SUPPLEMENTARY MATERIAL 1. Scoping review protocol

Understanding the use of secondary data in decision-making for public health and healthy public policy in the UK: summary of scoping review protocol

Table 1. Review questions

Strand 1	Strand 2
What do existing scoping and systematic	What are the barriers and facilitators at
reviews say about how evidence is used in	individual, organisational, and societal
decision-making for public health practice and	level to the use of secondary data in
healthy public policy?	decision-making for public health and
•	healthy public policy in the UK?
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Where available, we will also purposively select	t as case studies articles which focus on;
cross-sectoral sharing/linkage of secongle	dary data
Scottish context and systems	•
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Table 2. Searches – sources

Bibliographic databases	Medline
(Strand 1 & 2)	Scopus
	Social Science Citations Index
Grey literature	Google Scholar – first 30 results
(Strand 2 only)	
	Websites of:
	UK & devolved governments
	COSLA, LGA
	Public health agencies
	Public Health Scotland
	 Public Health England
	 Public Health Wales
	 HSC Public Health Agency Northern Ireland

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	Organisations involved in data sharing/linkage e.g. - HDR-UK - SAIL - Research Data Scotland - ADR	
Additional mechanisms	Discussion with advisory group to identify any other	
(Strand 1 & 2)	relevant resources	

Searches – terms and restrictions

We will develop a set of search terms for each database using a mixture of freetext and keywords, covering the following concepts – shown below with example synonyms. Wildcards are indicated with "*".

Table 3. Strand 1 search terms

Topic	Evidence	Decision-making	Article type
	Evidence	Policy making	Systematic review
	Data	Decision making	Scoping review
	Research	Public policy	•
	Knowledge	Health policy	
Synonyms	Evidence-based/ evidence-informed practice	Health in all policies	*
*	M	Public health practice	
	*	Health planning	*
	A	Social determinants of health	*
	•	Public health	
	A	Population health	

Table 4. Strand 2 search terms

Ì	Topic	Secondary data	Decision-making	Barriers and

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			facilitators
	Administrative data	Policy making	Challenges
	Routine data	Decision making	Obstacles
Synonyms	Linkage	Public policy	Enabler
	Cross-sector* data	Health policy	Promoting
	Electronic health records	Health in all policies	Supporting
	Personal health records	Public health practice	
		practice	
		Health planning	
*		Social determinants	
		of health	
A		Public health	
*		Population health	
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Table 5. Search strategy example

	Strand 1 - Medline		
#	Searches	Results	
1	(evidence or research).ab,ti.	2704937	
2	public health.ab,ti.	212514	
3	Public health/ or Population Health/	86724	
4	(health adj (practice or policy)).ab,ti.	21098	
5	public policy.ab,ti.	7877	
6	Policy/ or Public Policy/ or Policy Making/	50981	
7	social determinants.ab,ti.	5984	
8	(Health in all policies or HiAP).ab,ti.	299	
9	(policy makers or policy-makers or policy making).ab,ti.	23656	
10	(decision* or decision making or decision makers).ab,ti.	336883	
11	Decision making/	98701	
12	meta-ethnography.mp.	393	
.13	(qualitative adj2 synthesis).ab,ti.	2342	

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14	(qualitative adj2 review*).ab,ti.	3403	
15	(systematic adj2 (review or scoping)).ab,ti.	151245	
16	2 or 3 or 4 or 5 or 6 or 7 or 8 or 9	338294	
17	10 or 11	376532	
18	12 or 13 or 14 or 15	153725	
19	1 and 16 and 17	8721	
20	18 and 19	703	
21	limit 20 to yr="2011 -Current"	557	

Table 6. Inclusion criteria

A	Strand 1	Strand 2
Setting		UK only
	No restriction	Car for reviews agency includes LIVI
		[or for reviews, scope includes UK]
Language	Er	nglish
Time period	Ten years preced	ing date of searches
	(choice informed by launch of Adı	ministrative Data Taskforce in 2011,
		of administrative secondary data for
	research & p	olicy purposes)
		1
	Systematic reviews	
	Scoping reviews	
	*	Peer reviewed primary research,
B. I. P. and a second	Identified as such in title and/or	1 cor reviewed primary research
Publication type	abstract, with:	Grey literature reporting primary
		research
	Clearly specified research	
	question/aim	
	 Inclusion/exclusion criteria 	
	 Search strategy including 	
	more than one database	

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Definitions - 1	7 Public health practice – organised effi	orts undertaken with the intention of		Farmattad	
Deminions - 1	ions - 1 Public health practice – organised efforts undertaken with the intention of improving the health and wellbeing of individuals, communities, or populations and/or reducing inequalities in health; usually but not exclusively by staff working in health services, government, and the third sector.			Formatted Formatted	
	*			Formatted	
1	Healthy public policy – activities of go	overnment at local, or national level that		Formatted	
	may affect health and wellbeing and/o			Pormatted	
	not limited to) investment, regulation, legislation, incentivisation, and including policy areas other than healthcare and social care.				
Definitions - 2	Evidence – information used in the	Secondary data – use, re-use, or		Formatted	
	process of decision-making, which	novel combination of existing		Formatted	
1	might be based on numerical or	datasets, including those generated	X		[]
	textual data, practice guidelines, expert opinion, tacit knowledge and lived experience, narratives/stories, and meta-data (data about data).	through service delivery rather than for the purposes of research (administrative/routine data).		Formatted	()
Definitions - 3	Focus on process of how evidence (2) is used in public health practice and		Formatted	
	healthy public policy (1)			Formatted	
				Formatted	
Definitions - 4	†	Barriers or facilitators – factors that		Formatted	
	1 **	hinder or support an activity		Formatted	()
E alcadan aultania	D				
Exclusion criteria	Primary research; not systematic or	Study or article types other than primary research – e.g. editorials,		Formatted	
	scoping reviews	commentaries, essays. Abstract		Formatted	
	A	must describe research methods.		Formatted	
	Protocols for systematic or scoping	111001 00001100 100011011		Formatted	
	review.	^	<u> </u>	Formatted	
	ionon,	Research question relates to:		Formatted	
				Formatted	
	Research question relates to:	decision-making about		Formatted	
		diagnosis or clinical care of individual patients in a		Formatted	
	Validity of specific research	healthcare setting		Formatted	
	methods, evaluated	decision-making about		Formatted	
	according to ability to produce high-quality	research strategy/funding)
	research (note that studies	alone i.e. decision-making		Formatted: Font: (Defau (Arial)	III) +bouy Co
	evaluating suitability of	about what research should		Formatted	
	specific research methods –	be done and how		Tormutted	
	e.g. systematic reviews –	estimating effectiveness or		Formatted	
	according to their	cost-effectiveness of a			
	usefulness as evidence in decision-making WOULD be	specific public health or clinical intervention			

relevant),	 exclusively technical
 decision-making about 	aspects of secondary data
clinical care of individual	use such as linkage
patients in a healthcare	accuracy UNLESS research
setting.	examines how technical
decision-making about	factors affect such data are
research strategy/funding	used in decision-making
alone	 descriptive epidemiology for
 estimating effectiveness or 	a specific health condition
cost-effectiveness of a	
specific public health or	
clinical intervention	A
descriptive epidemiology for	Study describes use of secondary
a specific health condition	data to answer a research question
 interventional studies aiming 	
to <i>modify</i> the way in which	usefulness, feasibility,
evidence is used by	barriers/facilitators
decision-makers	^

Study screening and data extraction

Screening of citations retrieved will be carried out via a two-stage process based on (1) title and abstract and, for those found to be potentially relevant, (2) full text. An initial 25 titles and abstracts will be screened as part of pilot testing for the inclusion and exclusion criteria, and the latter refined as required before proceeding to the full sample.

Due to time and resource constraints, the remaining screening will be undertaken independently by two team members but with opportunities to discuss with other team members and the advisory group where necessary.

Data from studies and reports that meet the inclusion criteria will be extracted using a structured template (for study details) and, depending on the extent of results, either a framework in Excel or coding in NVivo (for key themes). The latter will draw on a set of pre-specified codes as well as additional codes identified on an iterative basis from the data during synthesis.

A 10% sample of full texts will be screened by two reviewers to check reliability. Data extraction will be undertaken by one reviewer and checked by a second to ensure accuracy and comprehensiveness of data extraction.

Quality assessment will not be undertaken given our interest in synthesising existing conceptual work to inform further research rather than obtaining effect estimates for specific exposure-outcome associations.

We will report on the results of searches and screening using a study flow chart.

Synthesis

We will report the results using narrative synthesis methods, informed by SWiM guidance where relevant (1). First, we will provide a descriptive overview of the number and types of sources included in the review, and the context in which studies were carried out.

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Second, we will code for and synthesise key themes for strands 1 and 2 separately but identifying overlaps where relevant. We will aim to present these results in visual and/or tabular formats that can be used to inform discussions at the first workshop and development of a systems map.

Stakeholder input

The project advisory group – which includes stakeholders from practice, policy, and the public – will be asked to provide feedback on the protocol and emerging results from the review, in order to inform the synthesis and development of outputs.

Reporting

Reporting of review results in the final study report and any subsequent publications will draw on PRISMA-ScR reporting guidelines for scoping reviews.

<u>References</u>

 Campbell, M., McKenzie, J. E., Sowden, A., Katikireddi, S. V., Brennan, S. E., Ellis, S., Hartmann-Boyce, J., Ryan, R., Shepperd, S., Thomas, J., Welch, V., & Thomson, H. (2020). Synthesis without meta-analysis (SWiM) in systematic reviews: reporting guideline. *BMJ*, 368, I6890. https://doi.org/10.1136/bmj.I6890 **Formatted:** Font: (Default) +Body CS (Arial), Bold

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