact more complete in Oyam (which does not have an IP) than in Lamwo and Kasese, and ACWs were incomplete for several other district with direct AVSI or Baylor-Uganda support. This suggests that IP presence is not a guarantee of effective DHT action.
UCO Y2 Response	Agree		
UCO Y2 comment			
Planned action steps	Strengthen capacity of the HSS team to support direct implementation		

		lack of easily accessed reporting (e.g. on district and regional EBP workshops). For example, UCO indicated that Kasese and Kikuube districts did not use BNA for their 2020-21 ACW, but the Kasese 2020-21 plan included BNA charts, and although causal analysis and prioritization appeared largely identical to the 2019-20 plan, some BNA charts were updated. For Kikuube, the Y1 PAMAT completed by Baylor-Uganda for the 2020-21 plan reports use of BNA (for immunization, ANC, WASH, malaria, and tuberculosis), although also noted that most activities identified through BNA were not included in the workplan (see also 5.1.1). These inconsistencies suggest gaps in sharing of information among DHTs, IPs and UCO, and gaps in monitoring the district planning process and EBP support. This suggests potential value in further reviewing implementing models, ensuring effective documentation systems, and ensuring clarity on roles and expectations for coordination among stakeholders.	
Recommendation 9	Ensure adequate time and practice as part of further ToT and DHT training. Consider the balance between training and practical work on planning during workshops.	IPs see the 2020 refresher training as building their skills and confidence with EBP. Workshop agendas were changed for support to 2021-22 planning, to include more time for practical work on the ACW.	DHTs did not complete ACW during the regional EBP workshops, and a packed agenda meant some presentations had insufficient time. The balance between providing training/guidance and time to work on planning could be reconsidered, particularly given increased DHT skills in BNA (for example, with a national or regional workshop focused on key updates followed by district workshops with some mentoring support for actual planning). The master trainer ToT was considered too short to adequately cover all topics on the agenda.
UCO Response	Agree		
UCO Y2 comments			
Planned action steps	Revise the training agenda to include more practice based training with field based practical's		
Recommendation	Consider the balance of	As above, planning workshops have been	

10	focus, time, and support between BNA steps, including ensuring sufficient time to probe and discuss causal analysis, solutions, prioritization, and equity.	made more practical. DHTs use root cause analysis and prioritization criteria (although this is not consistently documented in ACWs). However, there is room for deeper and more specific causal analysis, and for more differentiation in scoring for prioritization (see Annex B). Consideration of equity remains variable, and several stakeholders commented on a lack of clear methods to analyse equity during planning (see Annex B). New guidelines developed by DHSSi consultant contain little guidance on equity, and primarily advise using DHIS2 and other information sources that are unlikely to include detailed breakdowns to understand, for example, the situation for adolescents or people with disabilities. In addition, this data will not necessarily indicate the reasons for gaps in health care, or appropriate solutions. A potentially more feasible and effective strategy to increasing attention to equity during planning may be engaging with relevant stakeholder groups during or in advance of planning, to understand their experiences, needs and suggestions for good practice and priorities. Discussion with relevant CSOs, MoH desk officers or other ministries (e.g. gender) could also provide guidance for DHTs. This engagement could take place at both national levels (e.g. through HSS reflection meetings), and in districts, either inviting representatives to planning workshops or using other fora to build links and DHT understanding. Involvement of the Ministry of Gender within the human capital programme may also provide options to support DHT consideration of equity during planning.	See comments on recommendation 9. Y2 comments on equity remain valid, and there was no change in guidance on equity for Y3 with little emphasis during EBP training.
UCO Response	Agree		
UCO comment			
Planned action steps	Revise the training agenda to include more practice time for the causality analysis in the EBP		

Recommendation 11	Consider options for expanding skills to the wider DHT and sub-district level.	There were continued requests for EBP skills to be expanded, including to the whole DHT and to sub-district levels – particularly given an intended planning approach that starts from facilities (see 4.2). As suggested by one DHO, holding the main planning workshops within each district would allow wider participation, including development of skills for the full DHT. Currently workshops tend to be held outside the district to attract attendance, suggestive of insufficient inherent motivation to commit time to planning. With strong DHO leadership to support attendance, workshops at or close to the district health office could allow wider attendance, potentially with reduced costs. Some planning activities supported through DHSSi appear to have been held within districts; limited documentation prevented detailed assessment of attendance (or verification of locations and agendas), but there may be learning from experience with these workshops.	Use of regional workshops limited participation of district staff. However, there was some support for expanding skills, including through an additional workshop for Lamwo cost-shared with AVSI, and involvement of health sub-district staff in some Baylor-Uganda-supported EBP workshops. DHTs considered further expansion of skills necessary; some suggested they would now be able to support this given presence of master trainers among the DHT.
UCO Response	Agree		
UCO comments	This has direct implications to resources. While this is good – we will need to raise more resources to accommodate the number of people on the DHT.		
Planned action steps	• Active integration of EBP activities in resource mobilization efforts and revision of the HSS costing in the package of services • Resources available – target EBP training efforts at the district and create a critical mass for EBP at this level		
Recommendation 12	Support DHTs in understanding how EBP can drive efficiencies and deliver tangible benefits without additional funding, and how it can support routine activities.	The HSS Reflection Meeting report notes in response to this recommendation that MoH developed a short brief on the rationale for EBP. This brief explains that the plans are 'a key management tool that helps to ensure that available resources from all funding sources are used efficiently and effectively. It also helps to make sure that programs in the district are well coordinated and mitigates against the wastage that would result from poor coordination or duplication of services'. However, it does not provide further detail, or guidance on identifying cost-free activities. There is a continued expectation that UCO will fund activities identified through BNA in some districts, and DHTs emphasize use of plans for resource mobilization rather than as	There were no indications of emphasizing efficiencies during EBP training. Bottleneck solutions have often been supported through partner funding (often via UCO). DHTs tend to discuss BNA and ACW as important for resource mobilization, rather than efficient use of DHO resources.
UCO Response	Agree		
UCO comments	This will be integrated in the supportive supervision visits conducted with the Ministry of Health		
Planned action steps	• Develop a supervision schedule with the Ministry of Health and integrate EBP advocacy in the plan • Conduct the supervision		

	visits • Develop a communication language to resonate with the roles of DHTs to motivate them to use evidence in planning	explicitly improving efficiency of government resources. Additional support for MoH supervision was not possible within UCO funding (see recommendation 1).	

Table 9: Progress on Y2 recommendations

UCO Plan		Year 3 Evaluation findings and comments
Recommendation 1a	Build DHT capacity to facilitate EBP workshops, so reducing dependence on IPs, potentially linking this with plans for national ToT	The master training included some DHT members, and most DHT members indicated that they could now conduct BNA independently, and saw presence of experienced staff and master trainers within the district as enabling further support and training. However, DHT members were not involved in facilitating Y3 EBP training, which relied on UCO, IP or MoH. Follow up from the master training was not conducted due to lack of funds.
UCO Y2 response	Agree Priority for Y3	
UCO Y2 comment		
Planned action steps	• Hold catch up meetings with regional teams (made up of MoH, DLG & Academia) by June 30, 2022 • Support organization of regional trainings by August 2022	
Recommendation 1b	Identify opportunities for DHTs who value EBP to share experience with other districts. To motivate use of BNA, review and indicate alignment with league table indicators	The District League Table was highlighted by DHTs as a key driver of district attention and effort. In some cases, DHTs used BNA to tackle indicators that were reducing League Table performance. More explicit linking could encourage motivation.
UCO Y2 response	Agree Priority for Y3	
UCO Y2 comment	UCO has already been using this approach. For example, UCO has used Moyo District and Oyam District Biostats to share experience and expertise. Additionally, in the implementation of the Progression Model, similar approaches have been utilized.	

Planned action steps	• Work with implementing partners to identify DHTs who value EBP • Provide mentorship to perfect their skills on use of EBP. • Use these districts to present their experiences in EBP and HSS forums including the annual HSS Reflection Meeting, Regional Planning Meeting • Utilize leading individual and integrate them into regional EBP team	
Recommendation 2a	Ensure IPs provide effective review of ACWs, ideally by working with the full DHT to review the draft, so all DHT members understand requirements and approve the plan.	Many ACWs provided via IPs were incomplete, sometimes contradicting IP comments in interviews/reports.
UCO Y2 response	Agree Priority for Y3	
UCO Y2 comment	UCO will include this on the feedback for Ips from the evaluation report to be organized.	
Planned action steps	Organize an IP Evaluation report feedback session	
Recommendation 2b	For meaningful quality assurance, identify which ACW components are key for effective budget allocation and implementation (for example, accuracy of indicated funding and inclusion of all required activities may be more important than a specific analysis tool).	In relation to UCO comments, this recommendation was about use of tools/checklists for quality assurance of ACW, considering those developed in Y2 by the DHSSi consultant. Some criteria in those tools were not clearly the critical priorities (specific comments were sent to UCO on the checklist developed by the consultant in February 2022). In Y3, MoH reported that there was no change in the process for quality assurance of ACW, and the checklist had not been used. Regional MoH representatives provided some review of plans, and DHTs reported feedback from MoH (for example, on missing information, or alignment with the PBS and PIAP). There was no further work on systems for quality assurance under DHSSi.
UCO Y2 response	Agree Priority for Y3	
UCO Y2 comment	This is already in progress - UCO is working with the Ministry of Health to popularize the use of HMIS001 which will help translate prioritization into financing allocation	
Planned action steps	Continue to support the MoH to popularize and improve design and application of HMIS001 form	

Recommendation 2c	Given limited central MoH capacity, identify any existing systems for DHT supervision that could support sustained quality assurance of ACWs.	For RBF, see Y1 recommendation 6. UCO did not indicate work on the new supportive supervision strategy, but this may have value as a way of sustaining and institutionalizing EBP quality assurance.
UCO Y2 response	Partially agree Priority for Phase II	
UCO Y2 comment	A supportive supervision strategy was recently launched - pre COVID19. The emergency of the COVID19 meant that the MoH did not have a chance to full roll out the supervision strategy. UCO should instead work on mainstreaming the preparation and use of ACW in the evidence based supportive supervision. Additionally, ongoing work to streamline instruments for planning at the district level (i.e. integrating ACW as part of the criteria for funds disbursement) is likely to yield more benefits than a parallel supervision system.	
Planned action steps	Continue to follow up with the MoH on progress of integrating ACW as part of the deliverables for performance-based financing	
Recommendation 2d	Consider options to motivate DHTs to produce high quality plans; as well as ensuring plans affect funding (see Y1 recommendations 1 and 6 on alignment with central government and RBF funding), options might include increased visibility of plans through uploading on public websites or peer review among district teams.	See Y1 recommendation 6 for information on RBF.
UCO Y2 response	Agree Priority for Y3	
UCO Y2 comment	See comment above	
Planned action steps	Refer to action above	
Recommendation 3	Work with MoH on an integrated approach to monitoring all ACW activities, ensuring the approach is suited to DHT monitoring needs, understood by all DHT members, supported by district planners, and aligned to the programme	The new monitoring approach started with AVSI remains in draft form and the learning visit had not yet been done. Further discussion with MoH is needed on the approach.

	planning approach.	Quarterly reviews over 21-22 focused on key performance indicators, with limited attention to activities in ACW. Use of the BNA Excel for monitoring was inconsistent.
UCO Y2 Response	Agree Priority for Y3	
UCO Y2 comment	This is in progress. Based on the templates seen for Malawi's review meetings, AVSI started working on a modified module to support review meetings crucial for the monitoring of implementation of ACW. This will be presented to the MoH Planning Department for uptake	
Planned action steps	• Organize an MoH led field visit to districts in West Nile that have started implementing the revised Quarterly Review Schedule (supported by AVSI) • Develop lessons learnt and recommendations from the field visit • Ensure Quality ACW reviews are integrated into the HSS Reflection 3.0 meeting for deep dive discussion • Support district to prepare and present on Quality ACW Reviews at the HSS Reflection Meeting	
Recommendation 4a	Carefully review the added value and sustainability of the DHSS Progression Model and new checklists developed by the DHSSi consultant. The Progression Model has supported DHT reflection, but other institutionalized tools could potentially serve this purpose, and are already used by some DHTs to review and assess their performance.	The Progression Model was discussed at the HSS Reflection meeting, with mixed comments on its future use. There was not further work by UCO to consider links between the Progression Model and other models/tools. MoH did not see the Progression Model as relevant at this stage, and described it as *'too academic, too detailed - somebody needs to sit down with it and adapt to our system…It needs to be made practical'* (MoH KII01). Relevance was also reduced because the Model only covers UNICEF-supported districts: *'as long as it is still for UNICEF districts, we will have little interest'* (MoH KII01). The focus for MoH is the District League Table, which they described as comprehensive, encompassing service coverage, human resources, finance and reporting; the Progression Model would be a 'parallel
UCO Y2 Response	Partially agree Priority for Y3	
UCO Y2 comment	Work is in progress to fit the DHSS progression model into currently existing models. UCO is organizing a multi stakeholder workshop to disseminate the Yr3 results of the DHSS and will include utility and institutionalization/ continuation of	

	the DHSS progression model as a tool.	assessment tool' (MoH KII02). For any further work, MoH advised that UCO should present the Model to the Health Information, Innovation and Research TWG to seek their feedback. At district level, DHTs saw the District League Table and facility QoC assessment as key tools to monitor performance. Some DHT members had limited familiarity with the Progression Model, but those who had been more involved saw the Model as potentially useful. Particular benefits were providing district-level analysis that could complement tools focused on facility performance, covering all building blocks, and provision of instant feedback and easily interpreted results via automated calculations in the Excel tool and colour coding. Some suggestions were made for improvement, including removing criteria outside DHT control. Some DHTs indicated changes following Progression Model assessments, for example to improve delivery care in Lamwo and on promotions in Kasese. However, the Model has not been integrated or adopted at district level. UCO consider that the Progression Model provides more comprehensive assessment than the District League Table or other tools. However, as suggested by MoH comments, the League Table encompasses more than disease indicators, including an indicator on human resources and the Local Government Performance Assessment (LGPA) score. The LGPA in turn includes health indicators related to staffing (including substantive DHT appointments), reporting (including HMIS data), supervision, quarterly review and implementation of action points, health sector engagement with the district council, HUMC functionality, compliance with procurement and financial procedures. Drawing on or engaging with other tools (for example, to propose integration of 1-2 additional indicators) could provide a way to streamline and institutionalize assessment. Given DHT appreciation of automated scoring and colour coding within the Progression Model, UCO could also consider ways to support use of a similar approach for other government monitoring tools. Based on discussion with UCO about focus, the evaluation did not examine the implementation or effectiveness of the
Planned action steps	Organize a dissemination meeting for the YR3 DHSS progression model	

		Progression Model, beyond light touch understanding of district and MoH views. To support future direction, more extensive evaluation of current experience is needed to understand effectiveness, for example assessing awareness and ownership of associated action among the DHT and those responsible for implementation, use of the assessment, by the DHT or other stakeholders, implementation of action plans and their effects. As indicated by senior UCO management, further work would also be needed to ensure scoring is sufficiently sensitive to variation in district performance, with more specific scoring required to enable use of the results for improvement.
Recommendation 4b	Linked with this, examine ways to use institutionalized assessment systems (e.g. for RBF and the LGPA) to incentivize and support effective planning and management. These systems already include relevant areas, and it may be possible to incorporate additional indicators related to practices such as timely ACW completion. Existing MoH tools and systems for DHT supervision may also provide options for integration.	See comments on 4a. In terms of providing incentives for effective planning, the District League Table is a key driver of DHT motivation, and also supports interest in EBP. Strengthening links between effective HMIS001 completion and League Table scoring could support motivation. Integration of HMIS completion (or other aspects of EBP) within the Local Government Performance Assessment could also provide incentives.
UCO Response	Partially agree Priority for Phase II	
UCO Y2 comments	This is related to the comment above. If this will be found to be the future for DHSS progression model - then this is what will be implemented	
Planned action steps	See action point above	
Recommendation 5a	Identify the government contact points who are responsible for developing the programme planning approach, either in the National Planning Authority or relevant ministries for the human capital programme. Beyond government, identify any other organizations (such as development agencies) that are advising government in the move to programme planning. Engage with these contact points and organizations for early information on likely processes and to identify entry points that could	UCO did not report discussion on EBP with other country office teams or other sector partners as part of Y3 work. However, several other partners were included in the HSS Reflection meeting, including the World Bank, which plays a leading role in national planning, and the National Planning Authority also attended. Integration with PIAP codes (part of the new programme planning approach) was incorporated within the HMIS001 template.

	support effective inclusion of EBP.	The CSD section as a whole (and wider UCO programming) prioritizes district system strengthening and is fully aware of and reflecting on the EBP approach, and was in discussion with the Social Policy section. Future reflection on strategy provides an opportunity to consider cross-sector engagement.
UCO Response	Disagree Other	
UCO comment	We would need to be more organized internally and get to work with other sections in UCO who are part of the Human Capital Development and synergize with them as they have comparative advantages in interlocuting with these agencies. There is a risk of spreading ourselves too thinly.	
Planned action steps		
Recommendation 5b	Make links with other organizations (and UCO programmes) that work on district planning in health and related sectors, to understand how they are transitioning their support to adjust to programme planning. Collaboration with other organizations could also enable a consistent voice in input to planning discussions.	See comments on 5a.
UCO Response	Partially agree Other	
UCO comments	This is related to the comment above. While the CSD is by far the most advanced with regard to supporting DHSS, a UCO wide approach is likely to achieve greater impact while being more efficient in the utilization of the resources per district. This said - this is a larger conversation that needs to be taken up by management in order to get aligned. A key opportunity for this conversation will be the upcoming Country Programme Document Mid Term Review	
Planned action steps	Brief the Chief of CSD to take this conversation up with other sections	
Recommendation 5c	Use cross-sector engagement to learn from strategies for planning and monitoring employed in other sectors, as well as to share health sector experience. Globally, UNICEF has used BNA with	See comments on 5a.

	WASH and education, so the human capital programme potentially provides an opportunity to draw on and spread this experience of using BNA beyond health, enhancing EBP in other sectors.	
UCO Response	Partially Agree Priority for Phase II	
UCO comments	UCO will explore linkages with sectors in the Human Capital Development programme on planning	
Planned action steps	Set up learning session on Evidence Based Planning with other sectors	
Recommendation 5d	Identify any quality assurance, monitoring and assessment mechanisms that will be used as part of the programme planning approach. Systems for quality assurance and monitoring of plans related to health could then build on these systems.	No additional comments.
UCO Response	Partially agree Priority for Phase II	
UCO comments	This is closely related to monitoring of completion of ACW above.	
Planned action steps		
Recommendation 5e	As a longer-term agenda, support cross-sector links at district level for mutual learning and coordinated planning under the human capital development programme. Options include inviting representatives from other sectors to EBP meetings; working with district partners to support cross-sector discussion with district government on planning and integration of activities; and identifying synergies with UCO programmes in other sectors.	Some DHT members commented on potential value in cross-sector planning (via integrated plans and the new programme planning approach), as a way to enhance effective and efficient service delivery, suggesting that support for cross-sector discussion at district level could be welcome and have benefits. Cross-sector district engagement would not necessarily need to be financed by UNICEF, and should be jointly owned by other sectors and partners and led by government, so financed by others. Costs to UNICEF may be primarily in time to discuss interest in this cross-sector working with MoH, DHTs/CAOs and other district partners.
UCO Response	Partially agree Other	
UCO comments	A key challenge with this recommendation is the financial implication. Currently support for DHSS is on a shoestring budget and this may not be	

	possible. So while UCO agrees on the added value of this approach, financing is the biggest challenge to implementation of this approach	
Planned action steps		
Recommendation 6	Ensure regular updates from IPs to DHTs, including DHOs, and to MoH.	MoH indicated improved engagement in DHSSi activities for Y3, but they had significant ongoing concerns about insufficient communication, including lack of information on future workplans and roles of different partners.

ANNEX G PAMAT SCORING

PAMAT scoring is 1 to 4, with 4 being highest performance. Baseline (BL) scores refer to development of the 2019-20 ACW (domains 1-3); Y1 refers to development of 2020-21 ACWs (domains 1-3) and review and implementation of 2019-20 ACWs (for domains 4 and 5); Y2 scores refer to development of 2021-22 ACWs and review and implementation of 2020-21 ACWs; and Y3 scores refer to development of 2022-23 ACWs and review and implementation of 2021-22 ACWs. Domain 6 scores refer to practice over the previous 12 months.

Scores should be considered as a broad indication of status rather than precise quantitative measurement; see the evaluation Synthesis Report for information on the methods, including limitations. The evaluation team conducted PAMATs for Kasese, Lamwo, and Oyam. For other districts, OPM developed Y3 scores for domains 1 and 2 based on document review. UCO and IPs drafted scores for domains 3-6 based on discussion with DHTs. OPM conducted quality assurance and final scoring, but these scores rely primarily on evidence provided by UCO and IPs (in most cases, this information was sufficiently detailed, but some information was missing). For Y1 and Y2, UCO and IPs drafted scores for all domains, with quality assurance and final scoring by OPM. Domains 6 on management accountability was not completed by the Kiryandongo PAMAT team for baseline or Y1. Scoring is to have been affected by variation in probing and judgement of performance between the evaluation team, UCO and IPs, and by variation in the approach to assessment between years for the 7 non-evaluation districts. Due to this and other limitations, PAMAT scores should be considered as a broad indication rather than precise quantitative measurement (see also Section **Error! Reference source not found.**).

For the three core evaluation districts, there was limited change in PAMAT scores for quality of ACWs over baseline to Y3 for Kasese and Lamwo, partly due to use of BNA prior to DHSSi. Improvement since baseline was most evident in Oyam, because the 2019-20 ACW was largely identical to that of Kasese and the 20-21 ACW was incomplete. For all three districts, changes in PAMAT scores often reflected the extent to which plans were completed or other documents provided evidence of BNA, with some declines for Kasese and Lamwo in Y3 due to incomplete plans. Improved partner and community engagement since 2019 was particularly noted by Oyam DHT, linked to a broader change towards developing a district plan rather than focusing just on the budget. There were some DHT reports of improved implementation, for example due to fewer delays in receiving funding and more attention to the ACW, but DHT estimates of implementation levels varied significantly within districts, hindering reliable assessment of change. Oyam's score improved partly because there was not an ACW to implement over 2020-21. Across years and districts, there were usually quarterly performance reviews, with some use of analysed data such as the RMNCAH scorecard. These reviews focused on key indicators, which in some cases overlapped with prioritized bottlenecks, and in most cases there were not specific reviews of the activities planned in ACWs. There were some reports of increased use of data for reviews, but lack of documents affects reliable assessment of trends for domain 5. There was little change in the aspects of DHT management performance assessed within the PAMAT scoring. In all districts, there was routine engagement with the district executive and in most cases, regular DHT meetings. Role performance was reported as high, and as having improved due to more focus on performance appraisals, but improvement was not sufficient to change PAMAT scores for 6a as many DHT members were in acting positions, which meant additional workloads and, in some cases, lower decision-making confidence or authority, reducing ability to fully perform assigned responsibilities.

As above, PAMAT scores for the other seven districts were developed in part based on information provided by UCO or IPs, rather than direct assessment by the evaluation team. Trends in scores are likely to result in part from variation in the approach to PAMAT assessment between years, including change in

the individuals who conducted assessment (despite provision of detailed guidance to support standardization). For domains 1 and 2, which could be checked by the evaluation team based on documents, change in scores often reflected the extent to which plans were completed.

Table 10: PAMAT scores for Uganda

Criteria	Kasese				Lamwo				Oyam				Kamuli				Isingiro				Bugweri				Iganga				Kiryand-ongo				Kikuube				Ntungamo			
	BL	Y1	Y2	Y3	BL	Y1	Y2	Y3	BL	Y1	Y2	Y3	BL	Y1	Y2	Y3	BL	Y1	Y2	Y3	BL	Y1	Y2	Y3	BL	Y1	Y2	Y3	BL	Y1	Y2	Y3	BL	Y1	Y2	Y3	BL	Y1	Y2	Y3
1a. Health bottlenecks are identified using BNA	2	2	3	2	2	2	2	2	1	1	2	3	1	3	1	2	1	3	3	2	1	4	3	1	1	4	2	1	3	3	3	2	1	3	2	2	1	3	3	2
1b. Identification of priorities incorporates equity analysis	2	2	2	1	2	2	2	2	2	1	2	3	1	3	1	1	1	3	3	2	1	4	2	1	1	1	2	1	3	3	2	1	1	3	2	1	2	3	2	1
1c. Causal analysis is undertaken to inform action on bottlenecks	3	2	3	3	2	2	2	3	1	1	3	3	1	4	1	2	1	3	3	2	1	4	3	1	1	1	2	2	4	3	3	2	1	3	2	2	2	4	3	2
1d. Key activities identified to tackle bottlenecks are appropriately prioritized	3	2	3	3	3	3	2	3	1	1	2	3	1	4	1	3	2	2	3	3	1	4	2	1	1	1	2	3	3	3	3	1	1	4	2	3	2	4	4	3
2a The district plan includes activities identified through the BNA prioritization process	2	2	2	1	2	3	2	2	1	1	3	3	1	4	1	1	1	2	2	1	1	4	2	1	1	1	2	1	3	4	3	3	1	1	1	1	1	3	3	1
3a. The district plan is developed in collaboration with district partners	3	3	2	2	3	3	2	2	2	1	3	3	1	3	2	1	2	3	3	3	2	4	2	1	1	4	2	1	2	3	3	3	2	3	2	3	2	3	2	2
3c. Citizens have significant involvement in annual planning decisions	2	2	3	2	2	2	3	3	2	1	3	3	1	4	2	1	1	3	2	3	1	2	2	1	1	4	2	2	3	3	3	3	2	3	2	2	2	3	2	2
4a. Key activities in the district plan are implemented within the target year		2	3	3		2	3	3		2	1	4		1	2	4		2	2	3		4	2	4		4	2	4		2	2	3		2	2	3		2	2	4

Criteria	Kasese			Lamwo			Oyam			Kamuli			Isingiro			Bugweri			Iganga			Kiryand-ongo			Kikuube			Ntungamo		
	Y1	Y2	Y3	Y1	Y2	Y3	Y1	Y2	Y3	Y1	Y2	Y3	Y1	Y2	Y3	Y1	Y2	Y3	Y1	Y2	Y3	Y1	Y2	Y3	Y1	Y2	Y3	Y1	Y2	Y3
5a. There is regular review of plans and appropriate course correction	3	3	4	3	4	3	2	2	3	1	2	3	1	2	3	1	2	3	1	2	3	4	3	3	1	3	3	1	2	2
5b. BNA and/or other data/evidence are used to assess progress	3	3	4	3	4	4	2	3	3	1	2	3	2	2	3	1	2	4	1	2	4	3	4	4	1	3	4	1	2	2
6a. The DHT has clear roles and responsibilities	2	3	3	3	3	3	3	3	3	4	3	4	2	3	4	4	3	3	4	4	3		3	4	2	1	3	2	3	3
6b. The DHT meets on a regular basis	4	4	4	4	3	3	4	4	4	2	1	4	3	3	4	1	3	4	3	4	4		3	4	3	3	4	3	4	4
6c. Content of DHT meetings and decisions is documented with clear action points	2	4	4	3	4	4	3	4	4	1	1	4	3	3	3	4	4	2	4	4	4		3	4	3	3	3	2	3	2
6d. The DHT is represented in key high-level cross-sector district governance meetings	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	1	4	4	1	4	4		3	4	3	4	4	2	4	4

ANNEX H QUALITATIVE DATA ON CHANGE IN BOTTLENECKS

To understand the role of DHSSi in contributing to reduction in health system bottlenecks, we asked DHTs about progress on a selection of bottlenecks identified for their 2021-22 ACW, including what led to any progress or hindered change. Selection of bottlenecks for discussion considered any available information on change in bottlenecks over 2020-21 (discussing bottlenecks that were and were not indicated as improving), bottlenecks related to programmes selected as tracer sectors for the evaluation (ANC, EPI and non-communicable diseases) where available, and knowledge of PAMAT and interview participants. A sample of around 4 bottlenecks was identified for each district, but the actual number discussed varied depending on participant knowledge and additional bottlenecks indicated by participants. Table 11 summarizes information from Uganda on the bottlenecks discussed during fieldwork.

Despite extensive document review and interview discussion, analysis of change in bottlenecks and the role of BNA and ACWs faced several challenges. For example, quantitative data from UCO on changes in 21-22 bottleneck indicators was unavailable at time of fieldwork, and reports from DHTs on improvement were sometimes inconsistent with data from documents. DHTs also sometimes attributed improvement to BNA for indicators where there was no record of BNA being conducted, or the focus of BNA indicated by the DHT did not match documented BNA. There were also examples of DHTs indicating that activities were included in the AOP when this was not evident from documents, and difficulties with specifying timelines for activities, which hindered triangulation against specific ACWs and BNA. Inconsistencies and information gaps mean findings on change in bottlenecks and on the role of BNA and ACWs are indicative rather than definitive. More definitive tracing of the links would require significant additional fieldwork time.

Each DHT reported improvement in several bottlenecks prioritized in their 21-22 ACWs, including maternal death audits and ICCM supplies in Kasese, PNC checks and early ANC in Lamwo, and ANC coverage, access to TB care, ICCM supplies and HIV testing during pregnancy in Oyam. Improvements were attributed in part to activities prioritized during BNA. For example, in Lamwo, more emphasis on testing women for pregnancy and procuring HCG strips for testing was thought to have improved early ANC, and in Kasese, orientation for health workers on MPDSR and associated recording tools helped to revitalize MPDSR committees, increase auditing and ensure audits were recorded.

In many cases, other initiatives not planned through BNA also contributed to improvement. For example in Lamwo, continuous quality improvement (involving regular monitoring and quarterly learning meetings, supported by AVSI/UCO and Marie Stopes) was also a key driver of improved ANC coverage. In Oyam, ANC coverage may have been improved by implementation of the planned health education on early ANC attendance, pregnancy testing and training in ANC commodity orders, but improvement also resulted from increased access to ANC through upgrading some health centre (HC) II to level III, improved supervision through support from CUAMM (including to integrate and strengthen supervision tools), and procurement of pregnancy test kits (included in the RBF plan). As these examples suggest, partner interest was often an important factor for improvement. For example, in Kasese, ICCM improved in part due to arrival of a new partner focused on child health. Activities funded by this partner aligned with areas planned through BNA, but were initiated by the partner.

In several cases, other initiatives provided an incentive for action. For example, in Kasese, work on maternal death audits was partly due to this being an indicator in the District League Table, and facilities sought to improve ANC coverage because this affects RBF funds. In Oyam, ranking of health facilities

through quality of care assessment, and recognition of good performers in meetings, brought competition among facilities to improve ANC.

In all districts, quarterly performance reviews were highlighted as driving change on bottlenecks, such as ANC coverage in Oyam, PNC coverage in Lamwo, and availability of ICCM supplies in Kasese. Reviews increased focus on the indicators, allowed identification of action (with responsible staff held accountable at future reviews), and provided an opportunity to share problems with partners and secure support. As well as funding, this could lead to advocacy by partners. For example in Kasese, ICCM stockouts were highlighted in reviews, and partners then raised the issue with MoH to address with the National Medical Stores (NMS). Prioritizing indicators through BNA and inclusion in the ACW contributed to monitoring, but in many cases, indicators overlap with key national or RBF indicators and so would be monitored anyway.

Some bottlenecks were reported to have worsened or to have changed little. This was sometimes because the associated activities were not implemented. For example, in Lamwo, training in paediatric TB was not conducted because the DHO did not have funds and did not ask partners for support. In other cases, activities were implemented but other factors beyond immediate DHT control hindered improvement. For example, in Kasese and Oyam, there were efforts to improve malaria supplies, but some problems remained, related to provision from NMS in Kasese, and a high rate of malaria case that limited scope for redistribution from other districts in Oyam. The time needed for community behaviour change also hindered improvement, for example with ANC in Kasese.

All DHTs indicated that BNA was important for planning action on these bottlenecks, though to varying degrees and in different ways. In some cases, BNA helped to identify problems. For example, in Oyam, ICCM had not previously been prioritized, but through BNA, the DHT recognized the need to improve VHT screening, developed activities and secured partner support, and this improved ICCM. More often, overall problems were already known through other analysis and discussion, such as the RMNCAH scorecard, performance against national targets or on the District League Table, or monitoring during performance reviews. In these cases, BNA enabled further analysis and identification of strategies: '*the idea of doing BNA on these poorly performing indicators is to get the actual root causes as to why these indicators are persistently low and what we can do to improve on it… BNA enabled us to brainstorm on interventions that can actually enable us to improve'* (Oyam KIi02). Similarly, Kasese DHT noted that low coverage of interventions is often known, but *'we use the bottleneck to tell us exactly where the problem is…So it gives us the right direction, where to attack the problem'* (Kasese KII02). In line with this use of BNA to understand problems in more depth, DHTs often referred to the five whys as the most useful step.

Sometimes activities indicated as solutions through BNA were already planned or required by policy, but using BNA helped in other ways. This included justifying action by providing evidence, including for partners; highlighting the magnitude of problems, and so demonstrating the need for action; and documenting issues, which then supported review and monitoring.

In some cases, DHT claims about the role of BNA in determining planned activities were not clearly supported by document review. For example, Lamwo DHT suggested that BNA helped to plan specific action on neonatal infection, but the activities included in the ACW and discussed as implemented and bringing improvement did not relate to the main issue documented in causal analysis (which was insufficient recording by health workers). This may in part reflect recall issues or gaps in available documentation.

Table 11: District information on change in priority bottlenecks

District	Bottlenecks in 21-22 ACWs, and change as indicated in available documents and as reported by the DHT (selected determinants and bottlenecks)	Selected activities planned to address bottleneck and DHT comments on implementation	Information from fieldwork on other reasons for change / lack of change	Role of BNA in identifying gaps and activities
Kasese	**ANC** **Continuous use:** mothers attending ANC 4+ Visit Documents suggest limited change or minor decline from FY 20-21 to FY 21-22 • 22-23 AOP: 61.20% in FY 2020/2021 to 55.10% for FY 2021/22 (Q1-Q2) DHT: limited change	• Conducting community sensitization - Community sensitization on the importance of ANC and where to get ANC services was undertaken, including through working with churches and political leaders and using radio shows, with partner support • Outreaches to underserved populations - Outreach to remote areas was intensified. Potential solutions considered in prioritization matrix also included: • Train midwives on customer care and other important services (not discussed) • Upgrade HC IIs in sub counties without any health facility to save mothers from travelling long distances) - Some health centre (HC) IIs were upgraded to HC III to provide the full package of ANC services, and ANC services were started at some HC IIs. This increased access.	ANC 1 and 4 are assessed for RBF, which contributes to a focus on these indicators and efforts to improve at facility and DHT levels. Attendance was encouraged by recruitment of staff, which has reduced waiting times, and a reduction in stockouts. Other efforts included additional work on health education and sensitization, including emphasizing early ANC at facilities and by VHTs, providing health education on ANC when women visit facilities for other services, and building facility and VHT understanding of their MCH responsibilities (supported by UCO and other partners). Improvement was limited by slow progress in changing community beliefs, particularly for timing of ANC1, which then affects ANC4. Attendance is also hindered by service acceptability, including long waiting times at facilities due to insufficient midwives despite some	For ANC and other services, using BNA helped to indicate the magnitude of problems, and to analyse specific causes and define solutions

			recruitment, and by continued access issues for some locations.	
Kasese	**IMCI** **Effective Coverage/Quality** Proportion of sick children managed by VHT who recovered (Malaria, Pneumonia and Diarrhoea) • 22-23 BNA Excel: 23% over 20-21 • 21-22 AOP and BNA Excel 43% 2019-20 • No data for 21-22 DHT: ICCM coverage has improved, ICCM reporting by VHTs implementing ICCM has increased from about 50% in 2021 to 80-90% in Y3 **Commodities** Proportion of villages with zero stock out days of amoxicillin; ORS and Zinc; rapid diagnostic tests for malaria and anti-malarial drugs • 22-23 BNA Excel: 69% over 20-21 • 21-22 AOP and BNA Excel - 63% 2019-20 • No data for 21-22 DHT: Supplies improved, with some supplies that were	• Orientation of VHTs on the Management of childhood illness - Training for VHTs and their supervisors in ICCM was conducted: this involved a 3-day training for 2 VHTs per village on areas such as integration of nutrition, HIV messages, TB and malaria case management. This was supported by Mayanja Memorial Foundation. • Conduct a five-day orientation of VHTs on Documentation and Reporting. Conduct Frequent Quarterly Review meetings with the VHTs for feedback on their outputs - There was also capacity building for VHTs to strengthen understanding of documentation and the need for reporting, supported by UNICEF and Mayanja Memorial Foundation. Training was important for improvement.	A new development partner (Mayanja Memorial) began working in Kasese, focused on ICCM. They supported training on ICCM management and documentation (as indicated against specific activities from BNA), and also provided support on supplies, including procuring some equipment The DHT recognized the need to involve health sub-districts in supervision due to insufficient DHT time; working with the health sub-districts has improved supervision of facilities, and through this ICCM. Reviews to assess performance were used to highlight ICCM stockouts with partners, who then raised the problem with MoH to address with the National Medical Stores (NMS), and all facilities now receive at least get some supplies from NMS. There are ongoing problems with supplies related to bundling by NMS (e.g. malaria treatment being provides without sufficient rapid diagnostic test kits, which hinders implementation of the test and treat policy),	The problem of stockouts of ICCM commodities was already well-known, and always raised in discussion with VHTs. However, using BNA helped to define activities. The training supported by Mayanja Memorial Foundation was initiated by the partner, rather than because of the AOP.

	previously unavailable now available		and due to NMS providing supplies based on their assessment of need.	
Kasese	**Maternal death audits** **Geographic Accessibility:** Proportion of health facilities with functional MPDSR Committees (labelled as effective coverage in the BNA excel consolidated plan and 21-22 AOP, but this indicator is for geographic access) • 21-22 AOP and BNA Excel: 50% 2019-20 • No data for 21-22 **Continuous Utilization:** proportion of maternal deaths audited by health facilities • 21-22 AOP and BNA Excel: 20% 2019-20 • 22-23 AOP: 41% of Maternal deaths reviewed 20-21; 37.50% July-Dec 21 i.e. minor decline DHT: MPDSR has improved, with reviews now undertaken and committees revitalized.	• Orient health workers on recording charts and registers for proper auditing • Provide data collection tools to health facilities for proper record keeping - Facilities were trained on reporting of data on maternal deaths and given access to DHIS2 so they could enter information on audits, to ensure these are recorded. • Conduct support supervision of health workers by the district • Orienting health workers at CEmoNC facilities on MPDSR including their roles and responsibilities - The DHT conducted supervision and orientation on MPDSR with support from UNICEF and Save the Children, and provided MPDSR guidelines. These activities have helped to revitalize MPDSR committees and led to improvement, as the DHT previously did not follow up facilities to ensure that they conducted audits or submitted information on audits to the district.	Action on this bottleneck was also driven by low performance on the maternal death review indicator in the District League Table, so it was an area of concern and focus for the DHT.	The problem with maternal death reviews was known, but BNA was used to understand specific problems and plan action
Kasese	**Deworming** **Access**: proportion of planned outreaches carried out	• Conduct community sensitizations in sub counties on immunization services (related to outreach)	Documentation was the primary reason for low indicator performance: outreach and deworming	In general, BNA helped to indicate specific problems lying behind low coverage.

	• 21-22 AOP and BNA Excel: 23% 2019-20 • No data for 21-22 **Continuous Utilization**: proportion of expected children 12-59 months years who received the second dose of deworming pills • 21-22 AOP and BNA Excel: 19% (date not indicated) • No data for 21-22 DHT: primarily an issue of documentation	- Outreach has increased due to support from Save the Children, which adds to earlier support from GAVI and UNICEF • Conduct sensitization of caregivers on advantages of Deworming and Vitamin A supplementation - Sensitization was not conducted in the first quarter due to lack of funds, but may have been conducted more recently due to arrival of GAVI funding. However the main reason for the low indicator was documentation of existing outreach and deworming activities.	supplementation were done but not documented and entered in DHIS2. To address this, the biostatistician has stressed a need to use documentation tools during outreach. However there is limited change in documentation.	Including these activities in the AOP helped to provide direction for implementation. The AOP includes work that could support documentation: Monitoring Implementation of Planned outreaches by the health facilities. This was in the 21-22 AOP activity plan, but not in sections on BNA and does not appear to have been identified through BNA and root cause analysis.
Lamwo For Lamwo, the same bottlenecks were included in the 2020-21 and 21-22 ACW. The BNA Excel labelled 21-22 was the same as that for 20-21, and figures in the 21-22 AOP were also the same as the previous year. This	**PNC** **Initial use:** proportion of expected live births that have a postnatal contact at 6 days. • 21-22 AOP, and 20/21 and 21/22 BNA Excel with UCO Y2 data: 9% 2019-20; 57.17% 20-21 • No information on 21-22 DHT: for 2020-2021, coverage of postnatal visits improved to 60%; this was above their target of 45% (BNA Excel indicates target of 60% by June 2021).	Specific action related to an overall solution that midwives should document and inform the mothers on the benefit of returning for PNC at 6 days • Giving appointment dates to mothers - health workers are reminding mothers about PNC appointments • Updating the PNC registers - documentation was improved through mentoring for facilities by a team of district-based mentors on how to ensure PNC is fully documented • Health education to mothers at all entry points on the benefits of PNC - facilities are providing more health education on PNC to mothers (the additional community outreach	PNC was also improved through increased focus and monitoring: PNC was selected as a quality improvement project in HC III and IVs; the district prioritized PNC checks as a key indicator to monitor in quarterly review; and there is now more focus on PNC during facility supervision Partner support: AVSI and RHITES North Acholi were interested in postnatal care. AVSI supported community engagement through facility outreach to communities to provide education on the importance of PNC checks PNC checks improved primarily at HC III and IVs; at lower levels, staff shortages continue to limit PNC.	Insufficient PNC checks was indicated by the DHIS2 scorecard. Using BNA helped to fully understand the problem and to identify that health workers were not providing sufficient information to mothers about the need to return for PNC checks. This more detailed problem analysis helped to identify solutions.

means baseline data indicated as 2019-20 in the 21-22 Excel (and Y2 update) may be the 2018-19 figures used for 20-21 planning		would also contribute to health education, see right) • Other action planned and not discussed included male involvement in PNC services and domiciliary Note that activities indicated as implemented by the DHT broadly related broadly but not exactly to the planned actions (see right for detail)		
Lamwo	**ANC** **Initial use:** Proportion of pregnant women who attended ANC 1st visits within first trimester • 21-22 AOP, and 20/21 and 21/22 BNA Excel with UCO Y2 data: 13% 2019-20; 49% 20-21 • 22-23 BNA Excel: 66.8% 20-21 • No data for 21-22 DHT: early ANC improved – now around 58%, above the national target, and Lamwo is among the top 10 districts in Uganda Data on ANC4 (which is linked to ANC 1) are inconsistent but suggest possible improvement 2019-20 to 20-21, followed by	• Screening all women of reproductive age group for pregnancy at all entry points - Emphasized need to screen all mothers of reproductive age for pregnancy at every health facility • Procurement and distribution of HCG strips in all health facilities - HCG strips were made available for pregnancy testing • Orientation of health workers on communication skills relating to early ANC - Indicated as done, but no detail • Focus group discussion with stakeholders on early ANC attendance and targeted community dialogues. - Indicated as done, but no detail	Early ANC improved due to initiation of continuous quality improvement projects: this involved regular monitoring with quarterly learning meetings. This was supported by AVSI through UCO funding and by Marie Stopes with UNFPA funding.	The focus on early ANC came from recognizing Lamwo was below the national target. BNA helped to identify specific issues and prioritize activities, and contributed to monitoring of progress on indicators.

	decline for early 21-22: • 22-23 BNA Excel: proportion of pregnant women who attended ANC 4+ visits: 45% 2020-21 • 21-22 AOP: 14.7% 2019-20, 20.0% July-Dec 2020 • 22-23 AOP: 62.5% 20-21, 20.8% 21-22 (quarter 1)			
Lamwo	**Paediatric TB** **Human resources:** proportion of health facilities with at least one health worker trained in paediatric TB • 21-22 EBP template with UCO Y2 data: 0% 2019-20, 0% 20-21 • No data for 21-22 DHT: no improvement	• Training of health workers on Paediatric TB management - not done due to lack of funds: the district needed to hire someone with specialist knowledge, and did not ask partners for support		Training was included in the AOP but not implemented.
Lamwo	**Neonatal infection** **Initial use** - Proportion of expected neonatal infections with sepsis, pneumonia and meningitis that are detected • 21-22 EBP template with UCO Y2 data: 22.5% 2019-20, 15% 20-21 • No data for 21-22 DHT: improved	Specific action in the EBP Excel related to an overall solution of onsite mentorship with internal supervision of health workers on identification, management and documentation of neonatal sepsis, including: 1. Departmental updates during monthly staff meeting 2. Spot checks to assess the quality of documentation in data capture tools 3. Ensuring availability of guidelines and job aids for neonatal sepsis management	Neonatal infection rates have also improved because the DHT identified a lack of equipment (e.g. for sterilization and delivery sets) so equipment was procured with partner support (Marie Stopes, AVSI and Lutheran World Federation). In addition to the training on detection and management, midwives were trained on infection prevention, through partner support.	In general, problems with neonatal sepsis were known, but BNA helped to identify the key issues and to develop and prioritize activities more systematically. Including activities in the plan assigned responsibility and led to review of progress, which promoted action. Note that while the DHT discuss identification of activities as supported by BNA, document review does

		For the 21-22 AOP, these activities were included as: • Conducting monthly staff meetings to review progress of performance on neonatal infections (sepsis, pneumonia and meningitis) (not discussed) • Training of health workers on how to diagnose sepsis, pneumonia and meningitis in new-born - Midwives were trained on infection newborn care and clinicians were trained on diagnosis. Training was supported by partners, and improved newborn care.		not clearly indicate a link to bottleneck charts or causal analysis for activities on neonatal sepsis that were included in the AOP and implemented: root cause analysis in the 21-22 BNA Excel focused on documentation gaps, but the activities related to documentation were not included in the AOP, and the training on infection prevention and newborn management was not clearly related to the causal analysis through BNA.
Lamwo	**EPI** **Continuous use:** Proportion of children under 1 year who had Measles vaccination • 21-22 EBP template with UCO Y2 data: 88% 2019-20, 81.3% 20-21 • 21-22 AOP: measles coverage under one year: 89% 2019-20, 85% July-Dec 2020 • 22-23 AOP: measles coverage under one year: 76% 20-21, 81% 21-22 (quarter 1) DHT: not indicated	Specific action in the EBP Excel related to an overall solution of in-charges to monitor weekly implementation of planned outreaches, to address insufficient outreach. Selected examples included in the 21-22 AOP were: • Orientating EDHMT on EPI RED/REC Micro planning • developing facility EPI RED/REC micro plans - Some facilities have developed micro-plans, but this remains a challenge, due to facility preference for use of a manual approach which is more difficult that computer-based microplanning • quarterly performance review on EPI using RED/REC categorization	Awareness and uptake of measles vaccination was also addressed by health workers discussing measles vaccination when mothers come to facilities. There was also mentoring for facilities on the EPI documentation registers, to improve recording.	Not discussed specifically for EPI

		- performance is analysed on a quarterly basis using facility REDREC analysis, to see which facilities are not doing well in the Reach Every Child categorization Outreach activities for measles vaccination were also conducted and measles vaccination was also included during integrated child health days.		
Oyam	**ANC** **Continuous use:** Proportion of pregnant women who attended 4+ ANC visits Figures are inconsistent between documents (and the indicator varies), but suggest improvement for early 21-22, followed by decline e.g. • 22-23 EBP template: 57% 19-20; 67% 20-21; 75.50% 21/22 Q1 • May 2022 performance review: ANC 4 fell from 74 in Q1 to 54% in Q3 (Early ANC also declined, 45% to 34%) **Commodities:** Proportion of health facilities that reported no stock-out of ANC commodities (Fansidar, iron tablets, antimalarials, antibiotics, mosquito nets, RDT for malaria, lab commodities for testing STIs etc)	• 21-22 AOP: Orient women on the need to start ANC attendance early - this was done, emphasizing the need to identify pregnancy and attend ANC early during health education e.g. community dialogues and health talks No Excel was available for 21-22 but the 20-21 BNA Excel action was: • screening and testing for pregnancy in all women of childbearing age to enhance early detection - The DHT worked with in-charges and partners to promote pregnancy testing when women visit facilities • Train Facilities on ANC Commodity medicine orders - Training was conducted (as below for other commodities) Note that while the DHT indicated that pregnancy screening and health	ANC was also improved by regular monitoring of indicators through quarterly facility and district performance reviews brought improvement in ANC (and other areas), through discussion on ways to improve and an opportunity to secure partner support. Access to ANC (and other maternal health services) has improved since 2020 due to upgrading some HC II level to 3. Improved supervision also improved ANC: CUAMM provided support on integrating supervision tools, merging the Quality of Care assessment with the MoH supervision tool. Action to address problems was then identified during supervision. Ranking of health facilities in terms of performance (through quality of care assessment) and recognition	Low ANC coverage was already known through performance reviews. Using BNA, particularly root cause analysis, helped to consider underlying issues. Using BNA also helped to justify and emphasize activities. Including activities in the AOP helps to ensure indicators are monitored during reviews. However, beyond ACWs, partner support was also a critical factor. For commodities, BNA pointed to missed opportunities to identify pregnant women, partly due to lack of testing kits (note this was not indicated in the BNA analysis within the AOP). Training in commodity management was undertaken because it was in the AOP, which

	• 21-22 AOP: 22.2% Jul – Dec 2020 Some data on other time periods is provided in other documents, but the trend is unclear as the specific indicator varied between years/documents. DHT: improved	education on early ANC are now conducted, and that pregnancy test kits were procured, BNA documents for 22-23 suggests action remains limited or insufficient: There is limited or no CPD on presuming pregnancy among women of childbearing age at all entry point because of no HCG kits, Limited knowledge on the benefits of early attendance of ANC	of good performers in meetings brought competition among facilities that also supported improvements in ANC. the key gap in supplies highlighted by the DHT was availability of HCG test kit. To address this, procuring test kits was included in the RBF plan and this increased testing and early identification (with early ANC 1 supporting ANC 4+	contributed to partner support.
Oyam	**TB** **Access:** Proportion of health facilities providing TB services in the district • 21-22 AOP: 22.9% Jul – Dec 2020 DHT: access improved **Effective coverage:** proportion of TB patients who were enrolled for TB care and treatment and successfully cured within 6 months • 21-22 AOP: 26% Jul – Dec 2020 • May 22 review: TB cure rate 95-99% Q1-Q3 21-22 DHT: not specifically indicated	• Develop a training and empower HC II staff to offer TB services - Mentorship on TB was conducted by district and regional mentors for HC IIs where TB cases were identified (document review of the May 22 review indicated that mentoring replaces training due to funding: the review noted low TB screening and a need for targeted support to HC II; no budget is available for training so the district will do mentoring) • Use the HUB system to collect specimen from the patients from the Community and HC IIs - Conducted outreaches to patients in underserved locations (e.g. without diagnostic centres) to follow up and collect samples, as well as to identify and test their contacts	Access was also improved by accreditation of one more diagnostic centre.	Insufficient access to TB services was identified through BNA.

Oyam	**PMTCT** **Initial use:** Proportion of pregnant women who were tested and confirmed to be HIV+ Data are inconsistent between documents, so trend is unclear • 21-22 AOP: 12.7% Jul – Dec 2020 • 22-23 AOP: proportion of identified pregnant women living with HIV within MCH settings: 40% (date not indicated • 22-23 AOP: proportion of Pregnant women tested for HIV during current pregnancy 20-21: 94%; 21-22 85% (quarter not indicated) DHT: improved	• Accredit all facilities offering ANC to PMTCT ART services - Accreditation is needed because ANC is also conducted at HC IIs, but HIV testing and ARVs are delivered through HC IIIs. The DHT asked the National AIDS control programme to accredit HC IIs, but they are still waiting for the process to happen. Progress is slower because most HIIs were upgraded to level 3, so are automatically assessed by the National AIDS Control Programme. Some have been assessed, and they are waiting for the rest.	HC IIs were mapped to HC III so that HIV+ mothers identified at HC IIs can be linked to HC IIIs to access ARV. Partners supported outreach involving support from senior midwives to HC IIs to provide support on testing women during pregnancy and initiating ARVs, as well as conducting follow up of women on treatment. Related initiatives included working with VHTs to follow up women with HIV who have missed appointments. HIV testing during in pregnancy is MoH policy and an area of interest for partners (e.g. RHITES North Lango and CUAMM), and this also promotes action.	Gaps in PMTCT were already known, but BNA and especially causal analysis helped to identify the specific problems with HIV testing and ARV provision at HC IIs. It also provided a more systematic approach to identifying the problem. Although HIV testing during pregnancy was already mandatory, including this in the AOP meant it was documented, which highlighted the need to implement testing for district staff and enabled monitoring of progress.
Oyam	**ICCM** **Commodities**: Proportion of villages that had no stock-out of Amoxicillin, ORS & Zinc, RDT test for malaria test, Antimalarial drugs • 21-22 AOP: 13% July-Dec 2020 DHT: availability of commodities for ICCM has improved **Initial use** Proportion of expected children (0-59 months) screened and	• Train Facilities on community medicine orders - 3-day training on ordering (for ICCM and other medicines) was conducted by the National Medical stores for the district team and in-charges • Support Health Assistants to prioritized VHT support supervision - More supervision of VHTs was designed partly to strengthen reporting, as low quality of VHT	Availability of ICCM supplies was also supported through the Malaria Consortium and RHITES working with the biostatistician to support quantification of commodities. Availability of supplies was also supported through redistribution and requesting emergency supplies from NMS. However, this did not resolve all problems and there are still stockouts. For example for malaria supplies, a high rate of malaria meant other districts were also short	ICCM was not prioritized before use of BNA. BNA indicated the role of community health and helped to understand the root cause. Interventions were planned through BNA. Including activities in the AOP was important for action: health assistants did not have clear role in supervising VHT but this had to be implemented once in the AOP, and so was

	confirmed to have childhood illness • 21-22 AOP: 33% Jul-Dec 2020 DHT: this is likely to have improved due to improved documentation	reporting was one reason for the low indicator on screening. - This was done: the DHT emphasized the importance of VHTs to health assistants and the need for supportive supervision, and ensured that facility work plans indicate how health assistants will support VHTs (e.g. indicating meetings they will have and how they will use data to identify which VHT to support); and Malaria Consortium supported quarterly supervision by health assistants to VHT.	of supplies, hindering redistribution Stronger reporting was also supported by UNICEF providing reporting tools. A digital VHT register was piloted in 3 health facilities, which prompts VHT to screen – this has brought substantial improvement in these facilities. The 3 facilities piloting digital tools also have an App showing which VHTs are active, which guides the supervision schedule. Partners supported procurement of screening tools (CUAMM, RHITES, World Vision.	discussed with health assistants. Training in commodity management was done because it was in the AOP: this prompted the DHT to source funding and support

ANNEX I ASSESSMENT OF QUANTITATIVE DATA QUALITY AND AVAILABILITY

This Annex explains the process for quantitative data analysis across the DHSSi countries including assessment of data quality. It focuses on the analysis for the Y3 evaluation round, but procedures and data quality issues were similar for Y1 and Y2.

Results framework indicator 1A

Results framework indicator 1A is ***#/% of target districts that have reduced priority bottlenecks identified at baseline.*** A district counts towards this indicator if at least 50% of priority bottlenecks show any reduction. To calculate this indicator, we requested COs to share completed BNA Excel templates containing DHSSI Y3 (July 2021 – June 2022) information on performance of indicators related to bottlenecks prioritized by DHMTs as part of the 2021-22 FY planning process. In the case of Uganda and Tanzania, where the annual values were not provided, we used the quarter 4 (Q4) cumulative values for comparison. We first compared the indicator's baseline value against the end-year value to assess progress and determine the number of bottlenecks with any reduction in the Y3. We then compared the end-year value with the indicator's target value to determine the number of districts that met the target set by the district team for at least 50% of bottlenecks. For Kenya, we compared bottleneck values for 2020 provided in documents during the Y2 evaluation against values for 2021 provided in Y3, to determine the number of bottlenecks with any reduction from 2020 to 2021 to assess progress of indicators that were overlapping between the two years. Indicators prioritized in Y3 but not present in Y2 data could not be included in the analysis.

The process for completing, quality assuring, and sharing the BNA Excel templates was outlined in a Standard Operating Procedure (SOP) document, produced by ESARO with input from the evaluation team between the end of the Y2 and the beginning of the Y3 evaluation. A later document 'DHSSi program memo - BNA suggested revisions', drafted by the interim DHSSi coordinator/regional health systems strengthening specialist, describes how these processes worked in practice.

Here we describe issues affecting our ability to conduct the analysis or interpretation of results only, looking at issues that were common across most or all eligible countries.

Data gaps related to inconsistency in baseline periods and incomplete or incorrect completion of BNA templates persisted across years.

Indicator periods were not consistently aligned between years, countries or between districts in the same country. During the initial phase of the project, the annual period for indicator reporting was agreed as July - June (except Kenya) to align with the DHMT planning cycle, but there was variation in the indicator periods used in the submitted BNA Excel templates in Y2 and Y3. For Y2, in the case of Tanzania, some districts used the 2019-20 FY while others used the 2019 calendar year. Similarly, some of the Ugandan districts used inconsistent periods for reporting indicator performance. Considering the inconsistency in reporting across periods, caution should be exercised when interpreting the results for the indicators and comparison between districts or between countries should be avoided.

Some fields within the templates had not been completed or were completed incorrectly. Across both years, the country BNA templates missed crucial information required for the analysis. These data gaps have been classified as major and minor. Missing annual values and lack of clarity on reporting periods were classified as major issues. Districts with major issues (e.g. Kasese district in Uganda) were

excluded from the analysis. Minor issues that repeated in Y3 included bottleneck indicators not being expressed positively and an incorrect format used for target values. Minor issues did not prevent further analysis.

Results framework indicator 1B

As part of the evaluation, we measured the following results framework indicator related to changes in coverage: **#/% of target districts that have improved the coverage of priority health interventions (by number improved up to half of the available indicators)**.

As described in the inception report, in order to reduce the likelihood that findings against this results framework indicator are disproportionately affected by the quality and reliability of HMIS data, we have based this on a maximum of nine widely used coverage indicators (depending on data availability), including:

1. ANC coverage (at least one visit) (ANC1)
2. ANC coverage (at least four visits) (ANC4)
3. Proportion of skilled birth attendance
4. Proportion of deliveries taking place in a health facility
5. Proportion of mothers receiving PNC within two days of delivery
6. Contraceptive prevalence rate (CPR)
7. Proportion of 12–23-month children who received BCG vaccine
8. Proportion of 12–23-month children who are fully vaccinated
9. Percentage of <5 children with diarrhoea who received oral rehydration therapy

Results of the initial data quality assessment and information on data availability, steps to assess data quality and clean data, and data quality issues for the purpose of baseline/Year 1 reporting are described in the baseline/Year 1 synthesis Annex. Information related to Year 3 analysis and reporting is provided below.

Year 3 analysis

We were once again able to access the DHIS2 portals in Malawi, Uganda, and Kenya, and in Tanzania we used an open access source that contains DHIS2 data. In analyzing these indicators, we followed the same process as in Y2. We liaised with country HMIS focal points to understand availability of and any changes to the relevant indicators. Some indicators could not be downloaded for each country and were therefore omitted for this round of reporting. Please see Table 12 below for details. The specific indicator definitions vary slightly across countries which means that they may be measuring slightly different outcomes. For example, in Kenya and Malawi, DHIS2 contains data on the ‘children under one year who are fully immunized’, instead of ‘12–13-month children who are fully vaccinated’. As for the previous years, we opted to measure progress in these indicators despite the differences because the change in coverage over time within one country is of greater importance than comparability between countries.

Given ongoing concerns related to the reliability of the proportion data within Uganda’s DHIS2, we once again omitted Uganda from RF indicator reporting and instead presented data in the form or absolute numbers/data elements. The Uganda DHSI2 team advised against using calculated proportions found on DHSI2 because they are not always reliable. They recommended we recalculate the indicators in proportion using population data that they provided. This was not possible due to insufficient information from DHIS2 contacts in Uganda regarding the population data and denominators used for constructing proportions. In addition, reconstructed indicators should be validated and approved by a variety of stakeholders before use, and processes for validation were unclear.

We carried out data quality checks on the DHIS2 data to identify outliers, inconsistencies, and missing values. We discussed these issues with HMIS focal points to understand the reasons for these issues

and the implications for the analysis. For all countries, in accordance with advice from our HMIS expert, we dropped values greater than >100% for proportions which HMIS focal points noted could potentially be attributed to outdated population data or issues with target-setting at the facility level. Caution should be exercised when interpreting the results for some indicators where a large proportion of observations have been dropped.[30] For absolute values, we dropped values below the 5% percentile and above the 95th percentile as these ranges are most likely to include outliers.

Data cleaning and analysis was undertaken using STATA and Microsoft Excel software.

Table 12: Indicator availability by country

Indicator	Kenya[31]	Malawi	Tanzania	Uganda
ANC coverage (at least one visit) (ANC1)	Available	Not available: only absolute numbers are available directly in DHIS2	Available	Available
ANC coverage (at least four visits) (ANC4)	Available	Available	Available	Available
Proportion of skilled birth attendance	Available	Available	Available	Not available in DHIS2. **Proxy:** Number of total health facility deliveries in reporting period out of expected pregnant women in reporting period
Proportion of deliveries taking place in a health facility	Not available: only absolute numbers are available directly in DHIS2	Available	Available	Available
Proportion of mothers receiving PNC within two days of delivery	Available	Not available: only absolute numbers are available directly in DHIS2	Proportion of women receiving EAC Post partum care within 7 days (mother)	Not available. **Proxy:** Number of women who received PNC (postnatal care) check at 6 hours after birth)
Contraceptive Prevalence Rate (CPR)	Available	Not available in DHIS2	Available	Not available. **Proxy**: Number of women who received modern methods of

[30] For example 'proportion of pregnant women who attended at least one ANC visit during pregnancy' (Kenya, Malawi, Tanzania), 'proportion of pregnant women who attended four ANC visits during pregnancy' (Tanzania), 'proportion of deliveries taking place in a health facility' (Tanzania), 'BCG coverage' (Kenya), 'Proportion of children under one year who are fully immunized' (Kenya).
[31] All countries indicators were available in the form of proportions except for Uganda which was available in the form of absolute numbers.

				contraceptives out of total number of women aged 15-49 years
Proportion of 12–23-month children who received BCG vaccine	Proportion of under 1 year receiving BCG	Not available: only absolute numbers are available directly in DHIS2	Not available in DHIS2	Number of children aged <1yr who received BCG vaccine
Proportion of 12–23-month children who are fully vaccinated	Proportion of children under one year who are fully immunized	Not available: only absolute numbers are available directly in DHIS2	Not available in DHIS2	Children under one year who are fully immunized
Percentage of <5 children with diarrhoea who received oral rehydration therapy	Available but missing data from July 2019 to Sept 2020 hence excluded from the analysis.	Not available: only incidence of diarrhoea in children under five is collected in DHIS2	Not available in DHIS2	**Proxy:** Number of children aged 2 months under five years with diarrhoea treated with zinc out

ANNEX J BASELINE IMPACT INFORMATION

DHSSi considers impact in terms of reduction in bottlenecks identified by DHMTs (DHTs in Uganda), and improvement in coverage of priority health interventions, including coverage for priority populations. In this Annex, we present data used to calculate the relevant results framework indicators, which can also serve as information on whether the programme is on-track to achieve outcomes expected at a later stage.

Results framework indicator 1a is *#/% of target districts that have reduced priority bottlenecks identified at baseline*. A district counts towards this indicator if at least 50% of these bottlenecks show any reduction. To calculate this indicator, we analysed information on DHSSi Y3 values (2021-22) of health system bottleneck indicators for bottlenecks prioritized by DHTs for action over 2021-22. We first compared the bottleneck baseline value against the achieved quarter 4 value to get number of bottlenecks with any reduction in DHSSi Y3. We then compared the achieved quarter 4 value with the bottleneck target value to calculate the number of districts that met the target set by the district team for at least 50% of bottlenecks.

As seen in Table 13 below, all DHSSi districts saw a reduction in at least 50% of the priority bottlenecks, but only one DHSSi district (Isingiro) met the target set by the district team for at least 50% of their bottlenecks.

The bottlenecks included in this analysis were taken from information provided by UCO for the Y3 evaluation. Comparison against district plans for 2021-22 indicated that the indicated bottlenecks did not consistently match those prioritized by DHTs in their 2021-22 ACW, in terms of the health interventions and specific determinants. As such, this analysis does not necessarily reflect change in bottlenecks prioritized by district teams for their 21-22 plan.

Table 13: Districts achieving reduction in priority bottlenecks

District	Number of bottlenecks prioritized by the DHT in 2021-22	Number of bottlenecks with any reduction from baseline to 2021-22 Q4	Number of bottlenecks meeting target set by DHT in 2021-22 Q4	Did the district see reduction in at least 50% of priority bottlenecks from baseline to 2021-22 Q4?	Did the district meet the target set by the DHT for at least 50% of bottlenecks in 2021-22 Q4?
Bugweri	12	10	3	Yes	No
Iganga	6	3	0	Yes	No
Isingiro	10	8	6	Yes	Yes
Kamuli	6	5	1	Yes	No
Kiryandongo	9	6	2	Yes	No
Ntungamo	16	13	5	Yes	No
Kikuube	10	9	4	Yes	No
Oyam	14	10	2	Yes	No
Lamwo	6	4	1	Yes	No

Note: Data for Kasese district was incomplete, therefore not included in this analysis.

Results framework indicator 1b is *#/% of target districts that have improved the coverage of priority health interventions (by number improved more than half of the available indicators)*. A district counts towards this indicator if it achieved improved coverage for at least half of the priority health interventions since

baseline. For Uganda, it was not possible to obtain reliable data on population-level coverage outcomes in the form of proportions for the coverage indicators and so districts in Uganda have been excluded from this indicator (see Annex I). Instead, we obtained data in the form of absolute numbers/data elements for eight out of nine indicators selected during the inception period which are presented in Table 14 below. Information on data availability, steps to assess data quality and clean data, and data quality issues are described in Annex I.

The first annual plan supported under DHSSi was the 2020-21 plan. Consequently, for the purposes of assessing changes in coverage (expected to result from improved planning), baseline is considered as 2019-20 (which equates to the Y1 DHSSi implementation period), and this is compared against coverage over DHSSi Y2 (2020-21) and Y3 (2021-22). The table below shows the level of these indicators for the baseline period (July 2019 – June 2020), Year 2 (July 2020 – June 2021), and Year 3 (July 2021– June 2022).

Table 14: Coverage of priority health interventions (absolute numbers), by district, by year

Indicator	Coverage by District											
	Bugweri District			Iganga District			Isingiro District			Kamuli District		
	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
Number of pregnant women who attended at least one ANC visit during pregnancy	741	754	747	1634	1721	1681	2366	2198	2126	2722	2542	2493
Number of pregnant women attending 4th ANC visit	235	321	327	610	877	941	1133	1430	1392	981	1245	1337
BCG vaccination	617	635	588	1434	1575	1420	2067	1830	1715	2075	2223	2089
Number of children under one year who are fully immunized	577	572	584	862	1275	1441	1667	1722	1415	1342	1637	1628
Number of women receiving PNC within 6 hours (mother)	237	388	402	954	1198	1214	1198	1407	1567	1273	1595	1681
Number of deliveries taking place in health facilities	265	398	409	1001	1242	1268	1262	1470	1591	1310	1648	1757
Contraceptive prevalence rate	940	991	1136	4128	4779	4507	2909	3749	3732	4487	5425	4606
Number of children under five with diarrhoea treated with zinc & ORS[32]	8	71	57	426	115	150		33	146	7644	1179	573

[32] Data for Isingiro District for 2019-20 was not available

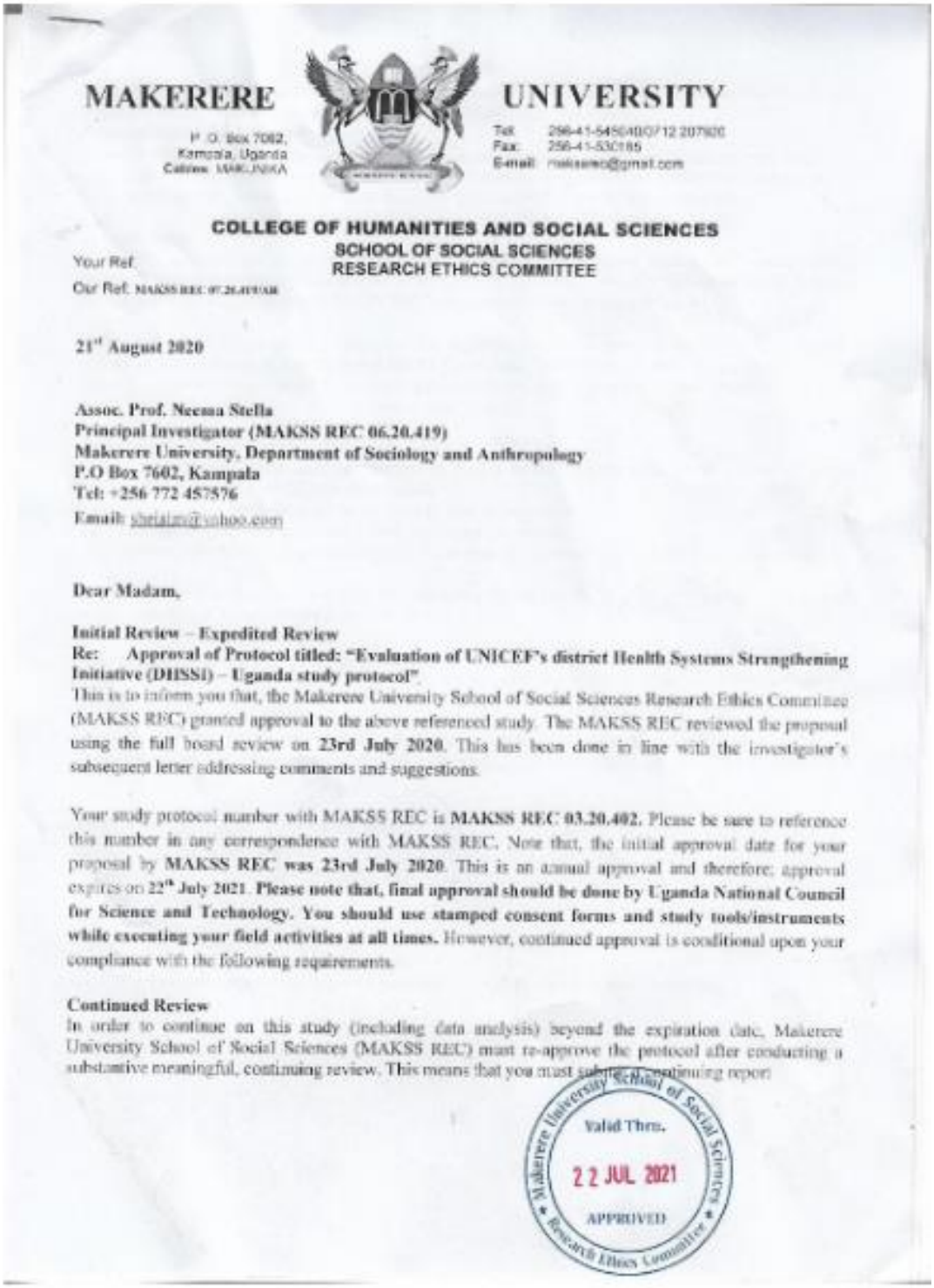
Indicator	Coverage by District											
	Kasese District			Kikuube District			Kiryandongo District			Lamwo District		
	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
Number of pregnant women who attended at least one ANC visit during pregnancy	3338	2997	3071	2009	1810	1738	1675	1547	1503	663	642	719
Number of pregnant women attending 4th ANC visit	1678	1947	2082	835	944	953	665	833	928	379	433	500
BCG vaccination	2870	2788	2911	1608	1581	1455	2090	1415	1273	459	471	503
Number of children under one year who are fully immunized	2233	3056	2789	1282	1337	1162	1056	1168	1162	494	498	450
Number of women receiving PNC within 6 hours (mother)	1884	2039	2888	906	1001	1022	797	871	955	372	433	479
Number of deliveries taking place in health facilities	2267	2507	3061	947	1004	1092	808	970	980	392	436	488
Contraceptive prevalence rate	6088	9770	13215	1790	2293	2037	1557	2383	4178	1112	1335	1337
Number of children under five with diarrhoea treated with zinc & ORS[33]	3791	4568	3410	904	18	61		114	544	759	2382	2521

[33] Data for Kiryandongo District for 2019-20 was not available

Indicator	Coverage by District					
	Ntungamo District			Oyam District		
	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
Number of pregnant women who attended at least one ANC visit during pregnancy	1737	1557	1684	2056	1901	1854
Number of pregnant women attending 4th ANC visit	766	904	1032	1048	1281	1269
BCG vaccination	1534	1428	1515	1558	1570	1506
Number of children under one year who are fully immunized	1425	1495	1511	1155	1227	1376
Number of women receiving PNC within 6 hours (mother)	1062	1236	1420	1263	1374	1293
Number of deliveries taking place in health facilities	1225	1273	1441	1283	1408	1340
Contraceptive prevalence rate	2104	2515	2487	2327	2975	3832
Number of children under five with diarrhoea treated with zinc & ORS	1970	2197	2243	3722	4312	4234

ANNEX K ETHICAL APPROVAL

Th evaluation was approved by the Makerere University School of Social Sciences Research Ethics Committee, and approval was renewed before commencing Y2 and Y3 fieldwork.



MAKERERE UNIVERSITY

P. O. Box 7062,
Kampala, Uganda
Cables: MAKUNIVA

Tel: 256-41-5450410/712 207920
Fax: 256-41-530185
E-mail: makssrec@gmail.com

COLLEGE OF HUMANITIES AND SOCIAL SCIENCES
SCHOOL OF SOCIAL SCIENCES
RESEARCH ETHICS COMMITTEE

Your Ref:
Our Ref: MAKSS REC 07.20.419/UGR

21st August 2020

Assoc. Prof. Neema Stella
Principal Investigator (MAKSS REC 06.20.419)
Makerere University, Department of Sociology and Anthropology
P.O Box 7602, Kampala
Tel: +256 772 457576
Email: sheilam@yahoo.com

Dear Madam,

Initial Review – Expedited Review
Re: Approval of Protocol titled: "Evaluation of UNICEF's district Health Systems Strengthening Initiative (DHSSI) – Uganda study protocol"

This is to inform you that, the Makerere University School of Social Sciences Research Ethics Committee (MAKSS REC) granted approval to the above referenced study. The MAKSS REC reviewed the proposal using the full board review on **23rd July 2020**. This has been done in line with the investigator's subsequent letter addressing comments and suggestions.

Your study protocol number with MAKSS REC is **MAKSS REC 03.20.402.** Please be sure to reference this number in any correspondence with MAKSS REC. Note that, the initial approval date for your proposal by **MAKSS REC was 23rd July 2020**. This is an annual approval and therefore approval expires on 22nd **July 2021. Please note that, final approval should be done by Uganda National Council for Science and Technology. You should use stamped consent forms and study tools/instruments while executing your field activities at all times.** However, continued approval is conditional upon your compliance with the following requirements.

Continued Review
In order to continue on this study (including data analysis) beyond the expiration date, Makerere University School of Social Sciences (MAKSS REC) must re-approve the protocol after conducting a substantive meaningful, continuing review. This means that you must submit a continuing report

Makerere University School of Social Sciences Research Ethics Committee
Valid Thru.
22 JUL 2021
APPROVED

Form as a request for continuing review. To avoid a lapse, you should submit the request six (6) to eight (8) weeks before the lapse date. Please use the forms supplied by our office.

Please also note the following:

- No other consent form(s), questionnaires and or advertisement documents should be used. The Consent form(s) must be signed by each subject prior to initiation of my protocol procedures. In addition, each research participant should be given a copy of the signed consent form.

Amendments

During the approval period, if you propose any changes to the protocol such as its funding source, recruiting materials or consent documents, you must seek Makerere University School of Social Sciences Research and Ethics Committee (MAKSS REC) for approval before implementing it.

Please summarise the proposed change and the rationale for it in a letter to the Makerere University School of Social Sciences Research and Ethics Committee. In addition, submit three (3) copies of an updated version of your original protocol application- one showing all proposed changes in bold or "track changes" and the other without bold or track changes.

Reporting

Among other events which must be reported in writing to the Makerere University School of Social Sciences Research and Ethics Committee include:

i. Suspension or termination of the protocol by you or the grantor.
ii. Unexpected problems involving risk to participants or others.
iii. Adverse events, including unanticipated or anticipated but severe physical harm to participants.

Do not hesitate to contact us if you have any questions. Thank you for your cooperation and commitment to the protection of human subjects in research.

The legal requirement in Uganda is that, all research activities must be registered with the National Council for Science and Technology. The forms for this registration can be obtained from their website www.uncst.go.ug

Please contact the Administrator of Makerere University School of Social Sciences Research and Ethics Committee at makssrec@gmail.com OR bigulied@yahoo.co.uk or telephone number +256 712 207926 if you counter any problem.

Yours sincerely,

Makerere University School of Social Sciences
Valid Thru-
22 JUL 2021
APPROVED
Research Ethics Committee

Dr. Fred Bateganya
Vice Chair
Makerere University School of Social Sciences Research and Ethics Committee

c.c: The Executive Secretary, Uganda National Council for Science and Technology

For further information, please contact:
Evaluation Office
United Nations Children's Fund
Three United Nations Plaza
New York, New York 10017
evalhelp@unicef.org
www.unicef.org/evaluation

June 2023