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### **BMJ Open**

# Beliefs and challenges held by medical staff about providing emergency care to migrants: an international systematic review and translation of findings to the UK context

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SCHOLARONE™ Manuscripts Beliefs and challenges held by medical staff about providing emergency care to migrants: an international systematic review and translation of findings to the UK context

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#### **Abstract**

#### Objective

Migration to the UK has increased. Emergency Departments (EDs) may be the first and only contact some migrants have with healthcare. Charging migrants for secondary healthcare is current practice, and extending this into emergency care has been proposed. Emergency care providers' (ECP) views concerning migrant patients in the international research literature were examined to identify potential health disparities and enable recommendations for ED policy and practice.

#### Design

A systematic review identified qualitative studies on emergency care providers' beliefs and challenges to delivering care to migrants in developed country settings. Searches of electronic databases, websites and journals were conducted using specific and broad search terms. Thematic synthesis of the evidence was conducted to inductively identify themes. Lines of argument were drawn to infer implications for UK policy and practice.

#### **Participants**

Emergency care providers included doctors, nurses and paramedics

#### Results

Eleven qualitative studies from Europe and the US were included in the review. Three analytical themes were found: challenges in cultural competence; weak system organisation that did not sufficiently support emergency care delivery; and ethical dilemmas over decisions on the rationing of healthcare and reporting of undocumented migrants.

#### Conclusion

Emergency care providers made cultural and organisational adjustments for migrant patients, however, willingness was dependent on the individual's clinical autonomy. ECPs did not allow legal status to obstruct delivery of emergency care to migrant patients. Reported decisions to inform the authorities were mixed; potentially leading to uncertainty of outcome for undocumented migrants and as a deterrent to seeking healthcare. If a charging policy for emergency care in the UK was introduced, it is likely that ECPs would resist this through fears of widening health care disparities. Recommendations include: cultural competence training, improved organisational support, guidance on managing migrant health and regulations, and, withholding a charging policy within emergency care.

Key words: migrants, emergency medicine, qualitative studies, health workers views, systematic review, thematic synthesis, health policy, marginalised populations, charging for NHS services, service access

#### Strengths and Limitations of this review

- This review performed a thematic meta-synthesis of qualitative studies to enable a deeper understanding and exploration on the ECPs beliefs and challenges surrounding the provision of care to migrants.
- All studies reached theoretical saturation
- If the study results did not separate out ECPs responses from other HCPs, they were excluded, potentially missing key data.

#### Introduction

International migration is at its highest ever level and increasing, with the 2017 estimate at 3.4% (258 million people) of the global population, a 49% increase since 2000 [1]. The UK experienced significant migration during the 1970s after joining the European Union (EU) and between 1993 and 2015, the foreign born population more than doubled from 3.8 to 8.7 million (7% to 13.5%) with a peak net increase of 336,000 in 2015 during the European migration crisis. The UK immigration figures currently sit among the top five countries in the world [1]. While most migration occurs legally, there were an estimated 533,000 undocumented migrants (UMs) in the UK in 2007 [2,3].

There is no apparent consensus on the definition of a migrant which makes drawing scientific conclusions based on the data challenging [4]. For this review the terminology in table 1 was used to ensure clarity and consistency.

Table 1: Migrant Terminology

First generation	Foreign-born resident who has relocated and become a
migrant	citizen or permanent resident in a new country
Second generation	Naturally born in the relocated country to one or more
migrant	parents who were born elsewhere
Asylum seeker	A person who has left their country of origin and formally
	applied for asylum in another country but whose
	application has not yet been concluded
Refugee	The asylum seeker has their claim for asylum accepted by
	the government
Undocumented	Foreign-born person with no legal right to stay in the host
migrant (UM)	country. These include: illegal entrants to the host country,
	failed asylum seekers, over-stayers (migrants who remain
	in the host country after their resident permit or visa has
	been revoked or expired), undocumented by birth (born
	into a family who have no legal right to stay)

The majority of migrant populations are healthy when they arrive, however, a number, particularly, refugees, asylum seekers and undocumented migrants suffer a disproportionate burden of morbidity [5]. Providing effective healthcare for migrants is of key public health importance, not only for treating the individual, but also in reducing the spread of communicable disease and the impact of future non-communicable diseases on the economy.

The UK NHS emergency services play a key role in the nation's public health as the first and only contact some migrants may have with the health system. However, emergency departments (EDs) are overstretched with yearly increases in patient presentations. The 'four-hour target', a proxy measurement of system effectiveness has not been met since 2015. Some UK politicians have quoted migrants as a causative factor [6]. A recent systematic review, has demonstrated that in Europe, migrants utilise EDs more than the native population, often for lower acuity presentations [7]. Most migrants, however, comprise a healthy labour force, and make a positive overall contribution to the exchequer.

In an effort to recover costs to the NHS, charging non-British citizens for secondary healthcare is the current practice, as per the 2016 Immigration Act. Extension of this into emergency care has been proposed, challenging the NHS's three core principles that it should meet the needs of everyone, it should be free at the point of delivery, and it should be based on clinical need, not on the ability to pay [8]. Health care advocacy groups have warned about the potential impact on the most marginalised populations [9,10]. In this climate of the pressurized ED where migrants are portrayed as a burden, and the identification of paying 'customers' and UMs is expected, ED providers' views towards migrant patients could point to whether health disparities exist.

There are no qualitative studies examining the ECP perspective of providing emergency care to migrants in the UK. In Denmark, two surveys based in the ED found that less satisfaction was expressed by health care professionals when patients were non-Western, and when the visit was felt to be less relevant [11]. Most of participants knowledge on migrants came via the media [12]. Other studies identified challenges surrounding language and cultural differences, time constraints, lack of awareness by healthcare staff of what NHS services were available to the migrant, especially undocumented migrants and lack of health care connectivity [13]. Although some HCWs have expressed desirability for cultural competence, some felt it was the responsibility of migrants to adapt to the local context [14–16].

The objective of the study was to synthesize findings concerning ECPs beliefs and challenges for providing health care to migrants as found in research studies based in high-income settings. A secondary aim was to relate the findings to current NHS policy and practice, as well as proposed charging policies within the ED and the potential impact on patient care in the UK.

#### Methods

Qualitative studies were selected from high-income settings such as (Western) Europe, North America and Australasia to facilitate potential generalizability to the UK. The specific inclusion and exclusion criteria are shown in table 2 below.

Table 2: Inclusion & exclusion criteria

Inclusion Criteria	Exclusion Criteria
Studies published from any time point	
English Language	Non-English language
Primary qualitative studies using	Non – qualitative studies eg surveys &
qualitative methods of data collection	questionnaires, quantitative
and analysis, including semi-structured	Systematic reviews
interview studies, focus groups,	
ethnographies and participant	
observation	
High-income setting	Low and middle income settings
Emergency care provider = nurse,	Other secondary health care providers
doctor, paramedic, health care	seeing emergency patients eg doctors
assistant	assessing acute stroke or orthopaedic
	surgeons assessing fractures, even if in
	the ED.
	Primary health care providers
Paradia da FD a da a la saidi	O to Cilo ED and a baselful
Based in the ED or 'pre-hospital	Out of the ED or pre-hospital
emergency' field	environment eg cardiologists
	performing PCIs in a catheter lab,
	primary care, outpatients, hospital
	wards

#### Information sources

The search for relevant texts involved databases, websites, conference proceedings, abstracts, policy documents and book chapters [17] (See appendix for full list). Backward and forward searching through the references lists and the citations for all eligible papers was undertaken to identify any further studies. A hand search through the three highest impact emergency care journals: the UK Emergency Medicine Journal, the European Journal of Emergency Medicine and the Journal of Emergency nursing, was conducted as well as a search for unpublished grey literature. The searches were performed between 1st February 2018 and 31st March 2018.

#### Search

Key databases were searched using a refined range of keywords and terms individually and then in combination using Boolean operators "AND / OR" to ensure searches were sensitive and specific [18,19]. Although specifically looking for beliefs and challenges, broader search terms were used. An example of the Medline search is shown in table 3 below. (Further search terms in appendix)

Table 3: Medline search

Database	Ovid (1946 onwards) Medline
Search	Exp emergency service, hospital/ or exp emergency medical
terms	services/ or emergency care provider or exp emergency
	medicine/ or exp emergency nursing/ or exp emergency nurse
	AND
	Exp emigrants and immigrants/ or exp transients and migrants/
	or exp refugees/ or exp undocumented immigrants/ or asylum
seeker/ or displaced person	
Results	436

#### Study selection process

#### Stage 1

Each of the two reviewers (HLH, G D-W) searched for articles through scanning of titles, and if relevant the abstract was read and kept if still meeting the inclusion criteria.

#### Stage 2

Full texts were obtained for the screened list of abstracts to further assess eligibility. Multiple publications from the same study group were treated as separate studies, if the study population or analyses differed. Both authors assessed their inclusion for reliability.

#### Data collection process

Study data was collected and tabulated in an excel spreadsheet. Where studies included other populations, such as GPs, only results clearly pertaining to ECPs were extracted.

To facilitate the systematic synthesis of results, all extracted data were inputted into an excel spreadsheet under two columns: 'beliefs' and 'challenges'. Papers were read line-by-line, relevant lines were extracted and entered under the headings and coded into themes, akin to framework analysis in primary qualitative research [20]. Subsequent studies were coded into pre-existing concepts and new ones were formed when possible. The papers were re-read several times to ensure all data was extracted and codes were revised if new information was found that required a modification.

#### Quality appraisal

All studies were subject to quality assessment scoring as per the qualitative Oxford Critical Appraisal Skills Programme (CASP) assessment tool of ten questions. Only studies that answered 'yes' to the first two screening questions were included [21]. Although a total CASP score was given for each study, due to the nature of qualitative research the scores were not used to weight the papers. Papers were assessed according to ability to answer the research question [18].

#### Synthesis of results

Codes were grouped inductively into crosscutting themes to enable deeper interpretation of what the beliefs and challenges were. A meta-synthesis was conducted by aggregating and summarizing the studies in order to produce themes that could introduce larger interpretations into how the beliefs and challenges could affect EC provision in the developed world context [22]. Drawing upon this synthesis, a translation to the UK NHS context, with reference to other literature, law and policy was undertaken.

Patient and Public Involvement
Patients and the public were not involved in this review

#### **Results**

A total of 4185 studies were found of which 11 were deemed relevant and included in this qualitative meta-synthesis. The PRISMA flow diagram (Figure 1) below demonstrates the search process with reasons for study exclusion [23].

Study characteristics (Table 4)

11 qualitative studies, published between 2003 and 2015, were included in this qualitative meta-synthesis: one from the US and the remainder from Europe. Four studies came from the EU funded 'Best practice in Health Care Services for Immigrants in Europe' (EUGATE) study group. Each of these has been detailed separately as they reported unique results and perspectives.

Ozolins & Hjelm K, 2003 Sweden [24]	Nurses' experiences of problematic situations with migrants in emergency care in Sweden	49 nurses: Emergency, Anaesthetic, ICU, theatres	Assumed migrant	Explorative using questionnaire asking for written 'thick descriptions'  Naturalistic paradigm - to develop theory	9 themes: 1) Behaviour 2) Language 3) Relatives 4) Reliance on authority 5) Organisational factors 6) Gender 7) Threatening situations 8) Previous experiences of violence 9) Natural remedies	Main problem is communication - language and cultural.  Interpreters and training programmes important
Hultsjo S & Hjelm K 2005 Sweden [25]	Immigrants in emergency care: Swedish health care staff's experiences	35 nurses: 12 emergency ward, 12 ambulance service, 11 psychiatric ward	Migrants - born outside Sweden	Explorative, Semi- structured focus group Krueger & Casey analysis	9 themes: 1) Asylum seeking refugees, 2) Cultural behaviours 3) Relatives 4) Gender 5) Organisational factors 6) Language 7) Perceived threatening situations 8) Earlier experiences of migration 9) Reliance on HC staff	Main problems experienced by HCP were caring for asylum- seeking refugees
Jones S 2008 USA [26]	Emergency nurses caring experiences with Mexican- American	5 Emergency nurses.	Mexican heritage regardless of citizenship status. 1st or	Interviews with open ended questions  Culture Care Theory	Key themes were: Language barrier, Continuity of care and limited cultural knowledge	HCP should receive training on language and culture. Translators should be available

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	patients		2nd generation			24 hours a day
Terraza-	Health	49	Immigrants -	Semi-structured	Providing healthcare	To provide quality
Nunez R et	professional	professionals &	Bolivia, China,	interviews and	caused distress, overload	of care,
al.	perceptions	managers:	Morocco,	focus groups.	and exhaustion. Problems:	interventions to
2010	regarding	primary and	Romania,		Communication, specific	reduce
Spain	healthcare	secondary care.	Gambia	Narrative content	immigrant characteristics,	communication and
[27]	provision to	7 ER doctors -		analysis	inappropriate use of	culture barriers are
	immigrants in	demographics			services, HCP attitudes,	requested.
	Catalonia	unclear			organizational, structural	
					deficiencies	
Priebe S &	Good practice	240 HCPs.	First	Structured	8 Problems: Language,	HCP in different
Sandhu S et	in health care	From each	generation	Interviews - open	difficulty arranging care,	services experience
al.	for migrants:	country 3 ECPS	migrants.	questions	social deprivation,	similar difficulties
2011	views and	(48), 9 GPs	Persons born		traumatic experience, lack	and similar views
Europe	experiences of	(144), 3 mental	outside the	Thematic content	of familiarity with health	on good practice.
(EUGATE	care	health HCP	country of	analysis	care system, cultural diff,	Implementing good
study)	professionals	(48)	current	· (O).	understanding of illness	practice needs
[28]	in 16 European		residence aged		and treatment, negative	resources,
	countries		18 - 65 years.		attitudes amongst	organization,
					staff/patients, lack of	training and
					access to medical history.	positive attitudes
Priebe S &	Good practice	48 ECPs. 3	First	Structured	Key themes:	To improve care
Bogic M et	in emergency	ECPS from each	generation	Interviews - open	Language, Cultural factors,	need all of
al.	care: views	of 16 countries	migrants.	questions	treatment expectations and	translator services,
2011	from		Persons born		system understanding,	cultural training,
Europe	practitioners		outside the	Thematic content	access, staff-patient	guidelines,
(EUGATE			country of	analysis	relationships, resources,	organisational
study)			current		migration stressors, access	support.
[29]			residence aged		to medical history	

18 - 65 years. Iensen N K **Providing** 12 HCPs: 3 ER UMs - without a Structured EM - care no different from Lack of guidance valid residency treatment of another et al. medical care physicians, 9 Interviews - open means HCP are 2011 unsure how to deal for UMs in GPs: 3 person. Complicated by permit *questions* lack of medical records and with UMs thus Denmark Denmark: managers (EUGATE what are the psychiatric unit contact person leaving it to the Oualitative content analysis individual's study) challenges for [30] health Graneheim and decision professionals Lundmann Biswas D et 8 ECPs: 3 head Willingness to treat despite Need for policies Access to UMs Semi-structured al. healthcare and nurses. 4 interviews and migratory status. and guidelines to 2011 alternative observations Challenges: Language, ensure access for nurses. Denmark 10 UMs. barriers, false UMs and clarity to health- seeking **HCP** [31] strategies Malteruds principle identification, insecurities for systematic text among UMs in about correct standard Denmark condensation procedures, not always being able to provide appropriate care. Dauvrin M Health care for 240 HCPs. **UMs** Structured Key themes: Access Organisation, local problems, communication, flexibility and et al. irregular From each Interviews - open 2012 legal complications. ECP's migrants: country: 3 ECPs questions legislation might (48), 9 GPs reported less of a help improve care Europe pragmatism across Europe. (144), 3 mental difference in care for for UMs (EUGATE Thematic content study) health HCP undocumented versus A qualitative analysis [32] study (48)documented migrants. Notifying authorities was uncommon

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Gullberg F & Wihlborg M 2014 Sweden [33]	Nurses' experiences of encountering UMs in Swedish emergency healthcare	16 nurses: 5 ECPs, 5 emergency psych, 2 delivery, 2 primary health care, 2 NGO.	UMs	12 semi structured open-ended interviews  Phenomenographic	Key themes: 1) Nurses confused by migrant status and social existence. 2) Conflicts in encounters - identification system, judgments & emotional reactions 3) Shifts within & between arbitrary boundaries - unclear conditions for interaction, creative	Guidelines, structural support and increased training for nurses requested
Kietzmann D et al. 2015 Germany [34]	Migrants' and professionals' views on culturally sensitive prehospital emergency care	41 migrants, 20 HCP - 15 ECPs in exec positions, 3 psychologists, 2 medical ethics	Migrants	Semi- structured individual interviews  Qualitative content analysis by Mayring	manoeuvring 6 categories from the ECPs: importance of basic cultural knowledge, awareness, attitude, empathy, ambiguity tolerance, communication skills.	8 recommendations: reflecting on self, sharing cultural knowledge, improve basic social competencies, communication skills, interpreters, transparency

Table 4: Study Characteristics

#### Risk of bias

First and second generation migrants were studied, however, how ECPs identified them as such was unclear. Only eight of the 11 studies detailed the decision behind choice of population stating migrant load and ECP exposure to migrants [26–33]. Only three papers commented on the origin and ethnicity of the ECP [26,33,34]. One study [24] used an explorative questionnaire with openended questions and the remainder used interviews. Five studies asked about experiences caring for migrant patients, and five asked for specific problems migrants may pose. Terraza-Nunez [27] was the only study to describe triangulation of results through comparing data from different sources and groups of informants. There was no mention of self-reflexivity in any of the papers, which could create interviewer bias. All studies reported that theoretical saturation was reached.

#### Thematic synthesis results of the beliefs and challenges

Three analytical themes were found: cultural competence; system organisation; and ethical dilemmas. These are described below.

#### Cultural competence

#### Language

Communication difficulties meant that some ECPs felt unable to make an assessment of severity of illness, such as when it was unclear whether the patient was unconscious or just did not understand Swedish [24], leading to over or under investigation and potential mismanagement [25]. Struggling to articulate advice to the patient led to frustration on both sides [25,30]. The use of relatives or close friends as interpreters was felt to be sub-optimal [24–26], however, although the use of professional interpreters was stated as good practice, [24–26,28,30,34], accessing them 24 hours a day [26] and concerns about their affect on the patient relationship created barriers to use [26,28].

#### Behaviour

ECPs found certain migrant behaviours difficult to comprehend. For example screaming during venesection [24] and staying silent following bereavement were perceived as over and under reactions by ECPs [26]. This even risked mismanagement, such as the case of a migrant suffering a cardiac event who was believed by the ECP to be over exaggerating to keep a single room [24]. And, the migrant who complained of chest pain believed to have had a heart attack, but was actually an acute stress response to past events of torture and conflict [25]. Aggressive and problematic patient behaviour was noted by ECPs [24], however, two studies also reported, negative attitudes and hostile behaviour by staff towards migrant patients [28,29].

#### Gender

The importance of migrant gender dynamics and need to find health care providers of the appropriate sex was respected by ECPs. However, ECPs found male migrants speaking for female patients uncomfortable, and, female ECPs

found male migrants who lacked trust in their abilities frustrating [24,25,32]. Importantly, in an emergency, ECPs stated that delivering emergency care would take priority [29].

#### Respect for authority

Some Swedish emergency nurses perceived that migrants had less respect for them compared with for physicians, by questioning their competence and refusal of treatment [24,25,33]. Conversely, nurses managing Hispanic patients in the US [26] experienced only appreciation towards them. This is in line with Hispanic cultural ethos of 'respecto', towards authority, and suggests that challenges are likely to be migrant specific, or related to the nature and culture of the host nation. ECP's stated that ethnically diverse ECPs are beneficial to managing a migrant population [28].

#### Relatives

Large numbers of relatives created a disruptive environment and disagreements on care between the ECP and relatives, was occasionally described, creating a hindrance to optimal patient care [24,25]. However, ECPs did acknowledge the importance of strong family links for gaining a collateral history and social support [26,28,29].

#### Stereotypes

ECPs often portrayed migrants, in particular UMs, as being of low socio-economic status, struggled to integrate, engaged in misuse of drugs and alcohol, sex work or crime, reflecting their socially marginalized and stigmatized status [25,28,29]. Some perceived UMs as a burden on society through not working or having a child to attempt to gain access to (in this case) Swedish citizenship. However, some ECPs were concerned of being portrayed as a racist by a migrant if their care seemed not to be fairly prioritized [25]. Interestingly, ECPs felt that migrants perceived them to be in positions of power, holding the autonomy to make decisions about their health care as well as their migration status (through access to documentation or conversely power to report to the authorities). [28,33].

#### System organisation

#### Migrants use of the health system

ECPs associated migrants that had lower education and health knowledge, lacked understanding of the host country's health system and were more likely to call an ambulance or attend ED frequently for non-acute medical problems [24,25,27,29]. Conversely, migrants were also perceived to present late in their illnesses, perhaps reflecting social vulnerability and reduced primary care access [30]. Interestingly, negative media portrayal of migrants was also seen as a factor for migrants not wanting to appear troublesome by attending EDs [28]. ECPs recognized that for UMs, fear of being reported to the authorities delayed them from seeking health care [26–28,31,33] and were frustrated that this delay sometimes led to deterioration of illness [29]. ECPs felt that certain health conditions were not disclosed, for fear of requiring referral to inaccessible

services [31] and that often the ED is the only option for UMs to seek healthcare [28].

#### Organisational support for undocumented migrants

ECPs expressed uncertainty on providing emergency and on going care to UMs due to a lack of or unclear guidance for the circumstances of no residency status or insurance [24,27–30,33] and [24–26,30,31]. Guidelines in existence were open to interpretation, leading to subjective management and potential for ECPs to exert 'power' in decision making [30,33]. ECPs recognized this lack of consistency would lead to anxiety by UMs when accessing healthcare. UMs were often noted to not attend appointments for fear of being reported to the authorities [33]. ECPs that attempted referral of UMs onto the welfare system found that the migrant was not adequately supported, which increased ECP disillusionment with the system [24].

#### Ethical dilemmas

#### Immigration status does not affect emergency care

ECPs claimed that immigration status would not affect their decision to provide emergency care [26,30–33]. However, legal versus ethical and professional conflicts are experienced by ECPs on whether to inform the authorities about UMs. Some ECPs removed the decision from their role believing it was not their responsibility to decide[31,33] for example one such attitude taken was '[I] don't ask so [I] don't have to make the decision' [30]. There were some situations where ECPs were more likely to inform the police, such as when they suspected a serious crime was involved or if the patient was a danger to themselves [29,30,32].

#### Health professionals as gate-keepers

ECPs recognised the increased resources, such as increase in diagnostic tests and administrative time, required to manage non-resident migrant or UM patients [25,28–30,32]. ECPs therefore felt compelled to consider the ethics of rationing the service. In some contexts, pre-payment of the full fee was demanded in cash, in accordance with rules for foreigners [33]. In others, health services, such as, non-governmental organisations (NGOs) were utilized as an alternative provision of care [29,32]. Many ECPs felt that more funding for this patient group would improve their ability to provide adequate patient care [29].

#### Gaming

Some ECPs perceived asylum seekers to feign illness and fake documentation in order to obtain medical certificates to support asylum and residency permit applications. Some ECPS felt this behaviour to be dangerous and foolish, however, many expressed helplessness at being unable to assist [24,25,33] and attempted to game the system using fake social security numbers, submitting laboratory samples in their own name, and prescribing cheaper or giving out free samples of medicine [28–30,32].

#### **Discussion**

Cultural challenges found across all ECPs were language barriers, migrant behaviour that was unusual for the host country and gender dynamics. In some instances challenges were met relating to migrant respect for authority, and the number of relatives. ECPs expressed that these challenges can lead to frustrations, delays in care, and risked the mismanagement of patients. These findings are not unsurprising, and similar issues have been described frequently in UK literature going back over 25 years [35]. However, this apparent lack of progress is concerning. Stereotyping of migrants was largely evident and it is well documented that this can occur implicitly in high-pressure crowded environments, such as the ED [36]. It was interesting that migrants were often stereotyped as being from the lower socio-economic classes and of marginalized status [33], which, although true for some populations, the majority will have regular jobs and contribute to society. This perhaps reflects the wider societal concerns about asylum seekers and illegal economic migrants, particularly in relation to the 2010 Arab Spring where ECPs may have had first hand experience a large influx of refugees and exposure to negative media footage.

ECPs perceived that some migrants, particularly from lower socio-economic backgrounds, lacked understanding of the host country's health system, leading to inappropriate access of services, supporting the finding in a recent systematic review of migrant use of EDs in Europe [37]. However, it is important to note that this behaviour is not only isolated to migrant groups but is seen in lower socio-economic populations lacking health insurance [38]. ECPs also expressed a lack of migrant health knowledge, however, the concept of a parallel migrant care health system, was rejected due to the risks of an un-integrated service that worsens social isolation, an opinion shared by the WHO [29,39,40].

With over 300 different languages spoken by London's school children in 2015 [41], and an estimated 500,000 UMs, maintaining cultural competence and organizational support within the NHS is essential. The ECPs in this review recognised the need for this [24–34], however, only 15% [28–30,32] reported that their service had sufficient human and technical resources to support this, suggesting an inability to meet rapid migration changes. Within the UK, equality and diversity training for health care workers, interpreter services and resources such as the Department of Health and Social Care (DHSC) 'migrant health' webpage [42] are among initiatives supporting clinicians. Additionally, a significant proportion, 25% or one quarter of the NHS health workforce are migrant born [43]. Importantly, this workforce diversity improves compassion and the skills required to care for migrant patients [44]. Unfortunately, anecdotal evidence since the 2016 EU referendum suggests that increasing numbers of migrant workers are leaving the NHS, although how this specifically impacts on EC is as yet unknown given wider pressures on the service.

#### **Undocumented** migrants

All ECPs in this review found an lack of guidance or support in the context of law and governance policies relating to the management of UMs. The Geneva Declaration, 1948 stated that 'It is the duty of a doctor to be dedicated to providing competent medical service in full professional and moral independence, with compassion and respect for human dignity' [45]. However, the ECP faces an ethical, moral and legal dilemma: a choice to treat an UM could move scarce resources away from someone else in greater need. On the other hand, the rationing of resources and not treating a UM risks widening health inequalities. A choice to inform the authorities, will almost certainly mean deportation. Emergency care to migrants was not withheld at any of the study sites, even within the chargeable contexts (Finland, Sweden, US), however, for UMs, there was mixed opinion on informing the authorities and willingness to 'game the system' to enable on going care.

The home office actively seeks undocumented migrants in the UK. One method, which was recently abandoned [46] following outrage from health and civil liberty organisations, was through a data sharing agreement between NHS digital and the home office. Now reliance for recognising and reporting UMs falls upon health care professionals when UMs access the health system. The General Medical Council and Home Office both state that the decision to report is a balance between patient confidentiality and their medical needs, weighted against the publics' interest [47].

#### NHS emergency care charging policy

To help alleviate over-stretched emergency departments of unnecessary attendances and to increase NHS funding, the DHSC has advised introducing a charging policy for non-resident migrant patients accessing emergency care [48]. Several organisations (British Medical Association (BMA), RCGP and Doctors of the World (DoW)), state that there is limited evidence that NHS use by migrants is a actually a substantial problem [49,50]. Activist groups such as DoW and 'Docs not cops', have campaigned aggressively to oppose these proposals [51,52] stating that the policy challenges the NHS's core principles [8], will affect the most marginalized populations, through inability to afford a chargeable service and inevitably lead to widening health care disparities risking the public health of themselves and their communities. Stereotyping is evident from this review and the identification of chargeable patients [53] risks implicit racial profiling by ECPs, an issue which the 'UK Guidance on implementing the overseas visitor charging regulations' strongly advises against [54]. The views of ECPs in this review suggest that if this policy was introduced there would be significant opposition and disregard for it. Currently, the medical union Doctors in Unite support health workers who refuse to check migrant patients' eligibility for NHS care before treating them, and who may face disciplinary action for doing so [55].

#### Meta -synthesis

Two key messages from this review are evident:

Clinical autonomy

A migrant, with reduced knowledge of the host country's health system and culture, will be in a position of vulnerability. A migrants' experience will depend on the ECPs knowledge and willingness to make adjustments for them. The constraints of the 'system', that is, a pressurized ED may lead to reduced tolerance for adapting to the needs of migrants and potentially increase healthcare disparities. However, importantly, ECPs will not allow culture or tradition to impact on immediate life-saving treatment.

• Immigration status does not affect emergency care delivery by ECPs For UMs the ED may be their only option for health care. Despite the ethical, moral and legal dilemmas experienced by ECPs when managing these patients, when it is an emergency ECPs will act in the patient's best interest. It is extremely unlikely that a policy to identify chargeable migrants would be accepted by ECPs. However, the variation in ongoing health care response and the decision on whether to report an UM to the authorities will continue to reinforce the barriers for UMs to seeking healthcare.

#### Recommendations

From this review, recommendations for health service providers and policy makers are outlined in table 5 below:

Table 5: Recommendations

14010 0.11000			
Recommendation 1	Improved awareness of health care disparities through		
	regular context specific migrant training		
Recommendation 2	Training on contextually appropriate migrant cultures and		
	specific health conditions		
Recommendation 3	Cultural and organizational support e.g. interpreters		
	available 24hours a day		
Recommendation 4	Advice for ECPs on NHS system organisation		
Recommendation 5	Accessible guidance on the law and regulations that affect		
	the delivery of care to undocumented migrants		
Recommendation 6	Awareness for undocumented migrants on the law and		
	ethical boundaries that ECPs are held to		
Recommendation 7	Implementation of a charging policy into emergency care		
	should not occur without wide professional consultation		
	and a full public health assessment of the impacts on		
	undocumented migrants and wider communities		

#### Conclusion

This is the first qualitative meta-synthesis of ECP beliefs and challenges to delivery of emergency care to migrants within developed settings. The key findings that cultural, organisational and ethical barriers exist to providing optimal care are not insurmountable, however, the care delivered by ECPs will

depend on their clinical autonomy and ethical stance. Charging within UK EDs is unlikely to be accepted by ECPs. Health service providers and policy makers should acknowledge the challenges and recommendations from this qualitative meta-synthesis to enable action towards reducing health care disparities.

This review has highlighted the need for further research to inform policy:

- ECP perceptions towards particular UK migrants groups
- Perspectives of administrative staff who are the usual first contact with a patient, towards migrants.
- UK ECPs views on an emergency care charging policy.
- The views of migrants accessing emergency care.
- Measurement of affect of beliefs and challenges held by ECPs on health outcomes of migrant patients

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#### **Conflicts of interest**

The Authors declare no conflicts of interest

#### **Author statement**

No other Author's or contributors were involved in the writing of this manuscript

#### Data availability

No additional data available

#### **Figures**

Figure 1: PRISMA diagram of included and excluded studies

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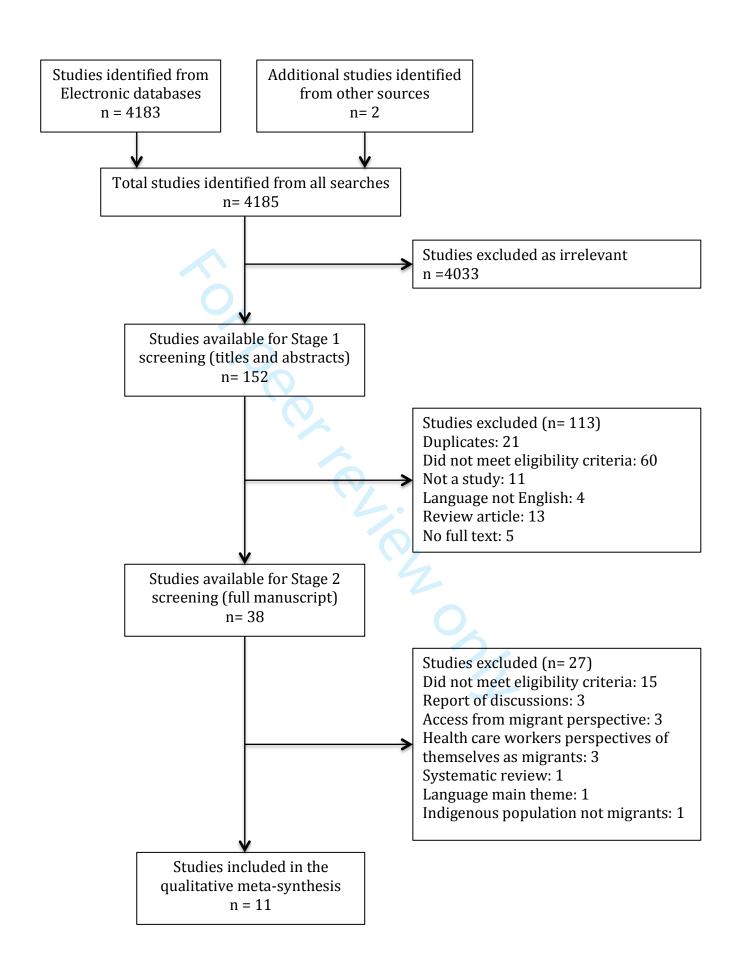
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#### **Appendices**

- 1. Websites & databases
- 2. Search terms

#### Appendix 1: Websites & databases

Health and education databases:

Ovid - Medline, Embase, PsyhInfo, CiNahl

Web of science

PubMed

Trip database

Google scholar

#### Websites:

WHO

The Migration Observatory

**International Organisation for Migration** 

Department of Health (UK)

Public Health England

Doctors of the World

Emergency medicine specific websites: Life In the Fast Lane, RCEM learning

#### Emergency journals:

Emergency medicine Journal - UK

European Journal of Emergency Medicine

Journal of Emergency nursing

Additionally for expert opinion and to uncover any more grey literature, communication with DoW via email, twitter and attending a webinar on migrant charging in the NHS was undertaken.

#### Appendix 2: Search terms

Ovid (1946 onwards)

Medline

Exp emergency service, hospital/ or exp emergency medical services/ or emergency care provider or exp emergency medicine/ or exp emergency nursing/ or exp emergency nurse

AND

Exp emigrants and immigrants/ or exp transients and migrants/ or exp refugees/ or exp undocumented immigrants/ or asylum seeker/ or displaced person

436 results

#### **Embase**

Exp emergency care/ or emergency health service/ or emergency medicine/ or emergency physician/ or emergency nursing

Exp migrant/ or undocumented/ or immigrant/ or refugee/ or asylum seeker 445 results

#### Psyh Info

Exp emergency services/ or health personnel/ or (accident and emergency) Exp immigrants/ or refugees/ or at risk populations/or asylum seeking 1431

Exp qualitative research/ or surveys/ or telephone surveys/ or mail surveys/ or questionnaires/ or health personnel attitudes/ or social perception Surveys and questionnaires were included in case of using this terminology for qualitative work.

129 results

#### Other databases

CiNahl (1981 onwards)

Exp emergency doctor/ or emergency nurse/ or health care provider/ or emergency department/ or accident and emergency/ or emergency service Exp migrant/or immigrant/ or asylum seeker/ or UM/ or irregular migrant/ or refugee/ or displaced person 0 results

Web of science 'emergency care and migrant' 145 results (6 relevant)

#### PubMed

The Medical Subject Heading (MeSH) search tool was used 'migrant' AND 'emergency care' 225 results

Trip database 199 articles (8 relevant)

#### Google scholar

"emergency care" AND "migrant" AND "qualitative"
2280 results – first 250 searched and then the results became irrelevant

# Reporting checklist for systematic review and meta-analysis.

Based on the PRISMA guidelines.

#### Instructions to authors

Complete this checklist by entering the page numbers from your manuscript where readers will find each of the items listed below.

Your article may not currently address all the items on the checklist. Please modify your text to include the missing information. If you are certain that an item does not apply, please write "n/a" and provide a short explanation.

Upload your completed checklist as an extra file when you submit to a journal.

In your methods section, say that you used the PRISMA reporting guidelines, and cite them as:

Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement

			Page
		Reporting Item	Number
	#1	Identify the report as a systematic review, meta-analysis, or both.	1
Structured summary	#2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number	1
Rationale	#3	Describe the rationale for the review in the context of what is already known.	1
Objectives	#4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	1
Protocol and registration	#5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address) and, if available, provide	N/A
	For	peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml	

		registration information including the registration number.	
Eligibility criteria	#6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rational	3
Information sources	#7	Describe all information sources in the search (e.g., databases with dates of coverage, contact with study authors to identify additional studies) and date last searched.	3
Search	#8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	3
Study selection	#9	State the process for selecting studies (i.e., for screening, for determining eligibility, for inclusion in the systematic review, and, if applicable, for inclusion in the meta-analysis).	4
Data collection process	#10	Describe the method of data extraction from reports (e.g., piloted forms, independently by two reviewers) and any processes for obtaining and confirming data from investigators.	4
Data items	#11	List and define all variables for which data were sought (e.g., PICOS, funding sources), and any assumptions and simplifications made.	4
Risk of bias in individual studies	#12	Describe methods used for assessing risk of bias in individual studies (including specification of whether this was done at the study or outcome level, or both), and how this information is to be used in any data synthesis.	10
Summary measures	#13	State the principal summary measures (e.g., risk ratio, difference in means).	N/a
Planned methods of analyis	#14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I2) for each meta-analysis.	N/A
Risk of bias across studies	#15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	10
Additional analyses	#16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml	N/A

		word pro apadinad.	
Study selection	#17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	Figure 1
Study characteristics	#18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citation.	6
Risk of bias within studies	#19	Present data on risk of bias of each study and, if available, any outcome-level assessment (see Item 12).	10
Results of individual studies	#20	For all outcomes considered (benefits and harms), present, for each study: (a) simple summary data for each intervention group and (b) effect estimates and confidence intervals, ideally with a forest plot.	10
Synthesis of results	#21	Present the main results of the review. If meta-analyses are done, include for each, confidence intervals and measures of consistency.	10
Risk of bias across studies	#22	Present results of any assessment of risk of bias across studies (see Item 15).	10
Additional analysis	#23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	N/A
Summary of Evidence	#24	Summarize the main findings, including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., health care providers, users, and policy makers	13
Limitations	#25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review level (e.g., incomplete retrieval of identified research, reporting bias).	1
Conclusions	#26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	13
Funding	#27	Describe sources of funding or other support (e.g., supply of data) for the systematic review; role of funders for the systematic review.	16

The PRISMA checklist is distributed under the terms of the Creative Commons Attribution License CC-BY. This checklist was completed on 20. December 2018 using <a href="http://www.goodreports.org/">http://www.goodreports.org/</a>, a tool made by the <a href="EQUATOR Network">EQUATOR Network</a> in collaboration with <a href="Penelope.ai">Penelope.ai</a>

### **BMJ Open**

# Beliefs and challenges held by medical staff about providing emergency care to migrants: an international systematic review and translation of findings to the UK context

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Secondary Subject Heading:	Global health, Health policy, Public health, Qualitative research
Keywords:	migrants, ACCIDENT & EMERGENCY MEDICINE, QUALITATIVE RESEARCH, Health policy < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, PUBLIC HEALTH, NHS

SCHOLARONE™ Manuscripts Beliefs and challenges held by medical staff about providing emergency care to migrants: an international systematic review and translation of findings to the UK context

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#### **Abstract**

#### Objective

Migration has increased globally. Emergency Departments (EDs) may be the first and only contact some migrants have with healthcare. Emergency care providers' (ECP) views concerning migrant patients were examined to identify potential health disparities and enable recommendations for ED policy and practice.

#### Design

Systematic review and meta-synthesis of published findings from qualitative studies.

#### **Data Sources**

Electronic databases, specialist websites and journals were searched using specific and broad search terms.

#### Eligibility criteria

Studies employing qualitative methods published in english. Settings: EDs in high income countries. Participants: ECPs included doctors, nurses and paramedics. Topic of enquiry: staff views on migrant care in ED settings.

#### Data extraction and synthesis

Data that fit the overarching themes of "beliefs" and "challenges" were extracted and coded into an evolving framework. Lines of argument were drawn from the main themes identified in order to infer implications for UK policy and practice.

#### Results

Eleven qualitative studies from Europe and the US were included. Three analytical themes were found: challenges in cultural competence; weak system organisation that did not sufficiently support emergency care delivery; and ethical dilemmas over decisions on the rationing of healthcare and reporting of undocumented migrants.

#### Conclusion

Emergency care providers made cultural and organisational adjustments for migrant patients, however, willingness was dependent on the individual's clinical autonomy. ECPs did not allow legal status to obstruct delivery of emergency care to migrant patients. Reported decisions to inform the authorities were mixed; potentially leading to uncertainty of outcome for undocumented migrants and as a deterrent to seeking healthcare. If a charging policy for emergency care in the UK was introduced, it is likely that ECPs would resist this through fears of widening health care disparities. Further recommendations for service delivery involve training and organisational support.

Key words: migrants, emergency medicine, qualitative studies, health workers views, systematic review, thematic synthesis, health policy, marginalised populations, charging for NHS services, service access

#### Strengths and Limitations of this review

- This review performed a thematic meta-synthesis of qualitative studies to enable a deeper understanding and exploration on the ECPs beliefs and challenges surrounding the provision of care to migrants.
- All studies reached theoretical saturation
- If the study results did not separate out ECPs responses from other Health Care Professionals (HCPs), they were excluded, potentially missing key data.

#### Introduction

#### International context

International migration is at its highest ever level and increasing, with the 2017 estimate at 3.4% (258 million people) of the global population, a 49% increase since 2000 [1]. The UK experienced significant migration during the 1970s after joining the European Union (EU) and between 1993 and 2015, the foreign born population more than doubled from 3.8 to 8.7 million (7% to 13.5%) with a peak net increase of 336,000 in 2015 during the European migration crisis. The UK immigration figures currently sit among the top five countries in the world [1]. While most migration occurs legally, there were an estimated 533,000 undocumented migrants (UMs) in the UK in 2007 [2,3].

#### **Definitions**

There is no apparent consensus on the definition of a migrant which makes drawing scientific conclusions based on the data challenging [4]. For this review the terminology in table 1 was used to ensure clarity and consistency.

Table 1: Migrant Terminology

First generation	Foreign-born resident who has become a citizen or
migrant	permanent resident in a new country
Second generation	Naturally born to one or more parents who were born
migrant	elsewhere
Asylum seeker	A person who has left their country of origin and formally
	applied for asylum in another country but whose
	application for refugee status has not yet been concluded
Refugee	The asylum seeker has their claim for asylum accepted by
	the government
Undocumented	Foreign-born person with no legal right to stay in the host
migrant (UM)	country. These include: persons who have entered illegally,
	failed asylum seekers, over-stayers (migrants who remain
	in the host country after their resident permit or visa has
	been revoked or expired), undocumented by birth (born
	into a family who have no legal right to stay)

Migrant health as a public health concern

The majority of migrant populations are healthy when they arrive, however, a number, particularly, refugees, asylum seekers and UMs suffer a disproportionate burden of morbidity [5]. Providing effective healthcare for migrants is of key public health importance, not only for treating the individual, but also in reducing the spread of communicable disease and the impact of future non-communicable diseases on the economy.

The key role of Emergency Departments in migrant healthcare

The UK NHS emergency services play a key role in the nation's public health as the first and only contact some migrants may have with the health system. However, emergency departments (EDs) are overstretched with yearly increases in patient presentations. The 'four-hour target', a proxy measurement of system effectiveness has not been met since 2015. Some UK politicians have quoted migrants as a causative factor [6] which has fed a media debate about eligibility for care. A recent systematic review, has demonstrated that in Europe, migrants utilise EDs more than the native population, often for lower acuity presentations [7]. Most migrants, however, comprise a healthy labour force, and make a positive overall contribution to the exchequer.

The issue of charging non-British citizens for emergency care

In an effort to recover costs to the NHS, charging non-British citizens for secondary healthcare is the current practice, as per the 2016 Immigration Act. Extension of this into emergency care has been proposed, challenging the NHS's three core principles that it should meet the needs of everyone, it should be free at the point of delivery, and it should be based on clinical need, not on the ability to pay [8]. Health care advocacy groups have warned about the potential impact on the most marginalised populations [9,10]. In this climate of the pressurized ED where migrants are portrayed as a burden, and the identification of paying 'customers' and UMs is expected, ED providers' views towards migrant patients could point to whether health disparities exist, as in the way patients are handled or dealt with

Staff attitudes and cultural competencies

There are no qualitative studies examining the ECP perspective of providing emergency care to migrants in the UK. In Denmark, two surveys based in the ED found that less satisfaction was expressed by health care professionals when patients were non-Western, and when the visit was felt to be less relevant [11]. Most of participants knowledge on migrants came via the media [12]. Other studies identified challenges surrounding language and cultural differences, time constraints, lack of awareness by healthcare staff of what health services were available to the migrant, especially undocumented migrants and lack of health care connectivity [13]. Although some HCWs have expressed desirability for cultural competence, some felt it was the responsibility of migrants to adapt to the local context [14–16]. "Cultural competence" has been defined as, "an overall

ethos of awareness and openness towards diversity," as opposed to assumptions concerning the values or behaviour of particular groups [14].

# Study aims and objectives

The primary objective of the study was to synthesize findings concerning ECPs beliefs and challenges for providing health care to migrants as found in findings of research studies based in high-income settings. The notions "beliefs" and "challenges" were based on the results of pilot searches which suggested these meta-themes as a good way of organizing the extant literature. "Beliefs" is here shorthand for staff views and opinions in relation to the perceived presentation, motivations and behaviour of migrants (according to the definition presented above) in EDs. What do migrants need? What is the clinical presentation? How do they conduct themselves? "Challenges" relates more to the staff or institutional response, or the "fit" (or lack of it) between system or cultural expectations and migrant behaviour. Pertinent issues would include language translation, and presence of relevant identity documents (as required by individual services).

A secondary aim was to relate the findings to current NHS policy and practice, The issue of charging patients in ED was to emerge as an underlying consideration in the extracted findings from the studies, which as we have seen was being proposed in the UK policy context whilst the review was being performed. In a process we have labelled "translation," the study findings were therefore reflected against these current proposals in order to imagine the potential consequences of charging migrants in the UK or other high-income country contexts.

#### Methods

A systematic review of studies of ECPs attitudes to migrant care in high-income country settings was undertaken. Qualitative meta-synthesis was used as an organizing and analytic frame for findings extracted from included studies. Qualitative studies were selected from high-income settings such as (Western) Europe, North America and Australasia to facilitate potential generalizability to the UK. The specific inclusion and exclusion criteria are shown in table 2 below.

Table 2: Inclusion & exclusion criteria

Inclusion Criteria	Exclusion Criteria
Studies published from any time point	
English Language	Non-English language
Primary qualitative studies using	Non–qualitative studies e.g. surveys &
qualitative methods of data collection	questionnaires, quantitative
and analysis, including semi-structured	Systematic reviews
interview studies, focus groups,	
ethnographies and participant	
observation	
High-income setting	Low and middle income settings

Emergency care provider = nurse, doctor, paramedic, health care assistant	Other secondary health care providers seeing emergency patients e.g. doctors assessing acute stroke or orthopaedic surgeons assessing fractures, even if in the ED. Primary health care providers
Based in the ED or 'pre-hospital emergency' field	Out of the ED or pre-hospital environment e.g. cardiologists performing PCIs in a catheter lab, primary care, outpatients, hospital wards

#### Information sources

The search for relevant texts involved databases, websites, conference proceedings, abstracts, policy documents and book chapters [17] The bibliographic databases searched were: Ovid - Medline, Embase, PsychInfo; CiNahl, Web of science, PubMed, Trip database and Google scholar. The Websites of WHO, The Migration Observatory, the International Organisation for Migration, the Department of Health and Social Care (UK), Public Health England, Doctors of the World were searched, along with the Emergency Medicine specific websites: Life In the Fast Lane and RCEM learning.

Backward and forward searching through the references lists and the citations for all eligible papers was undertaken to identify any further studies. A hand search through the three highest impact emergency care journals: the UK Emergency Medicine Journal, the European Journal of Emergency Medicine and the Journal of Emergency nursing, was conducted as well as a search for unpublished grey literature.

The primary searches were performed between 1st February 2018 and 31st March 2018. The bibliographic database searches were re-run during the article submission process to find additional relevant material. In this manner, Ovid Medline, Embase (via Ovid), PsychInfo (via OVID), CINAHL, Web of Science, PubMed, Trip Database and Google Scholar were all searched again (using the original searches) on 16th March 2019 and no additional studies were found.

#### Search

Key databases were searched using a refined range of keywords and terms individually and then in combination using Boolean operators "AND / OR" to ensure searches were sensitive and specific [18,19]. Although specifically looking for beliefs and challenges, broader search terms were used. An example of the Medline search is shown in table 3 below (Further search terms in appendix).

Table 3: Medline search

Database	Ovid (1946 onwards) Medline						
Search	Exp emergency service, hospital/ or exp emergency medical						
terms	services/ or emergency care provider or exp emergency						

	medicine/ or exp emergency nursing/ or exp emergency nurse AND
	Exp emigrants and immigrants/ or exp transients and migrants/ or exp refugees/ or exp undocumented immigrants/ or asylum
	seeker/ or displaced person
Results	436

# Study selection process

Two reviewers (HLH, G D-W) independently scanned titles. If relevant, abstracts were then screened against the inclusion criteria. Full texts were obtained for the screened list of abstracts to further assess eligibility. Both authors assessed their inclusion for reliability. Several articles were reported under the umbrella of "EUGATE," (table 4). These were treated as different studies as they employed different participant sub-sets and analytical sampling frames.

# Data extraction process

Study data was collected and tabulated in an Excel spreadsheet. Where studies included other populations, such as GPs, only results clearly pertaining to ECPs were extracted. Following a pilot phase, data was extracted by HH.

To facilitate the systematic synthesis of results, all extracted data were inputted into an Excel spreadsheet under two columns: 'beliefs' and 'challenges'. Papers were read line-by-line, relevant lines were extracted and entered under the headings and coded into themes, akin to framework analysis in primary qualitative research [20]. Subsequent studies were coded into pre-existing concepts and new ones were formed when possible. The papers were re-read several times to ensure all data was extracted and codes were revised if new information was found that required a modification. The findings from this iterative process were discussed between both authors on a periodic basis in order to refine the coding schema and conceptual understanding of the themes.

# Quality appraisal

All studies were subject to quality assessment scoring as per the qualitative Oxford Critical Appraisal Skills Programme (CASP) assessment tool of ten questions. Only studies that answered 'yes' to the first two screening questions were included [21]. Although a total CASP score was given for each study (see table 4), due to the nature of qualitative research the scores were not used to weight the papers. Papers were assessed according to ability to answer the research question [18].

# Synthesis of results

Codes were grouped inductively into crosscutting themes to enable deeper interpretation of what the beliefs and challenges were. A meta-synthesis was conducted by aggregating and summarizing the studies in order to produce themes that could introduce larger interpretations into how the beliefs and

challenges could affect EC provision in the high-income country context [22]. Drawing upon this synthesis, a translation to the UK NHS context, with reference to other literature, law and policy was undertaken.

Patient and Public Involvement

Patients and the public were not involved in this review

#### Results

A total of 4185 studies were found of which 11 were deemed relevant and included. The PRISMA flow diagram (Figure 1) below demonstrates the search process with reasons for study exclusion [23].

Study characteristics (Table 4)

11 qualitative studies, published between 2003 and 2015, were included: one from the US and the remainder from Western European countries. Four studies came from the EU funded 'Best practice in Health Care Services for Immigrants in Europe' (EUGATE) study group.

Table 4: Study Characteristics

Citation	Topic	Participants	Migrant definition used	Methods	CASP score (/10)	Key themes or findings	Implications
Ozolins & Hjelm K, 2003 Sweden [24]	Nurses' experiences of problematic situations with migrants in emergency care in Sweden	49 nurses: Emergency, Anaesthetic, ICU, theatres	Assumed migrant	Explorative using questionnaire asking for written 'thick descriptions'  Naturalistic paradigm - to develop theory	5	9 themes: 1) Behaviour 2) Language 3) Relatives 4) Reliance on authority 5) Organisational factors 6) Gender 7) Threatening situations 8) Previous experiences of violence 9) Natural remedies	Main problem is communication - language and cultural.  Interpreters and training programmes important
Hultsjo S & Hjelm K 2005 Sweden [25]	Immigrants in emergency care: Swedish health care staff's experiences	35 nurses: 12 emergency ward, 12 ambulance service, 11 psychiatric ward	Migrants - born outside Sweden	Explorative, Semi- structured focus group Krueger & Casey analysis	8	9 themes: 1) Asylum seeking refugees, 2) Cultural behaviours 3) Relatives 4) Gender 5) Organisational factors 6) Language 7) Perceived threatening situations 8) Earlier experiences of migration 9) Reliance on HC staff	Main problems experienced by HCP were caring for asylum- seeking refugees
Jones S	Emergency	5 Emergency	Mexican	Interviews with	9	Key themes were: Language	HCP should receive

2008	nurses caring	nurses.	heritage	open ended		barrier, Continuity of care	training on language
USA	experiences		regardless	questions		and limited cultural	and culture.
[26]	with Mexican-		of	0.1. 0		knowledge	Translators should
	American		citizenship	Culture Care			be available 24 hours
	patients		status. 1st	Theory			a day
			or 2nd				
			generation				
Terraza-	Health	49	Immigrants	Semi-structured	7	Providing healthcare caused	To provide quality of
Nunez R et	professional	professionals &	- Bolivia,	interviews and		distress, overload and	care, interventions to
al.	perceptions	managers:	China,	focus groups.		exhaustion. Problems:	reduce
2010	regarding	primary and	Morocco,			Communication, specific	communication and
Spain	healthcare	secondary care.	Romania,	Narrative content		immigrant characteristics,	culture barriers are
[27]	provision to	7 ER doctors -	Gambia	analysis		inappropriate use of	requested.
	immigrants in	demographics				services, HCP attitudes,	
	Catalonia	unclear		(V).		organizational, structural	
						deficiencies	
Priebe S &	Good practice	240 HCPs.	First	Structured	9	8 Problems: Language,	HCP in different
Sandhu S et	in health care	From each	generation	Interviews - open		difficulty arranging care,	services experience
al.	for migrants:	country 3 ECPS	migrants.	questions		social deprivation,	similar difficulties
2011	views and	(48), 9 GPs	Persons		U	traumatic experience, lack	and similar views on
Europe	experiences of	(144), 3 mental	born	Thematic content		of familiarity with health	good practice.
(EUGATE	care	health HCP	outside the	analysis		care system, cultural diff,	Implementing good
study)	professionals	(48)	country of			understanding of illness and	practice needs
[28]	in 16 European		current			treatment, negative	resources,
	countries		residence			attitudes amongst	organization,
			aged 18 -			staff/patients, lack of access	training and positive
			65 years.			to medical history.	attitudes
Priebe S &	Good practice	48 ECPs. 3	First	Structured	9	Key themes:	To improve care
Bogic M et	in emergency	ECPS from each	generation	Interviews - open		Language, Cultural factors,	need all of translator

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al. 2011	care: views from	of 16 countries	migrants. Persons	questions		treatment expectations and system understanding,	services, cultural training, guidelines,
Europe (EUGATE study) [29]	practitioners	FOL	born outside the country of current residence aged 18 - 65 years.	Thematic content analysis		access, staff-patient relationships, resources, migration stressors, access to medical history	organisational support.
Jensen N K et al. 2011 Denmark (EUGATE study) [30]	Providing medical care for UMs in Denmark: what are the challenges for health professionals	12 HCPs: 3 ER physicians, 9 GPs; 3 managers psychiatric unit	UMs - without a valid residency permit	Structured Interviews - open questions  Qualitative content analysis - Graneheim and Lundmann	9	EM - care no different from treatment of another person. Complicated by lack of medical records and contact person	Lack of guidance means HCP are unsure how to deal with UMs thus leaving it to the individual's decision
Biswas D et al. 2011 Denmark [31]	Access to healthcare and alternative health- seeking strategies among UMs in Denmark	8 ECPs: 3 head nurses, 4 nurses. 10 UMs.	UMs	Semi-structured interviews and observations  Malteruds principle for systematic text condensation	10	Willingness to treat despite migratory status. Challenges: Language, barriers, false identification, insecurities about correct standard procedures, not always being able to provide appropriate care.	Need for policies and guidelines to ensure access for UMs and clarity to HCP
Dauvrin M	Health care for	240 HCPs.	UMs	Structured	9	Key themes: Access	Organisation, local

et al. 2012 Europe (EUGATE study)	irregular migrants: pragmatism across Europe. A qualitative	From each country: 3 ECPs (48), 9 GPs (144), 3 mental health HCP		Interviews - open questions  Thematic content analysis		problems, communication, legal complications. ECP's reported less of a difference in care for undocumented versus documented	flexibility and legislation might help improve care for UMs
[32]	study	(48)				migrants. Notifying authorities was uncommon	
Gullberg F & Wihlborg M 2014	Nurses' experiences of encountering UMs in	16 nurses: 5 ECPs, 5 emergency psych, 2	UMs	12 semi structured open-ended interviews	9	Key themes: 1) Nurses confused by migrant status and social existence. 2) Conflicts in	Guidelines, structural support and increased training for nurses
Sweden [33]	Swedish emergency healthcare	delivery, 2 primary health care, 2 NGO.		Phenomenographic		encounters - identification system, judgments & emotional reactions 3) Shifts within & between arbitrary boundaries -	requested
				4	0,	unclear conditions for interaction, creative manoeuvring	

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Kietzmann D et al. 2015 Germany [34]	Migrants' and professionals' views on culturally sensitive pre-hospital emergency care	41 migrants, 20 HCP - 15 ECPs in exec positions, 3 psychologists, 2 medical ethics	Migrants	Semi- structured individual interviews  Qualitative content analysis by Mayring	7	6 categories from the ECPs: importance of basic cultural knowledge, awareness, attitude, empathy, ambiguity tolerance, communication skills.	8 recommendations: reflecting on self, sharing cultural knowledge, improve basic social competencies, communication skills, interpreters, transparency
reer review only							

#### Risk of bias

First and second generation migrants were studied, however, how ECPs identified them as such was unclear. Only eight of the 11 studies detailed the decision behind choice of population stating migrant load and ECP exposure to migrants [26–33]. Only three papers commented on the origin and ethnicity of the ECP [26,33,34]. One study [24] used an explorative questionnaire with openended questions and the remainder used interviews.

The explorative questionnaire study returned the lowest CASP score (see table 4), perhaps highlighting the hybridized nature of the method, although an openended questionnaire schedule might be considered "qualitative" on a continuum. The findings were nevertheless found to fit with those from other studies and the article was not excluded. The remaining studies scored between 7 and 10 according to the CASP checklist. Typically, articles failed to discuss researcher-participant relations; although this is not unusual in applied research concerning health services. Overall, the reporting quality of the studies was high, with 7/11 (63.63%) scoring 9/10 or higher.

Five studies asked about experiences caring for migrant patients, and five asked for specific problems migrants may pose. Terraza-Nunez [27] was the only study to describe triangulation of results through comparing data from different sources and groups of informants. There was no mention of self-reflexivity in any of the papers, which could create interviewer bias. All studies reported that theoretical saturation was reached.

Most studies were undertaken in EU countries and this, together with the issues raised above, indicates that if the findings were easily synthesizable, there is fairly high confidence that they represent a valid picture of the perceptions of ED staff working in a Western European context.

# Thematic synthesis results of the beliefs and challenges

Three overarching analytical themes were found: cultural competence; system organisation; and ethical dilemmas. These are described below.

# Cultural competence

On the basis of their experiences of treating migrant patients, difficulties were identified around potential clinical misunderstanding due to the social distances often involved. These issues coalesced around communication, (associated) problems in the clinical reading of patient behaviour and differing social expectations. The latter principally involving inter-personal gender dynamics and respect for medical authority. Staff felt this power imbalance and constructed stereotypes of migrants as they encountered the difficulties outlined below.

# Language

Communication difficulties meant that some ECPs felt unable to make an assessment of severity of illness. leading to over or under investigation and potential mismanagement [25]., For example, in one case it was unclear whether a patient was unconscious or just did not understand Swedish [24], Struggling to articulate advice to the patient led to frustration on both sides [25,30]. The use of relatives or close friends as interpreters was felt to be sub-optimal [24–26]. The use of professional interpreters was stated as good practice, [24–26,28,30,34], although accessing them 24 hours a day was another matter [26].

#### **Behaviour**

ECPs found certain migrant behaviours difficult to comprehend. For example screaming during venesection [24] and staying silent following bereavement were perceived as over and under reactions by ECPs [26]. This risked mismanagement, such as the case of a migrant suffering a cardiac event who was believed by the ECP to be over exaggerating to keep a single room [24]. Or the migrant who complained of chest pain believed to have had a heart attack, but was actually displaying an acute stress response to past events of torture and conflict [25]. Aggressive and problematic patient behaviour was noted by ECPs [24], however two studies also reported, negative attitudes and hostile behaviour by staff towards migrant patients [28,29].

#### Gender

The importance of migrant gender dynamics and need to find health care providers of the appropriate sex was respected by ECPs. However, ECPs found male migrants speaking for female patients uncomfortable, and female ECPs found male migrants who lacked trust in their abilities frustrating [24,25,32]. Importantly, in an emergency, ECPs stated that delivering emergency care would take priority over finding an ECP of the required gender [29].

#### *Respect for authority*

Some Swedish emergency nurses perceived that migrants had less respect for them compared with for physicians, by questioning their competence and refusal of treatment [24,25,33]. Conversely, nurses managing Hispanic patients in the US [26] experienced only appreciation towards them. This is in line with Hispanic cultural ethos of *respeto*, towards authority, and suggests that challenges are likely to be migrant specific, or related to the nature and culture of the host nation. ECP's stated that ethnically diverse ECPs are beneficial to managing a migrant population [28].

#### Relatives

Large numbers of relatives created a disruptive environment and disagreements on care between the ECP and relatives, was occasionally described, creating a hindrance to optimal patient care [24,25]. However, ECPs did acknowledge the importance of strong family links for gaining a collateral history and social support [26,28,29].

#### **Stereotypes**

ECPs often portrayed migrants, in particular UMs, as being of low socioeconomic status, perhaps struggling to integrate, engaged in misuse of drugs and alcohol, sex work or crime; reflecting their socially marginalized and stigmatized status [25,28,29]. Some perceived UMs as a burden on society through not working or having a child to attempt to gain access to (in this case) Swedish citizenship. However, some ECPs were concerned at being portrayed as a racist by a migrant if their care seemed not to be fairly prioritized [25]. Interestingly, ECPs felt that migrants perceived them to be in positions of power, holding the autonomy to make decisions about their health care as well as their migration status (through access to documentation or conversely power to report to the authorities). [28,33].

# System organisation

The difficulties and stereotypes described above led ECPs to form explanations, not only for migrant health seeking behaviour and presentation, but also for the legal or organizational contributors to the perceived behaviour. The primary issues concern problematics related to the timely use of ED by migrants, seen as realistically the "only option" for healthcare and the opacity of arrangements around an individual migrant's legal status and access to other health services.

# Migrants use of the health system

ECPs constructed a view of migrants as having lower education and health knowledge, thereby lacking understanding of the host country's health system. They associated this with perceived sub-optimal health behaviours. They were more likely to call an ambulance or attend ED frequently for non-acute medical problems [24,25,27,29]. Other perceived migrant behaviours, such as late presentation, were seen to reflect social vulnerability and reduced primary care access [30]. Interestingly, negative media portrayal of migrants was also seen as a factor for migrants not wanting to appear troublesome by attending EDs [28]. ECPs recognized that for UMs, fear of being reported to the authorities delayed them from seeking health care [26–28,31,33] and were frustrated that this delay sometimes led to deterioration of illness [29]. ECPs felt that certain health conditions were not disclosed, for fear of requiring referral to inaccessible services [31] and that often the ED is the only option for UMs to seek healthcare [28].

#### Organisational support for undocumented migrants

ECPs expressed uncertainty on providing emergency and ongoing care to UMs due to a lack of or unclear guidance for the circumstances of no residency status or insurance [24,27–30,33] and [24–26,30,31]. Guidelines in existence were open to interpretation, leading to subjective management and potential for ECPs to exert 'power' in decision making [30,33]. ECPs recognized this lack of consistency would lead to anxiety by UMs when accessing healthcare. UMs were often noted to not attend appointments for fear of being reported to the authorities [33]. ECPs that attempted referral of UMs onto the welfare system found that the migrant was not adequately supported, which increased ECP disillusionment with the system [24].

#### Ethical dilemmas

Migrant patients were seen to impose ethical dilemmas on ECP staff in EDs. In common with views expressed above, it was universally accepted the decision to provide care would always be taken without other considerations, although a decision to inform the authorities appeared to operate more on a case-by-case basis which took other factors into account. Other dilemmas surfaced around fair use of health resources in the context of underfunding and where some patients were perceived to be "gaming" the system to assist with applications, e.g. for refugee status.

# Immigration status does not affect emergency care

ECPs claimed that immigration status would not affect their decision to provide emergency care [26,30–33]. However, legal versus ethical and professional conflicts are experienced by ECPs on whether to inform the authorities about UMs. Some ECPs removed the decision from their role believing it was not their responsibility to decide [31,33] for example one such attitude taken was '[I] don't ask so [I] don't have to make the decision' [30]. There were some situations where ECPs were more likely to inform the police, such as when they suspected a serious crime was involved or if the patient was a danger to themselves [29,30,32].

# Health professionals as gate-keepers

ECPs recognised the increased resources, such as increase in diagnostic tests and administrative time, required to manage non-resident migrant or UM patients [25,28–30,32]. ECPs therefore felt compelled to consider the ethics of rationing the service. In some contexts, pre-payment of the full fee was demanded in cash, in accordance with rules for foreigners [33]. In others, health services, such as non-governmental organisations (NGOs) were utilized as an alternative provision of care [29,32]. Many ECPs felt that more funding for this patient group would improve their ability to provide adequate patient care [29].

#### Gaming

Some ECPs perceived asylum seekers to feign illness and fake documentation in order to obtain medical certificates to support asylum and residency permit applications. Some ECPS felt this behaviour to be dangerous and foolish, however, many expressed helplessness at being unable to assist [24,25,33]. Individual clinicians attempted to game the system using fake social security numbers, submitting laboratory samples in their own name, and prescribing cheaper (or giving out free samples) of medicine [28–30,32].

#### **Discussion**

This study set out to review and synthesize findings related to the perceived "beliefs and challenges" of migrant care, as articulated by ECPs in findings of published, primary qualitative studies. Eleven studies published 2003-2015 were included, although one (which was borderline according to both inclusion criteria and CASP score, see table 4) was only partly qualitative in that an open-

ended questionnaire was used. The remainder were of high reporting quality and most were undertaken in Western European countries. A thematic synthesis of findings extracted from the primary studies found that they comprised 3 main themes: cultural competence, organizational contributors to the perceived problematics of migrant care and ethical dilemmas. The question of charging patients emerged as an issue which cut across several aspects of clinical management, although ECPS were adamant that in an emergency, giving treatment would always trump other considerations.

#### Limitations

Studies which included ECPs but did not separate out their responses from other health professionals were excluded, potentially missing valuable material. However, we argue that this focus strengthens the validity of the findings so far as ED workers in Western European contexts are concerned. This focus means it is also important to stress that the staff views expressed in the studies relate solely to users of EDs, who are likely to be unrepresentative of the total migrant population in the local area in question. There was mixed representation of different ECP occupational groups across the studies, potentially biasing conclusions made. No studies included a comparison group and therefore the "beliefs and challenges" described may not necessarily be particular to migrants. Only studies of ECPs were included in the review and the beliefs of counsellors, administrative staff, receptionists, porters and others who may influence the migrant experience of the ED and decision-making around the use of emergency care were not considered. Finally, the data was extracted by one author only, although in practice the review and synthesis process entailed reading each included study report several times over.

#### Findings

Cultural challenges found across all ECPs were language barriers, migrant behaviour that was unusual for the host country and gender dynamics. In some instances challenges were met relating to migrant respect for authority, and the number of relatives. ECPs expressed that these challenges can lead to frustrations, delays in care, and risked the mismanagement of patients. These findings are not unsurprising, and similar issues have been described frequently in UK literature going back over 25 years [35]. However, this apparent lack of progress is concerning. Stereotyping of migrants was largely evident and it is well documented that this can occur implicitly in high-pressure crowded environments, such as the ED [36]. It was interesting that migrants were often stereotyped as being from the lower socio-economic classes and of marginalized status [33], which, although true for some populations, the majority will have regular jobs and contribute to society. This perhaps reflects the wider societal concerns about asylum seekers and economic migrants who enter illegally, e.g.in relation to the 2010 Arab Spring where ECPs may have had firsthand experience of a large influx of refugees and exposure to negative media footage.

ECPs perceived that some migrants, particularly from lower socio-economic backgrounds, lacked understanding of the host country's health system, leading

to inappropriate access of services, supporting the finding in a recent systematic review of migrant use of EDs in Europe [37]. However, it is important to note that this behaviour is not only isolated to migrant groups but is seen in lower socio-economic populations lacking health insurance [38]. ECPs also expressed a lack of migrant health knowledge, however, the concept of a parallel migrant care health system, was rejected due to the risks of an unintegrated service that worsens social isolation, an opinion shared by the WHO [29,39,40].

With over 300 different languages spoken by London's school children in 2015 [41], and an estimated 500,000 UMs, maintaining cultural competence and organizational support within the NHS is essential. The ECPs in this review recognised the need for this [24–34], however, only a minority [28–30,32] reported that their service had sufficient human and technical resources to support it, suggesting an inability to meet rapid migration changes. Within the UK, equality and diversity training for health care workers, interpreter services and resources such as the Department of Health and Social Care (DHSC) 'migrant health' webpage [42] are among initiatives supporting clinicians. Additionally, one quarter of the NHS health workforce are migrant born [43]. Importantly, this workforce diversity improves compassion and the skills required to care for migrant patients [44]. Unfortunately, anecdotal evidence since the 2016 EU referendum suggests that increasing numbers of migrant workers are leaving the NHS, although how this specifically impacts on EDs is as yet unknown given wider pressures on the service.

# **Undocumented migrants**

All ECPs in this review reported a lack of guidance or support in the context of law and governance policies relating to the management of UMs. The Geneva Declaration, 1948 stated that, 'It is the duty of a doctor to be dedicated to providing competent medical service in full professional and moral independence, with compassion and respect for human dignity' [45]. However, the ECP faces an ethical, moral and legal dilemma: a choice to treat an UM could move scarce resources away from someone else in greater need. On the other hand, the rationing of resources and not treating a UM risks widening health inequalities. A choice to inform the authorities will almost certainly mean deportation. Emergency care to migrants was not withheld at any of the study sites, even within the chargeable contexts (Finland, Sweden, US). However, for UMs, there was mixed opinion on informing the authorities and willingness to 'game the system' to enable on going care.

The Home Office actively seeks undocumented migrants in the UK and formally used a data sharing agreement with NHS Digital to collect relevant data. This was abandoned following interventions from health and civil liberties groups [46].

Reliance for recognising and reporting UMs now falls upon health care professionals when UMs access the health system. The General Medical Council and Home Office both state that the decision to report is a balance between

patient confidentiality and their medical needs, weighted against the publics' interest [47].

# NHS emergency care charging policy

To help alleviate over-stretched emergency departments of unnecessary attendances and to increase NHS funding, the DHSC (formerly Department of Health) has advised introducing a charging policy for non-resident migrant patients accessing emergency care [48]. Several organisations (British Medical Association (BMA), RCGP and Doctors of the World (DoW)), state that there is limited evidence that NHS use by migrants is a substantive problem [49,50]. Activist groups such as DoW and 'Docs not cops', have campaigned aggressively to oppose these proposals [51,52] stating that the policy challenges the NHS's core principles [8], will affect the most marginalized populations, through inability to afford a chargeable service, leading to widening health care disparities and impacting upon public health.. Stereotyping is evident from this review and the identification of chargeable patients [53] risks implicit racial profiling by ECPs, an issue which the 'UK Guidance on implementing the overseas visitor charging regulations' strongly advises against [54]. The views of ECPs in this review suggest that if this policy was introduced there would be likely moral, ethical and procedural confusion for ECPs. This could lead to opposition, resistance or variable implementation of the policy for possibly spurious reasons. Currently, the medical union Doctors in Unite support health workers who refuse to check migrant patients' eligibility for NHS care before treating them, and who may face disciplinary action for doing so [55].

# The evidence base in migrant health

A bibliometric analysis of global research in migrant health pointed to the over-representation of studies in "high income destination countries" [56], although only 1 of the cited articles was based in an ED. The reasons for the lack of such research in the UK are unclear, but future studies could be used to validate the findings presented here. The proposed "Million Migrants study of healthcare and mortality outcomes in non-EU migrants and refugees to England," [57] and other initiatives around the UCL-Lancet Commission on Migration and Health, will provide better intelligence on which to base decisions about health services more broadly [58].

#### Meta-synthesis

Two interpretations were drawn from putting the findings of the studies together. The first concerns the pre-eminent role of clinical autonomy in the delivery of migrant health care in the ED. A line of argument that follows from this realisation is that documentation is a secondary consideration in emergency care. Questions arise about the outcomes which could arise from instituting a charging policy.

# Clinical autonomy

A migrant, with reduced knowledge of the host country's health system and culture, will be in a position of vulnerability. A migrants' experience will depend on the ECPs knowledge and willingness to make adjustments for them. The constraints of the 'system', that is, a pressurized ED may lead to reduced tolerance for adapting to the needs of migrants and potentially increase healthcare disparities. However, importantly, ECPs will not allow culture or tradition to impact on immediate life-saving treatment.

• Immigration status does not affect emergency care delivery by ECPs For UMs the ED may be their only option for health care. Despite the ethical, moral and legal dilemmas experienced by ECPs when managing migrant patients, when it is an emergency ECPs will act in the patient's best interest. It is extremely unlikely that a policy to identify chargeable migrants would be accepted by ECPs. However, the variation in ongoing health care response and the decision on whether to report an UM to the authorities will continue to reinforce the barriers for UMs to seeking healthcare.

#### Recommendations

From this review, recommendations for health service providers and policy makers are outlined in table 5 (below).

Table 5: Recommendations

Recommendation 1	Improved awareness of health care disparities through
	regular context specific migrant training
Recommendation 2	Training on contextually appropriate migrant cultures and
	specific health conditions
Recommendation 3	Cultural and organizational support e.g. interpreters
	available 24hours a day
Recommendation 4	Advice for ECPs on NHS system organisation
Recommendation 5	Accessible guidance on the law and regulations that affect
	the delivery of care to undocumented migrants
Recommendation 6	Awareness campaign for undocumented migrants on the
	law and ethical boundaries that ECPs are held to
Recommendation 7	Implementation of a charging policy into emergency care
	should not occur without wide professional consultation
	and a full public health assessment of the impacts on
	undocumented migrants and wider communities

#### Conclusion

This is the first qualitative meta-synthesis of ECP perceptions of beliefs and challenges to the delivery of emergency care to migrants within developed settings. The key findings that cultural, organisational and ethical barriers exist to providing optimal care are not insurmountable. However, the care delivered by ECPs will depend on their clinical autonomy and ethical stance. Charging within UK EDs appears difficult to implement against the context of the evidence presented within this review.

Several avenues for further research are indicated, beginning with a UK study in the same field, which would also assist with validating the findings of the approach adopted here. In general, there would be value in comparative studies which move beyond the general category of "migrant" to understand the health needs of different groups. Future studies might also include the perspectives of administrative staff, who are usually the first point of contact with a patient. Finally, studies of the effects of staff views or attitudes on the health outcomes of migrant patients would help to evaluate training or initiatives, e.g. aimed at furthering the cultural competencies of NHS or other health service staff.

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# **Contributorship statement**

HLH conceived the idea for the review as part of a Masters dissertation. HLH conducted the review and analysis under the supervision of GDW. HLH wrote the manuscript with support and input from GDW.

#### **Conflicts of interest**

The Authors declare no conflicts of interest

#### **Author statement**

No other Author's or contributors were involved in the writing of this manuscript

#### Data availability

All data relevant to the study are included in the article or uploaded as supplementary information

#### **Figures**

Figure 1: PRISMA diagram of included and excluded studies

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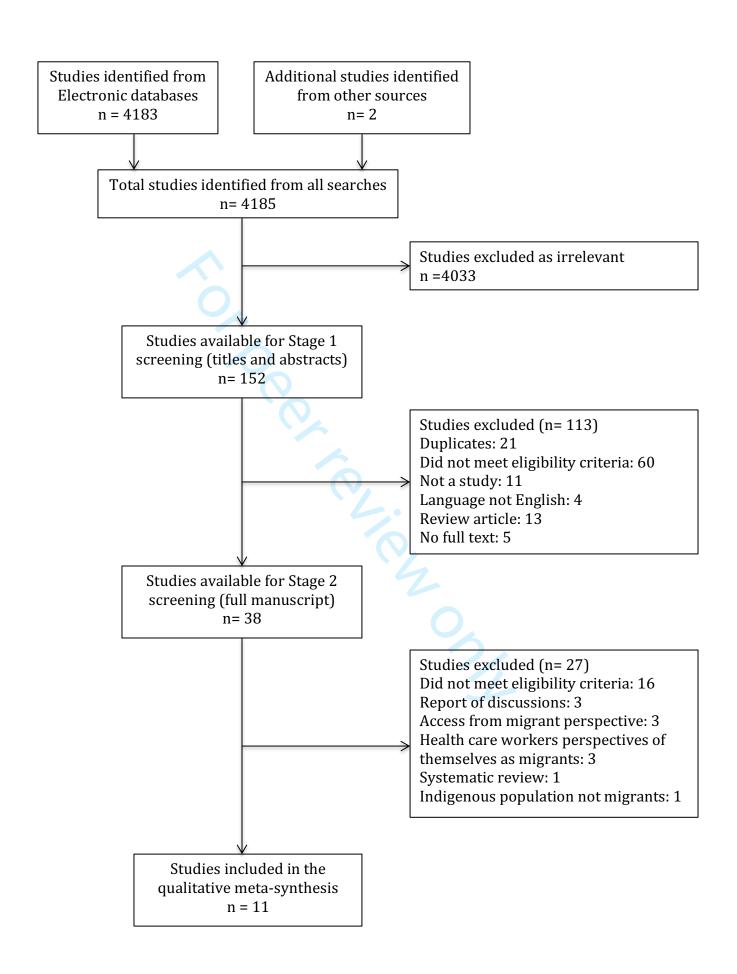
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# Appendix 1: Search terms

Ovid (1946 onwards)

Medline

Exp emergency service, hospital/ or exp emergency medical services/ or emergency care provider or exp emergency medicine/ or exp emergency nursing/ or exp emergency nurse

AND

Exp emigrants and immigrants/ or exp transients and migrants/ or exp refugees/ or exp undocumented immigrants/ or asylum seeker/ or displaced person

436 results

#### **Embase**

Exp emergency care/ or emergency health service/ or emergency medicine/ or emergency physician/ or emergency nursing

Exp migrant/ or undocumented/ or immigrant/ or refugee/ or asylum seeker 445 results

# Psyh Info

Exp emergency services/ or health personnel/ or (accident and emergency) Exp immigrants/ or refugees/ or at risk populations/or asylum seeking 1431

Exp qualitative research/ or surveys/ or telephone surveys/ or mail surveys/ or questionnaires/ or health personnel attitudes/ or social perception Surveys and questionnaires were included in case of using this terminology for qualitative work.

129 results

#### Other databases

CiNahl (1981 onwards)

Exp emergency doctor/ or emergency nurse/ or health care provider/ or emergency department/ or accident and emergency/ or emergency service Exp migrant/or immigrant/ or asylum seeker/ or UM/ or irregular migrant/ or refugee/ or displaced person 0 results

Web of science 'emergency care and migrant' 145 results (6 relevant)

#### PubMed

The Medical Subject Heading (MeSH) search tool was used 'migrant' AND 'emergency care' 225 results

Trip database 199 articles (8 relevant) Google scholar

"emergency care" AND "migrant" AND "qualitative" 2280 results - first 250 searched and then the results became irrelevant TO CONTRACTOR OF THE PROPERTY OF THE PROPERTY

# Reporting checklist for systematic review and meta-analysis.

Based on the PRISMA guidelines.

# Instructions to authors

Complete this checklist by entering the page numbers from your manuscript where readers will find each of the items listed below.

Your article may not currently address all the items on the checklist. Please modify your text to include the missing information. If you are certain that an item does not apply, please write "n/a" and provide a short explanation.

Upload your completed checklist as an extra file when you submit to a journal.

In your methods section, say that you used the PRISMA reporting guidelines, and cite them as:

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			Page
		Reporting Item	Number
	#1	Identify the report as a systematic review, meta-analysis, or both.	1
Structured summary	#2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number	1
Rationale	#3	Describe the rationale for the review in the context of what is already known.	1
Objectives	#4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	1
Protocol and registration	#5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address) and, if available, provide	N/A
	For	peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml	

		registration information including the registration number.	
Eligibility criteria	#6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rational	3
Information sources	#7	Describe all information sources in the search (e.g., databases with dates of coverage, contact with study authors to identify additional studies) and date last searched.	3
Search	#8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	3
Study selection	#9	State the process for selecting studies (i.e., for screening, for determining eligibility, for inclusion in the systematic review, and, if applicable, for inclusion in the meta-analysis).	4
Data collection process	#10	Describe the method of data extraction from reports (e.g., piloted forms, independently by two reviewers) and any processes for obtaining and confirming data from investigators.	4
Data items	#11	List and define all variables for which data were sought (e.g., PICOS, funding sources), and any assumptions and simplifications made.	4
Risk of bias in individual studies	#12	Describe methods used for assessing risk of bias in individual studies (including specification of whether this was done at the study or outcome level, or both), and how this information is to be used in any data synthesis.	10
Summary measures	#13	State the principal summary measures (e.g., risk ratio, difference in means).	N/a
Planned methods of analyis	#14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I2) for each meta-analysis.	N/A
Risk of bias across studies	#15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	10
Additional analyses	#16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml	N/A

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			were pre-specified.	
	Study selection	#17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	Figure 1
	Study characteristics	#18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citation.	6
-	Risk of bias within studies	#19	Present data on risk of bias of each study and, if available, any outcome-level assessment (see Item 12).	10
	Results of individual studies	#20	For all outcomes considered (benefits and harms), present, for each study: (a) simple summary data for each intervention group and (b) effect estimates and confidence intervals, ideally with a forest plot.	10
	Synthesis of results	#21	Present the main results of the review. If meta-analyses are done, include for each, confidence intervals and measures of consistency.	10
<b>)</b>	Risk of bias across studies	#22	Present results of any assessment of risk of bias across studies (see Item 15).	10
	Additional analysis	#23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	N/A
} 	Summary of Evidence	#24	Summarize the main findings, including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., health care providers, users, and policy makers	13
	Limitations	#25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review level (e.g., incomplete retrieval of identified research, reporting bias).	1
) )	Conclusions	#26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	13
	Funding	#27	Describe sources of funding or other support (e.g., supply of data) for the systematic review; role of funders for the systematic review.	16

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# **BMJ Open**

# Beliefs and challenges held by medical staff about providing emergency care to migrants: an international systematic review and translation of findings to the UK context

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<b>Primary Subject Heading</b> :	Emergency medicine	
Secondary Subject Heading:	Global health, Health policy, Public health, Qualitative research	
Keywords:	migrants, ACCIDENT & EMERGENCY MEDICINE, QUALITATIVE RESEARCH, Health policy < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, PUBLIC HEALTH, NHS	

SCHOLARONE™ Manuscripts Beliefs and challenges held by medical staff about providing emergency care to migrants: an international systematic review and translation of findings to the UK context

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#### **Abstract**

# Objective

Migration has increased globally. Emergency Departments (EDs) may be the first and only contact some migrants have with healthcare. Emergency care providers' (ECP) views concerning migrant patients were examined to identify potential health disparities and enable recommendations for ED policy and practice.

# Design

Systematic review and meta-synthesis of published findings from qualitative studies.

#### **Data Sources**

Electronic databases (Ovid Medline, Embase (via Ovid), PsychInfo (via OVID), CINAHL, Web of Science, and PubMed), specialist websites and journals were searched.

# Eligibility criteria

Studies employing qualitative methods published in English. Settings: EDs in high income countries. Participants: ECPs included doctors, nurses and paramedics. Topic of enquiry: staff views on migrant care in ED settings.

# Data extraction and synthesis

Data that fit the overarching themes of "beliefs" and "challenges" were extracted and coded into an evolving framework. Lines of argument were drawn from the main themes identified in order to infer implications for UK policy and practice.

# Results

Eleven qualitative studies from Europe and the US were included. Three analytical themes were found: challenges in cultural competence; weak system organisation that did not sufficiently support emergency care delivery; and ethical dilemmas over decisions on the rationing of healthcare and reporting of undocumented migrants.

# Conclusion

Emergency care providers made cultural and organisational adjustments for migrant patients, however, willingness was dependent on the individual's clinical autonomy. ECPs did not allow legal status to obstruct delivery of emergency care to migrant patients. Reported decisions to inform the authorities were mixed; potentially leading to uncertainty of outcome for undocumented migrants and deterring those in need of healthcare from seeking treatment. If a charging policy for emergency care in the UK was introduced, it is possible that ECPs would resist this through fears of widening health care disparities. Further recommendations for service delivery involve training and organisational support.

Key words: migrants, emergency medicine, qualitative studies, health workers views, systematic review, thematic synthesis, health policy, marginalised populations, charging for NHS services, service access

# Strengths and Limitations of this review

- This review performed a thematic meta-synthesis of qualitative studies to enable a deeper understanding and exploration of ECPs beliefs and challenges surrounding the provision of care to migrants
- All studies reached theoretical saturation
- If the study results did not separate out ECPs responses from other Health Care Professionals (HCPs), they were excluded, potentially missing key data

## Introduction

#### International context

International migration is at its highest ever level and increasing, with the 2017 estimate at 3.4% (258 million people) of the global population, a 49% increase since 2000 [1]. The United Kingdom (UK) experienced significant migration during the 1970s after joining the European Union (EU) and between 1993 and 2015, the foreign born population more than doubled from 3.8 to 8.7 million (7% to 13.5%) with a peak net increase of 336,000 in 2015 during the European migration crisis. The UK immigration figures currently sit among the top five countries in the world [1]. While most migration occurs legally, there were an estimated 533,000 undocumented migrants (UMs) in the UK in 2007 [2,3].

#### **Definitions**

There is no apparent consensus on the definition of a migrant which makes drawing scientific conclusions based on the data challenging [4]. For this review the terminology in Table 1 was used to ensure clarity and consistency.

Table 1: Migrant Terminology

First generation	Foreign-born resident who has become a citizen or
migrant	permanent resident in a new country
Second generation	Naturally born to one or more parents who were born
migrant	elsewhere
Asylum seeker	A person who has left their country of origin and
	formally applied for asylum in another country but
	whose application for refugee status has not yet been
	concluded
Refugee	The asylum seeker has their claim for asylum accepted
	by the government
Undocumented	Foreign-born person with no legal right to stay in the
migrant (UM)	host country. These include: persons who have entered
	illegally, failed asylum seekers, over-stayers (migrants
	who remain in the host country after their resident

permit or visa has been revoked or expired),
undocumented by birth (born into a family who have no
legal right to stay)

# Migrant health as a public health concern

The majority of migrant populations are healthy when they arrive, however, a number, particularly, refugees, asylum seekers and UMs suffer a disproportionate burden of morbidity [5]. Providing effective healthcare for migrants is of key public health importance, not only for treating the individual, but also in reducing the spread of communicable disease and the impact of future non-communicable diseases on the economy.

The key role of Emergency Departments in migrant healthcare

The UK National Health Service (NHS) emergency services play a key role in the nation's public health as the first and only contact some migrants may have with the health system. However, emergency departments (EDs) are overstretched with yearly increases in patient presentations. The 'four-hour target', a proxy measurement of system effectiveness has not been met since 2015. Some UK politicians have quoted migrants as a causative factor [6] which has fed a media debate about eligibility for care. A recent systematic review, has demonstrated that in Europe, migrants utilise EDs more than the native population, often for lower acuity presentations [7]. Most migrants, however, comprise a healthy labour force, and make a positive overall contribution to the exchequer.

The issue of charging non-British citizens for emergency care

In an effort to recover costs to the NHS, charging non-British citizens for secondary healthcare is the current practice, as per the 2016 Immigration Act. Extension of this into emergency care has been proposed, challenging the NHS's three core principles that it should meet the needs of everyone, it should be free at the point of delivery, and it should be based on clinical need, not on the ability to pay [8]. Health care advocacy groups have warned about the potential impact on the most marginalised populations [9,10]. In this climate of the pressurized ED where migrants are portrayed as a burden, and the identification of paying 'customers' and UMs is expected, ED providers' views towards migrant patients could point to whether health disparities exist, as in the way patients are handled or dealt with.

# Staff attitudes and cultural competencies

There are no qualitative studies examining the ECP perspective of providing emergency care to migrants in the UK. In Denmark, two surveys based in the ED found that less satisfaction was expressed by health care professionals when patients were non-Western, and when the visit was felt to be less relevant [11]. Most of participants knowledge on migrants came via the media [12]. Other studies identified challenges surrounding language and cultural differences, time constraints, lack of awareness by healthcare staff of what health services were

available to the migrant—especially undocumented migrants—and lack of health care connectivity [13]. Although some HCPs have expressed desirability for cultural competence, some felt it was the responsibility of migrants to adapt to the local context [14–16]. "Cultural competence" has been defined as, "an overall ethos of awareness and openness towards diversity," as opposed to assumptions concerning the values or behaviour of particular groups [14].

#### Study aims and objectives

The primary objective of the study was to synthesize findings concerning ECPs beliefs and challenges for providing health care to migrants as found in reports of research studies based in high-income settings. The notions "beliefs" and "challenges" were based on the results of pilot searches which suggested these meta-themes as a good way of organizing the extant literature. "Beliefs" is here shorthand for staff views and opinions in relation to the perceived presentation, motivations and behaviour of migrants (according to the definition presented above) in EDs. What do migrants need? What is the clinical presentation? How do they conduct themselves? "Challenges" relates more to the staff or institutional response, or the "fit" (or lack of it) between system or cultural expectations and migrant behaviour. Pertinent issues would include language translation, and presence of relevant identity documents (as required by individual services).

A secondary aim was to relate the findings to current NHS policy and practice. The issue of charging patients in ED, a current UK policy proposition, was to emerge as an underlying consideration in the extracted findings from the studies. In a process the authors have labelled "translation," the study findings were therefore reflected against these current proposals in order to imagine the potential consequences of charging migrants for ED care in the UK or other high-income country contexts.

# **Methods**

A systematic review of studies of ECPs attitudes to migrant care in high-income country settings was undertaken. Qualitative meta-synthesis was used as an organizing and analytic frame for findings extracted from included studies. Qualitative studies were selected from high-income settings such as (Western) Europe, North America and Australasia to facilitate potential generalizability to the UK. The specific inclusion and exclusion criteria are shown in Table 2 below.

Table 2: Inclusion & exclusion criteria

Inclusion Criteria	Exclusion Criteria			
Studies published from any time point				
English Language	Non-English language			
Primary qualitative studies using	Non–qualitative studies e.g. surveys &			
qualitative methods of data collection	questionnaires, quantitative			
and analysis, including semi-	Systematic reviews			
structured interview studies, focus				

groups, ethnographies and participant observation	
High-income setting	Low and middle income settings
Emergency care provider = nurse,	Other secondary health care
doctor, paramedic, health care assistant	providers seeing emergency patients e.g. doctors assessing acute stroke or orthopaedic surgeons assessing fractures, even if in the ED. Primary health care providers
Based in the ED or 'pre-hospital emergency' field	Out of the ED or pre-hospital environment e.g. cardiologists performing PCIs in a catheter lab, primary care, outpatients, hospital wards

# Information sources

The search for relevant texts involved databases, websites, conference proceedings, abstracts, policy documents and book chapters [17]. The bibliographic databases searched were: Ovid - Medline, Embase, PsychInfo; CiNahl, Web of science, PubMed, Trip database and Google scholar. The Websites of World Health Organisation (WHO), The Migration Observatory, the International Organisation for Migration, the Department of Health and Social Care (UK), Public Health England and Doctors of the World were searched, along with the Emergency Medicine specific websites: Life In the Fast Lane and RCEM learning.

Backward and forward searching through the references lists and the citations for all eligible papers was undertaken to identify any further studies. A hand search through the three highest impact emergency care journals: the UK Emergency Medicine Journal, the European Journal of Emergency Medicine and the Journal of Emergency nursing, was conducted as well as a search for unpublished grey literature.

The primary searches were performed between 1st February 2018 and 31st March 2018. The bibliographic database searches were re-run during the article submission process to find additional relevant material. In this manner, Ovid Medline, Embase (via Ovid), PsychInfo (via OVID), CINAHL, Web of Science, PubMed, Trip Database and Google Scholar were all searched again (using the original searches) on 16th March 2019 and no additional studies were found.

#### Search

Key databases were searched using a refined range of keywords and terms individually and then in combination using Boolean operators "AND / OR" to ensure searches were sensitive and specific [18,19]. Although specifically looking for beliefs and challenges, broader search terms were used. An example of the Medline search is shown in Table 3 below (Further search terms in appendix).

Table 3: Medline search

Database	Ovid (1946 onwards) Medline
Search	Exp emergency service, hospital/ or exp emergency medical
terms	services/ or emergency care provider or exp emergency
	medicine/ or exp emergency nursing/ or exp emergency nurse
	AND
	Exp emigrants and immigrants/ or exp transients and
	migrants/ or exp refugees/ or exp undocumented immigrants/
	or asylum seeker/ or displaced person
Results	436

# Study selection process

Two reviewers (HLH, GDW) independently scanned titles. If relevant, abstracts were then screened against the inclusion criteria. Full texts were obtained for the screened list of abstracts to further assess eligibility. Both authors assessed their inclusion for reliability. Several articles were reported under the umbrella of "EUGATE" (Table 4). These were treated as different studies as they employed different participant sub-sets and analytical sampling frames.

# Data extraction process

Study data was collected and tabulated in an Excel spreadsheet. Where studies included other populations, such as General Practitioners (GPs), only results clearly pertaining to ECPs were extracted. Following a pilot phase, data was extracted by HLH.

To facilitate the systematic synthesis of results, all extracted data were inputted into an Excel spreadsheet under two columns: 'beliefs' and 'challenges'. Papers were read line-by-line, relevant lines were extracted and entered under the headings and coded into themes, akin to framework analysis in primary qualitative research [20]. Subsequent studies were coded into pre-existing concepts and new ones were formed when possible. The papers were re-read several times to ensure all data was extracted and codes were revised if new information was found that required a modification. The findings from this iterative process were discussed between both authors on a periodic basis in order to refine the coding schema and conceptual understanding of the themes.

# Quality appraisal

All studies were subject to quality assessment scoring as per the qualitative Oxford Critical Appraisal Skills Programme (CASP) assessment tool of ten questions. Only studies that answered 'yes' to the first two screening questions were included [21]. Although a total CASP score out of ten was given for each study (see Table 4), due to the nature of qualitative research the scores were not used to weight the papers. Papers were assessed according to ability to answer the research question [18].

# Synthesis of results

Codes were grouped inductively into crosscutting themes to enable deeper interpretation of what the beliefs and challenges were. A meta-synthesis was conducted by aggregating and summarizing the studies in order to produce themes that could introduce larger interpretations into how the beliefs and challenges could affect EC provision in the high-income country context [22]. Drawing upon this synthesis, a translation to the UK NHS context, with reference to other literature, law and policy was undertaken.

Patient and Public Involvement

Patients and the public were not involved in this review.

# **Results**

A total of 4185 studies were found of which 11 were deemed relevant and included. The PRISMA flow diagram (Figure 1) below demonstrates the search process with reasons for study exclusion [23].

Study characteristics (Table 4)

11 qualitative studies, published between 2003 and 2015, were included: one from the US and the remainder from Western European countries. Four studies came from the EU funded 'Best practice in Health Care Services for Immigrants in Europe' (EUGATE) study group.

Table 4: Study Characteristics

Citation	Topic	Participants	Migrant definition used	Methods	CASP score (/10)	Key themes or findings	Implications
Ozolins & Hjelm K, 2003 Sweden [24]	Nurses' experiences of problematic situations with migrants in emergency care in Sweden	49 nurses: Emergency, Anaesthetic, ICU, theatres	Assumed migrant	Explorative using questionnaire asking for written 'thick descriptions'  Naturalistic paradigm - to develop theory	5	9 themes: 1) Behaviour 2) Language 3) Relatives 4) Reliance on authority 5) Organisational factors 6) Gender 7) Threatening situations 8) Previous experiences of violence 9) Natural remedies	Main problem is communication - language and cultural.  Interpreters and training programmes important
Hultsjo S & Hjelm K 2005 Sweden [25]	Immigrants in emergency care: Swedish health care staff's experiences	35 nurses: 12 emergency ward, 12 ambulance service, 11 psychiatric ward	Migrants - born outside Sweden	Explorative, Semi- structured focus group Krueger & Casey analysis	8	9 themes: 1) Asylum seeking refugees, 2) Cultural behaviours 3) Relatives 4) Gender 5) Organisational factors 6) Language 7) Perceived threatening situations 8) Earlier experiences of migration 9) Reliance on HC staff	Main problems experienced by HCP were caring for asylum- seeking refugees
Jones S	Emergency	5 Emergency	Mexican	Interviews with	9	Key themes were: Language	HCP should receive

2008 heritage open ended barrier. Continuity of care training on language nurses caring nurses. **USA** regardless and limited cultural experiences questions and culture. of Translators should [26] knowledge with Mexicancitizenship **Culture Care** be available 24 hours American patients status, 1st Theory a dav or 2nd generation Health 49 To provide quality of Terraza-Semi-structured 7 Providing healthcare caused **Immigrants** Nunez R et professional professionals & - Bolivia. interviews and distress, overload and care, interventions to al. perceptions managers: China, focus groups. exhaustion. Problems: reduce 2010 Communication, specific regarding primary and Morocco. communication and healthcare secondary care. Romania. Narrative content immigrant characteristics. culture barriers are Spain [27] provision to 7 ER doctors -Gambia analysis inappropriate use of requested. demographics immigrants in services. HCP attitudes. Catalonia unclear organizational, structural deficiencies Priebe S & Good practice 240 HCPs. First Structured 9 8 Problems: Language, **HCP** in different Sandhu S et in health care From each generation Interviews - open difficulty arranging care. services experience social deprivation. similar difficulties al. for migrants: country 3 ECPS migrants. questions 2011 (48), 9 GPs traumatic experience, lack and similar views on views and Persons of familiarity with health Europe experiences of (144), 3 mental Thematic content good practice. born (EUGATE health HCP outside the analysis care system, cultural diff, Implementing good care professionals (48)understanding of illness and practice needs study) country of [28] in 16 European treatment, negative resources, current attitudes amongst residence countries organization, aged 18 staff/patients, lack of access training and positive to medical history. attitudes 65 years. Priebe S & Good practice 48 ECPs. 3 First Kev themes: Structured 9 To improve care need all of translator Bogic M et in emergency ECPS from each Interviews - open Language, Cultural factors, generation

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al. 2011 Europe (EUGATE study) [29]	care: views from practitioners	of 16 countries	migrants. Persons born outside the country of current residence aged 18 - 65 years.	questions Thematic content analysis		treatment expectations and system understanding, access, staff-patient relationships, resources, migration stressors, access to medical history	services, cultural training, guidelines, organisational support.
Jensen N K et al. 2011 Denmark (EUGATE study) [30]	Providing medical care for UMs in Denmark: what are the challenges for health professionals	12 HCPs: 3 ER physicians, 9 GPs; 3 managers psychiatric unit	UMs - without a valid residency permit	Structured Interviews - open questions  Qualitative content analysis - Graneheim and Lundmann	9	EM - care no different from treatment of another person. Complicated by lack of medical records and contact person	Lack of guidance means HCP are unsure how to deal with UMs thus leaving it to the individual's decision
Biswas D et al. 2011 Denmark [31]	Access to healthcare and alternative health- seeking strategies among UMs in Denmark	8 ECPs: 3 head nurses, 4 nurses. 10 UMs.	UMs	Semi-structured interviews and observations  Malteruds principle for systematic text condensation	10	Willingness to treat despite migratory status. Challenges: Language, barriers, false identification, insecurities about correct standard procedures, not always being able to provide appropriate care.	Need for policies and guidelines to ensure access for UMs and clarity to HCP
Dauvrin M	Health care for	240 HCPs.	UMs	Structured	9	Key themes: Access	Organisation, local

et al. 2012 Europe (EUGATE study) [32]	irregular migrants: pragmatism across Europe. A qualitative study	From each country: 3 ECPs (48), 9 GPs (144), 3 mental health HCP (48)		Interviews - open questions  Thematic content analysis		problems, communication, legal complications. ECP's reported less of a difference in care for undocumented versus documented migrants. Notifying authorities was uncommon	flexibility and legislation might help improve care for UMs
Gullberg F & Wihlborg M 2014 Sweden [33]	Nurses' experiences of encountering UMs in Swedish emergency healthcare	16 nurses: 5 ECPs, 5 emergency psych, 2 delivery, 2 primary health care, 2 NGO.	UMs	12 semi structured open-ended interviews  Phenomenographic	9	Key themes:  1) Nurses confused by migrant status and social existence. 2) Conflicts in encounters - identification system, judgments & emotional reactions 3) Shifts within & between arbitrary boundaries - unclear conditions for interaction, creative manoeuvring	Guidelines, structural support and increased training for nurses requested

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Kietzmann D et al. 2015 Germany [34]	Migrants' and professionals' views on culturally sensitive pre-hospital emergency care	41 migrants, 20 HCP - 15 ECPs in exec positions, 3 psychologists, 2 medical ethics	Migrants	Semi- structured individual interviews  Qualitative content analysis by Mayring	7	6 categories from the ECPs: importance of basic cultural knowledge, awareness, attitude, empathy, ambiguity tolerance, communication skills.	8 recommendations: reflecting on self, sharing cultural knowledge, improve basic social competencies, communication skills, interpreters, transparency	
reer review only								

#### Risk of bias

First and second generation migrants were studied, however, as how ECPs identified them as such was unclear, the risk of stereotyping was evident. Only eight of the 11 studies detailed the decision behind choice of population, stating the reasons as migrant load and ECP exposure to migrants [26–33]. Populations of high migrant contact may demonstrate more compassionate behaviour than areas of less contact or, be able to self-regulate whether an experience is specific to a migrant. Conversely high burden areas may feel under higher pressure, with limited resources and feel more negatively towards migrants. Only three papers commented on the origin and ethnicity of the ECP [26,33,34]. It should be acknowledged that an ECP from a migrant background might respond more favourably towards a migrant patient as compared with a non-migrant ECP. One study [24] used an explorative questionnaire with open-ended questions, enabling thick descriptions but missing opportunity to clarify points, which the remaining studies using interviews benefitted from. However, these risked response bias, such as through not admitting the denial of care to an UM for risk of seeming socially undesirable.

Five studies asked about experiences caring for migrant patients, and five asked for specific problems migrants may pose, suggesting that immigrants are already problematized and perhaps leading to more negatively biased responses. Terraza-Nunez [27] was the only study to describe triangulation of results through comparing data from different sources and groups of informants. All qualitative studies by their nature risk recall bias and there was no mention of self-reflexivity in any of the papers, which could create interviewer bias. All studies reported that theoretical saturation was reached.

Most studies were undertaken in EU countries and this, together with the issues raised above, indicates that if the findings were easily synthesizable, there is fairly high confidence that they represent a valid picture of the perceptions of ED staff working in a Western European context.

# Study Quality

The explorative questionnaire study returned the lowest CASP score (see Table 4), perhaps highlighting the hybridized nature of the method, although an openended questionnaire schedule might be considered "qualitative" on a continuum. The findings were nevertheless found to fit with those from other studies and the article was not excluded. The remaining studies scored between 7 and 10 according to the CASP checklist. Typically, articles failed to discuss researcher-participant relations; although this is not unusual in applied research concerning health services. Overall, the reporting quality of the studies was high, with seven of the 11 (63.63%) scoring 9, 10 or higher.

# Thematic synthesis results of the beliefs and challenges

Three overarching analytical themes were found: cultural competence; system organisation; and ethical dilemmas. These are described below.

# Cultural competence

On the basis of their experiences of treating migrant patients, difficulties were identified around potential clinical misunderstanding due to the social distances often involved. These issues coalesced around communication, (associated) problems in the clinical reading of patient behaviour and differing social expectations. The latter principally involving inter-personal gender dynamics and respect for medical authority. Staff felt this power imbalance and constructed stereotypes of migrants as they encountered the difficulties outlined below.

#### Language

Communication difficulties meant that some ECPs felt unable to make an assessment of severity of illness leading to over or under investigation and potential mismanagement [25]. For example, in one case it was unclear whether a patient was unconscious or just did not understand Swedish [24]. Struggling to articulate advice to the patient led to frustration on both sides [25,30]. The use of relatives or close friends as interpreters was felt to be sub-optimal [24–26]. The use of professional interpreters was stated as good practice [24–26,28,30,34] although accessing them 24 hours a day was difficult [26].

#### **Behaviour**

ECPs found certain migrant behaviours difficult to comprehend. For example, screaming during venesection [24] and staying silent following bereavement were perceived as over and under reactions by ECPs [26]. This risked mismanagement, such as the case of a migrant suffering a cardiac event who was believed by the ECP to be over exaggerating to keep a single room [24]. Or the migrant who complained of chest pain believed to have had a heart attack, but was actually displaying an acute stress response to past events of torture and conflict [25]. Aggressive and problematic patient behaviour was noted by ECPs [24], however two studies also reported, negative attitudes and hostile behaviour by staff towards migrant patients [28,29].

#### Gender

The importance of migrant gender dynamics and need to find health care providers of the appropriate sex was respected by ECPs. However, ECPs found male migrants speaking for female patients uncomfortable, and, female ECPs found male migrants who lacked trust in their abilities, frustrating [24,25,32]. Importantly, in an emergency, ECPs stated that delivering emergency care would take priority over finding an ECP of the required gender [29].

#### Respect for authority

Some Swedish emergency nurses perceived that migrants had less respect for them compared with for physicians, by questioning their competence and refusal of treatment [24,25,33]. Conversely, nurses managing Hispanic patients in the US [26] experienced only appreciation towards them. This is in line with Hispanic

cultural ethos of *respeto*, towards authority, and suggests that challenges are likely to be migrant specific, or related to the nature and culture of the host nation [26]. ECP's stated that ethnically diverse ECPs are beneficial to managing a migrant population [28].

#### Relatives

Large numbers of relatives created a disruptive environment and disagreements on care between the ECP and relatives, was occasionally described, creating a hindrance to optimal patient care [24,25]. However, ECPs did acknowledge the importance of strong family links for gaining a collateral history and social support [26,28,29].

#### **Stereotypes**

ECPs often portrayed migrants, in particular UMs, as being of low socioeconomic status, perhaps struggling to integrate, engaged in misuse of drugs and alcohol, sex work or crime; reflecting their socially marginalized and stigmatized status [25,28,29]. Some perceived UMs as a burden on society through not working or having a child to attempt to gain access to (in this case) Swedish citizenship. However, some ECPs were concerned at being portrayed as a racist by a migrant if their care seemed not to be fairly prioritized [25]. Interestingly, ECPs felt that migrants perceived them to be in positions of power, holding the autonomy to make decisions about their health care as well as their migration status (through access to documentation or conversely power to report to the authorities). [28,33].

# System organisation

The difficulties and stereotypes described above led ECPs to form explanations, not only for migrant health seeking behaviour and presentation, but also for the legal or organizational contributors to the perceived behaviour. The primary issues concern problematics related to the timely use of ED by migrants, seen as realistically the "only option" for healthcare and the opacity of arrangements around an individual migrant's legal status and access to other health services.

#### Migrants use of the health system

ECPs constructed a view of migrants as having lower education and health knowledge, thereby lacking understanding of the host country's health system. They associated this with perceived sub-optimal health behaviours. They were more likely to call an ambulance or attend ED frequently for non-acute medical problems [24,25,27,29]. Other perceived migrant behaviours, such as late presentation, were seen to reflect social vulnerability and reduced primary care access [30]. Interestingly, negative media portrayal of migrants was also seen as a factor for migrants not wanting to appear troublesome by attending EDs [28]. ECPs recognized that for UMs, fear of being reported to the authorities delayed them from seeking health care [26–28,31,33] and were frustrated that this delay sometimes led to deterioration of illness [29]. ECPs felt that certain health conditions were not disclosed, for fear of requiring referral to inaccessible

services [31] and that often the ED is the only option for UMs to seek healthcare [28].

# Organisational support for undocumented migrants

ECPs expressed uncertainty on providing emergency and ongoing care to UMs due to a lack of or unclear guidance for the circumstances of no residency status or insurance [24,27–30,33]. Guidelines in existence were open to interpretation, leading to subjective management and potential for ECPs to exert 'power' in decision making [30,33]. ECPs recognized this lack of consistency would lead to anxiety by UMs when accessing healthcare. UMs were often noted to not attend appointments for fear of being reported to the authorities [33]. ECPs that attempted referral of UMs onto the welfare system found that the migrant was not adequately supported, which increased ECP disillusionment with the system [24].

#### Ethical dilemmas

Migrant patients were seen to impose ethical dilemmas on ECP staff in EDs. In common with views expressed above, it was universally accepted that the decision to provide care would always be taken without other considerations, although a decision to inform the authorities appeared to operate more on a case-by-case basis which took other factors into account. Other dilemmas surfaced around fair use of health resources in the context of underfunding and where some patients were perceived to be "gaming" the system to assist with applications, e.g. for refugee status.

# Immigration status does not affect emergency care

ECPs claimed that immigration status would not affect their decision to provide emergency care [26,30–33]. However, legal versus ethical and professional conflicts are experienced by ECPs on whether to inform the authorities about UMs. Some ECPs removed the decision from their role believing it was not their responsibility to decide [31,33] for example one such attitude taken was '[I] don't ask so [I] don't have to make the decision' [30]. There were some situations where ECPs were more likely to inform the police, such as when they suspected a serious crime was involved or if the patient was a danger to themselves [29,30,32].

#### Health professionals as gate-keepers

ECPs recognised the increased resources, such as diagnostic tests and administrative time, required to manage non-resident migrant or UM patients [25,28–30,32]. ECPs therefore felt compelled to consider the ethics of rationing the service. In some contexts, pre-payment of the full fee was demanded in cash, in accordance with rules for foreigners [33]. In others, health services, such as non-governmental organisations (NGOs) were utilized as an alternative provision of care [29,32]. Many ECPs felt that more funding for this patient group would improve their ability to provide adequate patient care [29].

# Gaming

Some ECPs perceived asylum seekers to feign illness and fake documentation in order to obtain medical certificates to support asylum and residency permit applications. Some ECPS felt this behaviour to be dangerous and foolish, however, many expressed helplessness at being unable to assist [24,25,33]. Individual clinicians attempted to game the system using fake social security numbers, submitting laboratory samples in their own name, and prescribing cheaper (or giving out free samples) of medicine [28–30,32].

#### Discussion

This study set out to review and synthesize findings related to the perceived "beliefs and challenges" of migrant care, as articulated by ECPs in findings of published, primary qualitative studies. Eleven studies published 2003-2015 were included, although one (which was borderline according to both inclusion criteria and CASP score, see Table 4) was only partly qualitative in that an openended questionnaire was used. The remainder were of high reporting quality and most were undertaken in Western European countries. The thematic synthesis of findings extracted from the primary studies found that they comprised three main themes: cultural competence, organizational contributors to the perceived problematics of migrant care and ethical dilemmas. The question of charging patients emerged as an issue which cut across several aspects of clinical management, although ECPS were adamant that in an emergency, giving treatment would always trump other considerations.

#### Limitations

Studies which included ECPs but did not separate out their responses from other health professionals were excluded, potentially missing valuable material. However, the authors argue that this focus strengthens the validity of the findings so far as ED workers in Western European contexts are concerned. This focus means it is also important to stress that the staff views expressed in the studies relate solely to users of EDs, who are likely to be unrepresentative of the total migrant population in the local area in question. There was mixed representation of different ECP occupational groups across the studies, potentially biasing conclusions made. Only studies of ECPs were included in the review and the beliefs of counsellors, administrative staff, receptionists, porters and others who may influence the migrant experience of the ED and decision-making around the use of emergency care were not considered. Finally, the data was extracted by one author only, although in practice the review and synthesis process entailed reading each included study report several times over.

#### <u>Findings</u>

All ECPs described the cultural challenges of a language barrier, migrant behaviour that was unusual for the host country, and, gender dynamics. In some instances challenges were met relating to migrant respect for authority, and the number of relatives. ECPs expressed that these challenges can lead to frustrations, delays in care, and risked the mismanagement of patients. These

findings are not unsurprising, and similar issues have been described frequently in UK literature going back over 25 years [35]. However, this apparent lack of progress is concerning. Stereotyping of migrants was largely evident and it is well documented that this can occur implicitly in high-pressure crowded environments, such as the ED [36]. It was interesting that migrants were often stereotyped as being from the lower socio-economic classes and of marginalized status [33], which, although true for some populations, the majority will have regular jobs and contribute to society. This perhaps reflects the wider societal concerns about asylum seekers and economic migrants who enter illegally, e.g.in relation to the 2010 Arab Spring where ECPs may have had firsthand experience of a large influx of refugees and exposure to negative media footage.

ECPs perceived that some migrants, particularly from lower socio-economic backgrounds, lacked understanding of the host country's health system, leading to inappropriate access of services, supporting the finding in a recent systematic review of migrant use of EDs in Europe [37]. However, it is important to note that this behaviour is not only isolated to migrant groups but is seen in lower socio-economic populations lacking health insurance [38]. ECPs also expressed a lack of migrant health knowledge, however, the concept of a parallel migrant care health system, was rejected due to the risks of an unintegrated service that worsens social isolation, an opinion shared by the WHO [29,39,40].

With over 300 different languages spoken by London's school children in 2015 [41], and an estimated 500,000 UMs, maintaining cultural competence and organizational support within the NHS is essential. The ECPs in this review recognised the need for this [24–34], however, only a minority [28–30,32] reported that their service had sufficient human and technical resources to support it, suggesting an inability to meet rapid migration changes. Within the UK, equality and diversity training for health care workers, interpreter services and resources such as the Department of Health and Social Care (DHSC) 'migrant health' webpage [42] are among initiatives supporting clinicians. Additionally, one quarter of the NHS health workforce are migrant born [43]. Importantly, this workforce diversity improves compassion and the skills required to care for migrant patients [44]. Unfortunately, anecdotal evidence since the 2016 EU referendum suggests that increasing numbers of migrant workers are leaving the NHS, although how this specifically impacts on EDs is as yet unknown given wider pressures on the service.

# Ethical dilemmas when treating undocumented migrants"

All ECPs in this review reported a lack of guidance or support in the context of law and governance policies relating to the management of UMs. The Geneva Declaration, 1948 stated that, 'It is the duty of a doctor to be dedicated to providing competent medical service in full professional and moral independence, with compassion and respect for human dignity' [45]. However, the ECP faces an ethical, moral and legal dilemma: a choice to treat an UM could move scarce resources away from someone else in greater need. On the other hand, the rationing of resources and not treating a UM risks widening health

inequalities. A choice to inform the authorities will almost certainly mean deportation. Emergency care to migrants was not withheld at any of the study sites, even within the chargeable contexts (Finland, Sweden, US). However, for UMs, there was mixed opinion on informing the authorities and willingness to 'game the system' to enable on going care.

The Home Office actively seeks undocumented migrants in the UK and formally used a data sharing agreement with NHS Digital to collect relevant data. This was abandoned following interventions from health and civil liberties groups [46].

Reliance for recognising and reporting UMs now falls upon health care professionals when UMs access the health system. The General Medical Council and Home Office both state that the decision to report is a balance between patient confidentiality and their medical needs, weighted against the publics' interest [47].

UK policy context: NHS emergency care charging policy

To help alleviate over-stretched emergency departments of unnecessary attendances and to increase NHS funding, the DHSC (formerly Department of Health) has advised introducing a charging policy for non-resident migrant patients accessing emergency care [48]. Several organisations (British Medical Association (BMA), RCGP and Doctors of the World (DoW)), state that there is limited evidence that NHS use by migrants is a substantive problem [49,50]. Activist groups such as DoW and 'Docs not cops', have campaigned aggressively to oppose these proposals [51,52] stating that the policy challenges the NHS's core principles [8], will affect the most marginalized populations, through inability to afford a chargeable service, leading to widening health care disparities and impacting upon public health.. Stereotyping is evident from this review and the identification of chargeable patients [53] risks implicit racial profiling by ECPs, an issue which the 'UK Guidance on implementing the overseas visitor charging regulations' strongly advises against [54]. The views of ECPs in this review suggest that if this policy was introduced there would be likely moral, ethical and procedural confusion for ECPs. This could lead to opposition, resistance or variable implementation of the policy for possibly spurious reasons. Currently, the medical union Doctors in Unite support health workers who refuse to check migrant patients' eligibility for NHS care before treating them, and who may face disciplinary action for doing so [55].

# The evidence base in migrant health

A bibliometric analysis of global research in migrant health pointed to the over-representation of studies in "high income destination countries" [56], although only 1 of the cited articles was based in an ED. The reasons for the lack of such research in the UK are unclear, but future studies could be used to validate the findings presented here. The proposed "Million Migrants study of healthcare and mortality outcomes in non-EU migrants and refugees to England," [57] and other initiatives around the UCL-Lancet Commission on Migration and Health, will

provide better intelligence on which to base decisions about health services more broadly [58].

# Meta-synthesis

Two interpretations were drawn from putting the findings of the studies together. The first concerns the pre-eminent role of clinical autonomy in the delivery of migrant health care in the ED. A line of argument that follows from this realisation is that documentation is a secondary consideration in emergency care. Questions arise about the outcomes which could arise from instituting a charging policy.

#### Clinical autonomy

A migrant, with reduced knowledge of the host country's health system and culture, will be in a position of vulnerability. A migrants' experience will depend on the ECPs knowledge and willingness to make adjustments for them. The constraints of the 'system', that is, a pressurized ED may lead to reduced tolerance for adapting to the needs of migrants and potentially increase healthcare disparities. However, importantly, ECPs will not allow culture or tradition to impact on immediate life-saving treatment.

• Immigration status does not affect emergency care delivery by ECPs For UMs the ED may be their only option for health care. Despite the ethical, moral and legal dilemmas experienced by ECPs when managing migrant patients, when it is an emergency ECPs will act in the patient's best interest. It is extremely unlikely that a policy to identify chargeable migrants would be accepted by ECPs. However, the variation in ongoing health care response and the decision on whether to report an UM to the authorities will continue to reinforce the barriers for UMs to seeking healthcare.

#### **Recommendations**

From this review, recommendations for health service providers and policy makers are outlined in Table 5 (below).

**Table 5: Recommendations** 

Recommendation 1	Improved awareness of health care disparities through
	regular context specific migrant training
Recommendation 2	Training on contextually appropriate migrant cultures
	and specific health conditions
Recommendation 3	Cultural and organizational support e.g. interpreters
	available 24hours a day
Recommendation 4	Advice for ECPs on NHS system organisation
Recommendation 5	Accessible guidance on the law and regulations that
	affect the delivery of care to undocumented migrants
Recommendation 6	Awareness campaign for undocumented migrants on the
	law and ethical boundaries that ECPs are held to
Recommendation 7	Implementation of a charging policy into emergency care
	should not occur without wide professional consultation

and a full public health assessment of the impacts on
undocumented migrants and wider communities

#### **Conclusion**

This is the first qualitative meta-synthesis of ECP perceptions of beliefs and challenges to the delivery of emergency care to migrants within developed settings. The key findings that cultural, organisational and ethical barriers exist to providing optimal care are not insurmountable. However, the care delivered by ECPs will depend on their clinical autonomy and ethical stance. Charging within UK EDs appears difficult to implement against the context of the evidence presented within this review.

Several avenues for further research are indicated, beginning with a UK study in the same field, which would also assist with validating the findings of the approach adopted here. In general, there would be value in comparative studies which move beyond the general category of "migrant" to understand the health needs of different groups. Future studies might also include the perspectives of administrative staff, who are usually the first point of contact with a patient. Finally, studies of the effects of staff views or attitudes on the health outcomes of migrant patients would help to evaluate training or initiatives, e.g. aimed at furthering the cultural competencies of NHS or other health service staff.

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# **Contributorship statement**

HLH conceived the idea for the review as part of a Masters dissertation. HLH conducted the review and analysis under the supervision of GDW. HLH wrote the manuscript with support and input from GDW.

#### **Conflicts of interest**

The Authors declare no conflicts of interest

#### **Author statement**

No other Author's or contributors were involved in the writing of this manuscript

#### Data availability

All data relevant to the study are included in the article or uploaded as supplementary information

#### **Figures**

Figure 1: PRISMA diagram of included and excluded studies

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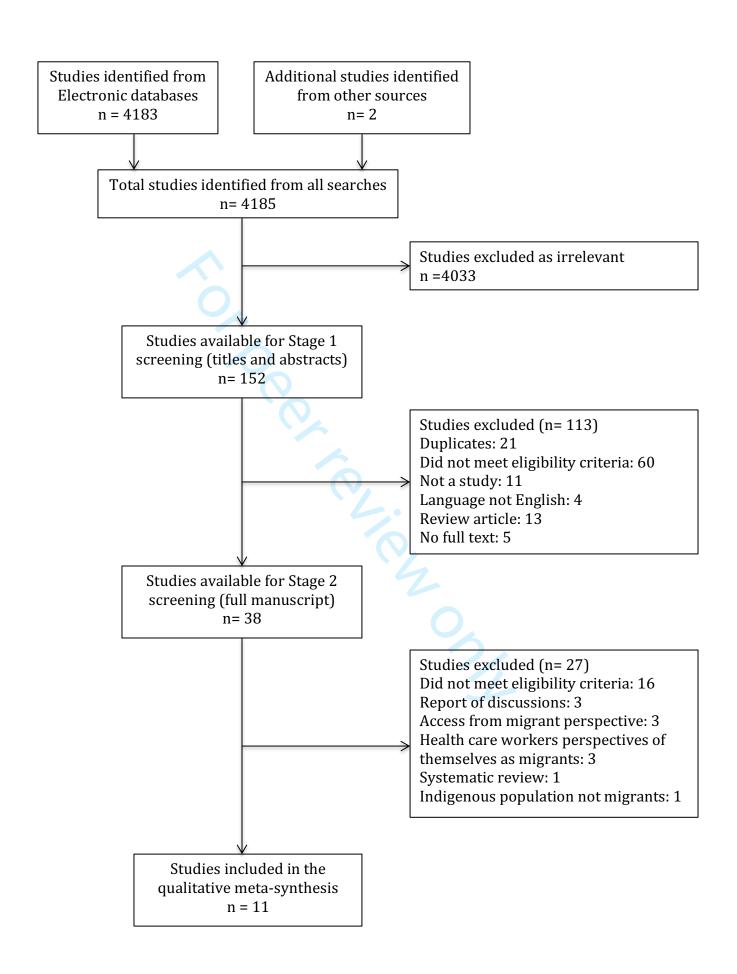
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# Appendix 1: Search terms

Ovid (1946 onwards)

Medline

Exp emergency service, hospital/ or exp emergency medical services/ or emergency care provider or exp emergency medicine/ or exp emergency nursing/ or exp emergency nurse

AND

Exp emigrants and immigrants/ or exp transients and migrants/ or exp refugees/ or exp undocumented immigrants/ or asylum seeker/ or displaced person

436 results

#### **Embase**

Exp emergency care/ or emergency health service/ or emergency medicine/ or emergency physician/ or emergency nursing

Exp migrant/ or undocumented/ or immigrant/ or refugee/ or asylum seeker 445 results

# Psyh Info

Exp emergency services/ or health personnel/ or (accident and emergency) Exp immigrants/ or refugees/ or at risk populations/or asylum seeking 1431

Exp qualitative research/ or surveys/ or telephone surveys/ or mail surveys/ or questionnaires/ or health personnel attitudes/ or social perception Surveys and questionnaires were included in case of using this terminology for qualitative work.

129 results

#### Other databases

CiNahl (1981 onwards)

Exp emergency doctor/ or emergency nurse/ or health care provider/ or emergency department/ or accident and emergency/ or emergency service Exp migrant/or immigrant/ or asylum seeker/ or UM/ or irregular migrant/ or refugee/ or displaced person 0 results

Web of science 'emergency care and migrant' 145 results (6 relevant)

#### PubMed

The Medical Subject Heading (MeSH) search tool was used 'migrant' AND 'emergency care' 225 results

Trip database 199 articles (8 relevant) Google scholar

"emergency care" AND "migrant" AND "qualitative" 2280 results - first 250 searched and then the results became irrelevant TO CONTRACTOR OF THE PROPERTY OF THE PROPERTY

# Reporting checklist for systematic review and meta-analysis.

Based on the PRISMA guidelines.

# Instructions to authors

Complete this checklist by entering the page numbers from your manuscript where readers will find each of the items listed below.

Your article may not currently address all the items on the checklist. Please modify your text to include the missing information. If you are certain that an item does not apply, please write "n/a" and provide a short explanation.

Upload your completed checklist as an extra file when you submit to a journal.

In your methods section, say that you used the PRISMA reporting guidelines, and cite them as:

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			Page
		Reporting Item	Number
	#1	Identify the report as a systematic review, meta-analysis, or both.	1
Structured summary	#2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number	1
Rationale	#3	Describe the rationale for the review in the context of what is already known.	1
Objectives	#4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	1
Protocol and registration	#5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address) and, if available, provide	N/A
	For	peer review only - http://bmjopen.bmj.com/site/about/quidelines.xhtml	

		registration information including the registration number.	
Eligibility criteria	#6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rational	3
Information sources	#7	Describe all information sources in the search (e.g., databases with dates of coverage, contact with study authors to identify additional studies) and date last searched.	3
Search	#8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	3
Study selection	#9	State the process for selecting studies (i.e., for screening, for determining eligibility, for inclusion in the systematic review, and, if applicable, for inclusion in the meta-analysis).	4
Data collection process	#10	Describe the method of data extraction from reports (e.g., piloted forms, independently by two reviewers) and any processes for obtaining and confirming data from investigators.	4
Data items	#11	List and define all variables for which data were sought (e.g., PICOS, funding sources), and any assumptions and simplifications made.	4
Risk of bias in individual studies	#12	Describe methods used for assessing risk of bias in individual studies (including specification of whether this was done at the study or outcome level, or both), and how this information is to be used in any data synthesis.	10
Summary measures	#13	State the principal summary measures (e.g., risk ratio, difference in means).	N/a
Planned methods of analyis	#14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I2) for each meta-analysis.	N/A
Risk of bias across studies	#15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	10
Additional analyses	#16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml	N/A

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			were pre-specified.	
	Study selection	#17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	Figure 1
	Study characteristics	#18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citation.	6
-	Risk of bias within studies	#19	Present data on risk of bias of each study and, if available, any outcome-level assessment (see Item 12).	10
	Results of individual studies	#20	For all outcomes considered (benefits and harms), present, for each study: (a) simple summary data for each intervention group and (b) effect estimates and confidence intervals, ideally with a forest plot.	10
	Synthesis of results	#21	Present the main results of the review. If meta-analyses are done, include for each, confidence intervals and measures of consistency.	10
<b>)</b>	Risk of bias across studies	#22	Present results of any assessment of risk of bias across studies (see Item 15).	10
	Additional analysis	#23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	N/A
} 	Summary of Evidence	#24	Summarize the main findings, including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., health care providers, users, and policy makers	13
	Limitations	#25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review level (e.g., incomplete retrieval of identified research, reporting bias).	1
)	Conclusions	#26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	13
	Funding	#27	Describe sources of funding or other support (e.g., supply of data) for the systematic review; role of funders for the systematic review.	16

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