

Proposal to Undertake an Evidence Evaluation

What has
UNICEF
achieved
for children
in the past
five years?

January 16th 2023, Submitted to Erica Mattellone, UNICEF

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A. Presentation of the Institution

The Newcastle University Evidence Synthesis Group (NuESG) is based in the Population Health Sciences Institute (PHSI), Faculty of Medical Sciences, Newcastle University, UK. Newcastle University is research intensive and a Russell Group member. The University holds a gold award in the Teaching Excellence Framework.

B. Institutions experience and capacity

The Newcastle University Evidence Synthesis Group (NuESG), founded in 2014, is a 26-strong multidisciplinary group of academics and researchers, and although now well established, is still growing in size and international reputation. NuESG is comprised of reviewers, information specialists, data scientists and economic modellers with strong skills, knowledge and experience in delivering a range of evidence synthesis projects using diverse methodologies. The group has extensive experience in information retrieval, using structured search methods alongside more novel approaches, critical appraisal, systematic reviews, systematic scoping and mapping reviews, rapid reviews, various traditional/novel synthesis methods (quantitative, qualitative and mixed methods); in addition to decision modelling, economic evaluation reviews, and preference elicitation methods. The team have diverse backgrounds in public health, epidemiology, statistics, health economics, information science, and data science, brought together to build a methodologically strong group of evidence synthesis researchers. Our NuESG supports the delivery of the National Institute for Health & Care Research (NIHR) Innovation Observatory, developing novel methods and tools to provide early insights and intelligence for the health and social care innovation development and regulatory pathway. The Group works closely with, and supports the evidence synthesis components of, two co-hosted NIHR Policy Research Units (Older People & Frailty and Behavioural Science). We have a track record of delivering high-quality, timely, robust research outputs for a number of key stakeholders including WHO, Cochrane and Campbell Collaboration, NIHR and NHS.

Fiona Campbell (FC) will be acting as team lead, supported by Professor Dawn Craig (DC). Fiona has over 20 years of experience in undertaking evidence synthesis to support decision making for national and international organisations including the NHS and WHO. This has included evidence synthesis across a wide variety of topic areas, including child and adolescent wellbeing. This has included the development of national guidance to support the care of children who are sexually abused, and who sexually abuse other children, the value of intergenerational interventions to promote wellbeing in children and young people, and interventions to support young people as they transition to adult health services. She has considerable experience of adapting methods to support the needs for rapid decision making by funders, leading methodological research and publishing work on methods for rapid reviews. She set up and leads the first course in Rapid Reviews Methods and has also led methodological work on the use of mapping reviews and Evidence Gap Maps. She also has expertise in locating and synthesising a range of types of evidence in order to address decision needs. This has included using 'grey literature' or unpublished sources of evidence. Fiona Campbell is the Editor of the Children and Young Person's Wellbeing Group for the Campbell Collaboration.

Professor Dawn Craig leads the NuESG and is Director of the NIHR Innovation Observatory. Dawn has extensive experience (>20 years) in applied research, predominantly in the areas of

evidence synthesis and economic decision modelling. She has an excellent track record in securing funding, with over £46 million in research funding as PI and co-app and delivering high-quality, timely outputs. She has delivered evidence synthesis projects across a plethora of topic areas such as breastfeeding promotion for low-birth-weight infants; measuring frailty in younger populations; parent-delivered interventions used at home to improve eating, drinking and swallowing in children with neurodisability; growth monitoring for short stature; and the impact of dental caries on malnutrition risk in children. She has considerable expertise in the application of a range of evidence synthesis methods, in addition to delivering novel, pragmatic, robust solutions to enable timely decision-making. Her role in this work will be to provide support as required and ensure that the team have the resources available to them to deliver this work.

C. Relevant experience

FC has recently supported the development of evidence and gap maps (EGMs) to support decision making, funded by WHO, NIHR and UKPRP. Christopher Mikton can be contacted for a reference (miktonc@who.int). DC has recently supported the delivery of WHO evidence reviews in the topic areas of effects on oral health outcomes of replacing rapidly digestible with slowly digestible starches; if dental caries increase risk of undernutrition in children; economic evaluations of interventions to prevent and control healthcare-associated infections; and the effects of radiofrequency exposure on adverse reproductive outcomes. The team has extensive experience in undertaking evidence synthesis to support policy decision making, and doing so under tight time pressures which is evident from the attached CVs. We can send further details of referees as required.

E. Proposed approach for the evaluation synthesis

We have started our proposed approach by describing the objectives, purpose and audience for the evidence evaluation, drawn from the ToR and discussions with UNICEF. These will inform our methods and the design of our outputs.

- 1) A systematic overview of the outcomes and impact of UNICEF-supported interventions for children and adolescents. This will summarize UNICEF's performance and identify lessons and systematic challenges.
- 2) Focus on **outcome-level results** achieved by the organization (by the Strategic Plan Goal Areas over the 2018-2022 period and the first year of implementation of the 2022-2025 Strategic Plan, in both development and humanitarian action) and identify what has worked well and what has not.
- 3) Identify key factors that have enabled or hindered the organization's performance and why it has been successful in helping achieve some outcome-level results towards the Strategic Plan at the country, regional and global levels; and less successful in helping achieve others.
- 4) Describe if these factors have changed over time, or has their performance changed compared to the previous DERs?
- 5) Describe lessons learned from evaluations from 2018 onwards. What has worked well and what has not – and in what contexts – in UNICEF-supported interventions for

children and adolescents by the five Goal Areas of the Strategic Plan (2018-2021 and 2022-2025)?

- 6) How well have UNICEF-supported programmes-built sustainability considerations in the design and implementation to support systems strengthening and national ownership?
- 7) What worked well, and what could be improved in the current evaluation synthesis process?
- 8) Where is the evaluation evidence the strongest, and where are the main gaps in evaluation evidence across the new Strategic Plan?
- 9) What strategic policy and programme recommendations have been made to advance and accelerate progress in the Decade of Action towards Agenda 2030? Are there recurring recommendations requiring action by the organization?
- 10) To identify lessons from evaluations (considering COVID-19 and other concurrent crises) and identify recurrent recommendations requiring action by the organization to explore areas of performance advancement and potential areas of improvement in policy, programming, monitoring and evaluation (systemic change).

Purpose

The synthesis will inform:

- the UNICEF Global Leadership Meeting (taking place **March 13-15, 2023**),
- the Global Effectiveness Review
- the mid-term review of the Strategic Plan 2022-2025 (that will begin in 2023)
- concrete actions towards strengthening ongoing policy, strategy, programme development and guidance, and collaborative approaches to accelerate outcomes for children and adolescents by 2030.

Audience

UNICEF leadership, senior management, regional and country office management, the Executive Board, national governments, and partner organizations. This report will also be an essential resource for the evaluation community in UNICEF to inform outcome measurement.

Methods

The above objectives are to be met within a three-month period (January–March 2023), and outputs are provided in two phases.

Phase 1

Systematic meta-synthesis of the reported findings of UNICEF evaluations conducted between 2018-2022 at the global, regional and country levels. A short summary briefing note (2,500 words) and a PowerPoint presentation will be produced with engaging dataviz/infographics.

Phase 2

Additional data collection and report writing in the second phase, evidence from UNICEF evaluation reports will be complemented with interviews with approximately 30 selected UNICEF stakeholders at headquarters, regional and country offices. These interviews will allow validation of the findings through sense-making to establish a connection between the results, conclusions and recommendations and to improve understanding of what UNICEF has or has

not achieved. Combining the secondary and primary data will produce a longer evidence synthesis report (25,000 words), and the short briefing note and PowerPoint will be updated for publication. An evaluation EGM will be created for publication on the UNICEF website.

The methods we propose will include a rapid evidence assessment informed by the methods used for previous Development Effectiveness Reviews but with an additional focus on outcome level results.

We will use a mixed methods, using both quantitative summation and description and qualitative synthesis. The EGM will adopt mapping methods.

Quantitative Synthesis (for phase 1)

Previous DERs have worked with a random sample of evaluation reports. To improve the strength of the report, we propose working in the following way:

- 1) Identify and agree a defined group of outcomes for each of the goals and across each of the domains of effectiveness. The domains of effectiveness defined by UNICEF include:
 - Relevance
 - Achievement of development and humanitarian objectives and expected results
 - Cross cutting themes: inclusive development and humanitarian which can be sustained (Gender Equity, Environmental sustainability and equity)
 - Sustainability
 - Efficiency
 - Using evaluations and monitoring to improve humanitarian and development effectiveness

The selection of key indicators will be informed by the Impact, Outcome and Output indicators for each goal area described in the Integrated Results and Resources Framework of the UNICEF Strategic Plan 2022-2025. Key outcomes across the 5 goals will be selected in discussion between the review team and UNICEF.

- 2) Identify those evaluation reports (using search function or the excel databases already created by UNICEF) that have measured and reported the results for these outcomes. We anticipate using text mining to search all of the included evaluations (approximately 450 evaluations) to identify the key terms and therefore identify the evaluations measuring the selected outcomes.
- 3) The identified evaluation reports will then be included in the data extraction. Baseline and end-point data will be collected for the pre-specified indicators, as well as relevant contextual factors such as setting, intervention, population. We will aim to include 70-90 evaluations in the analysis and will use purposive sampling if the number of eligible evaluations exceeds that. We will run an initial analysis on approximately 25 reports and present these interim results to UNICEF. This will provide an indication of how effective the terms for locating relevant evidence have been and the findings that are emerging. These 25 will include outcomes across the goals and will test the methods adopted. The early results will allow us to discuss our methods with UNICEF and allow modification of the terms we are using to locate the evaluations we will include.

- 4) We will give an indication of how many evaluations have included data on the pre-specified outcomes as a percentage of the total number of evaluations.
- 5) Data will be summarised, graphically presented, and where possible statistically synthesised in a meta-analysis (addressing objectives 1 and 2).

Qualitative Synthesis (for phase 1)

The evaluation reports identified for the quantitative synthesis will also be included in the qualitative synthesis. Again, to meet the time frames for phase 1, purposive sampling may be used to ensure the task is manageable whilst maintaining rigour. We will use automation technologies to search the database of included evaluation reports for agreed key terms. These might include: challenge, hinder, effective, barriers, success. Our information specialist and data scientist will assist in searching the databases. A framework synthesis will be used to code the descriptive findings in the evaluation that give an insight into the challenges, enablers and any factors that hindered or limited the effectiveness of the programme. The conceptual framework will be a model of factors that hinder or enhance the effectiveness of the interventions and will be informed by

- 2030 Agenda for Sustainable Development
- UNICEF's Strategic Plans (2018-2021 and 2022-2025) [UNICEF Strategic Plan 2018-2021-ENG.pdf](#)
- Integrated Results and Resources Framework (IRRF)
- Strategic Plan Goal Areas, in both development and humanitarian action
- Theory of Change [2021-EB10-Strategic Plan 2022-2025-Theory of Change-EN-2021.08.04.pdf \(unicef.org\)](#)

The conceptual framework will be refined during the analysis and will also provide a tool for identifying the gaps in the evaluations.

The previous DERs will also be examined in order to address objective 4.

Meta-synthesis

The qualitative and quantitative syntheses will be undertaken in parallel and the findings integrated in the final synthesis. We will examine the relationship and pattern between the enablers and hindrances to successful interventions and those that were less successful. We will endeavour to explore which interventions work most/least effectively and why. This work will inform the report and power point presentation needed by the end of February 2023 (objectives 1, 2 and 5).

Interviews and EGM (for phase 2)

The EGM will provide an interactive, visual output that will feature all of the existing UNICEF evaluations. The map will allow users to identify which goals are being addressed and which outcomes have been measured. The map will contain filters including: type of intervention, quality of the evaluation, setting, population, and others identified by UNICEF colleagues and stakeholders. A report will accompany the map and will address objectives 6, 7 and 8.

Semi-structured interviews, with interviewees identified by UNICEF will be conducted to support the final report, and address objectives 5, 9 and 10. The interview schedule will be

agreed with UNICEF. The meetings will be scheduled by UNICEF and conducted via zoom. The interviews will be recorded, but not transcribed due to time constraints. Themes will be identified and added to the framework used for the qualitative synthesis. The source of evidence within the themes will be clearly identified.

Source of evidence

The evaluation will include the following types of UNICEF evaluations at the country, regional and global levels:

- Evaluations of UNICEF's work across the five Goal Areas of the Strategic Plan (impact- and outcome-level focus)
- Evaluation of UNICEF's cross-cutting programmes (impact- and outcome-level focus)
- Evaluations of UNICEF's change strategies and other evaluations of institutional effectiveness (outcome-level focus)
- Evaluations of UNICEF's responses to humanitarian action (outcome-level focus)
- Country programme evaluations (outcome-level focus)
- Joint evaluations (outcome-level focus)

Five Goals:

- 1) Every child survives and thrives
- 2) Every child learns
- 3) Every child is protected from exploitation and violence
- 4) Every child lives in safe and clean environments
- 5) Every child has an equitable chance in life

Visualisation and analysis of the data

We plan to use SWIFT-Review to visualise and share the results of our analysis as an interactive dashboard. SWIFT-Review is a freely-available desktop application for evidence mapping and reference management. It specialises on using both text-mining and user-generated search queries to tag references and to visualise tagging results interactively as pie charts, bar charts, and heatmaps.

The search and tagging functionality enable users to search and filter records based on titles, abstracts, year of publication, on automatically text-mined categories, or on other fields. The resulting tag sets can be saved within a project file and will be shared with UNICEF or made available to the public. In the following paragraphs we show visualisations and example reports generated by importing data from 608 UNICEF evaluation reports, using structured data from report year, Geros rating, region, office, as well as text-mining functionalities within the software.

Tagging and searching of documents using user-defined complex search queries

For the purpose of the following examples, report titles, descriptions (replacing abstracts), and year were imported as part of each report's metadata. We created a search query using the combined title/abstract field and multiple search terms connected with an "OR" operator, as well as exemplary search terms working only on title or using a proximity search to pick up instances in the text where the word "vaccine" appears within five words of the word "supplies". When using this functionality for the anticipated UNICEF report, this approach will ensure that

any tagging via search strategies on title, abstract, or full text is carried out in a transparent manner, by automatically highlighting which words in the text matched a search query (see Figure 1).

The screenshot shows a software interface with three main sections:

- Top-left:** A search query editor with a text area containing a Boolean query: `tiab:(immunisation* OR "immunological sensit*" OR "immunologic stimulat*" OR immunostimula* OR vaccin* OR "acquired immunity" OR "protective inoculation*") OR (title:"immunis* program*" OR tiab:"vaccines supplies"--5)`. Below the text area are buttons for "Clear", "Execute", and "Batch Query...".
- Top-right:** A document preview window for "Evaluation of Immunisation Programme (EPI) in Lebanon (2013-2017)". The abstract text is displayed with search terms like "vaccination", "vaccines", and "supplies" highlighted in yellow. Below the abstract, there is a section for "Health Outcomes" with a sub-section for "Nutritional and Metabolic (100%)".
- Bottom:** A table showing 8 of 608 filtered documents. The table has columns for Score, Training, Inclusion, RefID, Title, Year, and Authors.

Score	Training ...	Inclu...	RefID	Title	Year	Authors
1	<input type="checkbox"/>	<input type="checkbox"/>	s10	Evaluation of Immunisation Programme (EPI) in Lebanon (2013-2017)	2018	
0.006	<input type="checkbox"/>	<input type="checkbox"/>	s176	Joint Mid-term Evaluation of UNICEF/Gavi M0U8	2019	
0	<input type="checkbox"/>	<input type="checkbox"/>	s427	Accelerated Immunization Activities Evaluation Review	2021	
0	<input type="checkbox"/>	<input type="checkbox"/>	s376	Évaluation formative du résultat clé pour les enfants concernant l'enregistrement des naissances (RCE#7) en Côte d'Ivoire	2021	
0	<input type="checkbox"/>	<input type="checkbox"/>	s486	Evaluation of BRIDGE IPC Training Programme	2021	
0	<input type="checkbox"/>	<input type="checkbox"/>	s307	Évaluation du fonctionnement, de l'efficacité et de la durabilité de la chaîne du froid et de l'approvisionnement en vaccins à Sao T...	2020	
0	<input type="checkbox"/>	<input type="checkbox"/>	s195	Evaluation of UNICEF's Contribution to Georgia's E-Health Information Management System (E-HIMS)	2019	
0	<input type="checkbox"/>	<input type="checkbox"/>	s135	Reach Every District (RED)/Reach Every Community (REC) Strategy Evaluation Pakistan (2014-18)	2019	

Figure 1: User-defined Boolean search query using multiple fields, wildcard, and adjacency operators to filter references for a vaccine-related topic (top-left), results showing 8/608 filtered reports (bottom) and highlighting of matched search terms within the title/abstract (top-right).

Import of structured data from databases and spreadsheets or other analysis files

Tag categories can be defined manually or be imported as batches from databases and spreadsheets. Our team has experience in dealing with databases, natural language processing, and Python/R programming. Therefore, we were able to create a very rapid analysis and mapping of UNICEF reports for the purpose of this application (3 hrs work-time) We created completely automated tag categories for structured data on year, Geros categories, as well as UNICEF office and region. Figure 2 shows "Region" data linked and transferred into the project file in the form of an interactive pie-chart. Figure 3 shows reports linked to the "Thailand" office.

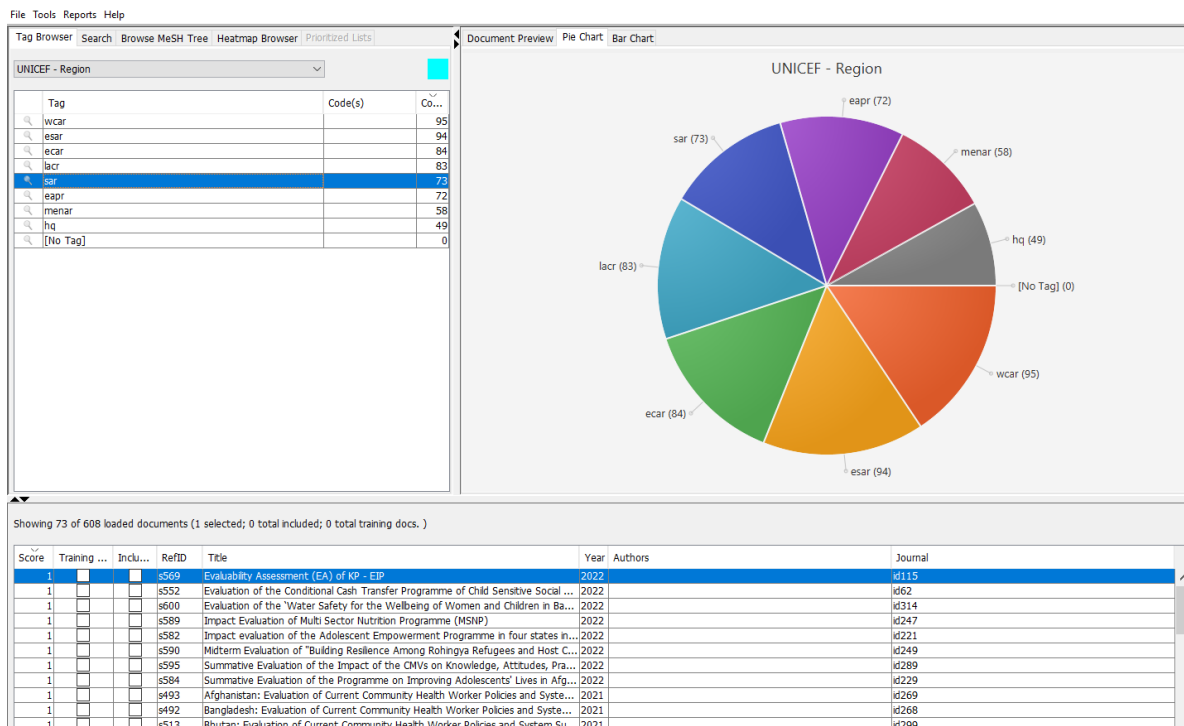


Figure 2: Using UNICEF's structured region data and visualising documents interactively in a pie chart. On the top-right "sar" was selected as "Region", leading to 73 filtered reports. Results across all categories are shown in the pie-chart on the top-right. On the pie-chart, users can click sections and also filter reports.

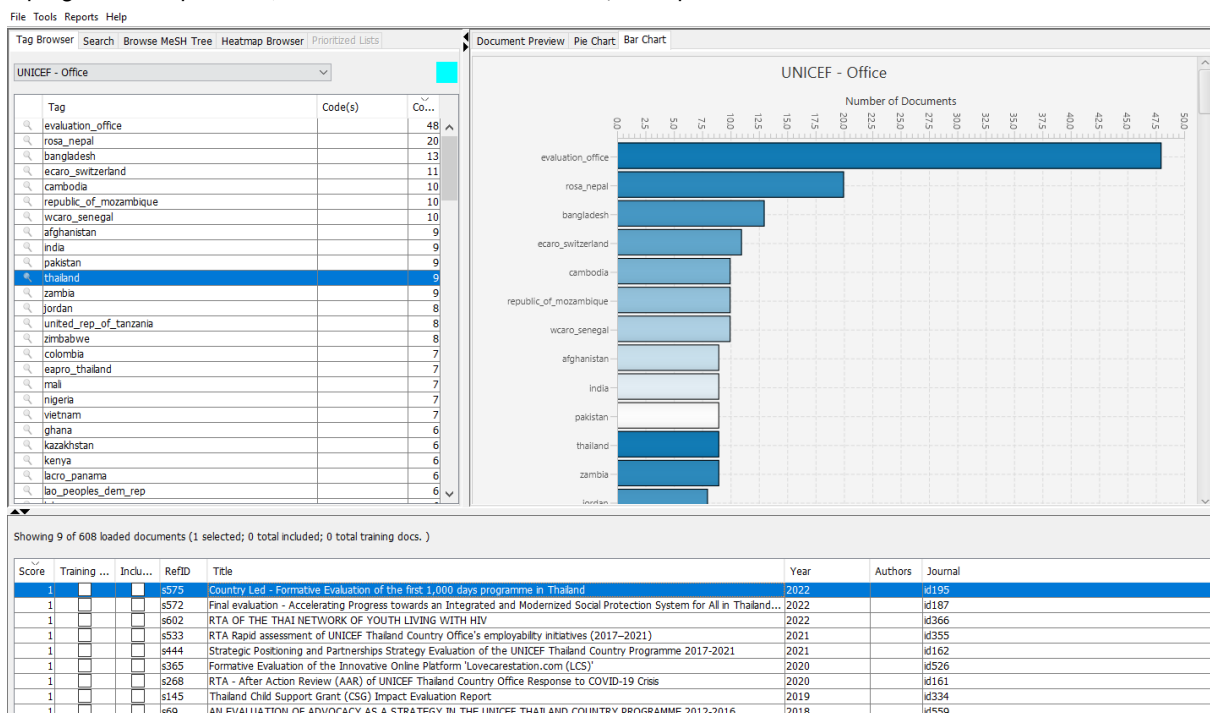


Figure 3: Bar-chart showing "Office" data, filtered down to results from Thailand.

However, the final analysis report to UNICEF will include more complex analyses and visualisations. A first example of this is shown in Figure 4, where we visualise reports by the intersection between "Year" and "GEROS rating" categories. The heatmap on the top-left corner is interactive, allowing the user to filter relevant references from each cell separately.

In Figure 4 we selected and displayed 9 records from 2021 rated as “Exceptional” within the sample dataset of 608 reports. All heatmaps, tag categories, or subsets of documents can also be exported to Excel, RIS reference files, or as static figures for direct sharing of the results.

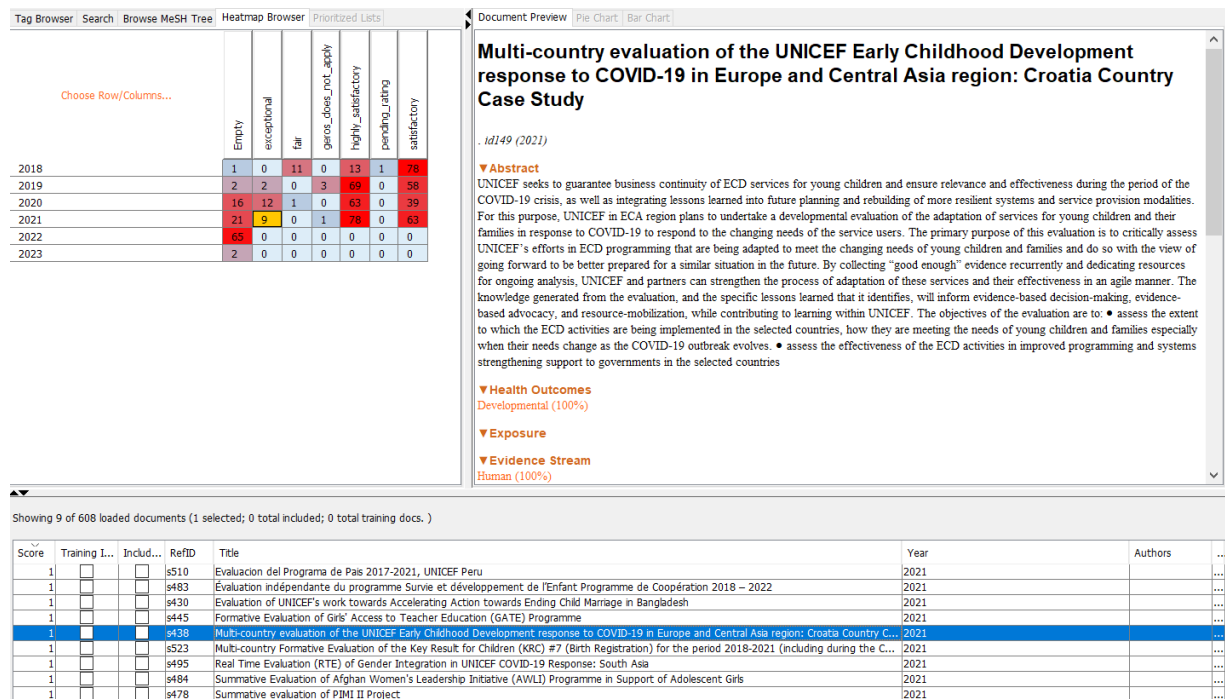


Figure 4: Interactive heatmap showing "Year" and "Geros categories"

Automated text-mining

A number of search-query and topic-modelling based text-mining algorithms are integrated into SWIFT-Review and are applied automatically to each imported reference. Figure 5 shows the integrated text-mining tagging categories for Health Outcomes. “Nutritional and Metabolic” is one of these categories, it applies to 52 of our example UNICEF reports. All visualisations are interactive, and all relevant documents are automatically filtered and presented by selecting the “Nutritional and Metabolic” category on the bar chart on the top-right in Figure 5. Text-mining is applied automatically to save time, but any tags can also be added or removed manually if needed. Similar to the user-defined search query tagging, transparency is achieved during the text-mining process by giving users the opportunity to display highlighted terms within each abstract that contributed towards the assignment of each tag category (Figure 6).

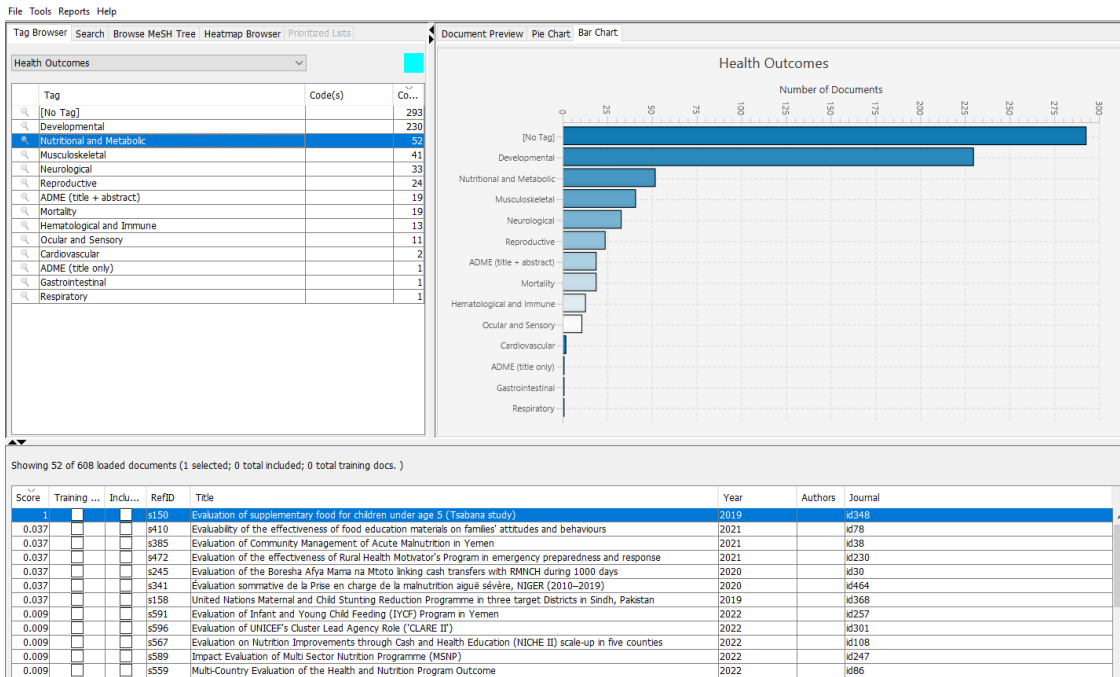


Figure 5: Automated tagging and filtering via text-mining

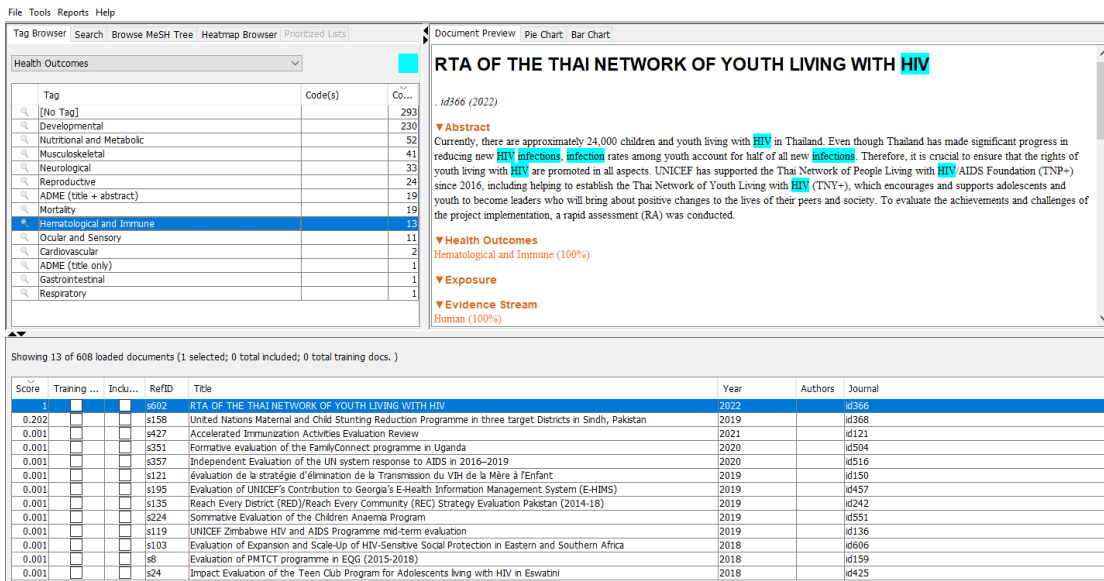


Figure 6: Transparency of the text-mining approach via highlighting of terms contributing to the automated "Hematological and Immune" tagging.

constructs, greatly reducing time-on-task for evidence synthesis. We can provide an additional cost per year for this ongoing work.

The limitation of the proposal is that our methods are based on assuming that the selected outcomes (chosen by UNICEF and in collaboration with the review team) have been measured and reported in the evaluations. If this is not the case, we may need to select alternative outcomes, or proxy measures. With limited timeframes we will have to respond quickly to these challenges. We will seek to prevent this by having our primary chosen outcomes, will a secondary list prepared and agreed.

We will not have time to double screen, extract and code data raising the risk of error. We will mitigate this by testing our screening, extraction and coding tools and frequent random checks of our processes.

D. Work plan

We have included a GANTT chart below. We plan to work on phase 1 and phase 2 in parallel, ensuring with close communication between the team members.

In **weeks 1 and 2** we will define clear parameters for the review and EGM, and confirm an agreed protocol. This will include consultation with UNICEF to confirm the framework for the EGM. We also will confirm the key outcomes for the quantitative evaluation. Terms for the automated search of the evaluation reports will need to be agreed. During week 2 we will begin the conversion of the PDFs into a SWIFT-review file. We will then use this to identify the key outcome measures and qualitative terms.

Weeks 3 and 4 will include coding and data extraction with agreed templates.

Weeks 5 and 6 will include the analysis of collected data for phase 1 and ongoing coding for the EGM for Phase 2.

Weeks 7 and 8 will include the preparation of the brief and PowerPoint slides for phase 1. It will also involve the key stakeholder interviews. We anticipate that UNICEF will schedule these meetings and they will be conducted via Zoom.

Weeks 9-12 will include preparation of the final report and the EGM.

		Jan				Feb				March			
		wk 1	wk 2	wk 3	wk 4	wk 5	wk 6	wk7	wk8	wk 9	wk 10	wk 11	wk 12
Phase 1	Protocol												
	Data collection												
	Analysis												
	Report writing												
	PowerPoint												
Phase 2	Agree coding framework for map												
	Coding												
	Interviews with key informants												
	Integration of evidence and Report writing												

To achieve the objectives of the evidence review within the tight timescales we suggest regular (weekly) meetings with UNICEF. This will allow us to discuss and resolve any unexpected methodological challenges we encounter.

G. Team Structure

Fiona Campbell will lead the team, with support from Professor Craig. Professor Nathan Hughes will also advise as a topic expert.

The review team will include Fiona Campbell, Pauline Addis, Hannah O’Keefe and Lena Schmidt. A further reviewer will be recruited, and their name confirmed with UNICEF. Relevant CVs can be found below.

4 systematic reviewers (Jan-Feb)

3 systematic reviewers (March)

Translation support (3 days) - we will use translation software for reports in French, Spanish, and Portuguese. We also can access support within our team from colleagues who are fluent in these languages.

CV for Fiona Campbell

Qualifications

2010 MPH (Distinction), University of Sheffield

1995 BSc (Hons) Community Nursing (Awarded First), Kings College London

1991 Registered General Nurse, St. Bartholomew’s School of Nursing and Midwifery

Career summary

2010-present Research Fellow, ScHARR, University of Sheffield

2007-2010 Research Associate, ScHARR, University of Sheffield

2001-2005 Research Associate, Newcastle University

1999-2001 Research Fellow, Royal College of Nursing

1995-1998 Community Nurse, The Gambia

1993-1995 Health Visitor and District Nurse, Haringey Health Authority

1991-1993 Staff Nurse, St Bartholomew’s Hospital

Research grants

Date	Project	Funder	Role	Grant
2022	Mapping the Evidence for the WHO Classification of	European Commission	Partner, Methods lead	3.2 million euros

	Tumours: A Living Evidence Gap Map by Tumour Type			
2021	Evidence mapping review of intergenerational interventions and a systematic review to explore their effect on social and mental wellbeing of children and young people	NIHR	PI, Lead applicant	£100,000
2021	Mapping the Evidence – Elder Abuse	WHO	Co-applicant and lead reviewer	£25,000
2019	Systems Science in Public Health and Health Economics Research	UKPRP, MRC	Evidence Synthesis Work Stream Lead	£5 million
2020	Pain relief strategies for dressing change in chronic wounds: a mixed-methods systematic review and survey of UK practice Call: 19/72 Pain relief strategies for dressing change in chronic wounds	NIHR	Co-applicant lead reviewer	£220,874
2020	Re-examining reproductive rights, 25 years after Cairo: legal determinants of reproductive health in The Gambia and beyond	Research England, HEFCE	PI, systematic reviewer	£7,000
2020	Public Health Review Team	NIHR	Co-applicant	£599,632
2019	Current health care provision and clinical interventions for women at risk of preterm birth in low resource settings	QR GCRF	PI	£21,900
2019	Digital Interventions to reduce alcohol related harm.	Alcohol Change UK	Co-applicant and systematic review lead	£20,000
May 2018	Preterm birth prevention and management	NIHR	Co-applicant and Lead of Evidence Synthesis Workstream	£995,000

2015	Evidence for identifying and helping children and young people who display harmful sexual behaviour	NICE	PI, Systematic reviewer, project manager	£100,000
2012	Physical Activity Advice in Primary Care: an evidence review	NICE	Co-applicant	£55,700
2011	Community-based peer support: Developing a model for promoting health literacy (COPES)	Department of Health	Co-applicant	£200,000

Recent peer-reviewed publications

1. Thompson-Coon J; **Campbell F**; Sutton A; Whear R; Rogers M; Barlow J; Robinson Carter E; Sharpe R; Chhen S; Wolstenholme L Intergenerational interventions and their effect on social and mental wellbeing of both children and older people – A mapping review and evidence and gap map. Campbell Systematic Reviews, vol 18 (2) May 2022
2. Ruiz, I; Colling R; **Campbell F**; Cree I; Puay-Hoon T(In press) Evidence levels in pathology for informing the WHO classification of tumours. Histopathology
3. Mikton C, Beaulieu M, Yon Y, Genesse JC, St-Martin K, Byrne M, Phelan A, Storey J, Rogers M, **Campbell F**, et al. Protocol: Global elder abuse: a mega-map of systematic reviews on prevalence, consequences, risk and protective factors and interventions Campbell Systematic Reviews 18(2) Article number e1227 Jun 2022 (Journal article)
4. **Campbell F**, Lindsay Blank, Susan Baxter, Anna Cantrell, Christopher Blackmore, Elizabeth Goyder (in press) Factors that Influence Mental Health of University and College Students in the UK: A Rapid Review (BMC Public Health – in press)
5. Sutton A, **Campbell F** The SchARR LMIC filter adapting a low-and middle income countries geographic search filter to identify studies on preterm birth prevention and management. Research Synthesis Methods 26 Feb 2022
6. **Campbell F**, Spontaneous Preterm Birth Prevention. A Scoping Review Highlighting an Inverse Pattern of Research with a Lack of Research Evidence from High Burden Settings. BMJ Open May 2022 <https://doi.org/10.1136/bmjopen-2021-052576>
7. **Campbell F**, Booth, A, Carroll C, Relton C. Qualitative Evidence Syntheses of Attitudes and Preferences to Inform Guidelines on Infant Feeding in the Context of Ebola Virus Disease Transmission Risk. PLOS Neglected Tropical Diseases 16(3) 10 Mar 2022
8. Foster CR, **Campbell F**, Blank L, Cantrell A, Black M, Lee AC. A Scoping Review of the Experience of Implementing Population Testing for SARS-CoV-2. Public Health doi: 10.1016/j.puhe.2021.06.012
9. Jayasooriya S, Dimambro-Denson F, Beecroft C, Balen J, Awokola B, Mitchell C, Kampmann B, **Campbell F**, Dodd P, Mortimer K. Patients with presumed tuberculosis

in sub-Saharan Africa that are not diagnosed with tuberculosis: a systematic review and meta-analysis. *Thorax*. 2022 Jan 23.

10. **Campbell F** LA. Public Health and the NHS at 70. Fit enough for the challenge of new enemies in a new landscape? An example of public health measures to address alcohol consumption *French Journal of British Studies* 2019 XXIV Article number 3(04 Sep).
11. **Campbell F**, Weeks L, Booth A, Kaunelis D, Smith A. A scoping review found increasing examples of rapid qualitative evidence syntheses and no methodological guidance. *Journal of Clinical Epidemiology*. 2019;115:160-71.
12. **Campbell F**, Sworn K, Booth A, Reuber M, Grunewald R, Mack C, et al. *Epilepsy Specialist Nurses The Evidence (ESPENTE): a Systematic Mapping Review*. 2019.
13. Beyer F, **Campbell F**, Bertholet N, Daeppen J, Saunders J, Pienaar E, et al. The Cochrane 2018 review on brief interventions in primary care for hazardous and harmful alcohol consumption: a distillation for clinicians and policy makers. *Alcohol and Alcoholism*. 2019;54(4):417-27.
14. Lawton K, Royals K, Carson-Chahhoud KV, **Campbell F**, Smith BJ. Nurse-led versus doctor-led care for bronchiectasis. *Cochrane Database of Systematic Reviews*. 2018(6).
15. Kaner EF, Beyer FR, Muirhead C, **Campbell F**, Pienaar ED, Bertholet N, et al. Effectiveness of brief alcohol interventions in primary care populations. *Cochrane database of systematic reviews*. 2018(2).
16. **Campbell F**, Lawton J, Rankin D, Clowes M, Coates E, Heller S, et al. Follow-Up Support for Effective type 1 Diabetes self-management (The FUSED Model): A systematic review and meta-ethnography of the barriers, facilitators and recommendations for sustaining self-management skills after attending a structured education programme. *BMC health services research*. 2018;18(1):898.
17. **Campbell F**, Booth A, Hackett S, Sutton A. Young people who display harmful sexual behaviors and their families: a qualitative systematic review of their experiences of professional interventions. *Trauma, Violence, & Abuse*. 2018:1524838018770414.
18. Preston L, Chambers D, **Campbell F**, Cantrell A, Turner J, Goyder E. What evidence is there for the identification and management of frail older people in the emergency department? A systematic mapping review. 2017.
19. Davis S, James M-S, Sanderson J, Stevens J, Goka E, Rawdin A, et al. A systematic review and economic evaluation of bisphosphonates for the prevention of fragility fractures. 2016.
20. **Campbell F**, Biggs K, Aldiss SK, O'Neill PM, Clowes M, McDonagh J, et al. Transition of care for adolescents from paediatric services to adult health services. *Cochrane Database of Systematic Reviews*. 2016(4).
21. Preston L, Turner J, Booth A, O'Keeffe C, **Campbell F**, Jesurasa A, et al. Is there a relationship between surgical case volume and mortality in congenital heart disease services? A rapid evidence review. *BMJ open*. 2015;5(12).
22. Harris J, Springett J, Booth A, **Campbell F**, Thompson J, Goyder E, et al. Can community-based peer support promote health literacy and reduce inequalities? A realist review. *Journal of Public Health Research*. 2015;3(3).
23. **Campbell F**, Holmes M, Everson-Hock E, Davis S, Woods HB, Anokye N, et al. A systematic review and economic evaluation of exercise referral schemes in primary care: a short report. *Health Technology Assessment*. 2015;19(60)

24. Croot EJ, Ryan TW, Read J, **Campbell F**, O’Cathain A, Venables G. Transient ischaemic attack: a qualitative study of the long term consequences for patients. *BMC family practice*. 2014;15(1):174.
25. **Campbell F**, Thokala P, Uttley LC, Sutton A, Sutton AJ, Al-Mohammad A, et al. Systematic review and modelling of the cost-effectiveness of cardiac magnetic resonance imaging compared with current existing testing pathways in ischaemic cardiomyopathy. *Health technology assessment (Winchester, England)*. 2014;18(59):1.
26. **Campbell F**, Dickinson HO, Critchley JA, Ford GA, Bradburn M. A systematic review of fish-oil supplements for the prevention and treatment of hypertension. *European journal of preventive cardiology*. 2013;20(1):107-20.
27. Tappenden P, **Campbell F**, Rawdin A, Wong R, Kalita N. The clinical effectiveness and cost-effectiveness of home-based, nurse-led health promotion for older people: a systematic review. *Health technology assessment (Winchester, England)*. 2012;16(20):1.
28. Karnon J, Campbell F, Czoski-Murray C. Model-based cost-effectiveness analysis of interventions aimed at preventing medication error at hospital admission (medicines reconciliation). *Journal of evaluation in clinical practice*. 2009;15(2):299-306.
29. Dickinson H, **Campbell F**, Beyer F, Nicolson D, Cook J, Ford G, et al. Relaxation therapies for the management of primary hypertension in adults: a Cochrane review. *Journal of human hypertension*. 2008;22(12):809-20.
30. **Campbell F**, Dickinson HO, Cook JV, Beyer FR, Eccles M, Mason JM. Methods underpinning national clinical guidelines for hypertension: describing the evidence shortfall. *BMC health services research*. 2006;6(1):47.

Project leadership

The following are projects where Fiona Campbell has had overall responsibility for the design, team coordination, review process and delivery of the final report, and presentation of findings both to commissioners and in wider dissemination activities.

ReBIP Review Body for Interventional Procedures Programme within NICE

- Medication Error
- Trans myocardial Laser Revascularisation
- Prevention of Infection in Ventilated Patients

HTA, NIHR

- Cardiac Magnetic Resonance (CMR) imaging

Public Health Collaborating Centre, NIHR

- Weight management in pregnancy

Economic Evaluation of Health and Care Interventions (EEPRU), Department of Health

- Medication Error

ScHARR TAG, NICE

- Exercise Referral Schemes
- Harmful sexual behaviour in children

University of Sheffield

- Lived Experience in training Mental Health Professionals

NIHR

- Interventions to reduce risk of preterm birth
- Intergenerational Interventions
- Pain management at dressing change
- Mental health of University Students
- Self-management in diabetes (DAFNE)

CV for Professor Dawn Craig

Position: Professor in Evidence Synthesis, Population Health Sciences Institute, Newcastle University (August 2018 to present)

Director, NIHR Innovation Observatory, Population Health Sciences Institute, Newcastle University (June 2020 – present)

Education/qualifications

2002 MSc Health Economics, University of York

2001 BA (hons), Business Economics, University of Portsmouth

Responsibilities

- Leadership/PI Newcastle University Evidence Synthesis Research Group (ESG)
- Leadership/PI of the NIHR Innovation Observatory (IO)
- Deputy Theme Lead for Enabling Methodologies Theme, NIHR Applied Research Collaboration NENC
- Senior Management Team Newcastle Technology Assessment Review Centre
- Senior Management Team Newcastle NICE Early Assessment Group
- NIHR Older People and Frailty Policy Research Unit - Evidence Synthesis Lead
- NIHR Policy Research Unit Behavioural Science - Evidence Synthesis Lead
- Evidence Synthesis Lead for NIHR Research Design Service NENC
- Member of the NIHR Newcastle In vitro Diagnostic Co-operative Management Group
- Development/Management of researchers and their career development
- Lead on applied research projects/funding bids; design, conduct and delivery of evidence synthesis, economic evaluations/decision models, health technology assessments, methodological research, grant and manuscript preparation.

Selection of publications

1. Kenny RP, Millar EB, Adesanya A, Richmond C, Beyer F, Calderon C, Rankin J, Toledano M, Feychting M, Pearce MS, **Craig D**. The effects of radiofrequency exposure on male fertility and adverse reproductive outcomes: A protocol for two systematic reviews of human observational studies with meta-analysis. *Environment international*. 2022 Jan 1;158:106968.
2. Jarvis H, O'Keefe H, **Craig D**, Stow D, Hanratty B, Anstee QM. Does moderate alcohol consumption accelerate the progression of liver disease in NAFLD? A systematic review and narrative synthesis. *BMJ open*. 2022 Jan 1;12(1):e049767.
3. Spiers G, Boulton E, Corner L, **Craig D**, Parker S, Todd C, Hanratty B. What matters to people with multiple long-term conditions and their carers?. *Postgraduate medical journal*. 2021 Dec 17.
4. Kunonga TP, Spiers GF, Beyer FR, Hanratty B, Boulton E, Hall A, Bower P, Todd C, **Craig D**. Effects of Digital Technologies on Older People's Access to Health and Social Care: Umbrella Review *J Med Internet Res* 2021;23(11):e25887

5. Akinbolade, S., Coughlan, D., Fairbairn, R., McConkey, G., Powell, H., Ogunbayo, D., & **Craig, D.** (2021). Combination therapies for COVID-19: An overview of the clinical trials landscape. *British Journal of Clinical Pharmacology*.
6. Hall A, Boulton E, Kunonga P, Spiers G, Beyer F, Bower P, **Craig D**, Todd C, Hanratty B. Identifying older adults with frailty approaching end-of-life: A systematic review. *Palliative Medicine*. 2021 Sep 14:02692163211045917.
7. Spiers GF, Liddle J, Kunonga TP, Whitehead IO, Beyer F, Stow D, Welsh C, Ramsay SE, **Craig D**, Hanratty B. What are the consequences of caring for older people and what interventions are effective for supporting unpaid carers? A rapid review of systematic reviews. *BMJ open*. 2021 Sep 1;11(9):e046187.
8. Chawla K, Kunonga TP, Stow D, Barker R, **Craig D**, Hanratty B. Prevalence of loneliness amongst older people in high-income countries: A systematic review and meta-analysis. *PloS one*. 2021 Jul 26;16(7):e0255088.
9. Taylor H, Pennington L, **Craig D**, et al. Children with neurodisability and feeding difficulties: a UK survey of parent-delivered interventions. *BMJ Paediatrics Open* 2021;5:e001095. doi: 10.1136/bmjpo-2021-001095
10. RPW Kenny, EB Millar, A Adesanya, C Richmond, F Beyer, C Calderon, Rankin J, Toledano M, Feychting M, Pearce MS, **Craig D**, Pearson F. The effects of radiofrequency exposure on male fertility and adverse reproductive outcomes: A protocol for two systematic reviews of human observational studies with meta-analysis. *Environment international* 158, 106968
11. Spiers GF, Kunonga TP, Beyer F, **Craig D**, Hanratty B, Jagger C. Trends in health expectancies: a systematic review of international evidence. *BMJ open*. 2021 May 1;11(5):e045567.
12. Tanner L, **Craig D**, Holmes R, Catinella L, Moynihan P. Does Dental Caries Increase Risk of Undernutrition in Children? *JDR Clinical & Translational Research*. April 2021. doi:10.1177/23800844211003529
13. Boulton E, Kneale D, Stansfield C, Heron PN, Sutcliffe K, Hayanga B, Hall A, Bower P, Casey D, **Craig D**, Gilbody S. Rapid systematic review of systematic reviews: what befriending, social support and low intensity psychosocial interventions, delivered remotely, may reduce social isolation and loneliness among older adults and how?[version 2; peer review: 2 approved with reservations]. *F1000Research*. 2021 Apr 28.
14. Vale L, Kunonga P, Coughlan D, Kontogiannis V, Astin M, Beyer F, Richmond C, Wilson D, Bajwa D, Javanbakht M, Bryant A, Akor W, **Craig D**, Lovat P, Labus M, Nasr B, Cunliffe T, Hinde H, Shawgi M, Saleh M, Royle P, Steward P, Lucas R, and Ellis R. Optimal surveillance strategies for patients with stage 1 cutaneous melanoma post primary tumour excision: three systematic reviews and an economic model. Southampton (UK): NIHR Health Technology Assessment, 2021; 25 (64)
15. Spiers GF, Kunonga TP, Hall A, Beyer F, Boulton E, Parker S, Bower P, **Craig D**, Todd C, Hanratty B. Measuring frailty in younger populations: a rapid review of evidence. *BMJ open*. 2021 Mar 1;11(3):e047051.
16. Hampton, J.S., Sharp, L., **Craig, D.** et al. Colorectal Cancer Screening and Surveillance for Non-Hereditary High-Risk Groups—Is It Time for a Re-Think? *Curr Treat Options Gastro* (2021).
17. Parr J, Pennington L, Taylor H, **Craig D**, Morris C, McConachie H, et al. Investigating parent delivered interventions to improve eating, drinking and swallowing in young children

with neurodisability: mixed methods study (FEEDS). NIHR Health Technology Assessment, 2021: Volume: 25, Issue: 22

18. Bray N, Kolehmainen N, McAnuff J, Tanner L, Tuersley L, Beyer F, Grayston A, Wilson D, Tudor Edwards R, Noyes J, **Craig D**. Early Mobility and Powered Wheelchair Evidence Review (EMPOWER): Examining the effectiveness and cost-effectiveness of earlier provision of powered mobility interventions for children with mobility limitations. NIHR Health Technology Assessment, 2020;24(50)

19. Balami JS, Coughlan D, White PH, McMeekin P, Flynn D, Roffe C, Chembala J, Nayak S, Wiggam I, Flynn P, Simister R, Sammaraiee Y, Sims D, Nader K, Dixit A, **Craig D**, Lumley H, Rice S, Burgess D, et al. The cost of providing mechanical thrombectomy in the UK National Health Service: a micro-costing study. *Clinical Medicine*, 2020. Vol 20, No 3: e40–5

20. Jarvis H, **Craig D**, Barker R, Spiers G, Stow D, Anstee QM, et al. (2020) Metabolic risk factors and incident advanced liver disease in non-alcoholic fatty liver disease (NAFLD): A systematic review and meta-analysis of population-based observational studies. *PLoS Med* 17(4): e1003100

21. Javanbakht M, Moloney E, Brazzelli M, Wallace S, Ternent L, Omar MI, Monga A, Saraswat L, Mackie P, Becker F, Imamura M, Hudson J, Shimonovich M, MacLennan G, Vale L & **Craig D**. Economic evaluation of surgical treatments for women with stress urinary incontinence: a cost-utility and value of information analysis. *BMJ Open* 2020;10:e035555. doi: 10.1136/bmjopen-2019-035555

22. Javanbakht M, Moloney E, Brazzelli M, Wallace S, Omar MI, Monga A, Saraswat L, Mackie P, Imamura M, Hudson J, Shimonovich M, MacLennan G, Vale L & **Craig D**. Surgical treatments for women with stress urinary incontinence: a systematic review of economic evidence. *Systematic Reviews*. 2020;9 (1):85.

23. Shemilt I, Aluko P, Graybill E, Craig D, Henderson C, Drummond M, et al. Economic evidence. *Cochrane Handbook for Systematic Reviews of Interventions*. 2019:507-23.

24. Moynihan P, Tanner L, Holmes R, Hillier-Brown F, Mashayekhi A, Kelly S & Craig D. Systematic review of evidence pertaining to factors that modify risk of early childhood caries. *JDR Clinical & Translational Research*. 2019;4(3):202-16.

25. Moloney E, O'Connor J, **Craig D**, Robalino S, Chrysos A, Javanbakht M, et al. Systematic Review of Economic Models Used to Compare Techniques for Detecting Peripheral Arterial Disease. *PharmacoEconomics-open*. 2019;3(1):21-30.

26. Moloney E, Lee KW, **Craig D**, Allen AJ, Graziadio S, Power M, et al. A PCR-based diagnostic testing strategy to identify carbapenemase-producing Enterobacteriaceae carriers upon admission to UK hospitals: early economic modelling to assess costs and consequences. *Diagnostic and prognostic research*. 2019;3(1):8.

27. Moloney E, **Craig D**, Holdsworth N, Smithson J. Optimising clinical effectiveness and quality along the atrial fibrillation anticoagulation pathway: an economic analysis. *BMC Health Services Research*. 2019;19(1):1007.

28. Imamura M, Hudson J, Wallace SA, MacLennan G, Shimonovich M, Omar MI, Javanbakht M, Moloney E, Shimonovich M, Becker F, Ternent L, Montgomery I, Mackie P, Saraswat L, Monga A, Vale L, **Craig D***, & Brazzelli M. Surgical interventions for women with stress urinary incontinence: systematic review and network meta-analysis of randomised controlled trials. *BMJ*. 2019;365: l1842. *corresponding author

29. Hanratty B, **Craig D**, Brittain K, Spilsbury K, Vines J & Wilson P. Innovation to enhance health in care homes and evaluation of tools for measuring outcomes of care: rapid evidence synthesis. *Health Serv Deliv Res* 2019;7(27)
30. Halvorsrud K, Lewney J, **Craig D**, Moynihan P. Effects of starch on oral health: systematic review to inform WHO Guideline. *Journal of Dental Research*. 2019;98(1):46-53.

Research funding

Ongoing

- NIHR - Technology Assessment Reviews. Total award: £2,900,000. Role: co-app (April 2022 to March 2027)
- NIHR HTA - COLOFIT - Optimal use of Faecal Immunochemical Testing for patients with symptoms of possible colorectal cancer. Total award: £757,064. Role: co-app (November 2021 to April 2023)
- NIHR Blood and Transplant Research Unit. Total award: £3,996,592. Role: co-app (April 2022 to March 2027)
- NIHR PRP - Community-based oral health interventions in socially disadvantaged adults. Total award: £629,492. Role: co-app: (May 2020 to March 2022)
- NIHR Policy Research Unit Behavioural Science. Total award: £2,840,739. Role: co-app (Evidence Synthesis Lead); (January 2019 to December 2023)
- NIHR Policy Research Unit Ageing and Frailty. Total award: £2,001,242. Role: co-app (Evidence Synthesis Lead); (January 2019 to December 2023)
- NIHR Innovation Observatory. Total award: £26.4 million: Role: PI; (April 2017 to March 2026)
- NIHR Applied Research Centre for the North East and North Cumbria. Funder NIHR. Date of award: 1/11/2019 to 31/10/2024. Amount of the award £9,000,000. Deputy Lead Evaluation Theme

Selection completed

- NIHR SPCR - Improving the evidence base for primary care: NIHR Evidence Synthesis working group. Total award: £1,912,967. Role: co-app; (October 2017 to September 2020)
- NIHR HTA - What is the clinical and cost-effectiveness of endoscopic bipolar radio-frequency ablation for malignant biliary obstruction? Total award: £199,000. Role: co-app/PI mentor; (March 2020 to February 2021)
- NIHR HTA - Oral nutritional interventions in malnourished frail elderly. Total award: £259,368.73. Role: co-app/PI mentor; (December 2019 to May 2021)
- NIHR - Updated systematic review of interventions to improve organ donation rates in BAME populations. Total award: £104,758. Role: co-app; (January 2019 to July 2019)
- NIHR HTA - Cost-effectiveness of earlier provision of powered mobility aids to children with mobility limitations. Total award: £251,448.80. Role: co-app; (April 2018 to May 2019)
- The Norwegian Institute of Public Health (NIPH) - Cochrane review support. Total award: £10,496. Role: principal investigator; (December 2017 to February 2018)

- NIHR SPHR - The effectiveness and cost-effectiveness of digital and practitioner delivered brief Alcohol interventions aimed at hiGher-risk drinkErs: a network meta-analysis – ENGAGE. Total award: £95,000. Role: co-app; (*September 2017 to February 2019*)
- NIHR HTA - What Interventions, delivered at home, available to improve eating in young children with neurodisability. Total award: £283,425: Role: co-app; (*July 2017 to June 2019*)
- Borrow Foundation - Systematic Review of Early Childhood Caries. Total award: £33,000. Role: co-app; (*July 2017 to March 2018*)
- NIHR HTA - The Effectiveness and cost-effectiveness of Surgical Treatments for womEN with stRes urinary incontinence (ESTER). Total award: £292,951. Role: principal investigator; (*August 2016 to December 2017*)
- NIHR HS&DR - INnovation to enhance health in Care Homes: rapid Evidence Synthesis: INCHES. Total award: £218,544. Role: co-app; (*August 2016 to July 2017*)

CV for Hannah O’Keefe

Qualifications

2019-2021 – MSc Public Health and Health Services research

2017-2018 – MSc Bioinformatics

2013-2017 – BSc (Hons) Biomedical Genetics

Appointments

2021-Present – Research Assistant Information Specialist, Newcastle University

2019-2021 – Training Fellow in Evidence Synthesis, Newcastle University

2018-2019 – Research Consultant, Newcastle University

Publications

1. Johnson EJ, **O’Keefe H**, Sutton A, Marshall C. The Systematic Review Toolbox: keeping up to date with tools to support evidence synthesis. *Systematic Reviews*, 2022.
2. Thomson K, Rice S, Arisa O, Johnson E, Tanner L, Marshall C, Sotire T, Richmond C, **O’Keefe H**, Mohammed W, Gosney M, Raffle A, Hanratty B, Craig D, McEvoy C, Ramsay S. A systematic review and meta-analysis to assess the clinical effectiveness and cost-effectiveness of oral nutritional interventions in malnourished frail older people. *The Lancet Health and Longevity* 2022, 3(10), e654-666.
3. **O’Keefe H**, Rankin J, Wallace SA, Beyer F. Investigation of text-mining methodologies to aid the construction of search strategies in systematic reviews of diagnostic test accuracy—a case study. *Research Synthesis Methods* 2022, 1-20.
4. Wordsworth J, **O’Keefe H**, Clark P, Shanley D. The damage-independent evolution of ageing by selective destruction. *Mechanisms of Aging and Development* 2022, 207:111709.

5. Jarvis H, **O'Keefe H**, Craig D, Stow D, Hanratty B, Anstee Q,. Does moderate alcohol consumption accelerate the progression of liver disease in NAFLD? A systematic review and narrative synthesis. *BMJ Open* 2021, **12**(1):e049767.
6. Klink G, **O'Keefe H**, Gogna A, Bazykin G, Elson J. A broad comparative genomics approach to understanding the pathogenicity of Complex I mutations. *Nature Scientific Reports* 2021, **11**(1), 1-12.
7. Oyewole A.O, Barrass L, Robertson E.G, Woltmann J, **O'Keefe H**, Sarpal H, Dangova K, Richmond C, Craig D. COVID-19 Impact on Diagnostic Innovations: Emerging Trends and Implications. *Diagnostics* 2021, **11**(2), 182.
8. **O'Keefe H**, Queen R, Lord P, Elson J. What can a comparative genomics approach tell us about the pathogenicity of mtDNA mutations in human populations? *Evolutionary Applications* 2019, **12**(10), 1912-1930.
9. **O'Keefe H**, Queen R, Meldau S, Lord P, Elson J. Haplogroup context is less important in the penetrance of mitochondrial DNA Complex I mutations compared to mt-tRNA mutations. *Journal of Molecular Evolution* 2018, **86**(6), 395-403
10. Hyslop LA, Blakeley P, Craven L, Richardson J, Fogarty NME, Fragouli E, Lamb M, Wamaitha SE, Prathalingam N, Zhang Q, **O'Keefe H**, Takeda Y, Arizzi L, Alfarawati S, Tuppen H, Irving L, Kalleas D, Choudhary M, Wells D, Murdoch AP, Turnbull DM, Niakan KK, Herbert M. Towards clinical application of pronuclear transfer to prevent mitochondrial DNA disease. *Nature* 2016, **534**(7607), 383-386.

HTA reports

1. Thomson K, Rice S, Arisa O, Johnson E, Tanner L, Marshall C, Sotire T, Richmond C, **O'Keefe H**, Mohammed W, Gosney M, Raffle A, Hanratty B, McEvoy C, Craig D, Ramsay S. Assessing the effectiveness and cost-effectiveness of oral nutritional interventions in malnourished frail older people. *Health technology Assessment*. Submitted to: NIHR.
2. Beyer F, Rice S, Orozco-Leal G, Still M, **O'Keefe H**, O'Connor N, Stoniute A, Craig D, Pereira S, Carr L, Leeds J. Endoscopic bipolar radiofrequency ablation for treating biliary obstruction caused by unresectable cancer: systematic review of clinical and cost effectiveness. *Health Technology Assessment*. Submitted to: NIHR.

CV for Pauline Addis

Current position Research Associate (evidence synthesis), NIHR Innovation Observatory, Population Health Sciences Institute, Newcastle University.

Education

2007-2011: PhD in Equine Biomechanics, Newcastle University.

2005-2007: MSc Equine Science, UWE (Hartpury College, now University), Gloucester.
Awarded the Dodson & Horrell Trophy for top student 2007.

2000- 2003: 2.1 BSc Equine Science, Imperial College at Wye, Kent.

Employment

January 2023-present: Research Associate in evidence synthesis at the NIHR Innovation Observatory (undertook part-time secondment June-December 2022).

February 2014-December 2022: Impact Officer at Newcastle University's Faculty of Medical Sciences. I was responsible for driving forward impact of research across the faculty. Key to this role was gathering and synthesising evidence from a range of sources to demonstrate the impact of Newcastle's research, which I then wrote up into concise, compelling case studies for various purposes, including REF2021. Two of these cases showcased how Newcastle research had underpinned WHO policy. I created and managed the North East Research Impact Group as well as two internal impact groups across the Faculty. From July 2021 to December 2022 I co-led the Association of Research Managers and Administrators (ARMA) Impact Special Interest Group, which involved communicating with ARMA and its members, preparing conference submissions and both organising and chairing training sessions.

June 2011-February 2014: Research Assistant/Associate (RA) at Newcastle University, starting in Mechanical & Systems Engineering and then moving to the Faculty of Medical Sciences, where I was made Team Leader of a group of four RAs. In both roles, I was responsible for collecting and presenting evidence of impact of research for REF 2014. This involved engagement with researchers, collecting and verifying data from various sources and distilling this information into a clear, concise case study for a lay audience.

July 2007-July 2011: PhD Studentship at Newcastle University, kindly funded by the EPSRC and Vicon. During my PhD, I gathered and analysed novel data and wrote up my findings for both peer reviewed publications and for a more lay audience. Thanks to my success in winning the majority of travel grants I applied for, I was able to attend five national and international conferences to present my work to my peers. I also presented and demonstrating at various public engagement events.

CV for Professor Nathan Hughes

Current post: Professor of Adolescent Health and Justice and Head of Department, Department of Sociological Studies, University of Sheffield, 2017 to present

Brief biography: Nathan Hughes is Professor of Adolescent Health and Justice, and Head of Department in the Department of Sociological Studies, University of Sheffield. He is also visiting researcher at the Centre for Adolescent Health at the Murdoch Children's Research Institute, Melbourne and the School of Social Policy, University of Birmingham, and was recently William Evans Fellow at the University of Otago, New Zealand.

His work focuses on the interrelated influence of health, developmental difficulties and social disadvantage in childhood on subsequent engagement with criminal justice systems, and the role of children's services in causing or countering this influence. This has included particular focus on the criminalization of neurodiversity, brain injury, and language impairment. He has considerable experience in supervising projects employing data analytics on administrative data, with ongoing work with West Midlands Police, South Yorkshire Police, Thames Valley Violence Reduction Unit, and the New Zealand government.

Emphasizing practical implications for policy and practice, he regularly engages with policymakers and professionals, recently including the UN Committee on the Rights of the Child; the Principal Youth Court Judge of New Zealand; and the All Party Parliamentary Group on Acquired Brain Injury. He is a founding member of the National Acquired Brain Injury Education and Learning Syndicate (N-ABLES; a consortium of charities and professionals supporting schools and policymakers to improve educational support to young people with acquired brain injury) and co-chair of the Global Law Enforcement and Public Health special interest group on neurodiversity and neurodisability, a collaboration of academics, clinicians and criminal justice professionals.

Qualifications

2005 PhD Social Policy (University of Warwick)

2000 MA Social Policy (University of Warwick)

1999 BA (Hons) Mathematics (University of Warwick)

Professional experience / Appointments held

2017-2019 Professorial Research Fellow, Faculty of Social Sciences, University of Sheffield

2007-2017 Lecturer then Senior Lecturer, School of Social Policy, University of Birmingham

2013-2015 Marie Curie Research Fellow, Murdoch Children's Research Institute, Australia.

2003-2007 Research Fellow, National Evaluation of the Children's Fund, University of Birmingham.

2001-2003 Research Fellow, Department of Social Policy and Social Work, University of Warwick.

Selected research projects [** indicates PI = Nathan Hughes*]

*2020 Development and piloting of a screening tool for neurodisability in a young adult specialist court. Higher Education Innovation Fund. PI. £2500

*2019-2020 Embedding Mental Health Support within District Police Stations. N8 Police Research Partnership. £10,000

*2019-2020 Systematic reviews of (1) non-clinical screening tools for neurodisability (2) mechanisms to support access to justice for people with neurodisability. Higher Education Innovation Fund. £15,000

2019-2020 Revealing and reducing trauma in young adults in the criminal justice system. Barrow Cadbury Trust. £64,000

*2018-2020 An examination of trends in young adult outcomes in the criminal justice system. Barrow Cadbury Trust. £10,000.

2015-2017 The role of the police in identifying and responding to adverse childhood experiences. College of Policing Police Knowledge Fund (UK). Co-I / workpackage lead. £250,000.

*2013-2016 Applications of Neuroscience to Social Policy and the Law. EU FP7 Framework, Marie Curie Actions International Outgoing Fellowship. €338,000.

*2012 An international evidence review of the prevalence of neurodevelopmental disorders amongst young people in custody. Office of the Children's Commissioner for England. £25,000

*2011-2013 Family and Social Policy: Towards Family-Minded Policy and Practice. British Academy UK-Latin-America Link Programme. £19,925.

*2010-2014 Understanding and Supporting Families with Complex Needs: a comparative study of family-minded policy and practice in social work, health and education in Europe and Latin America. EU FP7 Framework, Marie Curie Actions International Research Exchange Scheme. €250,000

*2009 Comparing anti-social behaviour policy in the UK, Western Australia and Victoria. Leverhulme Study Abroad Fellowship. £32,000

Selected publications

1. Hughes, N., Ungar, M., Fagan, A., Murray, J., Atilola, O., Nichols, K., Garcia, J. and Kinner, S., (2020). Health determinants of adolescent criminalisation. *The Lancet Child & Adolescent Health*, 4(2), pp.151-162.
2. Hughes, N., Sheahan, F., Williams, W.H. and Chitsabesan, P., (2020). Ensuring the rights of children with neurodevelopmental disabilities within child justice systems. *The Lancet Child & Adolescent Health*, 4(2), pp.163-166.
3. Borschmann, R., Janca, E., Carter, A., Willoughby, M., Hughes, N., Snow, K., Stockings, E., Hill, N.T., Hocking, J., Love, A. and Patton, G.C. (2020). The health of adolescents in detention: a global scoping review. *The Lancet Public Health*, 5(2): e114-e126.
4. Kinner SA, Hughes N, Borschmann R, Southalan L, Clasby B, Janca E, Willoughby M, Williams H. (2020) The health of children deprived of liberty: a human rights issue *The Lancet Child & Adolescent Health*; 4(1): 6-7.
5. Chandan, J.S., Hughes, N., Thomas, T., Nirantharakumar, K., Bandyopadhyay, S. and Taylor, J., (2020). Exploration of a novel preventative policing approach in the United Kingdom to adverse childhood experiences. *Child Abuse Review*, 29(2), pp.144-158.
6. Clasby, B., Bennett, M., Hughes, N., Hodges, E., Meadham, H., Hinder, D., Williams, H. and Mewse, A. (2019). The consequences of traumatic brain injury from the classroom to the courtroom. *Disability and rehabilitation*, 42:17, 2412-2421.
7. Clasby, B., Hughes, N., Catroppa, C. Morrison, E., 2018. Community-based interventions for adolescents following traumatic brain injury: a systematic review. *NeuroRehabilitation*, 42(3):345-363
8. Williams, W.H., Chitsabesan, P., Fazel, S. McMillan, T., Hughes, N., Parsonage, M. & Tonks, J (2018) Traumatic Brain Injury: A potential cause of violent crime? *Lancet Psychiatry*.
9. Hughes, N., Chitsabesan, P., Bryan, K., Borschmann, R., Swain, N., Lennox, C., & Shaw, J. (2017). Language impairment and comorbid vulnerabilities among young people in custody. *Journal of Child Psychology and Psychiatry*, 58(10), 1106-1113.
10. Hughes, N., Scibberas, E. and Goldfeld, S. (2016) 'Family and community predictors of language, socioemotional and behavior problems at school entry' *PLOS One*, 1(7): e0158802
11. Hughes, N. (2015) Understanding the influence of neurodevelopmental disorders on offending: utilizing developmental psychopathology in biosocial criminology, *Criminal Justice Studies* 28:39-60
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