



received: 30 October 2016
accepted: 30 May 2017

NURSES IN POLAND — IMMEDIATE ACTION NEEDED

pages: 97-104

JÓZEF HACZYŃSKI, ZOFIA SKRZYPCZAK,
MAŁGORZATA WINTER

ABSTRACT

The aim of the study is to analyse changes in the size of the population of nurses in Poland in the years 2004–2014, considering changes in their employment and the phenomenon of ageing. The analysis is based on the data published by the Central Register of Nurses and Midwives of the Central Statistical Office (GUS) and the Organisation for Economic Co-operation and Development (OECD). Nurses are the largest professional group in the healthcare sector. In 2014, only above 70% of licensed nurses were professionally active. The percentage of employed nurses compared to the number of licensed nurses varied between the lowest ratio of 65.1% in 2005 and the highest ratio of 71.7% in 2012. The latest ratio of 2014 was 70.9%, which was slightly lower compared to the highest ratio in 2012. The average age of a Polish nurse in 2008 was 44.19 years, increasing by about six years to 50.1 within the analysed period. The population of nurses aged above 65 years is almost 4.5 times bigger compared to the youngest age group, which is 21–25 years. Thus, 2/3 of the population of nurses are 41–60 years of age and nearly 85% are over 40. For two years (2000 and 2014), the number of practising nurses per 1000 inhabitants places Poland in the fifth bottom position among the European countries, which shows a significant reduction in patient access to nursing services. In Poland, the profession of nurses has no replacement generation. The article presents the shortage of professionally active nurses in Poland. The existing register of nurses does not contain complete information necessary to evaluate the current situation in Poland. There is a strong need to improve the tracking system of the register of nurses to accurately monitor the number of nurses in Poland. The shortage of professionally active nurses and their ageing necessitates immediate action to reduce the shortage by increasing the appeal of the profession among young people and by encouraging nurses to return to the profession. It is also necessary to take action to delay the retirement of those nurses who want to work longer and to use their potential. This is also particularly important because of the gap in experience, which is going to become apparent in the nearest future.

KEY WORDS

polish nurses, shortage, ageing

DOI: 10.1515/emj-2017-0019

Corresponding author:

Józef Haczyński

University of Warsaw, Faculty of
Management, Health Care
Management Centre, Poland
e-mail: jhaczynski@wz.uw.edu.pl

Zofia Skrzypczak

University of Warsaw, Faculty of
Management, Health Care
Management Centre, Poland
e-mail: skrzypczak@wz.uw.edu.pl

Małgorzata Winter

University of Warsaw, Faculty of
Management, Health Care
Management Centre, Poland
e-mail: mwinter@wz.uw.edu.pl

INTRODUCTION

The ageing population has a significant impact on the long-term care market worldwide influencing the organisation and delivery of health care. Nurses play an important and critical role in the delivery of safe, quality care within the healthcare system. The nursing shortage has been linked to high rates of patient mortality, infections, medication error, and

accidents as well as increased length of hospital stay (Liang et al., 2012).

The demand for nursing care will continue to grow because of increasing life expectancy, ageing, the prevalence of severity and diversity of chronic diseases, disabilities and the growth in long-term care and geriatric needs. Growing evidence of nurse supply/demand imbalances is a growing problem world-

wide. In fact, the European Commission has estimated that there will be a shortage of 590 000 nurses by the year 2020 (Sermeus, 2010). This situation is particularly evident in Poland, where due to the increase in the health care needs of ageing societies, the problems of the education system and the immigration of staff, the deficit has been steadily getting worse (Zgliczynski, 2016).

A detailed analysis of the current situation on the nursing labour market, organisation and distribution of work, needs, expectations, motivators at work and frustrations of nurses on the job will allow for better management of currently available resources and the reduction in the numbers exiting the nursing profession. A careful and systematic analysis of projected growth, replacement needs, and education capabilities should provide policymakers with a more complete picture of trends and predictions of the shortage.

The aim of the study is to analyse changes in the size of the population of nurses in Poland in the years 2004–2014, considering changes in their employment and the phenomenon of aging.

1. LITERATURE REVIEW

The shortage is created by two major and independent factors: occupational growth and replacement needs. According to the US Bureau of Labor Statistics, by 2022, the fastest growing numbers of new jobs are expected for personal care aides in the first place (580 800 new jobs, increasing by 48.8% compared to 2012) with nurses being the second highest job growth (526 800 new jobs, increasing by 19.4% compared to 2012), and home health aides in the fourth position (424 200 new jobs, increasing by 48.5%) (BLIS report, 2013). Replacement needs are a more significant source of job openings than job growth. Replacement needs are likely to exceed the average in those occupations that employ many women. There are two reasons for this situation: large numbers leave the labour force each year to assume family responsibilities, and a large proportion of older nurses has relatively few years of working life remaining. This calculation shows the scale of the problem: two out of every three job openings must be projected for replacing workers who leave their occupation. An experience gap is another important issue to resolve when hiring new employees to replace the nurses often leaving after many

years on duty. Employers need to focus on the fact that it is their responsibility and burden to ensure that new nursing staff can maintain practical skills and expertise. While improved strategies for recruiting health professionals, in part from foreign countries, are needed, major efforts should be directed towards maintaining employed nurses in their jobs for as long as possible (Westendorf, 2007). Migration of health professionals across countries, attracting young people to join the nursing workforce and retention of the existing staff are three possible approaches to tackle current and future nurse shortages (Heinen, 2013). Poland has been dealing with various degrees of nursing frustration and shortage for decades; however, this topic is rarely addressed in scientific publications. On the one hand, the role and importance of professional nursing care in contemporary medicine and health care are increasing due to an impact of ageing population and health problems connected with the rising incidence of chronic diseases and disabilities, which requires more health care services and the related broadening of the scope of nursing care. On the other hand, the perception of the nursing profession as unattractive in terms of financial, long-term professional development opportunities and satisfaction, reducing young people's interest in joining the profession, is linked to the limited capacity of reduced numbers of nursing schools and the ageing nursing workforce (Zgliczynski, 2016). This shortage is on the cusp of becoming a crisis, one with worrying implications for patients and health care providers alike. This is also one of the causes of leaving the profession. There are several reasons for such a situation, which could be categorised into demographic, work-related, and individual-related variables. Top reasons why licensed nurses are not working in nursing are the following: better-paid work in other professions, childcare responsibilities, other family responsibilities, work-related stress, work arrangements e.g. 12 night shifts, and possibilities for an early retirement for those older than 55.

Nurses, being the largest professional group in the healthcare sector, are strongly affected by budget balancing attempts. For many institutions, the easiest and fastest means to balance the books is to cut back the nursing workforce as institutions restructure, downsize, merge or actively shift care from hospitals to communities (Alameddine, 2012). Adequate numbers of qualified and distributed nurses are now one of the most important challenges faced by the Polish healthcare system. A better understanding of factors influencing decisions of nurses, an age structure

analysis, an assessment of the current situation on the nursing labour market in terms of its demand and supply, impact on future decisions to prevent the shortage of nurses. The aim of the study is to analyse changes in the size of the nurse population in Poland in the years 2004–2014, considering, among other things, their employment and ageing.

2. RESEARCH METHODS

The analysis is based on the published data from the following sources:

- Central Register of Nurses and Midwives. It is a source of information about nurses employed in Poland and a collection of personal data specified in the Act on Professions of a Nurse and Midwife. The Central Register is kept by the Polish Chamber of Nurses and Midwives,
- Central Statistical Office (GUS) — Health and health care in 2014,
- Organisation for Economic Co-operation and Development (OECD) — Health at a glance: Europe 2016.

3. RESULTS

3.1. COMPARISON TO OTHER COUNTRIES IN EUROPE

Human resources are one of the essential elements of the healthcare system. Fig. 1 presents the number of practising nurses per 1000 inhabitants

in different European countries for two years (2000 and 2014). Among the presented European countries, the ratio of 5.2 places Poland in the bottom fifth position and shows a significant reduction in the patient access to nursing services. Between 2000 and 2014, a minimal increase in this indicator was recorded, from 5.0 in 2000 to 5.2 in 2014. The average indicator in 28 EU countries was 6.9 in 2000 and increased to 8.4 in 2014.

3.2. THE NUMBER OF LICENSED AND EMPLOYED NURSES IN COMPARISON TO OTHER HEALTH CARE PROFESSIONS

In this analysed case, it is important to consider both the number of licensed professionals and the number of people actually employed in the Polish health care system (Fig. 2). In 2015, the Central Statistical Office of Poland (GUS) published the most recent available data on professionals working in public and private healthcare institutions and practices, which must report to the Ministry of Health. The data do not include persons for whom the main workplace is the National Health Fund, a university, public administration or a local government authority (GUS, 2015).

According to registers maintained by the Polish Chamber of Nurses and Midwives, the Chamber of Physicians and Dentists, the Pharmaceutical Chamber, and the Chamber of Laboratory Diagnosticians, in 2014, licensure had the following numbers of health care professionals: 141.4 thousands of medical doctors, 40.1 thousands of dentists, 282.5 thousands of nurses, 35.5 thousands of midwives, 31.4 thousands of pharmacists, and 14.7 thousands of laboratory diagnosticians. The number of employees in both

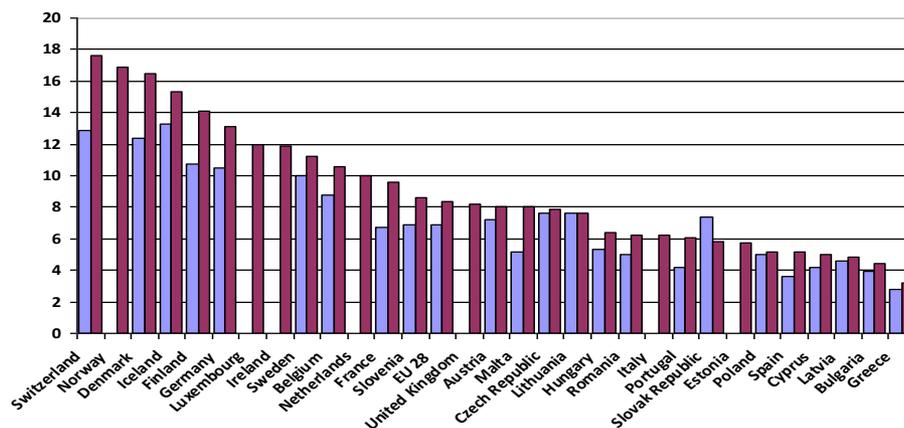


Fig. 1. Practising nurses per 1000 inhabitants in 2000 and 2014 (or the nearest year)

Source: (<http://dx.doi.org/10.1787/health-data-en>, 12.11.2016).

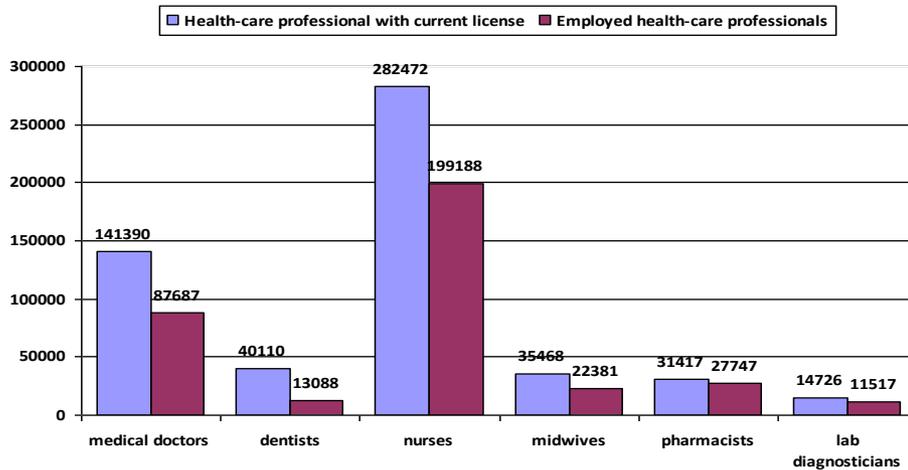


Fig. 2. Numbers of health care professionals with a current license and those employed in public and private health care entities in 2014

Source: (<http://stat.gov.pl>, 10.11.2016).

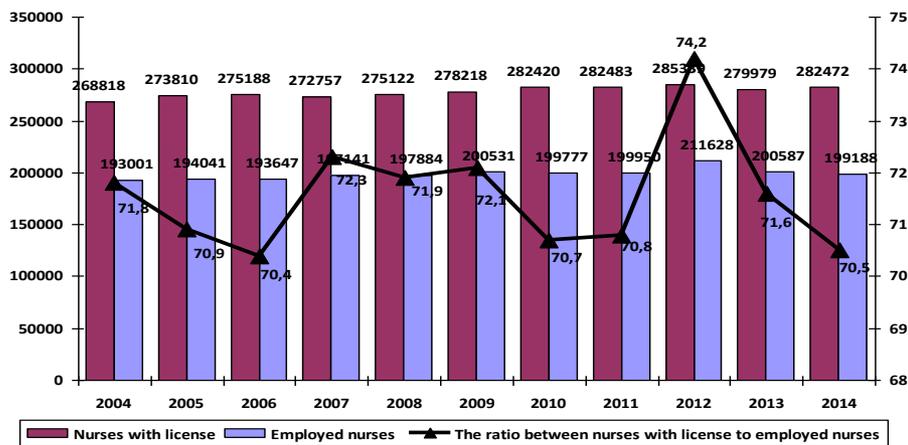


Fig. 3. Number and ratio of nurses with the current license and number of nurses employed in public and private health care entities in 2004–2014

Source: (<https://www.csioz.gov.pl/statystyka/biuletyn-statystyczny>, 12.11.2016).

private and public healthcare system analyses has shown that in 2014, nurses were still the dominating group of professionals but only above 70% of licensed nurses were professionally active. In 2014, the percentage of the employed among licensed health care specialists in other professions were as follow: 62% of doctors, 33% of dentists, 63% of midwives, 88% of pharmacists, and 78% of laboratory diagnosticians.

Fig. 3 was made to analyse the dynamics and trends of the number and ratio of licensed and employed nurses. The analysis started in 2004, one year before Poland joined the EU.

The percentage of employed nurses compared to the number of licensed nurses varied between

the lowest ratio of 65.1% in 2005 and the highest ratio of 71.7% in 2012. The latest ratio of 2014 was 70.9%, which is slightly lower compared to the highest ratio of 2012. After Poland had joined the EU, the immigration of nurses to other EU member states was observed in 2005. The decrease in the ratio between licensed and employed nurses was the lowest in the year of the EU accession and one year after. The unemployment rate of nurses in 2013 was 2.8% (5406 unemployed nurses) and 2.3% (4468 unemployed nurses) in 2014 already.

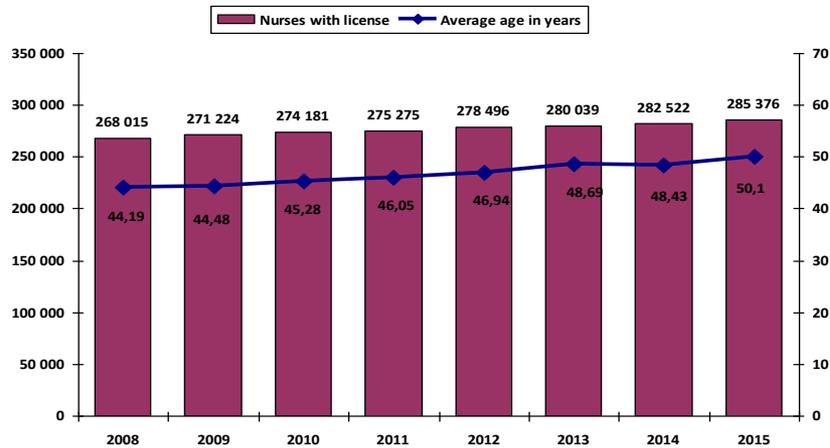


Fig. 4. Number of licensed nurses and the average age in 2008–2015

Source: (www.arch.nipip.pl, 11.11.2016).

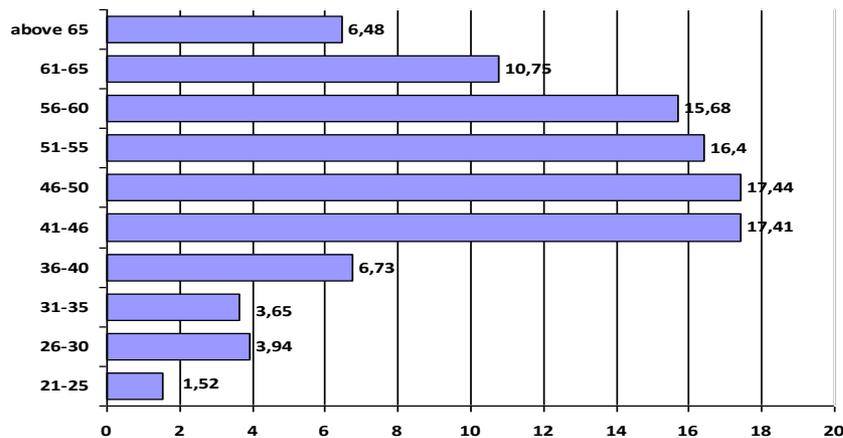


Fig. 5. Age structure of licensed nurses in the Central Register in 2014 [%]

Source: (www.arch.nipip.pl, 11.11.2016).

3.3. AGE STRUCTURE OF NURSES

The analysis of age in the period between 2008 and 2015 showed the ageing of this profession. The average age of a Polish nurse in 2008 was 44.19 years, increasing by about six years to 50.1 within the analysed period.

The population of nurses aged above 65 is almost 4.5 times bigger compared to the youngest age group of 21–25. This demonstrates the insufficient generation replacement.

The biggest age groups are groups of nurses in their forties: 41–45 years (17.41%) and 46–50 (17.44%), followed by a slightly smaller group of those aged over 50 years: 51–55 years (16.4%) and 56–60 years (25.68%). Thus, 2/3 of the population of nurses are people aged 41–60, and nearly 85% of the population are the nurses over the age of 40. This can,

therefore, be used to determine that nurses are a “demographically old professional group”.

4. DISCUSSION

Registered nurses with the current license are the largest group of health professionals that provide care in every setting of the healthcare system. The comparison of the number of nurses per 1000 inhabitants in Poland and other European countries shows a significant shortage of professionally active nurses, placing Poland in the fifth bottom position. The dynamics of this indicator were minimally increased within four years. The number of medical doctors with the current license is almost half of the nurses. The analysis of the number of employees

in both private and public healthcare systems has shown that in 2014, nurses were still a dominating group of professionals but only above 70% of licensed nurses were professionally active.

The low rate of unemployment of 2.3–2.8% is caused by economic immigration on the one hand and the natural unemployment on the other, as a result of the lack of jobs in the region, economic reasons, and the restructuration which caused the reduction in the level of nurse employment as well as growing numbers of specialists exiting the profession due to low salaries. Recruiting inactive nurses with an active nursing license but currently not working as nurses or working in non-nursing occupations may be a feasible and cost-effective method, which is used in many countries worldwide, for immediately addressing the nursing shortage (Hsing, 2016). Unfortunately, such efforts are not observed in Poland.

The sources of information about the number of professionals having an active license are the chambers of particular professions collecting information about their members. To obtain the right to practise the nursing profession in Poland after graduating from a university, the graduate must apply in writing. Currently, many young graduates who finish studies and want to work abroad in one of the EU countries do not register in the Polish Chamber of Nurses and Midwives. The difference between the number of nurses with the license and employed nurses emerges due to several reasons such as working in different health care entities outside Poland or leaving the profession for a period shorter than five years. Nurses who have not practised the profession for five years after the graduation or have not worked in the profession for more than five years must undergo special training to maintain the right to practise. Unfortunately, the law does not state the period to be practised by a nurse without interruption not to need the training. The described situation impacted the precise estimation of the number of nurses with the active nursing license who are not currently working in the nursing profession. The dynamics between the number of employed nurses and the number of licensed nurses could be explained by immigration. Most of the older nurses who decided to work in other EU member states maintained their professional license in Poland because of the required confirmation from the Polish Chamber of Nurses and Midwives regarding their education. Now, when the diplomas of nursing schools are widely accepted in the EU, another trend is observed. After complet-

ing the education, young nurses no longer apply for their license in Poland but leave the country immediately after the graduation. The dynamics of the number of persons having the actual license to practise is the result not only of the influx of new people who complete education and natural losses associated with the older vintage leaving the job but also the immigration to the Western Europe and emigration mostly from Ukraine and other post-Soviet countries. In recent years, Poland has witnessed a strong rise in medical graduates explained partly by an increasing number of international students choosing Poland to pursue their medical studies; however, most of them leave the country after graduation (Goździak, 2016; Zgliczynski, 2016). According to different data, about 10% of graduates of nursing schools do not work in the profession (Borowiak, 2011). In Poland, low wages of nurses and low pensions are the main reason for immigration and reduced interest in the profession. For young people, limited possibilities of professional development and little difference in salaries depending on years of experience result in the search for different professional opportunities (Marcinowicz, 2016; Skrzypczak, 2016).

Based on the published results of the RN4CAST study (Aiken, 2013), an average Polish nurse working in a hospital is 41 years old, which is among the oldest in Europe together with an average Finnish nurse (42 years old). The Polish result was impacted by the average age of the Polish nurse of almost 48.5 years in 2014, with 2/3 of all nurses being 41–60 years old and nearly 85% of the population over the age of 40. There is a clear insufficiency of generation replacement in this profession.

It is clear that nurses are a demographically old professional group (Zgliczynski, 2016). The further education provided to nurses and midwives after undergraduate studies provides opportunities to continue education at the master's degree level. Many nurses completing the first level of studies decide to continue their education at the master's degree level without undertaking a job in the profession. The current system has prolonged the period of education to 3 or 5 years of studies required for a nurse/midwife to take a job in the profession compared to the previous requirement of two years. So, currently introduced measures aimed at the increase of the numbers of young nurses starting work will bring results in five years. It seems that the shortage of professionals and the gap in experience will become a problem in the nursing profession within a few years in Poland.

According to the data of the survey conducted among nurses and midwives in Łódź, about 70% of participants have at least one additional working place. If nurses/midwives had only one permanent employment, about 30% of health care institutions in Łódź would be unable to provide nursing care according to requirements (Zdziebło, 2006). The picture of the Polish nursing population is very pessimistic. An average Polish nurse is a female over 40, holding at least one additional working place, overloaded and frustrated because of a low salary and the lack of promotion prospects. Immediate action should be taken to improve the situation of Polish nurses and decrease the shortage in this profession. This study has some weaknesses. It was based only on the available registry data and focused on the supply side of the labour market. The authors decided to analyse only the number of nurses, employment, and age structure. These figures could not reflect the full picture of the nursing labour market. To obtain a full picture of the shortage of nurses and the situation on the labour market, additional studies are required.

CONCLUSIONS

Nurses are the largest professional group in the healthcare sector. In Poland, one of the lowest numbers of nurses per 1000 inhabitants has been recorded after many years. Only 70% of licensed nurses are employed in health care entities. The average age of a Polish nurse is about 50 years, and nearly 85% of the population are nurses over the age of 40. There is no generation replacement in this profession.

The article presents the of comparison the shortage of professionally active nurses in Poland and other European countries. The most reliable and unfortunately incomplete data regarding the number of nurses come from the register, which does not always contain realistic numbers. There is a strong need to improve the tracking system of the nurses register to accurately monitor the number of nurses in Poland and their employment status.

Because of the shortage and ageing of this profession, it is necessary to take immediate action to reduce the shortage of professionally active nurses by increasing the appeal of this profession for young people and by encouraging nurses to return to their profession. It is also necessary to take action to delay the retirement for those nurses who want to work longer and to use the potential of older nurses. This is

particularly important because of the gap in experience, which is going to become especially relevant in the nearest future.

ACKNOWLEDGEMENTS

The authors have NO affiliations with or involvement in any organisation or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

LITERATURE

- Aiken, L. H., Sloane, D. M., Bruyneel, L., Van den Heede, K., & Sermeus, W. (2013). Nurses' reports of working conditions and hospital quality of care in 12 countries in Europe. *International Journal of Nursing Studies*, 50(2), 143-153. doi: 10.1016/j.ijnurstu.2012.11.009
- Alameddine, M., Baumann, A., Laporte, A., & Deber, R. (2012). A narrative review on the effect of economic downturns on the nursing labour market: implications for policy and planning. *Human Resources for Health*, 10(23). doi: 10.1186/1478-4491-10-23
- Borowiak, E., Manes, A., & Kostka, T. (2011). Sytuacja demograficzna pielęgniarek i położnych na podstawie analizy danych zawartych w rejestrze Okręgowej Izby Pielęgniarek i Położnych w Łodzi [Demographic situation of nurses and midwives based on the analysis of data in register of Regional Chamber of Nurses and Midwives in Lodz]. *Problemy Pielęgniarstwa*, 19(4), 417-423.
- Centrum Systemów Informacyjnych Ochrony Zdrowia. (2005-2015). *Biuletyn Statystyczny Ministerstwa Zdrowia* [Statistical Bulletin of the Ministry of Health]. Warszawa, Poland: Centrum Systemów Informacyjnych Ochrony Zdrowia. Retrieved from <https://www.csioz.gov.pl/statystyka/biuletyn-statystyczny>
- Goździak, E. (2016). Biała emigracja: variegated mobility of polish care workers. *Social Identities*, 22(1), 26-43. doi: 10.1080/13504630.2015.1110354
- GUS, Departament Badań Społecznych i Warunków Życia [CSO, Social Surveys and Living Conditions Department]. (2015). *Zdrowie i ochrona zdrowia w 2014r.* [Health and healthcare in 2014]. Warszawa, Poland: Zakład Wydawnictw Statystycznych. Retrieved from <http://stat.gov.pl/obszary-tematyczne/zdrowie/zdrowie/zdrowie-i-ochrona-zdrowia-w-2014-r-,1,5.html>

- Heinen, M., van Achterberg, T., Schwendimann, R., Zander, B., Matthews, A., Kózka, M., Ensio, A., Sjetne, I., Moreno Casbas, T., Ball, J., & Schoonhoven, L. (2013). Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries. *International Journal of Nursing Studies*, 50(2), 174-184. doi: 10.1016/j.ijnurstu.2012.09.019
- Liang, Y. W., Chen, W. Y., Lee, J. L., & Huang, L. C. (2012). Nurse staffing, direct nursing care hours and patient mortality in Taiwan: the longitudinal analysis of hospital nurse staffing and patient outcome study. *BMC Health Services Research*, 12(44). doi: 10.1186/1472-6963-12-44
- Marcinowicz, L., Owłasiuk, A., Slusarska, B., Zarzycka, D., & Pawlikowska, T. (2016). Choice and perception of the nursing profession from the perspective of Polish nursing students: a focus group study. *BMC Medical Education*, 16(243). doi: 10.1186/s12909-016-0765-3
- Naczelna Izba Pielęgniarek i Położnych [Polish Chamber of Nurses and Midwives]. (2011). *Centralny Rejestr Pielęgniarek i Położnych [Central Register of Nurses and Midwives]*. Retrieved from <http://www.arch.nipip.pl/index.php/aktualno%C5%9Bci/systemy-informacyjne-ochrona-danych-ობოbowych/2996-%20centralny-rejestr-pielęgniarek-i-polożnych>
- OECD/EU. (2016). *Health at a Glance: Europe 2016 – State of Health in the EU Cycle*. Paris, France: OECD Publishing. Retrieved from: <http://dx.doi.org/10.1787/health-data-en>
- Richards, E., & Terkanian, E. (2013). Occupational employment projections to 2022. *Monthly Labor Review, U.S. Bureau of Labor Statistics*. Retrieved from <http://www.bls.gov/opub/mlr/2013/article/pdf/occupational-employment-projections-to-2022.pdf>
- Sermeus, W., & Bruyneel, L. (2010). *Investing in Europe's health workforce of tomorrow: scope for innovation and collaboration. Summary Report of the Three Policy Dialogues*. Leuven, Belgium: Centre for Health Services & Nursing Research, Catholic University Leuven. Retrieved from <https://www.enpam.it/wp-content/uploads/Report-PD-Leuven-FINAL.pdf>
- Skrzypczak, Z., & Haczynski, J. (2016). *Nurses wages in Poland in 2010-2014* (in print).
- Westendorf, J. J. (2007). The nursing shortage: recruitment and retention of current and future nurses. *Plastic Surgical Nursing*, 27(2), 93-97. doi:10.1097/01.PSN.0000278239.10835.1c
- Yu, H. Y., Tang, F. I., Chen, I. J., Yin, T. J. C., Yu, S., & Chen, C. C. (2016). Nurse administrators' intentions and considerations in recruiting inactive nurses. *Journal of Nursing Management*, 24(5), 589-597. doi: 10.1111/jonm.12361
- Zdziebło, K. (2006). Mobilność zawodowa, wybór, szansa czy konieczność? [Job mobility, choice, chance or necessity?]. *Pielęgniarka i Położna*, 9, 9-12.
- Zgliczynski, W. S., Cianciara, D., Rostkowska, O., & Pinkas, J. (2016). Nurses in Poland – staffing and training system. *Postępy Nauk Medycznych*, 5, 279-283. doi: 10.5604/08606196.1202369