What is the existing evidence base for adult medical same day emergency care in UK NHS hospitals? A scoping review protocol

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ABSTRACT

Objectives Same day emergency care (SDEC) is a new model of care, which has emerged over the past 5 years, building on prior ambulatory care services. The National Health Service (NHS) England National Strategy for SDEC suggests SDEC can meet local health needs by providing alternatives to emergency department attendance or hospital admission, for people with an urgent healthcare need, beyond the limited scope of an urgent treatment centre. This review focuses on acute medical SDEC, as medical patients represent a significant proportion of emergency admissions. The planned scoping review aims to map the existing evidence base.

Methods and analysis This is a protocol for a scoping review to be conducted in accordance with the format of the Joanna Briggs Institute (JBI) methodology for scoping reviews. The databases to be searched will include EMBASE, MEDLINE and CINAHL, via EBSCOhost. Sources of unpublished studies, policies and grey literature will include Google Scholar, the Cochrane Library, TRIP database, ProQuest Dissertations and Theses Open, and the Health Management Information Consortium. Papers relating to acute medicine adult patients attending NHS SDEC services in the UK will be included. International papers will be excluded, as will those over 5 years old, and those where full text is not available. The results of the search and study inclusion/exclusion process will be reported and presented in a Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) flow diagram. Data will be extracted from papers included in the scoping review by two reviewers, using a JBI data extraction tool. Any differences of opinion will be discussed until consensus is reached. If needed, a third reviewer will be asked to join the review team to achieve consensus. Data and themes extracted will be summarised and presented in tables. A narrative thematic summary will accompany the presented results, describing how the results relate to the review objective. Literature gaps will be identified and recommendations for future research made.

Ethics and dissemination There is no requirement for ethical approval for this scoping review. On completion, it will be published in a peer-reviewed academic journal and presented at a conference.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ A significant strength of the Joanna Briggs Institute scoping review methodology is that it provides a structured and systematic approach for conducting scoping reviews, which uses the Preferred Reporting Items for Systematic Reviews and Meta-analyses Extension for Scoping Reviews checklist as a reporting framework.

⇒ Scoping reviews as a form of evidence synthesis address broad research questions and map evidence from a variety of sources to examine practice, policy and research, and to highlight gaps in the evidence base to inform future research.

⇒ Critical appraisal and risk of bias assessments are not required in scoping reviews; some methodologists suggest that this is a limitation.

⇒ Evidence from the previous iteration of same day emergency care (SDEC), ambulatory care, may offer developmental insights into the preliminary commencement of SDEC services, but other than informing the introduction to the topic, papers over 5 years old have been excluded from this planned scoping review as SDEC is a new innovation in healthcare delivery incepted over the past 5 years. This may be a limitation.

INTRODUCTION

Ambulatory care is an umbrella term used in the UK to describe acute hospital care that is distinct from outpatient, accident and emergency, urgent treatment centres, or inpatient care, and is sometimes referred to as ambulatory emergency care (AEC).1 In other countries, particularly in Northern America, Europe and Australia, the term ambulatory care is generally used to describe primary care services, rather than hospital care provision, although countries such as Australia are starting to adopt the UK model.2 The diverse nature and format of ambulatory care services, both nationally and internationally, means that comparisons between services are difficult.
AEC developed over the last decade or so, mainly being promoted by emergency departments (EDs) and acute medicine, and initially focusing on specific conditions, often termed ambulatory care sensitive conditions. The British Association for Ambulatory Emergency Care was founded in 2011 to promote the development, adoption and expansion of the specialty of AEC across the National Health Service (NHS) in the UK, and continues to promote the expansion of same day emergency care (SDEC) principles and practice today. While the NHS England Urgent and Emergency Care Review Team issued guidance recommending that all NHS Trusts should implement AEC in 2015, historically, there was no generic model; such services were heterogeneous and varied widely in their organisation and service provision. AEC tended to be provided in a clinic style setting, or within acute medical units, aiming to avoid admission and facilitate early discharge, but a variety of models were used, with some NHS Trusts embracing AEC, whereas others continued to operate more traditional models of admitting patients for assessment. In fact the Kings Fund others continued to operate more traditional models of use, with some NHS Trusts embracing AEC, whereas others rely only on the National Early Warning Score, based on physiological observations, or other risk assessment tools. Others take a more inclusive approach, taking all medical referrals, as long as clinically stable, this is often termed a process driven approach.

There is also variation in the staffing models for SDEC nationally, with some being consultant led, whereas others are led by advanced clinical practitioners (ACPs). Over the last decade or more, across the NHS, shortages of medical staff led to service transformation and a realisation that workforce development was required. This, in part, led to development opportunities for other registered clinicians, such as nurses and allied health professionals, into advanced practice roles. Advanced clinical practice is designed to enable the safe and effective development of skills, across traditional professional boundaries. ACPs are educated to master’s degree level or equivalent, with knowledge and skills that permit an expanded scope of practice, and undertake roles and responsibilities historically seen as being within the jurisdiction of medical staff. Advanced clinical practice was recognised in the NHS Long Term Plan as being central to transforming service delivery and meeting local health needs as a key part of contemporary workforce planning. There is a growing evidence base to support the safety and effectiveness of, and patient satisfaction with, ACP roles; while recognising that there is ambiguity and variability within ACP roles nationally, progress is being made towards role standardisation and accreditation.

This planned scoping review will focus on acute medical SDEC, as medical patients represent a significant proportion of emergency admissions in the NHS. Typically, up to 30% of these patients are discharged within 24 hours of arrival, suggesting that admission avoidance, through the use of SDEC services, would meet that need and reduce pressure on inpatient beds, as recommended in The NHS Long Term Plan. Where necessary, SDEC patients can attend again on subsequent days, for further investigation or review, rather than being admitted, but there is limited data on the patient experience of SDEC, and on the impact on patients of the requirement for repeated or multiple visits. Some services are developing this further, through the use of Virtual Wards and Hospital at Home, but these services are beyond the scope of this review, as they are distinct from SDEC.

An emerging evidence base suggests that ambulatory care provision has been heterogeneous, whereas SDEC now has a national strategy, with core requirements, although local variations remain significant, in terms of specialty coverage; and some ambulatory care services focus on specific pathways, for patients presenting with particular conditions, such as low risk chest pain, cellulitis, low-risk pulmonary embolism, etc and exclude patients who do not fit a specific pathway. Some use a risk stratification tool such as the ‘AMB’ Score, a simple seven element scoring tool for ambulatory care, whereas others rely only on the National Early Warning Score, or other risk assessment tools. Others take a more inclusive approach, taking all medical referrals, as long as clinically stable, this is often termed a process driven approach.
services have simply been rebranded as SDEC. Embedding the SDEC national strategy should guide future service development in a more cohesive manner, leading to a more homogeneous service across the seven NHS regions. This, in turn, will support future research, as comparisons between services will be less subject to confounding.

Given that the SDEC model has been operational for a relatively short period of time, a review of the evidence base is indicated to establish what research underpins the model. It is not uncommon for new healthcare policies and initiatives to be rolled out, based on small pilot studies, in a top-down approach from the Department of Health, as political agendas often drive cost savings and efficiency, rather than substantive workforce transformation priorities, given the ever-increasing demand on the NHS. It remains to be seen whether medium-term and long-term costs savings are produced by SDEC services, given the requirement for additional pathways, estate and staffing, or whether this approach simply delays admission and/or increases severity of illness at presentation, particularly in the older, frail population. Economic analysis and specialty SDEC such as frail SDECs are not considered further, as the focus of this review is on acute medicine.

Establishing existing evidence underpinning the SDEC model will identify gaps that require investigation through further research. Initial searches suggest that there is little published literature to date, so a scoping review was chosen as the appropriate type of literature review to map emerging evidence. The Joanna Briggs Institute (JBI) methodology for scoping reviews was chosen to provide structure to the review, and to support the development of a comprehensive overview of the available evidence in relation to adult medical SDEC in the NHS.

A preliminary search of MEDLINE, the Cochrane Database of Systematic Reviews, JBI Evidence Synthesis and PROSPERO was undertaken to ascertain if this topic had been investigated previously, and no current, or in progress, systematic reviews or scoping reviews on the topic were identified. This protocol has been registered with Protocols.io.

Review question
What is the existing evidence base for adult medical SDEC in UK NHS hospitals?

Objective
To determine the existing evidence base in relation to medical SDEC, in the NHS, in the UK.

Keywords for searching
Ambulatory Emergency Care, AEC, Same Day Emergency Care, SDEC.

Eligibility criteria
Participants
Adult patients (over 18).

Concept
SDEC model of care delivery, acute medicine specialty, excluding all other specialty SDECs.

Context
NHS hospitals in the UK only.

Types of Sources
This scoping review will consider all study designs, including randomised controlled trials, non-randomised controlled trials, before and after studies and interrupted time-series studies. Observational studies including prospective and retrospective cohort studies, case–control studies and cross-sectional studies will be considered for inclusion. This review will also consider descriptive observational study designs including case series, individual case reports and descriptive cross-sectional studies for inclusion.

Methods
A variety of evidence synthesis methodologies are available, including a range of different types of review, including systematic reviews, mixed-methods reviews, realist synthesis, etc, all aiming to inform policy, practice and/or further research, through rigorous, explicit and systematic methods. If answers to clinically meaningful questions or to produce practice guidance are required a systematic review is likely to be the preferred option, whereas to identify the types of evidence available in a particular area, to identify key characteristics or factors, and to identify and analyse knowledge gaps, a scoping review is likely to be more suitable. A scoping review offers an initial evaluation of the possible volume and range of existing research literature. Its primary goal is to recognise the nature and breadth of research evidence, often encompassing ongoing studies as well. While in contrast a systematic review involves a thorough and methodical search for, evaluation and integration of research evidence, typically following the guidelines set by the Cochrane Collaboration for conducting systematic reviews. However, in contrast to systematic reviews, scoping reviews are not typically considered a conclusive outcome on their own due to their inherent limitations in rigour and duration, making them more susceptible to bias. One noted drawback of scoping reviews is the lack of a quality assessment process, which means that conclusions may be based more on the quantity of studies rather than their actual intrinsic quality. Consequently, the findings from scoping reviews cannot be relied on to provide recommendations for policy or practice, while in contrast systematic reviews can be used as such.
Considering the objectives of this review, a scoping review was selected as the appropriate methodological approach to systematically identify and map the evidence, across a wide range of sources, relating to SDEC. This will assist in clarifying the evidence base and identify key characteristics and/or factors relating to SDEC, as well as identifying and analysing gaps in knowledge to support future research initiatives.

The guidance provided by the JBI Manual for Evidence Synthesis, Chapter 11: Scoping Reviews offers a robust, structured framework, which builds on and refines previous iterations of scoping review frameworks. This guidance recommends that an a priori protocol is established methodological guidance should be followed and that reporting standards, such as the Preferred Reporting Items for Systematic Reviews and Meta-analyses Extension for Scoping Review (PRISMA-ScR) guidelines (online supplemental material 1), should be used.

In accordance with the JBI methodology for scoping reviews, this methods section follows the recommended structure of: search strategy, study/source of evidence selection, data extraction, data analysis and presentation.

### Search strategy

The search strategy will aim to locate both published and unpublished studies. An initial limited search of MEDLINE and CINAHL, via EBSCOhost, was undertaken to identify articles on the topic. The words contained in the titles and abstracts of relevant articles were used to develop a full search strategy (table 1 and online supplemental material 2). The search strategy, including all identified keywords, will be adapted for each database and/or information source. The reference lists of all included sources of evidence will be screened for additional studies.

Studies published in English will be included, as this review focuses on UK SDEC services. Studies published in the past 5 years will be included, due to the recent initiation of the SDEC model, the specific focus on SDEC, and the wide-ranging differences between the former heterogeneous AEC services. The introductory section of the scoping review will consider the wider context of papers beyond 5 years, as will the ensuing discussion section of the paper, but the scoping review itself will focus on up to 5 years, as that is the general timeline for operation of SDEC services.

Inclusion criteria: English language, within the last 5 years, full text available, UK only, adults (over 18), acute medicine specialty.

Exclusion criteria: Foreign language, older than 5 years, no full text available, non-UK papers, paediatrics (under 18), specialties other than acute medicine.

The databases to be searched will include EMBASE, MEDLINE and CINAHL, via EBSCOhost. Sources of unpublished studies, policies and grey literature will include Google Scholar, the Cochrane Library, TRIP database, ProQuest Dissertations and Theses Open, and the Health Management Information Consortium. Planned search dates will be in August 2023.

### Data extraction

Data will be independently extracted from papers included in the scoping review by two reviewers, using a data extraction tool based on the JBI data tool. The data extracted will include specific details about the participants, concept, context, study methods and key findings relevant to the review question. Information on the casemix, staffing and capability of SDEC services will be extracted where available. Any differences of opinion will be discussed until consensus is reached. If the need arises, a third reviewer will be asked to join the review team to achieve consensus.

According to Peters et al., critical appraisal of individual sources of evidence is generally not required for scoping reviews that map the evidence base, hence no critique, assessment of study quality, or risk of bias, will be offered in the final review.

The PRISMA-ScR checklist will be used to guide reporting, providing a comprehensive report structure, as per the JBI guidance (online supplemental material 1).

### Data analysis and presentation

Data from the extraction tool will be summarised and presented in tabular form. Types of papers and key categories or themes will be identified a priori, using an iterative
approach, and presented in graphical form, to map the type of publications, and key themes identified within them. There is limited guidance on how scoping review data analysis and presentation should be conducted, beyond the use of frequency counts, tabular/graphical presentation, and basic qualitative content analysis to identify key factors or issues.37

A narrative summary will accompany the presented results and describe, through the use of themes, how the results relate to the review objective. Gaps in the literature will be identified and recommendations for future research will be made.

**Patient and public involvement**
No patient and public involvement.

**ETHICS AND DISSEMINATION**
There is no requirement for ethical approval for this scoping review. Once the scoping review has been completed, it will be submitted for publication in an academic journal and for presentation at a conference.

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