What older people want from emergency care – a systematic review.

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James van Oppen, Lisa Keillor, Áine Mitchell, Timothy Coats, Simon Conroy

Abstract

Objectives: To evaluate the expectations and preferred outcomes from emergency care among older people or their caregivers.

Methods: A review protocol was registered (PROSPERO CRD42018107050). Medline, Embase, CINAHL, PsychInfo, BNI, AgeInfo, and the Cochrane Database of Systematic Reviews were searched in their full date ranges to September 2018. Included articles were hand-searched for further citations. Citations were screened for (1) older people aged over 65, (2) emergency department settings, and (3) reporting expectations or preferred outcomes for emergency care (as opposed to experience or satisfaction). Quality appraisal and data extraction of eligible articles were undertaken by two reviewers. Themes were synthesised through content analysis and described narratively.

Results: Older people wished to have prompt waiting times, efficient care, clear communication, and comfortable environments. They had additional and unique expectations for holistic care and support in decision-making. The ED provoked a sense of vulnerability among older people who were likely to have had frailty.

Conclusion: The lack of dominant themes among included studies suggests that older people should be treated as individuals rather than a homogenous group. Establishing individuals’ preferred outcomes could improve person-centred care.

What this paper adds

What is already known on this subject?

• Patients’ healthcare expectations influence their subsequent experience and satisfaction. Understanding these could support individualised and person-centred care.
• Previous reviews have reported communication and timeliness to be prioritised above other aspects of care for the majority of ED patients.
• Older people have specific and complex needs that may be poorly served in fast-flowing Emergency Departments; they may have unique expectations for their healthcare and concerns about being in the ED.

What this study adds

• This systematic review indicates that older ED patients want efficient, comfortable, and informative ED care.
• Older people feel vulnerable in the ED. They have unique desires for holistic care and supported involvement in decision-making.
Background

Systematic reviews investigating emergency care experiences and satisfaction find that patients consider informative and compassionate communication and relief of pain to be the fundamentally important elements of Emergency Department (ED) care (1-3). Experience and satisfaction are influenced by patients’ expectations, which can be subdivided to health outcome goals, healthcare preferences, and health priorities (4).

Healthcare preferences can be difficult to explore, with recall bias, evolving or changing perspectives over time, and fears of jeopardising treatment presenting methodological challenges. Due to their higher prevalence of cognitive impairment and communication barriers, these perspectives may be even harder to obtain from older people and particularly those living with frailty, who are among the most vulnerable of ED users (5). These people often have non-specific illness presentations and complex physical, psychological and social needs, which may be poorly served by fast-flowing ED care. There is some evidence that older people may respond better to interventions based on communication and elicitation of their priorities for multidisciplinary care rather than to technological innovation (6, 7).

Patient satisfaction improves when professionals understand their patients’ expectations (8). Expectations among a cohort of predominantly younger ED patients included timeliness, cleanliness, and communication above many other aspects of care (9). There is less research reporting expectations for emergency care among older people and their carers (10). Those living with frailty are known to have poorer outcomes from acute care (11), and so may well have specific concerns and expectations. Understanding these could facilitate an individualised and tailored approach to person-centred care for older people.

This review summarises published evidence for expectations and preferred outcomes from Emergency Department (ED) care among older people.

Methods

Search strategy

The full protocol was registered with PROSPERO (ID: CRD42018107050). The search strategy was informed by a review of reviews in the field and the assistance of a medical librarian. The full date ranges of the Cochrane Database of Systematic Reviews, Medline, Embase, CINAHL, PsycInfo, BNI, and AgeInfo databases were searched with exploded MeSH headings and relevant keywords, restricted to English language. Databases were searched from inception to 20th September 2018, and references were managed using Endnote software. The reference lists of included full-texts were hand-searched for additional papers.

Indicative search terms are displayed below; these were modified accordingly for each database. The strategies used for the Medline and Embase databases are shown at Appendix 1.

Population: Health Services for the Aged/ or Geriatric Assessment/ or Frail Elderly/ or Frailty/ or Aging/ or (geriatric* or old* age* or older or elder* or frail*).tw.

Setting: Emergency Service, Hospital/ or (emergency department* or emergency care or emergency medic* or emergency room* or emergency ward* or urgent care or casualty).tw.

Outcome: Quality Of Health Care/ or Quality Indicators, Health Care/ or Attitude To Health/ or Patient Satisfaction/ or (qualit* or goal* or wish* or experience* or priorit* or expect* or
perception* or satisfaction or opinion* or preference or patient reported outcome measure* or attitude* or belief* or acceptability or feeling* or view* or perspective*).tw.

**Eligibility**

Duplicate articles were removed. One reviewer (JvO) screened all titles and abstracts, and then identified eligible full texts using pre-defined inclusion criteria (Table 1). The outcome of interest was healthcare expectations, which were defined as the preferred outcomes that older people hoped to gain during their ED attendance. Where these could be inferred from the later perceptions of experience and satisfaction (respectively occurring during or after ED attendance), these studies were included. We excluded systematic reviews, having completed a preparatory review of reviews.

A 25% random sample of citations were screened by a second reviewer (LK); Cohen’s kappa statistic was calculated for inter-rater reliability.

LK second-screened all identified full texts. Cohen’s kappa statistic was again calculated, and disagreements resolved through consensus with a third reviewer (AM). Reasons were recorded for exclusion of ineligible articles at the full-text stage (Appendix 2).

We deviated from our protocol, in which we stated that we would include only those studies with participants who had frailty as defined by clinical judgment or scoring tool. We found no articles which codified frailty in-keeping with recent developments in emergency medicine, for example by using the Clinical Frailty Score. The majority of studies used age as a pragmatic eligibility criterion, while some recruited patients with proxy markers of frailty including multiple co-morbidities, frequent ED attendances, or residence in a care home. Up to a quarter of participants could be expected to have had frailty (12), although the proportion may be under-represented in these studies that mainly excluded patients with cognitive impairment.

<table>
<thead>
<tr>
<th>Category</th>
<th>Inclusion criteria</th>
<th>Exclusion criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Patients aged over 65 years. Carers of patients aged over 65 years.</td>
<td>Population aged under 65 years.</td>
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<tr>
<td></td>
<td></td>
<td>Insufficient sub-group reporting to enable analysis of subjects aged over 65 years within mixed population.</td>
</tr>
<tr>
<td>Intervention</td>
<td>Any intervention in the ED.</td>
<td>Interventions delivered wholly outside of the ED.</td>
</tr>
<tr>
<td>Outcome</td>
<td>Studies reporting patients’ or carers’ preferred outcomes for emergency healthcare.</td>
<td>Studies reporting outcomes described only by healthcare professionals. Studies reporting only experiences during or satisfaction after ED care, from which expectations could not be ascertained or inferred.</td>
</tr>
<tr>
<td>Setting</td>
<td>Care delivered in hospital-based Emergency Department(s).</td>
<td>Care wholly delivered outside of ED settings.</td>
</tr>
<tr>
<td>Study type</td>
<td>Qualitative and quantitative studies published in peer-reviewed journals.</td>
<td>Papers with insufficient data for analysis of subjects’ expectations. Papers not available in English. Systematic reviews.</td>
</tr>
</tbody>
</table>

Table 1: Inclusion and exclusion criteria
Quality appraisal

Quantitative and qualitative full-texts were appraised by two reviewers using the Mixed-Methods Appraisal Tool (13).

Data extraction and synthesis

Two reviewers independently extracted data from each article into a standardised form (Appendix 3). Qualitative content analysis was undertaken (14), by assigning and categorising identifiers to text instances in the manuscripts. Categories were grouped and reviewed until themes emerged among people’s reported perceptions, which the reviewers then discussed until consensus was reached. A meta-analysis was not planned; the reviewers were familiar with recent literature and anticipated identifying qualitative studies or heterogeneous quantitative methods.

Results

Study selection

Following de-duplication, 7233 citations were identified from database searches. 7135 articles were excluded during title and abstract screening (Figure 1). Of 98 full-texts, sixteen were excluded for ineligible populations, six for non-ED settings, and twenty-three (predominantly conference proceedings) had ineligible publication type or insufficient data for extraction and appraisal. Healthcare expectations were not established in twenty-seven papers. Hand-searching reference lists of eligible manuscripts yielded twenty-five further citations although none satisfied criteria for inclusion. Inter-rater agreement for citation exclusion in the 25% sample was perfect (\(k = 1\)). Agreement for full text exclusion was also strong (\(k = 0.83\)).

Overview of included studies

Twenty-six papers published between 1992 and 2018 were included. There were no studies of older people attending hospitals in Africa, Asia and South America. Six studies prospectively explored older patients’ expectations for emergency care (Table 2). Four used qualitative interview methods (15-18) and two analysed interview or survey data quantitatively (19, 20). Healthcare preferences were determined from twenty further papers (reporting nineteen studies) which had experience- or satisfaction-based outcomes (Table 3). For example, older people reporting feeling controlled and ignored (21) was interpreted as their preference to be included in decision-making processes. Researchers used qualitative interviews (21-32) and focus groups (33-35), quantitative analyses of survey (36-38) and interview data (39), and a mixed-methods study of audit and interview data (40). Sample sizes ranged from 7 (29) to 2115 (36), with a total sample of 5116 participants.

Quality appraisal of included studies

No studies were excluded based on quality assessment. Star ratings (Tables 2 & 3) indicate whether MMAT criteria were reported; emphasis during synthesis reflected the rationale behind studies’ quality ratings and whether they directly reported preferred healthcare outcomes. Quality appraisal was limited by some studies’ availability only as conference abstracts (20, 31, 34, 35).

In five of six studies which directly explored preferred outcomes, data collection was carried out within one month of the ED attendance. Arends et al (19) surveyed the expectations of care home residents who had not necessarily received emergency care, potentially reducing the recall bias introduced by subsequent experiences. Of these studies, those graded as stronger presented justifying evidence for their thematic construction (15, 17, 18), whereas weaker gradings were assigned to studies with limited reporting of their methods, qualitative framework, or outcomes and
implications (16, 20). Most of these studies excluded patients with significant cognitive impairment (15-19), limiting generalisability to many older people with frailty.

Of twenty papers where expectations were derived from context, six ensured representation of people with impaired capacity by including consultees (23, 28, 35, 38, 39), while four studies excluded patients with cognitive impairment (21, 33, 37, 40). The stronger studies in this group again integrated data supporting the researchers’ observations (21-23), while others had small or restricted samples (25, 26, 28, 29, 36) or significant lead-time following ED attendance (27, 33).

**Synthesis: older people's preferred outcomes for emergency care**

The frequency of themes among included studies (Table 4) shows that older people did not report one single dominant set of preferred outcomes. Rather, various expectations were found by researchers in different study populations in different settings. Perceived expectations for care may vary with people’s health context and the urgency of their condition. The heterogeneity in our results reiterates the need to treat older people as individuals rather than as a uniform group.

**Efficient and comprehensive care**

Older people and their carers wanted a comprehensive and easily accessible Emergency Department service (15, 18). They reported negative perspectives when care was rushed or lacked a holistic approach (30, 35). While people often accepted long waiting times (15) and made concessions for busy staff (18), they wanted regular updates and explanations for delays (17, 32). If the reasons for longer waits were not explained, subsequent satisfaction was reduced (19, 38). Two studies reported that older people expected to be fully assessed, investigated and to receive an accurate diagnosis (16, 18).

Older people attending with trauma valued a holistic approach to care, prioritising the management of their chronic conditions and transitions between care providers in addition to being able to return to their pre-injury baseline (31).

**Sensitivity towards vulnerability**

Those older people who were likely to have had frailty were afraid of being alone in the ED (19). They were afraid of their illness (15) and of losing independence (34), and felt that they had nowhere else to seek care (15). Older people wanted ED staff to take time to explain the likely trajectory of illness, and to use reassurance, courtesy and humour during interactions (17, 18, 32). They expected their clinician to be aware of their advance directives and preferences for end of life care, and wanted to discuss these in the ED (20).

Older people and their carers expected a suitable physical environment for care during their attendance (27, 28). They noted the importance of providing for physical needs (17, 18, 32, 37, 39) such as comfortable trolleys or beds, dimming lights, toileting, access to food and drink, and orientation around the department. Carers were clear that EDs should provide adequate staffing and an optimised environment for basic nursing care, specifically suggesting treating older people in a separate space away from the noisy and busy general ED (27).

**Person- (and family-) centred holistic care and information provision**

Older people expected consideration of their personal healthcare priorities. These included relief of symptoms (in particular of pain) (19, 38, 39) and improving their quality of life (34).
Older people generally wished to take an active role in decision-making but may have lacked the necessary information or understanding (17, 18). Insufficient or poorly-understood explanations about diagnosis or discharge were associated with older people feeling less satisfied with their care (39). One study suggested that older people experienced different treatment in healthcare discussions because of their age or frailty: individuals with indications for Intensive Care transfer were rarely asked for their opinions about admission, and were less likely to be asked if they had cognitive impairment (36). Patients can only be involved in decision-making if professionals consider their views (38); this may require common communication barriers to be overcome, which include visual or hearing problems, cognitive impairment, and language (1).

Carers also wanted to receive more information and be actively involved in healthcare discussions (18, 27, 28). Familiar caregivers’ or relatives’ presence in the ED was important to both older patients and their carers alike (28). Encouraging family presence can improve interaction (33), as they may act as patient advocates (18, 40) or help to overcome some of a person’s communication barriers.

**Discussion**

Older people’s healthcare preferences included efficiency, information provision, and environmental comfort; these concepts feature as National Patient Survey Programme domains and would appear valid among older people. Clear communication and explanation were also expected (3). The included studies did not, however, report an expectation for plain language. This is in contrast with research in younger populations (9), perhaps reflecting older people’s familiarity with medical conditions. Older people wanted short waiting times, but also appeared resilient and tolerated (and perhaps expected) longer waits – particularly if delays were explained (32, 33).

Older people had some unique healthcare expectations. These were more common in studies that included people with stereotypical markers of frailty, although the available evidence did not specifically stratify frail populations. Older people who were more likely to be frail had health outcome goals of symptom relief and return to pre-morbid baseline. They felt vulnerable, anxious, and wanted reassurance in the ED. They were afraid of the uncertain trajectory of their illness, and of symptoms such as pain. They also feared being ignored by healthcare professionals, and needed supporting as active participants in care. To our knowledge, studies in younger populations have not identified these themes.
**Strengths and limitations**

We used a qualitative systematic review approach to integrate patients’ views and perceptions into communicable themes. The risk of neglecting primary literature articles was minimised by searching multiple databases. Although three-quarters of citations were initially screened by only one reviewer, there was strong inter-rater agreement for the double-screened sample and full-texts.

We assigned greater focus to those studies which directly evaluated preferred healthcare outcomes. Findings are limited by the different objectives and methods of different research groups, and are limited to those perceptions which have been captured in literature reports. Extrapolation of expectations from patients’ experiences should be interpreted cautiously.

None of the studies of older people’s expectations for emergency care used a validated frailty assessment method as a recruitment inclusion criterion or to stratify outcomes. We therefore deviated from our protocol and included study populations based on age alone. Some studies included participants who had attributes stereotypically associated with frailty, including multiple co-morbidities, residence in a care home, or frequent use of emergency care. Most excluded individuals who had cognitive impairment, so our findings may not be generalisable to that significant proportion of older people. Prospective investigation of the views of people living with frailty, and comparison of healthcare expectations between older and younger people is warranted to confirm our findings.

**Summary and implications for practice**

Few studies have investigated expectations of treatment and concerns among older people receiving emergency care. There is no evidence about whether the presence or degree of frailty alters older people’s expectations for emergency care. There was substantial heterogeneity in the approaches employed. Research was predominantly qualitative, and of limited methodological quality. There was no single dominant set of expectations apparent from our analysis. Recurring themes gave some indication that older people receiving emergency care had health outcome goals of symptom-relief and return to pre-morbid baseline. Healthcare preferences included active communication, involvement in decision-making, inclusion of familiar caregivers, and holistic approaches that minimise their sense of vulnerability.

Systems developing Geriatric Emergency Medicine services will wish to support better person-centred care. Partnered healthcare (the involvement of consumers in shared decision-making) includes understanding and planning delivery of patients’ preferred healthcare outcomes. Patient Reported Outcomes Measures (PROMs) can capture these outcomes of interest and can be a powerful mechanism to change practice and focus care on that which is most important to patients. At the individual patient level, PROMs can drive improvements in diagnosis, communication and prioritisation of needs (41). At the population level, PROMs can be used for research, benchmarking, and fed-back to providers to inform service improvements. There is no existing evidence-based outcome measure for older people with urgent care needs. Our review confirms the importance of establishing the needs of individual *people* rather than the “older patients” group.
Table 2: Older people’s healthcare expectations reported from prospective investigation

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Country</th>
<th>Recruited Population</th>
<th>Funding</th>
<th>Appraisal tool and rating</th>
<th>Design</th>
<th>Outcome themes</th>
<th>Person-centred holistic care and information provision</th>
<th>Sensitivity towards vulnerability</th>
<th>Headline message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arendts</td>
<td>2017 (19)</td>
<td>Australia</td>
<td>Before ED attendance N=414 Community care facility residents</td>
<td>Australian Research Council MMT - Quant desc *** Excluded significant proportion of target population (cognitive impairment)</td>
<td>Survey (discrete choice experiment)</td>
<td>Would be less satisfied with longer wait, when time spent alone, and with complications. More satisfied when symptoms relieved.</td>
<td></td>
<td></td>
<td>Context-specific but strong preference for ED transfer, with preferences for shorter waits, less time alone and higher symptom relief.</td>
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</tr>
<tr>
<td>Goodridge</td>
<td>2018 (15)</td>
<td>USA</td>
<td>During attendance N=115 Patients &gt;65 triaged as non-urgent</td>
<td>University of Saskatchewan MMT - Qualitative **** Thematic construction presented with a small amount of evidence</td>
<td>Interviews, inductive analysis</td>
<td>Specialised care provision.</td>
<td></td>
<td></td>
<td>No accessible or available alternatives when conditions non-urgent. Attendances due to fear of illness. Older people use the ED seeking comprehensive and accessible care.</td>
<td></td>
</tr>
<tr>
<td>Hunold</td>
<td>2016 (16)</td>
<td>USA</td>
<td>During attendance N=185 Patients aged &gt;65</td>
<td>MMAT - Mixed *** Qualitative framework vague. Appropriate quantitative method</td>
<td>Response weight interviews, framework analysis</td>
<td>Elements of successful visit: evaluation and treatment, timely care, good service.</td>
<td>Elements of successful visit: communication.</td>
<td>Elements of successful visit: environment.</td>
<td>Patients prioritised directed and efficient assessment.</td>
<td></td>
</tr>
<tr>
<td>Majerovitz</td>
<td>1997 (17)</td>
<td>USA</td>
<td>During attendance N=71 Patients &gt;60 &gt;3hrs in ED, or carers</td>
<td>MMAT - Quant desc **** Excluded cognitively impaired patients. Daytime recruitment.</td>
<td>Semi-structured interviews, framework analysis</td>
<td>&gt;50% patients with incomplete understanding of their condition and treatment. 40% carers dissatisfied with level of communication.</td>
<td></td>
<td>25% patients cited problems with personal care in the ED. 42% cited problems with the ED environment.</td>
<td>Older people want to be active patients, but often lack information about their condition or treatment.</td>
<td></td>
</tr>
<tr>
<td>Smith</td>
<td>2017 (20)</td>
<td>USA</td>
<td>During attendance N=248 OP &gt;65 or caregivers</td>
<td>MMAT - Quant desc ** Limited reporting of methods and implications</td>
<td>Survey</td>
<td>40% wanted to discuss advance directives with their doctor (only 7% were asked).</td>
<td></td>
<td>82% patients felt their ED provider should know about their end-of-life preferences.</td>
<td>Most older people want clinicians to be aware of their care preferences. Many are not asked about their wishes in the ED.</td>
<td></td>
</tr>
<tr>
<td>Stein-Parbury</td>
<td>2015 (18)</td>
<td>Australia</td>
<td>&lt;1 month from discharge N=10 OP &gt;65 accompanied by carer, living independently</td>
<td>University of Technology, Sydney MMT - Qualitative ***** Small and relatively limited sample. Rich data integrated.</td>
<td>Semi-structured interviews, interpretive analysis</td>
<td>Expected to have their condition fully assessed and tested, and to receive a diagnosis.</td>
<td>Lack of communication regarding condition and processes within the ED. Carers cite the requirement to be assertive in advocacy.</td>
<td>Persistent or worsening symptom trajectory preceding ED attendance. ED commonly poorly accessible from car.</td>
<td>Older peoples’ and carers’ needs for information are often unmet.</td>
<td></td>
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</tbody>
</table>
### Table 3: Expectations inferred from reported experience or satisfaction

<table>
<thead>
<tr>
<th>Author Year Country Pub. type</th>
<th>Recruited Population</th>
<th>Funding</th>
<th>Appraisal tool and rating</th>
<th>Design</th>
<th>Outcome themes</th>
<th>Person-centred holistic care and information provision</th>
<th>Sensitivity towards vulnerability</th>
<th>Headline message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baraff 1992 (33) USA Journal - Primary</td>
<td>&lt;1 year from attendance N=unknown Ambulatory and articulate patients aged &gt;65</td>
<td>John Hartford Foundation via SAEM MMAT - Qualitative ***** Population representation may have been limited.</td>
<td>Focus groups</td>
<td>Tolerant of a considerable wait – satisfied with quality of care.</td>
<td>Written instructions would alleviate confusion over ED environment processes.</td>
<td>Felt abandoned, appreciated kindness. Considerable anxiety regarding illness and care. Fear of falling and of violence. Cold, noisy environment, stretchers uncomfortable. Difficult to arrange transport home.</td>
<td>Older adults would benefit from education about their emergency care. Staff should be sensitive to their anxieties, and explain delays.</td>
<td></td>
</tr>
<tr>
<td>Bridges 2010 (21) UK Journal - Primary</td>
<td>&lt;1 mo from discharge N=96 Patients &gt;75 or their carers.</td>
<td>Burdett Trust for Nursing MMAT - Qualitative ***** Rich evidence. Excluded cognitively impaired patients.</td>
<td>Discovery interview techniques. Inductive analysis</td>
<td>Satisfied (relieved, grateful) with medical care but diminished self-perception related to long wait.</td>
<td>Power imbalance – felt controlled and ignored. Psychological and wider care needs variably met.</td>
<td>Ability to express needs was constrained by older people feeling they did not matter.</td>
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<tr>
<td>Considine 2010 (22) Australia Journal - Primary</td>
<td>&lt;1 week from attendance N=27 Patients &gt;65 or their carers, able to give consent.</td>
<td>Victorian Department of Health MMAT - Qualitative ***** Modest interpretations from rich evidence.</td>
<td>Interviews. Dual inductive thematic construction</td>
<td>Frustration over waiting times, but understanding of prioritisation.</td>
<td>Reluctant to access the ED and attend in desperation. Confusion around ED processes (e.g. triage). Financial concerns influenced access.</td>
<td>ED systems may need modification for the specific needs of older people.</td>
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<tr>
<td>Dresden 2014 (34) USA Conference abstract</td>
<td>&lt;45 days from attendance N=30 Patients &gt;65</td>
<td>MMAT - Qualitative ** Abstract with limited reporting of evidence.</td>
<td>Focus groups. Constant comparative analysis.</td>
<td>Generally positive towards quality of care. Negative perceptions of the waiting times and lack of holistic approach.</td>
<td>Lack of information, communication difficulties. Lack of privacy. Felt as if care was rushed.</td>
<td>Evaluation of ED interventions should incorporate health-related quality of life measures.</td>
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<tr>
<td>Kihlgren 2004 (23) Sweden Journal - Primary</td>
<td>At ED arrival N=20 Patients &gt;75 or their carers.</td>
<td>Swedish Foundation for Health Sciences and Allergy Research MMAT - Qualitative ***** Integrated data supporting observations. Exc. fractures or MI patients</td>
<td>Observation, interviews. Grounded theory analysis.</td>
<td>Long, unpleasant waits. Unnecessary delays.</td>
<td>Poor access to information. Often left alone on uncomfortable bed. Cold. Lacked privacy. ED routines and process poorly understood.</td>
<td>The ED physical environment can be disconcerting and inhibit older patients’ understanding.</td>
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<tr>
<td>Lawlor 2011 (35) Ireland Conference abstract</td>
<td>N=20 Older patients or carers</td>
<td>MMAT - Qualitative * Abstract with limited reporting of evidence.</td>
<td>Focus group</td>
<td>Generally positive towards quality of care.</td>
<td>Lack of information, communication difficulties. Lack of privacy. Felt as if care was rushed.</td>
<td>Individuals’ wishes were rarely sought when considering</td>
<td></td>
<td></td>
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<tr>
<td>Le Guen 2016 (36) ED triage N=2115</td>
<td>MMAT - Quant desc *****</td>
<td>Questionnaire</td>
<td></td>
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<tr>
<td>Author</td>
<td>Year</td>
<td>Country</td>
<td>Journal - Type</td>
<td>Methodology</td>
<td>Sample</td>
<td>Results</td>
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<tr>
<td>Liu</td>
<td>2016</td>
<td>Australia</td>
<td>Journal - Primary</td>
<td>During ED attendance</td>
<td>N=361 Patients &gt;65 or relatives</td>
<td>Variability in quality of explanations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lyons</td>
<td>2009</td>
<td>UK</td>
<td>Journal – Primary</td>
<td>After attendance</td>
<td>N=20 Patients &gt;65, able to consent</td>
<td>Important to be kept up to date.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>McCusker</td>
<td>2018</td>
<td>Canada</td>
<td>Journal - Primary</td>
<td>&lt;1 week from attendance</td>
<td>N=412 Patients &gt;75 or relatives</td>
<td>Problems and tests communicated poorly.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meyer, Spilsbury</td>
<td>1999</td>
<td>UK</td>
<td>Journal - Primary</td>
<td>&lt;1 mo from attendance</td>
<td>N=12 Patients &gt;75 (purposive sample)</td>
<td>Disorientating waiting time.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morphet</td>
<td>2015</td>
<td>Australia</td>
<td>Journal - Primary</td>
<td>1-4 years after attendance</td>
<td>N=24 Relatives of older patients</td>
<td>Older people felt invisible.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nerney</td>
<td>2001</td>
<td>USA</td>
<td>Journal - Primary</td>
<td>During attendance</td>
<td>N=778 Patients &gt;65 or their proxies</td>
<td>Appreciated time spent with staff and prompt assistance.</td>
<td></td>
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<tr>
<td>Nikki</td>
<td></td>
<td></td>
<td></td>
<td>During attendance</td>
<td>Interview</td>
<td>Stressful environment, lacking support.</td>
<td></td>
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</tr>
</tbody>
</table>

**France**

Patients >80 potentially needing critical care. Patient preference was reported by the physician (may over-estimate).

**Liu 2016 (37)**

Australia Journal - Primary

During ED attendance N=361 Patients >65 (reported subgroup). Ex. cognitive deficit

**Lyons 2009 (24)**

UK Journal – Primary

After attendance N=20 Patients >65, able to consent

**McCusker 2018 (39)**

Canada Journal - Primary

<1 week from attendance N=412 Patients >75 or relatives

**Meyer, Spilsbury 1999 (25, 26)**

UK Journal - Primary

<1 mo from attendance N=12 Patients >75 (purposive sample)

**Morphet 2015 (27)**

Australia Journal - Primary

1-4 years after attendance N=24 Relatives of older patients

**Nerney 2001 (38)**

USA Journal - Primary

During attendance N=778 Patients >65 or their proxies

**Nikki**

During attendance

**Primary**

Variety in quality of explanations.

Important to be kept up to date.

Problems and tests communicated poorly.

Disorientating waiting time.

Older people felt invisible.

Stressful environment, lacking support.
<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>Sample Description</th>
<th>Methodology</th>
<th>Findings</th>
<th>Implications</th>
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<tbody>
<tr>
<td>2012</td>
<td>Finland</td>
<td>N=9 Relatives of medical patients &gt;65</td>
<td>MMAT - Qualitative ***** Small sample size. Restricted to medical patients (justified – prolonged stays).</td>
<td></td>
<td>Need for broader involvement of family members in ED care.</td>
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<td>2003</td>
<td>Sweden</td>
<td>N=7 Patients &gt;65 (selected sample)</td>
<td>MMAT - Qualitative ***** Small sample size, selected by nurse manager. Duration since attendance not reported.</td>
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<td>2012</td>
<td>Sweden</td>
<td>During attendance N=14 Patients &gt;70, at least 3 ED visits /1year</td>
<td>NU-Hospital Group MMAT - Qualitative ***** Small sample. Integrated supportive data.</td>
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<tr>
<td>2014</td>
<td>USA</td>
<td>At hospital discharge N=21 Patients &gt;55 or carers</td>
<td>MMAT - Qualitative ** Abstract with limited reporting of evidence.</td>
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<tr>
<td>2007</td>
<td>New Zealand</td>
<td>During attendance N=95 Patients &gt;80 exc. cognitively impaired</td>
<td>MMAT - Mixed methods ** Limited purposive sample for the qualitative element.</td>
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<tr>
<td>1999</td>
<td>USA</td>
<td>&lt;72 hrs from attendance N=12 Sampling not specified</td>
<td>MMAT - Qualitative **** Small sample. Recruitment and eligibility not reported. Unclear description of data analysis methods.</td>
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</table>

**Inductive analysis.**

- Relatives satisfied when giving information and feeling actively involved.
- Unhappy when excluded or unable to access information.

**Need for broader involvement of family members in ED care.**

- Long waits on hard trolleys, without attention or food.
- Needed affection and belongingness, but perceived staff as too busy to attend to existential needs.
- Felt safer waiting in corridor than alone.

**Basic needs, including safety, must be supported in the ED to assist older people to take an active role in health processes.**

- Contradictory experiences between positive triage encounters and subsequent neglected, long wait.

- Identified themes of care for injured older people. Care transitions was an area for improvement.

**Important to understand older peoples’ ED experiences to enable effective and efficient patient-friendly service.**

- Suggested a number of innovations to improve the care of older patients.
References

Declarations

Acknowledgements

The authors thank Dr Mary Edmunds Otter (University of Leicester) and Dr Louise Preston (University of Sheffield) for methodological advice.

Ethics approval

Not applicable.

Clinical trial registration

Not applicable. The systematic review protocol was registered (PROSPERO CRD42018107050).

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Competing interest

None declared.

Contributorship statement

JvO and SC planned the review. JvO, LK, and AM extracted and analysed data. All authors contributed to the narrative synthesis and manuscript drafting.
Appendix 1: Search strategy

Indicative search terms (MEDLINE via OVID SP)

1. Health Services for the Aged/ or Geriatric Assessment/ or FRAIL ELDERLY/ or Frailty/ or Aging/
2. (geriatric* or old* age* or older or elder* or frail*).tw.
3. Emergency Service, Hospital/
4. (emergency department* or emergency care or emergency medic* or emergency room* or emergency ward* or urgent care or casualty).tw.
5. "QUALITY OF HEALTH CARE"/ or QUALITY INDICATORS, HEALTH CARE/ or ATTITUDE TO HEALTH/ or PATIENT SATISFACTION/
6. (qualit* or goal* or wish* or experience* or priorit* or expect* or perception* or satisfaction or opinion* or preference* or patient reported outcome measure* or attitude* or belief* or acceptability or feeling* or view* or perspective*).tw.
7. 1 or 2
8. 3 or 4
9. 5 or 6
10. 7 and 8 and 9
11. limit 10 to english language

Indicative search terms (EMBASE via HDAS)

"((((GERIATRICS/ OR "ELDERLY CARE"/ OR "FRAIL ELDERLY"/ OR "GERIATRIC ASSESSMENT"/ OR (geriatric* OR old* age* OR older OR elder* OR frail*).ti,ab) AND ("EMERGENCY MEDICAL SERVICE"/ OR "EMERGENCY MEDICAL CARE"/ OR "EMERGENCY HEALTH SERVICE"/ OR (emergency department* OR emergency care OR emergency medic* OR emergency room* OR emergency ward* OR urgent care OR casualty).ti,ab)) AND ("HEALTH CARE QUALITY"/ OR "ATTITUDE TO HEALTH"/ OR "PATIENT ATTITUDE"/ OR "PATIENT SATISFACTION"/ OR (goal* OR wish* OR experience* OR priorit* OR expect* OR perception* OR satisfaction OR opinion* OR preference* OR "patient reported outcome measure"* OR attitude* OR belief* OR acceptability OR feeling* OR view* OR perspective*).ti,ab)) [English language]"

Medline (Ovid) 1946 to 20 Sept 2018
Embase (Ovid via HDAS) 1974 to 20 Sept 2018
CINAHL (EbscoHost via HDAS) 1937 to 20 Sept 2018
PsycInfo (ProQuest via HDAS) 1806 to 20 Sept 2018
BNI (ProQuest via HDAS) 1992 to 20 Sept 2018
AgeInfo to 20 Sept 2018
Cochrane Library to 20 Sept 2018
Appendix 2: Ineligible full-text articles and reasons for exclusion

### Ineligible population


5. Capp R, Camp-Binford M, Sobolewski S, Bulmer S, Kelley L. Do Adult Medicaid Enrollees Prefer Going to Their Primary Care Provider’s Clinic Rather Than Emergency Department (ED) for Low Acuity Conditions? Medical Care. 2015;53(6):530-3.


13. Lin Y-K, Lin C-J. Patients’ expectations not established


### Ineligible setting


### Patients' expectations not established


### Appendix 3: Data extraction form

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Figure legends

Figure 1: study selection flowchart