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Thematic study

Cost analysis of health care provision for irregular migrants and EU citizens without insurance

Final report

Vienna, December 2016

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The present study is supplemented by four country-specific policy briefs and an overall policy brief, which provide a summary of the methodology, findings and recommendations of the study.

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ACRONYMS

ACSC	Ambulatory care sensitive conditions
ADAPT	COST Action IS1103 - "Adapting European health systems to diversity"
AMU	Urgent medical assistance
ASEF	Asia-Europe-Foundation
AUSL	Azienda Unitá Sanitaria Locale
BMG	Bundesministerium für Gesundheit
CD	Case description
C-HM	Center for Health and Migration
CPAS	Public Social Welfare Centre
DALY	Disability adjusted life year
DG SANTE	Directorate-General for Health and Food Safety
DRG	Diagnosis related groups
EC	European Commission
EU	European Union
FRA	European Union Agency for Fundamental Rights
GDP	Gross domestic product
GO	Governmental Organisation
HUMA	Health for Undocumented Migrants and Asylum seekers network
ICD	International Classification of Diseases
ILO	International Labour Office
INAMI	Institut national d'assurance maladie-invalidité (Belgium)
IOM MHD	International Organization for Migration, Migration Health Division
LEA	Livelli essenziali di assistenza - Essential levels of care (Italy)
MdM	Médecins du Monde
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
PD	Practice description
PICUM	Platform for International Cooperation on Undocumented Migrants
QALY	Quality adjusted life year
RKÖ	Austrian Red Cross
SPSS	Statistical Package for the Social Sciences
SSN	Servizio Sanitario Nazionale (Italy)
STP	Temporarily Present Foreigners
TB	Tuberculosis
TCN	Third country national
WGKK	Wiener Gebietskrankenkassa (Austria)
WHO	United Nations World Health Organization

I EXECUTIVE SUMMARY

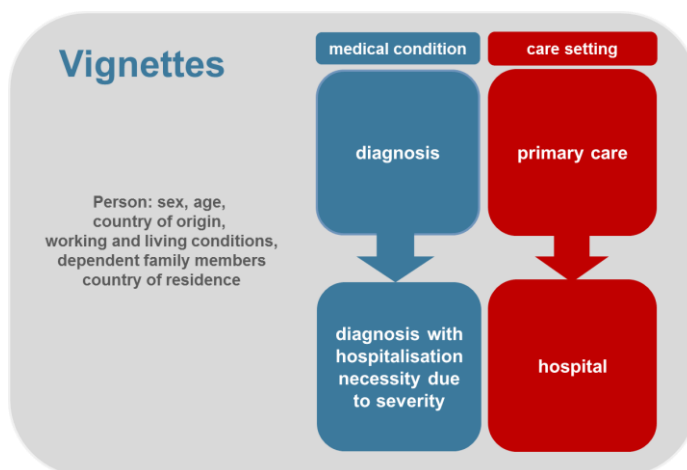
I.1 Objectives and methodology

The thematic study, undertaken within the framework of IOM's EQUI-HEALTH project "Fostering health provision for migrants, the Roma, and other vulnerable groups", analysed economic costs related to the exclusion of irregular migrants from access to the mainstream health care system.

A majority of European countries seemingly consider that by providing irregular migrants with access to emergency care they fulfil their fundamental human right to health care. Accordingly, respective legal frameworks deny access to primary care, which leads to severely delayed treatment processes and avoidable hospitalisation. The main objective of the study was to evaluate the economic costs of timely treatment provided to irregular migrants in a primary health care setting versus the costs of delayed treatment in a hospital.

The study used a vignette approach. Vignettes are short descriptions of scenarios and are composed of defined core elements that can be varied systematically to develop different hypothetical cases. Based on primary data and supplemented further with register data, desk research and expert opinion, vignettes provide robust economic results and are more generalizable than single case studies.

Real-life and comparison vignettes were developed containing two core elements: i) medical condition and ii) care setting. The vignettes were then used to compare treatment costs in the two care settings – primary health care and hospital.

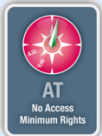
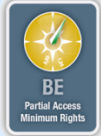

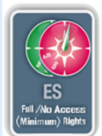


I.2 Partners

Commissioned by the Migration Health Division of IOM's Regional Office in Brussels (IOM MHD RO Brussels), the Center for Health and Migration (C-HM) in Vienna designed and conducted the study in 2014-2015, in close cooperation with IOM and primary health care and hospital service providers in four European Union (EU) Member States (MS): Austria, Belgium, Italy, and Spain.

Implementation partners provided the link to practice partners, i.e. service providers where primary data was collected. Implementation partners included Médecins du Monde Belgium/BE, Agència de Salut Pública de Catalunya/ES, and AUSL Reggio Emilia/IT. In Austria, C-HM acted as an implementation partner. Practice partners selected for the study included Neunerhaus Vienna/AT, Barmherzige Brüder Krankenhaus Vienna/AT, Médecins du Monde Polyclinic Brussels/BE, Unitat de Salut Internacional Vall d'Hebron-Drassanes Barcelona/ES, Hospital Germans Trias I Pujol (Can Ruti) Badalona/ES, Centro Salute Famiglia Straniera Reggio Emilia/IT and Azienda Ospedaliera S.Maria Nuova di Reggio Emilia/IT.

The countries above were selected for the study as they represent two different approaches to financing health care systems – insurance-based and tax-based, as well as two categories of policy regulations on access to health care for irregular migrants – partial access and no access. All four countries provide irregular migrants with access to emergency care.

Key country data	Austria	Belgium	Italy	Spain
Population				
➤ Total (2014)	8,506,889	11,203,992	60,782,668	46,512,199
➤ Migrants (% of total population for 2014)	12.4%	11.3%	8.1%	10.1%
➤ Irregular migrants (% of total population; min. and max. estimation for 2008)	0.22% 0.65%	0.65% 1.24%	0.47% 0.77%	0.62% 0.78%
➤ Roma (% of total population; min. and max. estimation for 2009)	0.24% (20,000) 0.36% (30,000)	0.19% (20,000) 0.38% (40,000)	0.18% (110,000) 0.29% (170,000)	1.4% (650,000) 1.73% (800,000)
Health care financing system	Insurance based	Insurance based	Tax based	Tax based
Regulations on access to health care for irregular migrants				

I.3 Economic analysis

A micro-costing approach was used to estimate direct and indirect costs associated with each vignette.

- Direct medical costs include medication (pharmaceuticals and medical devices), diagnostics and disposable equipment, and time spent by physicians, nurses and other professionals (interpreter, social worker) during medical encounters, as well as resources used in other health care organisations or services (e.g. laboratory or check-ups in outpatient sector).
- Direct non-medical costs include travel time and expenses incurred by the health care provider, and the time the patient spends at the health care provider.
- Indirect costs include income loss for the patient and productivity loss for society as a whole.

The cost analysis was conducted using three perspectives:

- Patient
- Third party payer (Health care system)
- Society

Data used to calculate costs was obtained from national and international databases and national tariff / fee catalogues.

The estimated costs of the primary health care vignette were compared to the costs of the vignette representing delayed treatment in a hospital setting from each of the three perspectives. The difference represents potential savings by avoiding hospitalisation through timely diagnosis and treatment in primary care.

I.4 Results

Results obtained through the study demonstrated that timely treatment in a primary health care setting is always cost saving when compared to treatment in a hospital setting. This is true for the direct medical and non-medical costs, as well as the indirect costs. According to cost estimations, at least 49 and up to 100% of direct medical and non-medical costs of hospitalisation can be saved if timely primary health care is provided to irregular migrants. This is true from the perspective of all three stakeholders: the patient, the third part payer (health care system) and society as a whole.

Overview of potential cost savings (%)

primary care versus hospital care		Depression (Austria)	Diabetes (Austria)	Epilepsy (Belgium)	Hypertension (Spain)	Asthma (Italy)
Patient	Direct medical and non-medical costs	94 %	74 %	66 %	90 %	90 %
	Indirect costs	4 %	100 %	100 %	92 %	
Third party payer	Direct medical and non-medical costs	94 %	49 %	77 %	100 %* (rounding error)	86 %
Society	Direct medical and non-medical costs	92 %	52 %	67 %	99 %	85 %
	Indirect costs	4 %	100 %	100 %	92 %	

1.5 Conclusion

Timely treatment in a primary health care setting entails potential cost savings of at least 49 and up to 100% of direct medical and non-medical costs, and between 4 and up to 100% of indirect costs incurred in a hospital setting for treatment of more severe medical conditions.

Identified cases revealed the vulnerability of the Roma population and of other EU citizens from the poorer EU Member States regarding access to health care.

The study confirms the close interrelation between irregular migration and black labour markets as identified in previous work (Trummer, Novak-Zezula et al, 2014). A majority of cases in the primary data reported an active working life on the black labour market and a high economic responsibility for family members.

The vignette approach applied in this study proved appropriate for estimating and comparing costs that occur in different health care settings, especially for chronic diseases with acute complications, such as asthma or hypertension. Of course, **a sample of 40 cases and 7 providers from 4 countries cannot generate fully representative data on costs of health care provision for migrants in an irregular situation in the EU.**

Nevertheless, owing to the collected primary data and the vignette approach, the estimated costs are reliable with a high internal validity. Results from the present study therefore complement other studies (presented in section 3) that have been conducted on this subject, which often have a high external validity and generalisability but sometimes lack internal validity. Despite the methodological differences, results are consistent across all of these studies.

I.6 Recommendations

General Recommendations

1. Acknowledge health care for irregular migrants and EU citizens ineligible for or without insurance as a public health issue and apply public health instruments of planning, implementing, monitoring and evaluation accordingly.
2. Provide access to primary health care for all persons, irrespective of legal status; provide access to (highly) specialised care based on case-by-case decisions.
3. Facilitate information sharing between all stakeholders, including the general public and (irregular) migrant communities, with the specific goals of transparency and empowerment.

Specific national recommendations

Austria:

- Formulate a public health policy directly addressing health care provision for irregular migrants
- Link public health services to existing NGO structures and develop models of public private partnerships (PPP) for service provision

Belgium:

- Harmonize implementation of the “Urgent Medical Aid” system across the different territorial regions
- Simplify administrative procedures

Italy:

- Harmonize regional implementation of policy regulations and administrative tools to integrate irregular migrants into service provision, such as the “Temporary Present Foreigners” anonymous code
- Use existing models of good practice of cooperation between public health actors and civil society as examples to learn from and to apply in other regions

Spain:

- Assess the policy shift by conducting an economic analysis on its effects, using the variation in implementation levels by different regions as an additional source for evaluation
- Evaluate the effects of the various regional attempts to regulate access to health care for irregular migrants and EU citizens ineligible for or without insurance on the functionality of the public health sector especially in terms of job satisfaction, commitment and work ability of staff

2 INTRODUCTION

The “Thematic study: Cost analysis of health care provision for migrants and ethnic minorities” (2014-2015), was commissioned by IOM MHD RO Brussels within the framework of the EQUI-HEALTH project “Fostering Health provision for migrants, the Roma and other vulnerable groups”, co-funded by DG SANTE within the second programme of Community action in the field of health (2008-2013). The initially formulated aims of the study were to analyse economic and social costs of excluding vulnerable migrant groups from the mainstream health care system, with a focus on irregular migrants and Roma with irregular status. However, interdisciplinary discussions held during the inception phase of the study revealed a conflicting complexity of terminology. From an economic perspective, social costs are related to productivity, whereas, from a sociological perspective, they are related to the consequences on society. The C-HM project team therefore decided to use the economic conceptualization to analyse only the economic costs of health care provision for irregular migrants. In other terms, it was decided to narrow the focus to allow for clear and targeted results that would allow for more effective advocacy with EU policy-makers to improve access to the mainstream health care system for irregular migrants.

2.1 OBJECTIVES

The principal objective of the study was to evaluate the economic costs of timely treatment provided to irregular migrants in a primary health care setting versus the costs of delayed treatment in a hospital, the latter occurring most often due to exclusion from the mainstream health care system. The study represented an empirical analysis, using a mixed methods approach by combining quantitative and qualitative methods. To this end, available evidence (real life cases) on health care provision for irregular migrants was used as a starting point to develop vignettes (real-life and comparison) on health care provision in two settings – primary care and hospital, and calculate related costs. These vignettes were then used to carry out a cost analysis of direct and indirect costs, resulting in evidence-based recommendations on access to health care services for irregular migrants. The countries included in the study were Austria, Belgium, Italy and Spain.

2.2 IRREGULAR MIGRANTS AS SPECIFIC GROUP OF INTEREST

The right to health is recognized as a human right in various international human rights treaties and other instruments¹ that have been ratified by all EU member states (Rechel et al. 2011), as well as the Charter on Fundamental Rights of the EU. At the same time, access to health care is regulated by national law, which, in most cases, makes access contingent on certain conditions, such as proof of insurance and citizenship/or regular status. Migrants with an irregular status are a group of interest with particular vulnerabilities concerning access to health care: EU institutions consider irregular migrants as a specifically vulnerable group that needs to be taken into account in the health care systems of EU member states².

However, reliable figures on irregular migrants in the EU are not accessible; only estimates are available (Clandestino, 2009). In 2008, the share of irregular migrants in the EU 27 was estimated at between 0.39 % and 0.77 % of the total population, and between 7% and 13% of the foreign population (Vogel, 2009).

Irregular migrants are often confined to a parallel world that is characterized by exploitation, insecurity, and a constant fear of entering into conflict with the law. Their health is a key issue from several perspectives:

1. A majority of irregular migrants do not have health insurance. While many among them seem to work, they do not have insurance as they are employed without formal contracts. This is acknowledged in the DIRECTIVE 2009/52/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 June 2009, which provides for sanctions and measures against employers of third-country nationals without a legal status and states that “a key pull factor for illegal immigration into the EU is the possibility of obtaining work in the EU without the required legal status.”³

¹ The Constitution of the World Health Organization (1946), Universal Declaration of Human Rights (1948), International Convention on the Elimination of All Forms of Racial Discrimination (1965), International Covenant on Economic, Social and Cultural Rights (1966), Convention on the Elimination of All Forms of Discrimination against Women (1979), Convention on the Rights of the Child (1989), Convention on the Rights of Persons with Disabilities (2006).

² EC Communication on Reducing Health Inequalities in the EU, 2009, 567 final; European Parliament resolution of 8 March 2011 on reducing health inequalities in the EU, 2010/2089(INI))

³ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:168:0024:0032:EN:PDF>

2. Irregular migrants face extreme physical and mental stress due to their harsh working (e.g. long hours, low salaries, uncertainty about job security) and precarious living conditions.
3. For the most part, only emergency services are accessible to irregular migrants and they are not covered by any other surveillance systems; this can result in delayed treatment for possible communicable diseases, thus posing a potential public health risk.

A growing body of knowledge on access to health care in EU MS has been developed over the last several years within the framework of various projects funded by the EU (IOM, 2009; HUMA, 2009; PICUM, 2007; Karl-Trummer, Novak-Zezula, 2010; FRA, 2011). These projects demonstrated that a majority of European countries with diverse health care financing schemes in place exclude irregular migrants from the mainstream health care system. According to the project “Health care in NowHereland”, funded by the Second EUHealth programme and implemented by C-HM in 2008-2010, 20 of the 27 EU MS did not allow access to health care for irregular migrants, with the exception of emergency care. Three EU MS allowed partial access, i.e. explicit entitlements to a limited range of services. Four EU MS allowed access to the same range of services as their citizens, contingent on providing documentation on certain eligibility criteria, e.g. minimum length of stay (Karl-Trummer, Novak-Zezula, et al. 2010). It is often argued that restrictions on irregular migrants’ access to health care are necessary as open access would lead to high costs incurred by the health care system for the treatment of people who, it is alleged, do not contribute to welfare systems in the EU. Additionally, similar arguments are put forth claiming that open access, irrespective of regular status and/or financial contributions, constitutes an attractive pull factor for irregular migration. A recent study conducted by researchers at Harvard Medical School and Hunter College School of Public Health in the U.S. showed that, on the contrary, immigrants, particularly noncitizens, contribute billions of dollars more to Medicare’s Hospital Insurance Trust Fund than they withdraw in health benefits each year. Immigrants contributed a surplus of \$115 billion during the period between 2002 and 2009. During the same period, U.S.-born citizens generated a net deficit of \$28 billion. The explanation for this might be the fact that the vast majority of immigrants are working-age adults. Therefore, as a group, they have a higher labour force participation rate and the total amount of income taxes they pay is high (Zallman et al., 2013).

It can actually be counter argued that, recognizing that “there will always be a number of irregular migrants present in Europe, regardless of the policies adopted by governments to prevent their entry or to return them speedily” (European Parliament resolution of 8 March 2011 on reducing health inequalities in the EU, 2010/2089(INI)), their exclusion from health care leads to costs not only from a humanitarian perspective, but also to unnecessary economic costs due to postponed treatment processes resulting in “forced emergencies”. The scientific evidence base to support this argument, however, was, up until now, scarce, as economic arguments mainly concentrated on costs related to provision of services and (immediate) avoidable costs, rather than on costs that may arise from non-provision.

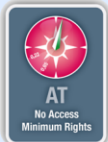

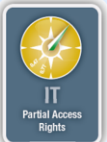

2.3 COUNTRIES SELECTED FOR THE STUDY

Austria, Belgium, Italy, and Spain were selected for this study, based on four criteria: 1) balanced geographic diversity, 2) different types of health care financing systems, 3) different regulations on access to health care, and 4) availability of data sources on practices providing health care for irregular migrants.

While Austria and Belgium have an insurance-based health system, in Italy and Spain a tax-based system is in place. According to the classification proposed by the project “Health Care in NowHereland” (2008-2010), regulations on access to health care for irregular migrants in the four countries can be categorized as follows: Austria is a no-access country, i.e. access to health care for irregular migrants is limited to emergency care only; Belgium is a partial access country, i.e. irregular migrants can access urgent medical assistance, free of charge, in social welfare centres and compulsory health insurance can be obtained by some specific vulnerable groups of irregular migrants; Italy is a partial access country, i.e. irregular migrants can obtain an anonymous health card, which allows access to urgent and essential care; since 2012, Spain has been a no-access country, i.e. access to health care is limited to emergency care only. In 2012, the Spanish Government issued Royal Decree-Law 16/2012 severely restricting access to health care for irregular migrants who, up until this point, had enjoyed full access to the mainstream health care system in Spain. The decree has not been applied uniformly across all 17 Spanish autonomous communities, however, and following municipal elections in March 2015, some regions adopted legal and/or administrative measures to guarantee access to health services for migrants at regional level. Subsequently the Ministry of Health announced a change of the 16/2012 law⁴.

⁴ Information provided by Head of Migration and International Health, Health Promotion Unit, Catalanian Public Health Agency, Secretary of Public Health, Ministry of Health of the Catalanian Government

Table 1: Main characteristics of chosen countries

	Austria	Belgium	Italy	Spain
Population				
➤ Total (2014)	8,506,889	11,203,992	60,782,668	46,512,199
➤ Migrants (% of total population for 2014)	12.4%	11.3%	8.1%	10.1%
➤ Irregular migrants (% of total population; min. and max. estimation for 2008)	0.22% 0.65%	0.65% 1.24%	0.47% 0.77%	0.62% 0.78%
➤ Roma (% of total population; min. and max. estimation for 2009)	0.24% (20,000) 0.36% (30,000)	0.19% (20,000) 0.38% (40,000)	0.18% (110,000) 0.29% (170,000)	1.4% (650,000) 1.73% (800,000)
Health care financing system	Insurance based	Insurance based	Tax based	Tax based
Regulations on access to health care for irregular migrants				

Note: Sources of population data for total and % of migrants: Eurostat; for % irregular migrants: Clandestino; for number of Roma: Council of Europe, Roma and Travellers Division.

Detailed information on the contexts in and health care access policies of the countries selected for the study is provided in the country-specific sections of this report.

2.4 SELECTION OF PRACTICE MODELS OF HEALTH CARE PROVISION FOR IRREGULAR MIGRANTS

There is no systematic inventory in the EU of medical practices that provide health care for irregular migrants. In general, official data is scarce.

One of the main sources for documented practices is the project “Health Care in NowHereland” that produced the first-ever compilation of policies and regulations in force in the EU 27, and a database of practice models (organizations providing health care) in 11 EU MS and Switzerland. It also provided in-depth assessments of selected practice models and insights into the ‘daily lives’ of irregular migrants and their struggle to access health care services. The data collection phase of the

project took place in 2009-2010 by means of a self-administrated questionnaire (available in 11 languages), including questions on services needed, services provided, staffing, and financing. It was distributed via international experts, as well as hospital and NGO networks. The database includes 71 practice models from 12 countries (AT, BE, FR, DE, EL, HU, IT, NL, PT, ES, SE and CH). Eight of the practice models are hospitals, 63 are primary care organisations, 24 are governmental organisations (GOs) and 47 are non-governmental organisations (NGOs).

The first step in the selection of practice models of health care provision for irregular migrants for the present thematic study included a review of the NowHereland database. The search revealed the following results: nine practices in Austria (all of them non-governmental), one practice in Belgium (non-governmental), fifteen practices in Italy (10 governmental, 5 non-governmental) and five practices in Spain (3 governmental, 2 non-governmental). The practices were assessed based on services provided (main focus: medical health care), completeness of data and whether they were willing to be publically recognized (anonymous/non-anonymous).

The second step included a consultation with the study's advisory committee members from the four countries under study, COST Action IS1103 'ADAPT' and IOM MHD RO Brussels, on the appropriateness and accessibility of the identified services, as well as on alternative service providers to be integrated into the thematic study.

The final step of the process involved contacting the pre-selected service providers to invite them to participate in the study. In the case of a commitment on their part, an agreement outlining the conditions of their participation in the study was signed between the service provider and C-HM.

The aim of the process was to select one service provider from the primary health care sector and one from the hospital sector in each of the countries participating in the study. The selection criteria included the experience of the service provider in working with vulnerable groups and the willingness of the service provider to participate in the study. The type of practice (GO or NGO) did not constitute a factor in the selection, as the legal framework in the respective country may encourage service provision through the formal health system or through NGOs or through both.

2.5 SELECTED PRACTICES

The following service providers were selected and agreed to participate in the study.

Country	Primary Health Care	Hospital Setting
AT	NeunerHaus (Vienna)	Krankenhaus der Barmherzigen Brüder (Vienna)
BE	Médecins du Monde, Polyclinic (Brussels)	None ⁵
ES	Unitat de Medicina Tropical i Salut Internacional Vall d'Hebron-Drassanes– Institut Català de la Salut (Barcelona)	Hospital Can Ruti (Badalona)
IT	Centro per la salute della Famiglia Straniera (Reggio Emilia)	Santa Maria Nuova Hospital (Reggio Emilia)

⁵ Despite efforts undertaken by IOM Brussels, C-HM and a representative of the Centre fédéral de la migration it was not possible to reach an agreement with a hospital in Belgium to act as practice partner and provide patient data.

3 STATE OF THE ART ON COSTS OF (NON) PROVISION OF HEALTH CARE FOR MIGRANTS AND ETHNIC MINORITIES

3.1 RELEVANCE OF ECONOMICS IN HEALTH CARE

In general, health care costs are a considerable and continuously increasing element of governmental expenditures in developed countries. Statistics collected by the World Health Organization (WHO) indicate that, between 1995 and 2013, total health care expenditures, as a percentage of the national gross domestic product (GDP), increased in all EU MS. The average health care expenditure share of GDP was 7 % in 1995 and increased to 8.76 % in 2013. It should be noted, however, that from 2009 to 2010 a slight decrease or stagnation of the total health expenditures was observed in most European countries due to the financial crisis and subsequent austerity measures that were put in place. The same is true for the four countries selected for the study: in Austria, the total health care expenditure share of GDP increased from 9.6 % in 1995 to 11 % in 2013; in Belgium from 7.6 % to 11.2 %; in Italy from 7.1 % to 9.1 %; and, in Spain from 7.4 % to 8.9 % (WHO).

Economically, there are three major reasons that can possibly explain such a growth of expenditures (Folland et al., 2010). First, the use of services and goods is rising. Regarding the health care sector, this means an increase in physician and hospital visits, as well as more prescriptions and drug purchases. This rise is mainly due to a demographic change on account of falling fertility rates and a longer life expectancy, resulting in an increase in the share of elderly people in our society (Zweifel et al., 1999). Elderly people suffer more often than other adults and children from chronic diseases and are, therefore, more likely to be in need of costly long-term care. Another possible reason for the growth of expenditures is that the goods and services that are consumed are more expensive compared to previous decades. In the health care sector, this can be rationalised by the fast emergence of very expensive high-tech products (such as Magnetic Resonance Tomography, Magnetic Resonance Imaging and other diagnostic technologies) over the last several years. The third reason is that the prices of health care services are rising faster than those of other goods and services (Folland et al., 2010). In other words, the inflation in the cost of health care is higher than that in the remaining economy. According to traditional economic theory, this could be due to an increased demand for health care, as mentioned above. However, another explanation has been put forth by health economists: due to the fact that the health care sector is very labour-intensive, the

cost disease⁶ of personal services (e.g. services provided by doctors and nurses) leads to a greater increase in total personnel expenditure than in less labour-intensive sectors (Baumol and Blinder, 2009).

With increasing national expenditures in the health care sector, economic aspects, in general, and cost containment, in particular, have become priorities for many research agendas. Evidence-based knowledge on the financial and economic impacts of certain interventions or measures is especially relevant, or even necessary, to the strategic development and financing of health care systems and services. (Brown, Thurecht, Nepal 2012; Dahrouge, Devlin, Hogg, Russell, Coyle, Fergusson, 2012).

3.2 FORCED EMERGENCIES AND ACCESS TO HEALTH CARE

In relation to prevention and health promotion, emergency care is on the other end of the health care continuum, not only in terms of individual suffering, but also as regards economic costs. Avoidable emergencies are an issue that is widely discussed, especially in a considerable range of U.S. literature (Pappas, 1997; Kruzikas, 2000; Russo, 2007; Smith-Campbell, 2005). Recent European studies (Caminal et al., 2004; Rizza et al., 2007; Rosano, 2012; Magan, 2011) on public health also put forth the argument that medical emergencies can be avoided through a system of effective primary and preventive care. In 2004, Caminal et al. proposed a European core list of prevalent ambulatory care sensitive conditions (ACSC) that are avoidable through prevention, early diagnosis and treatment, or by effective disease control and management. The list includes infectious diseases, such as rheumatic fever, pneumonia and acute pyelonephritis, but also non-infectious diseases, such as hypertensive heart disease and diabetes mellitus. Avoiding emergencies, which often lead to hospital admissions, results in averting high service costs and, at the same time, increases public welfare. Even if hospitalisation could not be avoided “[...] the use of primary services may reduce the duration of hospitalisation” (Fleming, 1995). Pappas et al. (1997) point out that the number of avoidable emergencies is an important indicator of the efficiency and equity of a national health care system. A more recent systematic review of the relationship between avoidable hospitalisation and accessibility to primary care (Rosano, 2012) found that the majority of studies confirm an inverse association between accessibility and the quality of primary health care and ambulatory care sensitive hospitalisations.

⁶ Baumol’s cost disease refers to the increase of salaries, and hence labour costs, without a corresponding increase in labour productivity in certain sectors. This phenomenon occurs due to wage increases in other productivity increasing sectors: to stay competitive on the labour market, sectors that did not experience increases in labour productivity have to offer similar wages to their employees, in order not to lose them.

In keeping with the reasoning presented above, it is possible to infer that timely access to health care is a crucial cost saving and welfare enhancing measure, and denying access to primary care or prevention programmes to part of the population is not only economically inefficient but also harmful on an individual and societal level. Despite this rationale, in Europe and the U.S., there are groups in society that are excluded from the primary care systems (Fuchs, 2003; Rowland, 2004). The situation in Europe is especially delicate because the claim by governments of universal coverage denies the fact that there are parts of the population (e.g. irregular migrants, uninsured persons) that do not have access to the health care system due to legal, financial and administrative barriers. Furthermore, this claim overlooks another problem, which is that effective access to health care providers is more difficult for some parts of the population (e.g. migrants due to language barriers) than for others. They might experience barriers to health care other than just financial, including lack of time, lack of health literacy and practical difficulties in reaching providers (e.g. unavailability of transport). In the U.S., there is greater awareness that certain groups in society are uninsured or are unable to access health care facilities, resulting in a better evidence base and hence a better understanding of why a person is uninsured and how this person approaches the health care system in case of medical need (Miller, 2004; Smith-Bell, 2005; Oyster, 2002; Rosano, 2012). A review of U.S. studies on uninsured persons showed that there is a strong relationship between access to primary and preventive care, and health insurance, which is fostered by socioeconomic status (Hoffman and Paradise, 2008).

3.3 COSTS RELATED TO BARRIERS TO HEALTH CARE ACCESS FOR IRREGULAR MIGRANTS

Even if we consider that the quantity of uninsured individuals in Europe might be small, there are at least two reasons why investigating this phenomenon is necessary. First, the number of uninsured persons in European countries is unknown and their personal and socioeconomic characteristics are scarcely investigated. Second, in accordance with evidence presented in studies conducted in the U.S. (Ayanian et al., 2000), it can be hypothesised that uninsured persons form a particularly vulnerable group due to their exclusion from the primary and preventive care system and their often precarious social and financial status (Hoffman and Paradise, 2008). Increasing awareness among health policy makers of the situation of the uninsured, including their vulnerability, might help improve social equity and enable cost containment in the emergency and inpatient sectors. The latter argument regarding cost containment has been put forth in the U.S., and has been analysed quantitatively in the past. A U.S. study published in 2005 showed that following the establishment of a community health centre, which focussed on financially disadvantaged and uninsured people, emergency department visits by uninsured persons decreased by almost 40 % within three years, while the use of the same services by insured patients increased continuously (Smith-Campbell, 2005). Another article, published in 2003, on the costs of covering the uninsured concludes that the gains in better health and longevity (health capital) would outweigh society's economic investments

necessary to extend coverage to the 40 million uninsured Americans (Miller, 2004). To our knowledge, no such estimations of the gains in health capital compared to necessary societal economic investments have been undertaken in the EU, as the notion of universal health insurance coverage interdicts the systematic occurrence of uninsurance. However, even in the context of universal coverage, there are groups of persons in the EU that are systematically excluded from access to health care including migrants in an irregular situation.

Recently, provision of health care for irregular migrants and, in particular, the costs related to denying access to the mainstream health care system, has gained increasing attention not only within equity discourses but also from an economic perspective. One recommendation presented at the Asian European Foundation's (ASEF) First Research Exchange Workshop on Social Determinants of Migrants' Health Across Asia and Europe was to support research on "Cost effectiveness of limiting undocumented migrant's access to free primary care" [...] "since economic and financial arguments were felt to perhaps be more persuasive to EU governments than arguments relying on a human rights approach the participants proposed to conduct cost effectiveness analyses of not allowing undocumented migrants to get access to free primary care" (ASEF, 2012: p28).

In line with the recommendation above, ASEF commissioned a comparative study on "Costs of Exclusion of (Un)documented Migrants from Healthcare" conducted in 2014 in Austria, Italy, Hong Kong SAR and Singapore by European and Asian research partners, namely Lee Kuan Yew School of Public Policy, National University of Singapore, JC School of Public Health and Primary Care, Chinese University of Hong Kong, and C-HM Austria. As part of the study, a costing framework was developed to quantify economic and social costs of (no) treatment. Evidence was collected concerning organisational practices of health care provision for vulnerable migrant groups, as well as individual patient records. "Real life cases", covering the treatment process of specific patients, were identified using different approaches (face-to-face interviews, surveys and site visits of health care providers) in order to quantify basic treatment costs. This preliminary attempt at measuring costs of excluding irregular migrants from primary health care showed, on a case level, that costs rise considerably when treatment is delayed. However, it was pointed out by the researchers that results that are more generalizable were necessary to generate evidence that is more robust. It was further concluded that the full economic benefits of investing in the health of migrants are linked to an increased productivity of national economies by reducing sickness absenteeism and work disability (ASEF report). This holds true even for migrants in an irregular situation who are forced to work on the black labour market, as the unobserved economy forms an important part of the overall economy. This is demonstrated by the fact that all OECD countries adjust for black market activities when estimating their national accounts (Gyomai, 2014). However, the notion that the health of irregular migrants is important not only from an ethical and human rights perspective but also from an economic one has seemingly not been clearly understood and demonstrated yet. The ASEF study argues that as "decision-makers understand and respond to evidence and money [...] economic arguments should supplement moral suasion" (ASEF report, p.93).

Following the publication of the ASEF report, in 2015 the European Union Agency for Fundamental Rights (FRA) commissioned a study on the cost of exclusion of migrants in an irregular situation from health care (FRA, 2015). The study, conducted in Germany, Greece and Sweden, aimed to shed light on this topic by analysing two medical conditions – hypertension and pregnancy, using a decision tree model. The results of these static models show that, for both conditions, providing access to preventive health care for migrants in an irregular situation is cost saving. Even though these results seem to be rather robust, the authors point out that due to limited data availability, and the fact that the models are static and, therefore, do not take into account migrant mobility, further research is needed.

A third, recently published study (Bozorgmehr and Razum, 2015) on the financial effects of restricting access to health care for asylum-seekers and refugees in Germany takes on a more macroeconomic approach. The authors used annual, national routine data to compare health expenditures incurred by migrants with restricted access to health care with that of migrants with regular access (i.e. same access as citizens) to health care. They found higher expenditures in the group with restricted access and concluded that this difference cannot be explained entirely by differences in need. This adds further evidence to the assumption that restricted access to health care leads to higher costs than unrestricted access for patients with similar treatment needs. Even though the results of the study are based on the use of robust data, the authors deem that evidence is still insufficient and claim that an “evidence-informed discourse on access to health care [...] is needed” and “urgently requires high-quality, individual-level data” (Bozorgmehr, p. 2).

All of the afore-mentioned recently published research on the economic effects of restricted access to health care for (irregular) migrants shows that excluding this group from the mainstream health care system results in greater costs. However, all three studies also pointed out the need for more robust data, especially on the individual patient level, to encourage an evidence-driven debate on granting irregular migrants access to mainstream health care. For this reason, the present study was designed to complement existing research through the collection of primary data based on real life cases of health care provision for irregular migrants and generalizing these individual cases by using a vignette approach. The costing of these vignettes was conducted from three different perspectives - the patient, the health care system/third-party payer and the society/economy, in order to estimate the costs and savings related to granting irregular migrants access to timely health care for each stakeholder. This bottom-up approach was chosen to ensure transparency and internal validity, without compromising generalizability.

Further to the studies mentioned above, in 2015, a Health strand was included in the Migrant Integration Policy Index⁷ (MIPEX) as an instrument to measure the equitability of a country's policies relating to the health of migrants. The MIPEX Health strand was created in the framework of the EQUI-HEALTH project and was based on a collaboration between IOM MHD RO Brussels, the Migration Policy Group (MPG) and COST Action IS1103 (ADAPT). The Health strand combined the methodology of MIPEX with the normative framework adopted by the Council of Europe in its *Recommendations on Mobility, migration and access to health care* (Council of Europe, 2011), which resulted from a consultation process involving researchers, intergovernmental organizations, non-governmental organizations and a wide range of specialists in health care for migrants. Health policies in 34 countries – EU-28, the three European Free Trade Association (EFTA) countries Norway, Switzerland and Iceland, as well as Bosnia-Herzegovina, the Former Yugoslav Republic of Macedonia and Turkey – were examined relating to three groups of migrants: legal migrants, asylum seekers and undocumented migrants. More specifically, the following elements of each country's policies were assessed: entitlements to health services, policies to facilitate access, responsive health services and measures to achieve change. Based on the findings, a Summary Report on the MIPEX Health Strand and Country Reports⁸ was published in November 2016, and individual country reports are in the process of being finalized and will be available at the beginning of 2017.

Building on research carried out on the topic of access to health care for irregular migrants, in October 2016, IOM MHD RO Brussels, in collaboration with COST Action IS1103 (ADAPT) and as part of the EQUI-HEALTH project, elaborated and published *Recommendations on Access to Health Services for Migrants in an Irregular Situation: An Expert Consensus*⁹. The recommendations reflect a consensus that was developed over the course of a series of joint international meetings in 2012-2016 attended by experts on migration, health policy, human rights law, health economics and epidemiology, as well as by representatives of intergovernmental and civil society organizations concerned with migrant health. Taking into consideration the current political and practical obstacles, this document presents the arguments for improving irregular migrants' access to healthcare services, as well as that of all other groups excluded from proper coverage.

⁷ <http://www.mipex.eu/health>

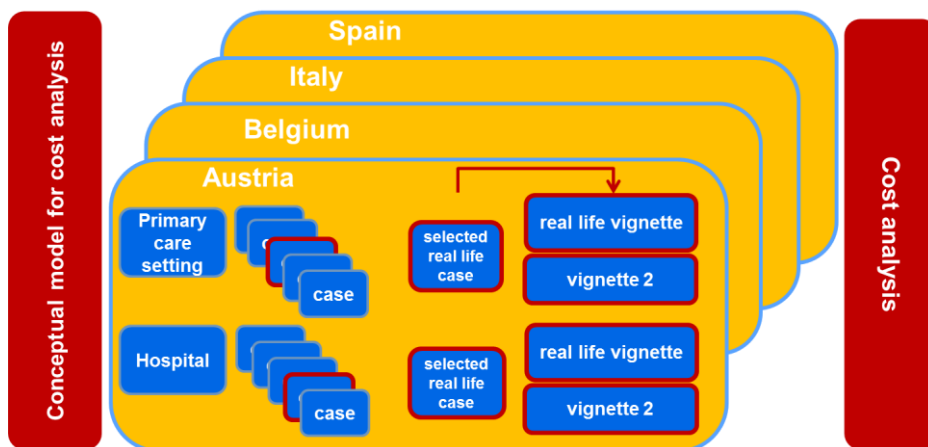
⁸ <https://publications.iom.int/books/mrs-no-52-summary-report-mipex-health-strand-and-country-reports>

⁹ <http://equi-health.eea.iom.int/index.php/9-uncategorised/336-expert-consensus>

4 CONCEPTUAL MODEL

In order to evaluate the costs of provision versus the costs of restricting access to mainstream health care for migrants in an irregular situation, an empirical analysis was conducted using a mixed methods approach by combining quantitative and qualitative techniques. Available evidence (real life cases) on health care provision for irregular migrants was used as a starting point to develop vignettes (model cases) in two different settings (primary care and hospital) and calculate the related costs. These vignettes then served as the basis for a cost analysis, including direct and indirect costs.

Figure 1: Methodological approach



4.1 DATA COLLECTION

Data protection is a core value and duty of health care organisations. Those that provide health care for specifically vulnerable groups use particular caution when giving patient information. To get access to data, trustful relationships between practices and researchers are crucial. Within the framework of this study, where there was no established partnership between the practices and the researchers (as for e.g. in Austria), implementation partners supported access to the organisations. Those practices that agreed to participate in the study, were provided with a "Memorandum of Understanding", which included regulations concerning confidentiality and anonymity (see annex).

To collect information on the participating organisations, a practice description (PD) template was developed. It included questions concerning:

- The organisation (type of organisation, geographical coverage, budget);
- Target group and clientele (legal status, numbers, nationalities, age, sex, health problems);
- Health services provided (preventive care, health promotion and education, medical care, mental health care, social support);
- Staff (professions, full time equivalent of employees, volunteers).

To collect data on specific cases, a case description (CD) template was developed, including the following information:

- The patient: age, sex, country of origin, length of stay;
- Social determinants of health: work, housing, financially dependent family members;
- Medical care: number of encounters, health problems and diagnoses, services delivered, medication, diagnostics and disposables, time spent by staff, and medical treatment in other organisations;
- Degree of representativeness of the collected cases for the given institution.

Both templates are included in the annex to this report and were pre-tested at the Austrian practices.

A standardised procedure was developed for data collection:

- Health care organisations were provided with the PD, the CD and a short project description via e-mail. They were asked to fill in the PD and to familiarize themselves with the CD. A site visit of the practice was agreed on;
- Filled in PDs were sent back to C-HM;
- A site visit of each organisation was conducted, aimed at clarifying open issues from the PD, introducing the CD and presenting /discussing the sampling procedure. If possible, one CD was filled in on-site. A Memorandum of Understanding was signed between each participating practice and C-HM;
- Filled in CDs (10 per organisation) were sent back to C-HM.

During the site visits, it became obvious that face-to-face communication between the practice partners and the researchers was of utmost importance:

- To create a trustful relationship, which is the basis for the provision of information on (vulnerable) patients;
- To receive as much information as possible, open discussions on single cases turned out to be necessary. Specifically, in health care settings where social workers or health mediators are involved in patient care, they can provide very detailed information on the working and living conditions of their clients, which cannot be found in patient records. Due to low language skills levels and/or time restrictions, this detailed information tended not to be completely documented in the provided structured templates;

- To discuss sampling procedures that at the same time respect scientific standards and are feasible in practice. As each organisation has its own operational structure, individual adaptations of the standard sampling procedure had to be discussed and agreed on (see below).

4.2 SAMPLING PROCEDURE

The sampling procedure consisted of two steps. First, 10 cases of irregular migrant patients were randomly sampled from each organisation participating in the study. Second, one of these 10 cases was selected for the economic analysis based on pre-defined selection criteria.

Sampling of 10 cases

Sampling procedures for collecting cases from the organisations were developed in accordance with two principles: randomization and individualization.

The highest possible level of randomization in a given context of data collection was set as a goal in order to ensure the objectivity of the case selection process and to prevent social bias, identified as a potential problem during the case selection pre-test.

Individualization of the procedure was necessary given the significant operational differences of the organisations participating in the study. For each of the seven organisations where data was collected, the sampling procedure was adjusted according to the specificity of the given setting (primary health care vs. hospital), as well as the available data. The individualization also served the purpose of excluding potential bias in the sampling process resulting from regular changes in the services provided by the organisations, such as availability of on-site interpreters or on-call times of specific physicians that patients are aware of and that influence their visiting patterns. The organisations vary also strongly in terms of opening hours and number of patients who are irregular migrants. Therefore, a careful analysis of the operational structure of the organisation preceded the finalization of the sampling procedure for each. At the same time, the highest possible level of comparability of the procedures between settings/organisations was maintained.

Selection of 1 out of the 10 cases

Out of the 10 cases sampled from each organisation, one was selected as primary data source for the economic analysis using the vignette approach. The following criteria were established for the selection of the single cases: high degree of representativeness for the institution regarding medical treatment (indicated for each case on a scale included at the end of the CD template); in compliance with the desired heterogeneity of diseases between countries and settings (non-communicable diseases, infectious diseases, mental conditions); disease of a high potential relevance to the health

authorities and the general public; working age patient; availability of comprehensive information on the case (especially regarding diagnosis and treatment). Each selected case needed to fulfil all of the criteria above in order to be chosen for the economic analysis.

4.3 THE VIGNETTE APPROACH

The vignette approach is a technique used by researchers from many different disciplines (psychology, sociology, anthropology, and nursing research) within qualitative as well as quantitative research. It is traditionally applied in studies concerning perception, attitudes, beliefs and norms (Renold, 2002).

A vignette is a short, systematically varied description of a case. They are 'short stories about hypothetical characters in specified circumstances, to whose situations the interviewee is invited to respond' (Finch, 1987:105). Vignettes can be generated from a variety of different sources, including previous research findings, collaboration with other professionals from the specific field of inquiry or can also be based on real-life stories (Hughes 1998; Hughes & Huby, 2002).

A vignette consists of so-called "factors". Each factor defines core elements of a case. Different attributes are defined for each factor, so that the description of the case can be varied. Practice experience shows that the selection of a limited number of factors (max 4) is necessary to keep vignettes manageable¹⁰.

4.3.1 Vignette design

For the purpose of this study, the vignette technique was applied within a qualitative approach. For each real life case selected in accordance with the procedure described in the previous section, two vignettes, comprised of two factors, were developed: a real life vignette and a comparison vignette. The two factors included in each vignette were defined as follows: diagnosis, and setting. Information concerning the patient was denoted as context. The core of and the starting point in the process of developing each real life vignette was a real case. The data from the real life vignette was supplemented with additional information (derived from expert opinion), not included in the real case but necessary to complete the economic analysis, or the vignette was simplified by excluding

¹⁰ Expert interview with Dr. Christiane Atzmüller (23.10.2014)

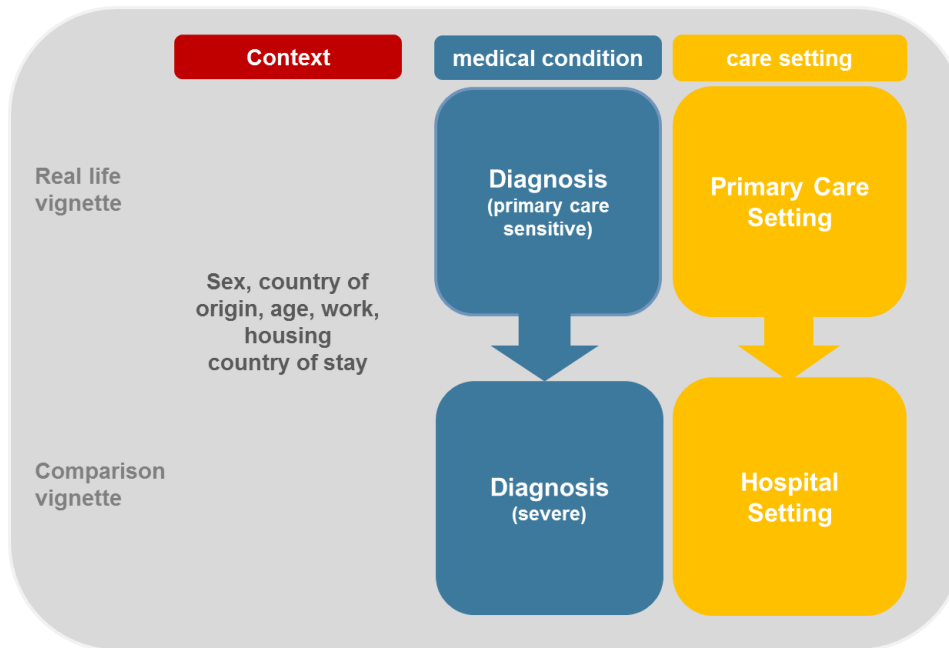
some information from the real life case, which was not necessary for the analysis. In the study, the real life vignette was compared to the comparison vignette, which depicted the “other” health care setting. Hence, if the real life vignette represented timely treatment in primary care, the comparison vignette represented delayed treatment in a hospital, and vice versa. Each vignette was subject of economic analysis and evaluation.

Figure 2: Defined factors



The factor “person” included information related to the patient from the real life case (e.g. sex, age, country of origin), was kept stable (the same for both vignettes) and was defined in the vignette as “context”. Since the focus of the study was the economic analysis of (non) provision of care for irregular migrants, the most relevant information at the “person” level was whether he/she was of working age, as the loss of productivity is important for the calculation of costs incurred by society. In the real life vignette, the factor “diagnosis” referred to the main diagnosis from the selected real life case. In the comparison vignette the diagnosis from the real life case was adjusted (higher/lower severity) to reflect the degree of severity or the degree of the development of the disease. The direction of the adjustment corresponded to the setting of the given vignette (less severe in the primary care setting and vice versa). The factor “setting” referred to where the patient subject of the vignette received treatment, and was defined either as primary care or hospital setting. In the real life vignette, the setting from the original real life case was kept the same and in the comparison vignette, it was changed to the “other” setting. Since treatment processes vary depending on the different settings (e.g. continuous diabetes treatment is offered in a primary health care setting, while medical treatment in case of severe problems linked to diabetes is offered in a hospital setting), to avoid rendering the vignettes more complex through the addition of another factor, medical treatment was considered and reflected within the factor “setting”, and not defined as a separate factor.

Figure 3: Defined vignettes



Using the vignette approach, the economic analysis undertaken in the present study included:

- Costing of real life vignette: calculation of costs related to the real life case in the primary health care or hospital setting
- Costing of comparison vignette: calculation of hypothetical costs of treatment in the “other” setting, with a hypothetical degree of disease severity relevant to the setting

4.4 ECONOMIC ANALYSIS

The objective of the economic analysis was to analyse the economic rationale behind the (non) provision of timely treatment for irregular migrants. To this end, timely treatment in a primary care setting was compared with emergency care in a hospital setting. As outlined above the present thematic study used a bottom-up approach starting with field research in organisations that directly deliver health care to irregular migrants, followed by the selection of representative real life cases and the development of vignettes for better generalizability. As regards the economic analysis of the

vignettes, a decision-maker approach was used (Drummond, 2005); in other words, the evaluation of the treatment pathways was conducted in a transparent and pragmatic way, in order to ensure that the analysis is comprehensible and reproducible. In the following subchapters, the methodological approach of the study will be presented, including the specific methodology of the economic analysis and the data sources used.

4.4.1 Methodological background

In health economics, a widely used method to evaluate the costs and consequences of a medical or health care policy intervention is the decision analytic model. In other words, two alternatives (e.g. timely vs. delayed treatment) are compared over a defined period of time by using different data sources and taking into account the probability distributions of the occurrence of certain events and endpoints (Drummond, 2005). The reliability of the results of a decision analytic model depends on the constructed model itself (e.g. decision tree or Markov model) and on the epidemiological and clinical data used to calculate the costs and consequences. In the case of (non) provision of health care for irregular migrants, the crucial problem is the availability of epidemiological data, which is associated with a lack of information about the transition probabilities of the studied events and endpoints.

General population epidemiological data could not be used for the present study for various reasons. First, irregular migrants are especially vulnerable to labour market exploitation, as they do not have any legal leverage against their employers. Second, due to financial pressure, their housing conditions are usually much worse than those of documented migrants and citizens, even those with low financial means. Extreme working and housing conditions are known to have a negative effect on physical health (Kontunen, 2014). Furthermore, the mental well-being of irregular migrants is adversely affected by a constant fear of deportation and uncertainty about the future. These are all just consequences of the vulnerable situation of an irregular migrant, without taking into account the individual suffering and trauma that have most likely preceded their current state. In line with these arguments, not even epidemiological data on regular migrants would suffice, but data specifically on the health of irregular migrants is necessary (Bozorgmehr and Razum, 2015).

The decision analytic model most often used in health economic evaluation is the Markov chain model, where an individual occupies a certain state during a given point in time and changes from one state into another (e.g. sick – treated – cured) after a defined period. These transitions from one state into another after a certain period are called cycles. To make sensible use of the Markov model, as well as the less complex decision tree model, it is necessary to have reliable information about the probability that an individual will change from one state into another. This so called ‘transition probability’ is difficult to observe and currently not available as regards the heterogeneous group of irregular migrants. It is not clear what the pathway of irregular migrants within the health care system actually is, as individuals might enter and leave the system at very different points in the

course of their disease and treatment. A decision analytic model on the cost of care (or lack thereof) for irregular migrants would incorporate many uncertainties and therefore lack robustness.

All of the above led the research team to choose a vignette approach in order to carry out the present study. By deciding to use this approach, it was clear that internal validity and robustness would supersede external validity and generalizability. However, to ensure credibility and transparency, it seemed more sensible to use robust information as a starting point, allowing for the possibility to expand the study population and the time horizon should more evidence become available thereafter.

In light of the lack of epidemiological data on migrants in an irregular situation, an extrapolation of the results of the present study based on a decision analytic model to estimate the total costs related to the treatment of irregular migrants cannot be regarded as sensible. Even if the epidemiology of irregular migrants was comparable to that of the general population, the information on the number of irregular migrants in the EU, and most other European countries, is based on estimates that are in most cases not reliable (Clandestino, 2009). Irregular migrants are a heterogeneous group and evidence on their number, intra-European mobility, health status and use of health care services is either non-existent or not sufficiently trustworthy. The high mobility of this group is also the reason why the time horizon for each of the cost estimations in this study corresponds with the time frame of the observed treatment process of the selected case. All cost estimations beyond the observed timeframe would have to be based on treatment processes of citizens, which cannot be assumed to be comparable to those of irregular migrants. This is not only true because of the earlier described epidemiological differences, but also because it cannot be assumed that the treatment process of irregular migrants is as continuous and the compliance with the treatment process similar to that of patients with regular access to health care.

It is very common in health economic evaluations to compare the occurring costs of a treatment process with the health outcomes of a treatment (often referred to as benefits). These can be measured by using natural units (such as blood pressure), endpoints (such as mortality), quality adjusted life years (QALYs), or disability adjusted life years (DALYs). The latter two measures are usually recommended in guidelines on health economic evaluations (see Ramsey, 2005, Drummond etc.) and are based on evidence from clinical studies. There are several reasons why the present analysis does not include any measures related to health outcomes. Once again, epidemiological and clinical data on irregular migrants is not available, and the transferability of health outcomes observed among the general population, which is usually the target population of clinical trials, to the situation of irregular migrants is not possible. There are also more technical reasons for not including QALYs or DALYs in the economic analysis of the present study. Some literature suggests that including QALYs and lost productivity might result in double counting, as reduced productivity/income is associated with lower quality of life (Lensberg et al., 2013, and Krol et al., 2013). It was therefore decided to include lost productivity in the study as a measurement unit and to disregard health outcomes. The policy reason for not including the health outcomes of irregular

migrants in the study is that they are usually not the “target population” of policy makers. In other words, policy makers do not feel responsible for the health or quality of life of irregular migrants, which, unfortunately, makes the financial implications of providing health care the main basis for political decision-making regarding access to health care for irregular migrants.

4.4.2 Design of real-life and comparison vignettes

Real life cases of health care provision for irregular migrants are often very complex and consequently not representative. Therefore, the selected real life cases were converted into more simple real life vignettes, depicting a typical pathway of care for an irregular migrant with a given health problem. Other diseases were only taken into account if they were common comorbidities. Reducing the complexity of a case increases its transparency and generalizability. However, besides this simplification it was sometimes necessary to add parts of the care history of the patient as not all of the relevant details were always available and the observed pathway of care was therefore fragmented. As the real life cases were collected from either a primary care provider or a hospital, the real life vignettes reflected the care in the setting from where the case had been collected. The real-life vignettes were compared to vignettes that were developed to reflect the other of the two settings. Thus, if the case had been collected from a primary care institution, and hence the real life vignette was set in primary care, the comparison vignette was set in a hospital where the same patient would have had to be hospitalized because he/she did not receive timely primary care. On the other hand, if the case had been collected from a hospital, the real-life vignette reflected hospital care and the comparison vignette represented primary care, where the patient would have received timely treatment. The design of comparison vignettes was based on routinely collected data (e.g. national databases or Eurostat database), medical literature and guidelines, other real life cases collected in this and other studies, and expert opinions of health care professionals involved in the care for irregular migrants.

4.4.3 Perspectives and types of costs

The vignettes designed from the selected cases were evaluated economically from the perspective of the patient, the third party payer and the society, including direct medical and non-medical, and indirect costs. Regarding the patient, the most relevant cost categories are the direct non-medical costs, which include the patient’s opportunity costs, and the indirect costs, or more precisely the loss of income. The direct medical costs are only relevant to the patient if they have to be paid out of pocket. By contrast, the direct medical costs are the only costs relevant to the third party payer as they include remuneration, salary or payments to the health care providers (such as primary care, hospitals, outpatient physicians and other health personnel), as well as the costs of medication and medical devices used for treatment and diagnosis. The societal perspective is the most commonly recommended perspective in health economic evaluation and takes into account all costs incurred by

the population, regardless of who has to bear them. Loss of productivity is included in the analysis from the society's perspective following evidence that irregular migrants are particularly at risk of exploitation in the black labour market, which affects the shadow economy and consequently the official economy as the shadow economy substitutes services and production of goods of regular markets (Schneider, 2008). It is important to emphasize that an economic evaluation from a societal viewpoint should not be confused with an analysis of social costs, which would incorporate personal suffering of the patient and her/his relatives and dependents.

Table 2: Costs included in the analysis

Cost categories	Types of costs
Direct medical costs	Medication (pharmaceuticals and medical devices)
	Diagnostics equipment and disposables used during medical encounter
	Physician's time
	Nurse's time
	Time of other professionals (interpreter, social worker) during the medical encounter
	All of the above in other institutions/organisations (e.g. laboratory or check-ups in outpatient sector)
Direct non-medical costs	Travelling time
	Travel expenses
	Time spent at the health care provider
Indirect costs	Lost income / productivity (patient / society)

It is possible to assume that intangible costs incurred by the patient, mainly suffering and inability to carry out daily-life activities, are higher in the case of delayed treatment and hospitalisation as opposed to timely treatment in primary care. However, these costs, related to reduced quality of life, were not included in the present analysis as they could not be observed directly or measured when collecting patient data, and, for the reasons described in the "Methodological background" section, could not be calculated in a reliable manner based on existing evidence.

4.4.5 Costing and data sources

Even though the detailed evaluation of the cost items with the relevant unit costs had to be adapted for each vignette, some common approaches can be described. The following table gives an overview of the resources used and the corresponding unit costs, both of which depend on who actually bears the costs.

Table 3: Overview of the costing of resources used

Type of costs	Financing – Cost bearer	Resources used	Unit cost evaluation	Data source
Encounter with physician in primary care setting	Salary – Third party payer / society	Number of encounters times average time of encounters as indicated in template	Median gross earnings of primary care physicians	National data or Eurostat database
Encounter with physician in primary care setting	Fee-for-service – Third party payer / society	Services provided by physician	Tariff of service provided	National tariff catalogue
Contact with other health professionals in primary care setting	Salary – Third party payer / society	Number of contacts times average time of contacts as indicated in template	Median gross earnings of social worker, health mediator, etc.	National data or Eurostat database
Hospital costs	DRG system – Third party payer / society	Relevant DRG code and the corresponding remuneration for the hospital	Remuneration (and length of stay) for specific DRG-code by gender and age of patient	National routinely collected data on hospital financing
Medication	Reimbursed – Third party payer / society	Amount of dispensed pharmaceuticals as indicated in template or according to guidelines	Net pharmacy retail price	Pharmaceutical price information service
Medication	Out-of-pocket – Patient	Amount of dispensed pharmaceuticals as indicated in template or according to guidelines	Gross pharmacy retail price	Pharmaceutical price information service
Travelling time	Patient / society	Travelling time to and from provider	National median or average net/gross earnings (patient/society)	Eurostat database
Travelling costs	Patient / third party payer / society	Depending on mode of transportation	Ticket price of regional public transport (patient) or costs of ambulance (third-party payer and society)	Public transportation services or fee catalogue for ambulance
Time spent at health care provider	Patient / society	Time spent at care provider as indicated in template plus waiting time according to expert opinions or literature	National median or average net/gross earnings (patient/society)	Eurostat database
Lost income/productivity	Patient / society	Lost working hours due to the disease as stated by the patient	50 % of the national median net/gross earnings (patient/society)	Eurostat database

The unit costs should reflect, as far as possible, the real resource utilisation from the perspective of the patient, the third party payer or the society. According to the human capital method, resources for which no market price is readily available, such as time, should be evaluated with a unit price that is at least as high as what could be earned on the labour market. This is the minimum value an individual in a society attaches to her/his leisure time. For this “price”, which is often referred to as reservation wage, a person is willing to give up, freely, their leisure time and join the labour market.

If a person's reservation wage is lower than what she/he could earn on the labour market, she/he would probably join the labour market. This concept is also often referred to as the opportunity cost of time (see Drummond, page 216). In the study at hand the direct non-medical, or opportunity costs (travelling time and time spent at the health care provider) from the perspective of the patient (society) were estimated using the national net/gross median earnings. To estimate the indirect costs in line with the human capital approach, the lost income/productivity is evaluated at 50 % of the national net/gross median earnings to reflect the usually low-wage jobs irregular migrants are forced to perform, given their illegal status.

If the prices for resources used were not available for the year in which the real life case occurred, the prices were adjusted for inflation using the consumer price index (<http://www.inflation.eu/>). As the currency in all of the countries selected for this study is the Euro, no currency conversion was necessary. Further adjustments for country-specific purchasing power were not necessary if the unit costs were based on country-specific information (national prices, tariffs etc.).

4.4.6 Comparative analysis

Contrary to the preliminary analysis conducted at the beginning of this study where direct and indirect costs were analysed together, throughout the rest of the study the direct and indirect costs were analysed separately. The methodological reason for this separation is twofold. First, it increases the generalizability of the direct costs, as the opportunity costs (direct non-medical costs) disregard the current working situation of the patient. This is in line with equity considerations and the ethical judgement that the value of forgone time should be equal for all members of our society. The indirect costs (lost income/productivity) depend on the actually stated (lost) working hours of the patient. As it cannot be ruled out that the working hours of irregular migrants vary significantly and, especially, that those of the cases collected in this study deviate from the average, it can be assumed that the generalizability of the indirect costs is considerably lower than the generalizability of the total direct costs. Second, if the opportunity costs of the treatment (direct non-medical costs) and the actual lost income/productivity (indirect costs) were added together, the risk of double counting may arise (Lensberg, 2013, and Krol, 2013). This is especially relevant as regards the analysis of the hospital setting, because the time spent in the hospital causes opportunity costs and lost income/productivity at the same time.

In conducting the cost analysis, the estimated direct (medical and non-medical) costs of the primary care vignette (real life/comparison) were added together and compared with the direct costs of the hospital vignette (comparison/real life) for each of the three perspectives (patient, third-party payer and society). The difference between the direct costs of primary care versus hospital treatment will be presented as a total and as a percentage of the costs of the hospital treatment. The percentage

represents the costs that could have been saved if hospitalisation had been avoided through timely treatment, and will be referred to as “potential savings” throughout the analysis. The same approach was used when comparing the indirect costs of primary care versus hospital treatment.

4.4.7 Sensitivity analysis

The previous subchapters describe the methodological approach that was used to estimate the costs of the real life and comparison vignettes. The results of these estimations were considered as baseline results, as they represent the costs most likely to occur. However, there was some uncertainty related to a number of the cost parameters used. To evaluate the sensitivity of the baseline results to possible changes in the parameters applied in the real life cases, which were regarded as given, a parametric sensitivity analysis was performed. Cost parameters that could conceivably vary between patients and had to be estimated based on different data sources were changed to the lowest and the highest possible values. The baseline results were then compared to the highest potential savings (i.e. difference between the lowest estimated primary care costs and the highest estimated hospital costs as a percentage of the highest estimated hospital costs) and the lowest potential savings (i.e. difference between the highest estimated primary care costs and the lowest estimated hospital costs as a percentage of the lowest estimated hospital costs). Based on this, the robustness of the baseline results was evaluated and a range of potential results was identified.

4.4.8 Vignette approach and infectious diseases

The applicability of the vignette approach encountered difficulties when communicable diseases such as tuberculosis (TB) were chosen as the basis for the economic analysis. In Italy and Spain cases of TB were chosen as they adhered to the selection criteria outlined earlier (Chapter 4.2). There were two principal reasons for these difficulties: first, even if a highly infectious disease is diagnosed early in primary care, it will generally be followed by referral to specialized care and possibly hospitalisation for treatment for public health reasons, making the comparison of primary care to hospital care redundant; and second, if the disease is not discovered early, the economic consequences are likely to be considerable due to a probable high number of infected persons, and only to a limited extent due to the higher direct medical costs of a delayed treatment and hospitalisation. In general, communicable diseases, with their implications for the whole population, are a very important public health issue whose full costs and consequences can only be estimated using a dynamic modelling approach (e.g. using microsimulations).

To estimate the full economic implications of an infectious disease, agent-based microsimulation modelling would have to be conducted. This is a form of decision analytic modelling where every patient in the cohort model is attributed certain characteristics (age, gender, living/working situation, contact with other people, etc.), which lead to a certain probability of infecting other people and therefore influence the health outcomes for the whole population (e.g. life-years lost) and the incurred costs. This modelling technique is complex and requires sound evidence on the characteristics of the cohort model in order to ascribe the correct (transition and infection) probabilities to the attributed characteristics.

The following chapters present the economic analysis carried out in the four countries selected for the study, including:

- Information on the context concerning the migrant population in each country, main features of the health care system, and specific policy regulations regarding entitlements to health care for irregular migrants and ethnic minorities;
- The application of the conceptual model – two cases studies per country, with the exception of Belgium.

5 AUSTRIA

5.1 CONTEXT

Population and share of migrant population

According to official statistics, Austria has a total population of 8,584,926 inhabitants (2015)¹¹, with a foreign population share of 13.3% (1,146,078 people). Almost half of the foreigners living in Austria originate from other EU countries (570,298 people). The share of third-country nationals (TCNs) living in Austria amounts to 6.6% (566,915 people)¹². The largest groups of non-EU citizens residing in Austria originate from Turkey (115,433 people), Serbia (114,289 people) and Bosnia and Herzegovina (92,547 people)¹³.

The net migration for 2014 was +72,324 people¹⁴. Positive net migration has been the only demographic driver for population growth¹⁵ since the 1960s, when Austria began recruiting guest workers from Turkey and Yugoslavia to meet labour demand.

The Austrian health care system: Main features¹⁶

Compared to the EU average, Austria has a higher health expenditure ratio (8.4% public and 2.6% private health expenditure as a share of GDP in 2012; EU: 7.1% and 2.3%, respectively).¹⁷

2013 Eurostat data shows that 0.7% of the Austrian population declared unmet health care needs (EU: 3.6%; EU-15: 3.4%).

¹¹ <http://epp.eurostat.ec.europa.eu/tgm/graph.do?tab=graph&plugin=1&language=en&pcode=tps00001>, acc. 2.12.2015

¹² https://www.statistik.at/web_de/statistiken/bevoelkerung/bevoelkerungsstruktur/bevoelkerung_nach_staat_sangehoerigkeit_geburtsland/index.html, acc. 2.12.2015

¹³ http://www.statistik.at/web_de/statistiken/bevoelkerung/bevoelkerungsstruktur/bevoelkerung_nach_staat_sangehoerigkeit_geburtsland/index.html, acc. 2.12.2015

¹⁴ https://www.statistik.at/web_de/statistiken/bevoelkerung/wanderungen/index.html, acc. 2.12.2015

¹⁵ https://www.statistik.at/web_de/dynamic/statistiken/bevoelkerung/wanderungen/wanderungen_insgesamt/publdetail?id=44&listid=44&detail=609, acc. 12.05.2014

¹⁶ Gesundheit Österreich GmbH (2013): Das österreichische Gesundheitswesen im internationalen Vergleich. Wien

¹⁷ OECD 2012

Bed density in Austria is the second highest in the EU (763 hospital beds per 100,000 inhabitants in total in 2012, including 549 acute beds; EU: 526 and 365, respectively). While Austria has the second highest physician density in the EU (4.8 doctors per 1,000 inhabitants in 2012; EU: 3.3), nurse density is below the EU average (7.7 nurses per 1,000 inhabitants in 2012; EU: 8.9).¹⁸

Policy regulations: entitlements to health care

Austria has an insurance-based health care system with compulsory health insurance linked to employment and income. Each employer registers their employees in the social insurance scheme with the amount of health insurance fees contributed by employer and employee depending on income received up to a certain level, above which fees do not increase any further. As a result of this system, 99.9% of the entire population including regular migrants is insured¹⁹ (2011) and has access to a broad range of services²⁰.

Through the insurance system, labour migrants with legal status and their dependents have full access to health care entitlements, including health care (medical care, medical and therapeutic aids, psychotherapy, clinical psychology, physiotherapy), medical home care, institutional care, sickness allowance in case of inability to work as a result of illness, dental care, physical rehabilitation, and health promotion measures (counselling). The same applies to most self-employed persons, persons claiming unemployment benefits, pensioners, and dependents of all of these groups.²¹

Entitlements to health care for asylum seekers are legally guaranteed on federal level ("Grundversorgung"), including subsidises for health insurance fees. They enjoy the same health insurance coverage as citizens contingent on compliance with specific regulations concerning area of residence. Asylum seekers are covered in the area where they reside, in accordance with their asylum application. In certain cases, asylum seekers enjoy greater coverage than nationals do as they have free access to services not covered by health insurance (e.g. nursery care – for citizens this service is not covered by health insurance)²².

¹⁸ OECD 2012, Eurostat 2012

¹⁹ Hofmarcher, M. (2013): Das österreichische Gesundheitssystem. Akteure. Daten. Analysen. Medizinisch Wissenschaftliche Verlagsgesellschaft

²⁰ http://www.bmg.gv.at/cms/home/attachments/2/1/2/CH1015/CMS1287855495948/the_austrian_health_care_system_2010_e1.pdf, acc. 20.03.2014

²¹ <http://www.migration.gv.at/en/living-and-working-in-austria/health/health-insurance.html>, acc- 25.03.2015

²² <http://ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20003460>, acc. 20.03.2014

Formatiert: Deutsch (Österreich)

Feldfunktion geändert

Formatiert: Deutsch (Österreich)

Feldfunktion geändert

Formatiert: Deutsch (Österreich)

Refugees living in Austria (“Asylberechtigte”/ “Subsidiär Schutzberechtigte”) also have full access to health care entitlements through the health insurance system, either through their employer or through “Mindestsicherung” (minimum income scheme).

Entitlements to health care for specific migrant and ethnic minority groups

Irregular migrants

Information on the number of irregular migrants residing in Austria is scarce. Estimations dating back to 2008 give a range of 54,064 people maximum and 18,439 people minimum, resulting in an average of 36,252²³. According to an assessment by the Austrian Criminal Intelligence Service, (Bundeskriminalamt) in 2013, 14,811 persons were apprehended on grounds of illegal entry or residence on the territory of Austria²⁴. They originated from 54 different countries, with the top three being Afghanistan (1,035), Pakistan (160) and Algeria (75)²⁵.

The main policy concerning access to health care for irregular migrants is “functional ignorance”²⁶, meaning that there are no specific regulations on access to health care for irregular migrants but NGOs providing health care for this group are subsidised through tax money²⁷. Irregular migrants have free access, through services provided by NGOs, to emergency care²⁸, TB treatment²⁹ and

Asylum-seekers are covered under statutory health insurance with contributions being paid either from federal funds or the responsible Land. (HIT, 2013, S90)

²³ http://irregular-migration.net/typo3_upload/groups/31/4.Background_Information/4.4.Country_Reports/Austria_CountryReport_Clandestino_Nov09_2.pdf, acc. 12.05.2014

²⁴ http://www.bmi.gv.at/cms/BK/publikationen/Statistiken_Schleppe.aspx, acc. 12.05.2014

²⁵ <http://umf.asyl.at/Themen/>, acc. 20.05.2014

²⁶ Karl-Trummer, Ursula; Metzler, Birgit; Novak-Zezula, Sonja (2009): Health Care for Undocumented Migrants in the EU: Concepts and Cases. Background Paper developed within the framework of the IOM project „Assisting Migrants and Communities (AMAC): Analysis of Social Determinants of Health and Health Inequalities“. Brussels: IOM http://c-hm.com/wp-content/uploads/2015/08/Health_Care_for_Undocumented_Migrants_Background_Paper-6-.pdf, 15.09.2015

²⁷ Karl-Trummer, U.; Björngren-Cuadra, C.; Novak-Zezula, S. (2010): Two Landscapes of NowHereland. Fact Sheet Policies. Online publication, Center for Health and Migration, Vienna; http://c-hm.com/NHL_policy_rz_EN.pdf, 02.06.2014

²⁸ KAKuG/Bundesgesetz über Krankenanstalten und Kuranstalten StF: BGBl. Nr. 1/1957, § 22

²⁹ Tuberkulosegesetz StF: BGBl. Nr. 127/1968, § 37, 38

“Anonymous delivery”, meaning that no documents have to be shown to receive prenatal and perinatal care³⁰. Additionally, irregular migrants can pay out-of-pocket to obtain access to services.

Roma

In 1993, Austria acknowledged Roma as an ethnic minority. Within the framework of the implementation of the National Roma Integration Strategy, in 2013, the Austrian Federal Chancellery listed three specific measures to address Roma health: two organisations providing counselling on social and health tasks, and a study on Roma and Health commissioned by the Austrian Chancellery, the Austrian Ministry of Health and the Austrian Ministry for Integration³¹, which was conducted by C-HM focussing on health problems and barriers faced by Roma in accessing the health care system (2013-2014).

“Data on the ethnic origin of members of ethnic and other minorities is not collected in Austria for historical reasons, primarily on account of the genocide of Austrian Roma and Sinti during the Nazi era.”³² The last official figures on Roma residing in Austria date back to the 2001 population census, when 6,273 people (0.08% of total population) stated that they speak “Romani” in their every-day lives³³. Current estimations of the number of Roma in Austria, given by experts from inside and outside the Roma community, indicate a range of 25,000 to 150,000 people, with a share of autochthonous Roma of about 10%³⁴.

Entitlements to health care depend on their status: Roma who are Austrian citizens or have a legal residence status enjoy full entitlement to health care through the health insurance system; for those in an irregular situation, the same regulations as for irregular migrants apply.

³⁰ , acc. 20.05.2014

³¹ <http://www.bka.gv.at/DocView.axd?CobId=53584>, acc. 20.05.2014

³² <http://www.bka.gv.at/DocView.axd?CobId=52715>, acc. 20.05.2014

³³ <http://www.bka.gv.at/DocView.axd?CobId=52715>, acc. 20.05.2014

³⁴ <https://www.bka.gv.at/DocView.axd?CobId=51319>, acc. 17.04.2015

5.2 APPLICATION OF THE CONCEPTUAL MODEL I

5.2.1 Data collection process

At the first Austrian service provider participating in the study, Neunerhaus, an NGO providing health care for homeless and uninsured people living in Vienna, data was collected by a social worker. Information from several sources was used to complete the case description (CD) template: patient records, interviews with Neunerhaus physicians to collect detailed data on medical conditions and treatments received by a given patient, and the social worker's interviews with the 10 sampled patients to obtain information on the social determinants of health.

5.2.2 Sampling

To select 10 cases, information was collected on the two first irregular migrant patients, either Third Country Nationals or EU citizens with irregular legal status³⁵, visiting the institution each day over a period of 5 consecutive days (from Monday to Friday). A prerequisite for the selection was that this had to be at least the patient's second visit to the clinic in order to ensure there was sufficient information on their case and an already established trust relationship with the social worker allowing her to conduct an interview with the patient.

Out of the 10 cases, one case fulfilling the pre-established selection criteria (Chapter 4.2) was chosen for the cost analysis.

5.2.3 Case A.

A., a 50-year-old woman from Hungary, was the case selected at Neunerhaus. Prior to visiting the institution for the first time, she had already been living in Vienna for about three months. She

³⁵ If an EU national stays longer than three months in Austria, he/she needs to have obtained health insurance and possess "sufficient financial resources" necessary to secure his/her livelihood and be able to prove this to the authorities in order to maintain regular migrant status.

<https://www.help.gv.at/Portal.Node/hlpd/public/content/239/Seite.2394001.html>, acc. 20.03.2016

resided in a shelter for homeless people where she did not have to pay rent. At the time of the study, A. was working about four hours per week as a masseuse on the black labour market. She had no family members financially dependent on her income, either in her home country or in Austria.

From July to November 2014, A. visited Neunerhaus six times. When she went to Neunerhaus for the first time in July 2014, A. presented a swollen ankle. The ankle was examined and the patient was provided with an ointment and a bandage. At the next encounter, the patient reported a sore throat; she was diagnosed with pharyngitis (throat infection) and treated with antibiotics. During the third encounter, for the first time, A. told the doctor about her mental health problems, indicating that she felt depressed and anxious. The doctor diagnosed her with an anxiety disorder and mild depression, and provided the patient with the appropriate medicine. During the following three encounters, the patient received psychosocial counselling and various pharmaceutical drugs. Her treatment lasted 12 weeks.

5.2.4 Real life and comparison vignettes

To design the real life vignette, the following assumptions were made, especially regarding the patient's ability to work during the course of her treatment. First, it was assumed that, if she were in good health, A. would be able to work 20 hours per week. The assumption that the patient would only work 20 and not 40 hours per week is a rather conservative one, in order not to overestimate the indirect costs from the patient's perspective. A. declared that due to her state of mild depression she cannot work for more than four hours per week and, consequently, loses wages corresponding to 16 hours per week. A second assumption concerned the length of time the patient spent at the primary care provider and the travel time necessary to reach the provider. According to the experience of the social workers at Neunerhaus, the average time a patient spends in the waiting room is 30 minutes before she/he is seen by a doctor. The patient's travel time was assumed as 40 minutes by public transport. This corresponds to the information given in the case description. This is relevant to the calculation of the opportunity costs incurred by the patient.

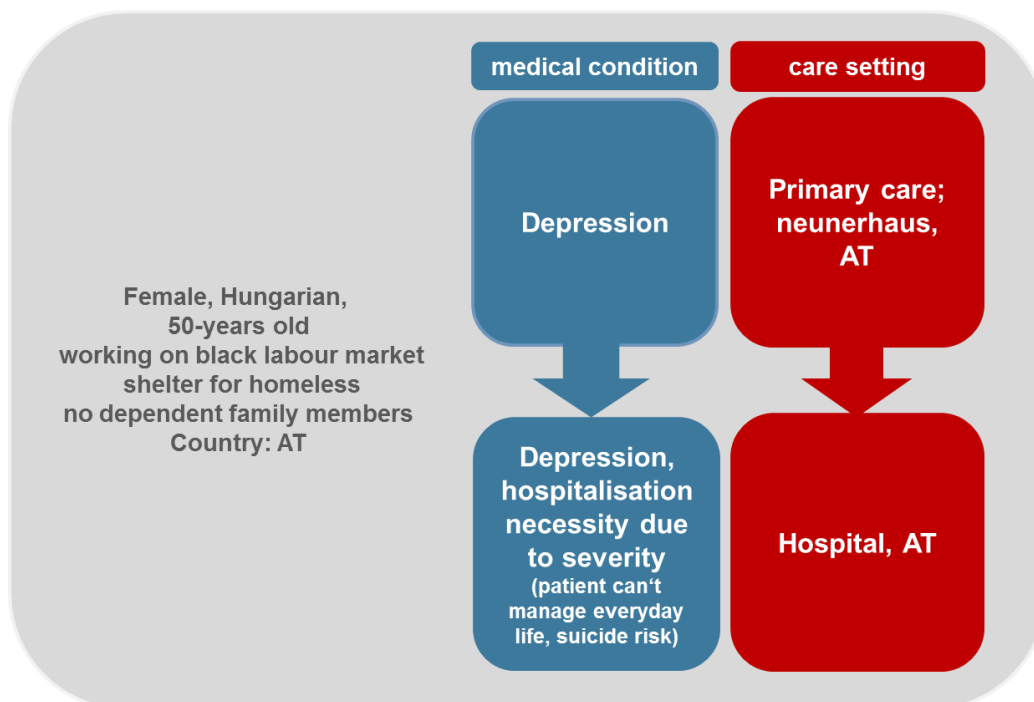
Neunerhaus staff members reported that in the case of vulnerable groups it is very common that patients present minor physical health problems during their first few encounters to check if the service provider and health workers are trustworthy. Once they feel safe at the organisation, they present mental health problems or other serious ailments during later encounters. For this reason, the first two encounters of patient A., which were due to a swollen ankle and a sore throat, were included in the vignette and the subsequent cost analysis.

The real life vignette was compared to a vignette in a hospital setting, where the same patient would have had to be hospitalized because she had not received timely primary care and her mild

depression developed into moderate depression, a more severe condition. According to a clinical expert, and based on routinely collected data from Austrian hospitals, the length of stay for women between the ages of 50 and 54 who are hospitalized with moderate depression is on average 13.7 days (DIAG/ GÖG). It was stated that the patient was able to work only restricted hours during the 12 weeks of treatment in primary care from July to November 2014. Prior to her hospitalisation, when she did not receive any other care, she would have been able to work four hours per week and during her hospital stay not at all. Regarding transportation, it was assumed that the patient could not have reached the hospital on her own and would have had to be taken there by ambulance (as hospitalization necessity indicates a severe incidence such as self-harm), but that she could return home from the hospital by means of public transport. The travelling time by public transport used for the comparison vignette was taken from the real life vignette, hence, 40 minutes for one way.

To be able to compare the two vignettes, a time horizon of 12 weeks was used, as this was the actual period of treatment in the real life case. This is a rather short time horizon, but, as there is no information about the patient beyond this timeframe, it could not be extended without risking the internal validity of the analysis.

Figure 4: Vignettes “depression” Austria



5.2.5 Data sources

To estimate the direct medical costs for the real life vignette in the primary care setting, the main data sources used were the Viennese insurance company's (Wiener Gebietskrankenkassa; WGKK) tariff catalogue for general practitioners and the Pharmaceutical Price Information service of the Gesundheit Österreich GmbH (www.goeg.at/en/PPI). To calculate the direct non-medical costs and the indirect costs, the Eurostat database was used to obtain the net and gross average earnings in Austria. The cost of transportation to the encounters was estimated by considering the regular ticket price for a single trip with the Viennese public transport operator "Wiener Linien".

As regards the costing of the comparison vignette in the hospital setting, routinely collected data on the financing of Austrian public hospitals was used. The financing system is based on so-called "Diagnosis related groups" (DRG) whereby a hospital is remunerated according to the diagnosis and the length of inpatient stay³⁶. The quantity of points (called LKF³⁷ points in Austria) that a hospital receives for delivering care for a certain diagnosis was re-calculated in 2005 by an interdisciplinary team of specialists based on the micro-costing of around 500,000 inpatient stays in 20 reference hospitals across Austria. Even though the exact amount of money a hospital receives depends on the total number of points accumulated in each of the Austrian states (BMG, Info-Brochure), as the initial micro-costing analysis in 2005 revealed a value of 1 € per point, this same rate was used for the estimation of the inpatient stay costs for the comparison vignette. The transportation costs to the hospital by an ambulance were calculated, from the perspective of the third party payer, based on the mean amount invoiced by a common ambulance service in Austria (Samariter Bund) (Dimai, 2012). From society's perspective, the average cost of one emergency trip undertaken by the Austrian Red Cross in 2013³⁸ (Jahresbericht, RKÖ, 2013) was used for the costing of the comparison vignette.

³⁶ For a more detailed description of the hospital financing system in Austria see: http://www.bmg.gv.at/home/EN/Topics/The_Austrian_DRG_system_brochure (accessed 27.03.2015)

³⁷ LKF: Leistungsorientierte Krankenanstalten Finanzierung (engl. service-oriented hospital financing)

³⁸ This was calculated by dividing the total performance volume of ambulance services by the total number of emergency trips in Austria.

5.2.6 Results of cost analysis

From the **patient's** perspective, the direct medical costs were not relevant, for neither the real life nor the comparison vignette, as in Austria these are borne by the health care system (i.e. the service provider (NGO), if the patient is uninsured and unable to pay, or the insurance company, if the patient is insured). The direct non-medical costs relevant to the patient represented the opportunity costs related to the six encounters at the Neunerhaus, including travel time (two times 40 minutes for each encounter) and ticket expenses for the travel (2.20 € per one-way ticket), as well as time spent at the health care facility (30 minutes including waiting time). In total, the opportunity costs for case A. amounted to over 200 €, when calculated based on the net average wage in Austria in 2014 (15.9 € per hour). The patient's indirect costs, representing lost earnings, amounted to 1,800 €, as, according to information given on the CD template, the patient was only able to work four hours per week instead of 20 during her 12 week treatment. Regarding the comparison vignette, i.e. if the patient had been hospitalised, her opportunity costs would have amounted to almost 3,520 €. Most of these costs can be ascribed to time lost due to her hospitalisation (16 hours per day). The lost income (i.e. indirect costs) over the entire 12 weeks, including 13.7 days of hospitalisation for moderate depression, was estimated at around 1,880 €.

Table 4: Cost analysis depression (patient's perspective)

Cost category	Description	<i>Real life vignette</i>	<i>Comparison vignette</i>
		Primary care: mild depression	Hospital: moderate depression
Direct medical costs	Treatment related costs	-	-
Direct non-medical costs	Opportunity costs	200 €	3,520 €
Indirect costs	Lost income	1,800 €	1,880 €

All numbers were rounded to the nearest ten.

From the **third party payer's** perspective, costing for the primary care setting included the service fees of the general practitioner (GP) and the prices for the dispensed pharmaceuticals. The cost of the services provided by the GP, including two psychosomatic-oriented diagnostic visits due to minor ailments and four psychosomatic-oriented visits with additional counselling due to a mental disorder, as well as a capitation disbursed per patient per quarter, was estimated at around 170 €. The

pharmaceuticals³⁹, as stated in the CD template, were priced in accordance with the net pharmaceutical retail price and, in total, were estimated at 60 €. Therefore, the total direct medical expenses borne by the third party payer in the primary care setting amounted to around 230 €. Had the patient been hospitalised and treated for moderate depression, the costs incurred by the third party payer would have added up to 4,030 €. These costs would have, for the most part, been linked to the inpatient treatment of moderate depression, for which, according to hospital financing data, hospitals in Austria claim around 3,810 €. The remaining amount included the so-called “Hotelkomponente” (hotel component), the cost for which (160 €) would have been borne by the third party payer due to the patient’s inability to pay, and the cost of the ambulance (60 €).

Table 5: Cost analysis depression (third party payer’s perspective)

Cost category	Description	<i>Real life vignette</i>	<i>Comparison vignette</i>
		Primary care: mild depression	Hospital: moderate depression
Direct medical costs	Treatment related costs	230 €	3,810 €
Direct non-medical costs	“Hotelkomponente”, ambulance	-	220 €

All numbers were rounded to the nearest ten.

The costs incurred by the **society** as a whole included the direct medical costs borne by the third party payer, the non-medical costs related to lost time of the patient and the indirect costs reflecting lost productivity. Concerning the real life vignette, the sum of the direct medical costs equalled the one calculated for the third party payer (230 €). In line with the human capital approach, the latter two cost categories were evaluated in accordance with the Austrian average gross wage. Opportunity costs were calculated at 100% of the average earnings while the lost productivity was costed at 50 % to account for the relatively low qualification of the patient. Thus, direct non-medical costs incurred by the society as a result of time lost by the patient amounted to 270 €. Indirect costs reflected lost working hours during the 12-week treatment period. In total, the society had to bear costs of around 2,330 €, due to lost productivity during the patient’s treatment in primary care.

If the patient had been hospitalized, the society, in addition to the direct medical costs paid by the third party payer, would have incurred around 2,220 € of direct non-medical costs. The societal costs due to lost productivity, in the case of hospitalisation for moderate depression, would have amounted to 2,430 €.

³⁹ Xanor (4 packages), Amlodipin (2 packages), Sertralin (2 packages), Trittico (1 package), Amoxicillin (1 package), Diclobene (1 package), InluASS (2 packages), Diclofenac (1 package), Mucobene (1 package)

Table 6: Cost analysis depression (societal perspective)

Cost category	Description	<i>Real life vignette</i>	<i>Comparison vignette</i>
		Primary care: mild depression	Hospital: moderate depression
Direct medical costs	Treatment related costs	230 €	3,810 €
Direct non-medical costs	“Hotelkomponente”, ambulance and opportunity costs	270 €	2,220 €
Indirect costs	Lost productivity	2,330 €	2,430 €

All numbers were rounded to the nearest ten.

5.2.7 Comparative summary

The above presented results of the cost analysis were compared from the three perspectives. The direct medical and non-medical costs were combined, whereas the indirect costs were analysed separately.

According to the real life vignette, providing primary care for an irregular migrant with mild depression resulted in direct medical and non-medical costs for the third party payer of around 230 €, all of which were direct medical costs (physician’s services and medication). This is in stark contrast to the expenses incurred by the third party payer in the comparison vignette, which amounted to over 4,000 € in the case of a moderate depression. Hence, from the perspective of the third party payer, avoiding hospitalisation through timely treatment of the mild depression could save up to 94 %. The potential savings for the patient and the society are 94 % and 92 % of the total hospital costs, respectively. These cost savings are mainly due to the increased opportunity cost related to time lost during the hospitalisation, but also, from the perspective of the society, due to the high direct medical costs of a hospitalisation. The intangible costs incurred by the patient, mainly related to suffering and inability to carry out daily activities, can be considered higher in the case of a hospitalisation as compared with primary care treatment. As already mentioned, these costs linked to reduced quality of life were not included in the analysis as they could not be directly observed or measured when collecting patient data. However, the potential economic savings for the patient were analysed and are very similar to those of the third party payer. The same holds true for the society as a whole.

Table 7: Potential cost savings of timely primary care for depression (total and as percentage of total costs in hospital setting)

Perspective	Direct medical and non-medical costs	Indirect costs
Patient	3,320 € (94 %)	70 € (4 %)
Third party payer	3,800 € (94 %)	-
Society	5,540 € (92 %)	100 € (4 %)

All numbers were rounded to the nearest ten.

Potential cost savings = costs hospital setting – costs primary care setting

Percentage of potential savings = potential cost savings / costs hospital setting

The analysis of the indirect costs showed that the actual income/productivity loss due to the hospitalisation was similar to that lost in the case of primary health care treatment, with potential savings of 4 %. The same held true for both the patient and the society as a whole. The reason for these small differences is that the reduced working hours of the patient were mainly due to a diminished, illness-related ability to work, and not due to the actual treatment process. If the treatment process at a health care provider had been the main reason for the absence from work, then it is expected that the difference between the indirect costs of hospital care and those of primary care would have been greater. Furthermore, the fact that the patient worked only four hours per week during her 12-week treatment at the primary care facility, as well as during the ten weeks prior to her hospitalisation, reduced the impact of the nearly two weeks of hospitalisation.

5.2.8 Sensitivity analysis

The sensitivity analysis showed that the baseline results were closer to the lower limit of the potential savings. A comparison of the highest estimate of the direct costs in primary care with the lowest estimate in the hospital setting showed that the minimum potential savings were 93% for the patient, 94% for the third-party payer and 91% for the society. The maximum potential savings (comparing the lowest estimate of direct costs in primary care with the highest in hospital care) were estimated to be 97%, 96% and 95% for the three stakeholders, respectively.

The indirect costs, on the contrary, were very sensitive to the hours the patient would usually work, ranging from 100%, if the patient did not have to change her working hours due to the illness, to 2%, if she would have usually worked 40 hours per week and had to reduce them.

5.3 APPLICATION OF THE CONCEPTUAL MODEL 2

5.3.1 Data collection process

At the second Austrian service provider participating in the study, the Barmherzige Brüder Hospital in Vienna, data was collected by an administrative worker, exclusively from patient records.

5.3.2 Sampling

C-HM received a dataset with the basic patient records of all uninsured patients from 2013. The dataset was filtered for TCN patients. Out of this group, ten records were chosen randomly with the programme SPSS Statistics. In the next step, the hospital provided C-HM with full, anonymized medical records for these ten patients.

Out of the 10 cases, one case fulfilling the pre-established selection criteria was chosen for the cost analysis.

5.3.3 Case B.

B. was a 52-year-old man from Israel. In October 2013, B. was admitted to the Barmherzige Brüder Hospital in Vienna for five days because of a phlegmon (a spreading diffuse inflammatory process with formation of suppurates/purulent exudate or pus) in connection with a diabetic foot ulcer, a consequence of Type II diabetes mellitus. Contrary to cases collected in a primary care setting, in a hospital setting information about a patient's socio-economic status is not available as data stems from routine medical patient records.

On the day of admission, an incision, lavage and drainage of the abscess on the patient's left foot were performed and an intravenous antibiotic treatment was started. As a result of the treatment, doctors' examinations as well as laboratory test results showed an improvement in the health status of the patient allowing him to be discharged at his own request. He was provided with medicine and a follow-up procedure was agreed on; he was advised to undertake daily check-ups at the surgical outpatients' department, and to keep his leg laid high during daytime and not strain it. The patient was prescribed a three-week course of oral antibiotics. He was also advised to see an internist outside the hospital for regular blood sugar monitoring and optimal blood sugar adjustment.

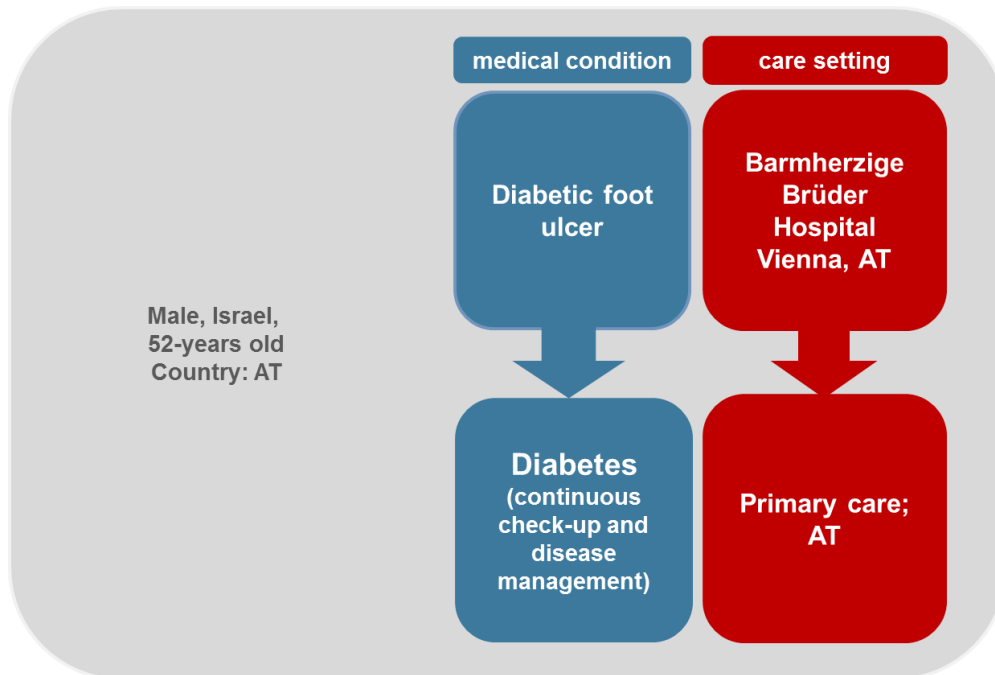
The patient visited the surgical outpatients' department eight times during the following three weeks to have his wounds checked and dressings changed.

5.3.4 Real life and comparison vignettes

The case described above was used to design the real life vignette in the hospital setting. As no information was available on the patient's socio-economic status, assumptions had to be made regarding his working hours. In order to calculate the indirect costs related to lost income and productivity, it was assumed that the patient worked 20 hours per week prior to his hospitalisation. Furthermore, the patient was not treated elsewhere before the hospitalisation and he received subsequent check-ups in the outpatient sector. Therefore, apart from the period of the actual hospital stay (five days) and the check-ups in ambulatory care, no further costs arose due to the illness, as it was assumed that the patient was able to work prior to and following the hospitalisation (indirect costs), and no other care had been provided prior to hospitalisation (direct costs). This is based on the presumption that as soon as the patient was unable to work he sought medical help at the hospital.

To design the comparison vignette in a primary care setting, data from an earlier study on irregular, uninsured Roma was used (C-HM Project "Roma and Health"). The six cases of diabetes mellitus selected for that study are comparable to the cases collected for the present study as they were also collected at an NGO that provides primary care for the uninsured. Half of these cases were male patients, out of which the one with the age closest to case B. was chosen for the comparison vignette. The patient visited the primary care provider twelve times and a laboratory six times between August 2011 and June 2013, and had various pharmaceutical drugs prescribed to him. This time horizon of two years was used for the comparison of the two vignettes.

Figure 5: Vignettes “Diabetes” Austria



5.3.5 Data sources

For the costing of the real life vignette in the hospital setting, the main data source used was the routinely collected data on the financing of Austrian public hospitals based on DRG points (see Chapter 5.2.5 for details). To calculate the direct medical costs of the check-ups following the hospitalisation, the Viennese insurance company’s (Wiener Gebietskrankenkassa; WGKK) tariff catalogue for general practitioners and the Pharmaceutical Price Information service of the Gesundheit Österreich GmbH (www.goeg.at/en/PPI) were used. Net and gross average earnings in Austria for 2014, as published by Eurostat, served as the basis for the calculation of the direct non-medical and the indirect costs. Transportation costs for the check-ups were calculated by considering the regular ticket price for a single trip with the Viennese public transport operator “Wiener Linien”. For the costing of the comparison vignette, in addition to the above-mentioned data sources, the WGKK’s tariff catalogue for laboratories was consulted to price the diagnostic tests carried out during the treatment process in the primary care setting.

5.3.6 Results of cost analysis

From the **patient's** perspective, for both the real life and the comparison vignettes, only the direct non-medical and the indirect costs were relevant as the direct medical costs were borne by the third party payer. The direct non-medical costs of the real life vignette (hospitalisation) incurred by the patient totalled 1,460 €, including the opportunity costs related to travelling, the hospital stay and the check-ups, as well as the transportation costs. The lost income due to the hospitalisation, which amounted to a bit less than 200 €, was quite moderate as it was assumed that the patient was able to work before and after his hospital stay. In the case of the comparison vignette (primary care), the patient's ability to work would not have been reduced, resulting in indirect costs of 0 €. However, the direct non-medical costs incurred by the patient would have amounted to 390 €, due to multiple encounters at the primary care provider and the laboratory over a period of almost two years.

Table 8: Cost analysis diabetic foot ulcer (patient's perspective)

Cost category	Description	Comparison vignette	Real life vignette
		Primary care: diabetes type II	Hospital: diabetic foot ulcer
Direct medical costs	Treatment related costs	-	-
Direct non-medical costs	Opportunity costs	390 €	1,460 €
Indirect costs	Lost income	-	200 €

All numbers were rounded to the nearest ten.

In the case where the patient was hospitalised (real life vignette) with a diabetic foot ulcer, the **third party payer** incurred direct medical costs of nearly 3,080 €, of which almost 90 % (2,740 €) for the hospital stay itself and the rest for the check-ups in the outpatient sector. As the direct non-medical costs associated with the hospital stay (i.e. the "Hotelkomponente"), which usually have to be borne by the patient, could not be paid by the patient in this case, the third party payer incurred additional costs of around 60 €. In total, the diabetes case which was not treated in primary care and had to be hospitalised due to a diabetic foot ulcer, produced direct costs of 3,140 € from the perspective of the third party payer. If the diabetes type II would have been treated continuously in primary care (comparison vignette), before complications like a foot ulcer occurred, the treatment related direct medical costs would have amounted to about 1,610 €, covering twelve encounters with a primary care physician and six laboratory visits, as well as various pharmaceuticals over a period of almost two years.

Table 9: Cost analysis diabetic foot ulcer (third party payer's perspective)

Cost category	Description	Comparison vignette	Real life vignette
		Primary care: diabetes type II	Hospital: diabetic foot ulcer
Direct medical costs	Treatment related costs	1,610 €	3,080 €
Direct non-medical costs	"Hotelkomponente"	-	60 €
Indirect costs	Lost income/productivity	-	-

All numbers were rounded to the nearest ten.

From *society's* viewpoint, the costs that matter most in the real life vignette (hospitalisation) are the direct medical costs, which correspond to those borne by the third party payer. In addition to the so-called "Hotelkomponente" (60 €), the opportunity costs for the society (1,230 €) represented the major part of the direct non-medical costs. The indirect costs were relevant for the society, and amounted to 280 € reflecting one week of lost productivity due to the hospital stay. If the patient had been continuously treated in a primary care setting over a period of about two years, the society would have incurred 2,080 € in costs, including 470 € of non-medical costs.

Table 10: Cost analysis diabetic foot ulcer (societal perspective)

Cost category	Description	Comparison vignette	Real life vignette
		Primary care: diabetes type II	Hospital: diabetic foot ulcer
Direct medical costs	Treatment related costs	1,610 €	3,080 €
Direct non-medical costs	"Hotelkomponente", and opportunity costs	470 €	1,290 €
Indirect costs	Lost productivity	-	280 €

All numbers were rounded to the nearest ten.

5.3.7 Comparative summary

Similar to the vignette comparison based on the case of patient A., the primary care treatment for patient B. was associated with less direct medical and non-medical costs for the patient, the third party payer and the society. The patient could have saved 74 % of the costs incurred by him in the hospital, mainly due to the high opportunity costs arising from a hospitalisation. The third-party payer could have saved 49 % of the expenses incurred due to the hospitalisation, if timely primary care had been provided over a timespan of two years. The same holds true for the society, which

could have saved more than half of the costs attributed to the hospitalisation and follow-up for a diabetic foot ulcer, if primary care had been accessible to the patient.

Table 11: Potential cost savings of timely primary care for diabetes in € (as percentage of total costs in hospital setting)

Perspective	Direct medical and non-medical costs	Indirect costs
Patient	1,080 € (74 %)	200 € (100 %)
Third-party payer	1,520 € (49 %)	-
Society	2,280 € (52 %)	280 € (100 %)

All numbers were rounded to the nearest ten.

Potential cost savings = costs hospital setting– costs primary care setting

Percentage of potential savings = potential cost savings/costs hospital setting

As it was assumed that the patient, if treated timely and continuously in primary care, was able to maintain his working hours, no indirect costs were calculated in the primary care vignette. In the hospital vignette, the patient was not able to work during the five days he had to spend at the hospital. Therefore, 100 % of the indirect costs could have been saved by the patient and the society had the patient received timely primary care treatment.

5.3.8 Sensitivity analysis

The results of the sensitivity analysis showed that the estimated potential savings for the patient ranged from 64% to 80% of the direct medical and non-medical costs of hospitalisation, depending on the travelling time, the time the patient spent at the care provider and, most importantly, the patient's usual working time before/after the hospitalisation. The range of the potential savings for the society was smaller (between 48% and 56%), because there was relatively little uncertainty surrounding the costing parameters. The third-party payer's costs were insensitive to the parametric changes, as the opportunity costs related to the time spent by the patient are of no relevance to the third party payer's direct medical and non-medical costs. A sensitivity analysis of the indirect costs was not conducted, since the indirect costs in primary care are always zero, regardless of the assumed working time. The reason for this is, that the patient does not lose any income (i.e. the society has not lost productivity) if the diabetic patient is treated timely in primary care. The potential savings are therefore always 100 % compared to hospital care.

6 BELGIUM

6.1 CONTEXT

Population and share of migrant population

According to official statistical data, Belgium has a total population of 11,258,434⁴⁰ inhabitants (2015). In 2014, the share of the foreign population amounted to 11.3% (1,264,427 people)⁴¹ of the total. The majority of foreigners come from other EU countries, particularly the EU-15. In 2011, the TCN population constituted only 36% of all migrants in Belgium. The immigrant population from Italy, France and the Netherlands constituted more than 40% of the total immigrant population, while Moroccans represented almost 8% and Turkish nationals nearly 4%. However, it is important to note, that TCNs tend to naturalize more frequently in Belgium than EU nationals.⁴²

The Belgian health care system: Main features

Compared to the EU average, Belgium has a higher health expenditure ratio (8% public and 2.6% private health expenditure as a share of GDP in 2012; EU avg.: 7.1% and 2.3%, respectively).⁴³

2013 Eurostat data shows that 2.1% of the Belgian population declared unmet health care needs (EU: 3.6%; EU-15: 3.4).

Bed density in Belgium is higher than the EU average (644 hospital beds per 100,000 inhabitants in total in 2012, including 412 acute beds; EU: 526 and 365, respectively). While Belgium has a relatively low physician density in comparison to the EU average (2.9 doctors per 1,000 inhabitants in 2012;

⁴⁰ <http://epp.eurostat.ec.europa.eu/tgm/graph.do?tab=graph&plugin=1&language=en&pcode=tps00001>, acc. 2.12.2015

⁴¹ <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=tps00157>, acc. 2.12.2015

⁴² <http://www.migrationpolicy.org/article/belgium-country-permanent-immigration>, acc. 2.12.2015

⁴³ OECD 2012

EU: 3.3), nurse density is the third highest in the EU (14.8 nurses per 1,000 inhabitants in 2012; EU: 8.9).⁴⁴

Policy regulations: entitlements to health care

Belgium has an insurance-based health care system. Legal residents in Belgium must register with one of six non-profit health insurance companies. Residents pay membership contributions as well as a fixed amount established by law for the cost of services (the “ticket modérateur”, or patient contribution, which takes into account the person’s income). The health insurance company pays or reimburses the remaining costs of the services. Several mechanisms have been established to help people in precarious economic situations obtain access to health care services. People facing extreme financial hardship can also request additional health care assistance from their local Public Social Welfare Centre (hereafter CPAS).⁴⁵

Entitlements to health care for specific migrant and ethnic minority groups

Irregular migrants

Irregular migrants living in Belgium have access to health care through the “Urgent Medical Assistance” (AMU) system, put in place in 1996. Obtaining AMU is subject to certain conditions, namely proof of medical need established by a medical certificate, address in Belgium and a mandatory social enquiry that usually takes the form of a visit to the applicant’s home. Financial hardship must be verified during this visit. If the undocumented person is entitled to AMU, his/her health care expenses will be directly reimbursed to the health professional/health care institution by CPAS. Afterwards, the federal authorities reimburse CPAS for all medical treatments except those that do not have an Institut national d’assurance maladie-invalidité (INAMI) nomenclature code. Although irregular migrants enjoy the right to access health care, there are many practical and administrative barriers.⁴⁶

⁴⁴ OECD 2012, Eurostat 2012

⁴⁵ <http://www.google.at/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB4QFjAA&url=http%3A%2F%2Fwww.medecinsdumonde.org%2Fcontent%2Fdownload%2F13839%2F165082%2Ffile%2FMdM%2BReport%2Baccess%2Bhealthcare%2Btimes%2Bcrisis%2Bband%2Brising%2Bxenophobia.pdf&ei=-P-iU5jhMcXF7AbEzYHQDw&usq=AFOjCNFmuMadH0ymoHxMBCvEkvijTXVJUA&bvm=bv.69411363,d.ZGU>, acc. 19.06.2014

⁴⁶ https://www.medicosdelmundo.org/index.php/mod.documentos/mem.descargar/fichero.documentos_MdM_Report_access_healthcare_times_crisis_and_rising_xenophobia_edcfd8a3%232E%23pdf, acc.20.03.2016

Roma

It is impossible to determine the exact number of Roma living in Belgium since the term 'Roma' refers to ethnic belonging; registration in the population register, the aliens register or the provisional register of asylum seekers is based on country of origin. Moreover, Article 6 of the Law from 8th of December 1992 on privacy when processing personal data states that 'the processing of personal data that contain information on racial or ethnic origin ... is forbidden'. Consequently, there are no official statistics for the various ethnic groups or minorities living on Belgian territory.⁴⁷

According to a document published by the Council of Europe's Roma and Travellers Division (updated last in 2010), estimations on the number of Roma in Belgium range from 20,000 to 40,000.⁴⁸ The majority of Roma in Belgium are migrants, either EU citizens or TCN.⁴⁹

There are no specific legal provisions regarding Roma access to health care in Belgium. It depends largely on their residence status. Roma who are citizens and Roma with residence permits can benefit from the same entitlements as other Belgian citizens. Roma EU citizens without residence permits are considered irregular migrants. Specific rules for access to health care apply to asylum seekers, mainly coming from the Western Balkans following the visa liberalisation travel regime.⁵⁰

6.2 APPLICATION OF THE CONCEPTUAL MODEL 3

6.2.1 Data collection process

The Médecins du Monde (MdM) Polyclinic in Brussels was the Belgian service provider that agreed to participate in the study. The centre provides health care to all persons having difficulties in accessing services, including irregular migrants, asylum seekers and the uninsured. Information on social determinants of health, not included in the standard patient record (e.g. occupation, working hours, rent for housing), was collected by an IOM researcher through interviews with patients. Prior to each

⁴⁷ http://ec.europa.eu/justice/discrimination/files/roma_belgium_strategy_en.pdf, acc. 19.06.2014

⁴⁸ <http://www.coe.int/t/dg3/romatravellers/Source/documents/stats.xls>, acc. 19.06.2014

⁴⁹ http://equi-health.eea.iom.int/images/NRIS_Belgium_final.pdf, acc. 20.03.2016

⁵⁰ http://equi-health.eea.iom.int/images/NRIS_Belgium_final.pdf, acc. 20.03.2016

interview, all selected patients were asked for their consent by a member of staff (a written consent form was prepared and showed to the patients, but in order to maintain patients' anonymity it was signed by the researchers, and not by the patient, after obtaining his/her oral consent.) All other information necessary to complete the CD templates was collected from patient files by a social worker from the participating institution.

6.2.2 Sampling

In order to be able to collect detailed data, only patients who came to the polyclinic for follow-up consultations were included in the sampling process since it is only at the time of a second visit that a consultation with a social worker takes place, and this made it possible to introduce the research to the patients and ask for their consent to participate in the interview. Patients coming for a follow-up visit constituted around half of all the patients of the clinic. Moreover, as explained by the staff from the organisation, patients who come back for a follow-up visit are, in general, those with more severe health problems and therefore are more vulnerable, which was in line with the focus of the study.

Information was collected on 10 consecutive patients, who were irregular migrants and agreed to be interviewed, and who came to the polyclinic for a follow-up visit on Tuesday, Wednesday or Thursday during one given week. These weekdays were chosen as follow-up visits were accepted only then.

Out of the 10 cases, one case fulfilling the pre-established selection criteria was chosen for the cost analysis.

6.2.3 Case C.

C. was a 35-year-old male irregular migrant from Guinea. Before coming to MdM for the first time, he had already been living in Brussels for about two years. He was living as a squatter and therefore was not paying any rent. A mathematician by profession, C. was working on average six hours per week teaching after school maths lessons to primary and secondary school children. No family members were financially dependent on C.'s income, either in his home country or in Belgium.

Between May 2013 and May 2015, C. visited the MdM clinic for medical treatment 14 times. During his encounters, C. presented health problems related to epilepsy, tiredness and bipolar disorder. Additionally, he reported bloody stool. He was diagnosed with epilepsy, psychological problems,

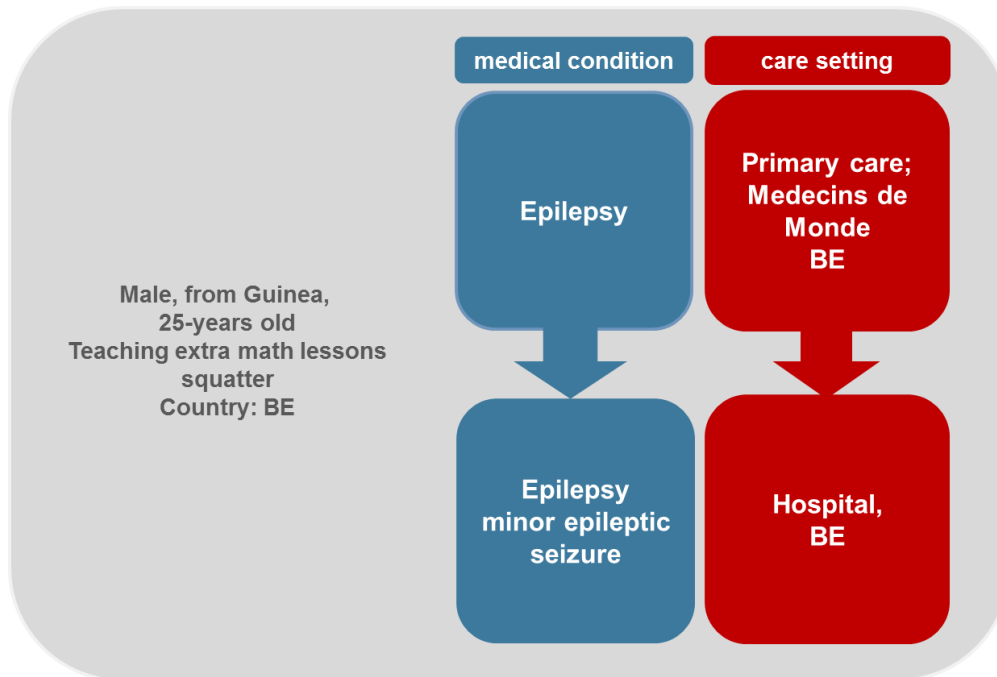
bipolar disorder and bleeding haemorrhoids. The patient was provided with two different pharmaceutical drugs to prevent epilepsy-related seizures. During the course of the medical treatment, the patient met with the Mdm social worker 17 times.

6.2.4 Real life and comparison vignettes

For the real-life vignette only the primary diagnosis, epilepsy, was considered as this seemed to have been the main concern regarding treatment in the primary care setting. In the CD form, it was indicated that each of the 14 encounters with a primary care physician lasted ten minutes. It was assumed that the same amount of time was spent with a social worker. Furthermore, it was assumed that the patient would have usually met the physician and the social worker during the same visit to the primary care provider, except for three visits, during which he only saw the social worker. As stated in the CD, the illness did not have an impact on the working hours of the patient, indicated as six hours per week.

The assumptions used to design the comparison vignette in the hospital setting were mainly based on the national hospital statistics (<https://tct.fgov.be/webetct/etct-web/anonymous?lang=fr>). At the time of the study, the most recent data on patients with epilepsy in this database was from 2011. On average, patients with a minor epileptic seizure spent two days in a hospital, with the third-party payer incurring costs of around 1,640 € including daily rates for hospital stays, pharmaceuticals and other fees (e.g. laboratory tests). The severity grade of minor epileptic seizure was chosen for the hospital vignette because the largest proportion of hospital stays due to epileptic seizures were due to minor seizures. Furthermore, the average age of hospitalised patients with this severity level was 28 in 2011, which roughly corresponded to the age of the patient from the real life case. Regarding transportation, it was assumed that the patient would have had to be taken to the hospital by an ambulance but could return home from the hospital by public transport.

Figure 6: Vignettes “Epilepsy” Belgium



6.2.5 Data sources

To evaluate the direct medical costs of the real-life vignette in the primary care setting, the national fee catalogue for outpatient practitioners was consulted (Rijksinstituut voor Ziekte- en Invaliditeitsverzekering, 2015), according to which a general practitioner receives around 21 € per consultation. Prices of pharmaceuticals were obtained from the Pharmaceutical Price Information service (<http://www.goeg.at/en/Reports-Service.html>) and data on net and gross average earnings was obtained from the Eurostat database. The direct medical costs for the comparison vignette in the hospital setting were taken from the national hospital statistics database (<https://tct.fgov.be/webetct/etct-web/anonymous?lang=fr>) and the costs for the transportation by ambulance from a circular (Omzendbrief) by the Directorate-General for Health Care (Directoraat-generaal Gezondheidszorg).

6.2.6 Results of cost analysis

From the **patient's** perspective, the relevant costs in the primary care setting (real life vignette) included the opportunity costs associated with the time the patient spent traveling and at the health care provider. Since the patient walked by foot to all encounters, no additional travel costs arose. The direct non-medical costs added up to 200 €. The primary care treatment did not affect the working hours of the patient. Hence, no income was forgone and no indirect costs arose for the patient. If, however, the treatment had been delayed and the patient had to be admitted to a hospital and stay there for two days, the direct non-medical cost would have been around 590 € and the potentially lost income 20 €.

Table 12: Cost analysis epilepsy (patient's perspective)

Cost category	Description	<i>Real life vignette</i>	<i>Comparison vignette</i>
		Primary care: epilepsy management	Hospital: minor epileptic seizure
Direct medical costs	Treatment related costs	-	-
Direct non-medical costs	Opportunity costs	200 €	590 €
Indirect costs	Lost income/productivity	-	20 €

All numbers were rounded to the nearest ten.

The **third party payer**, who in such a case bears the direct medical costs including medication, incurred costs of 380 € for the health and social care personnel in the primary care facility and 20 € for the cost of pharmaceuticals. In the case of a hospitalisation, the average direct medical costs for a minor epileptic seizure were estimated to be 1,660 € based on the inflated average expenditures for this ailment in Belgian hospitals in 2011. Additionally, the transportation of the patient to the hospital by an ambulance would have cost the third party payer around 60 €.

Table 13: Cost analysis epilepsy (third party payer's perspective)

Cost category	Description	Real life vignette	Comparison vignette
		Primary care: epilepsy management	Hospital: epileptic seizure
Direct medical costs	Care by health professionals	380 €	1,660 €
	Medication	20 €	
Direct non-medical costs	Transport (ambulance)	-	60 €

All numbers were rounded to the nearest ten.

For the **society**, the direct medical and non-medical costs associated with the treatment of epilepsy in primary care amounted to 740 €, including the time spent by the health and social care personnel with the patient, the cost of medication, and the costs related to the patient's travelling and time spent at the primary health care provider. The direct costs incurred by the society had the patient been hospitalised would have amounted to 1,660 € for the medical treatment and 580 € for the patient's transportation to and time spent at the hospital. Furthermore, the lost productivity due to the two-day hospitalisation would have corresponded to indirect costs of 40 €.

Table 14: Cost analysis epilepsy (societal perspective)

Cost category	Description	Real life vignette	Comparison vignette
		Primary care: epilepsy management	Hospital: epileptic seizure
Direct medical costs	Care by health professionals	380 €	1,660 €
	Medication	20 €	
Direct non-medical costs	Opportunity costs / transport	340 €	580 €
Indirect costs	Lost income/ productivity	-	40 €

All numbers were rounded to the nearest ten.

6.2.7 Comparative discussion

The patient, the third party payer and the society could potentially have saved 66 %, 77 % and 67 %, respectively, of the expenses associated with a hospitalisation due to a minor epileptic seizure had the patient been treated in primary care. Furthermore, no income or productivity losses would have

occurred had the patient been treated by a primary care provider, whereas a hospitalisation was associated with an income/productivity loss of two days.

Table 15: Potential cost savings of timely primary care for epilepsy (total and as percentage of total costs in hospital setting)

Perspective	Direct medical and non-medical costs	Indirect costs
Patient	390 € (66 %)	20 € (100 %)
Third party payer	1,330 € (77 %)	-
Society	1,500 € (67 %)	40 € (100 %)

All numbers were rounded to the nearest ten.

Potential cost savings = costs hospital setting– costs primary care setting

Percentage of potential savings = potential cost savings/costs hospital setting

6.2.8 Sensitivity analysis

As regards direct medical and non-medical costs, the lower (upper) limit of the potential savings due to avoided hospitalisation was calculated to be 49% (93%) for the patient, 75% (89%) for the third-party payer and 57% (88%) for the society. From all three perspectives, the baseline scenario is therefore closer to the lowest potential savings than to the highest.

Since the patient did not have to reduce his working hours in case of a timely treatment in primary care, the potential savings rate was 100% for the patient and the society. However, the absolute difference between lost income/productivity in case of primary care vs. hospital care amounted to 20€ and 190€ (lowest and highest absolute potential savings as calculated in sensitivity analysis), respectively, for the patient, and 40€ and 380€, respectively, for the society.

7 ITALY

7.1 CONTEXT

Population and share of migrant population

According to official statistical data, as of December 31, 2014, Italy had a total of 60,795,612 inhabitants, of which more than 5 million had foreign citizenship (8.2%).⁵¹

Within the foreign population, the number of TCNs holding a residence permit in Italy on the 1st of January 2015 amounted to 6.5 % of the total population (3,929,916 people). The most represented countries of origin among TCNs are Morocco (518,357), Albania (498,419), China (332,189), Ukraine (236,682) and the Philippines (169,046). In 2014, the share of TCN children in Italy amounted to 24% of the total migrant population holding a residence permit.⁵² From 2014 to 2015, an increase of approximately 55,000 migrants was observed.

The share of long-term residence permits has been growing continuously. While in 2014 they amounted to 2,179,607, in 2015 they totalled 2,248,747 and represented the largest part of the migrant population with regular status (57.2%).⁵³

The Italian health care system: Main features

Italy's public health expenditures are slightly higher than the EU average (7.4% of GDP in 2012; EU: 7.1%), whereas its private health expenditures are lower (1.9% of GDP in 2012; EU: 2.3%).

Data on unmet needs with regard to medical examination or treatment disaggregated by income quartiles shows relatively high inequality in access to health care in Italy. 2013 Eurostat data indicates that 6.3% of the Italian population declared unmet health care needs (EU-27: 3.6%; EU-15: 3.4%).

Bed density in Italy is lower than the EU average (353 hospital beds per 100, 000 inhabitants in total in 2012, including 283 acute beds; EU: 526 and 365, respectively). While Italy has a higher physician

⁵¹ <http://www.istat.it/en/archive/162261>, acc. 2.12.2015

⁵² <http://www.istat.it/en/archive/171424>, acc. 2.12.2015

⁵³ Ibid.

density than the EU average (3.7 doctors per 1,000 inhabitants in 2012; EU: 3.3), nurse density is below the EU average (6.4 nurses per 1,000 inhabitants in 2012; EU: 8.9)⁵⁴.

Policy regulations: entitlements to health care

Italy has a tax-based health care system. The central government controls the distribution of tax revenue for publicly financed health care (Servizio Sanitario Nazionale, or SSN) and defines a national minimum statutory benefits package - the “essential levels of care” (livelli essenziali di assistenza, or LEAs, to be offered to all residents in every region for free or subject to co-payments).⁵⁵ A system of co-payments, called ticket, was introduced in 1982 for an increasingly high number of services included in LEAs.⁵⁶ Citizens contribute to the health care system through general taxation, based on progressive income tax, if not entitled to an exemption due to age, social status, disability, certain chronic or rare health conditions, or other special conditions.⁵⁷

Health care provision is a shared responsibility between the central, regional and local governments. Because of this decentralized management of the health care system, the implementation of the legislative framework and entitlements to health care services may differ between the various regions.⁵⁸

In order to access health care services, regular migrants must register with the Italian National Health System in order to obtain their health card. Asylum-seekers can register in the health system as well, and receive health care on equal ground with Italian nationals and predicated on the same conditions.⁵⁹

Entitlements to health care for specific migrant and ethnic minority groups

Irregular migrants

As no official records on irregular migrants exist, their number can be only estimated. The Initiatives and Studies on Multi-ethnicity (ISMU) Foundation in Milan estimated the number of irregular

⁵⁴ http://www.oecd-ilibrary.org/social-issues-migration-health/hospital-beds_20758480-table5, acc. 6.09.2015

⁵⁵ http://www.commonwealthfund.org/~media/Files/Publications/Fund%20Report/2013/Nov/1717_Thomson_intl_profiles_hlt_care_sys_2013_v2.pdf, acc. 18.06.2015

⁵⁶ http://equi-health.eea.iom.int/images/SAR_Italy_final.pdf, acc. 6.09.2015

⁵⁷ Ibid.

⁵⁸ Ibid.

⁵⁹ Ibid.

migrants living in Italy in 2009 at 560,000, 544,000 in 2010, 443,000 in 2011, 326,000 in 2012 and 294,000 in 2013.⁶⁰

Between January and October 2015, approximately 131,431 migrants arrived in Italy by sea with an average of 508 arrivals per day. IOM has noted that this number represented a slight decrease of arrivals (approximately 6,000 less) compared to the same period in 2014. The top five countries of origin were Eritrea, Nigeria, Somalia, Sudan and Syria⁶¹.

Irregular migrants have access to health care services through a specific system called “STP – Temporarily Present Foreigners” consisting of a short-term but renewable anonymous code.⁶² The STP is issued for free by the local health administration and is valid for six months anywhere on Italian territory. Services are provided at no cost to the applicants but are subject to the co-payment system (ticket) under the same conditions as those for Italian nationals. An irregular migrant who finds himself in a situation of poverty can apply for “poverty/indigence status” by submitting a self-declaration to the health authority providing the services.⁶³ The STP code gives access to preventive, urgent (which cannot be delayed) and essential care (a much wider definition that includes maternity and child care vaccinations, and treatment of infectious disease), as well as services considered necessary for public health reasons.⁶⁴ The STP does not give access to general practitioners who, as in many other European countries, are the gatekeepers to the system of specialized medical care.⁶⁵

Roma

According to the document published by the Council of Europe’s Roma and Travellers Division (updated last in 2010), estimations on the number of Roma in Italy range from 110,000 to 170,000.⁶⁶ In 2013, Amnesty International reported that there were about 150,000 Roma, Sinti and Caminanti in Italy, representing around 0.25% of the total population of the country. These communities include

⁶⁰ http://equi-health.eea.iom.int/images/SAR_Italy_final.pdf, acc. 6.09.2015

⁶¹ https://www.iom.int/sites/default/files/situation_reports/file/Europe-Mediterranean-Migration-Crisis-Response-Situation-Report-05-October-2015.pdf, acc. 20.03.2016

⁶² <http://www.epim.info/wp-content/uploads/2011/02/HUMA-Publication-Comparative-Overview-16-Countries-2010.pdf>, acc. 18.06.2015

⁶³ http://equi-health.eea.iom.int/images/SAR_Italy_final.pdf, acc. 6.09.2015

⁶⁴ Ibid.

⁶⁵ <http://www.epim.info/wp-content/uploads/2011/02/Access-to-healthcare-for-Undocumented-Migrants-in-11-EU-countries-2009.pdf>, acc. 16.03.2016

⁶⁶ <http://www.coe.int/t/dg3/romatravellers/Source/documents/stats.xls>, acc. 18.06.2015

Italian citizens (about 50%), people from other EU countries and from the former Yugoslavia, as well as stateless people. Only about 3 % of them were found to be itinerant.⁶⁷

According to figures given in the 2012 National Strategy for Inclusion of Roma, Sinti and Caminati Communities⁶⁸, there is an estimated number of 140,000 Roma (around 0.23% of the total population), most of whom are children and youngsters up to 16 and have Italian citizenship.

Entitlements to health care for Roma depend on their legal status. Roma who are Italian citizens or have a regular residence status enjoy full entitlement to health care through the Italian National Health System; for those in an irregular situation, the same regulations apply as those for irregular migrants.

7.2 APPLICATION OF THE CONCEPTUAL MODEL 4

7.2.1 Data collection process

At the Centro per la Salute della Famiglia Straniera (CSFS) in Reggio Emilia, a primary care centre, data was collected and CD forms filled in on site by a researcher from C-HM through interviews with patients, physicians and a midwife. Consent was requested from each chosen patient prior to his/her interview. During discussions with the physicians and the midwife, they drew on their knowledge of the patients, as well as patient records, in order to provide detailed information on the medical conditions and treatment processes of the patients. Altogether, information on 11 cases was collected.

During all interviews with the patients, as well as with the medical personnel, the C-HM researcher was accompanied by another researcher from the Azienda Unità Sanitaria Locale (AUSL) di Reggio Emilia who served as an (English – Italian) interpreter.

⁶⁷ <http://www.amnesty.org/en/library/asset/EUR30/013/2013/en/8e6bc1e5-00d0-4aaa-b59e-39c1cd8f4284/eur300132013en.pdf>, acc. 18.06.2015

⁶⁸ http://ec.europa.eu/justice/discrimination/files/roma_italy_strategy_en.pdf, acc. 18.06.2015

7.2.2 Sampling

The 11 cases were sampled in a hybrid way. The first seven cases were selected by choosing the first seven patients who visited the institution for a consultation on a given day (Wednesday). These seven persons included patients with and without appointments. The C-HM researcher conducted short interviews with all of them in order to collect information on social determinants of health that were not included in the standard patient record (e.g. occupation, working hours, housing). Due to practical constraints, it was not possible to interview more than seven people.

The remaining four cases were chosen by the midwife and one of the physicians from among the patient files of the institution. Two cases were chosen randomly by the midwife from her patient files since women's health issues, and especially pregnancy, constitute the most common diagnosis for patients visiting this institution. The physician chose two cases of unaccompanied minors as this group was pointed out by staff members as one that also constitutes a significant part of their patients.

Out of the 11 cases, one case fulfilling the pre-established selection criteria was chosen for the cost analysis.

7.2.3 Case D.

D. was a 37-year-old man from Tunisia, who had been living in Italy for five years. He was a homeless irregular migrant, mainly living on the street and not working.

Since his first medical encounter in August 2013, D. had visited the CSFS 15 times, mainly because of lungs problems. As he had no command of the local language, a cultural mediator facilitated communication, when available. If no mediator was present, a friend of the patient provided interpreting support during the clinical encounters.

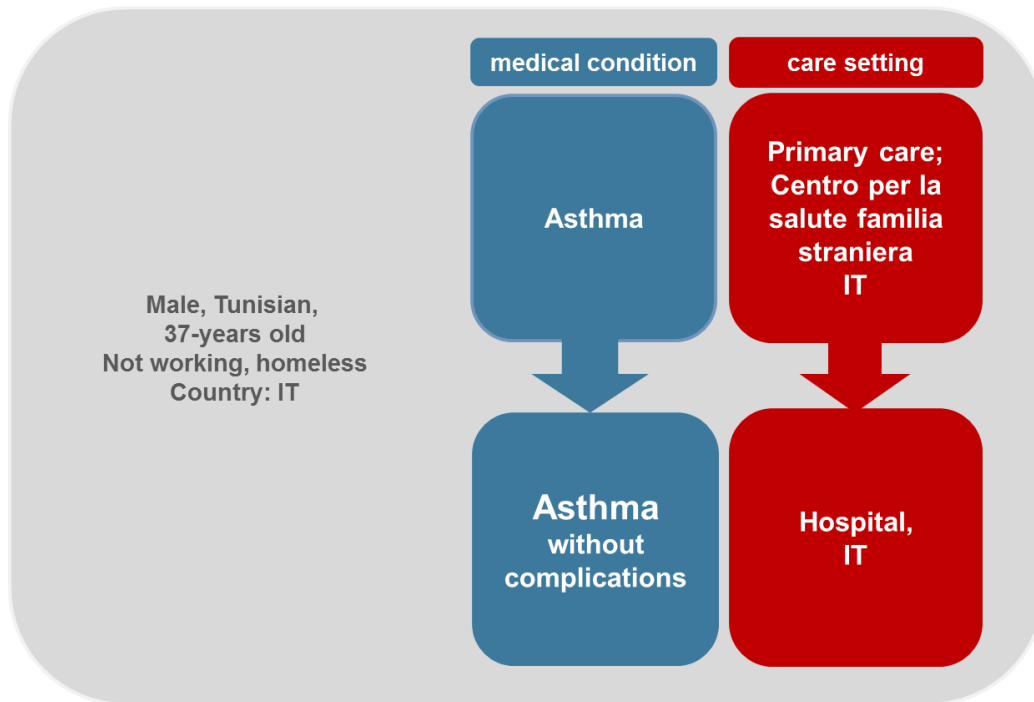
D. was diagnosed with severe asthma. The health centre conducted a tuberculosis (TB) test, a chest x-ray and a chest tomography, and provided the patient with asthma medicine for free. At the last documented encounter, the patient presented an infected finger injury and bandages and antibiotics were provided to him. Furthermore, the patient underwent a methadone treatment at another health service provider dedicated to treatment of substance addictions.

7.2.4 Real life and comparison vignettes

In order to be able to perform a comparative cost analysis of the described treatment of patient D., a real life and a comparison vignette were designed by considering asthma as the primary medical condition. For the real life vignette, the treatment of the infected finger was disregarded as this was neither a common condition treated at the health centre nor did it have a great impact on treatment costs. Furthermore, the fact that the patient underwent a methadone treatment at another health institution was not included in the analysis as it can be assumed that the methadone treatment does not influence substantially the costs related to the asthma treatment. The patient visited the primary care provider 15 times, with each encounter lasting ten minutes. At one of these 15 encounters, a pulmonologist saw the patient for 15 minutes. Regarding the costs of the cultural mediator, it was conservatively assumed that in seven out of the 15 encounters a cultural mediator was present, including the encounter where the lung specialist was consulted.

For the comparison vignette, it was assumed that the patient received standard medical treatment for asthma without complications in a hospital setting. In line with data on the average length of stay of male patients aged 35 to 39 with asthma (ICD 10-codes: J45 and J46) in Italy from 2001 to 2012, it was assumed the patient would have been hospitalised for 5.2 days. It was further assumed that the patient would have been taken to the hospital by an ambulance but would have been able to walk home from the hospital. In keeping with the real-life vignette both ways were estimated to take 15 minutes of the patient's time. Finally, it was presumed that the patient did not work, again in line with the real life case, and did not receive any other treatment beyond the hospitalisation.

Figure 7: Vignettes “Asthma” Italy



7.2.5 Data sources

Data taken from the statistical database of the OECD (www.oecd-ilibrary.org) and the International Labour Office (ILO; laborsta.ilo.org/) was used to evaluate the time of the health professionals in monetary terms. This included the wage rates of general practitioners, professional nurses and auxiliary nurses. The latter was used as a proxy for the wage rate of a cultural mediator. The Pharmaceutical Price Information service was again used as a basis to calculate the prices of medication. Other services provided in the primary care setting (chest X-ray and tomography) were priced according to the tariffs for special services in the outpatient sector (prestazioni di assistenza specialistica ambulatoriale). Eurostat data on net and gross average earnings in 2014 was used to calculate the direct non-medical costs (i.e. opportunity costs of the patient). As the patient did not work during the 3-year treatment process, indirect costs were not calculated.

For the costing of the comparison vignette the same data sources were used for the non-medical cost categories. Regarding the direct medical costs, tariffs for acute care hospitals were used to

calculate the cost of inpatient treatment of asthma without complications for patients aged 17 and over. All unit costs that were not available for 2013 or 2014 were inflated to 2013 prices (: <http://www.inflation.eu/>).

7.2.6 Results of cost analysis

From the perspective of the **patient**, the relevant opportunity costs associated with the treatment in primary care included travelling time and time spent with the physicians. When this time was evaluated based on the net average earnings in Italy in 2014, the opportunity costs for the patient added up to around 110 €. Had the patient been hospitalised his opportunity costs of travelling to and staying at the hospital would have amounted to almost 1,110 €. As the patient was not working, he did not lose any income (no indirect costs).

Table 16: Cost analysis asthma (patient's perspective)

Cost category	Description	<i>Real life vignette</i>	<i>Comparison vignette</i>
		Primary care: asthma	Hospital: asthma w/o complications
Direct medical costs	Treatment related costs	-	-
Direct non-medical costs	Opportunity costs	110 €	1,110 €
Indirect costs	Lost income/productivity	-	-

All numbers were rounded to the nearest ten.

From the **third party payer's** perspective, the costs in the primary care setting included the salary of the physicians, the cultural mediator, the costs of the medication, and the tariffs of the diagnostic services. For 15 encounters with the GP, one encounter with a pulmonologist and the presence of the cultural mediator costs of around 140 € were incurred by the third party payer. The TB test, the chest X-ray and the tomography added up to around 110 €, and the pharmaceuticals (Ventolin Evohaler and Deltacortone) to less than 40 €. In total, the third party payer had to bear direct medical costs of 280 € for the patient's treatment in primary care. In the case of hospitalisation, the direct medical costs would have increased to 1,830 € if no complications arose during the inpatient stay. Furthermore, because the patient would have been taken to the hospital by ambulance, transportation costs would have amounted to 230 €.

Table 17: Cost analysis asthma (third party payer's perspective)

Cost category	Description	Real life vignette	Comparison vignette
		Primary care: asthma	Hospital: asthma w/o complications
Direct medical costs	Care by health professionals	140 €	1,830 €
	Other health care services	110 €	
	Medication	40 €	
Direct non-medical costs	Ambulance	-	230 €

All numbers were rounded to the nearest ten.

The direct medical costs incurred by the **society** as a whole correspond to the costs incurred by the third party payer. Additionally, opportunity costs arose due to the time the patient spent at the health care provider. In the primary care setting these opportunity costs amounted to 160 €, whereas in the hospital setting they were estimated at 1,040 €.

Table 18: Cost analysis asthma (societal perspective)

Cost category	Description	Real life vignette	Comparison vignette
		Primary care: asthma	Hospital: asthma w/o complications
Direct medical costs	Care by health professionals	250 €	1,830 €
	Other health care services	110 €	
	Medication	40 €	
Direct non-medical costs	Ambulance, and opportunity costs	160 €	1,040 €
Indirect costs	Lost income/productivity	-	-

All numbers were rounded to the nearest ten.

7.2.7 Comparative discussion

A comparison of the costs incurred by the third party payer and the society in the primary care setting with those in the hospital setting shows that around 90 % of the hospitalisation costs could potentially have been saved if timely treatment had occurred in the primary care setting. For the patient, the individual suffering was not priced in this analysis but it can be assumed that it would be substantial in the case of delayed asthma treatment. The patient's opportunity costs could have been

reduced by over 90 %, or 990 € in monetary terms, if hospitalisation had been avoided and primary care treatment provided.

Table 19: Potential cost savings of timely primary care for asthma (total and as percentage of total costs in hospital setting)

Perspective	Direct medical and non-medical costs	Indirect costs
Patient	990 € (90 %)	-
Third party payer	1,780 € (86 %)	-
Society	2,430 € (85 %)	-

All numbers were rounded to the nearest ten.

Potential cost savings = costs hospital setting– costs primary care setting

Percentage of potential savings = potential cost savings/costs hospital setting

7.2.8 Sensitivity analysis

From the perspective of the patient, the potential savings associated with timely treatment of asthma ranged from 55% to 94% of the total direct medical and non-medical costs of the hospital treatment. Similarly, the estimated direct costs from the third party payer's and the society's perspectives ranged from 53% to 96% and 51% to 95%, respectively. Hence, the estimated baseline results seem robust to parameter changes.

8 SPAIN

8.1 CONTEXT

According to official statistical data, Spain has a total population of 46,439,864⁶⁹ inhabitants (2015) with a foreign population share of 9.6% (4,447,852 people)⁷⁰. The percentage of foreign-born inhabitants in Spain as a whole increased between 2005 and 2010 from 10.7% to 14.0%⁷¹. The proportion of foreign-born inhabitants in Catalonia has increased nearly six-fold, from 2.9% in 2000 to 15.68% in 2012⁷².

Although the population in Spain decreased by 72,335 persons in 2015 in comparison to 2014, the number of persons with Spanish nationality increased by 156,872. This growth was mainly due to the acquisition of Spanish citizenship, which included 205,807 persons (according to provisional data). On the other hand, the foreign population decreased by 229,207 persons (4.90%) between 2014 and 2015. This was due to the combined effect of emigration of foreign-born inhabitants to other countries and the acquisition of Spanish citizenship.⁷³

In the first half of 2013, the migratory balance of foreign nationals was -100,056⁷⁴ and in 2014, it changed to -64,802 persons. Foreign nationals who emigrated from other countries registered a 7.0% increase in 2014 as compared to 2013, while foreign emigration to other countries decreased by 28.0%.⁷⁵

In 2015, the largest groups of TCNs in Spain originated from Morocco (686,314), Ecuador (174,328) and China (166,383).⁷⁶

⁶⁹ <http://epp.eurostat.ec.europa.eu/tgm/graph.do?tab=graph&plugin=1&language=en&pcode=tps00001>, acc. 2.12.2015

⁷⁰ http://www.ine.es/en/prensa/np917_en.pdf, acc. 2.12.2015

⁷¹ UN DESA, 2008; Vasileva, 2011

⁷² www.idescat.cat

⁷³ http://www.ine.es/en/prensa/np917_en.pdf, acc. 2.12.2015

⁷⁴ http://www.ine.es/en/prensa/np822_en.pdf, acc. 2.12.2015

⁷⁵ http://www.ine.es/en/prensa/np917_en.pdf, acc. 2.12.2015

⁷⁶ http://www.ine.es/en/prensa/np917_en.pdf, acc. 2.12.2015

The Spanish health care system: Main features

Spain's public health expenditure equals the EU average (7.1% of GDP in 2012), whereas its private health expenditure exceeds the EU average slightly (2.5% of GDP in 2012; EU: 2.3%).⁷⁷

Data on unmet needs with regard to medical examination or treatment disaggregated by income quartiles shows relatively moderate equity in access to health care in Spain in 2011.⁷⁸ 2013 Eurostat data indicates that 2.8% of the Spanish population declared unmet health care needs (EU: 3.6%; EU-15: 3.4%).

Bed density in Spain is significantly lower than the EU average (316 hospital beds per 100,000 inhabitants in total in 2012, including 246 acute beds; EU: 526 and 365, respectively).⁷⁹ While Spain has a higher physician density than the EU average (3.8 doctors per 1,000 inhabitants in 2012; EU: 3.3), nurse density is the second lowest among EU countries (4.9 nurses per 1,000 inhabitants in 2012; EU: 8.9).⁸⁰

Policy regulations: entitlements to health care

Spain has a tax-based health care system. The country is divided into 17 autonomous communities, including the Canary and Balearic Islands, and two autonomous cities (Ceuta and Melilla). The health care system was historically controlled by the central government, but today each region is responsible for health care provision on its territory and the only jurisdiction the central government has is for the overall budget.⁸¹

In April 2012, the Spanish Ministry of Health approved the Royal Decree-Law 16 /2012 thus launching a structural reform of the National Health System. Prior to the reform, all categories of migrants enjoyed free and accessible health care services in Spain. The Royal Decree limited access to health care through the Spanish National Health System to insured persons and those officially labelled as "beneficiaries". The reform enforced severe constraints in access to health care, including an increase in the percentage of pharmaceutical costs paid by the user and refusal to treat unregistered foreigners (in effect from September 1, 2012). Under the law, legally residing migrants are entitled to

⁷⁷ OECD 2012

⁷⁸ Eurostat 2012

⁷⁹ Eurostat 2012

⁸⁰ OECD 2012, Eurostat 2012

⁸¹ <http://www.treatmentinspain.com/expatriate/system/>, acc. 18.06.2014

the same services as nationals but, if they are not insured or are not beneficiaries of the Social Security System, they have to pay for them.⁸²

As the health care system is decentralized, the responsibility for public health care is shared by the central and the regional governments of the 17 autonomous communities. In practice, this means that the Royal Decree has been applied, and in certain cases not applied at all, in a different manner across the autonomous communities, resulting in different models of health care provision within Spain.⁸³ In the autonomous cities of Ceuta and Melilla, the central government has retained the management of health care provision and services are delivered by the National Institute of Health Management (INGESA).⁸⁴

Entitlements to health care for specific migrant and ethnic minority groups

Irregular migrants

In 2009, estimations on the number of irregular migrants in Spain ranged from 300,000 to 390,000 people, representing 0.65% to 0.85% of the total population, respectively. Data from January 2008 shows that the main countries of origin of irregular TCNs were Bolivia (165,000 people or 28% of irregular migrants), Argentina (99,000 people or 17% of irregular migrants), and Brazil (79,000 people or 13% of irregular migrants).⁸⁵

The new Article 3ter of Law 16/2003 (introduced by Article 1 of the Royal Decree-Law 16/2012), which regulates access to health care, provides that adult foreign nationals who are neither registered nor authorized as residents in Spain are entitled to health care only in the event of “emergency in case of serious disease or accident, and pregnancy, prenatal and postnatal care”.⁸⁶

⁸² http://equi-health.eea.iom.int/images/SAR_Spain_Final.pdf, acc. 6.09.2015

⁸³ Ibid.

⁸⁴ <http://www.msssi.gob.es/en/organizacion/sns/libroSNS.htm>

⁸⁵ http://irregular-migration.net/typo3_upload/groups/31/3.Database_on_IrregMig/3.2.Stock_Tables/Spain_Estimates_Irregular_Migration_Nov09_2.pdf, acc. 18.06.2014

⁸⁶ https://www.medicosdelmundo.org/index.php/mod.documentos/mem.descargar/fichero.documentos_MdM_Report_access_healthcare_times_crisis_and_rising_xenophobia_edcfd8a3%232E%23pdf, acc. 16.03.2016;

As mentioned above, the Royal Decree has not been applied in a uniform manner across the autonomous communities in Spain. Several autonomous communities are either partially implementing the reform or not at all.

The Catalan Department of Health recognizes the right to access public health care services for all new arrivals in the region. The basic requirement to access the public health care system is registration in Catalonia. Subsequently, the person is provided with an individual health card to gain access to the portfolio of common public health services. However, the period of time that the person has been registered determines the type of rights he/she has regarding access to health care services. People who have been registered for less than 3 months have the right to emergency care and public health programs only. Those who have been registered for a period between three months and one year also have access to primary health care. If a person's registration exceeds one year, the person gains the same rights as a Catalan citizen.

Roma

According to the document published by the Council of Europe's Roma and Travellers Division (updated last in 2010), estimations on the number of Roma in Spain range from 650,000 to 800,000, representing 1.4% and 1.73% of the total population, respectively.⁸⁷

More recent estimations on the number of Roma in Spain (included in the 2012-2020 National Roma Integration Strategy for Spain), approximate 725,000 to 750,000 persons. These figures should, however, be regarded with a certain degree of caution due to the variety of methods used for their calculation. Estimated figures, therefore, may range from 500,000 to 1,000,000 people.⁸⁸

Roma are distributed across the national territory with a most concentrated presence in Andalusia, where 40% of Spanish Roma reside. There is a large presence of Roma in Catalonia, Valencia and Madrid as well. Demographic studies show that approximately one third of the Roma population is

"The Spanish Minister of Health announced in the mass media that Immigrants who are in Spain illegally will have the right again to access to Primary Health Care in the Spanish National Health System (NHS), but they will not get the health card back (their cards were removed from them following the health care reform in 2012 (law 16/2012)). The Minister, Alfonso Alonso, defended this decision, which is a political rectification of the Spanish Government, in order to be more "practical" and "not to saturate emergencies". (http://politica.elpais.com/politica/2015/03/31/actualidad/1427788718_943883.html). There is not announcement of this change in the Health Ministry web site.

⁸⁷ acc. 16.06.2014 (where is the first part of this reference?)

⁸⁸ http://ec.europa.eu/justice/discrimination/files/roma_spain_strategy_en.pdf, acc. 18.06.2014

aged below 16 years and the birth rates among Roma are substantially higher than the average for the entire population.⁸⁹

Entitlements to health care depend on their legal status. Roma who are Spanish citizens are entitled to health care by virtue of the same legislation that entitles the rest of the Spanish population. In the case of foreign Roma from EU and non-EU countries, the laws that apply are the same as those for foreigners, including irregular and unemployed migrants. Much like for irregular migrants, the Royal Decree, where implemented, has led to important restrictions on access to health care services for Roma who are not Spanish citizens.⁹⁰

⁸⁹ http://ec.europa.eu/justice/discrimination/files/roma_spain_strategy_en.pdf, acc. 18.06.2014

⁹⁰ http://equi-health.eea.iom.int/images/NRIS_Spain_final.pdf, acc. 6.09.2015

8.2 APPLICATION OF THE CONCEPTUAL MODEL 5

8.2.1 Data collection process

A Pakistani mediator was assigned by the coordinator of the mediation service at the Hospital Can Ruti in Badalona, Catalonia, the task of collecting data for the study due to the high relevance of the Pakistani community for the institution/region, as well as her vast experience in the field. She filled out the CD templates using information from patient files and by referring to her knowledge of the patients.

8.2.2 Sampling

The mediator selected the first ten cases of Pakistani patients with irregular status who were released from the hospital during the data collection phase.

Out of the 10 cases, one case fulfilling the pre-established selection criteria was chosen for the cost analysis.

8.2.3 Primary Data G.

G. was a 46-year-old male irregular migrant from Pakistan. He had been living in Spain for four years and three months. He was working 17 hours per day/7 days per week in a grocery store, earning about 350 € per month. He was living in a shared private accommodation, paying 80 € per month in rent. In Pakistan, five family members were financially dependent on his income.

When he went to the emergency unit in Can Ruti Hospital, he had severe chest pain and uncontrolled hypertension. He was hospitalised for eight days. An intra-cardiac catheterization was conducted. As the examination showed that he had coronary heart disease, G. underwent bypass surgery.

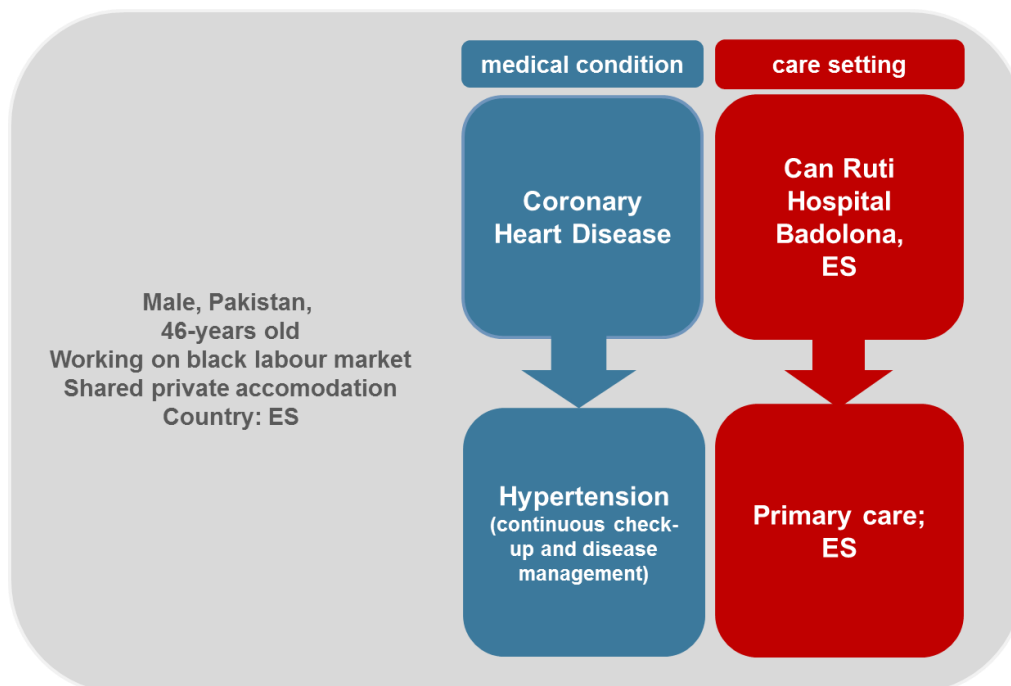
The health mediator facilitated communication with the doctor and a social worker who arranged for the patient to receive medicines following his release from the hospital.

8.2.4 Real life and comparison vignettes

As the collected information on the case was very comprehensive, no assumptions had to be made about the treatment process for coronary heart disease and the ability of the patient to work in order to design the real-life vignette. However, in order to increase the generalizability of the estimated indirect costs, the stated wage of 350 € per month was not considered in the analysis. Instead, the wage rates used to calculate the indirect costs represented, as stated in the conceptual model, 50 % of the net and gross average income in Spain.

For the development of the comparison vignette in a primary care setting, the assumptions about contact frequency with a physician or nurse and the pharmaceutical treatment (length and medication) were based on national and international guidelines (NICE and ESC-ESH guidelines). The length of the encounters with the health professionals was set at 20 minutes. The same travel time was used as the one stated by the patient in the hospital setting. It was assumed that the patient would be able to work throughout the treatment process in the primary care sector. The same method as that for the real-life vignette was used to calculate the indirect costs.

Figure 8: Vignettes “Coronary Heart Disease” Spain



8.2.5 Data sources

The Spanish DRG catalogue from 2013 (Norma SNS 2013 AP27) was used to calculate the direct medical costs of the real-life vignette associated with hospitalisation, including bypass surgery and coronary catheterization. To calculate the opportunity costs related to travel and time spent at the hospital, the Eurostat database was consulted for the average net and gross earnings in Spain in 2014 (Eurostat). The ticket price (2.15 €) of a one-way public transport ticket was taken from the CD of the patient.

The direct medical costs of the primary care setting (comparison vignette) were calculated using data from the annual income structure survey by the National Institute of Statistics in Spain (<http://www.ine.es/jaxi/tabla.do>) and the OECD database (OECD database). The time of the primary care physician was monetized based on the average remuneration of general practitioners in Spain in 2013 (OECD database) and the nurse's time based on the average earnings of health service and care workers in 2012 (www.ine.es). The prices of the pharmaceuticals were obtained from the PPI service⁹¹. All prices were inflated to 2014 prices.

8.2.6 Results of cost analysis

From the *patient's* perspective, the direct non-medical costs he incurred in the hospital setting added up to 1,530 €; if the coronary heart disease (CHD) had been treated timely in primary care they would have amounted to only 160 €. The indirect costs, calculated based on 50 % of the net median earnings in Spain, would have amounted to 80 € if the patient's illness had been managed on time, according to clinical guidelines, and added up to 920 € for the real-life case where the patient was hospitalised and bypass surgery was performed.

⁹¹ Gesundheit Österreich GmbH; Pharma Price Information (PPI) service. Further information available from: www.goeg.at/en/PPI (acc. 20.07.2016)

Table 20: Cost analysis coronary heart disease (patient's perspective)

Cost category	Description	Comparison vignette	Real life vignette
		Primary care: CHD management	Hospital: bypass surgery
Direct medical costs	Treatment related costs	-	-
Direct non-medical costs	Opportunity costs	160 €	1,530 €
Indirect costs	Lost income/productivity	80 €	920 €

All numbers were rounded to the nearest ten.

The **third party payer** would have had to bear direct medical costs of around 90 € had the patient been treated early, and incurred almost 19,000 € in the case of hospitalisation and bypass surgery.

Table 21: Cost analysis coronary heart disease (third party payer's perspective)

Cost category	Description	Comparison vignette	Real life vignette
		Primary care: CHD management	Hospital: bypass surgery
Direct medical costs	Care by health professionals	40 €	19,000 €
	Medication	50 €	
Indirect costs	Lost income/productivity	-	-

All numbers were rounded to the nearest ten.

Had the disease been treated timely in primary care, **society** would have incurred direct medical and non-medical costs of 270 €. The patient's inability to work during the encounters with the primary health professionals would have led to indirect costs (lost productivity) of 90 €. In the real-life case where the patient had to undergo bypass surgery, the direct costs for the society added up to 20,000 € and the indirect costs to about 1,050 €.

Table 22: Cost analysis coronary heart disease (societal perspective)

Cost category	Description	Comparison vignette	Real life vignette
		Primary care: CHD management	Hospital: bypass surgery
Direct medical costs	Care by health professionals	40 €	19,000 €
	Medication	50 €	
Direct non-medical costs	Opportunity costs	180 €	1,000 €
Indirect costs	Lost income/productivity	90 €	1,050 €

All numbers were rounded to the nearest ten.

8.2.7 Comparative discussion

The comparative analysis of the direct and indirect costs shows that all three stakeholders could have saved at least 90 % of the costs of a hospitalisation had the coronary heart disease been managed timely in primary care. The third party payer and the society could both have saved nearly 100 % of their expenditures had a heart surgery been avoided and treatment in primary care provided. This is mainly due to the very high costs of a coronary bypass surgery. The patient's savings of 90 % can be attributed to the length of hospitalisation that follows bypass surgery. The same is true for the savings in indirect costs for the patient and the society (both 92 %).

Table 23: Potential cost savings of timely primary care for coronary heart disease (total and as percentage of total costs in hospital setting)

Perspective	Direct medical/ non-medical costs	Indirect costs
Patient	1,370 € (90 %)	850 € (92 %)
Third party payer	18,910 € (100 %)	-
Society	19,740 € (99 %)	960 € (92 %)

All numbers were rounded to the nearest ten.

Potential cost savings = costs hospital setting – costs primary care setting

Percentage of potential savings = potential cost savings / costs hospital setting

8.2.8 Sensitivity analysis

The results of the sensitivity analysis showed that the estimated potential savings for the patient ranged from 85% to 94% of the direct costs of hospitalisation. The direct costs incurred by the third-party payer and the society were less sensitive to parameter changes, as the potential savings ranged from 99% to 100% and from 98% to 99%, respectively. The estimated indirect costs were rather robust as well, ranging from 87% to 96%.

9 APPLICATION OF THE CONCEPTUAL MODEL TO INFECTIOUS DISEASES

While the vignette approach proved to be especially valuable for the cost analysis of chronic diseases with acute complications such as asthma or hypertension, the applicability of the approach encountered difficulties when infectious diseases such as tuberculosis were chosen as the basis for the cost analysis. There were two principal reasons for this: first, even if a highly infectious disease is diagnosed early in primary care, it will generally be followed by referral to a specialized service and possibly hospitalisation for public health reasons, making the comparison of primary care to hospital care redundant; and second, if the disease is not discovered early, the economic consequences are likely to be considerable due to a probable high number of infected persons, and only to a limited extent due to the higher direct medical costs of a delayed treatment and hospitalisation.

In what follows, two vignettes on Tuberculosis treatment processes, one from Italy and one from Spain, are described and analysed. Although the vignette approach has limits here as described above, the two vignettes can serve as a starting point for further health economic analysis on the topic, using a dynamical modelling approach (e.g. using microsimulations).

9.1 APPLICATION OF THE CONCEPTUAL MODEL 6

9.1.1 Data collection process

Data was collected by a researcher from C-HM on site in the infectious diseases department of the Santa Maria Nuova Hospital in Reggio Emilia, Italy. All information was gathered through interviews with the head nurse and a physician from the department. They referred to patient records as well as to their knowledge of their patients in order to provide the information necessary to complete the CD templates.

During the interviews with the medical personnel, the C-HM researcher was accompanied by another researcher from the AUSL di Reggio Emilia who served as an (English – Italian) interpreter.

9.1.2 Sampling

Due to practical constraints in terms of limited time of medical staff for providing information to the researcher, five cases were collected: four were chosen randomly by the head nurse among TCN irregular migrants' patient records and the physician chose the case of a patient whom he had treated recently and he could therefore give more details about his personal situation and living conditions.

Out of the five cases, one case fulfilling the pre-established selection criteria was chosen for the cost analysis.⁹²

9.1.3 Case E.

E. was a 44-year-old man from China, who had been living in Italy for two months. He was an irregular migrant, not working at the time the study was conducted and living in a private accommodation shared with his wife and two sons. Information about his living and working situation before his arrival to Italy was not available.

He approached a primary health care centre because of a severe cough. The patient was referred to a hospital by the medical personnel of the primary care provider because he was at high risk for TB due to his medical background. He was diagnosed with TB at the hospital and hospitalised for one month. Blood tests, chest x-rays and a sputum test were conducted every second week at the hospital. In accordance with medical standards, the patient was provided with medicines that he had to take for another six months following his discharge from the hospital. No information was available on whether he actually completed the treatment as he was supposed to do.

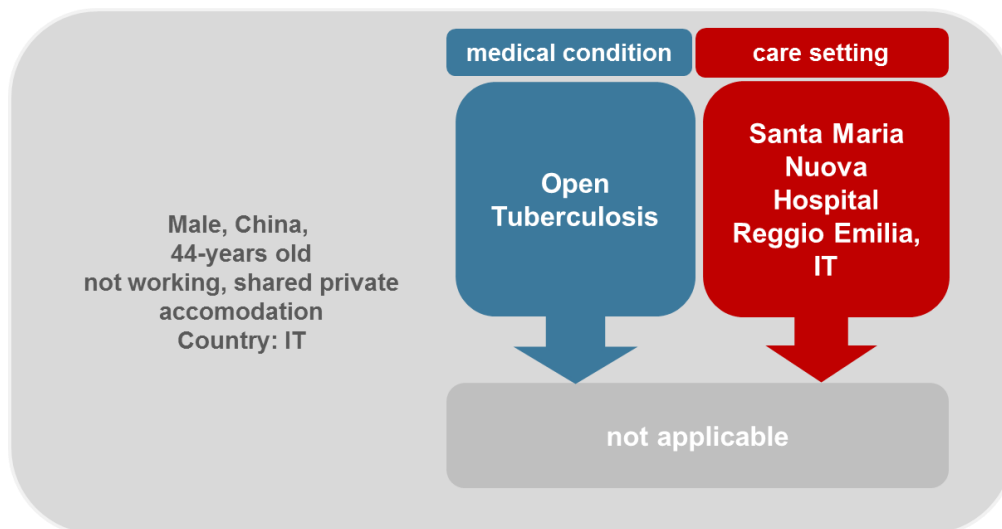
⁹² In Spain, a case of a patient with Tuberculosis was also used as starting point for vignette development. The Italian case was nevertheless selected since it fulfilled all other criteria with emphasis on the high potential relevance of the disease to the health authorities and the general public and availability of comprehensive information on the case.

9.1.4 Real life and comparison vignettes

The real-life vignette in the hospital setting was designed based on the selected case, as the information on the case was comprehensive and in line with the standard treatment recommendations. Only two assumptions had to be made, one regarding the length of the pharmaceutical treatment following the patient's discharge from the hospital and the other concerning the mode of transportation. The former was set to be six months based on standard treatment recommendations, and the latter was assumed to be by means of public transportation, taking the patient 15 minutes each way.

When designing the comparison vignette, based on various public consultations during which preliminary results of the costing of this vignette were presented, it became obvious that the methodological approach was not suitable for highly infectious diseases that require hospitalisation. Therefore, the real life vignette was designed and costed according to the case reported at the time of data collection but the comparison vignette could not be designed sensibly for two reasons: first, TB, if diagnosed early in primary care, will generally be followed by at least two weeks of hospitalisation; and second, if the disease is not discovered early, the economic consequences are likely to be considerable due to a possible high number of infected persons, and only to a limited extent due to the higher direct medical costs of delayed treatment and hospitalisation. For these reasons, the following section will present the cost estimations of the real-life vignette only, based on information collected in the hospital without a comparative analysis with timely primary care treatment.

Figure 11: Vignettes "Tuberculosis" Italy



9.1.5 Data sources

The main data sources used to calculate the direct medical costs of the hospitalisation were the Italian tariff catalogue for services in acute care hospitals (tariffe delle prestazioni di assistenza ospedaliera per acuti) and the Pharmaceutical Price Information service (GOEG). The Eurostat database was used to obtain data on the average net and gross earnings in Italy in 2014 to estimate the direct non-medical costs, and the website of the public transport company was consulted to estimate the cost of transportation to reach the health care providers. All prices were inflated to 2013 prices as this was the year the case occurred.

9.1.6 Results of cost analysis

From the *patient's* perspective, the relevant opportunity costs associated with the treatment included travelling time and the time spent with the health care professionals. When this time was evaluated based on the net average earnings in Italy in 2014, the opportunity costs of travelling to and staying at the hospital for one month amounted to almost 6,400 €. The patient was unemployed and, therefore, did not lose any income (indirect costs).

Table 24: Cost analysis tuberculosis (patient's perspective)

		<i>Comparison vignette</i>	<i>Real life vignette</i>
Cost category	Description	Primary care: tuberculosis	Hospital: open tuberculosis
Direct medical costs	Treatment related costs	n.a.	-
Direct non-medical costs	Opportunity costs		6,400 €
Indirect costs	Lost income/productivity		-

All numbers were rounded to the nearest ten.

From the *third party payer's* perspective, the direct medical costs included the reimbursement for the treatment at the hospital and the medication that the patient had to take for another 6 months (Nicozid, Etapiam, Rifadin, and Piraldina), amounting to around 8,200 €.

Table 25: Cost analysis tuberculosis (third party payer's perspective)

Cost category	Description	<i>comparison vignette</i>	<i>Real life vignette</i>
		Primary care: tuberculosis	Hospital: open tuberculosis
Direct medical costs	Care by health professionals	n.a.	8,070 €
	Medication		130 €
Direct non-medical costs			-

All numbers were rounded to the nearest ten.

The direct medical costs incurred by the **society** as a whole corresponded to the costs incurred by the third party payer. Additionally, opportunity costs amounting to 4,680 € were incurred by the society due to the time the patient spent at the health care provider. As the patient was unemployed, indirect costs were not calculated.

Table 26: Cost analysis tuberculosis (societal perspective)

Cost category	Description	<i>comparison vignette</i>	<i>Real life vignette</i>
		Primary care: tuberculosis	Hospital: open tuberculosis
Direct medical costs	Care by health professionals	n.a.	8,070 €
	Medication		130 €
Direct non-medical costs	Opportunity costs		4,680 €
Indirect costs	Lost income/productivity		-

All numbers were rounded to the nearest ten.

9.2 APPLICATION OF THE CONCEPTUAL MODEL 7

9.2.1 Data collection process

Data was collected by a cultural mediator working at the Unitat de Salut Internacional Vall d'Hebron Drassanes, a public primary health care centre located in Barcelona, Spain. Information from patient files, as well as the mediator's knowledge about patients' living conditions, was used to complete the CD templates.

9.2.2 Sampling

The mediator chose 10 cases that were typical for the institution in terms of patients and health problems and about which she could provide comprehensive information regarding the living situation of the patients.

Out of the 10 cases, one case fulfilling the pre-established selection criteria was chosen for the cost analysis.

9.2.3 Case F.

F. was a 28-year-old Roma man in an irregular situation, originally from Romania. He had been living in Spain for three years. He was working 30 to 40 hours per week on the black labour market, collecting rubbish. He was living together with family members in a private accommodation. Three family members in Spain (his wife, his sister and his brother) were dependent on his income, as well as his parents and three children in Romania.

From June 2013 to February 2015, the patient had ten encounters at Unitat de Salut Internacional Vall d'Hebron Drassanes. At the first encounter, the patient presented the following health problems: fever, cough, dehydration and weight loss. He was diagnosed with TB and provided with medication corresponding to standard recommended treatment in primary care setting. Due to his condition and treatment, the patient missed 12 working hours per week for the duration of his treatment.

The health mediator facilitated communication with the doctor and a social worker, who arranged for the patient to be provided with a health card.

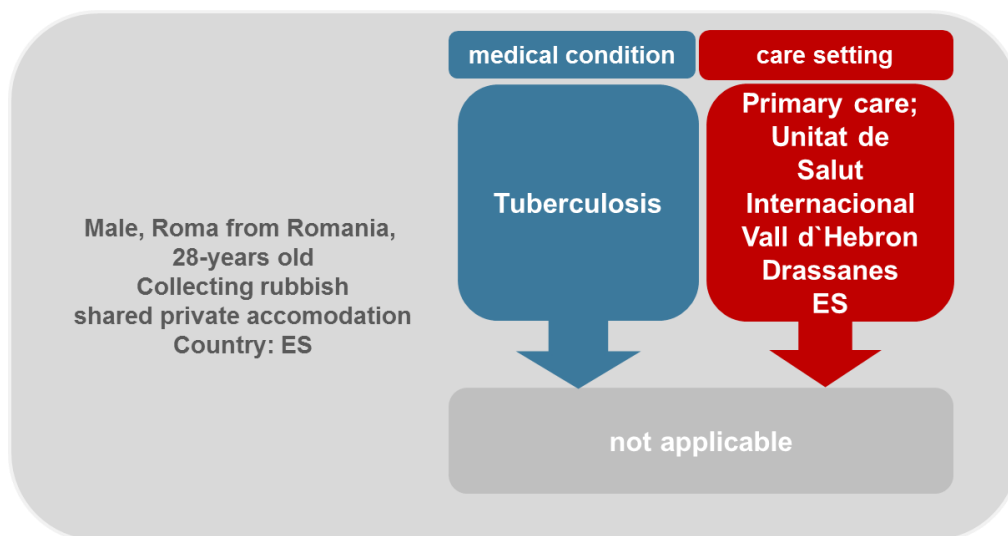
9.2.4 Real life and comparison vignettes

Since the information collected in the primary care setting on this TB case was comprehensive and consistent, few assumptions had to be made to design the real life vignette. One assumption concerned the length of treatment and the other one the exact medication. Both parameters could be derived from international guidelines on the treatment of TB (WHO guidelines TB Treatment, 2010). Based on these guidelines the length of the treatment was assumed as six months and the timeframe for pharmaceuticals to be taken as six (Rifinah) or two months (Myambutol and Pyzina). According to the collected information, the patient was seen by a doctor ten times for 20 minutes each, and the physician spent two hours with the patient's case beyond examination. Furthermore, a nurse, a social worker and a health mediator spent three, four and six hours, respectively, with the patient. He reached the primary care provider using public transport, which took him 20 minutes and

cost him 2.50 € each way. It is beyond the scope of this report to evaluate the lifetime costs of untreated TB and the costs related to the infection of others. The collected data does not include information about any hospitalisation or treatment in any other health care institution.

Similar to the economic analysis of case E. in Chapter 7.3, a comparative analysis of primary versus hospital care does not seem sensible as in case of open TB hospitalisation for at least 2-3 weeks until the patient is no longer infectious is inevitable. The actual difference in economic costs derives from the number of people infected, which might be considerably reduced by timely access to primary care. However, the static methodological framework used in this study is not suitable for dynamic disease modelling needed to estimate and compare these public health implications. For these reasons, what will follow is the estimation of the costs of the real-life vignette based on the case as it was collected from the primary care provider through the data collection process of this study.

Figure 12: Vignettes “Tuberculosis” Spain



9.2.5 Data sources

To evaluate the direct medical costs of the real-life vignette the average remuneration of general practitioners in Spain was obtained from the OECD database (www.oecd-ilibrary.org) and the average annual earnings of health service and care workers was obtained from the Spanish statistics institute (www.ine.es). The Eurostat database was used to evaluate the patient's opportunity costs and the indirect costs based on the average net and gross earnings of the total population in Spain. The prices of the pharmaceuticals were obtained from the PPI service (www.goeg.at/en/PPI). As there was no information available on the price of one of the drugs (Pyzina), the gross price for this product was obtained from an internet pharmacy (www.eurodrugstore.eu) and converted into the net price by using the gross/net differentials of the other pharmaceuticals. All costs were inflated to 2014 prices.

9.2.6 Results of cost analysis

From the *patient's perspective*, the relevant costs are the opportunity costs related to the encounters at the primary care provider as well as the indirect costs due to missed working hours. In the primary care setting, the patient's opportunity costs amounted to 250 € and the lost income due to 12 missed working hours per week over a period of six months to 1,950 €.

Table 27: Cost analysis tuberculosis (patient's perspective)

Cost category	Description	<i>Real life vignette</i>	<i>Comparison vignette</i>
		Primary care: tuberculosis	Hospital: tuberculosis without complications
Direct medical costs	Treatment related costs	-	n.a.
Direct non-medical costs	Opportunity costs	250 €	
Indirect costs	Lost income/productivity	1,950 €	

All numbers were rounded to the nearest ten.

The *third party payer* had to bear the direct medical costs of the treatments in primary care. The monetized time of the health professionals in the primary care setting added up to 150 €, and the cost of the dispensed pharmaceuticals was 180 €, amounting to a total of direct medical costs in the primary care setting of 370 €.

Table 28: Cost analysis tuberculosis (third party payer's perspective)

Cost category	Description	<i>Real life vignette</i>	<i>Comparison vignette</i>
		Primary care: tuberculosis	Hospital: tuberculosis without complications
Direct medical costs	Care by health professionals	150 €	n.a.
	Medication	180 €	
Indirect costs	Lost income/productivity	-	

All numbers were rounded to the nearest ten.

The direct medical costs for the **society** corresponded to those paid by the third party payer. Additionally, opportunity costs for the time the patient had to spend at the health care provider were incurred by the society. In the case of a timely treatment in the primary care setting, these direct non-medical costs were estimated to be 260 €. Productivity loss due to the patient missing 12 hours per week during six months would have led the society to incur costs of 2,370 € for the duration of his treatment in primary care.

Table 29: Cost analysis tuberculosis (societal perspective)

Cost category	Description	<i>Real life vignette</i>	<i>Comparison vignette</i>
		Primary care: tuberculosis	Hospital: tuberculosis without complications
Direct medical costs	Care by health professionals	150 €	n.a.
	Medication	180 €	
Direct non-medical costs	Opportunity costs	260 €	
Indirect costs	Lost income/productivity	2,370 €	

All numbers were rounded to the nearest ten.

10 CONCLUSIONS AND DISCUSSION

Results from the present study, carried out by C-HM and commissioned by IOM within the framework of the EQUI-HEALTH project, show that timely treatment in a primary health care setting entails potential cost savings of at least 49 and up to 100% of the sum of direct medical and non-medical costs incurred in a hospital setting for delayed treatment of more severe medical conditions.

Furthermore, primary data collected as part of the study revealed the vulnerability of migrants, especially those in an irregular situation, and Roma, including uninsured citizens from the poorer EU Member States, regarding access to health care. The study also confirmed the close interrelation between irregular migration and black labour markets as identified in previous research (Trummer, Novak-Zezula et al, 2014). A majority of cases among the primary data collected reported an active working life on the black labour market and a high economic responsibility for family members.

In relation to the economic analysis of the (non)provision of health care for irregular migrants, the main objective of the present study, the vignette approach proved to be appropriate for estimating and comparing costs that occur in different health care settings. As a result of the primary data collected (real life cases) and the application of the vignette approach, the estimated costs derived from the study are rather robust with a high internal validity. The results obtained therefore complement other studies that have been conducted on this subject that often have a high external validity and generalisability but sometimes lack internal validity. Despite the methodological differences, results are consistent across these and the present study. For example, the earlier mentioned study on the costs of exclusion conducted by the European Agency for Fundamental Rights (FRA, 2015), where a decision analytical modelling approach was used, arrived at similar estimated costs for the screening, management and treatment of hypertension when compared to the results of the primary health care vignette of Case G. in Spain in the present study.

The vignette approach proved to be especially valuable for the cost analysis of chronic diseases with acute complications such as asthma or hypertension. The applicability of the approach encountered difficulties when infectious diseases such as tuberculosis were chosen as the basis for the cost analysis. There were two principal reasons for this: first, even if a highly infectious disease is diagnosed early in primary care, it will generally be followed by referral to a specialized service and possibly hospitalisation for public health reasons, making the comparison of primary care to hospital care redundant; and second, if the disease is not discovered early, the economic consequences are likely to be considerable due to a probable high number of infected persons, and only to a limited extent due to the higher direct medical costs of a delayed treatment and hospitalisation. In general, communicable diseases, with their implications for the whole population, are a very important public health issue. Full costs and consequences could be estimated using a dynamical modelling approach (e.g. using microsimulations).

The cost analysis compared the potential cost savings from three different perspectives: the patient, the third-party payer/health care system and the society. The results of the cost estimations based on the designed vignettes showed that the third-party payer had the widest range of potential savings as regards direct medical and non-medical costs – from 49 % for diabetes with a diabetic foot to 100 % for a hypertensive patient with bypass surgery, followed by the society – from 53 % for diabetes with a diabetic foot to 99 % for a hypertensive patient with bypass surgery. The potential savings for the patient ranged from 66 % in the case of an epileptic seizure to 94 % in the case of a moderate depression. The fact that the estimated potential savings from the third party payer's and the society's perspective are lowest for diabetes reflects the high degree of continuous disease management that is necessary in the case of this disease. In general, it can be said that, according to the estimated costs in primary and hospital care, at least 50% and up to 100%, of the medical and non-medical costs of a hospitalisation could be saved if timely primary care had been provided. This is true for all three stakeholders: the patient, the third party payer and the society as a whole.

II RECOMMENDATIONS

The recommendations were formulated addressing two general levels applicable to all four countries under study, as well as other EU MS. First, an overall Public Health level is considered with three core recommendations. Second, each core recommendation is followed by specific recommendations on how it should be implemented at stakeholder level, focusing on three main stakeholders: policy, practice, and (migrant) community.

Based on the country-specific context concerning access to health care for irregular migrants (see sections 5-8 of the report), recommendations specific to each country under study were also formulated.

General recommendations

- 1. Acknowledge health care for irregular migrants and EU citizens ineligible for or without insurance as a public health issue and apply public health instruments of planning, implementing, monitoring and evaluation accordingly.**

Public health policy level

- Provide a common system for monitoring of health care needs, health care provision and cost of care to create evidence and data needed for planning services.
- Keep the public health agenda separate from immigration control but foster and enable communication and coordination between public health and immigration authorities, e.g. by setting up or joining an intersectoral board.

Health care provider level

- Document figures of irregular migrants and EU citizens ineligible for or without insurance, and collect data on their health care needs, health care provision and cost of care.
- Use this information for continuous quality and equity improvement, using instruments of quality management; include (irregular) migrant health issues into existing quality management and information procedures and instruments.

Community level

- Involve service users and community members (e.g. migrants that have been in a state of irregularity or have been without insurance) to get insights into health care needs and expectations about service provision.

- 2. Provide access to primary health care for all persons, irrespective of legal status; provide access to (highly) specialised care based on case-by-case decisions.**

Public health policy level

- Set regulations accordingly by defining the range of primary health care services accessible to all and areas of (highly) specialised care (e.g. IVF treatments within reproductive health) subject to prior review on case-by-case basis.
- Define guiding elements for case-by-case decisions (e.g. expected treatment adherence necessary for the successful completion of treatment processes) as well as procedures and responsibilities related to decision-making.

Health care provider level

- Establish an interdisciplinary (health, social work, ethics, and economics) expert board responsible for case-by-case decision-making.
- Implement an administrative tool to monitor and document diagnosis, treatments, and decisions made, including the rationale for these decisions.

Community level

- Foster (health) literacy of irregular migrants and EU citizens ineligible for or without insurance.
- Involve community members in supporting and facilitating the provision of health care services, e.g. as interpreters, intercultural mediators, and/or community health educators.

- 3. Facilitate information sharing between all stakeholders, including the general public and (irregular) migrant communities, with the specific goals of transparency and empowerment.**

Public health policy level

- Inform the public (opinion) with evidence on figures, health problems, and treatments of/for irregular migrants and EU citizens ineligible for or without insurance, including an economic analysis on benefits of inclusion of these groups into mainstream primary care.
- Implement structures that support communication and sharing of knowledge and experiences between public health policy and immigration policy representatives.

Health care provider level

- Inform health policy and health care management about health care provision, including present and envisaged challenges and possible practical solutions, as well as needs of health care professionals.
- Inform migrant communities about range of services available to irregular migrants and EU citizens ineligible for or without insurance, regulations on how to use them, and principle guidelines on what to expect and how to interact with health care providers.

Community level

- Inform health care providers about decisive elements related to accessibility and appropriateness of services (e.g. concepts of health and illness).
- Provide information to irregular migrants and EU citizens ineligible for or without insurance that enables them to utilize the health care services appropriately (e.g. concepts of punctuality, gender equality).

Specific national recommendations

Austria:

- Formulate a public health policy directly addressing health care provision for irregular migrants
- Link public health services to existing NGO structures and develop models of public private partnerships (PPP) for service provision

Belgium:

- Harmonize implementation of the “Urgent Medical Aid” system across the different territorial regions
- Simplify administrative procedures

Italy:

- Harmonize regional implementation of policy regulations and administrative tools to integrate irregular migrants into service provision, such as the “Temporary Present Foreigners” anonymous code
- Use existing models of good practice of cooperation between public health actors and civil society as examples to learn from and to apply in other regions

Spain:

- Assess the policy shift by conducting an economic analysis on its effects, using the variation in implementation levels by different regions as an additional source for evaluation
- Evaluate the effects of the various regional attempts to regulate access to health care for irregular migrants and EU citizens ineligible for or without insurance on the functionality of the public health sector especially in terms of job satisfaction, commitment and work ability of staff

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I3 ANNEXES

13.1 PRACTICES

13.1.1 Austria

Policy context: No Access

Primary care setting: Neunerhaus – Hilfe für obdachlose Menschen, Vienna

Type of organisation: NGO

Neunerhaus is a primary health care service provider, delivering primary care and dental care for homeless people in Vienna. The organisation is financed from public and private funds (65% and 35%, respectively). Patients are requested to show a health card and asked for their contact information. In case they do not have a health card, only some contact information is asked for. The main health problems clients are diagnosed with include physical health issues (39% of patients), mental health issues (20%), and alcohol and drug related health problems (57%). In 2013, 2,650 patients were registered at the centre, with the largest shares of nationalities being Austria (17.2%), Romania (16.3%) and Bulgaria (13.5%). One social worker, ten general practitioners (GP) and two dental assistants are employed at Neunerhaus (7.4 full time equivalent, FTE), and one GP and 24 dentists volunteer, all together in total for 18 hours per week.

Hospital setting: Barmherzige Brüder Hospital, Vienna

Type of organisation: Confessional hospital

The Barmherzige Brüder Hospital in Vienna is a confessional hospital under public law and consists of nine specialised departments and two institutes. In 2014, 950 staff members provided health care for 32,500 inpatients and carried out approximately 133,000 ambulatory treatments. The outpatient unit is accessible to patients without health insurance; inpatient treatment is provided for uninsured patients following board consultation, where the health problem and the context of the patient (e.g. support network to see whether the patient can be discharged and necessary further care is ensured in private setting), as well as the capacities of the hospital, are taken into consideration. In 2013, 437 uninsured patients were admitted to the hospital, 214 of them TCNs, mainly from Serbia (30%).

13.1.2 Belgium

Policy context: Partial Access

Primary care setting: Médecins du Monde Belgium, Brussels

Type of organisation: NGO

Médecins du Monde (Mdm) Belgium is a primary health care service provider (polyclinic), delivering primary care in Brussels for persons with difficulties in accessing the mainstream health care system. Irregular migrants constitute about 70% of the clients of the polyclinic and EU citizens with no residence permit about 13%. Other categories of clients include asylum seekers and people with various types of residency statuses such as visa or residence papers. Patients are not asked for a health card or contact information. The main health problems clients are diagnosed with are musculoskeletal issues, skin diseases, respiratory diseases, cardiovascular health problems, digestive problems, and psychological problems. In 2014, 4,615 patients were registered at the polyclinic with the largest shares of nationalities being Morocco (35.9%), Democratic Republic of Congo (14.4%), Guinea-Conakry (11.6%), Cameroun (9%) and Romania (7%). The majority of these clients were between 21 and 40 years old (54%); 68.2% are male and 29.1% female. For 2.7% of them, sex was not documented. Services provided include general care, dental care, paediatric care, mother and childcare, psychiatric care and psychological support. Social support is provided for patients with multiple vulnerabilities. If necessary, patients are referred to other health care providers for vaccinations, screenings and infectious disease control. Referrals are made as well for emergency care and diagnostic and surgical services. One social worker, one GP, two nurses and one psychologist are employed at Mdm Belgium's polyclinic (3 FTE). They also fulfil organisational and coordination tasks. Medical staff is supported by interpreters. Mdm Belgium also runs a mobile unit that visits train stations three days a week serving a mainly homeless clientele. Medical care for homeless people is also provided at a shelter for the homeless by doctors volunteering with Mdm Belgium.

13.1.3 Italy

Policy context: Rights / Partial Access

Primary care setting: Centro per la Salute della Famiglia Straniera (CSFS), Reggio Emilia

Type of organisation: Dedicated public health service

The CSFS is run by the local health authority (Azienda Unità Sanitaria Locale - AUSL) of Reggio Emilia, providing outpatient care and medical treatment, including gynaecological examinations and counselling, prenatal care, paediatric care, TB, surgery and cultural mediation services. Support for specific target groups is offered on a project basis, e.g., psychosocial support and health care for sex workers or badanti (women working as housekeepers and/or caregivers in private households). The centre keeps precise statistics on its patients, made possible through the STP code, which permits the identification of patients and the keeping of patient records, while at the same time preserving patients' anonymity. The CSFS shares its database with Caritas "Querce di Mamre", a medical practice that offers specialised care in 11 areas: dental care, general care, mother and childcare, surgical services, neurology, urology, cardiology, ophthalmology, orthopaedics, ear, nose and throat services, and dermatology. In case specialised care is needed, patients are referred by CSFS to Querce di Mamre.

Hospital setting: Azienda Ospedaliera S.Maria Nuova di Reggio Emilia

Type of organisation: Public hospital

The Azienda Ospedaliera S.Maria Nuova di Reggio Emilia is a government hospital, financed entirely from public funds. In 2013, 195 irregular migrant patients were registered at the hospital, amounting to 0.42% of patients served by the hospital in that year. Irregular migrants mainly originated from Nigeria, China, Albania, Georgia and Ukraine. The majority of these patients were between 18 and 40 years old (53%); 59.4% were female and 40.6% male. The main health problems patients were diagnosed with included sexual and reproductive health issues and infectious diseases. In 2013, 2,938 staff members provided a broad range of inpatient and outpatient care. Additionally, four cultural mediators employed by a social cooperative work at the hospital on a regular basis.

13.1.4 Spain

Policy context: No rights/ Access

Primary care setting: Unitat de Salut Internacional Vall d'Hebron-Drassanes Secció de Salut Comunitària, Barcelona

Type of organisation: Public primary health care organisation

The Unitat de Salut Internacional Vall d'Hebron-Drassanes Secció de Salut Comunitària is run by the local health authority of Barcelona. The service provider delivers preventive care, including vaccinations, screenings and infectious disease control, as well as psychiatric care and psychological and social support. The organisation is financed from public (95%) and private funds (5%). Target patients are migrants (70%) and citizens who travel to tropical countries. About 30% of the migrant patients are with an irregular status. The main health problems identified are infectious diseases, especially HIV/AIDS, Hepatitis and Malaria, and mental health issues. In 2013, 3,226 patients were registered at the organisation, including 2,258 migrants, mainly originating from the Maghreb, Sub-Saharan Africa and Asia. The majority of these patients were between 41 and 50 years old (55%); 65% were female, 32% male and 3% transgender. The organisation employs 42 staff members (32 FTE). They are supported by volunteers (in total 20 hours/week).

Hospital setting: Hospital Germans Trias i Pujol (Can Ruti)

Type of organisation: Public hospital

The Hospital Germans Trias i Pujol (Can Ruti) is a government hospital in the city of Badalona, providing services on a regional level. It is financed completely from public funds. Figures on patients with irregular status are not documented. Patients are requested to show a health card; if they do not have one, they are entitled to access emergency care. In 2013, the intercultural mediation service registered 1,654 encounters of regular and irregular migrants at the emergency department. Out of these patients, 76% were adults and 24% were children; 50.2% were female and 49.8% male. Intercultural mediators report that irregular migrants originate mainly from Pakistan, Arab countries and China. The main health problems these patients were diagnosed with, apart from emergencies, were HIV/AIDS and diabetes. In 2013, 15 doctors and 27 nurses provided emergency care, and three cultural mediators were working on a routine basis (1 FTE).



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FN 151596k
Gerichtsstand: Wien

13.2 PRACTICE DESCRIPTION



Health care for irregular migrants

Practice description

Contact information

Organisation:

Internet address:

Contact person (name and function):

Address:

E-mail Address:

Telephone:

Organisation description

- Type of **organisation**:
 - ☐ governmental organisation
 - ☐ non-governmental organisation

- Type of **health care provider**:
 - ☐ Primary health care setting
 - ☐ Hospital

in case you want to give more detailed information, please specify:.....

- **Geographical coverage** (please tick as many boxes as needed):
 - ☐ national (please specify):.....
 - ☐ regional (please specify):
 - ☐ local (please specify) :

- Year of **foundation**:

- How is the organisation **financed**?
 - ☐ public funds, _____%
 - ☐ private funds (e.g. sponsoring, donations), _____%

- What are the **annual costs** per year?
 - personnel:
 - infrastructure:
 - other costs, please specify: _____

Target group and clientele of health care

- What are the **target groups** of your organisation? What is their share? (please tick as many boxes as needed)
 - ☐ asylum seekers, _____% of clients
 - ☐ refugees, _____% of clients
 - ☐ irregular migrants, _____% of clients
 - ☐ work migrants, _____% of clients
 - ☐ Roma, _____% of clients
 - ☐ others, please specify: _____, _____% of clients
- Do migrants need any **documents** to access your services? (please tick as many boxes as needed)
 - ☐ yes, please specify (e.g. health card, residence permit):.....
 - ☐ yes, contact information (e.g. telephone number):.....
 - ☐ no
- What are the most common **health problems** of your clientele? (please tick as many boxes as needed)
 - ☐ work related diseases (please specify):
 - ☐ accidents (please specify):
 - ☐ general health problems (e.g. cold)
 - ☐ infectious diseases (e.g. tuberculosis, or sexual transmitted diseases like Lues, HIV) (please specify):
 - ☐ sexual and reproductive health issues (please specify):
 - ☐ mental health issues (please specify):
 - ☐ other, please specify:

Clientele 2013

(in case data for 2013 are not available yet, please indicate the year to which information is related: ____)

- **Numbers**

1) Registered numbers: _____

2) If not monitored, please provide an estimate: _____

- **Main nationalities**/share

- _____ ; _____ %
- _____ ; _____ %
- _____ ; _____ %
- _____ ; _____ %
- _____ ; _____ %

- **Age** /share

0-17	18-30	31-40	41-50	51-60	61 –
_____ %	_____ %	_____ %	_____ %	_____ %	_____ %

if other categorisation is used, please indicate:

- **Sex** / share

Female _____ %

Male _____ %

Transgender _____ %

Health services

- Health services provided

	On a regular basis:	on a project basis (please indicate duration)
Preventive care	<input type="checkbox"/>	<input type="checkbox"/>
Vaccinations	<input type="checkbox"/>	<input type="checkbox"/>
Screenings	<input type="checkbox"/>	<input type="checkbox"/>
Infectious disease control	<input type="checkbox"/>	<input type="checkbox"/>
Others, please specify:	<input type="checkbox"/>	<input type="checkbox"/>
Health promotion and education	<input type="checkbox"/>	<input type="checkbox"/>
please specify:	<input type="checkbox"/>	<input type="checkbox"/>
Medical care	<input type="checkbox"/>	<input type="checkbox"/>
Dental care	<input type="checkbox"/>	<input type="checkbox"/>
Emergency care	<input type="checkbox"/>	<input type="checkbox"/>
General care	<input type="checkbox"/>	<input type="checkbox"/>
Paediatric care	<input type="checkbox"/>	<input type="checkbox"/>
Woman and child care	<input type="checkbox"/>	<input type="checkbox"/>
Diagnostic services	<input type="checkbox"/>	<input type="checkbox"/>
Surgical services	<input type="checkbox"/>	<input type="checkbox"/>
Occupational health	<input type="checkbox"/>	<input type="checkbox"/>
Alternative medicine	<input type="checkbox"/>	<input type="checkbox"/>
Others, please specify:	<input type="checkbox"/>	<input type="checkbox"/>
Mental health care	<input type="checkbox"/>	<input type="checkbox"/>
Psychiatric care	<input type="checkbox"/>	<input type="checkbox"/>
Psychological support	<input type="checkbox"/>	<input type="checkbox"/>
Addiction treatment	<input type="checkbox"/>	<input type="checkbox"/>
Others, please specify:	<input type="checkbox"/>	<input type="checkbox"/>
Social support	<input type="checkbox"/>	<input type="checkbox"/>
please specify:	<input type="checkbox"/>	<input type="checkbox"/>

- How important is it to cooperate with interpreters / cultural mediators?

0	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

not at all

essential

Staff

- **Professions**

	Number of employees	Number of volunteers
Administrative staff		
General practitioners		
Psychiatrists		
Dentists		
Paediatrics		
Gynaecologists and Obstetricians		
Midwives		
Nurses		
Psychologists		
Psychotherapists		
Social workers		
Interpreters		
Intercultural mediators		
Other, please specify:		

- **Main countries of origin /share of staff members in %**

- _____; _____ %
- _____; _____ %
- _____; _____ %
- _____; _____ %
- _____; _____ %

- **Full Time Equivalent of all employees**

(The Full Time Equivalent (FTE) is a method to univocally measure the numbers of employees. FTE is equivalent to one person who works 8 hours a day. If there are employees with different working hours they are re-calculated according to this quantity. For example, a person working on a part time contract of 6 hours a day is equivalent to 0.75 FTE (6/8 hours) while a person who works 4 hours will be equivalent to 0.5 FTE.)

_____ FTE

- Total hours of **volunteering** per week

_____ hours/week

Thank you very much for your cooperation!



CENTER FOR HEALTH AND MIGRATION

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13.3 CASE DESCRIPTION



Health care for irregular migrants

Case description

This template serves for collecting as much information as possible on the health problems, treatment processes and living conditions of a migrant patient who is in an irregular situation and has approached your service.

Some of the information asked for may not be available. Please fill in as much as possible, consulting with colleagues, and skip those sections for which there is no reliable information at hand.

Organisation providing information on case

Organisation:

Contact person (name and function):

E-mail Address:

Country:

Type of **organisation**:

☐ governmental organisation

☐ non-governmental organisation

Type of **health care provider**:

☐ Primary health care

☐ Hospital

Case description

Personal information about the patient

- Age:..... years
- Sex:
 - ☐ female
 - ☐ male
 - ☐ transgender

- Country of origin:
- Length of stay in receiving country (until first visit at the organisation):months
- Status during the visit/medical treatment:
 - ☐ asylum seeker
 - ☐ refugee
 - ☐ irregular migrant
 - ☐ labour migrant
 - ☐ Roma
 - ☐ others, please specify:

Structural and social determinants of health

- Is the patient working?
 - ☐ yes
 - ☐ on regular labour market ☐ on black labour market
 - ☐ continuously ☐ occasionally
 - ☐ no
- Please indicate how many hours a week the patient works (estimation).....
- Which kind of work does the patient perform (e.g. construction work, kitchen help, domestic work)?
- How many hours / days/ weeks of work will/did the patient miss due to his/her condition?
.....

- Please describe the housing conditions:

- ☐ Shelter for homeless / asylum seekers
- ☐ Shared private accommodation
- ☐ Private accommodation shared with family members
- ☐ Private accommodation
- ☐ Others

- *What is the (estimated) rent for housing per month?: €*

- *How many members of the family are financially dependent on the patient's income?*

In host country:

In country of origin:

- How did the patient get to your organisation (and back)?

- a. What kind of transportation (public, care, walking) did the patient use?

.....

- b. *How long did it take her/him?*

.....

- c. *How much did she/he have to pay?.....*

What are the sources for the information given (e.g. observation, information by patient, information by colleague)?

Medical treatment in your organisation and related costs

(Medical) treatment of the patient in your organisation:

1. Number of encounters with the patient:
2. Date of first encounter (month/year):
3. Which health problem(s) was (were) presented by the patient?
4. Which diagnoses were made?

What was (were) the service(s) delivered to the patient? (Please use template below)

5. Medication (pharmaceuticals and medical devices given to the patient):
- What drugs or medical devices were given to the patient (paid for by your organisation?)
.....
 - What drugs or medical devices were prescribed to the patient?
.....
 - Did/does the patient have to pay for any (part) of the medication out-of-pocket?
.....
6. What diagnostics and disposables were used during the encounter?
.....
7. Physician's time:
- How much time did the physician spend with the patient?
 - How much additional time beyond examination did the physician spend on the patient (writing a report, research, or other activities)?
8. Nurse's time
- How much time did a nurse spend on the patient (in total)?
9. Time of other professionals involved (interpreter, social worker etc.)? (Please specify the profession, the total time and the task performed)

What are the sources for the information given (eg patient record)?

Medical treatment in another organisation and related costs

1. Was the patient treated/cared for in any other organisation? If not, please skip the remaining questions!
- ☐ yes

☐ no

2. In what type of organisation was the patient treated/cared for? (hospital, laboratory, specialist)
3. What was the service delivered?
4. Did the patient receive any medication there?
 - What drugs or medical devices were given to the patient (paid for by your organisation?)
.....
 - What drugs or medical devices were prescribed to the patient?
.....
 - Did/does the patient have to pay for any (part) of the medication out-of-pocket? (Please indicate the out-of-pocket payments of the patient)
.....
5. What diagnostics and disposables were (probably) used during the encounter?
.....
6. How much time did a physician spend on the patient? (estimation).....
7. How much time did other medical or administrative staff spend on the patient? (estimation)
.....

What are the sources for the information given (e.g. medical report, discharge letter)?

.....

Thank you very much for your cooperation!

Overall assessment of the case:

Please indicate on the scale how typical (in terms of medical aspects) the above described case is for your organisation.

1	2	3	4	5	6	7
not at all typical					extremely typical	

Additional comments of any kind are welcome! Please use this space:

13.4 OVERVIEW SENSITIVITY ANALYSIS

Country	Diagnosis	Setting	Vignette	Cost category	Parameter (units)	Min	Base case	Max
Austria (AT)	Depression	Primary care	Real life	Direct non-medical costs	Travelling time one-way (min)	30	40	50
		Primary care	Real life	Direct non-medical costs	Time per physician visit (min)	20	30	40
		Hospital	Comparison	Direct non-medical costs	Travelling time one-way (min)	30	40	50
		Hospital	Comparison	Indirect costs	Patient's usual working time (hours) / patient's lost working time (hours)	4/0	20/16	40/36
Austria (AT)	Diabetic foot	Primary care	Comparison	Direct non-medical costs	Travelling time one-way (min)	30	40	50
		Primary care	Comparison	Direct non-medical costs	Time per physician visit (min)	20	30	40
		Primary care	Comparison	Direct non-medical costs	Time per laboratory visit (min)	10	15	20
		Hospital	Real life	Direct non-medical costs	Travelling time one-way (min)	30	40	50
		Hospital	Real life	Direct non-medical costs	Time per check-up (min)	20	30	40
		Hospital	Real life	Indirect costs	Patient's usual working time before / after hospitalisation (hours per week)	10	20	40

Belgium (BE)	Epilepsy	Primary care	Real life	Direct (non-)medical costs	Travelling time one-way (min)	5	10	15
		Primary care	Real life	Direct (non-)medical costs	Time per physician visit (min)	5	10	15
		Primary care	Real life	Direct (non-)medical costs	Time per social worker encounter (min)	5	10	15
		Hospital	Comparison	Direct non-medical costs	Travelling time one-way (min)	5	10	15
		Hospital	Comparison	Indirect costs	Patient's usual working time before / after hospitalisation (hours per week)	3	6	12
Spain (ES)	Coronary heart disease	Primary care	Comparison	Direct (non-)medical costs	Time per physician visit (min)	10	20	30
		Primary care	Comparison	Direct (non-)medical costs	Time per encounter with nurse (min)	10	20	30
		Primary care	Comparison	Direct non-medical costs	Travelling time one-way (min)	30	60	90
		Primary care	Comparison	Indirect costs	Time lost due to travel and encounter with physician per visit (min)	70	140	210
		Hospital	Real life	Direct non-medical costs	Travelling time one-way (min)	60	120	180

Italy (IT)	Asthma	Primary care	Real life	Direct (non-)medical costs	Time per physician visit (min)	10	12,5	15
		Primary care	Real life	Direct (non-)medical costs	Time with pulmonologist (min)	10	15	20
		Primary care	Real life	Direct (non-)medical costs	Time with cultural mediator per encounter (min)	10	12,5	15
		Primary care	Real life	Direct non-medical costs	Travelling time one-way (min)	5	10	15
		Hospital	Comparison	Direct non-medical costs	Travelling time one-way (min)	10	15	20
		Hospital	Comparison	Direct non-medical costs	Time spent at hospital (days)	4,7	5,2	5,9