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Research Article

Identifying Social Care Research Literature: Case Studies From Guideline Development

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Abstract

Objective – Systematic searching is central to guideline development, yet guidelines in social care present a challenge to systematic searching because they exist within a highly complex policy and service environment. The objective of this study was to highlight challenges and inform practice on identifying social care research literature, drawing on experiences from guideline development in social care.

Methods – The researchers reflected on the approaches to searching for research evidence to inform three guidelines. They evaluated the utility of major topic-focused bibliographic database sources through a) determining the yield of citations from the search strategies for two guidelines and b) identifying which databases contain the citations for three guidelines. The researchers also considered the proportion of different study types and their presence in certain databases.

Results – There were variations in the ability of the search terms to capture the studies from individual databases, even with low-precision searches. These were mitigated by searching a combination of databases and other resources that were specific to individual topics. A combination of eight databases was important for finding literature for the included topics. Multiple database searching also mitigates the currency of content, topic and study design focus, and consistency of indexing within individual databases.

Conclusion – Systematic searching for research evidence in social care requires considerable thought and development so that the search is fit for the particular purpose of supporting guidelines. This study highlights key challenges and reveals trends when utilising some commonly used databases.

Introduction

As people are living longer with more complex conditions, there is a need for a more integrated health and social care system. In 2012, the National Institute for Health and Care Excellence (NICE) in England broadened its remit on health to develop national quality standards and guidelines for social care. The NICE Collaborating Centre for Social Care was set up in 2013 and has addressed cross-cutting themes spanning health and social care through the provision of guidelines. Social care "generally refers to all forms of personal care and other practical assistance for children, young people and adults who need extra support" (NICE, 2014, Glossary). The NICE guidelines contain recommendations for individual health and social care practitioners, local authorities, health and social care commissioners, providers of services, and other organizations (NICE, 2014). The procedures for developing social care guidelines were informed by the processes used for clinical guidelines. Guideline committees develop the guidelines and are supported by evidence review teams, who undertake systematic literature searches and review the best available evidence (NICE, 2014).

Both health and social care service fields contain complex systems, and there are similarities in reviewing research evidence in these areas. However, as part of developing social care

guidelines, important differences in the respective research traditions meant that reviewers and information scientists in the new collaborating centre had to consider whether a unique approach was needed. The purpose of this study is to focus on lessons learned from the systematic searching undertaken to support the evidence reviews that inform the development of guidelines. Drawing on analyses of three searches for social care guidelines, we describe some challenges and reflect on the utility of these searches. The three guidelines focused on social care support for people across three distinct topics: 1) home care—delivering personal care and practical support to older people living in their own homes (NICE, 2015); 2) transition between inpatient mental health settings and community or care home settings (NICE, 2016b); and 3) transitions from children's to adults' services for young people using health or social care services (NICE, 2016a). The latter two guidelines also covered support for people using health services.

Literature Review: The Peculiarities of Searching for Social Care Research

Challenges of seeking diverse literature for guidelines have been recognised in public health (Levay, Raynor, & Tuvey 2015). Like public health, social care sits in between other services by its very nature and purpose. This is reflected in the research literature, which uses a diverse terminology and is published within a range of

disciplines, such as social sciences, health, criminal justice, and housing (Clapton, 2010). The literature is varied in format, with reports and unpublished literature making up a significant proportion (Clapton, 2010). To account for this, Golder, Mason, & Spilsbury (2008) suggest searching a number of different sources that cover different disciplines and using broad search strategies that encompass many variants of terminology. A number of case studies in this field recommend that social care systematic reviews utilise databases drawn from the broad fields of health, social sciences, and social care or those that contain multidisciplinary sources (Brettle & Long, 2001; Clapton, 2010; Golder et al., 2008, McElhinney, Taylor, Sinclair, & Holman, 2016; McFadden, Taylor, Campbell, & McQuilkin, 2012; McGinn, Taylor, McColgan, & McQuilkan, 2016; Steventon, Taylor, & Knox, 2016; Taylor, Wiley, Dempster, & Donnelly, 2007; Taylor, Dempster, & Donnelly, 2003). Clapton (2010) found that a minimum of seven or eight databases needed to be searched to capture the relevant references for three reviews on looked-after children (children under care), and the exact selection of databases is highly dependent on topic. McGinn et al. (2016) show that it is difficult to predict the best databases across several social care topics. National context is also important. The reviews studied by Clapton (2010) informed a UK context, and she suggests searching UK-focused databases to add local context and reduce North American bias from commonly used databases.

Developing search strategies to capture the diverse terminology and research literature within social care literature is therefore a challenge. Steventon et al. (2016) considered approaches for a search about risk communication and risk concepts in dementia care. They found that *care* as a concept was too diffuse as it encompassed location of care, types of carer, range of professionals involved in care, specific care services, quality of care, service policy, and practice issues. Golder et al. (2008) observe that alternatives for the term *carer* include phrases such as *husbands supporting their*

wives or *children caring for their elderly relatives*, and there may be specific terms for paid and unpaid staff, (e.g., *care worker* or *volunteer*). They also note national differences, whereby the term *carer* is common in the United Kingdom, but *caregiver* or *caretaker* are terms used in the United States.

Given that social care research is considered difficult to identify, it is of interest to assess how well systematic searches locate what is present within a database. A thoughtful search strategy "considers the aim of searching, ensuring that the appropriate methods are used; what the most relevant sources of studies are likely to be; the benefits and drawbacks of searching each source; the resources available; ... appropriate search terms; and the benefits and costs of different combinations of sources within the available resources" (Brunton, Stansfield, Caird, & Thomas, 2017, p. 105). The case studies referred to above are based upon analysis of search results to assess which studies were identified from which database. While these findings help to indicate a database's usefulness to individual topics, they depend on the search strategies used.

More informative is the analysis by Golder et al. (2008) for a review on the effectiveness of respite care for carers of frail older people. They found that for the majority of databases their search strategies failed to retrieve some relevant references that were stored in these databases, despite using a very broad search. Reasons were that the bibliographic details lacked one of the concepts in their search, one of the concepts was expressed using ambiguous phrases, or records did not contain abstracts. They found that the studies from their review could be identified using their search strategy on six databases (AgeLine, EMBASE, Health Management Information Consortium (HMIC), MEDLINE, PsycINFO, Social Sciences Citation Index (SSCI)) plus reference checking and contacting authors. They checked which databases contained these studies and found that the same six sources collectively contained all the included

references. The search strategy used in their systematic review identified unique references (i.e., items found from only one of the resources searched) in four databases: AgeLine, EMBASE, PsycINFO, and SSCI. The authors found that reference checking and contacting authors are also valuable sources of unique relevant references and provide materials not available through the use of databases.

A similar investigation by Bayliss & Dretzke (2006) found that in seven out of nine databases investigated, their searches failed to locate relevant studies that were present for a technology assessment report on a parenting intervention. Reasons included: the bibliographic details lacked either the study design or subject elements used in their search, the index terms searched, and the absence of abstracts. The difficulty of missing items is not limited to social care. In analyzing the citations of nine systematic reviews of diagnostic test accuracy, Preston, Carroll, Gardois, Paisley, & Kalthenthaler (2015) found 11% of citations were indexed in either MEDLINE or EMBASE but were not retrieved by the searches used for each review. We are aware that search strategies can never be perfect and will never retrieve every relevant reference (Brettle et al., 1998, Brunton et al., 2017, p. 98), and other constraints include the time and resources available to search (Brunton et al., 2017, p. 97). While the balance between sensitivity and precision in systematic searches needs to be grappled with across various research fields, we suggest social care searching merits further investigation, based on the literature reviewed here and our own experiences of working on social care guidelines as well as systematic reviews in health and education.

Aims and Objectives

This study aims to draw on the experiences of identifying social care research for three guideline topics in order to highlight challenges and inform practice. We write from the perspectives of an information scientist charged

with designing the searches based on the scope of the guideline and a reviewer charged with screening citations and appraising included studies. We hope that by analyzing the utility of our own approaches we can share knowledge on how social care searching can be developed further. Specifically, our objectives are to:

a) reflect on the challenges of searching for three guideline topics; and
b) evaluate the utility of major topic-focused bibliographic database sources for identifying research.

Methods

Overview of the Approach to Literature Searching for the Three Guidelines

Each guideline was preceded by a referral to the NICE Collaborating Centre for Social Care, based on a population need identified through policy and practice. This referral was developed into a scope following consultation with stakeholders. The scope outlines the importance of the topic and the remit of the guideline in terms of populations, settings, and interventions. As part of developing the guidelines, each topic contains approximately seven sets of research questions relating to the effectiveness of interventions, people's experiences of them, and barriers and facilitators to service delivery or interventions. Table 1 provides examples of each type of research question for each topic.

Each literature search utilized over 20 bibliographic databases comprising international and UK-focused health, social science, social care, and economic databases. The searches were supplemented by mainly UK-focused website searches, specialist registers, and catalogues, some citation searching, and contributions from the guideline development team. The search resources differed across the three topics, and the analysis presented here focuses on general databases in health, economics, social sciences, and social care. The full search strategies and reviews are reported

Table 1
Examples of Types of Research Questions for Each Guideline

Types of research questions	Guidelines		
	Home care: delivering personal care and practical support to older people living in their own homes	**Transition between inpatient mental health settings and community or care home settings**	**Transition from children's to adults' services for young people using health or social care services**
Effectiveness of the interventions	What approaches to home care planning and delivery are effective in improving outcomes for people who use services?	What is the effectiveness or impact of interventions, components of care packages, and approaches designed to improve discharge from inpatient mental health settings?	What is the effectiveness of interventions designed to improve transition from children's to adults' services?
People's experiences	What are users' and family carers' experiences of home care?	What are the views and experiences of people using services in relation to their admission to inpatient mental health settings from community or care home settings?	What are young people's experiences of transitions? What works well?
Barriers and facilitators to specific interventions	What are the significant features of an effective model of home care?	How do different approaches to assessment, care planning, and support (including joint working) affect the process of admission to inpatient mental health settings from community or care home settings?	What factors help and hinder purposeful and planned transitions from children's or adolescents' to adults' services, as identified by young people, their families and carers, practitioners, and research?

elsewhere (NICE, 2016a, 2016b, 2015). The original database searches were updated after one year to identify new research on the effectiveness of interventions. The searches were followed by screening and appraising studies for relevance to the review questions. Studies deemed relevant to the review questions were then included to inform recommendations within the guidelines.

Methods of Analysis

The search protocols and key internal documents related to developing the search strategies for each guideline were revisited. Common challenges were identified, and key ways to address these were noted.

Table 2

Databases Searched and the Database Platform

Database	Platform
British Education Index (BEI), CINAHL Plus, Econlit, ERIC, MEDLINE	EBSCO
British Nursing Index (BNI)	HDAS
AMED, EMBASE, MEDLINE, PsycINFO, Health Management Information Consortium (HMIC), Social Policy and Practice (SPP)	Ovid
ASSIA, ERIC, International Bibliography of Social Sciences (IBSS), Library and Information Science Abstracts (LISA), PAIS, PILOTS, Sociological Abstracts, Social Services Abstracts, Worldwide Political Science Abstracts (WPSA)	Proquest
Social Sciences Citation Index (SSCI)	Web of Science

A three-step process was used to investigate the utility of database sources. First, for two of the guidelines (child to adult services and mental health setting transitions) the citations used to provide research evidence were traced back to their original sources. These two guidelines contained 81 and 71 citations, respectively. The citations were checked against the original search results prior to duplicate checking and prior to the update searches. For the homecare guideline, citations located outside databases were also investigated. Second, the presence of the 225 citations from all three guidelines was checked in 20 major topic-focused bibliographic databases at least one year after the original searches. This was undertaken by searching the fragments of titles for each citation. Databases hosted within the same platform were searched together and are listed in Table 2. These include many of those that had been searched for each topic plus some additional databases. These databases were selected for being important topic-focused databases and convenience of analysis. Third, the sources of the original searches and the studies present within the databases were compared for two guidelines, and we observed some reasons for disparities across selected citations.

Analysis was undertaken using the systematic review management tool, EPPI-Reviewer 4 (Thomas, Brunton & Graziosi, 2010). EPPI-

Reviewer 4 is a web-based electronic software for managing systematic reviews that is based on hundreds of reviews supported by or conducted at the EPPI-Centre (http://eppi.ioe.ac.uk/cms). It facilitated the assigning and analysis of codes for each citation relating to review questions, study designs, and databases.

Results

Designing the Search Strategies for the Three Guidelines

As part of the guideline development process, the information scientist developed searches that aimed to be sensitive in retrieving most of the studies available but balanced with retrieving a manageable number of citations to screen. As the guidelines were led by a stringent timeframe, comprehensiveness of searches needed to be balanced with the time available to complete the reviews, which included the reviewers' need for time to screen and review studies. The number of records screened from the database searches ranged from around 14,500 to 21,400 per topic, after removal of duplicates. The number of citations of studies that were used to inform each guideline ranged from 71 to 81 per topic, which equates to an individual search precision of under 0.6%.

Table 3

Common Challenges and Selected Examples Across the Guidelines

Challenges	Guidelines		
	Homecare for older people	Transition between mental health inpatient and community settings	Transition from children's to adults' services
Population encompasses individuals to organizations or settings	Individual homecare staff and social care agencies	Individual patients returning home and service transitions such as secondary care to primary care	Young people transitioning and children's and adult health and social care services
Some relevant controlled vocabulary have broader focus than the topic and some MeSH term examples	Home nursing	Discharge Continuity of patient care	Patient transfer Continuity of patient care Patient care planning
Irrelevant studies retrieved in test searches	Clinical studies on home nursing in medical databases	Studies on prevalence or characteristics of the population	Transition has multiple meanings (e.g., physical and emotional development; life change transitions, such as parenting, education and employment)

Table 3 summarizes, with selected examples, some of the challenges in developing a search strategy. A particular challenge for the guideline topics described here was that their titles and referrals did not follow a traditional PICO structure (population, intervention, comparator, outcome), and neither did many of their questions. Most notably, no topic operated with specific outcomes for the interventions and all included open-ended questions. To address this, the information scientist aimed to work closely with the reviewers to clarify ambiguous aspects of the scope and the review questions. For each guideline, the concepts common to each review question, such as populations and setting or context, were identified. In these instances, it was possible to construct one literature search to address the review questions for each guideline topic. A diverse range of search terms were

needed for each concept and developed from several test searches.

Across all topics, the population concept encompassed various groups of individuals and organizations. For example, the *population* concept in the homecare topic included older people, homecare staff, carers, social services, or integrated services. For the mental health setting transitions topic, the population was informed by the setting; it included people who were either entering or leaving inpatient mental health settings. Relevant literature might describe the population in terms of people with a mental health disorder and indicate that they are in hospital, or it might describe the mental health unit.

A second concept was used in each topic. For the two topics on transitions, this involved a setting element (such as discharge from hospital to home or moving to adult services), but it also involved a process of transition and included interventions, such as transition planning or treatment education. For homecare, this concept related to the setting and intervention (e.g., care in the home). Articulating this second concept was challenging for all topics owing to the diversity of terminology present in relevant literature.

There was also a problem of context. In the topic on child to adult services, the focus was on care transitions in both in health and social care services. However, *transition* is also a term used to describe facets outside this focus. For example, it can mean transition in terms of adolescent physical and emotional development or life changes, such as parenting, educational achievement, and employment. As some literature about education and developmental transitions is interlinked with research on care transitions, the former topics could not be automatically excluded from the search. To help counter this, a broad range of qualifying terms was used in the free-text searches so that transition had to appear with terms that were indicative of care or transition planning (e.g., care, pathways, readiness, failures, or schemes). Where possible, proximity searching was used, which involved deciding on an arbitrary distance of words between transition and other relevant search terms. For this topic, we decided not to search education databases, but we searched and browsed UK government websites related to the education system for relevant research relating to health and social care service transitions.

The focus of transition between two settings or inpatient mental health settings and community was particularly challenging to articulate. As well as discharge, admission, or transition, there could be a variety of ways to describe the process, such as a person leaving hospital, moving home, returning to the community, or receiving aftercare services. There could also be a change of service provider, such as moving between primary and secondary care. A range of free-text and controlled terms was used to capture this literature for individual and service level transitions in a focused way.

Some relevant controlled vocabulary terms tended to have broader focus than the topic. For example, the Medical Subject Heading (MeSH) term *Continuity of Patient Care* was used in both transitions topics. Controlled vocabulary focused on transitions to services is usually absent. The MeSH term *Transition to Adult Care* was introduced in 2012. To identify earlier literature, the MeSH terms *Continuity of Patient Care*, *Patient Handoff*, *Patient Transfer*, and *Patient Care Planning* were each used in combination with MeSH terms for children and adolescent services. To increase search precision, the MeSH term *Patient Care Planning* had to occur with the term *Adult* in the title or abstract.

All searches retrieved large numbers of irrelevant studies, and we took steps to reduce this. For mental health setting transitions an inclusive study design filter was used in databases that yielded very large search results to capture trials, cost-effectiveness and qualitative studies, and research on people's views or opinions on services. The purpose for using the filter was to reduce the yield of studies on prevalence or describing specific characteristics of the population. We decided to search the education databases British Education Index and ERIC using a focused search that aimed to capture studies on students returning to school following time in hospital without capturing literature about educational transitions. One particular difficulty that could not be resolved in the homecare topic was being unable to distinguish between clinical studies and social care in large health databases. The MeSH term *Home Nursing* was relevant to the homecare topic but also captured clinical aspects of homecare beyond the guideline focus. For the child to adult services topic, we initially considered using recently published systematic

reviews to avoid duplication of effort, but this was not possible during the searching and screening stages as the existing reviews we found did not fully cover a group of interest or some aspects of interest for that group. For example, while there was good coverage on effectiveness and views in some health settings, this material did not provide evidence on related areas, such as barriers and factors to specific interventions. There also seemed to be a gap in reviews on social care transitions for young people with physical disabilities. In compiling the evidence for the guideline, once screening had taken place, some findings of

systematic reviews were considered collectively where appropriate.

It was important that appropriate database and website sources were searched to reflect the range of sectors, settings, and outcomes within the scope of each individual guideline. We supplemented database searches by browsing searching on websites for different population groups.

One way to manage the time needed to conduct the evidence reviews was to only include studies published after a particular date. These varied across the guideline topics and for individual questions. Individual evidence reviews were

Table 4

Citations Found From the Systematic Review Searches for Two Guidelines

Database	Child to adult services n=81, % (number unique)	Mental health setting transitions n=71, % (number unique)
ASSIA	14	14
BNI	20 (1)	17 (3)
CENTRAL	1	34
CINAHL	30	n/a
CINAHL Plus	n/a	38 (1)
DARE	2	0
Econlit	0	0
EMBASE	41 (1)	44
ERIC	n/a	1 (1)
HMIC	5 (2)	14
IBSS	1	3
MEDLINE	48 (5)	59 (3)
NHS EED	0	3
PsycINFO	35 (5)	56 (2)
SSCI	40 (1)	44 (2)
SPP	31 (7)	11 (2)
Social Services Abstracts	2	3
Social Work Abstracts	0	0
Sociological Abstracts	1	0
ZETOC	n/a	4 (1)
NSPCC Inform	4	n/a
Other sources (unique)	14 (websites, trials registry, early scope work)	6 (citation searching, trials registry, websites)

sometimes limited to the UK context. Decisions on such restrictions were in agreement with the Guideline Committee for that topic, were used where deemed appropriate for a specific reason (such as changes in practice), and were used after searching and screening had taken place. The actual searches were carried out at the farthest time point and not limited by geography. Language exclusions were applied within the databases as the final step in the search for two topics so that the number of citations prior to this exclusion was transparent.

References Identified by the Search Strategies for Two Guidelines

Table 4 shows the yield of relevant citations identified from each resource using the systematic searches for the child to adult services and the mental health setting transition topics. Nearly all the databases searched yielded some studies, and comparing both topics, performance was similar for most of the databases. Notable differences are CENTRAL (the Cochrane trials database), which was much higher yielding for the mental health setting transitions topic, and Social Policy and Practice (SPP), which was higher yielding for the child to adult services topic. EMBASE, MEDLINE, and SSCI each yielded over 40% of the citations for the child to adult services topic. For the mental health setting transitions topic, PsycINFO and MEDLINE, perhaps not surprisingly, yielded over 55% of studies. Social Work Abstracts and Econlit did not yield any studies. Some studies were only found in one database, and these databases differed between the two topics.

Considering the contribution of databases collectively, the following eight databases yielded 89% (135/152) of studies: British Nursing Index (BNI), CINAHL, EMBASE, HMIC, MEDLINE, PsycINFO, SPP, and SSCI. The remaining studies were found from sources outside the databases listed, plus one study for each topic was found from focused searches of ERIC and ZETOC. Sources outside bibliographic databases were important for identifying a small number of studies not located elsewhere, yielding 14% of citations for child to adult services and 6% of studies for mental health setting transitions. This contrasts with the homecare topic where 23% were found from sources outside bibliographic databases.

References Present Within the Databases for Three Guidelines

Table 5 shows the number of studies present in each database for the three guideline topics. The majority of studies were present within these databases. Individual databases containing the most studies varied by topic. For child to adult services, SSCI, CINAHL, and EMBASE each contained 52% of studies, or 70% collectively (n=57/81). For mental health setting transitions, PsycINFO contained 90% of studies (n=64/71), and for home care, SPP contained 77% of studies (n=56/73). A large amount of overlap exists across the databases. Meanwhile, 10% (n=23/225) of studies were located only in one of the databases searched. The majority (8%) of these were from SPP, plus two citations from HMIC, and one from EMBASE. Some citations were not present in any of the databases searched for the child to adult services (7%, or six citations) and homecare topics (4%, or three citations). Twelve citations were found only in one place. Of these, 10 were from SPP, and two were from HMIC.

For the child to adult services topic, the minimum combination of databases to get all of the citations was EMBASE, SPP, and PsycINFO. For mental health setting transitions the combinations were less clear, owing to large overlap between the databases. For the homecare topic, CINAHL Plus, HMIC, and SPP collectively yielded all the studies present within the databases. For all of the topics, seven databases provided 96% (n=215/225) of citations (CINAHL Plus, EMBASE, HMIC, MEDLINE, PsycINFO, SPP, and SSCI). ERIC yielded one unique study, and the remaining nine studies were not present in any database.

Table 5
Citations Present in Each Database for the Three Guideline Topics

Database	Child to adult services, n=81 % (number unique)	Mental health setting transitions, n=71 % (number unique)	Homecare, n=73 % (number unique)
AMED	4	11	7
ASSIA	19	24	27
BEI	2	1	0
BNI	23	30	14
CINAHL Plus	52	65	53
Econlit	0	0	1
EMBASE	52 (1)	79	30
ERIC	9	4 (1)	0
HMIC	11	23	62 (4)
IBSS	1	4	15
LISA	0	0	1
MEDLINE	51	77	32
PAIS	5	0	1
PILOTS	0	1	0
PsycINFO	41	90	22
Sociological Abstracts	1	0	8
SSCI	52	77	34
Social Services Abstracts	7	8	18
SPP	43 (9)	21	77 (8)
WPSA	0	0	0
Not present in any of these databases	7	0	4

One of the main differences between health research and social care is that in health the concept of *intervention* is well established, and the randomised controlled trial (RCT) is the gold standard for investigating the role an intervention can play in service delivery. In clinical guidelines focussing on drug interventions, the RCT is central and searches on these topics may include methods filters. These filters exclude studies that do not meet established standards for health research, thus increasing the precision of searches. In social care, less work is done on interventions as such.

Instead, many studies investigate approaches and ways of working, and the role of the RCT is less prominent. Therefore, considering which study designs were found in which database is relevant (Figure 1). Four databases yielded over three times more studies on people's views and experiences than on effectiveness (ASSIA, BNI, SPP, and HMIC). CINAHL and SPP provided the most studies about people's views. Studies evaluating cost effectiveness formed a very small portion of studies, and these were present in most of the databases. For Figure 1, some of the studies had overlapping categories, and the *Other* category relates to studies concerning
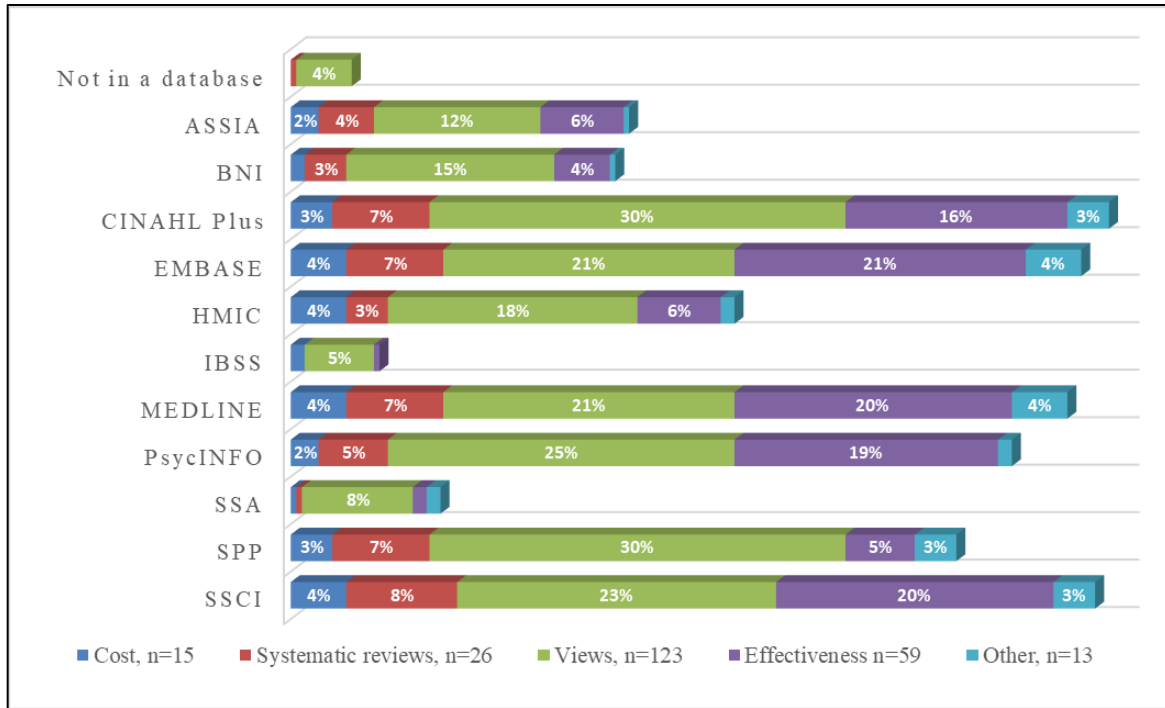
Figure 1
Citations present within each database for different study designs, % of total, N=225 (values under 2% are not annotated).

Table 6
Sources Present Within Selected Databases by Study Type

Study design N=225	Cost n=15	Systematic reviews n=26	Views and experiences n=123	Effectiveness n=59	Other n=13
Total number of citations retrieved by combination	CINAHL Plus, HMIC, and either EMBASE or MEDLINE 100% (15)	SSCI, PsycINFO, and SPP 96% (25)	CINAHL Plus, HMIC, SPP, and SSCI 92% (113)	CINAHL Plus, EMBASE, SSCI, and SPP 100% (59)	Either EMBASE or MEDLINE, and SPP 100% (13)
Not present in a database	-	1	8	-	-

factors that help or hinder an intervention and that do not fit within other study designs.

Table 6 provides a matrix of database sources and study designs to help visualize where certain types of studies are located. We recognize, however, that due to database overlap other possible combinations could yield the same studies. The data for Table 6 was compiled using the highest yielding databases for a study design, and the databases where the unique citations were found.

Comparing the Performance of the Databases Searches

Anyone who has conducted complex searches across multiple databases is aware of the

curiosities encountered at times due to spelling mistakes in the original title or abstract or due to indexing interpretation. Unpicking every thread of idiosyncrasy encountered across these searches would be extremely time consuming, but a selective picture of why some citations were not located by the search in some databases was gained for the child to adult services and the mental health setting transition topics. The reasons some studies were not located often applied across several databases.

Some studies were not present in the database due to the time lag of adding publications to a database. From our estimates, this is less concerning for citations from BNI, HMIC, and MEDLINE, which each had two items missing due to this issue. The database with the largest time lag issue was EMBASE (18 citations), followed by CINAHL Plus and SSCI (10 citations each).

Controlled vocabulary and keywords within individual databases were important for finding some citations, and this was sometimes the reason a citation present in multiple databases was identified by our searches only in one place. For example, one study present in eight databases was found in only SSCI due to the citation containing the word *transition* in the keyword plus field. The benefit of controlled vocabulary is not consistent within databases. For example, our searches in PsycINFO found two citations for the mental health setting transitions topic, owing to the subject headings *Psychiatric Hospital Admission* and *Psychiatric Hospitalization*. The citations were both present in MEDLINE and SSCI but not located by the search strategy. Conversely, a study indexed in MEDLINE with the MeSH term *Psychiatric Hospitals* was not found using the subject headings within PsycINFO.

Some citations, found in databases elsewhere, were missed owing to controlled vocabulary and indexing being broader than our search strategy. For example, three studies were not found in HMIC because our population terms in

the controlled vocabulary were more specific than that applied by the indexers. We opted not to use the controlled term *Transitional Programs* in CINAHL owing to its broader scope than our focus. In SSCI, three studies were not found due to filtering out studies focused on education without containing health and social care subjects; however, this approach also reduced the number of references to screen by around 400. As mentioned earlier, the number of final hits is important to the reviewers who are charged with screening within a tight timeframe. Furthermore, screening studies that are situated outside of social care but imply social care in the abstract is slow and at times difficult.

The use of free-text searching with proximity for certain words to reduce the number of irrelevant citations resulted in studies being missed. At least one study was identified in the British Nursing Index (BNI) that was missed in other databases for the mental health setting transitions topic. Unlike the other database searches, no proximity was used as it was easier to translate the search without it and the relative yield of search results was low. Another reason for missing studies was the absence of one search concept. For example, one study was not found in SPP because it had no transition terms. There were also other limitations from the databases. Abstracts were absent from citations in some databases but were present in others. Two citations were not found in HMIC owing to a date limit being applied to the search, and these two citations did not contain a date in the date field. (The date was included in another field.) Searching the notes field in addition to the abstract field would have been helpful for this database. Furthermore, two items in two databases were found at the time of searching but were not present when checked at a later date.

Discussion

While some findings are largely technical and specialist, they have a direct relevance to policy

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and practice. With the aim to develop research-based social care and increase our understanding of cost-effective services in this field comes the need to search efficiently and effectively for relevant research.

Key Challenges and Implications

The development of guidelines is largely underpinned by methods developed within the health field, and following these within a social care framework can be challenging. Our analysis shows that it is possible to conduct systematic and useful searches for social care guideline development within this context. Because most of the questions were driven by their relevance to practice, it was not clear how well some areas were researched. Having a potential paucity of literature, coupled with challenges in identifying it, drove the searches to be sensitive within resource constraints. This might not be possible to achieve or appropriate for all social care guidelines.

Designing search strategies for the three guidelines in this analysis was challenging because they asked a range of questions across broad topics about both individuals and services and encompassed multiple outcomes. However, our searches were able to capture most of the evidence from the collection of databases searched. Collective searches identifying literature for several questions within each guideline topic meant that fairly sensitive searches could be undertaken. The contribution of studies sourced outside databases was fairly low for the topics on child to adult services and mental health setting transitions. This could be due partly to the sensitivity of the databases searches and partly that less relevant literature existed outside the databases. This is surprising, given the challenges encountered in translating the concepts of transitions into search terms for the database searches. In contrast, for the homecare topic, 23% of literature was identified from supplementary searches outside databases, though just 4% of literature was not actually present in the databases.

Attempts to increase precision of database searches meant that some citations were missed within individual databases, but our analysis shows that searching across multiple databases mitigated this problem. This was aided by the large amount of overlapping and relevant content found across the databases.

Utility of Major Topic-Focused Bibliographic Databases

Choosing which databases to search is based on a number of factors, including likelihood of high yields, unique yields, convenience to search, sensitivity of the search available, functionality of the databases, and combination of databases searched. From this study, the trend points to using MEDLINE for currency and precision of searches: EMBASE, HMIC, and SPP for unique content; PsycINFO for mental health topics; BNI for broader searching; and CINAHL for studies on people's views. SSCI yielded more relevant studies than other social sciences databases and located some studies not found in other databases. The keywords plus field in SSCI (which is generated from the reference list of each citation) proved useful to search as an alternative to an indexed controlled vocabulary. ERIC was important for education topics. We observed there are potential issues with applying date limits, and as such, in some databases, it is prudent to check this by comparing the search results with an exclusion search of citations outside of the date limits required.

Inability to locate some citations varied according to database, topic, and individual citations in our analysis of the child to adult services and the mental health setting transition topics. Searching the following eight databases for the two topics would locate all the studies: BNI, CINAHL, EMBASE, HMIC, MEDLINE, PsycINFO, SPP, and SSCI. This same combination could potentially locate all the studies from homecare; however, complete data is not available to check this with the original searches. Over 20 databases were searched for

each guideline, and our findings suggest a potentially smaller number of databases would yield the same results. This information is particularly useful in undertaking further searches in areas related to these topics and for update searches of the guidelines. Given that the most useful databases vary depending on topic, these findings are tentative when applying to other topics.

It is important to be aware of specialist resources relevant to a topic, and this is not fully considered here. For example, for the child to adult services guideline, the NSPCC Inform child protection database was also searched, and searching trials registries and systematic review databases is often appropriate. However, the aim of this study was to consider general topic-specific databases rather than specialized sources.

Context with Other Research

To locate social care studies, flexibility of approaches is needed in developing search strategies. This study shows this, and so have others (Clapton, 2010; Forbes & Griffiths, 2002; McNally & Alborz, 2004). Our findings on important databases to search are consistent with five of the six important databases from Golder et al. (2008), which related to respite care for carers, though we did not investigate AgeLine. Our study also confirms there are still difficulties with lack of abstracts.

Although it is accepted that multiple database searching is important, our study informs practice on which databases might be more useful to focus on when carrying out literature searches in social care topics, with the caveat that every new topic faces the challenge of articulating a search, finding suitable search terms, and knowing where to find studies. Our results also highlight the variability in indexing studies across databases. It further suggests variability of indexing within databases on social care topics, within the broad remit of the guidelines included here. Analyzing the

citations present within databases by their study design was undertaken to explore the usefulness of these databases to inform particular types of questions. The findings particularly highlight the predominance of citations of studies about people's views in certain databases; however, the ability to identify these particular citations from the actual searches is not tested.

Limitations of This Research

There are a number of limitations to the findings presented here. Two databases, HMIC and SPP, are particularly rich in U.K.-relevant content, so their applicability and coverage to social care topics from other countries are unclear. Given that the majority of studies on people's views and experiences were intentionally selected from the U.K. this influences transferability of findings to other countries. It is also worth considering that some studies in the guidelines contributed more than others, and analyzing the influence of these goes beyond the scope of this analysis.

The citations of research evidence used in the analysis were from the search strategies developed for the guidelines and were not compared with other search strategies. However, as part of the guideline development process, the Guideline Committee and public stakeholders have the opportunity to provide research evidence that may have been missed.

Understanding where citations are most likely to be found informs decisions on utilising specific resources. This is particularly useful for topics that are difficult to search for or where a paucity of literature is anticipated. However, only assessing where items present does not provide a complete picture. For example, although ERIC contained 9% of studies from the child to adult transition topic, the sensitivity and practicality of searching ERIC with our search strategy is not known. Using ERIC was important to locate one study for the mental health settings transitions topic, but a deliberately precise search was used. The utility of the interdisciplinary database

Scopus was not fully explored here; it was found, post-hoc, to contain a majority of citations for all three guidelines, including 95% of citations from mental health settings transitions topic, though the sensitivity of a search needed to capture these is unknown. A final limitation is that this study compares three guidelines undertaken at different points in time. Differing date limits were used across review questions, with a focus on recent literature where this was considered appropriate. CINAHL Plus was used in the analysis of where citations were present in which databases, but only CINAHL (which has less content) was searched for the child to adult services guideline.

Conclusions

Developing guidelines and systematic reviews in social care involves identifying social care research that is relevant, but not limited, to integrated health and social care services. Broad questions to inform integrated or multi-disciplinary service development are challenging to articulate into concepts that can be translated into terms for searching and require considerable thought and development. For social care practitioners who want to use evidence in their practice and for policy makers in the same field, guidelines informed by evidence reviews and systematic reviews are good ways of grasping a coherent body of literature. Therefore, it is important that the challenges of identifying such literature through systematic searching are addressed. This study highlights challenges and reveals trends in identifying social care research from database sources. There is variation in the ability of the search terms to capture the studies from individual databases, even with low-precision searches. However, this is mitigated by searching a combination of databases and searching other resources and websites that are specific to individual topics. We identified a combination of eight databases that were important for finding literature for these topics. Multiple database searching also mitigates

issues related to the currency of content, topic and study design focus, and consistency of indexing within individual databases.

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