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# A typology of cross-border patient mobility

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ABSTRACT

Based on systematic observation and analysis of available evidence, we propose a typology of cross-border patient mobility (rather than the so-called 'medical tourism') defined as the movement of a patient travelling to another country to seek planned health care. The typology is constructed around two dimensions based on the questions 'why do patients go abroad for planned health care?' and 'how is care abroad paid for?' Four types of patient motivations and two funding types have been identified. Combined in a matrix, they make eight possible scenarios of patient mobility each illustrated with international examples.



## 1. Introduction

Any observer of patient mobility is bound to notice the diversity of movements and practices taking place within and across continents. Patients in search of immediate, affordable or unusual treatments travel long distances; inhabitants of certain border-regions access health services in the neighbouring jurisdiction, while people who reside 'abroad' return to their home country or country of affiliation to receive medical care. The aim of this article is to make sense of this variety by proposing a typology of patient mobility with global relevance. Such a systematic classification is useful to scholars, policy-makers and health care actors who deal with the conceptual or empirical implications of cross-border health care. By capturing the nature of patient movements, the typology is intended to clarify what patient mobility is (and is not), identify patterns and shifts in patient flows, and generate new ideas for research.

The typology is built around two dimensions: why do patients go abroad for planned health care, and how is care received abroad paid for? At the heart of both questions lies a cornerstone of health systems: that health care be organised, delivered, consumed and financed within the boundaries of a single territory. The *principle of territoriality* has been the logic behind health systems to make planning and sustainability of services possible (Cornelissen, 1996). While the concept has been developed and described in the context of (European) social security systems (see Ferrera, 2005), territoriality arguably also applies to other forms of collective funding. A predefined territory makes it easier for funding bodies, whether public or private, to organise health services efficiently as they know the size and characteristics of the population they cover, how many providers deliver care and what care is needed and supplied. Contracting with providers can be a way to ensure sustainable services and control expenditure. If patients can get 'any' treatment 'anywhere' this will affect costs. Private health insurers often operate with a defined network of providers, which patients should go to or face financial penalty. The effect is similar: to delimit the sphere in which health care is funded, consumed and delivered.

Patient mobility goes beyond conventional territorial logic; it functions according to different incentives, rules and structures. By answering the questions 'why do patients go abroad for planned health care, and how is care received abroad paid for?', we present a typology with two dimensions: *types of patient motivations* according to the reasons for seeking health services abroad and *types of funding* that allow patients to do so. This implies a demand-side approach focusing on the users of health care. The result is a matrix of four types of motivations and two types of funding combined into eight possible scenarios of patient

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[1] Disclaimer: The author previously worked as Technical Officer for the World Health Organization. The findings, interpretations and conclusions expressed in this article are the sole responsibility of the authors. They do not purport to reflect the position of the World Health Organization or of the World Trade Organization or their Members.

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mobility. International evidence will illustrate each scenario to test the applicability of the typology and demonstrate its relevance.

This endeavour comes at an opportune time. Patient mobility is high on the agenda at EU level and in international agencies including the OECD, World Health Organisation and World Bank. The European Commission and EU Member States have since 2004 been exploring the options for creating a new legal framework for patient mobility between the 27 EU countries (European Commission, 2004, 2008; RAPID Press Release, 2009; Council of the European Union, 2010). A slow and thorny political process has highlighted the intricacy of the issues at stake. At the OECD, attention to patient mobility focuses on the growth of 'medical tourism' and the trade in health services as a promising, expanding industry, which is not sufficiently understood or monitored (Morgan, 2009; Warner and Jahnke, 2010). The OECD is currently working on integrating more fully the cross-border flows of patients into the System of Health Accounts.[2] At the WHO, the risks and opportunities of trade in health services have been examined for over a decade with research being commissioned[3] and the organisation recently focusing its work on cross-border patient mobility.[4] The World Bank has undertaken similar efforts and published papers on patient mobility's potential impact (Mattoo and Rathindran, 2005; Arunanondchai and Fink, 2007; Cattaneo, 2009). One of the few international agreements that could provide guidance for the definition of cross-border mobility of patients is the General Agreement on Trade in Services (GATS) of the World Trade Organization. According to GATS Article I, the treatment of a patient abroad would be considered as a trade in services "in the territory of one Member to the service consumer of any other Member" (WTO, 1995). As GATS covers all types of services, this definition is rather general and leaves many questions open from a health perspective.

### 1.1. Definitions

At a minimum, cross-border patient mobility involves a patient who travels to another country for the purpose of receiving planned health care. This implies a deliberate movement outside the *country of residence* where the patient lives and where he/she may or may not have health care coverage. By *health (care) cover* we imply the entitlement a patient has to access health care services by virtue of being affiliated to a health insurance scheme, whether public or private. The precise range of health care services the patient has right to will be referred to as *benefit package* and is defined by the competent funding authorities in statutory, public health systems and by private health insurers in privately funded systems. The country where the patient is treated will be referred to as the *country of treatment*.

The typology focuses on deliberate movements across international borders of patients seeking planned health care. This implies that variants of patient mobility taking place within the same country, e.g. from one region or federal state to another or from the public to the private sector, are not included because no country borders are crossed. Tourists, expats and migrants accessing care in a foreign country are, on the other hand, not included because either they do not travel with the purpose of obtaining care but make use of health services in the country where they find themselves.

It also follows from our definition that we only consider the obtainment of health services abroad, thereby excluding movements related to the purchasing of products such as pharmaceuticals or medical devices, as well as trade in services where the patient is not travelling between countries as in the case of tele-medicine.

It is a conscious choice of terminology to refer to 'patient mobility' and not 'medical tourism'. The former is a wider, more diverse and more nuanced phenomenon than the latter. Our typology takes a demand-side approach centred on patient motivations rather than focusing on the suppliers of health care and their interests in patient mobility. Finally, the industry-driven term 'medical tourism' insinuates leisurely travelling and does not capture the seriousness of most patient mobility.

## 2. Materials and methods

The typology has been created based on the observation, systematisation and analysis of practices of patient mobility. The evidence base stems from the results of an European research project on patient mobility[5] in 2004–2007 (Rosenmoller et al., 2006) and from continuous research in the area since then.

A literature review stretching across 11 languages[6] and 23 European countries[7] was carried out in 2005–2006 (Glinos and Baeten, 2006). Material was found through country expertise and snowballing. The review proceeded as a search for material from secondary sources. Data collection was done using a 'snowballing' method by which experts, public officials and stakeholders were contacted to identify documentation. These sources provided new research paths which lead to new information, and so forth. Systematic internet searches revealed documentation in national languages. In 2009–2010, evidence was updated and collected at the international level including consultations with experts from the World Health Organization and the World Bank.

Common for both European and worldwide patient mobility is the generally poor data availability. Written material is rare and of variable quality (Rosenmoller et al., 2006a, p. 5). This is particularly true for patient mobility of commercial nature and when no public bodies are involved. While the Internet provides abundant information and can be the main communication channel between potential patients and providers, the quality of information is often dubious and the approach biased.

Patient mobility being rapidly evolving and under-researched, grey literature and media reports have been used to document developments not covered elsewhere and local experts consulted to provide specific insights.

## 3. Results

### 3.1. Towards a typology

Based on our findings, patient mobility practices have been analysed and regrouped according to two dimensions: *types of*

[2] The so-called *System of Health Accounts* (SHA) is a manual developed by the OECD in collaboration with the WHO to collect comprehensive data on health expenditure and financing at the national level. The first version of the SHA from 2000 is now used by a large number of OECD and non-OECD countries as the standard accounting framework for health financing statistics. Currently, the OECD is leading efforts to update and revise the current SHA. (More information can be found on http://www.oecd.org/health/sha).

[3] http://www.who.int/trade/resource/tradewp/en/index.html.

[4] In February 2009, the WHO organised an international workshop in Kobe, Japan, on the topic of the international movement of patients across borders. The workshop contributions are available upon request.

[5] By its full name, 'The Future for Patients in Europe' was a European Research Project part of the Scientific Support to Policies component of the EU's 6th Framework Programme, financed by DG Research. Carried out at the Observatoire Social Européen in the framework of the 'Europe for Patients' project (2004–2007).

[6] Danish, Dutch, English, French, German, Greek, Italian, Norwegian, Portuguese, Spanish and Swedish.

[7] Initial material collected and analysed at the Observatoire Social Européen in the framework of the 'Europe for Patients' project (see Rosenmoller et al., 2006).

*patient motivations* according to the reasons for which patients seek health services abroad and *types of funding* that allow them to do so. The two elements are inextricably part of any form of patient mobility and essential to understanding the phenomenon. They are reflected in our typology and the axes of the two-dimensional matrix. We present four types of motivations and two funding types in the typology and illustrate their combinations in the matrix, being well aware that any typology makes analytical distinctions, which in real life are likely less clear cut.

### 3.2. Why patients go abroad: types of patient motivations

It is generally assumed that patients want to be treated as close to home as possible, by providers speaking their language, surrounded by relatives, in a familiar system. Longer distances to a hospital tend to discourage utilisation (Luft et al., 1990) also termed the 'distance-decay' hypothesis (Burns and Wholey, 1992). Patients may however be willing or may prefer to be treated abroad if this offers some advantage. Mobility occurs as patients deliberately, and more or less voluntarily, decide to travel abroad for planned health care. By comparing health services in the country of residence with health services elsewhere, patients decide where to be treated (Brouwer et al., 2003). Because this entails a choice, it is possible to differentiate between motivational factors. We have identified four motivations for seeking cross-border care: availability, affordability, familiarity and perceived quality of health care. Even if patients consider several aspects when deciding to travel for care, mobility is usually triggered by one of the four motivations.

#### 3.2.1. Availability

One reason to go abroad is that care is unavailable in patients' country of residence. Availability as a motivation has two separate dimensions: availability in terms of *quantity* of services and in terms of *types* of services. In either case, mobility happens because of what cannot be obtained in the home system.

Availability in terms of quantity mainly reflects timely access to medical care. Delays can make patients travel for faster access. The prospect of having to wait extended periods in the home system motivates mobility, not the least when patients are in pain, has a debilitating condition and/or need life-saving surgery.

Availability of types of care can have a geographical, financial and/or legal dimension. In sparsely populated and peripheral areas, health services may be limited. Due to investment costs, certain highly specialised care facilities are available in few locations usually close to main cities. In border-regions it may be rational for patients to access cross-border care if this implies shorter distances than travelling domestically. Some countries may fund patient mobility for rare or complicated conditions instead of providing services domestically. Elsewhere, travelling for specialised care is an option for patients who can afford it. In countries with no well-functioning health system, people may go abroad even for basic health services.

Finally, some patients seek a type of treatment or treatment method outlawed where they live, including reproductive health and genetics, or end of life assistance (Palm and Glinos, 2010). With progress of medical science, more controversial interventions with bio-ethical dimensions become medically possible (Knoppers and LeBris, 1991). With important differences between national laws, patients can 'shop around' for the legislation and legal loopholes that fit their aspirations (Pennings, 2004).

#### 3.2.2. Affordability

The share of health expenses which patients carry can encourage travelling to countries where spending will be lower. Patients have an incentive to look for the most economical care when they do not have any insurance coverage, live in a different country than where affiliated to a health funding scheme or when the treatment in question is excluded from the benefit package they are entitled to. Affordability also plays a role where care is part of the insurance package but subject to co-payments, and where health insurers charge lower premiums for policies stipulating care is delivered abroad.

Travelling abroad may be the only option available if costs are prohibitively high in the patient's country. Patients are prepared to travel considerable distances, e.g. for major vital surgery or treatments paid out-of-pocket such as plastic surgery and dental care provided that total costs remain below what they would pay at home and within their budgets. Such patient flows favour the most price competitive countries.

Affordability also motivates migrant groups who travel back to their country of origin if care is cheaper, if they continue to be covered there and/or if they do not have cover in the country of residence.

#### 3.2.3. Familiarity

Familiarity plays a strong role when deciding where to receive medical treatment. It can be particularly present in border-regions or among migrant population groups who reside in another country than the one they consider home. In other cases, familiarity may imply shared religious beliefs, culture or history (e.g. due to former colonial links). Feeling at ease with a system, trusting its providers and being able to speak one's language is important in situations of illness and vulnerability. Seeking care in another country may respond to cultural expectations or respect certain religious practices.

In border-regions, health facilities across the border may be geographically and culturally closer and the one's inhabitants feel most familiar with, because providers speak their language/dialect and they cross the border regularly. Receiving care across the border may be patients' preference. Migrants and long-term residents living abroad may prefer treatment in their country of origin; they do not travel to a foreign country but return home for care. This can occur in border-regions, where people live, work and/or reside across the border. Migrants living further away from their country of origin may prefer returning home especially in case of serious medical conditions.

#### 3.2.4. Perceived quality

Patients may travel because they perceive the quality of services delivered in the home system as inferior to that available elsewhere. This may, e.g. be due to medical equipment, technology or methods being more advanced abroad, or to the reputation of certain foreign hospitals and doctors seen as pioneers in their field of expertise. Several clinics around the world profile themselves in this way to attract a foreign, relatively wealthy clientele. It is the *perception* of better quality abroad which makes patients travel, as the factual quality of medical care is generally difficult for patients to assess.

### 3.3. How care abroad is paid for: types of funding

Patient mobility is determined by patient motivations and by the funding modalities through which cross-border care is paid for. Publicly funded health schemes rely on the principle that health care is delivered and consumed within the territory covered by the system, and patients are not generally encouraged to go abroad. Where private health insurance covers patients, contractual agreements between insurers and providers may determine which health facilities patients can use (in most cases

located within a predefined service area). The source of funding can come from the patient, or from a third source, be it a public or private health insurer or public authorities. The different types of funding can be classified into two broad categories:

*3.3.1. Patients travelling without cover for cross-border care*

Patients are responsible for paying the total health expenses incurred abroad out-of-pocket. No other funding body intervenes. One can distinguish between uninsured and insured patients. The first group concerns individuals with no health cover in their country of residence, generally from countries with no statutory public health insurance scheme, including people who cannot afford private insurance cover. The second group concerns those with health cover in their country of residence but who travel to obtain a treatment type or method excluded from their benefit package; this includes care received outside the territory in which the benefit package applies. In statutory public health systems, benefit packages reflect criteria of estimated medical necessity (leaving out, e.g. most aesthetic surgery or adult dental care), economic efficiency, accepted medical practice (leaving out 'alternative' or unproven therapies) and social, ethical norms (either banning or allowing, e.g. abortion and fertility treatments) and specify that care must be consumed domestically. Private insurance policies may consider similar exclusion/inclusion criteria but also reflect the price of policies. Travelling to obtain treatment excluded from the benefit package may thus concern under-insured individuals who cannot afford sufficient private cover.

*3.3.2. Patients travelling with cover for cross-border care*

A variety of funding mechanisms may allow patients to go abroad for care with expenses being covered by a funding body. (1) Patients may hold private health insurance that covers the type of treatment received and its delivery abroad. (2) Legal principles or national social protection legislation of a country may entitle covered patients to receive treatment abroad. (3) Purchasing bodies may contract foreign providers or may have networks of preferred providers abroad, to which patients can go for certain services. (4) Governments may set up bilateral or multilateral agreements stipulating the conditions under which patients can travel for care and be covered by their statutory public funding scheme. One final, outlying occurrence of patient mobility with 'cover' should be mentioned: patients may access care for free if they are covered by the funding body of the country of treatment.

Each mechanism defines the conditions for funding care in terms of patients and treatments covered, as well as the level of coverage. Moreover, funding bodies often require patients to seek prior approval before undergoing treatment. While all four mechanisms imply a structured approach to patient mobility, the third and fourth go one step further by establishing a link between providers and funders/purchasers in different countries. This breaks with health care generally being organised domestically. The most notable form of cross-border collaboration is arguable when states mutually agree on making structures for patient mobility (type 4). This implies official derogations to the principle of territoriality. This is a rare occurrence: we found two examples[8] both initiated decades ago but ongoing. One is a bilateral agreement between Malta and the UK. The other – noteworthy in terms of the number of countries involved and the scope of entitlements – is a supranational agreement between EU/EEA Member States through Regulation 883/2004 (formerly 1408/71) (EP and Council Regulation (EC), 2004; EP and Council Regulation (EC), 1971). Set up in the early 1970s to ensure EU citizens enjoy their right to freedom of movement according to Art. 42 of the EC Treaty, Regulation 1408/71 entitles citizens moving to another Member State as well as migrant workers and their families working and living in different Member States to have access to statutory health care. Among others, the Regulation allows citizens to request prior authorisation from the relevant authorities in their country of residence for planned treatment in another Member State (the E112 procedure). Where patients are covered by the Regulation, the cost of care consumed abroad is settled directly between the Member State of affiliation and that of treatment (Palm and Glinos, 2010).

Any typology has limitations. We present *analytical distinctions* to systematise observations, well aware of overlaps and blurs in real life. More than one motivation may influence a patient at a time, just as motivations may reinforce each other. Moreover, a patient who does not obtain cover for cross-border care (second funding type) may nevertheless decide to travel abroad paying out-of-pocket (first funding type). How patient mobility works in practice will be examined in what follows.

*3.4. Applying the typology: a matrix of patient mobility*

Combining the two dimensions of the typology we have designed a matrix of possible patient mobility scenarios (Fig. 1). Each of the eight matrix values represents a combination of a patient type and a funding type.

In what follows, examples of patient mobility from around the world will be used to put the typology into application. We realise that not all combinations can be illustrated or can be illustrated with equal amount and quality of evidence. This however does not make it less important as a patient/ funding combination has a conceptual value, and lack of evidence is an interesting finding in itself. Moreover, an unreported form of patient mobility does not mean it does not exist. Our goal with presenting a matrix is not to be exhaustive but to capture a representative sample of actual patient mobility patterns.

*3.4.1. Availability, quantity of service/no cover (Fig. 1, matrix value 1)*

Anecdotic evidence shows British women, perhaps in their thousands, travelling for fertility treatment to avoid NHS waiting times by paying out-of-pocket. Due to shortages since a 2005 law removed anonymity for sperm and egg donors in Britain, waiting lists can extend up to seven years (Fleming, 2006; Tremlett, 2006; Campbell, 2009). Reports also suggest Canadians undergo medical treatment abroad in order to side step waiting lists, even without having a guarantee for reimbursement (Eggertson 2006).

*3.4.2. Availability, type of service/no cover (Fig. 1, matrix value 1)*

The absence of cover for a treatment is likely to affect its availability in a country. Partially or entirely outlawed medical acts

| | | Types of funding: does the patient have cover for cross-border care? | |
|---|---|---|---|
| | | No cover | With cover |
| Types of patient motivations: why does the patient travel for care? | Availability<br>• *Quantity*<br>• *Type* | 1 | 2 |
| | Affordability | 3 | 4 |
| | Familiarity | 5 | 6 |
| | Perceived quality | 7 | 8 |

**Fig. 1.** Matrix of cross-border patient mobility.

[8] Two other examples were found (mentioned in the Discussion) but without further details.

are, e.g. neither available nor covered. We found three illustrations of patient mobility as 'law evasion' (Pennings, 2004). In 1991, the possibility of 'procreative tourism' was noted by Knoppers and LeBris as countries' legislations on medically assisted conception differed widely. In 2009, an European study estimated that 20,000–25,000 "cross-border fertility treatment cycles" were yearly provided to foreign patients in Belgium, Czech, Danish, Slovenian, Spanish and Swiss clinics. Of 1230 patients surveyed, 83% received no reimbursement of costs (Shenfield, 2009). A Belgian study over 2000–2007 suggests foreign patient inflows to 16 out of 18 licensed reproductive medicine centres stabilised at 2100 per year (Pennings et al., 2009). Both studies agree that restrictions in terms of age limits, sexual orientation, civic status, treatment methods or total bans on assisted reproduction in patients' home countries explain patient flows. Secondly, records of women travelling from Ireland to Britain (Payne, 1999), Mexico to California (Angulo and Guendelman, 2002), Portugal to Spain (Oliveira da Silva, 2009) and Malta to neighbouring Sicily (Mifsud et al., 2009) for abortion illustrate the demand for outlawed medical services. Portuguese women stopped going to Spain since 2007 when abortion was legalised and included under the NHS (Oliveira da Silva, 2009). Patient mobility to Switzerland for medically assisted suicide is a third example. Dignitas, the only organisation helping foreign people, had by late 2007 assisted 808 individuals from 26 countries, mainly Germany (57%), Switzerland (12%) and Britain (10%) (Dyer, 2007).

On the other hand, wealthy patients from poorer countries may go abroad for specialised care inexistent in their country. Patient data from a leading Parisian hospital network, Assistance publique-Hôpitaux de Paris (AP-HP), which includes university hospitals, seem to point in this direction as the network treated 156 Kuwaiti, 99 Lebanese, 86 Saudi, 43 Emirian, 42 Syrian, 41 Russian and 8 Ukrainian patients paying out-of-pocket in 2007 (Olivier, 2008). Other studies note how Middle Eastern patients previously going to Europe and the USA increasingly choose places geographically closer such as Dubai as well as to India and Singapore for specialised health services (De Greef and Thomaes, 2006). Patients from African, Arab, Saarc[9] and CIS countries go to India for treatments unavailable in their home countries partly because of lower prices than in Europe and the US, changing preferences since 9/11 and cultural ties (Financial Express, 2006). Jordan attracts patients since the 1970s from Yemen, Sudan, Bahrain, Syria, Libya, Palestine and Saudi Arabia including treatments in cardiology, neurology, bones and knuckles, and internal diseases. Most pay for care privately although some are sponsored by their countries. A protocol was, e.g. signed in 1996 between Jordan and the Algerian Social Security Fund (Fakhouri et al., 2004) but details could not be found. People from Benin travel to France, Morocco and Ghana for specialised treatments not provided in Benin, e.g. in cardiology (i.e. pacemakers) and neurology. On the other hand, patients arrive to Benin from Niger, Nigeria and Togo for surgical treatments (personal communication/Christoffersen, 2010). According to some sources, 18,000 Nigerians per year go abroad for care unavailable in their country (Nyagah, 2009). Reports show people from Micronesian States travel to Hawaii and the Philippines for care such as cardiac surgery and cancer treatment (Pobutsky et al., 2005; Manzano and Rodolfo, 2009).

### 3.4.3. *Availability, quantity of service/with cover (Fig. 1, matrix value 2)*

Funders of health care may allow patient mobility in case of waiting lists in the country of residence. We found evidence of three different funding mechanisms being used in such contexts.

The health insurance laws in Canada's provinces and territories make it possible for waiting list patients to apply for prior approval for 'out of country services',[10] or those with means to pay upfront may retrospectively submit a claim to their funding authority (MacIntosh, 2004).[11] In either case, the treatment in question must be an insured medically necessary service unavailable in the country.

Cross-border contracting with foreign providers is another way to increase capacity. The Norwegian health authority purchased some 10,000 treatments in mainly Swedish, Danish and German hospitals in 2001–2003. The English NHS sent 190 orthopaedic patients to France and Germany in 2002 and 440 patients to Belgium for knee and hip surgery in 2004–2005. Several Dutch health insurers have contracts with Belgian hospitals since the 1990s for treatments including orthopaedic, bariatric and eye surgery. Every year, thousands of Dutch patients receive care in Belgium this way (Glinos et al., 2010). The Ontario health authority began contracting with US providers in 2009 for diagnostic imaging and bariatric, cancer and residential treatments (e.g. for substance abuse and eating disorders) (Davis, 2010).[12]

Thirdly, EU regulation 883/2004 (Art. 20) also concerns waiting list patients. Although patients must seek prior authorisation from their funding authority before going abroad for treatment, the regulation obliges to give approval "where the treatment in question is among the benefits provided for by the legislation in the Member State where the person concerned resides and where he cannot be given such treatment within a time-limit which is medically justifiable, taking into account his current state of health and the probable course of his illness". [13] The entitlement to timely care is especially far-reaching for health systems facing under-capacity. Waiting list patients from the UK (Triggle, 2007) and Italy (Donia Sofio and Gabellini, 2006) have benefited from faster treatment in another EU country through the prior authorisation procedure of Regulation 1408/71.

### 3.4.4. *Availability, type of service/with cover (Fig. 1, matrix value 2)*

Patient mobility due to certain types of services being unavailable or unreachable may also be funded through three different mechanisms.

National legislation in the USA allows patient mobility for patients covered by Medicare and Medicaid in cases of distant, geographically unavailable services. Treatments received abroad are generally excluded from Medicare and Medicaid cover. Social Security Act §1814(f)(1) however makes an exception to this 'foreign exclusion' by entitling patients to planned in-patient services by a hospital located outside the US if it is located closer to, or substantially more accessible from, the patient's residence than the nearest domestic hospital adequately equipped to deal with, and available for the treatment of, the illness or injury in question.[14] In practice, this mainly concerns border-region inhabitants living close to Canada or Mexico.

Similarly, a Belgian law from 1981 allows residents living within 15 km of a border to access hospital care in neighbouring

[9] Bangladesh, Bhutan, Maldives, Nepal, Pakistan, India, Sri Lanka and Afghanistan.

[10] http://www.health.gov.on.ca/en/public/programs/ohip/outofcountry/prior_approval.aspx and http://www.health.alberta.ca/documents/OOCHSC-Info-Sheet.pdf.

[11] http://www.health.alberta.ca/AHCIP/travel-claims.html, http://www.cbc.ca/news/background/healthcare/medicaltourism2.html.

[12] http://www.health.gov.on.ca/english/providers/programme/ohip/outofcountry/us_preferred_providers.html.

[13] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:166:0001:0123:EN:PDF and http://europa.eu/rapid/pressReleasesAction.do?reference=PRES/09/231&type=HTML.

[14] Social Security Act §1814(f), available at http://www.ssa.gov/OP_Home/ssact/title18/1814.htm.

countries located within 25 km of the border as well as specialised ambulatory services, without having to apply for prior authorisation (OFBS, 2007, p. 215).

Elsewhere, schemes go beyond border-regions. Public health insurance in Jordan may under rare circumstances fund specialised treatment abroad. 32 patients travelled mainly to the US and the UK in 2003 for total costs of $1million (Fakhouri et al., 2004). In Tanzania, a scheme run by the Ministry of Health allows cross-border referral when domestic capacity is limited. According to estimates, ca. 100 patients are yearly sent to India for cardiac surgery, sometimes co-sponsored by charitable organisations (Tanzanian Heart Institute (THI), 2008; Ministry of Health, 2003). A Tripartite agreement was prepared in 2004 between the German Heart Institute-Munich, the THI and the Tanzanian Ministry of Health to build a local heart surgery unit instead of sending patients to India, while difficult cases would be treated in Germany. The Minister however never signed the agreement (THI, 2008).

Cross-border contracting in European border-regions is used as a solution to give patients access to certain services across the border instead of travelling long distances within the country of residence. Examples of purchaser–provider agreements (with the involvement of local or national health authorities) include a contract signed in 1996 between German insurer AOK Rheinland and Dutch university hospital UMC St Radboud; the agreement signed in 2003 between Puigcerda hospital (Spain) and regional health insurers of Languedoc-Roussillon (France) covering obstetric care for French insured women (a local French maternity clinic had closed down in 2001); and an agreement from the 1970s between a Dutch insurer, five Belgian hospitals and the relevant authorities allows members of the insurer living in Zeeuws-Vlaanderen to access specialised services including in cardiology, nuclear medicine and haemodialysis (Glinos and Baeten, 2006).

An unusual form of purchaser–provider cooperation is that between BUPA Latin America and Jackson Memorial Hospital in Miami, Florida. In 2007, the health insurer donated $1million to the hospital to set up the BUPA International Patient Reception Center which by 2009 had treated 2000 foreign patients. Treatments mostly concern specialized care for serious conditions such as heart disease or cancer (Bandell, 2009).

Multilateral or bilateral agreements can allow patients to travel for care unavailable at home for instance when population numbers do not justify having expensive facilities in a country. EU Regulation 883/2004 is the only multilateral agreement reported. Of the 27 Member States, Luxembourg uses it generously to authorise patient mobility. The country granted ten times more authorisations than some larger Member States (European Commission, 2003) and spent €161 per capita on 883/2004 claims compared with the €2.59 EU average in 2004 (Busse and van Ginneken, 2010). Allowing access to health facilities in neighbouring countries is established practice in the Luxembourg system (Kieffer, 2003).

The only bilateral agreement reported in detail we found is a waiver agreement between Malta and the UK which since the 1970s gives Maltese patients access to certain highly specialised treatments (such as bone marrow transplants, liver transplants, complex major spinal surgery, paediatric cardiac surgery, surgery of the jaw and face and specialist paediatric intervention) in ca. 25 UK hospitals. The accord waives the costs of these treatments by assuming they correspond to the costs of emergency care delivered to UK visitors in Malta. The Maltese government covers extra costs when the volume of Maltese patients referred to the UK exceeds an agreed yearly quota (Muscat et al., 2006).

Finally, the collapse of the Zimbabwean health system has sparked patient mobility to neighbouring countries for basic medical care delivered gratuitously. According to Mozambican authorities, hundreds of Zimbabweans cross the border to receive antiretroviral drugs (Meldrum, 2008). Antiretroviral therapy is free of charge in Mozambique for nationals and non-nationals (Kiwanuka and Monson, 2009). Some Zimbabwean women cross the border to neighbouring Zambia, Mozambique and Botswana to access antenatal and childbirth services as emergency care is provided for free in all three countries (Kiwanuka and Monson, 2009).

#### 3.4.5. Affordability/no cover (Fig. 1, matrix value 3)

Patient flows going to countries where the costs of medical services are lower are widely described by grey literature although reliable data on the phenomenon are lacking. Within Europe, the new geo-political context since the 2004 EU enlargement has prompted eastward movements as patients from, e.g. the UK, Ireland, Denmark, Germany and Austria (Obermaier, 2009), seek mainly dental care but also other services not included in public benefit packages such as aesthetic surgery in Poland, Hungary and Slovenia but also Croatia and Turkey. Estimates show that Turkey attracted 200,000 foreign patients in 2008 mainly for dental care, eye surgery and cosmetic operations (Nerbollier, 2009). Patient flows also go to Argentina (mainly from the US and Canada but also Chile and Spain) for aesthetic surgery (Legrand, 2006) and Tunisia (from Europe, Libya, Algeria and the Middle East) (Meeus, 2005).

Meanwhile, Americans who can only afford treatment abroad go to Mexico and other Central American countries (Konrad, 2009) but also further afield, e.g. to Thailand and India (Bookman and Bookman, 2007). A 2007 survey of residents living in the border city El Paso (Texas) is illustrative. The sample was predominantly of Hispanic ethnicity (70%) and US citizens by birth (61%). 27% had used health services in Mexico during the last 2 years. The most common reason for visiting a medical provider (92%) or a dentist (95%) was lower cost. Hispanics (34%) and the uninsured (42%) were more likely to use cross-border medical services than the non-Hispanics (10%) and the insured (20%). For dental care, however, ethnicity and health coverage did not influence cross-border utilisation (55–58% for all four groups) (Byrd and Law, 2009), suggesting that the lower costs of Mexican dental care are attractive for all since these services typically are excluded from health coverage. Another survey estimated that in 1 year, 24,000 US-born non-Latino Whites living in California had crossed the border to Mexico for dental care while 8000 had done so for medical care (Wallace et al., 2009).

The Binational Farmworker Health Survey found that 50% of Mexican farmworkers having worked or working in California preferred to obtain treatment in Mexico if given a choice. Reasons given were affordability and perceived effectiveness of Mexican medicine. The strong preference for Mexican care reflects that half of the respondents were uninsured, 24% had employer-based insurance but likely with only seasonal coverage, while 19% were Medicaid recipients (Mines et al., 2001).

#### 3.4.6. Affordability/with cover (Fig. 1, matrix value 4)

Various examples exist of health purchasers contracting abroad to make savings and offer their members better rates and/or services. Some US insurers and employers have experimented with policies offering treatments in Thailand or India at a lower cost (Cortez, 2008; Burkett, 2007; Yi, 2006) although the practice has not become widespread. In Europe, German insurer HEK currently has contracts with Czech and Hungarian spas which are 30–40% cheaper than German centres and have a good reputation among HEK's affiliates (Glinos et al., 2010). Similarly, Norwegian municipalities contract Norwegian-owned

rehabilitation centres in Spain where property prices and running costs are substantially lower than in Norway and the climate more favourable for conditions such as asthma and arthritis (Glinos et al., 2010).

Singapore recently introduced legislation allowing reimbursement of medical treatments received abroad. In the Singaporean system, citizens contribute to their own health savings account, which can only be used for the medical expenses of the contributor or close relatives. Since March 2010, Singaporeans can be referred abroad for in patient care and day surgery, and be reimbursed using the funds of their account. To keep the account replenished, Singaporeans are incentivised to look for cost-effective treatment, at home or abroad, effectively becoming their own health purchasers (Central Provident Fund Board, 2010).

Between Mexico and the US, patient flows go both ways. Cross-border contracting is one way to respond to the needs of Mexicans residing and working north of the border. Western Growers Association, a membership organisation of agricultural businesses in California and Arizona, has since 1972 been providing cross-border health care plans to its workers by contracting with Mexican doctors and hospitals close to the border. Since 2000, thanks to the Knox-Keene Act of 1975 allowing Californian insurers to sell cross-border plans and two Senate Bills allowing Mexican plans to be sold in California; Blue Shield of California, Health Net of California and Mexican insurer SIMNSA are offering cross-border health insurance plans with networks of providers of contracted Mexican doctors and hospitals (Warner and Schneider, 2004; Schulz and Medlin, 2006). Enrolment areas concentrate around San Diego and Los Angeles, with estimates pointing to 150,000 workers benefiting from binational plans (Wallace et al., 2009). The plans make it possible for Mexicans to access affordable care in a familiar setting. Some plans provide cover on both sides of the border reminding of the EU provisions for dual access for migrant workers and their families under Regulation 883/2004.

According to federal law, US citizens over 65 qualify for Medicare health coverage wherever they live. This motivates US seniors living in Mexico to return home for health care. US Social Security Administration data show some 50,000 retired Americans living in Mexico in 2005 (four in five being Mexican natives) (Kammer, 2005), reaching an estimated 100,000–200,000 in 2007 (Gunter, 2007). A survey on this population's access to health services over the last three years[15] showed most had seen doctors in Mexico, 37% had visited a doctor in the US one to five times and 27% more than six times. In case of hospitalisation, 56% would stay in Mexico and 66% would go to the US in case of serious illness and 50% because of health coverage in the US (Daley, 2007).

In Europe, similar flows of returners exist as Northern Europeans increasingly move to the Mediterranean countries. In 2006, over 250,000 UK citizens had registered with municipalities in Spain. In March 2007, 52% of the total 64,820 registered UK population in the Autonomous Community of Valencia had health cards giving access to public facilities. The discrepancy suggests patients use private Spanish providers and/or travel to the UK to obtain care under the NHS (Legido-Quigley and La Parra, 2007). A survey of Britons in the region found 67% of respondents were covered by either the UK or Spanish public health system, of which 27% were under the UK NHS (La Parra and Mateo, 2008). Long-term residents avoid registering in the new country of residence partly out of fear of losing the right to return 'home' for treatment (Legido-Quigley and La Parra, 2007).

[15] 1045 respondents participated. 73% lived in Mexico for 10–12 months per year, 11% for 7–9 months per year. 31% declared to have no Medicare coverage.

#### 3.4.7. Familiarity/no cover (Fig. 1, matrix value 5)

Patients travelling to a country because they feel more familiar with its health system and providers often involve people living abroad who return to their home country for treatment.

The Binational Farmworker Health Survey found resilient preference for treatment in Mexico among Mexican farmworkers having worked or working in California. While relative newcomers to the US overwhelming preferred Mexican providers, 48% of those having spent between half and three quarters of their adult life in the USA still preferred Mexican health care, and preference remained at 36% for those having spent over 75% of their adult life in the USA. Affordability will also have played a role since half of the respondents were uninsured (Mines et al., 2001).

Patients according to a new study, an estimated 264,000 Californians went to Mexico for medical care in 2008 (Wallace et al., 2009). 80% of these patients were Mexican immigrants living in the US and 9% were US born Mexicans. Moreover, 372,000 Californians sought dental care south of the border, with similar proportions of Mexicans (77% and 7%, respectively). The ethnic pattern of movements shows the importance of culture and familiarity in seeking health care. The study does not clarify whether patient movements happened with or without coverage, but Mexicans are the foreign-born population group with the lowest insurance coverage (Bustamante et al., 2008).

Commercial providers have identified familiarity as a factor for attracting foreign patients, especially where patients cover their expenditure by themselves. Language and translation services are often highlighted. Private hospitals in Bangkok emphasising a familiar environment claim to offer their services in over twenty languages and respect religious and cultural dietary restrictions, while a planned health care facility in the Philippines considers employing Japanese medical personnel (Whittaker, 2008).

According to reports from hospitals in India, the Philippines and Turkey, a proportion of foreign patients treated are, respectively, 'NRIs' (an estimated 20 million non-resident Indians live across the world), Overseas Filipinos (estimated at 9 million) and people of Turkish descent (Financial Express, 2006; Manzano and Rodolfo, 2009; Health Protection Report, 2009; De Neve, 2010).

#### 3.4.8. Familiarity/with cover (Fig. 1, matrix value 6)

Though rare, funding mechanisms in some European border-regions allow patients who feel more familiar with health services across the border to access these. According to Dutch health insurer OZ, its members expect access to local Belgian doctors and hospitals where they are used to receive treatment. The OZ enrolment area (Zeeuws-Vlaanderen) is geographically and culturally connected to Belgian Dutch-speaking provinces, and inhabitants cross the border regularly. The Dutch insurer set up contracts with Belgian hospitals to manage patient flows and respond to its members' needs (Boffin and Baeten, 2005; Glinos et al., 2005).

Similar contexts of cross-border proximity exist elsewhere in Europe with funding arrangements based either on cross-border contracting or on easing the conditions of Regulation 883/2004 to facilitate access for border-region populations (Glinos and Baeten, 2006). Moreover, Regulation 883/2004 allows frontier workers to use providers they feel familiar with and ensure continuity of care as they can access health services both in the country of residence and that of employment also after retirement.

A pre-test carried out among German students at Maastricht University, the Netherlands, revealed a majority of students

go back to Germany for health care due to positive aspects (being familiar with certain German providers, knowing how/where to find a doctor and being covered by their families health insurance) and negative aspects (experiencing or perceiving Dutch health professionals as unapproachable, not knowing how/where to find a doctor and having to pay cash for consultations although the Dutch system provides benefit-in-kind). Language was not reported as a problem although cultural differences were (Glinos and Maarse, unpublished).

#### 3.4.9. Perceived quality/no cover (Fig. 1, matrix value 7)

Based on the available literature it is difficult to distinguish between patients who travel with and patients who travel without cover to obtain better (perceived) quality. One example involving out-of-pocket is that of mainland Chinese women giving birth in Hong-Kong to benefit from its high medical and technological standards (and ensure their baby is entitled to access the educational and welfare system of Hong-Kong). Over 10,000 births were by mainland couples in 2006, up from 600 in 2001 (Cheng, 2007).

Similarly, women from Mozambique reportedly go to neighbouring South Africa to give birth and for maternity care as services there are perceived of better quality (AMI, 2010).

Reputation of doctors and hospitals appears to influence the perception of (high) quality and attracts a clientele of mostly affluent patients. The US is one important destination. According to the Johns Hopkins, the clinic treats 3000 foreign patients per year from around 100 countries. According to Mayo Clinic, it has treated 6 million foreign patients since the 1920s and foreign patients now make up 2% of total volumes. Swedish Medical Center, Seattle, estimates that foreign patients bring in $8–10 million per year, the majority paying cash upfront (DerGurahian, 2008). Other so-called centres of excellence are Bumrungrad hospital in Thailand and Stockholm Care clinic in Sweden, which mostly treat foreign patients. In Chile, specialised centres, e.g. rehabilitation care, attract upper-income Bolivians, Peruvians and Ecuadorians (León, 2000). Lebanon has long been known for its high skilled medical staff and expertise attracting large numbers of affluent patients from the Arab region.

#### 3.4.10. Perceived quality/with cover (Fig. 1, matrix value 8)

In some countries, an institutionalised low opinion of the health system (by doctors and/or patients) and an equally entrenched belief that 'abroad is better' encourages patient mobility. Italians (mainly from the south of the country) and Greeks have been known to 'escape' their health systems especially in the 1980s and 1990s to go to France, the UK and Germany for specialised treatments. Italians did so thanks to the regional health authorities being generous in granting prior approval through then Regulation 1408/71 while Greeks had arrangements through their health insurers also based on the regulation (Glinos and Baeten, 2006).

In the border-region between Poland and Germany, reports suggest that hundreds of pregnant Polish women are going to German hospitals to deliver partly because they can decide on the birth method and because they believe care is better, partly because they do not have to pay since they fall under Regulation 883/2004s provision on access to care, which becomes medically necessary while abroad. The Polish National Health Fund, which is supposed to reimburse the German hospitals, has started refusing to do so claiming that Polish women abuse the system (Rodkiewicz, 2007).

Travelling with private insurance cover to receive the best quality care is arguably only within the reach of the most affluent. One example is athletes and professional football players going to a well-known doctor in Colorado, USA, for knee surgery.[16]

## 4. Discussion

If patient mobility is a topic worth studying it is because we believe patient mobility attracts (a perhaps disproportionate amount of) attention because it fits into a wider context of health care becoming globalised and commodified, of purchasers experimenting with cost-effective ways to deliver care and of the choice rhetoric expecting patients to be consumers. The aim of the paper is to make sense of patient mobility without exaggerating its importance as we realise a vast majority of health care takes place locally.

### 4.1. Limitations and implications

An important limitation for our research was the inadequate and uneven availability of data. We have based the typology on reported cases of patient mobility. It would however be wrong to assume that unreported patient mobility equals patient mobility not existing. Quite the opposite: most patient mobility is likely to go unreported. The Internet as an information source only partly makes up for lacking documentation. One problem is the quality and quantity of web-based information of commercial nature. Secondly, using the Internet implies an over-representation of cases reaching the web; this affects geographical coverage if patient flows in, e.g. Africa, Asia and Latin America are less likely to be web-streamed. In terms of types of patient mobility covered, cases paid out-of-pocket and initiated by individual patients are under-represented because patient flows where a public or private third party payer is involved more easily appear in media, official documents or research. This explains why less evidence than expected was found for cases with 'no cover' (scenarios 1, 3, 5 and 7). Assuming patient mobility with involvement of third party payers is rarer in parts of the world may reinforce geographical distortion. The authors being from Europe may contribute to language and 'rich country' bias.

### 4.2. Key findings

The typology is intended to discern patterns and shifts in patient flows. In what follows we will discuss the main findings in terms of the global relevance of patient mobility, the flows of 'returners', the role of border-regions, the importance of affordability as a motivation and the changing context of health care.

One message deriving from the typology is the existence of patient mobility across the world. Even the limited evidence gathered shows patient flows taking place within and across *all* continents using a variety of funding mechanisms. Cross-border contracts exist between Mexico and the US, and between European countries, while BUPA Latin America sponsored a hospital department in Florida; bilateral, trilateral or multilateral agreements can be found between Malta and the UK, Jordan, Algeria, German and Tanzanian actors (although it never materialised), and between the 27 EU Member States; legislation in several countries allows nationals, under certain conditions, to seek treatment abroad, e.g. using their health savings accounts as in Singapore and across the world patients paying for treatment out-of-pocket. One exceptional case showed patients travelling to countries where legislation guarantees free access to health services for nationals and non-nationals. The diverse and

[16] http://www.steadman-hawkins.com/athleteUpdate.cfm.

sometimes surprising findings have tested the global relevance and applicability of the typology.

The flows of people returning to their countries of origin are another feature of patient mobility. Patient movements of *returners* take place for reasons of familiarity and/or of affordability. Familiarity with a system, its providers and a certain culture can be an important motivation to travel for health care. Sharing the same language and cultural approach to health care as one's doctor, being treated in familiar surroundings, knowing how to 'navigate' the system and having the same doctor for years are part of familiarity. Others return for care because of not having health cover in the country of (new) residence. Care being cheaper in the home country or patients keeping insurance cover there are clear incentives to travel back. Americans living in Mexico spend an estimated $100–300 million yearly on health care in the US, and equivalent amounts are spent by Mexicans living in the US returning to Mexico for care (Warner and Jahnke, 2010). As increase in numbers of people living, working and studying abroad (The Economist, 2009), returning 'home' for health care is likely to remain an important aspect of patient mobility.

Border-regions are home to intense patient flows, both of those returning home for care and those looking for something they cannot in their own country. The proximity of differences, e.g. in prices or in available services, encourages patient mobility between neighbouring countries. Such flows are visible on all continents sometimes with official structures set up by funding bodies and providers to benefit from economies of scale as in many European border-regions (Glinos and Baeten, 2006).

While wealthy patients seeking the best care available have always travelled, a new kind of patients is now travelling to save money. This implies a change not only in the purpose of patient mobility but also in the direction of flows. Europe and the US, traditionally important destination countries for wealthy patients looking for 'best' care, have lost their monopolistic position. High-quality, specialised services are now also provided in other countries where costs are marginal compared to Europe and the US. This has at least two implications: wealthy patients from, e.g. Africa, Asia and the Arab world, can seek quality care in countries geographically and culturally closer, paying less than if treated in Europe or the US. Secondly, patients from the US and Europe who cannot afford treatment in their home country travel to countries where prices are lower including for serious conditions (mostly in the case of US patients), dental care or cosmetic surgery. Affordability as a motivation is likely to gain in importance as rising health care costs and reliance on private sources of funding push people to look for alternatives, and give price-competitive providers an opening to attract patients. According to one American scholar, paying out-of-pocket without any prospect of insurance reimbursement is probably the most common way for US citizens to travel for care (personal communication/Cortez, 2010). This hypothesis might well hold true for patients from many other countries even if reliable data are scarce (cf. Limitations). The fact patients travelling with no cover are likely to be so numerous but might go unnoticed prompts the question of what this means for our understanding of patient mobility and for research in the field.

Travelling for affordability is a development, which can be considered part of the wider, changing context of health care. A series of interconnected elements form this context. As technological advancement and demographic changes have led to increase in the cost of health care, the need for more and alternative funding sources (including private) has appeared favouring market-oriented solutions (Callahan, 1999). This has raised the stakes for regulators, providers, funders, purchasers and indeed users of health care (see also Deloitte, 2008, 2009; Ehrbeck et al., 2008; Youngman, 2009). Moreover, care has become increasingly unaffordable for patients without insurance cover. (2) To contain costs, countries have since the 1990s embarked on health care reforms (inspired by new public management theories of the 1980s) centred around the *commercialisation* of health care, a process by which health care becomes a *commodity* marketed, traded and provided through a commercial relationship between suppliers and purchasers (Koivusalo and Mackintosh, 2004; Tritter et al., 2010). Challenging the role of the public sector and favouring explicit contractual relationships based on a purchaser–provider split, commercialisation has literally opened the market for health care, which is increasingly seen as a sector for jobs, growth and export (Tritter et al., 2010). Purchasing services abroad through cross-border contracts or health savings accounts can be seen as examples of new ways of funding care. Linked to the previous but also to other pressures for 'patient-empowerment' is the choice rhetoric according to which patients are expected to behave as consumers who decide what services and products to consume/buy in the health care marketplace (Newman and Kuhlmann, 2007; Tritter et al., 2010). Commercialisation is partly a prerequisite for the *globalisation* (or internationalisation) of health care by which actors increasingly function beyond national borders. Actors are motivated to follow international standards and rules to take part in the global market where health services and products are traded (see e.g. De Greef and Thomaes, 2006); this is true for migrating health professionals seeking job opportunities, hospitals seeking to attract clientele and medical staff, private health insurers extending their services across countries and firms producing medical devices/ pharmaceuticals for the global market (Cortez, 2008; Koivusalo and Mackintosh, 2004). In this context, patient mobility is a logical link to fulfil the potential of the global health care market. In addition, affordable travel and instant (web-based) information facilitate movements, while in the EU, patient mobility has become an individual (as opposed to collective) right under certain conditions (Palm and Glinos, 2010), and the opening of borders encourage travelling to EU Member States with the lowest prices.

While the context of health care is changing and adapting to the global dimension, most health care is nevertheless likely to continue to be accessed, delivered, funded and organised at local and national levels. Several factors, such as the lack of health cover for treatments received abroad, the general reluctance of patients to travel for care (Exworthy and Peckham, 2006) and some types of health services, such as emergency care, treatments implying repeated sessions, mental care and chronic diseases with continuous follow-up, being less suited for travelling mean there is a natural limit to patient mobility.

## 5. Conclusion

Patient mobility in the sense of a patient travelling deliberately across a border to obtain health care takes place within as well as between continents when patients perceive they can find (and fund) what they seek. The diversity of the phenomenon makes the typology useful. From the uninsured seeking affordable treatment to the wealthy seeking 'better' care, from the border-region resident going where is the closest to the waiting list patient wanting faster care, from UK seniors in sunny Spain to Mexican-born US residents returning 'home' for care, from those seeking cheaper to those seeking outlawed care… The modern nomads, the immigrants, the uninsured, the impatient, the childless, the sick, the wealthy—are all part of patient mobility in a world used to travel, trade and exchanges and where health care is not the exclusive realm of national states and systems. A good classification is an instrument to explore global developments in patient mobility, understand its causes, stimulate scientific research and

enhance debates at national and international levels. Our typology is hopefully just such an instrument.

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## References

AMI (African Medical Investments), 2010. AMI Well Woman Clinic a Lifeline for Mozambican Mothers. Club of Mozambique, 11 May 2010 (accessed 23 July 2010).

Angula, V., Guendelman, S., 2002. Crossing the border for abortion services: the Tijuana–San Diego connection. Health Care for Women International 23, 642–653.

Arunanondchai, J., Fink, C., 2007. Trade in health services in the ASEAN Region. World Bank Policy Research Working Paper 4147, Washington, DC.

Bandell, B., 2009. Bupa brings insured patients from Latin America to Miami. South Florida Business Journal.

Boffin, N., Baeten, R., 2005. Dutch Patients Evaluate Contracted Care in Belgian Hospitals: Results of a Mail Survey. Observatoire Social Europeen, Brussels.

Bookman, M.Z., Bookman, K.R., 2007. Medical Tourism in Developing Countries. Palgrave Macmillan, New York.

Brouwer, W., van Exel, J., Hermans, B., Stoop, A., 2003. Should I stay or should I go? Waiting lists and cross-border care in The Netherlands. Health Policy 63, 289–298.

Burkett, L., 2007. Medical tourism: concerns, benefits, and the American legal perspective. Journal of Legal Medicine 28, 223–245.

Burns, L.R., Wholey, D.R., 1992. The impact of physician characteristics in conditional choice models for hospital care. Journal of Health Economics 11, 43–62.

Busse, R., van Ginneken, E., 2010. Cross-Border Healthcare Data. In: Wismar, M. (Ed.), Cross-Border Health Care: Mapping and Analysing Health Systems. Diversity European Observatory on Health Systems and Policies, Brussels.

Bustamante, A.V., Ojeda, G., Castaneda, X., 2008. Willingness to pay for cross–border health insurance between the United States and Mexico. Health Affairs 27, 169–178.

Byrd, T.L., Law, J.G., 2009. Cross-border utilization of health care services by United States residents living near the Mexican border. Pan American Journal of Public Health 26, 95–100.

Callahan, D., 1999. Medicine and the market: a research agenda. Journal of Medicine and Philosophy 24 (3), 224–242.

Campbell, D., 2009. Thousands of women leaving UK for fertility treatment. The Guardian, 22 May 2009.

Cattaneo, O., 2009. Trade in health services: what's in it for developing countries? World Bank Policy Research Working Paper Series 5115, Washington, DC.

Central Provident Fund Board, Singapore Government, 2010 〈http://ask-us.cpf.gov.sg/explorefaq.asp?category=23069〉 (last accessed 27.07.2010).

Cheng, M.H., 2007. Hong Kong attempts to reduce influx of pregnant Chinese. The Lancet 369, 981–982.

Christoffersen, S.V., 2010. Patientbevaegelighed i Afrika? UNAIDS Benin Country Office, Benin. Personal communication, 26 July 2010.

Cornelissen, R., 1996. The principle of territoriality and the community regulations on social security (Regulations 1408/71 and 574/72). Common Market Law Review 33, 439–471.

Cortez, N., 2008. Patients without borders: the emerging global market for patients and the evolution of modern health care. Indiana Law Journal 83, 71–132.

Cortez, N., 2010. Patient mobility in the US. Southern Methodist University, Texas. Personal communication, 25 February 2010.

Council of the European Union, 2010. Council agrees on new rules for patients' rights in cross-border healthcare. Press release. 10760/10, 8 June 2010.

Daley, E., 2007. Survey findings. In: Warner, D.C. (project coordinator), Medicare in Mexico: Innovating for Fairness and Cost Savings. Policy Research Project Report No. 156, University of Texas, Austin.

Davis, H.L., 2010. Kaleida goes north for patients. Buffalo News, 12 January 2010.

De Greef, S., Thomaes, R., 2006. Dare & Care—Internationalisation du Secteur Medical Belge. FEB/VBO, Brussels.

Deloitte, 2008. Medical Tourism—Consumers in Search of Value. Deloitte Center for Health Solutions (#8174), Washington DC.

Deloitte, 2009. Medical Tourism: Update and Implications. Deloitte Center for Health Solutions (#9112), Washington DC.

De Neve, J.-W., 2010. Medisch Tourisme—Turkije. John Hopkins Hospital, Istanbul Personal communication, 24 July 2010.

DerGurahian, J., 2008. Breaking Barriers. Modern Healthcare, 7 July 2008.

Donia Sofio, A., Gabellini, A., 2006. Mobility of Italian patients within European Union. Working Paper, International Health Economics Association World Congress (2007).

Dyer, C., 2007. Dignitas is forced to offer its services from a former factory. BMJ 335, 1176.

The Economist, 2009. The others. 19 December 2009.

Eggertson, L., 2006. Wait-list weary Canadians seek treatment abroad. Canadian Medical Association Journal 174, 1247.

Ehrbeck, T., Guevara, C., Mango, P.D., 2008. Mapping the market for medical travel. The McKinsey Quarterly, May 2008 McKinsey&Company.

European Commission, 2003. Report on the application of internal market rules to health services—implementation by the Member States of the Court's jurisprudence. Brussels, DG Internal Market, European Commission, Annex 2.

European Commission. Proposal for a Directive of the European Parliament and of the Council on services in the internal market. COM(2004)2, 13.1.2004. 〈http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2004:0002:FIN:EN:PDF〉.

European Commission. Proposal for a Directive of the European Parliament and of the Council on the application of patients' rights in cross-border healthcare. COM(2008) 414, 2.7.2008. http://ec.europa.eu/health/ph_overview/co_operation/healthcare/docs/COM_en.pdf.

EP and Council Regulation (EC) No. 883/04 on the coordination of social security systems. OJ (2004) L 166/1.

EP and Council Regulation (EC) No. 1408/71 on the application of social security schemes to employed persons and their families moving within the European Community. OJ (1971) L 149/2.

Exworthy, M., Peckham, S., 2006. Access, choice and travel: implications for health policy. Social Policy & Administration 40, 267–287.

Fakhouri, G., Okour, R., Fardous, T., Al-Shafei, A.R., 2004. Trade in health services, the case of Jordan. WHO Regional Office for the Eastern Mediterranean.

Ferrera, M., 2005. The Boundaries of Welfare—European Integration and the New Spatial Politics of Social Protection. Oxford University Press, NewYork.

Financial Express, 2006. Health check. The Indian Express Limited, 1 April 2006.

Fleming, N., 2006. Couples warned of dangers in fertility tourism. The Telegraph, 28 April 2006.

Glinos, I.A., Boffin, N., Baeten, R., 2005. Contracting Cross-border Care in Belgian Hospitals: An Analysis of Belgian, Dutch and English Stakeholder Perspectives. Observatoire Social Europeen, Brussels.

Glinos, I.A., Baeten, R., 2006. A Literature Review of Cross-border Patient Mobility in the European Union. Observatoire Social Europeen, Brussels.

Glinos, I.A., Baeten, R., Maarse, H., 2010. Purchasing health services abroad: practices of cross-border contracting and patient mobility in six European countries. Health Policy 95, 103–112.

Glinos, I.A., Maarse, H., unpublished. Survey: where do German Unimaas students go for health care? Germany vs. the Netherlands. Maastricht University. Pretest May–July 2010.

Gunter, A., 2007. Retiree demographics and projections. In: Warner, D.C. (project coordinator), Medicare in Mexico: Innovating for Fairness and Cost Savings. Policy Research Project Report No. 156. University of Texas, Austin.

Health Protection Report, 2009. Multi-resistant hospital bacteria linked to India and Pakistan. Health Protection Report News Archive, 26 June 2009.

Kammer, J., 2005. Mexican retirees: the best of both worlds. American Association of Retired Persons Segunda Juventud magazine, April/May 2005.

Kieffer, R., 2003. L'Impact de la jurisprudence européenne sur la politique sanitaire et sociale au Luxembourg. In: Proceedings of the Paper presented on 05.12.03 in Lille.

Kiwanuka, M., Monson, T., 2009. Zimbabwean Migration into Southern Africa: New Trends and Responses. Forced Migration Studies Programme, University of the Witwatersrand, Johannesburg, South Africa.

Koivusalo, M., Mackintosh, M., 2004. Health systems and commercialisation—in search of good sense. Prepared for the United Nations Research Institute for Social Development International Conference on Commercialization and Health Care: Global and Local Dynamics and Policy Responses. Draft, March 2004, Geneva.

Konrad, W., 2009. Going abroad to find affordable health care. The New York Times, 20 March 2009.

Knoppers, B.M., LeBris, S., 1991. Recent advances in medically assisted conception: legal, ethical and social issues. American Journal of Law and Medicine 17, 329–361.

La Parra, D., Mateo, M.A., 2008. Health status and access to health care of British nationals living on the Costa Blanca, Spain. Ageing & Society 28, 85–102.

Legido-Quigley, H., La Parra, D., 2007. The health care needs of UK pensioners living in Spain: an agenda for research. Eurohealth 13, 14–18.

Legrand, C., 2006. En Argentine, chirurgie esthétique et tourisme. Le Monde, 5 October 2006.

León, F., 2000. The Case of the Chilean Health System, 1983–2000. United Nations Economic Commission for Latin America and the Caribbean (ECLAC)/Pan American Health Organization (PAHO).

Luft, H.S., Garnick, D.W., Mark, D.H., Peltzman, D.J., Phibbs, C.S., Lichtenberg, E., McPhee, S.J., 1990. Does quality influence choice of hospital? Journal of the American Medical Association 263, 2899–2906.

MacIntosh, C., 2004. Medical tourism: need surgery, will travel. A Canadian patient. CBC News Online, 18 June 2004.
Manzano, G.N., Rodolfo, M.C.L.S., unpublished. The movement of patients across international borders—emerging challenges and opportunities for health care systems: linkages of medical travel. Draft Report. University of Asia and the Pacific, Manila, Philippines.
Mattoo, A., Rathindran, R., 2005. Does health insurance impede trade in health care services? World Bank Policy Research Working Paper 3667, July 2005.
Meeus, B., 2005. Sea, sun and soins "all inclusive". Le Soir Magactu, 29 June 2005.
Meldrum, A., 2008. Zimbabwe's health-care system struggles on. The Lancet 371, 1059–1060.
Mifsud, M., Buttigieg, G.G., Savona-Ventura, C., Delicata, S., 2009. Reproductive health in Malta. European Journal of Contraception and Reproductive Health Care 14, 249–257.
Mines, R., Mullenax, N., Saca, L., 2001. The Binational Farmworker Health Survey. California Institute for Rural Studies, Davis.
Ministry of Health, The United Republic of Tanzania. National Health Policy, October 2003.
Morgan, D., 2009. Written statement to Ministers' round table. Medical Tourism and Global Health Congress, Los Angeles, 26–28 October 2009. 〈http://www.oecd.org/dataoecd/33/47/43952547.pdf〉.
Muscat, N., Grech, K., Cachia, J.M., Xuereb, J., 2006. Sharing capacities—Malta and the United Kingdom. In: Rosenmoller, M., McKee, M., Baeten, R. (Eds.), Patient Mobility in the European Union—Learning from Experience. European Observatory on Health Systems and Policies, Copenhagen.
Nerbollier, D., 2009. Des soins moins chers sous le soleil turc. Le Soir, 3 March 2009.
Newman, J., Kuhlmann, E., 2007. Consumers enter the political stage? The modernization of health care in Britain and Germany. Journal of European Social Policy 17, 99–111.
Nyagah, N., 2009. The business of health in sub-Saharan Africa. TradeInvest Africa, 25 May 2009.
Obermaier, A.J., 2009. Cross-border purchases of health services—a case study on Austria and Hungary. Policy Research Working Paper 4825, World Bank.
OFBS, 2007. Rapport Démographie médicale. Observatoire Franco-Belge de la Santé.
Oliveira da Silva, M., 2009. Reflections on the legalisation of abortion in Portugal. European Journal of Contraception and Reproductive Health Care 14, 245–248.
Olivier, A., 2008. La vague du tourisme medical n'a pas gagné la France. Le Figaro, 5 August 2008.
Palm, W., Glinos, I.A., 2010. Enabling patient mobility in the European Union: between free movement and coordination. In: Mossialos, E., Permanand, G., Baeten, R., Hervey, T. (Eds.), Health Systems Governance in Europe: The Role of EU Law and Policy. CUP, Cambridge.
Payne, D., 1999. Record numbers of Irish women visit Britain for abortion. BMJ 319, 593.
Pennings, G., 2004. Legal harmonization and reproductive tourism in Europe. Human Reproduction 19, 2689–2694.
Pennings, G., Autin, C., Decleer, W., Delbaere, A., Delbeke, L., Delvigne, A., De Neubourg, D., Devroey, P., Dhont, M., D'Hooghe, T., Gordts, S., Lejeune, B., Nijs, M., Pauwels, P., Perrad, B., Pirard, C., Vandekerckhove, F., 2009. Cross-border reproductive care in Belgium. Human Reproduction 24, 3108–3118.
Pobutsky, A.M., Buenconsejo-Lum, L., Chow, C., Palafox, N., Maskarinec, G.G., 2005. Micronesian migrants in Hawaii: health issues and culturally appropriate, community-based solutions. Californian Journal of Health Promotion 3, 59–72.
RAPID Press Release, 2009. Council adopts new rules for the coordination of social security systems. PRES/09/231, 27 July 2009, Brussels.
Rodkiewicz, K., 2007. Polish women giving birth in Germany. Krakow Post, 24 November 2007.
Rosenmoller, M., McKee, M., Baeten, R. (Eds.), 2006. Patient mobility in the European Union—learning from experience. European Observatory on Health Systems and Policies, Copenhagen.
Rosenmoller, M., McKee, M., Baeten, R., Glinos, I.A., 2006a. Patient mobility: the context and issues. In: Rosenmoller, M., McKee, M., Baeten, R. (Eds.), Patient Mobility in the European Union—learning from experience. European Observatory on Health Systems and Policies, Copenhagen, pp. 1–7.
Shenfield, F., 2009. Presentation on Cross-border Reproductive Care at the 25th annual Conference of the European Society of Human Reproduction and Embryology, Amsterdam, 29 June 2009. http://www.eshre.eu/01/default.aspx?pageid=752.
Schulz, A.T., Medlin, C., 2006. Cross Border Health Care Plans. Health Policy Monitor, Bertelsmann Stiftung with Institute for Global Health (IGH), University of California, Berkeley/San Francisco.
THI (Tanzanian Heart Institute), 2008. The Tanzanian Heart Institute crisis 2008: causes and possible solutions. Experts Opinion, August 2008.
Tremlett, G., 2006. Spain becomes the destination of choice for fertility tourists from Britain. The Guardian, 12 May 2006.
Triggle, N., 2007. Health care across Europe's border—UK. BBC News, 19 December 2007.
Tritter, J., Koivusalo, M., Ollila, E., Dorfman, P., 2010. Globalisation, Markets and Healthcare Policy—Redrawing the patient as consumer. Routledge, London and New York.
Yi, D., 2006. Overseas surgery a clamp on costs. Los Angeles Times, 30 June 2006.
Youngman, I., 2009. Medical tourism statistics: why McKinsey has got it wrong. International Medical Travel Journal (web-based).
Wallace, S.P., Mendez-Luck, C., Castaneda, X., 2009. Heading south: why Mexican immigrants in California seek health services in Mexico. Medical Care 47, 662–669.
Warner, D.C., Schneider, P.G. (Eds.), 2004. Cross-border Health Insurance—Options for Texas. US–Mexican Policy Report No. 12. The University of Texas at Austin, Texas.
Warner, D.C., Jahnke, L.R., 2010. US-Mexico Mode 2 Imports and Exports of Health Services. Report to the Organisation for Economic Cooperation and Development. The University of Texas at Austin, Texas.
Whittaker, A., 2008. Pleasure and Pain: Medical travel in Asia. Global Public Health 3, 271–290.
World Trade Organization, 1995. General Agreement on Trade in Services, Annex 1B of the WTO Agreement. World Trade Organization, Geneva.