

REVIEW

Health and access to care for undocumented migrants living in the European Union: a scoping review

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Background Literature on health and access to care of undocumented migrants in the European Union (EU) is limited and heterogeneous in focus and quality. Authors conducted a scoping review to identify the extent, nature and distribution of existing primary research (1990–2012), thus clarifying what is known, key gaps, and potential next steps.

Methods Authors used Arksey and O'Malley's six-stage scoping framework, with Levac, Colquhoun and O'Brien's revisions, to review identified sources. Findings were summarized thematically: (i) physical, mental and social health issues, (ii) access and barriers to care, (iii) vulnerable groups and (iv) policy and rights.

Results Fifty-four sources were included of 598 identified, with 93% (50/54) published during 2005–2012. EU member states from Eastern Europe were under-represented, particularly in single-country studies. Most study designs (52%) were qualitative. Sampling descriptions were generally poor, and sampling purposeful, with only four studies using any randomization. Demographic descriptions were far from uniform and only two studies focused on undocumented children and youth. Most (80%) included findings on health-care access, with obstacles reported at primary, secondary and tertiary levels. Major access barriers included fear, lack of awareness of rights, socioeconomics. Mental disorders appeared widespread, while obstetric needs and injuries were key reasons for seeking care. Pregnant women, children and detainees appeared most vulnerable. While EU policy supports health-care access for undocumented migrants, practices remain haphazard, with studies reporting differing interpretation and implementation of rights at regional, institutional and individual levels.

Conclusions This scoping review is an initial attempt to describe available primary evidence on health and access to care for undocumented migrants in the European Union. It underlines the need for more and better-quality research, increased co-operation between gatekeepers, providers, researchers and policy makers, and reduced ambiguities in health-care rights and obligations for undocumented migrants.

Keywords Undocumented migrants, health, access to care, European Union, review

KEY MESSAGES

- Only 54 primary sources were identified in this scoping review on health and access to care for undocumented migrants in EU27, most of which lacked methodological rigour and consistency—particularly in sampling. This indicates a significant need for more and higher-quality research on this subject.
- Methodological challenges in accessing this largely invisible population need addressing, requiring co-operation between the various actors (e.g. NGO and health staff gatekeepers, academic communities and policy makers) at regional, national, and institutional levels.
- Improved awareness of health-care rights and obligations for undocumented migrants could reduce ambiguities and anxieties limiting access to this group for health staff and researchers.

Background

Case reports from support organizations suggest high infection rates, poor disease prevention, and delays in health-care access among undocumented migrants living in the 27 member states of the European Union (EU27), reflecting both increased health risks of undocumented migrants and barriers to health-care access (Chauvin *et al.* 2009; Karl-Trummer *et al.* 2009; MDM 2009). Mladovsky and others associate these increased risks with a lack of knowledge about host health systems, language and cultural barriers, legal constraints, financial concerns and anxiety (Mladovsky 2007; PICUM 2010a). Undocumented migrants remain under-researched within the EU (Mladovsky 2007). Undocumented migrants are not included in national statistics due to their insecure status, while legal and social vulnerabilities make them hard to reach for research. Thus, data are often based on estimates and conclusions drawn from findings for the overall migrant population. The quality of data collection and statistics can be particularly difficult to assess (Mladovsky 2007; Kovacheva and Vogel 2009).

Although increasing, existing literature on the health and access to care of undocumented migrants in the EU is heterogeneous in focus and quality. While some overviews exist (PICUM 2010a; FRA 2011b; Chauvin *et al.* 2012), none have been found in peer-reviewed journals to date. Authors chose to conduct a scoping review to identify the extent, nature and distribution of existing research evidence, thus clarifying what is known and gaps preventing progress in this under-researched area. Because they do not try to appraise the quality of evidence formally, scoping reviews allow inclusion of a broad range of study designs from both peer-reviewed and grey literature (Arksey and O'Malley 2005; Grant and Booth 2009; Levac *et al.* 2010).

Aim and objectives

The aim of this review is to identify the key research priorities on health and access to health care among undocumented migrants residing in the EU. Objectives were to summarize the extent, nature, distribution and main findings of the available literature. Main gaps in the literature are also discussed.

Methods

Authors used Arksey and O'Malley's scoping framework with Levac, Colquhoun and O'Brien's 2010 revisions (Arksey and O'Malley 2005; Levac *et al.* 2010). This six-stage framework

includes: (i) identifying the research question; (ii) identifying relevant studies; (iii) selecting studies; (iv) charting data; (v) collating, summarizing, and reporting results and (vi) stakeholder consultation (Arksey and O'Malley 2005; Levac *et al.* 2010).

Stage 1: identifying the research question

The York framework suggests a broad, clearly articulated research question, defining concepts, target population, health outcomes, and scope whilst accounting for the aim and rationale of the review (Arksey and O'Malley 2005; Levac *et al.* 2010). Authors selected the research question: 'What are the scope (i.e. extent, nature, and distribution), main findings and gaps in the existing literature on health status and access to health care for undocumented migrants residing in one of 27 member states of the European Union?'

Definitions used can be found in Box 1. Authors used the WHO definition of health. Thus, the review included all primary studies referring to physical, mental or social aspects of health within the target population. While the vagueness of this definition can challenge operationalization, it was deemed appropriate due to its broad recognition and frequency of usage. The literature lacks consensus on the definition of 'access to care'. Authors used Gulliford and colleagues' (Gulliford *et al.* 2001) definition as it is more specific than most. Authors defined undocumented migrants according to the European Glossary on undocumented migration, due to its frequency of use.

Stage 2: identifying relevant studies

The York framework recommends searching multiple literature sources to increase comprehensiveness (Arksey and O'Malley 2005). Authors searched electronic databases, key journals and websites.

First, electronic databases PubMed, Web of Science, EMBASE, Global Health, CINAHL Plus and PsychINFO databases were searched systematically, using the terms 'undocumented AND migrant AND health AND EU countries' adapted to the MeSH headings for each database. As 'undocumented' is used interchangeably with 'illegal', 'unauthorised', 'irregular', 'compliant/non-compliant/semi-compliant (im)migrants' (UWT 2008), all search terms were used.

For example, in PubMed the search strategy was: ("undocumented"[All Fields] OR "illegal"[All Fields] OR "unauthori?ed"[All Fields] OR "compliant"[All Fields] OR

Box 1 Key definitions

Health	'A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity' (WHO)
Access to care	'Facilitating access is concerned with helping people to command appropriate health care resources in order to preserve or improve their health', depending on availability, accessibility, acceptability, barriers to utilization (Gulliford <i>et al.</i> 2001)
Undocumented migrants	'Foreign citizens present on the territory of a state, in violation of the regulations on entry and residence, having crossed the border illicitly or at an unauthorized point: those whose immigration/migration status is not regular, and can also include those who have overstayed their visa or work permit, those who are working in violation of some or all of the conditions attached to their immigration status; and failed asylum seekers or immigrants who have no further right to appeal and have not left the country' (European Glossary on undocumented migration)

Box 2 Final inclusion and exclusion criteria

Inclusion criteria	Primary research studies: <ul style="list-style-type: none"> (i) with data on the health status and/or access to health care of undocumented migrants in one or more of the EU27 countries; (ii) in a language in which authors were proficient (i.e. Dutch, English, French, German, Italian, Portuguese, Spanish); (iii) published from 1 January 1990 to 31 December 2012.
Exclusion criteria	Studies were excluded if: <ul style="list-style-type: none"> (i) no primary data was collected (e.g. many used hospital-based records or audits from other health institutions); (ii) data was not disaggregated by immigration status (e.g. some studies targeted migrants in general); (iii) documents duplicated higher-quality study results already included (e.g. meeting abstracts were excluded if original peer-reviewed articles were available); (iv) they were not research articles (e.g. small ad hoc surveys, comments, notes, personal views, discussion papers, books); (v) they were published in a language other than those in inclusion criteria and no English abstract was available; (vi) data was collected before a respective state was a member of the EU; and (vii) the country was an overseas territory of an EU member state.

“irregular”[All Fields] OR “Illegal Migrants”[MeSH Term] AND (“migrant*”[All Fields] OR “migration”[All Fields] OR “immigrant*”) AND (“Delivery of Health Care”[MeSH Heading]) AND (“EU”[All Fields] OR “European Union”[MeSH Heading] OR “Europe*”[All Fields] OR “Europe”[MeSH Heading]).

Second, key journals, websites and references were searched purposefully. Four key journals on migration were hand-searched (i.e. *International Migration*; *Journal of Ethnic and Migration Studies*; *Journal of Refugee Studies* and *European Journal of Migration and Law*). For websites and references, a four-stage search strategy was implemented: (i) publications posted on websites of well-known non-profit organizations and EU-related migration institutions were searched; (ii) relevant citations were snowballed to references and websites of other pertinent organizations, including those of undocumented migrant projects; (iii) a Google search of ‘undocumented migrants’ was conducted to include additional relevant documents and (iv) stakeholder recommendations were assessed

according to inclusion criteria. Table 1 provides a list of organization and project websites searched.

Stage 3: study selection

Inclusion and exclusion criteria were established via an iterative process. Authors agreed initial selection criteria based on the research question, focusing on primary research on health status and/or health-care access of undocumented migrants in the EU27. All study designs, intervention types and participants (e.g. undocumented migrants, health professionals) were considered. Study outcomes were restricted to health status and access to health care for undocumented migrants. This study did not specifically address refugees, asylum seekers or victims of trafficking, although they may have been included as undocumented migrants. All authors agreed the final selection criteria (available in Box 2).

The first author was responsible for screening titles and abstracts found in electronic databases, documents from

Table 1 List of organizations and projects included in targeted website searches, in alphabetical order

Organizations	Projects
European Commission–United Nations Joint Migration and Development Initiative (JMEDI)	Clandestino
European Migration Network (EMN)	European Best Practices in Access, Quality and Appropriateness of Health Services for Immigrants in Europe (EUGATE)
European Union (EU)	European Programme for Integration and Migration (EPIM)
European Union Agency for Fundamental Rights (FRA)	ITSAL project
International Organization for Migration (IOM) - Europe	Health and Social Care for Migrants and Ethnic Minorities in Europe (HOME)
Médecines du Monde (Doctors of the World)	Health care in Nowhereland
Médecines Sans Frontières (Doctors Without Borders)	Health for Undocumented Migrants and Asylumseekers (HUMA) Network
Migrants Rights Network (MRN)	MIGHEALTHNET
Platform for International Cooperation on Undocumented Migrants (PICUM)	PROMO
	Quality in and Equality of Access to Healthcare Services (HealthQUEST)
	Undocumented Workers Transitions (UWT)

citations, and key websites according to agreed inclusion and exclusion criteria (Box 2). Co-authors were consulted during the study selection process as needed. Figure 1 provides a flow diagram of the process.

Stage 4: data charting

Relevant sources were charted in Excel using the following column headings: lead author, publication year, title of source, type of source (e.g. original article, report), type of search (i.e. electronic database, hand-search, reference searching, stakeholder recommendation), name of database, name of journal or organization, country of data collection, year(s) of data collection, study design, methods, target population, sampling method, key demographics (i.e. number, sex and age of participants), whether undocumented migrants were defined (i.e. yes/no/unclear), definition used if undocumented migrant was defined, study objective(s), main study findings and recommendations. These headings resulted from an iterative process, with several added during the charting process as authors agreed the final list. The first author was primarily responsible for data extraction with support from the second author on sources in Spanish, Italian and Portuguese.

Stage 5: collating, summarizing and reporting results

First, results on the nature, extent and distribution of studies were summarized. Second, summarization of findings was guided by the research question (i.e. access and barriers to health care) and WHO definition of health (i.e. physical, mental and social). Third, important themes that emerged from analysis were added.

Stage 6: consultation with stakeholders

A stakeholder group was organized as part of this study to provide feedback on preliminary results. Sixteen experts in the field were approached via email in August 2012, of whom thirteen agreed to participate. The consultation process took place in two stages. First, stakeholders were sent a draft of

results on the extent, nature and distribution of literature and asked to provide initial feedback addressing questions such as ‘Did you expect these results?’ and ‘What can be done to make the results more useful?’ and suggesting themes for displaying summary findings. Feedback was used to develop the coding manual for analysis. Second, stakeholders were sent a draft of the results section and asked for feedback, including any policy and research recommendations that could inform the discussion section.

Results

Extent of the literature

Figure 1 is a flow diagram for the 54 sources included of 598 identified. Initial database searching provided 27 sources (50%). Hand-searching key websites ($N=10$) and reference lists ($N=7$) provided 31%. Stakeholder recommendations ($N=8$) provided 15%. An updated database search provided 4% ($N=2$).

Figure 2 shows numbers of sources by publication year. During 1990–99, none were found. Two studies each were published in 2000 and 2001. An increase began in 2005, with most (26%; 14/54) published in 2011. Forty-four sources included the health of undocumented migrants in study objectives, while 10 (19%) included it in a general focus on migrant health.

Nature of the literature

Publications were from public health, epidemiology, sociology, medical anthropology and policy disciplines. Thirty (56%) were original peer-reviewed journal articles, 17 (31%) were reports, 4 (7%) were theses and 3 (6%) were meeting abstracts. Study designs and methods were not always clearly described, but 28 (52%) were qualitative, 13 (24%) quantitative, 9 (17%) mixed-methods and 4 (7%) interventions. Qualitative studies often used multiple methods, such as a combination of semi-structured interviews, focus groups and/or participant observations. Quantitative studies usually used one data-collection

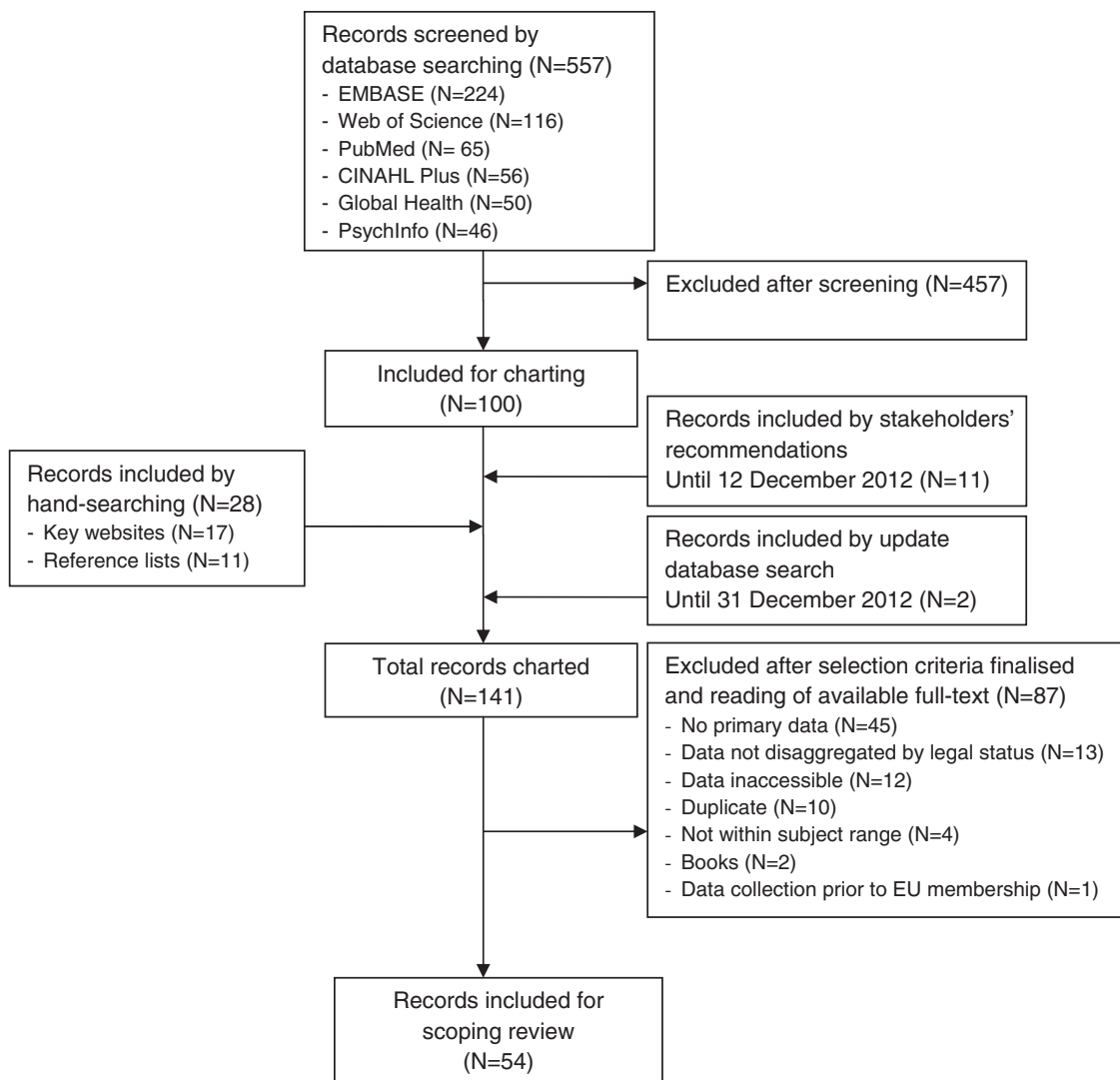


Figure 1 Flow diagram of selection of records included in scoping review

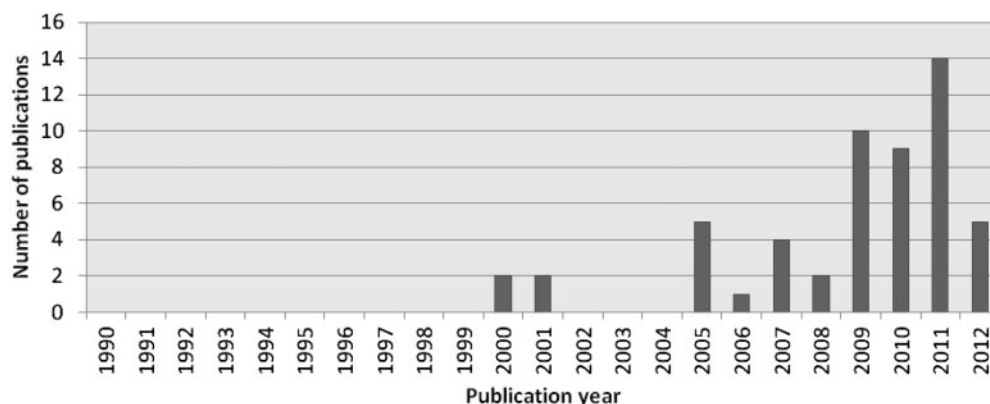


Figure 2 Number of publications on health and access to health care for undocumented migrants in the EU27 by publication year

method, often cross-sectional surveys. Only one study was described as longitudinal (Castañeda 2008), although several used follow-up methods (Lebouché *et al.* 2006; Castañeda 2009; Mensinga *et al.* 2010; Castañeda 2011).

A few studies clearly described their sampling methodology, while most provided minimal or no explanation. The majority used purposeful sampling including snowball, consecutive, criterion and quota strategies. Only four quantitative studies

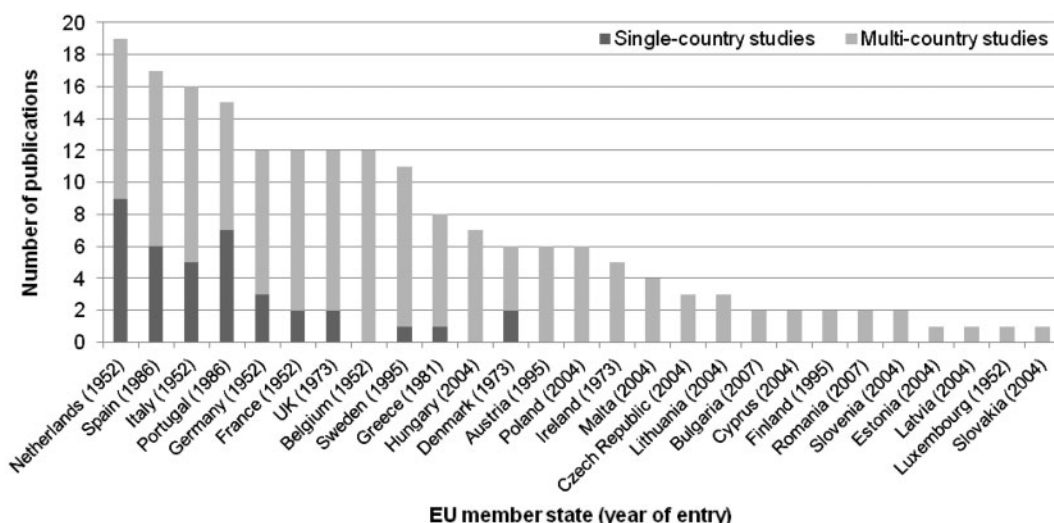


Figure 3 Number of single and multi-country studies on health and access to health care for undocumented migrants by EU member state (EU 2010)

used some form of random selection. An intervention study used random sampling to assign participants to three treatment regimes (Matteelli *et al.* 2000), one cross-sectional study used two-stage stratified cluster sampling (Torres and Sanz 2000), another cross-sectional study used randomization of matched cohorts (Veenema *et al.* 2009), and a survey protocol required random selection of eligible participants (Chauvin *et al.* 2009).

About half the sources included a definition of 'undocumented' migrants. Some of these were clearly defined, while most used a few descriptive words (e.g. 'those without permission to stay'). Most (36; 67%) used the term 'undocumented', 10 (19%) used 'illegal', 5 (9%) 'irregular' and 2 (4%) 'unauthorised'. One Swedish study used the term '*Gömda*', meaning 'hidden', to refer to those living without legal status (MSF 2005). Forty sources (74%) included undocumented migrants as study participants, 13 (24%) only included health professionals or other experts, and 1 (2%) tested a health information intervention (Cacciani *et al.* 2005).

Distribution of the literature

Figure 3 shows the 38 (70%) single-country and 16 (30%) multi-country studies included, by EU member state. Multi-country studies included primary data collection in more than one EU member state, ranging from 2 to all 27. Estonia, Latvia, Luxembourg and Slovakia were least represented, only included in one multi-country study. Bulgaria, Cyprus, Finland, Romania and Slovenia ($N=2$), the Czech Republic and Lithuania ($N=3$), Malta ($N=4$), Ireland ($N=5$), Poland ($N=6$), Austria ($N=6$), Hungary ($N=7$) and Belgium ($N=12$) were also solely represented in multi-country studies. Remaining member states were included in both single and multi-country studies, with the Netherlands most represented in 24% (9/38) single-country and 63% (10/16) multi-country studies.

Descriptions of migrant demographics were far from uniform. Most (85%) publications included a mix of male and female participants, with 6 (11%) only including women and 2 (4%) only including men. There were large variations in ages of study participants, although the average was just over 30 years old,

with the exception of two studies focusing on children (Mensinga *et al.* 2010) and youth (Bloch and Zetter 2011). Of the 40 publications including participation of undocumented migrants, 7 (18%) provided no detail on countries of origin. Only one focused on migrants from a specific country, namely Afghanistan (Fidan 2010). Remaining sources ($N=32$) included undocumented migrants from various origins, including 30 (94%) African, 22 Asian (68%), and 21 each American (66%) and other European (66%).

Thematic findings

Findings were summarized according to four themes: (i) physical, mental, and social health issues, (ii) access and barriers to care, (iii) vulnerable groups and (iv) policy and rights. Table 2 shows thematic coverage by study, with many including multiple themes. Most ($N=43$; 80%) included findings on access to care. Perceived or measured physical and mental health of undocumented migrants were described by 15 (29%) and 9 (17%) sources, respectively. Approximately 29%, mostly reports, included findings on social health, particularly occupational health and living conditions. Vulnerable groups (e.g. children, pregnant women, detainees) were highlighted by 12 (23%) sources. Two sources described an intervention to improve data collection. Of 17 that analysed policy or gave an overview of undocumented migrants' rights, most were reports (53%; 9/17) or theses (24%; 4/17).

Physical, mental and social health

Several studies described poor self-reported health among undocumented migrants. For example, MSF found undocumented migrants' health deteriorated since coming to Sweden (MSF 2005). Chauvin found digestive, musculoskeletal, respiratory and gynaecological complaints most common among undocumented migrants in an 11-country study (Chauvin *et al.* 2007). A Dutch providers survey found undocumented migrants had significantly more skin and digestive issues than documented migrants (Van Oort *et al.* 2001). Antenatal care

Table 2 Coverage of themes for each of the 54 sources (multiple themes possible), displayed in alphabetical order by type of source

Sources lead author(s) (year)	Themes					
	Policy and rights	Access to care	Physical health	Mental health	Social health	Vulnerable groups
Journal article (N = 30)	N = 4	N = 25	N = 5	N = 2	N = 5	N = 2
Ahonen (2010)					✓	
Ahonen (2009)					✓	
Biswas <i>et al.</i> (2011)		✓				
Bruno (2005)		✓				
Carvalho <i>et al.</i> (2005)		✓	✓			
Castañeda (2011)	✓	✓				
Castañeda (2009)		✓	✓			
Castañeda (2008)	✓	✓				✓
Dauvrin <i>et al.</i> (2012)	✓	✓				
Dias <i>et al.</i> (2008)		✓				
Dias <i>et al.</i> (2010)		✓				
Dias <i>et al.</i> (2010b)		✓				
Dias <i>et al.</i> (2011c)		✓				
Dias <i>et al.</i> (2011a)		✓				
Dias <i>et al.</i> (2011b)		✓				
Dorn <i>et al.</i> (2011)		✓	✓			✓
El-Hamad (2001)		✓				
Grit <i>et al.</i> (2012)	✓	✓				
Heus (2010)		✓				
Jensen <i>et al.</i> (2011)		✓				
Keygnaert <i>et al.</i> (2012)			✓	✓		
Larchanché (2012)		✓				
Lebouché <i>et al.</i> (2006)		✓				
Matteelli <i>et al.</i> (2000)		✓				
Porthé <i>et al.</i> (2009)					✓	
Sousa <i>et al.</i> (2010)					✓	
Strassmayr <i>et al.</i> (2012)		✓		✓		
Torres and Sanz (2000)		✓				
Torres-Cantero <i>et al.</i> (2007)		✓				
Yosofi (2009)		✓	✓		✓	
Report (N = 17)	N = 9	N = 13	N = 7	N = 5	N = 9	N = 6
Bloch and Zetter (2011)					✓	✓
Burnett and Whyte (2010)					✓	
Chauvin <i>et al.</i> (2007)	✓	✓	✓		✓	
Chauvin (2009)		✓				
Collantes (2007)	✓	✓				
Collantes <i>et al.</i> (2011)	✓	✓	✓	✓	✓	✓
Fidan (2010)		✓	✓		✓	
FRA (2011a)	✓	✓				
FRA (2011b)	✓					
FRA (2011c)	✓				✓	
McKay <i>et al.</i> (2009)	✓	✓			✓	
Mensinga <i>et al.</i> (2010)		✓				✓
MDM (2009)	✓	✓				✓
MSF (2005)		✓	✓	✓	✓	
PICUM (2010b)		✓	✓	✓	✓	✓
Van Oort <i>et al.</i> (2001)		✓	✓	✓		

(continued)

Table 2 Continued

Sources lead author(s) (year)	Themes					
	Policy and rights	Access to care	Physical health	Mental health	Social health	Vulnerable groups
Veenema <i>et al.</i> (2009)	✓	✓	✓	✓		✓
Thesis (N=4)	N=4	N=4	N=2	N=1	N=1	N=2
Baghir-Zada (2009)	✓	✓	✓		✓	✓
Hansen (2005)	✓	✓				
Martens (2009)	✓	✓				
Schoevers (2011)	✓	✓	✓	✓		✓
Meeting abstract (N=3)	N=0	N=1	N=1	N=1	N=0	N=2
Cacciani <i>et al.</i> (2005)						
Coutinho <i>et al.</i> (2011)						✓
Van Den Muijsenbergh (2007)		✓	✓	✓		✓
Total (N=54) (%)	17 (31%)	43 (80%)	15 (29%)	9 (17%)	15 (29%)	12 (23%)

✓ indicates theme is covered, but does not reflect depth of coverage.

was the primary reason undocumented migrants visited one Berlin clinic, followed by chronic, paediatric, dental, acute and injury care (Castañeda 2009). While several studies focused on access to HIV and TB screening, few analysed the burden of these infections among undocumented migrants. One study found 7.1% HIV prevalence among 834 undocumented migrants; however, the population was partially drawn from two HIV clinics (Chauvin *et al.* 2007). Two studies reported increased vulnerability to sexual violence among undocumented migrants (Van Den Muijsenbergh 2007; Keygnaert *et al.* 2012).

Among studies reporting on health status, psychological issues appeared most widespread. Two studies associated increased stress, depressive, anxiety, sleeping and somatic symptoms among undocumented migrants with their insecure living and working conditions (PICUM 2010; Biswas *et al.* 2011). High suicide rates were found among those in detention centres (MDM 2009). Van Oort found Dutch general practitioners significantly more frequently diagnosed mental disorders among undocumented than documented migrants (Van Oort *et al.* 2001), while Schoevers concluded that mental disorders might be under-reported as female participants seemed hesitant to discuss them (Schoevers 2011).

While several studies found undocumented migrants worked in poorer conditions than documented migrants, only one analysed potential health effects in detail (Sousa *et al.* 2010). As part of 'ITSAL project', Sousa and colleagues found undocumented workers three times as likely to report health problems as documented workers (Sousa *et al.* 2010). Another ITSAL publication on work conditions (e.g. high job instability, vulnerability, low remuneration, poor social benefits, long hours and fast-paced work) concluded undocumented workers' health depended largely on the health and safety measures taken by employers (Porthé *et al.* 2009). McKay found vulnerability and disempowerment were particularly severe among female domestic workers (McKay *et al.* 2009).

None of the studies analysed the health effects of poor living conditions, though it is likely these contributed to worsened health. Chauvin found half of participants in a multi-country study resided in insecure and overcrowded conditions (Chauvin *et al.* 2009). Collantes found 47% of undocumented respondents

living in 'insanitary or dangerous accommodation' (Collantes *et al.* 2011), seen also in photographic evidence of Afghan migrants' living conditions in Greece (Fidan 2010).

Access and barriers to care

Four quantitative studies analysed associations between documentation status and care seeking and usage. One reported no significant association between usage and status, although confounders appeared unadjusted for (Torres-Cantero *et al.* 2007). A second reported an association for migrant men after adjusting for gender (Dias *et al.* 2008). Two found both usage and care-seeking were significantly associated, even after adjusting for confounders (Torres and Sanz 2000; Dias *et al.* 2011b). A study on migrants in detention showed that those of Asian origin were significantly less likely to seek care than those from other regions (Dorn *et al.* 2011). Several qualitative studies indicated health-care usage was difficult for migrants from Brazil (Dias *et al.* 2010) and women who migrated for personal reasons (Schoevers 2011).

Obstacles to health-care access were reported at primary, secondary and tertiary level, with access particularly limited for the latter two. Primary-care access was often delayed, with the continuum of care particularly lacking for pregnant undocumented migrants (Van Den Muijsenbergh 2007; Castañeda 2009; PICUM 2010b). Schoevers explored the use of patient-held records to improve continuity of care and empowerment among undocumented women, but results were unsatisfactory (Schoevers 2011). Cacciani and colleagues reported on a shared information system, to improve health data collection on undocumented migrants across outpatient clinics in Italy, which appeared promising enough to scale up (Cacciani *et al.* 2005).

Hospital referrals were limited (Veenema *et al.* 2009), with some cases refused at hospitals (Dorn *et al.* 2011). Several studies raised concerns about mental health services access (Castañeda 2008; Baghir-Zada 2009; Veenema *et al.* 2009; Dauvrin *et al.* 2012), with one providing in-depth analysis of barriers in 14 EU member states (Strassmayr *et al.* 2012). Access to dental (Castañeda 2008; Baghir-Zada 2009; Martens 2009), HIV (Lebouché *et al.* 2006; Chauvin *et al.* 2007; Heus 2010;

Dias *et al.* 2011c) and TB services (Matteelli *et al.* 2000; Carvalho *et al.* 2005; Schoevers 2011) were also reported as limited.

About half the studies provided some analysis of reasons undocumented migrants experienced poor health services access. Lack of awareness of legal entitlements among both undocumented migrants and health-care providers was often cited. Ambiguities on what constituted an 'emergency' and lack of guidelines on treatment options contributed to uncertainty among health professionals (Biswas *et al.* 2011; Jensen *et al.* 2011) and denial of entitled care (MDM 2009). Fear of being reported to the authorities was cited as an important barrier to care seeking, even in the absence of any reporting obligations (PICUM 2010b). Financial obstacles limited access to secondary care, with access to primary care also affected. Costs prevented many migrants from accessing care or medicines, while reimbursement systems increased workloads among health-care providers. Cultural and language barriers were described as reducing undocumented migrants' ability to negotiate treatment options, potentially compromising quality of care (FRA 2011a).

While health-care professionals in two studies reported not varying treatment by patient documentation status (Biswas *et al.* 2011; Jensen *et al.* 2011), two studies found numbers of diagnostic and therapeutic interventions differed by status. Dauvrin and colleagues found both restricted for undocumented patients (Dauvrin *et al.* 2012). Van Oort found treatments decreased while diagnoses increased for undocumented patients (Van Oort 2001). Sources indicated quality of care might be reduced for undocumented patients as they may be difficult to treat due to the complexity of their health problems, limited socio-cultural skills among providers, linguistic issues during consultations, and added administrative efforts (Veenema *et al.* 2009; Biswas *et al.* 2011; Dias *et al.* 2011a; Jensen *et al.* 2011). Thus, access for undocumented migrants was described as 'variable and unpredictable' (Schoevers 2011), depending on choices of individual health workers (Martens 2009).

Access appeared improved by the presence of voluntary health organizations. For example, Schoevers concluded better access to care among asylum seekers compared with undocumented migrants might be because they were more likely to be exposed to voluntary organizations at asylum centres (Schoevers 2011). Voluntary organizations were reported to play an important role in referring undocumented migrants to 'accessible' primary- and secondary-care providers and in actual health-care provision via outreach clinics (Baghir-Zada 2009; Yosofi 2009; PICUM 2010b; Castañeda 2011; Schoevers 2011). Some organizations also provided advocacy and legal support if needed (Baghir-Zada 2009; FRA 2011b). However, financial constraints limited their activities (Baghir-Zada 2009). Additionally, one source cautioned that they should not be become an 'alternative structure of care' for undocumented migrants (PICUM 2010b).

Several sources indicated that lack of health-care access encouraged alternative health-seeking behaviours. One in-depth analysis showed undocumented migrants self-medicated, sought advice from doctors in their country of origin, and borrowed health insurance cards (Biswas *et al.* 2011).

Vulnerable groups

Particularly vulnerable groups that emerged from analysis were pregnant women, children and detainees. Several studies described lack of or delays for antenatal care. Van den Muijsenbergh found pregnant undocumented migrants faced payment barriers at hospitals and lacked referrals to gynaecologists (Van Den Muijsenbergh 2007). Castañeda found undocumented women most frequently sought obstetric care (Castañeda 2009). Schoevers found low contraceptive usage, limited sexually transmitted infection screening, high abortion rates, and lack of sexual and gynaecological treatment among undocumented women (Schoevers 2011).

Delayed health care seeking among undocumented children and their parents was frequently reported. Mensinga found that lack of knowledge among parents and health-care providers on respective rights and obligations caused confusion when seeking care (Mensinga 2010). Chauvin concluded that unhygienic living conditions and frequent house moves adversely affected physical and mental health of both parents and children (Chauvin *et al.* 2009). Two studies discussed missed vaccinations amongst newborns (PICUM 2010b; Collantes *et al.* 2011), while Castañeda described the challenges of registering an undocumented baby (Castañeda 2009). Bloch explored the experiences of young undocumented migrants (18–31 years), finding their status affected their socioeconomic opportunities (e.g. limited aspirations, insecure employment) although coping with adversity resulted in a sense of accomplishment (Bloch and Zetter 2011).

Two studies reported on the health situation of undocumented migrants in detention centres (MDM 2009; Dorn *et al.* 2011). Dorn and colleagues analysed health care seeking among detainees in the Netherlands, finding nearly 50% had sought care—mostly for injuries and dental problems—25% of whom were denied care (Dorn *et al.* 2011). An MDM study reported high suicide rates among detainees in EU member states (MDM 2009).

Policy and rights

Studies analysing policies and rights concluded that legal entitlements to health care for undocumented migrants, including entitlements to emergency care, child immunizations, antenatal care and mental health services, varied considerably across EU member states. Legal entitlements did not correspond with access to care. Dauvrin found similar barriers for undocumented migrants among different health systems, including communication, cultural misunderstandings, referral difficulties and delayed or disrupted care (Dauvrin *et al.* 2012). Jensen found emergency room physicians described barriers as due to a lack of rights-based policies (Jensen *et al.* 2011). Several sources also reported within-country differences in implementation of rights, at regional, institutional and individual levels among health-care providers and employers.

Authors generally described policies on access to care for undocumented migrants as increasingly restrictive, largely to discourage entry of new migrants (MDM 2009; Grit *et al.* 2012). However, three studies reporting on the effects of a new regulation on access to care for undocumented migrants in the Netherlands found access and awareness of policy and rights

had increased (Martens 2009; Veenema *et al.* 2009; Mensinga *et al.* 2010).

Discussion

This study provided an overview of the scope and main findings of empirical work, published in peer-reviewed and grey literature, on health and access to care of undocumented migrants residing within the EU27. Only 54 primary sources were identified, most of which lacked methodological rigour and consistency—particularly in sampling. This indicates a significant need for more and higher-quality research on this subject. Are conclusions possible from a review of such sources? While there is a risk that study flaws could be repeated in the review, some trends appear clear.

Extent, nature and distribution of sources

While some member states (e.g. Netherlands, UK, Spain, Italy) were included in many more studies than were others, these have some of the highest estimates of foreign irregular residents, potentially explaining this difference (Clandestino 2009). Most member states were represented within multi-country studies rather than those tailored to national contexts. While large-scale country comparisons are important, they may lack depth, consistency, or quality (e.g. methodology and data collection affected by local researchers with differing research skills). Future multi-country studies would benefit from increased methodological transparency and consistency.

Much of the available research was conducted by NGOs. Because of their knowledge of the social, mental and physical well-being of undocumented migrants and greater access to this hidden group, NGOs are important actors in this field. However, potential conflicts of interest between research and health advocacy missions must be considered when interpreting their outputs. However, external researchers may be less knowledgeable of the lived reality of undocumented migrants and often rely on the same NGOs for data collection or recruitment. Future collaborative research between NGO and academic researchers could strengthen the evidence base.

More and better quality research within individual member states, particularly longitudinal studies, is clearly needed. Methodological issues (e.g. recruitment, sampling, and follow-up of undocumented migrants) need to be addressed. Invisibility of undocumented migrants, especially those not seeking care, remains a culprit. Research is needed to support policies on healthy migration and develop interventions and documentation systems that provide undocumented migrants with greater stability. Close co-operation between governments and NGOs may be needed to achieve this.

Health status and access

A possible reason the knowledge base on undocumented migrant health status was poor is because this often relies on availability of routine data. The main reason for excluding studies in this review, after charting, was lack of primary data. Most of these studies relied on monitoring systems of formal health-care usage within the population that would likely under-represent undocumented migrants. It may be impossible

to include this relatively 'invisible' population in routine health data collection, but important lessons can be learned from initial data-collection interventions, such as that of Cacciani and colleagues (Cacciani *et al.* 2005). Existing research on migrant health often overlooks likely differences in health status and experiences of documented vs undocumented migrants (e.g. 13 studies excluded for lacking disaggregated results). Future research could usefully be disaggregated by documentation status, as results for these migrant sub-populations are likely to be different.

Access to care seemed particularly important, as 80% of studies reported on it. Access is universally defined for those living in the EU27, under Article 35 of the European Union Charter of Universal Rights, as '*Everyone has the right of access to preventative healthcare and the right to benefit from medical treatment under the conditions established by national laws and practices*' (EU 2000). However, a comparative study of national policies showed wide disparities in how this right to health care was exercised (Cuadra 2011). The same barriers to timely health-care access were found consistently. For example, while minimal research was conducted on physical, mental, and social health separately, that available suggested the stressful environments in which undocumented migrants often live and work are not conducive to health, particularly mental health.

Policy and rights

One reason for the disappointing number of primary studies is that research on this topic is relatively new, only increasing slowly since 2005. Unfortunately, this makes it difficult to detect any changes in health or health-care access for undocumented migrants in the past years. Research may have increased because 2005 was the time EU migration policy began shifting towards national security (Triandafyllidou 2009), resulting in more stringent internal (e.g. health-care access) and external migration control (e.g. borders) (Ingleby 2012). For example, the Treaty of Lisbon strengthened the EU's legal position in returning undocumented migrants to countries of origin (Brady 2008). Increased discussions on international platforms, such as the 2010 3rd European Health Conference on Integrated Public Health in Amsterdam, the 2011 9th International Conference of the European Network for Mental Health Service Evaluation in Ulm, and the 2011 7th European Congress on Tropical Medicine and International Health in Barcelona, likely contributed to increased research interest, although not the drop in publications in 2012.

Policy advocacy within the EU27 should address prevailing misconceptions surrounding rights and obligations to health care for undocumented migrants. This could be described not only as 'the right thing to do' (i.e. in accordance with Article 35 of the European Charter of Universal Human Rights), but also of public health benefit. Results suggest HIV and tuberculosis rates may be relatively high among undocumented migrants (Chauvin *et al.* 2007), while their access to screening and treatment is relatively low (Matteelli *et al.* 2000; Carvalho *et al.* 2005; Lebouché *et al.* 2006; Dias *et al.* 2011c). To control these and other health issues effectively, public health care would need to reach all, even those without documentation.

Health care for undocumented migrants could become more consistent. Several sources showed individual health-worker

choices, rather than policies, determined access. This indicates some providers take on the majority of work, which seems an unfair and sustainable solution (PICUM 2010b; Ingleby 2012). Undocumented migrants seeking health care they are legally entitled to should be able to access services at their nearest facility. Policy makers thus have a responsibility not to shift the burden of interpreting legal rights to already overburdened health staff.

Limitations

This study has several limitations. First, a scoping review only includes studies within authors' search capacity (e.g. accessible on databases searched or through stakeholders). That recommended studies were not found during database searches indicates the challenges of locating all primary research on this topic and likelihood that much of this research remains unpublished and inaccessible (e.g. due to the variety of potential search terms, political sensitivity). Second, some stakeholders were more active than others (e.g. one recommended three additional Dutch studies, potentially skewing distribution data). Third, relevant publications may exist outside of authors' language capabilities, despite covering several major European languages. Finally, authors did not assess evidence quality, as the quantity and quality of studies were insufficient for a meaningful systematic review. Not excluding on quality gave authors the opportunity to include a broader range of evidence from both peer-reviewed and grey literature. However, this means summary findings should be interpreted cautiously.

Conclusions

This is a first attempt at a comprehensive overview of available primary evidence on health and access to care for undocumented migrants. This scoping review underlines the need for more and better quality research. Methodological challenges, in accessing this largely invisible population, need addressing. This requires co-operation between the various actors (e.g. NGO and health staff gatekeepers, academic communities, policy makers) at regional, national and institutional levels. Improved awareness of health-care rights and obligations for undocumented migrants could reduce ambiguities and anxieties limiting access to this group for health staff and researchers. As international and national migration policies become increasingly restrictive, urgent action is likely needed to avoid worsening the status quo.

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Conflict of interest

None declared.

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