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Assessing and enhancing integration in workplaces

BACKGROUND REPORT

MIGRANT WORKERS IN THE GERMAN HEALTH SECTOR

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Abstract

In spite of an increasing number of workers, the German health sector is already facing labour shortages. In view of the demographic development and structural characteristics of the German health system, the need for health workers particularly doctors and nurses will further increase. Starting from this point, the paper seeks to explore the role of migrant workers in the German health sector. After a brief description of the German health system, it is looked at the access of migrant workers to the sector in terms of migration opportunities and integration conditions. A particular focus lies on the access to health training and recognition of professional qualifications. Finally, the presence of migrant workers in the health sector in Germany and Hamburg as a city-state is overviewed.

The paper gives evidence for an increasing relevance of foreign nationals for the health sector at federal level. Both absolute and relative numbers are on the rise, with EU nationals particularly contributing to this development. The increased absorption capacity of the health sector could be partly attributed to policies related to eased migration opportunities for health workers and improved conditions for access to education and recognition of professional qualifications that have been adopted in the 2000s. However, despite increasing numbers, the representation of foreign nationals in the health sector still remains below their proportion in the working population. Contrary to the federal level, the city state of Hamburg shows a diverging trend of a steady and even declining absorption capacity for migrant workers over time.

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1.1 Institutional and regulatory framework

The health economy is a growing sector in Germany both in terms of expenditures and working population.[2] The health expenditures per capita grew annually by 2.1 per cent from 2000 to 2011 and corresponded to 11.3 per cent of the German GDP in 2011 thus being the fourth highest spending within the OECD countries (OECD 2013a). The working population in the health economy increased in the period 2000-2012 by 22.6 per cent and reached 5.2 million workers in 2012. The growth of jobs in the health economy 2000-2012 was three times higher than in the economy as a whole (Federal Statistical Office 3/5/2014).

The German health system is characterized by the principles of solidarity, subsidiarity and corporatism that influence its features related to coverage, financing, governance and organization of health provision. According to the principle of solidarity aimed at ensuring universal access to health services, the German health system has a nearly universal coverage through compulsory insurance schemes (European Parliament 1998). Although it is aimed at providing health services to all citizens, categories such as irregular migrants are excluded from health insurance for financial and legal reasons (Cyrus and Kovacheva 2009). Health insurance is compulsory since 2009 and the vast majority of the population is covered by a statutory health insurance (SHI) (*Gesetzliche Krankenversicherung*).[3] Special regulations apply to self-employed persons, civil servants and persons with a high income which are exempt from the statutory health insurance. 11.7 per cent of the population in 2011 was insured by private health insurance companies, self-employed and civil servants making the majority. Persons with a high income that was fixed at gross income higher than 4,462 euro per month in 2014 can choose between private and statutory insurance. The vast majority usually opts to remain in the statutory health insurance (Bidgood 2013). In addition to the mandatory health insurance, compulsory long-term care insurance was introduced in 1995.[4]

The German health system is predominantly financed by social security contributions paid to the health insurance funds. In 2011 two-thirds of health spending was financed by statutory health insurance funds whereas 23 per cent were privately financed and only 9 per cent were provided by tax revenue of the German government (Paris *et al*. 2010). A uniform contribution rate was introduced in 2009 and there

[1] We thank Dita Vogel, Christina Boll and Claudia Finotelli for helpful comments and suggestions.
[2] The health economy encompasses four main areas: health sector (e.g. ambulatory care, inpatient or statutory care and long-term care), wholesale and supplier sector (e.g. pharmaceutical industry, medical technology and wholesale trade of medical products); area related to research, consultancy, health insurance and public administration; and area only marginally related to provision of health services such as fitness and spa facilities, assisted living and health tourism (Boll *et al*. 2010).
[3] Information System of the Federal Health Monitoring (Gesundheitsberichterstattung des Bundes): Bevölkerung nach Krankenkasse/-versicherung in 1000, accessed 08.04.2014 http://www.gbe-bund.de
[4] Federal Ministry of Health: Die Geschichte der Pflegeversicherung, accessed 08.04.2014, http://www.bmg.bund.de.

are lower contribution rates for certain groups such as low-income persons and students.[5] The principle of solidarity guarantees that all persons receive the necessary health benefits regardless of the level of their contributions. The principle of benefits of kind guarantees that no direct payment by insured persons for health services is required.

The governance of the German health system is affected by the principle of subsidiarity and corporatism. Subsidiarity implies decentralization of governance. Whereas the regulatory framework is set by federal law, implementation takes place at *Länder* or municipal level. Corporatism suggests partial self-governance and autonomously cooperating health bodies such as statutory and private health insurance funds, professional organisations, trade unions, hospital associations and charity associations. Self-governance takes place in the form of contracts between the statutory health insurance funds and the health providers such as hospitals and physicians. Different health bodies such as statutory health insurance funds, professional associations and hospital representatives on *Länder* and federal level negotiate for instance remuneration of workers, prices of medicine or inclusion of benefits in the health insurance catalogue.

The statutory health insurance funds are self-administering corporations under public law, which means that they are under government supervision but are organizationally and financially independent.[6] They are organized in the National Association of Statutory Health Insurance Funds (*Spitzenverband der Gesetzlichen Krankenversicherung*). Health providers such as doctors, dentists, pharmacists and psychotherapists are organized in chambers, which are professional bodies under public law and based on obligatory membership and internal democratic legitimization. All doctors need to register with the respective State Chamber of Physicians (*Landesärztekammer*). Self-employed doctors admitted to provide ambulant care services in the framework of the statutory health insurance are additionally members of the National Association of Statutory Health Insurance Physicians (*Kassenärztliche Bundesvereinigung*). In contrast to doctors, nurses are not obliged to register with a respective professional association.[7] In addition to the corporatist bodies, trade unions such as ver.di (an influential trade union for the service sector) and Marburger Bund (influential association representing employed doctors) represent workers' interests. In contrast to the doctors, the majority of health professionals, i.e. nurses and care assistants, are not organized at all (Hoesch 2012). The strong corporatism in the German health system and the imbalance of power among corporatist actors make the system particularly vulnerable to group-driven interests. Thus it is argued that doctors' associations influence the debates on labour shortages and have usually objected to the liberation of immigration rules (Hoesch 2012; Finotelli 2014).

In terms of care provision, the public health service in Germany encompasses federal and local health authorities responsible for tasks such as infectology, medicines and drug safety, prevention and

[5] In 2014, the rate amounted to 15.5 per cent of the income, with 7.3 per cent being paid by the employer and 8.2 per cent by the employee.
[6] http://www.deutsche-sozialversicherung.de/en/health/organisation.html.
[7] No data on foreign nurses is available for further analysis.

innovation. In contrast to other countries such as the UK, health treatment is not part of a national public health service. Ambulatory care is mainly delivered by doctors in private medical practices whereas mostly hospitals provide inpatient care. Hospitals can be public run by local authorities, towns and the states, private non-profit run by churches or non-profit organizations, or private for-profit run as free commercial enterprises.

An accelerated development towards privatization of hospitals is found. Within a ten-year period, the share of privately run hospitals has more than doubled. As a result, privately owned for profit hospitals made up a share of 35 per cent, private non-profit hospitals of 36 per cent, and public hospitals of only 30 per cent in 2012 (Federal Statistical Office 2013c). Nevertheless, a majority of hospitals are still not-for-profit (65 per cent of 2,017 hospitals). Privatization took place particularly in the former Eastern states as well as in Hamburg, Berlin and North Rhine-Westphalia (Bölt and Graf 2012). In Hamburg there are 51 hospitals: 36 of them are privately owned (71 per cent), 12 are run by non-profit organizations (24 per cent) and just 3 are public (6 per cent) (Federal Statistical Office 2013c).

1.2 Workforce

The health sector constitutes the core area of health economy and is directly related to the provision of health services as ambulatory, inpatient and long-term care. In the following we refer to health workers in the health sector with a special focus on doctors and nurses. Main educational and career paths and employment patterns in the sector are sketched.

1.2.1 Educational and career paths

Education in the field of health can be obtained in three types of training facilities: in the so-called dual educational system, in vocational schools and at universities and universities of applied sciences (Eckert 2011b). The dual educational system combining apprenticeship in a health facility and vocational education in a school is decentralized and training capacities depend on the offer of training positions by the employers. In the dual system mainly medical and dental assistants are trained. Nurses and care workers are predominantly trained in vocational schools. Although in recent years university education of nursing professionals is possible, nursing in Germany is still a non-academic profession. As academic professionals, doctors and dentists are trained at universities. As there are more applicants than the university system can accept, 20 percent of the study places are awarded by the principle *numerus clausus*, 20 percent by waiting periods for the medical study and 40 percent by the universities' selection procedures, confining the access to education to the best applicants.[8] The most

[8] http://www.hochschulstart.de/index.php?id=4255

training positions in the health sector are in vocational and professional schools – 207,000 in 2006/2007 – compared to 89,000 in the dual system and a comparable number of enrolled students at universities (Afentakis and Böhm 2009).

Different career paths are typical for the health occupations of interest for this report –doctors and nurses. Enrollment in human medicine at a university is possible after completed 12 years of secondary education (*Abitur*). After six years of university education and final exams graduates obtain a licence to practise as generalists (*Approbation*). Graduated generalists can practice as employees in hospitals, health centers or medical practices but are not allowed to set up an own practice, for which a further specialty training is required.[9] A specialty can be obtained in each health facility that possesses an authorisation to offer specialty training by the Chamber of Physicians, hospital being main providers of specialty training. Doctors in specialty training are mostly employed as assistant doctors and can become a medical specialist after at least five years of training on the job and an exam with the respective State Chamber of Physicians.

After specialty training, doctors can further work as an employee or set up an own medical practice as a self-employed doctor. Doctors in medical practices provide ambulant services and work under contract to the statutory health insurance funds or treat privately insured patients. Depending on the specialty training, self-employed doctors work as a general practitioner (which is a specialty field in Germany as well) or as a specialist doctor. Patients are encouraged to visit a general practitioner first, who refers to specialists or a hospital when necessary. Doctors in hospitals which are responsible for emergency cases and long-term care are salaried specialists and provide inpatient services.

In terms of remuneration, doctors are ranked on the top of the payment scale for academic professions in Germany (Peichl 2012). Fee-for-service is the predominant mode of payments for general physicians and specialists working in ambulatory care. Doctors employed in inpatient institutions (mainly hospitals) receive salaries dependent on their career level and working experience (Paris *et al*. 2010). Comparing the average salary of medical specialists in Germany with that of their counterparts in OECD countries, German specialist doctors are midrange (OECD 2011).

Nursing education takes places in a vocational school. Ten years of schooling is required in order to take up training in nursing. Training as general or pediatric nurses takes three years and ends with a state examination whereas nursing assistants undergo one year of training. Further two-year specialty training is necessary to become a nursing specialist such as a surgical nurse or a cardiac nurse. University education is either possible after accomplished vocational training or after four year relevant working experience and is generally part of the further qualification of a nurse. Since 2003, primary nursing training at university is offered (Wissenschaftsrat 2012). However, the number of academic training opportunities for nursing directly related to patients' care remains low. 21,000 places in vocational schools and only 600 university places are provided annually (Wissenschaftsrat 2012).

[9] http://www.kbv.de/html/zulassung.php

Further reforms of educational paths of nursing are model tests for a generalised vocational training with the aim at merging the three branches of nursing: general nurses, pediatric nurse and elderly care nurse into one general nursing training (DBfK 2014).

Nurses are employed predominantly in hospitals, clinics and practices of specialized doctors and rarely in practices of general practitioners where medical assistants are employed. The general core tasks of a nurse are the provision of care to patients, assistance to the doctor's treatment and documentation. Nursing assistants support nursing professionals in the field of hygiene, documentation and therapeutic measures. On average, specialized doctors are earning twice as much as nurses (OECD 2011).[10] In comparison to other professions with the same qualification level, nursing professions show a low wage increase of 20 per cent from 1995 to 2010 (Dingeldey 2013).

1.2.2 Employment patterns

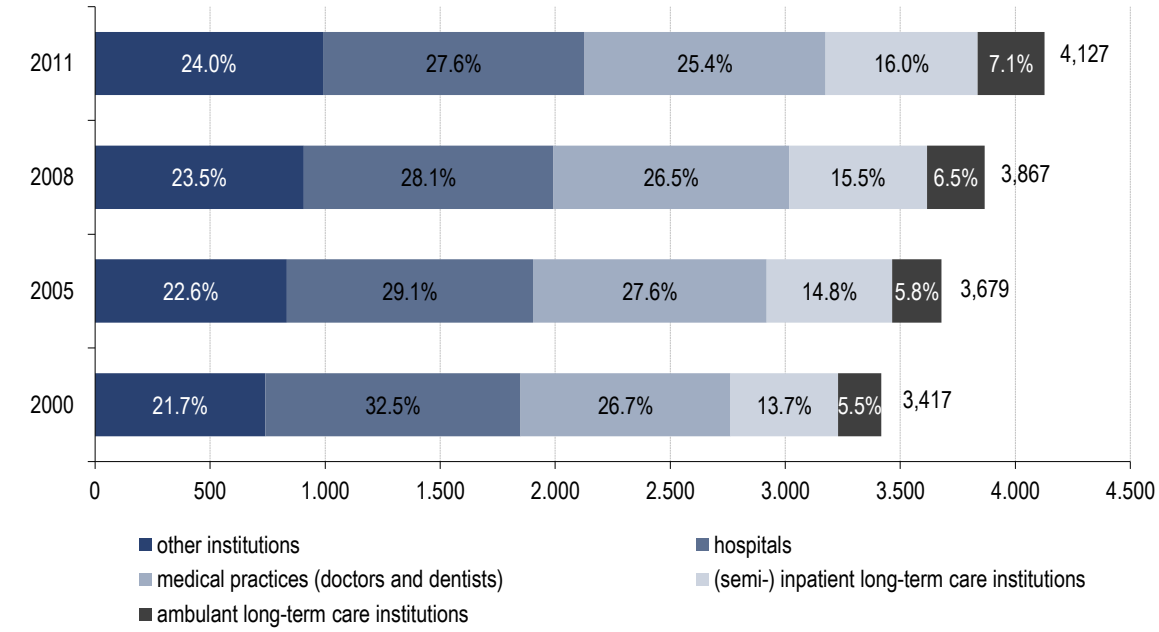
In 2011, 84 per cent of the workers in the health economy were employed in facilities of the health sector: ambulatory, semi-inpatient and inpatient facilities, 7 per cent in the wholesale and supplier sector and 4 per cent in the administration (Federal Statistical Office 2013b).[11] In terms of personnel by medical facilities in the core area, the health sector, a shift from inpatient to ambulatory care facilities took place over time. Both ambulatory and inpatient facilities show a trend of continuously increasing number of workers in the time period 2000-2011 but the growth rate in the ambulatory care was nearly twice as high as in the semi-inpatient and inpatient care: 28 per cent and respectively 14 percent (Federal Statistical Office 2013b). Consequently, in 2011, more health personnel were working in ambulant facilities (44 per cent) than in semi-inpatient and inpatient facilities (40 per cent) (Federal Statistical Office 2013b). An explanation of the growing ambulatory care sector could be the extended scope of care services for hospitals since the 1990s. Hospitals which traditionally provided only inpatient care were allowed to provide ambulant care to patients in need of highly specialized treatment on a permanent basis, in specialties with under-provision of care and patients with certain rare diseases (Busse and Riesberg 2004).

A majority of 4,127,000 out of 4,920,000 workers in the health sector in 2011 were employed in ambulatory and semi-inpatient and inpatient facilities (Federal Statistical Office 2013b). The working population in ambulatory and inpatient facilities increased from 3.4 million to 4.1 million from 2000 to 2011. Hospitals constituted the biggest employer (27.6 per cent), followed by medical practices of doctors and dentists (25.4 per cent), semi-inpatient and inpatient long-term care facilities (16 per cent) and ambulant long-term care facilities (7.1 per cent) (see Figure 1). Whereas the share of health workers in hospitals and medical practices has decreased by 4.9 per cent and 1.3 per cent respectively

[10] http://www.oecd-ilibrary.org.
[11] Semi-inpatient institutions encompass institutions such as day hospitals and day centres.

from 2000 to 2011, that of workers in long-term care facilities has continuously increased by 2.3 per cent for semi-inpatient and inpatient facilities and by 1.6 per cent for ambulant care facilities (see Figure 1).[12]

Figure 1 Workers in ambulatory and inpatient care facilities 2000-2011, by facilities (000s)



Source: Health personnel accounts, Federal Statistical Office 2013b; HWWI.

Different employment patterns are dominant for doctors and nurses. Whereas doctors are represented almost equally in ambulant and inpatient facilities (42 per cent and respectively 50 per cent of the doctors in 2011), nurses work predominantly in inpatient facilities (77 per cent of the nurses in 2011) (Federal Statistical Office 2013b). Over time, changes in the distribution among facilities took place. Data from 2000 to 2011 show a decreasing share of doctors in ambulant facilities, particularly medical practices, and a decreasing share of nurses in inpatient care facilities, particularly hospitals.

1.2.3 Labour shortages

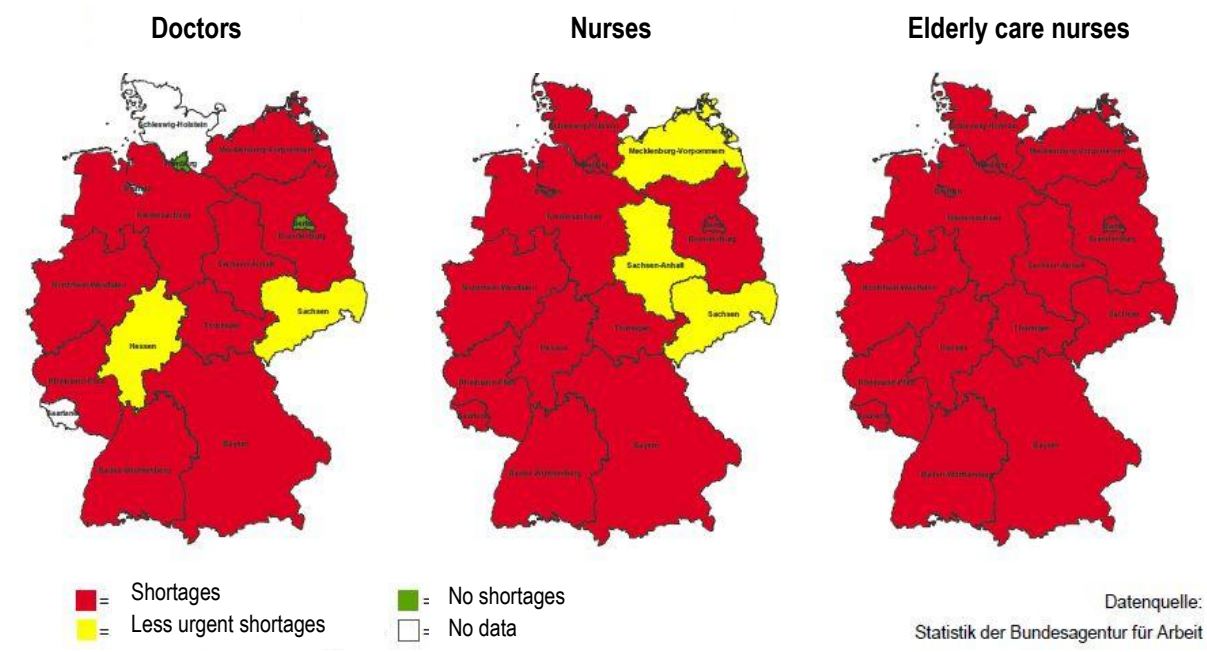
In international comparison, Germany exhibits good population coverage by doctors and nurses. Germany had a ratio of 3.84 practicing doctors to 1,000 inhabitants in 2011, outnumbered only by the Netherlands and Switzerland (OECD 2013a). For Hamburg, the coverage even amounted to 4.7 doctors

[12] The statistic on workers in care homes does not include employees in homes for the elderly, "where the treating or relieving of health problems is not the primary purpose of the job". For more information: Federal Statistical Office: Health personnel accounts, accessed 04.04.2014, https://www.destatis.de.

(Afentakis and Böhm 2009). With a density of practising nurses of 11.4 to 1,000 inhabitants in 2011, Germany scored above the OECD average of 8.7 (OECD 2013a).

Nevertheless, there are vivid debates on the lack of skilled labour in Germany. The health sector is one of the sectors already facing labour shortages, both of academics as well as of workers with vocational training (Federal Employment Agency 2011a). Two main indicators are used for identifying labour shortages: the job vacancy duration and the number of unemployed workers in relation to the number vacant positions (job vacancy-unemployment ratio). According to the Federal Employment Agency that collects relevant data on vacant positions and unemployment, three health occupations are particularly affected by shortages: doctors, general nurses and elderly care nurses. The vacancy duration in these professions was substantially above the average of 67 days for all professions in 2011. It amounted to 155 days for doctors, 105 days for general nurses and 110 days for elderly care nurses. Moreover, in most of the German regions less unemployed health workers were registered than vacancies available (Federal Employment Agency 2011a). As Figure 2 shows, universal shortages are identified in two occupations – humane medicine and elderly care – whereas nurses are in short in the former Western states. Remarkably, no shortages of doctors are identified for Hamburg and Berlin.

Figure 2 Labour shortages in the health sector in 2014 based on a period of vacant positions



Source: Federal Employment Agency 2011a.

Note that the traffic light system gives indications about severity of labour shortages. Regions marked in red are currently facing labour shortages (i.e. the average vacancy duration is more than 40 per cent above that for all professions and there are less than 150 unemployed persons per 100 job vacancies).

Regions marked in yellow show first signs of shortages (i.e. the average vacancy duration is above that for all professions and there are less than 300 unemployed persons per 100 job vacancies). Regions marked in green are not affected by shortages (i.e. the average vacancy duration is below that for all professions and there are more than 300 unemployed persons per 100 job vacancies) (Federal Employment Agency 2011b).

In spite of an increasing working population in Germany, the health sector is already facing labour shortages. Both demographic and structural reasons could explain this tendency. With regard to demographic reasons, reasons for labour shortages can be found on both demand and supply side. The German population is aging and will decline in future years due to increased life expectancy and fall in the birth rate. Given constant net migration of 100,000 persons annually, the German population would still decline from 81 to 65 million by 2060 (Boll *et al*. 2014a). Already in 2030 the number of people aged 65 and over will increase by a third, while the group of people aged under 20 will decrease by a sixth. Germany will be facing great challenges by 2020, also because those born in years with a strong birth-rate (baby-boomer generation) will retire at that time (Boll *et al*. 2014a). The population in Hamburg will rise to 1.85 million in 2030 but the proportion of the population of working age, defined as the age between 20 and 65, will decline from 64.2 per cent in 2010 to 59.7 per cent in 2030 (Boll *et al*. 2013). The group of people aged 65 and over will increase and make up even more than one third of the population in 2060 (Boll *et al*. 2013).

In view of the aging German society, the demand for health services will rise substantially. The demographic effects are already noticeable in an increasing number of treatment cases and increasing number of doctors in retirement age. From 2004 to 2012 the number of ambulant treatments increased by 136 million and that of inpatient treatments by 1.8 million (German Medical Association 4/14/2014). On the supply side, workers in the health sector won‘t be sufficient to offset the demographic development as the number of persons in economically active age will decline. In 2013 the share of doctors older than 59 amounted to 15.6 per cent and the share of doctors in the age cohort 50-59 amounted to 28.3 per cent (German Medical Association 4/14/2014). Along with increasing share of older doctors, the share of doctors in part-time employment increased from 31,000 in 2001 to 54,000 in 2011 (German Medical Association 4/14/2014).

With regard to structural reasons, training capacities and attractiveness of professions influence the supply of health professionals. Facing a surplus of doctors in the 1990s, the doctors' associations lobbied successfully for a reduction of training capacities that turned the surplus to shortages in the 2000s (Hoesch 2008). A high drop-out rate at universities of 30 per cent (Finotelli 2014) as well as a high share of graduate students (12 per cent) that do not pursue their profession as practising doctors (Kopetsch 2010) contributes to labour shortages.

Shortages are partly related to a mismatch of provided and requested specialist doctors (Finotelli 2014) that could be explained with the systematic training of young doctors in special fields by hospitals

(Eckert 2011a). This is reflected in the number of office-based specialists that increased more rapidly than the number of general practitioners, which dropped to less than 30 per cent of all office-based doctors in 2012 (Kassenärztliche Bundesvereinigung 2013). Labour shortages affect German regions differently. Thus less attractive rural areas face a significant lack of general practitioners (Finotelli 2014).

The attractiveness of the German health system also plays a role. German health professionals are in search for adequate payment and better working conditions, with less bureaucracy, less hierarchy and more flexible working hours (Eckert 2011a). This could lead to emigration of health professionals towards more attractive countries. The number of doctors leaving Germany annually in the period 2008-2012 ranged between 2,500 and 3,500, with two-thirds of them being German nationals (German Medical Association 2014b). The most preferred destinations were Switzerland, Austria, the US and the UK. According to estimates, about 17,000 German doctors were working in foreign countries in 2010 and the number of doctors leaving Germany for work abroad is increasing (Kopetsch 2010). Apart from emigration, shortages may have led to a vicious circle in some fields. Bottlenecks may lead to increasing workload in the workplace which may lead to increasing drop-outs of personnel and in turn result in shortages.

Forecasts on future labour shortages show a wide margin, caused by a different focus on professions and different selection and weighting of variables influencing the development. The consultancy company PricewaterhouseCoopers (PwC) predicts a shortage of 56,000 doctors and 140,000 non-academic health workers by 2020. For 2030, PwC calculates a much higher shortage of 165,000 doctors and 786,000 non-academic health workers (Ostwald *et al*. 2013). Whereas by 2030 the shortage of doctors will be more distinctive in ambulatory facilities (54 per cent of the physicians' positions will remain vacant), the inpatient facilities will need to handle more vacancies for non-academic staff (Ostwald *et al*. 2013). In contrast to the PwC forecast, a quite balanced shortage of academics and non-academics and a smaller number of future vacancies is predicted by another consultancy company, the Prognos AG. Including the social professions, a shortage of 840,000 health and social workers by 2030 is predicted (Prognos 2011). Another forecast focuses on care professions and calculates different scenarios. It predicts that by 2025 the demand for care workers will increase by 20 to 48 percent (depending on the scenario) and the shortage will range between 135,000 and 214,000 care workers (Afentakis and Maier 2010). An increased demand by 50 per cent by 2030 and vacancies of 500,000 care workers by 2030 are predicted by the Bertelsmann foundation (Bertelsmann Stiftung 11/19/2012).

According to an official statement of the local authorities, Hamburg won't face labour shortages before 2020 but shortages of health and care professions are likely to appear already in the short term (BASFI 2013). Until 2030, a relatively moderate growth in the demand for care services (plus 32 per cent) and 6,426 vacancies in the care sector are predicted for Hamburg (Bertelsmann Stiftung 11/19/2012).

1.2.4 National policies aimed at addressing shortages

Shortages in the health sector are addressed in the framework of shortages of qualified staff in the economy as a whole. The Federal government started different initiatives to deal with shortages of skilled labour. In June 2011, the Federal government, the employer associations and the trade unions launched a joint declaration on ensuring the supply with skilled professionals (Bundesregierung 2011). In this declaration as well as in the later published concept with measures aimed at dealing with labour shortages (BMAS 2011), the Federal government ranks the activation of the potential workforce already residing in Germany higher than the recruitment of foreign-trained professionals from abroad. Migration of foreign workers is considered rather a complementary instrument for dealing with labour shortages. Along with measures for a better labour market integration of women, elderly employees, disabled people, early school leavers, low qualified people and long-term unemployed, specific measures target the group of persons with migration background already living in Germany such as advisory services, language courses and improved procedure for recognition of foreign qualifications (BMAS 2011). Apart from measures for dealing with labour shortages in general, a special initiative targets shortages in the health sector, particularly in elderly care nursing. In 2012, the Federal government started a training initiative that aims at fostering training in elderly care and increasing the attractiveness of the profession. A special website was launched and a team of 30 consultants gives advice on training in elderly care across Germany.[13]

Although state institutions consider migration as a measure with a low potential for dealing with labour shortages (BMAS 2011), migration plays a crucial role for the labour market both in the short and long run. Migration is almost by default considered a short-term solution to deal with current open vacancies because extended training periods of health professionals particularly doctors impact on the workforce size with a time lag (Grignon *et al*. 2013). For demographic reasons, migration is also taken into consideration, when speaking of long-term shortages (Kolodziej 2012). In terms of migration policies, Germany has gradually opened up for qualified workers particularly since 2005. Companies are allowed to recruit qualified workers fulfilling minimum requirements in terms of labour conditions and salary arrangements.

2 Regulatory framework for migrant health workers

2.1 Admission policies

2.1.1 Migration policies and recruitment

After the guest worker period in the 1950s and 1960s that ended with the introduction of a recruitment stop in 1973, the German migration policies had been restrictive for a long period of time. Not until 2000s the German migration policies started displaying an increased acceptance of immigration,

[13] http://www.bmfsfj.de/BMFSFJ/aeltere-menschen,did=197916.html.

particularly with the new immigration law from 2005 that changed the terminology and the structure of the legal framework (Vogel and Kovacheva 2014).

The German regulatory framework that is strongly influenced by EU regulations distinguishes mainly between two categories of migrants: citizens of EU member states and of other non-EU countries. EU nationals benefit from the principle of free movement of workers that provides them with unrestricted access to the German territory and labour market under the same conditions as German nationals. Neither a residence nor a work permit is required in order to take up employment. For newly accepted EU member states, Germany has been traditionally making use of transitional periods in the area of free movement of workers. After the expiration of the transitional rules for the eight Central and Eastern European countries on 1 May 2011 and Bulgaria and Romania on 1 January 2014, currently only citizens from the Croatia are exposed to transitional periods. Croatian nationals need to apply for a work permit with the International Placement Office of the Federal Employment Agency in order to be employed as dependent workers or to provide services in the construction sector and related branches of industry such as cleaning services for buildings and interior decorators. For the health sector, it implies that a Croatian doctor needs a work permit in order to be employed in a German hospital but he or she can set up an own surgery under the same conditions as a German colleague as the freedom of establishment is not restricted.[14] However, as foreign doctors work predominantly in inpatient facilities and only 13 per cent were self-employed in 2012 (German Medical Association 2014a), their access to the labour market is, nonetheless, affected by the transitional rules.

With regard to migration policies targeting third-country nationals, the reluctance to attract migrant workers has gradually decreased. Two changes of particular relevance for migrant health workers from third countries took place in the regulatory framework in the 2000s: the introduction of the Blue Card for highly-skilled workers in August 2012 and the so-called Whitelist for skilled workers in July 2013. The Blue Card as a new residence title was introduced in the course of implementation of the EU directive on highly qualified employment (§19a Residence Act). Non-EU nationals with a university degree may be granted a residence permit to take up employment corresponding to their qualification if they can prove a job contract or a job offer and a minimum annual salary of 47,000 euro as set for 2014. To professions with labour shortages such as IT specialists, engineers and doctors, a lower level of annual salary of 37,128 euro applies (BAMF 2014). The Blue Card is issued by the responsible foreigners' authority for a maximum period of four years and no consent of the Federal Employment Agency is required. After 33 months of employment and payment of contributions to the retirement scheme a person can apply for a permanent residence title. Generally, third-country nationals need to wait 60 months before being entitled to apply. A further improvement of the conditions of entry for third-country nationals with a university degree is the possibility to obtain a visa for six months for the purpose of job seeking. Foreign graduates from German universities are allowed to stay 18 instead of 12 months in order to seek for employment.

[14] Note that in case of excess supply of certain specialties of doctors, the *Länder* commissions of doctors and health insurance funds are entitled to restrict the admission of medical practice establishments (§103 SGB V).

Non-academics with vocational training from non-EU countries benefit from the legal amendment of the Employment Ordinance (*Beschäftigungsverordnung*), in force since July 2013. The so-called Whitelist issued by the Federal Employment Agency contains non-academic professions requiring vocational training that face labour shortages. In the Whitelist in 2014 the following health occupations are included: health and nursing professions without specialisation, specialist nursing professions, elderly care professions, and surgical technology/medical technical assistance professions (Federal Employment Agency 2014). The access to the German labour market for the listed professions is less regulated as the consent of the Federal Employment Agency is needed but the so-called priority check (*Vorrangprüfung*) is not required. Although it is not checked whether the employment of a German or an EU worker is possible, a priority check is indirectly done as the prerequisite for filling a vacancy with a foreigner is that the position has been published in the job exchange portal of the Federal Employment Agency for a sufficient period of time (Federal Employment Agency 2013). It is important to note that the education required for a certain occupation depends on the German regulations and not on those of the country of origin. Correspondingly, to a nurse with a tertiary education who wants to immigrate to Germany the Whitelist instead of the Blue Card regulation applies.

Apart from labour migration regulations such as the Blue Card and Whitelist, migrant workers may use other migration channels provided by the law such as migration in the framework of family reunification or university education and vocational training. Moreover, the requirements for a residence permit for self-employment – investment of at least one million euros or the creation of at least ten jobs – do not apply to doctors who want to set up an own surgery in case of a potential special regional need for medical care (Derst *et al*. 2007).

With regard to recruitment of health workers from abroad, Germany is geared to the Global Code of Practice on the International Recruitment of Health Personnel of the World Health Organisation adopted in May 2010. On the one hand it recommends to industrial countries to abstain from recruiting health workers from developing countries hit by severe labour shortages. On the other hand it is emphasised that the right of skilled workers of mobility should not be constrained. Germany among other countries decided to dissolve this contradiction by sticking to a list of 57 developing countries defined as facing critical shortages (Angenendt *et al*. 2014). In November 2013, a ban on recruitment and placement of health professionals from the identified countries was added to the Employment Ordinance. For that reason, the recruitment of migrant workers in nursing and care occupations from these countries may be undertaken only by the Federal Employment Agency (Bundesregierung 2014).

In the past, Germany had actively recruited nurses and care workers in the framework of bilateral agreements: in the 1960s and 1970s with South Korea, Philippines and India (Fischer 2014), in the 1980s and the 1990s with Yugoslavia (Hoesch 2008: 48), and since 2005 with eight European countries: Croatia, Ukraine, Poland, Slovenia, Czech Republic, Slovak Republic, Bulgaria and Romania (Dhillon *et al*. 2010). The last bilateral agreement in force, that with Croatia, expired in 2012 (Bundesregierung 2014). Active recruitment of doctors abroad did not take place for more than 30 years

(Hoesch 2008). The presence of foreign doctors in the German health sector can be thus attributed to the integration of foreign students or refugees but not to active recruitment of migrant health professionals (Hoesch 2008).

For the first time since 1973, national and local initiatives for active recruitment abroad were launched (Vogel and Kovacheva 2014: 149). The website www.make-it-in-germany.com launched in 2012 aims at attracting international workers particularly from shortage occupations by providing them with useful information about migration and economic opportunities in Germany, and presenting Germany as an attractive place to work and live.[15] Active recruitment strategies are implemented by state institutions. The International Placement Office of the Federal Employment Agency (*Zentrale Ausland – und Fachvermittlung, ZAV*) supports German companies in the recruitment process abroad by cooperating with national authorities of the sending countries and organizing events such as European Job Days and job exchanges with the EURES network (European Employment Services). In addition to mechanical engineering and technology, and hotel and catering industry, the health sector is one of three sectors the Central Placement Office is focusing on.[16] The role of recruitment agencies is minor (Eckert 2011b).

Pilot projects for international recruitment in the health sector were launched with both EU and non-EU countries. In the EU, activities for attracting migrant health workers take place mainly in four member states with high potential for job seekers: Greece, Italy, Portugal and Spain (Bundesregierung 2013). In 2013, a special programme MobiPro-EU was launched with the aim at attracting young people from EU member states to do vocational training in occupations with labour shortages, long-term care work being one of them. With regard to recruitment from non-EU countries, in 2013, the Central Placement Office of the Federal Employment Agency entered into an agreement about placement of nurses with the respective employment agencies of Serbia, Bosnia and Herzegovina, the Philippines and possibly Tunisia. The recruitment in the framework of the so-called Triple-Win-Project is supported by the Federal Agency for International Cooperation (*Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ*) that is responsible for the linguistic and professional preparation and accompanying integration activities of about 2,000 qualified nurses in German companies (Bundesregierung 2014). Furthermore, pilot programmes with China for recruitment of 150 Chinese elderly care nurses and with Vietnam for the training of 100 geriatric nurses in Germany were launched (Bundesregierung 2014; Brown 2013). These pilot programmes aim at reducing labour shortages in Germany but also at gathering experience with appropriate recruitment of migrant health workers, so that well managed migration has a positive impact on both sending and receiving countries (Angenendt *et al*. 2014).

[15] Official Website Make it in Germany, accessed 22.04.2014, http://www.make-it-in-germany.com/en/
[16] Website Central Placement Office of the Federal Employment Agency (ZAV): Personalsuche für Deutschland, accessed 22.04.2014, http://www.arbeitsagentur.de

In spite of the improvements of the regulatory framework for highly-qualified third-country nationals and Germany being one of the countries with the lowest barriers for highly skilled migration, labour migration to Germany remains at a low level (OECD 2013b). Migration of health workers other than doctors to Germany is minimal (Eckert 2011b). No statistical data on foreign doctors and nurses migrating to Germany are collected. According to calculations based on Microcensus data, 35,900 foreign-trained doctors were pursuing their profession in 2010 and 32,800 foreign doctors obtained their qualification in Germany (Demary and Koppel 2013). Thus nearly 20 per cent out of 373,000 doctors working in 2010 in Germany were migrants.

2.1.2 Access to the health sector

With regard to access of migrant workers to the German health sector, it has to be distinguished between two main ways: directly after training in the field of health in Germany or after an admission to practice the profession of foreign-trained workers.

The Federal Statistical Office provides data on education of foreign nationals at health vocational schools and universities. Statistics on health vocational schools show that 6.7 per cent of about 135,000 pupils in 2012 had a foreign nationality (Federal Statistical Office 2012). The share of foreign nationals in health studies at universities amounted to 9 per cent in 2012. In spite of the increase in the period 2000-2012, foreign nationals are still underrepresented in health fields of study compared to their share in all fields of study (11.3 per cent in 2012) (Federal Statistical Office 2013a). Interestingly, foreign nationals are overrepresented in human medicine, amounting to 17 per cent of all students. It is important to note that the increased share of foreign students cannot be certainly attributed to increased migration for educational purposes as there are many foreign nationals who obtained secondary education in Germany (so-called *Bildungsinländer*) and are not considered educational migrant.

With regard to foreign nationals who obtained training in health abroad, it has to be distinguished between migrant health workers that come to Germany to obtain further qualification and those that intend to pursue their profession. The former needs an academic recognition whereas the latter recognition of professional qualification (Braun 2011). Doctors who intend to do specialty training in a German hospital thus need an academic recognition by a university whereas those who want to work in hospital need recognition of their professional qualification by the respective institutions in charge. In the latter case, it is important whether the professional qualification is regulated or non-regulated. Regulated professions such as doctors, pharmacists, nurses and care workers require the approval by German authorities whereas non-regulated professions such as medical receptionists can be practised without an official admission. Migrant health workers in regulated professions need to prove (a) equivalent qualifications referring to the German standard and (b) sufficient German language skills. As most of the

health professions are regulated, the recognition of foreign qualifications is a crucial prerequisite for accessing the German health sector.

To draw a more detailed picture of the prevalent access regulations, a closer look is taken at two main health professions, doctors and nurses. Doctors in Germany need a full licence to practise in order to pursue their profession (*Approbation*). The Federal Medical Regulation distinguishes between two types of licence to practise differing in terms of duration and entitlements: full (*Approbation*) and provisional (*Berufserlaubnis*) in accordance with § 10 of the Federal Medical Regulation. Whereas the full licence is valid across Germany for an unlimited period of time and allows both dependent work and self-employment, the provisional licence is issued for a period up to two years and for an individual state (*Land),* and the setting up of an own surgery is not allowed. German graduates obtain a full licence to practise after graduation. In the past, foreign-trained doctors from EU member states, Australia, Israel, Japan, Canada and New Zealand were entitled to a full licence, because their medical degrees were considered equivalent to the German degree (Finotelli 2014). Foreign nationals from the rest of the third countries were not entitled to a full licence and might obtain only a provisional licence even if they graduated from a German university. The current legal framework does not distinguish between nationalities and countries of origin anymore that is a major improvement related to the access of foreign nationals from third countries to the sector. According to the Recognition Law, all persons irrespective of their residence status and citizenship are entitled to start a procedure for a full licence.[17] A provisional licence is still issued in case of a temporary professional practice in Germany and does not encompass recognition of professional qualifications by the issuing authority.

2.2 Policies on the recognition of professional qualifications

Many migrants in Germany work below their level of qualification as their foreign qualifications have not been recognized (Bils 2010; Boll *et al*. 2014b). The recognition of professional qualifications is particularly important for regulated occupations such as doctors, care workers and pharmacists as they are not allowed to work without a proof of the equivalence of their foreign qualification to the German standards. For a long time, the recognition of foreign qualifications in Germany had been characterized by fragmentation and differential treatment of different migrant and occupational groups (Bils 2010; Englmann 2009). As part of the German policy on dealing with labour shortages, a Recognition law came into force in April 2012 by which several changes in the recognition of foreign qualifications were enacted (Vogel and Kovacheva 2014).[18]

Particularly third-country nationals benefit from the law. It introduced a legal claim to apply for recognition of qualification irrespective of residence status and citizenship. In the absence of such a

[17] Official Website of Recognition in Germany, accessed 15.04.2014, www.anerkennung-in-deutschland.de.
[18] Apart from the federal law, there are local laws in individual *Länder* on the recognition of foreign qualifications which refer to regulated occupations such as child care workers, engineers and architects.

legal claim so far, third-country nationals hardly managed to access the recognition procedure. In the recognition procedure, it is checked whether the professional qualification obtained abroad is comparable with the German requirements for the particular profession. Currently, there are about 600 occupational groups regulated by the Recognition Law. The procedure should not take more than three months. Furthermore, residence in Germany is not a prerequisite and an application from abroad is possible.[19] A further improvement of the recognition procedures with a great impact on health professions is the partial recognition, which was not possible prior to 2012 and in the past affected mainly doctors and pharmacists (Bils 2010). In the past, applications had been rejected in case even of minor differences between foreign qualification and the German standards.[20] Partial recognition means that only parts of the qualification are recognized and missing parts can be acquired through further courses and training. Prior to 2012, a lack of information about recognition procedures was a main obstacle for migrant health workers, as a study among foreign doctors in Hamburg showed (Braun 2011). To support migrants interested in recognition of their foreign qualification, councelling centres were established aimed at providing advice and assistance.[21]

The impact of the Recognition Law on health professionals is visible in data on recognition of qualifications. According to estimates for the period April 2012-February 2013 30,000 applications were submitted, 20,000 of them in the health sector, 12,000 applications by doctors and nurses, among them 8,635 applications of foreign-trained doctors and 3,123 applications of foreign-trained nurses (Ärzteblatt 2013).

According to the first official evaluation of the law by the Federal Statistical Office, almost 11,000 applications had been submitted between April and December 2012 (Federal Statistical Office 10/15/2013).[22] 75 per cent of the applications were submitted by health professionals, particularly doctors. Two-thirds of the applications were fully or partly recognized while only 5 per cent were not successful. 27 per cent were still in procedure. The vast majority of the successful applications were health professions. 5,100 doctors received recognition of their qualification and thus a right to practise in Germany. In terms of regions of origin, half of the applications were submitted by a person with qualification from an EU member state. Among the half of applications by third-country nationals, 43 per cent applications came from persons outside Europe and 57 per cent from persons in non-EU European countries (Federal Statistical Office 10/15/2013). In spite of the fact that the number of applications was below the expected level in the context of the recently established Recognition Law, the law's effectiveness can be positively assessed since the professional qualification of more than 10,000 persons has been recognized.

[19] Official Website of Recognition in Germany, accessed 15.04.2014, www.anerkennung-in-deutschland.de.
[20] For further analysis of the new Recognition law see Braun (2012) and Finotelli (2014).
[21] Recognition of foreign professional qualifications is one of the fields of work of the Competence Centres in the Programme IG Integration through training, http://www.netzwerk-iq.de/ .
[22] The effectiveness of the Recognition Law is monitored by the Federal Institute for Vocational Education and Training (*Bundesinstitut für Berufsbildung, BiBB*). A first report is said to be published soon (at the beginning of 2014).

Although the recognition procedure is accessible to everybody irrespective of citizenship, it is easier for EU citizens to obtain recognition in the health occupations than for third-country nationals. The European Directive on Recognition of Qualifications (EU Directive 2005/36/EC) simplifies the procedure for EU citizens, citizens from the EEA and Switzerland that take advantage of automatic recognition of medical professional qualifications obtained in EU member states. For those persons, no individual check of the equivalence of the qualification is undertaken. Admittedly, if the qualification is obtained before the accession to the EU, which is particularly relevant for new member states from the 2004, 2007 and 2013 enlargement waves, a Certificate of Conformity issued by the country of origin is required. In the case of third-country nationals, however, the equivalence of the foreign qualification is obligatory compared with the German standard. Special provisions may apply for ethnic Germans (*Spätaussiedler*).

In the recognition procedure not only professional qualification but also professional experience is taken into consideration. In the case of rejection or partial recognition, further training is recommended. If the foreign qualification is not fully comparable to the German standards, migrant workers from third countries must pass a knowledge test in order to prove knowledge in the field.[23] Different tests are foreseen for EU and non-EU citizens. For instance, non-EU nurses with partial recognition take an exam covering the material for the respective field whereas the exam for EU citizens covers only the deficits in the field.

Taking a closer look at doctors, the recognition of qualification is regulated at national level by the Federal Medical Practitioners' Act (*Bundesärzteordnung*) and the medical licensure law (*Approbationsordnung für Ärzte)* but implemented at *Länder* level. Six years of medical training is required for doctors. For those who graduated before the EU Directive came into force, three years of relevant experience is additionally required. Applications for recognition of the general licence to practise and the specialty have to be submitted to the responsible institutions: ministries of health of the respective *Länder* in charge with the recognition of the licence for general practitioners and the State Chambers of Physicians in charge with the recognition of specialties (mainly in the form of an oral interview) (BAMF 2011).[24] In the case of Hamburg, the responsible institutions are the Agency for Social Affairs, Family and Health and the State Chamber of Physicians in Hamburg. Due to the federal structure of Germany, differences in procedures such as costs and required documents exist among the *Länder* (BAMF 2011). For the recognition of a specialty third-country nationals need to have been working in the respective field of specialty for 12 months in order to take the respective exam with the State Chamber of Physicians (*Weiterbildungsordnung* of the State Chamber of Physicians in the respective German *Land*), whereas this is not required from EU citizens.

Good German language skills are important for successful labour market integration in the health sector, where personnel-related services and relations and technical vocabulary are essential for the right

[23] In 2002 knowledge test and prove of German knowledge were introduced.
[24] Important information about recognition procedures is available on the website: www.anerkennung-in-deutschland.de.

treatment of patients (Friebe 2006). Language skills are a prerequisite for recognition of qualification of foreign-trained doctors and nurses.[25] In 2014, the health ministers agreed that in the future, language level B2 for German language and C1 for technical language skills (*Fachsprachenprüfung*) will be required from migrant doctors (Wichmann 2014). In five of the German *Länder*, the examination for technical language skills is already required (Wichmann 2014).

3 Presence and role of migrant workers in the German health sector

3.1 General trends

The number of workers in the health sector increased by 19.6 per cent from 4,115,000 in 2000 to 4,920,000 in 2011 (Federal Statistical Office 2013b) and is still on the rise. In contrast to other economic sectors such as construction or automotive industry, it has shown a high resistance to the economic crisis from 2008 (BDI 2013). Besides the trend of a steadily increasing number of workers, the health sector shows a trend of feminization. The share of women rose from 71.9 per cent to 74 per cent from 2000 to 2011 (Federal Statistical Office 2013b). Whereas doctor's occupations are rather gender balanced, in non-academic occupations such as medical-technical assistants and pharmaceutical management assistants women hold more than 90 per cent of the jobs (Federal Employment Agency 2011a).

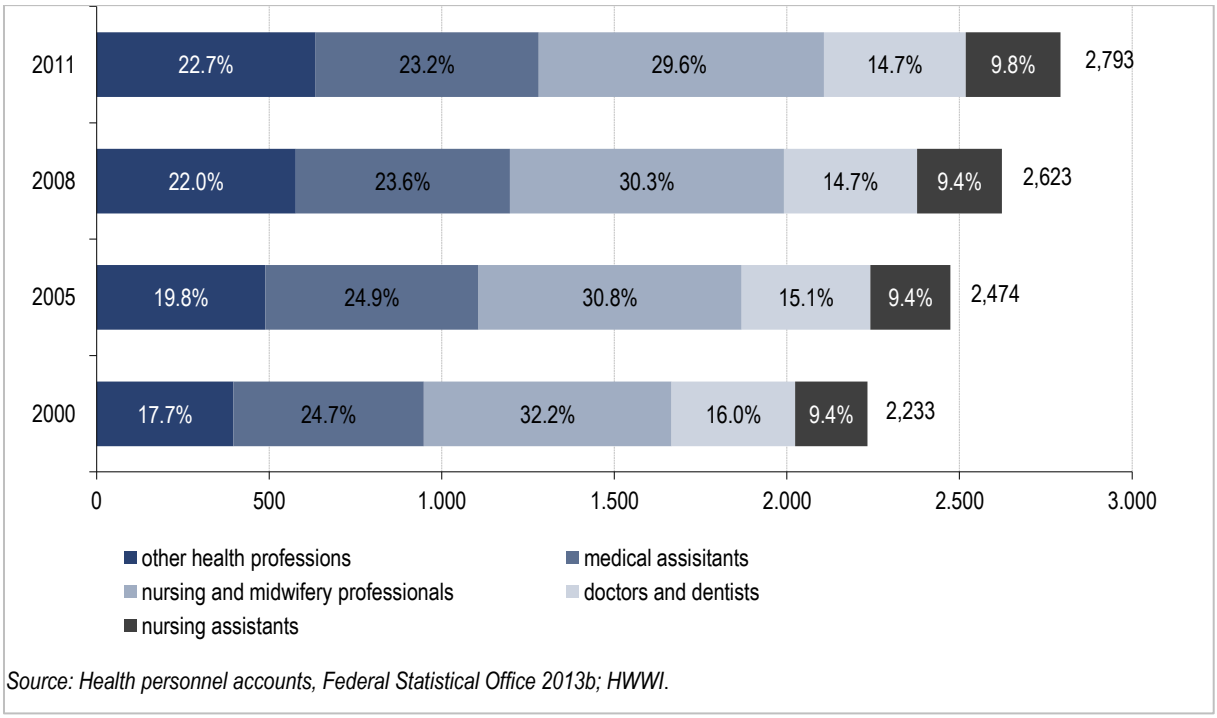
Most of the health workers are dependent salaried workers. The biggest groups among self-employed workers in 2012 were doctors with 35 per cent of about 348,700 doctors (German Medical Association 2013) and pharmacists with 18,172 freelancers (IFB 2013). In terms of employment forms, there is a trend towards an increasing relevance of part-time employment. From 2000 to 2010, part-time jobs in the health sector were showing a growth of 70 per cent in contrast to 37 per cent in the overall economy (Federal Employment Agency 2011a: 9). As a result, one third of the health workers in 2010 had part-time jobs as opposed to a quarter in 2000 (Federal Employment Agency 2011a: 6). Temporary agency work increasingly takes place and there were 25,045 temporary agency workers in 2011 (Walwei and Ziegler 2012; Bräutigam *et al*. 2010).

The health workforce comprises a variety of occupations categorized in four statistical categories: health service occupations (*Gesundheitsdienstberufe*) that are directly related to the provision of health (e.g. doctors and nurses), social occupations (e.g. elderly care nurses), health crafts persons (e.g. opticians or dental technicians) and other special occupations.[26] With 2,793,000 persons, the health service occupations represented 57 per cent of the health workers in 2011 (Federal Statistical Office 2013b). Among them, the four biggest occupational groups in 2011 were nursing and midwifery professionals

[25] Language requirements may vary from *Land* to *Land* but in most cases, at least level B2 is required in order to pursue a profession.
[26] Based on National classification of occupations of 1992 (KldB92), applied by the Federal Statistical Office.

(29.6 per cent), followed by medical assistants (23.2 per cent), doctors and dentists (14.7 per cent) and nursing assistants (9.8 per cent) (see Figure 3). Over time, medical assistants, nursing professionals and midwifery professionals as well as doctors and dentists have slightly lost relevance in favour of other professions, above all nursing assistants. However, in absolute numbers all these occupations have been growing. The most significant growth by 83 percent is observed in the case of elderly care workers and nursing assistants (32 per cent). The growth in medical assistants and doctors accounted for 17 per cent and 16 per cent (Federal Statistical Office 2013b).

Figure 3 Health workers 2000-2011, by occupations (in 1,000)



Source: Health personnel accounts, Federal Statistical Office 2013b; HWWI.

The presence of foreign nationals in the German health sector is captured in data sources scattered in different institutions. Two main sources are survey data on the working population from the Microcensus survey, published annually by the Federal Statistical Office, and administrative data on employees subject to social security contribution, published quarterly by the Federal Employment Agency.[27] Further data are provided by professional associations such as the German Medical Association (*Bundesärztekammer*).

[27] As detailed data for the health sector are not publicly available, special evaluations were requested in the framework of the project. A special evaluation of Microcensus data applying national classification of occupations 1992 (KldB1992) for the period 2005-2012 was provided by the Federal Statistical Office. A special evaluation of data on employees subject to social security contribution was provided by the Federal Employment Agency and is available by occupation for the period 2008-2011 applying the national classification of occupation KldB1988 (Federal Employment Agency 2014a) and by institution for the period 2008-2013 (Federal Employment Agency 2014b) with the national classification of economic activities 2008.

The Microcensus is an annual household survey covering 1 per cent of the German population. It contains data on working population by occupation and since 2005 data on citizenship and migration.[28] According to Microcensus data, the number of workers in the health sector in Germany increased from 2,430,000 in 2005 to 2,771,000 in 2012 and the share of workers in the health sector accounted for 6.9 per cent of the total working population in 2012 compared to 6.6 per cent in 2005 (see Table 1). In line with the general employment trend, the share of foreign nationals increased from 4.7 per cent to 5.4 per cent in the same period. However, it is important to keep in mind that part of the foreign nationals are persons who obtained their secondary education in Germany (so-called *Bildungsinländer*) who are born in Germany or moved to the country in a child age. In spite of the growth in absolute terms, in relation to their share in the total population in Germany of 8.2 per cent, foreign nationals are underrepresented in the health sector. Among 150,000 foreign nationals in 2011 third country nationals dominated with 54 per cent over EU nationals that accounted for 46 per cent.

Data on employees subject to social security contributions reveal similar trends of increasing relevance of the sector for the German economy and underrepresentation of foreign nationals despite their growing number and share in the total number of health workers. There were almost 2,197,000 employees in the health sector in June 2011. The share of foreign nationals increased from 3.8 per cent to 4.2 per cent in the period 2008-2011 but still remains below the average of 7.3 per cent in the economy as a whole (Federal Statistical Office 2014).

Table 1. Working population in the health sector (HCS) in Germany 2005-2012, by nationality, absolute values (000s) and share of

	Total employed persons in HCS	% of total working population	German nationals	Foreign nationals	% of total employed persons in HCS	EU27	% of total employed persons in HCS	Non-EU	% of total employed persons in HCS
2012	2,771	6.9%	2,620	150	5.4%	69	2.5%	81	2.9%
2011	2,717	6.8%	2,576	142	5.2%	68	2.5%	73	2.7%
2010	2,647	6.8%	2,506	142	5.4%	66	2.5%	74	2.8%
2009	2,608	6.7%	2,475	133	5.1%	62	2.4%	71	2.7%
2008	2,529	6.5%	2,406	123	4.9%	56	2.2%	65	2.6%
2007	2,484	6.5%	2,367	117	4.7%	54	2.2%	62	2.5%
2006	2,446	6.5%	2,334	113	4.6%	51	2.1%	62	2.5%
2005	2,430	6.6%	2,316	114	4.7%	56	2.3%	58	2.4%

Source: Federal Statistical Office 2014, Microcensus, special evaluation; HWWI.

According to Microcensus data for Hamburg, the working population in the health sector increased from 52,000 to 67,000 from 2005 to 2012 (see Table 2). With an increase by 28.8 per cent, the upward trend

[28] The classification of occupations KldB1992 was replaced in 2011 by a new classification KldB2010. Both are national classifications that are not fully comparable to the International Standard Classification of Occupations ISCO.

for the city state of Hamburg exceeded by far the German one of 14 per cent. The share of workers in the health sector in Hamburg is higher than the respective share at the federal level (7.3 per cent vs. 6.9 per cent), thus pointing to a greater relevance of the sector for the city state. Remarkably, despite the job growth in the health sector for Hamburg, the share of foreign nationals declined considerably from 7.7 per cent in 2005 to 4.5 per cent in 2012. Correspondingly, the total number of foreign nationals dropped from 4,000 to 3,000 in the same period.

Table 2 Working population in the health sector (HCS) in Hamburg 2005-2012, by nationality

	Total employed persons in HCS	In % of total working population	German nationals	Foreign nationals*	In % of total employed persons in HCS
2012	67,000	7.3%	64,000	3,000	4.5%
2011	68,000	7.5%	65,000	3,000	4.4%
2010	68,000	7.7%	63,000	5,000	7.4%
2009	60,000	6.8%	56,000	4,000	6.7%
2008	54,000	6.3%	50,000	4,000	7.4%
2007	49,000	5.8%	46,000	3,000	6.1%
2006	47,000	5.7%	44,000	3,000	6.4%
2005	52,000	6.5%	48,000	4,000	7.7%

**Own calculation.*
*** No data is available for EU and non-EU nationals due to low numbers in the statistics.*
Source: Federal Statistical Office 2014, Microcensus, special evaluation; HWWI.

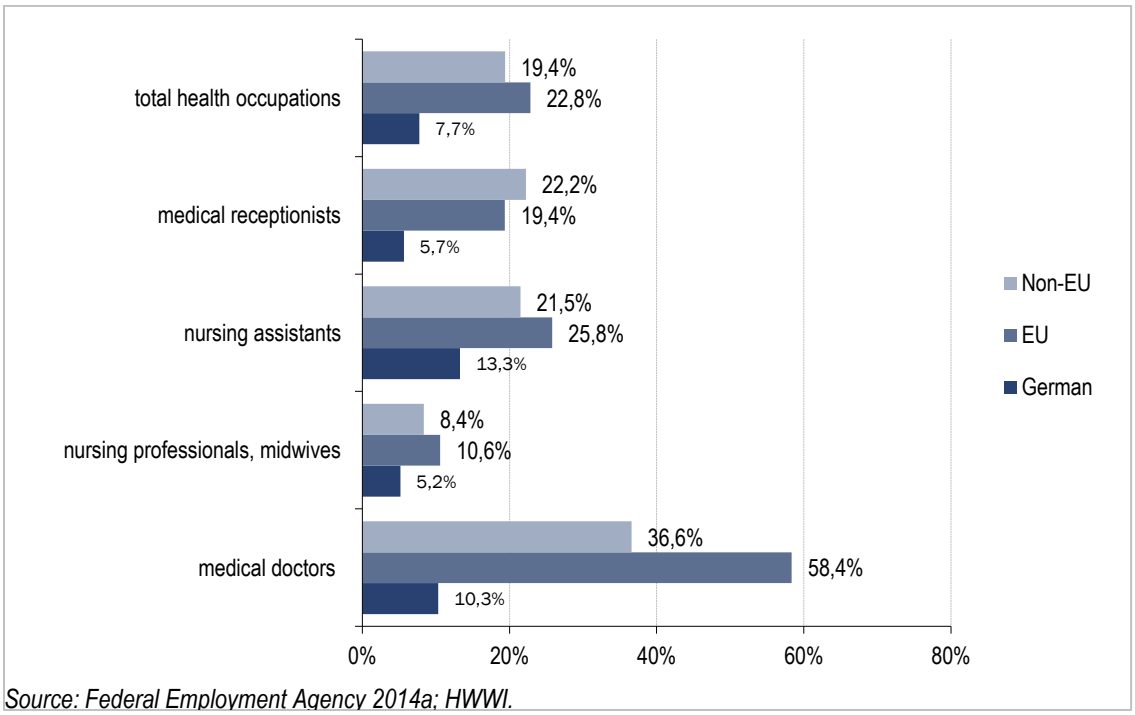
According to data on employees subject to social security contributions, 57,000 or 6.9 per cent of about 835,000 employees subject to social security contribution in Hamburg were working in the health sector in 2011 (Federal Statistical Office 2014). In contrast to the declining share of foreign nationals in the working population, the share in employees subject to social security contribution in Hamburg remained at a stable level of 4.9 per cent (Federal Statistical Office 2014). The different trends may be attributed to the fact that not all employed persons are subject to social security contributions. Most of the foreign nationals in Hamburg come from non-EU countries in contrast to the federal level where the number of EU and non-EU nationals is almost equal. More interestingly, within the individual sending regions, relatively more EU nationals are employed in the health sector (4.4 per cent of all EU nationals subject to social security contribution) than third-country nationals (3.6 per cent of all third-country nationals subject to social security contribution).

3.2 Migrant workers by occupation and facility

Data on employees subject to social security contribution give insight into the presence of foreign nationals in individual occupations. The biggest occupational groups in 2011 were nursing professionals and midwives (35 per cent) and medical receptionists (26 per cent), followed by nursing assistants (13

per cent) and doctors (9 per cent). The number of workers in all those occupations increased from 2008 to 2011. As Figure 4 shows, the growth rates for foreign nationals were higher than for German nationals. In the period 2008-2011, the number of employees increased by 22.8 per cent for EU nationals and by 19.4 per cent for non-EU nationals, as opposed to only 7.7 per cent for German nationals. Interestingly, the greatest increase is observed in the case of doctors particularly for EU nationals that more than doubled (58.4 per cent) and non-EU nationals that increased by more than a third (36.6 per cent).

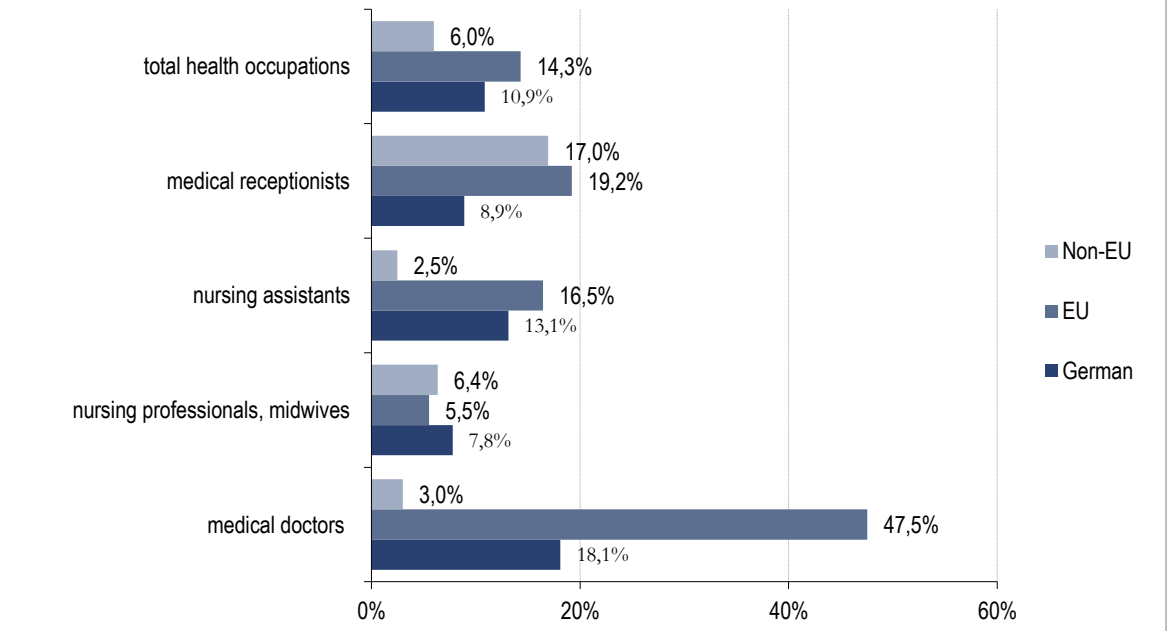
Figure 4 Development of employees subject to social security contribution in Germany 2008-2011 (growth rates), by occupation and nationality



Source: Federal Employment Agency 2014a; HWWI.

Data on employees subject to social security contribution for Hamburg reveal similar trends of an increased number of workers in health occupations in the period 2008-2011 and higher growth rates for foreign nationals from the EU than for German nationals (see Figure 5). In terms of occupations, the highest growth rate is observed in the case of doctors and particularly for EU nationals (47.5 per cent). With only three per cent, the growth rate for non-EU doctors is remarkably small. A difference between federal and Hamburg level exists in the development between EU and non-EU nationals. Whereas the lowest growth rates in Germany are observed for German nationals, in Hamburg this is the case for third country nationals. EU nationals have the highest growth rates at both federal and Hamburg level.

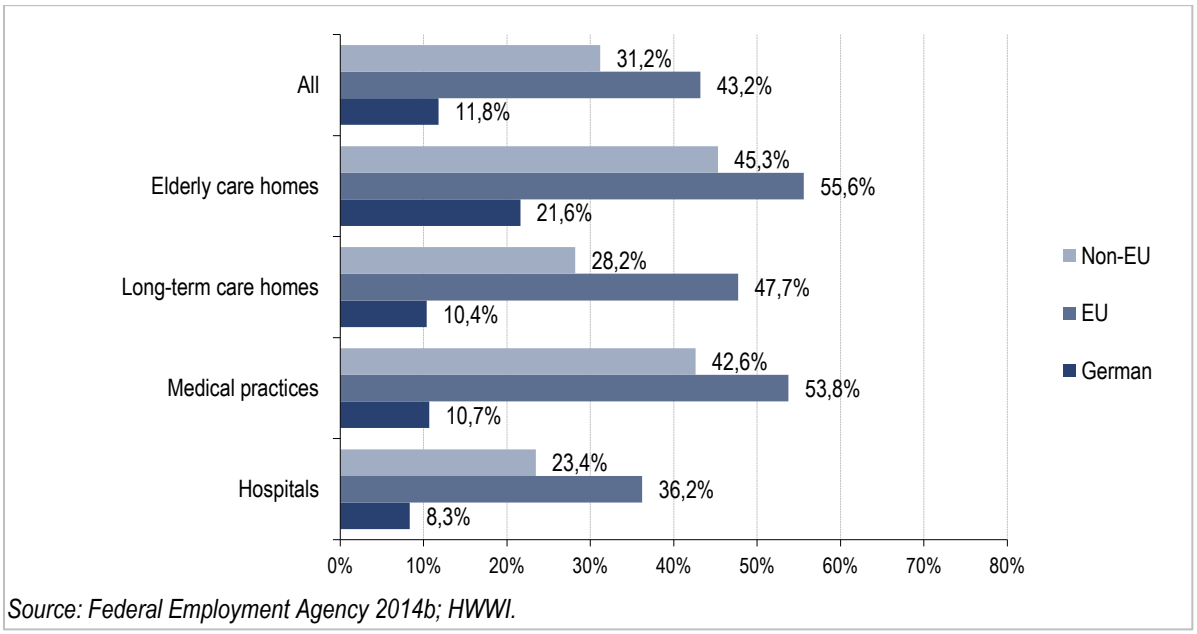
Figure 5 Development of employees subject to social security contribution in Hamburg 2008-2011 (growth rates), by occupation and nationality



Source: Federal Employment Agency 2014a; HWWI.

With regard to the presence of foreign nationals by facilities, there were about 3,092,000 employees subject to social security contribution in the German health sector in June 2013. The biggest facilities in terms of workers in 2013 are hospitals with 42 per cent of all employees, followed by offices of doctors and dentists (20 per cent), long-term care homes (16 per cent) and elderly care homes (10 per cent). From 2008 to 2013, the number of EU nationals increased faster than that of non-EU and German nationals (see Figure 6). The number of workers from EU countries grew particularly strongly in elderly care homes (55.6 per cent) and medical practices (53.8 per cent). Likewise, the number of non-EU nationals in those two institutions increased by 45.3 per cent and 42.6 per cent, respectively. The increase among German nationals was comparatively high in elderly care homes (21.6 per cent).

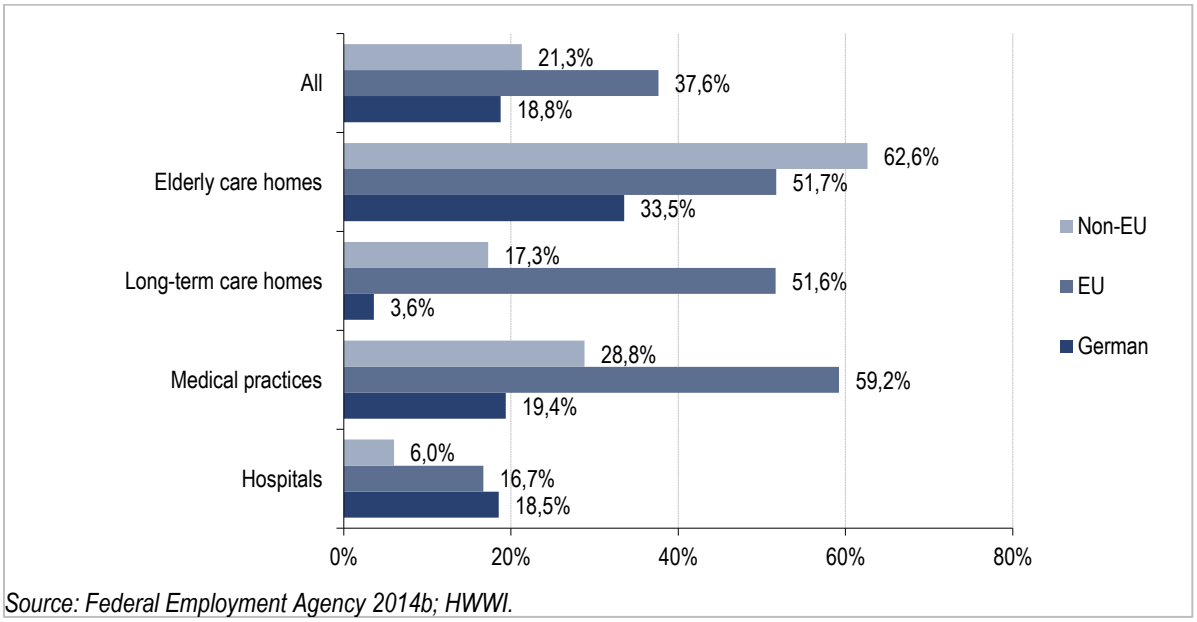
Figure 6 Development of employees subject to social security contribution in Germany 2008-2013 (growth rates), by facility and nationality



Source: Federal Employment Agency 2014b; HWWI.

The highest growth rate took place in elderly care homes at both federal and state level. However, in Hamburg the number of workers in hospitals grew slower than at federal level. The number of non-EU workers in elderly care homes increased substantially by 62.6 per cent (see Figure 7).

Figure 7 Development of employees subject to social security contribution in Hamburg 2008-2013 (growth rates), by facility and nationality



Source: Federal Employment Agency 2014b; HWWI.

3.3 Foreign doctors

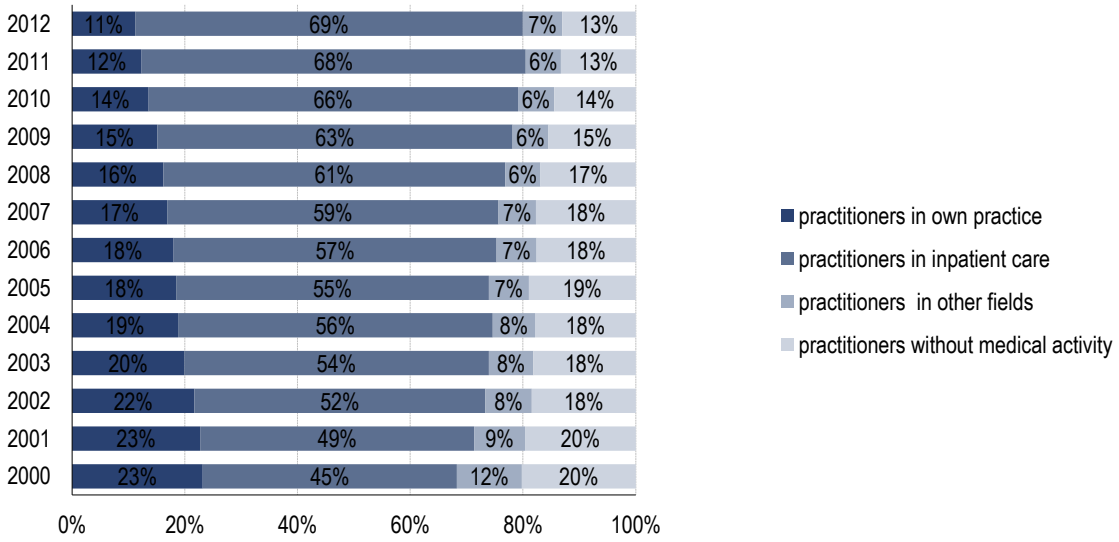
Besides Microcensus and labour statistics, data on doctors by nationality is available. Doctors in Germany have to register with the respective State Chambers of Physicians and these administrative data are published annually by the German Medical Association. It is more inclusive compared to data of the Federal Employment Agency as it encompasses not only persons subject to social security contributions but also self-employed persons and civil servants. Data by nationality are available but it is not possible to differentiate between foreign nationals with foreign training and with training in Germany. Indications about inflow of foreign doctors are given by data on new registrations of doctors from EU member states although registration is probably not occurring in the year of migration. The number of EU doctors who accessed the German health sector for the first time increased from 226 in 2000 to 2,225 in 2012 with a particular growth since the EU enlargements in 2004 and 2007 (German Medical Association 2014c). Main nationalities in 2012 were Romania, Greece, Hungary, Austria and Bulgaria.

Since 2000, the number of registered doctors with a foreign nationality has been steadily increasing and rose by 75 per cent from 14,600 in 2000 to almost 32,600 in 2012 (German Medical Association 2014a). The vast majority of foreign doctors were registered in the former Western states. In 2012 two-thirds of the foreign doctors were registered in four states: North Rhine-Westphalia, Bavaria, Baden-Württemberg and Lower Saxony. Hamburg as a city state made up only 2 per cent of all foreign doctors. More than half of the foreign doctors in Germany come from an EU member state, followed by Asia (18 per cent) and other European countries (17 per cent). Main nationalities in 2012 were Romania, Greece, Austria, Russia and Poland. Main third countries were Russia, Iran, Syria, Turkey and Ukraine. Over time, the relevance of EU as a sending region increased from 41 per cent in 2005 to 56 per cent in 2012 whereas the rest of Europe displayed a decline from 29 per cent to 17 per cent (German Medical Association 2014a).

Data collected by the State Chamber of Physicians in Hamburg showed that the number of foreign doctors registered in Hamburg rose from 429 to 659 in the period 2005-2013 (State Chamber of Physicians Hamburg 2014). This is in line with the increasing number of doctors in Hamburg. However, compared to the federal level, the growth of registered foreign doctors in Hamburg is less considerable. Both the number of EU and non-EU doctors increased but the growth of registrations by EU nationals is more pronounced (111 per cent) than those by non-EU nationals (22 per cent). The increased relevance of doctors from EU countries could be explained by the EU enlargements and the transition of important sending countries from third countries to EU member states. The share of EU nationals increased from 35 per cent to 48 per cent, resulting in rather balanced shares of EU and non-EU regions in 2013. Foreign doctors came mainly from Austria, Greece, Iran, Turkey, Poland and Russia.

Not all registered foreign doctors are actually pursuing their profession. In the period 2000-2012, the share of those without medical activity declined from 20 per cent to 13 per cent (see Figure 8). Looking at the main fields of activity, increasing relevance of inpatient care and decreasing relevance of medical practices can be observed. In the period 2000-2012, the share of doctors in medical practices dropped from 23 per cent to 11 per cent whereas the share of doctors in inpatient care rose considerably from 45 per cent to 69 per cent. A decline took place in the share of doctors in other fields such as public authorities. As a result of this development, in 2012 more than two-thirds of all foreign doctors worked in inpatient institutions and only one out of ten in an own practice.

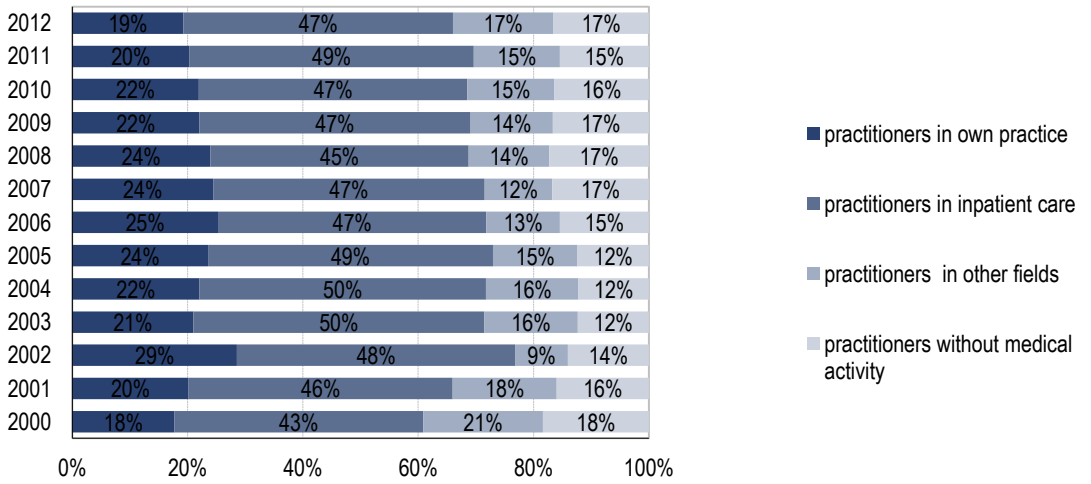
Figure 8 Foreign doctors in Germany 2000-2012, by field of activity



Source: German Medical Association 2014d; HWWI.

In Hamburg, there has not been a similar trend in the distribution by field of activity of doctors (see Figure 9). The share of doctors in medical practices, in inpatient care and in other fields remained almost stable in the period 2000-2012. In 2012, almost half of the doctors worked in inpatient institutions and one out of five has an own practice. Compared to the federal level, medical practices and other fields of activity such as public administration have a higher relevance in Hamburg. The share of those without medical activities is higher than at the federal level.

Figure 9 Foreign doctors in Hamburg 2000-2012, by field of activity



Source: German Medical Association 2014d; HWWI.

4 Concluding remarks

The German health sector is already missing health workers and migrant workers can help filling these gaps. General migration policies have been already revised as a reaction to the issue of labour shortages in the economy and opened up improved migration opportunities for health professionals such as doctors and nurses. Access to jobs in the health sector has also been improved, particularly by easing the recognition procedure of foreign qualifications that has been substantially used by migrant health workers. Differences between EU and non-EU citizens have become less pronounced over time but still EU nationals enjoy easier access to the health sector both in terms of migration opportunities and recognition conditions.

In line with these legal developments, the number of foreign nationals working in the health sector in Germany has been on the rise, thus showing the sector's absorption capacity for migrant workers. However, despite the increasing relevance in absolute and relative terms, migrant workers are still underrepresented in the health sector in relation to their share on the total working population. Over time, the sector seems to attract more EU nationals than non-EU national that could be partly explained by the much more favourable regulatory framework for EU migrants. The health sector in Hamburg has also gained in importance for the local economy and shows even a faster job growth than the federal level. Remarkably, in contrast to the federal level, the share of foreign nationals in the health sector in Hamburg stagnated or declined over time. The lower absorption capacity for migrant workers in Hamburg could be to a large extent related to the specific characteristics of the locality such as attractiveness and labour shortages. Furthermore, it could be associated with the integration capacities

of the workplace in terms of adaptation and retention. The process of workplace integration of migrant health workers has gained little importance in the research and is a promising avenue of research.

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