

# SPRAWY MIĘDZYNARODOWE

Marcin MIKOS,<sup>1</sup> Katarzyna GADEK,<sup>2</sup>

DOI : 10.32055/mw.2020.15.7

Anna BIAŁK-WOLF,<sup>3</sup>

Michał SEWERYN,<sup>4</sup> Joanna AUGUSTYŃSKA<sup>5</sup>

## An Analysis of the Scale of Medical Tourism

### Introduction

According to the United Nations World Tourism Organisation (UNWTO), tourism “comprises the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business, and other purposes.”<sup>6</sup>

Poland is one of the most popular tourist destinations in Europe. In 2018, 85.9 million foreign visitors (tourists and same-day visitors) travelled to this country, marking a 2.6% increase compared to the previous year. This number includes 19.6 million tourists – a 7.5% increase compared to 2017.<sup>7</sup>

One of the motivating factors is the eagerness and desire to obtain medical services in another country. Consistent with Białk-Wolf,<sup>8</sup> “medical tourism is traveling abroad with the intent to make use of medical treatment to preserve life, enhancing the quality of life or improving one’s appearance; because of lower cost, better quality or the inaccessibility of some procedure at the place of residence (resulting from a lack of personnel, knowledge, technical equipment, and procedures, or long waiting times or legal limitations) often combined with sightseeing the visited place.”<sup>9</sup> According to Lunt and Carrera, medical tourism is “organised travel outside one’s natural healthcare jurisdiction for the enhancement or restoration of the individual’s health through medical intervention.” The phenomenon may result from a broad array of considerations: economic, for example, resulting from lower prices of medical procedures; qualitative, by providing a patient with a greater sense of safety; and innovative, giving access to

---

<sup>1</sup> Marcin Mikos – Department of Economic and Systemic Analysis, National Institute of Public Health PZH – National Research Institute in Warsaw.

<sup>2</sup> Katarzyna Gądek – the Cracow City Office, Poland.

<sup>3</sup> Anna Białk-Wolf – Institute of Medical Tourism Research and Development, Poland.

<sup>4</sup> Michał Seweryn – EconMed Europe, Cracow, Poland.

<sup>5</sup> Joanna Augustyńska – EconMed Europe, Cracow, Poland.

<sup>6</sup> Department of Economic and Social Affairs, Statistics Division. Chapter 2: The demand perspective: basic concepts and definitions. In: Department of Economic and Social Affairs, Statistics Division, International Recommendations for Tourism Statistics 2008. New York, NY: United Nations Publication; 2010. p. 9–22.

<sup>7</sup> Główny Urząd Statystyczny, *Turystyka w 2018*, Zakład Wydawnictw Statystycznych, 2019.

<sup>8</sup> A. Białk-Wolf, *Potencjał rozwojowy turystyki medycznej*, “Zeszyty Naukowe Uniwersytetu Medycznego, Ekonomiczne problemy usług” 2010, no. 591(53), p. 653–662.

<sup>9</sup> A. Białk-Wolf, *Potencjał rozwojowy turystyki medycznej*, “Zeszyty Naukowe Uniwersytetu Medycznego, Ekonomiczne problemy usług” 2010, no. 591(53), p. 653–662.

the latest treatment technologies. Studies on patient mobility in the European Union show that most patients (71%) travel abroad for treatment to obtain access to procedures unavailable in their country. Other reasons for patient mobility include seeking higher quality medical services (53%), the renown of care centres, specialists, or both (38%), and shortening the waiting time for the service (31%).<sup>10</sup>

According to Statistics Poland, in 2018, 0.75% (640.6 thousand persons), among all foreign visitors, travelled to Poland due to health-related reasons.<sup>11</sup> Although medical tourism is not one of the economic priorities of the country, individuals going to Poland for health-related reasons incurred the highest expenditure during their stay, namely \$742 per person, followed by visitors participating in conferences and congresses – \$616, and in trade shows and exhibitions – \$548.<sup>12</sup>

### Cracow is a Tourist Hub

Cracow is an important destination on the map of European tourism. As the former capital city of Poland, it perfectly combines historical heritage with attractive leisure, cultural, and entertainment facilities and services while providing premium transport, accommodation, and dining.

The most recent studies on tourism traffic<sup>13</sup> demonstrate that the City received 14.05m visitors in 2019, of which 23.5% were foreign travellers. It gives a 4.1% increase in the number of visitors compared to 2018. A population breakdown shows that arrivals from Germany account for 14.2%, from the United Kingdom – 13.9% of visits, Italy – 11.5%, France – 11.2%, and Spain – 10.4%. The primary purposes of foreign tourist visits to Cracow include heritage tourism – 37.2%, leisure – 20.4%, and entertainment – 10.0%. Health reasons are declared by 0.4% of foreign visitors in 2018 and 0.9% – in 2017.<sup>14</sup>

The most famous heritage sites in Cracow include the Main Market Square with the centrally located Cloth Hall, Royal Wawel Castle, the former Jewish district of Kazimierz, and the Sanctuary of Divine Mercy.

The total expenditure made by tourists in Cracow in 2019 is estimated at approximately 7.5 billion PLN (\$1.93 billion<sup>15</sup>) and demonstrates a tendency to grow.<sup>16</sup>

<sup>10</sup> Directorate-General for Communication, *Patients' rights in cross-border healthcare in the European Union (Survey)*, Special Eurobarometer 425, 2015.

<sup>11</sup> Główny Urząd Statystyczny, *Turystyka w 2018*, Zakład Wydawnictw Statystycznych, 2019.

<sup>12</sup> J. Rab-Przybyłowicz, *Trends and Socio-economic Aspects of Medical Tourism Development in Poland*, "Studia Periegetica" 2016, no. 2(16), p. 99–118.

<sup>13</sup> Małopolska Organizacja Turystyczna. Raport Ruchu Turystycznego w Krakowie w 2019 r. – Infografika, Urząd Miasta Krakowa 2020.

<sup>14</sup> K. Borkowski, T. Grabiński, R. Seweryn, et al., *Raport Ruchu Turystycznego w Krakowie w 2018 r. Monografia*, t. 2, 2019, 1 Małopolska Organizacja Turystyczna; K. Borkowski, T. Grabiński, R. Seweryn, et al., *Raport Ruchu Turystycznego w Krakowie w 2017 r. Monografia*, t. 1, 2018, 1 Małopolska Organizacja Turystyczna.

<sup>15</sup> Narodowy Bank Polski, Average dollar exchange rate quoted by the NBP on 3rd March 2020 (USD 1 = PLN 3.8804), <https://www.nbp.pl/>, 3 March 2020.

<sup>16</sup> Małopolska Organizacja Turystyczna, *Raport Ruchu Turystycznego w Krakowie w 2019 r. – Infografika*, Urząd Miasta Krakowa 2020.

## The Medical Potential of Cracow

Besides a plethora of historical and cultural values, Cracow has solid foundations for offering healthcare services. This is mainly due to the Medical School (Collegium Medicum) and the university teaching hospitals of one of Europe's most prestigious institutions of higher education, the Jagiellonian University.

The total hospital bed resources in the City of Cracow consist of 8,338 beds in various specialty wards, with the majority in public hospitals. Private hospitals have 2,015 beds, which accounts for 24.2% of the total number of bed resources.<sup>17</sup> There are 271 dental inpatient clinics in the City, most of which belong to the private sector.<sup>18</sup>

The medical professionals of the Małopolska Region include 13,535 physicians (39.8 per 10,000 inhabitants), 3,855 dentists (11.3 per 10,000 inhabitants), 25,823 nurses (75.9 per 10,000 inhabitants) and 3,272 midwives (9.6 per 10,000 inhabitants).<sup>19</sup>

As far as availability of imaging diagnostics is concerned, there are 60 Computed-Tomography units (CAT scanners) in the region, which corresponds to 1.8 per 100,000 inhabitants, 34 Magnetic Resonance Imaging (MRI) devices (1.0 per 100,000 inhabitants), and three Positron Emission Tomography (PET) scanners, at 0.1 per 100,000 inhabitants.<sup>20</sup>

Local authorities have made the development of medical tourism in Cracow a priority. The supporting arguments include high-quality medical facilities in the City, spa resorts near Cracow, premium accommodation, and reliable transport. According to the local authorities, this field holds significant potential for growth, especially in the context of the ageing populations of Western Europe and the increased demand for healthcare services in that region. The development of medical tourism combined with the City's economic growth will also help decrease the seasonality in tourist traffic in Cracow, making it popular all year round.<sup>21</sup>

As the phenomenon of medical tourism has not been carefully researched yet, the main aim of this study was to assess the medical tourism market in Cracow – the capital of the Małopolska region of Poland.

## Material and methods

General research of tourism traffic showed that an annual average of 0.4% of foreign visitors in Cracow arrived for medical purposes.<sup>22</sup>

<sup>17</sup> Urząd Marszałkowski Województwa Małopolskiego. Departament Zdrowia i Polityki Społecznej, *Lecznictwo w Małopolsce*, Raport wg stanu na dzień 31.12.2016 r., Kraków 2017.

<sup>18</sup> *Register of entities performing medical activities, register of dental inpatient clinics*, <https://rpwdl.csioz.gov.pl/>, 5 Aug. 2020.

<sup>19</sup> Centrum Systemów Informacyjnych Ochrony Zdrowia, "Biuletyn statystyczny Ministerstwa Zdrowia 2019", Warszawa 2019.

<sup>20</sup> Centrum Systemów Informacyjnych Ochrony Zdrowia, "Biuletyn statystyczny Ministerstwa Zdrowia 2019", Warszawa 2019.

<sup>21</sup> K. Borkowski, T. Grabiński, R. Seweryn, et al., *Raport Ruchu Turystycznego w Krakowie w 2017 r. Monografia*, t. 1, 2018, 1 Małopolska Organizacja Turystyczna.

<sup>22</sup> K. Borkowski, T. Grabiński, R. Seweryn, et al., *Raport Ruchu Turystycznego w Krakowie w 2018 r. Monografia*, t. 2, 2019, 1 Małopolska Organizacja Turystyczna.

Therefore, a study regarding the situation on the medical tourism market in the City had been conducted with a proprietary paper-based questionnaire yearly from 2015 to 2018.

The study analysed the type of medical facility, the percentage of revenue from providing services for foreign patients, the structure of such services compared, and a breakdown by the country of patient origin. Additionally, the questionnaire included questions concerning the method of patient acquisition, marketing activities of the facility, as well as opportunities and barriers for the development of medical tourism perceived by the respondents. The obtained data underwent qualitative and quantitative analysis, with the qualitative approach being dominant due to the low number of respondents.

In 2015 the first questionnaire was delivered to 42 medical care units registered with the governor (*voivode*) for inpatient treatment in Cracow. With 17 completed questionnaires obtained, the return rate was 40%. The participants included 17 healthcare units, of which 13 were hospitals, and the remaining 4 were medical facilities for specialist outpatient care, diagnostic imaging, dentistry, and nursing care. In 2018, the return rate of questionnaires fell to 25%, and most participants were outpatient and hospital units. A decline in the interest of dental facilities participating was also noticed.

One of the problems with collecting reliable data regarding medical tourism results from the fact that the leading group of persons coming to Poland to make use of medical treatment are Polish citizens living abroad. They pay privately for their treatment, and often not even the clinics are aware that many of their patients are international patients. Other issues with collecting accurate data are due to the clinics' and patients' reluctance to share information about their health (especially if the medical treatment is a beauty procedure or is forbidden in the country of origin). The scope of medical tourism is comprehensive, making an exact definition and a precise estimate of its size difficult. Especially regarding one-day treatments and "medical wellness," there is much debate whether these should be considered medical tourism as such. As it is difficult to estimate the size of the medical tourism market, the methodology mentioned above can be seen as a way to overcome this shortcoming. One should keep in mind that not all foreign patients in a clinic have travelled to Poland intending to obtain medical treatment. They could also have come with another original aim or are working or living in Poland.

Nevertheless, they are a good indicator of medical tourism, which is also used in other countries. This method is frequently used because it is a reliable statistic. So we can be confident that at least some of these patients are, in fact, medical tourists.

## Results

In the most current study from 2018, areas of particular interest for foreign patients undergoing planned treatment in Cracow include:

- Dentistry – implants, prosthetics, endodontic treatment, aesthetic dentistry, dental surgery, orthodontics;
- Plastic surgery – breast implants, botox, liposuction, eyelid correction, vaginoplasty, hair transplants, hyperhidrosis treatment, lifting without a scalpel, mesotherapy with platelet-rich plasma;

- Ophthalmology – laser vision correction, refractive lens exchange, cataract treatment, eyelid lesion removal;
- Oncology – outpatient chemotherapy, proton therapy, radiotherapy, one-day surgery (including removal of birthmarks), breast cancer and brain tumors surgery, outpatient oncological consultations;
- Cardiology – coronaroplasty, coronary angiography, cardioverter implants, ablation in atrial fibrillation, dilation of carotid and vertebral arteries, cardiological consultations;
- Gynecology and obstetrics – *in vitro* fertilisation, intrauterine insemination, tubal patency test;
- Orthopedics – knee joint reconstructions, hip replacement, stem cell treatment, spine operations, podiatry, physiotherapy, sports medicine.

Concerning the readiness of medical facilities to provide services for foreign patients in 2018, 74% of the units investigated have quality management certificates (either national for quality management in healthcare or ISO-type). There are still no hospitals accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).

Due to a renewed study conducted in 2015, 2016, 2017, and 2018, it is possible to make comparisons and statements regarding medical tourism trends in Cracow. It should be highlighted that all of the reports are based on the input from medical units, which took part in the survey.

Comparing the numbers of foreign patients with the hospital treatments, we can state that this number varies wildly every year: in 2015, it was 1,959 patients, in 2016 – 3,380, in 2017 – 1,223, and 2018 – 3,030. Interesting is the increased amount of inpatient consultations, which rose from 536 in 2015 to 15,129 in 2017, just to fall rapidly in 2018 to 3,088 patients. The number of rehabilitation procedures was the highest in 2017 – 138 procedures, compared with 69 in 2015, 62 in 2016, and 128 in 2018.

In 2017 dental clinics participated in the investigation for the first time. The number of foreign patients amounted to 13,127, whereas in 2018, it was only 1,761. Considering the several times higher number of inpatient and dental consultations in foreign patients in 2017, a clear trend is hard to be noticed between the annual studies. The total number of foreign patients in 2017 amounted to 29,617, and in both – previous, and next year, there were three times fewer patients – 9,275 in 2016 and 8,007 in 2018. It should be noted that not all of them can be considered medical tourists.

When analysing the country of origin of the patients during the time between 2015 and 2017, we can observe a relatively constant share of the German citizens (about 16%), British (about 23%), and French (about 9%) in 2015–2017. The percentage of Ukrainians fell from 30% in 2015 to only 15% in 2017. Patients from Norway and the USA came firstly in 2016, and the share of Russians has grown from 3% in 2016 to 11% in 2017. However, in 2018 we can notice a few changes in the structure of the medical tourists. There was a significant increase in the share of the citizens of Ukraine (51%) and Britain (35%) and a decrease in the percentage of German (5%), French (2%), and Russian (2%). Dominated by Ukrainian citizens, this distribution differs from the general structure of foreign tourists visiting Cracow, as they are the group

most frequently using medical services. Still, they are not a dominant nationality in terms of total tourist traffic (i.e., German).

The percentage of revenue generated by the different services purchased by foreign patients is also difficult to compare due to the significant disparity between dental clinics and hospitals. The average income from the treatment of foreign patients for medical institutions in Cracow participating in the study amounted to 7.1% of all annual revenues in 2018, 10.8% – in 2017, and 9.1% – in 2016. However, the average is overstated by dental facilities, whose gains in this area reach up to 50% per year. The average revenues for this segment in 2018 amounted to 19.4% of the total values regarding dental institutions (17.5% in 2017). Hospitals have a small share of income generated by the services purchased by foreign patients, and it is in the range between 0.0003% and 7%, with the average value accounted for 1.03%.

Since 2016, 100% of the medical units have English-speaking staff and personnel. In 2015, 42% of the units' personnel spoke German, Russian, French, or all. Moreover, in 29% of the clinics, communication with the medical staff and personnel is possible also in Ukrainian or Italian. In 2017, 64% of the clinics offered websites in English, whereas in 2015, this value had only been 59%. Only single service providers run websites in languages other than English, including German, Russian, Ukrainian, Italian, Swedish, and Dutch. In 2017, 76% stated that they operated call centres in English.

Regarding the tools used by the medical units to promote their services, the study confirms low activity in trying to reach foreign customers proactively. In 2017 – 10% and 2018 – 9.5% took part in international fairs in New York, London, Oslo, Stockholm, Kyiv, Lviv, Bergen, or Copenhagen. The percentage of medical units advertised in the international press is also growing; in 2018, it was 17%, in 2017 – 12%, whereas in 2016, this percentage had been only 4%. Other commonly used promotional tools are foreign websites for patients, promotions by foreign agents, and promotion in international dental magazines.

Turning to how patients travel to Cracow, the most common way was by privately organised trips by the patients: 40% in 2015, 62% in 2016, 35% in 2017, and 58% in 2018. Agents were involved in organising the trip in 35% of all travels in 2015, and this number decreased to 20% both in 2016 and 2017 and to 16% in 2018. The travel agents were responsible for 8.5% of patients in 2018 (a decrease of 4% compared to 2017). We can also observe in 2018 that 9% of patients chose a specific medical clinic due to the recommendation of another person and 8% were from diplomatic missions.

Answers to the open-response question concerning barriers perceived in the development of medical tourism in Cracow were also analysed. Participants most often mentioned increased demand for commercial services for Polish patients, shortages of medical staff, legal restrictions on advertising medical services, high costs for individual medical facilities of reaching the target groups with the offer, lack of international promotion of Cracow as a destination of medical tourism, competition from Romania, Hungary and Croatia in dentistry and also foreign exchange fluctuations related to Brexit. However, the percentage of medical units that recognise the difficulties in the

development of medical tourism is falling – in 2018, it was only 43%, whereas in 2017 – 58% of them, and 2016 – 68% noticed such difficulties.

In the last section of the study, the respondents recommended actions that regional authorities of the Cracow city could embark on to support the development of medical tourism. In the most recent study, they usually pointed to the need of strengthening the promotion of medical services as an asset of the City and region in the promotional campaigns they run to integrate the medical and tourist offers (meetings, fairs, bulletins, an online platform for browsing through the available services, etc.). Creating the long-term strategy with the promotion of medical potential, high-quality medical services, and patient safety in Cracow, and with information for tourists staying in Cracow about the available therapeutic base was also mentioned by medical units. Moreover, they needed an assistant for medical institutions in cooperation with diplomatic missions, as well as co-financing of participation in foreign fairs, financial support in raising the standards of quality of medical services, and legal support regarding legal regulations for the business in other countries.

In summary, we can observe that after a boom, the situation in the medical tourism market in Cracow stabilises. Medical facilities that have opted for medical tourism as the central area of their activity gain a clear competitive advantage. The areas of dentistry, aesthetic surgery, and orthopedics in Cracow are the best-prepared segments of medical services to serve foreign patients. The promotion of Cracow as a destination for medical tourism remains the industry's basic expectation for the City. We can observe positive trends and activities to establish well-organised medical tourism destinations in Cracow.

## Discussion and conclusion

Medical tourism is an intensively developing field in the global economy. In recent years, many countries have demonstrated an increase in the number of medical tourists. It is calculated that the medical tourism market size is expected to grow up to 25% each year.<sup>23</sup> The number of medical tourists travelling for treatment each year was estimated at 30–50 million.<sup>24</sup>

The largest beneficiaries of globalised healthcare include countries in Asia, specialising in a broad range of services. The main centres are situated in the South-eastern region of the continent: India, Thailand, and Singapore.<sup>25</sup> In 2015 and 2016, Malaysia won the International Medical Travel Journal's award for "Health and Medical Tourism Destination of the Year."<sup>26</sup> In 2018, the revenue from medical tourism in Malaysia

<sup>23</sup> F. Larisa, G. Țigu, *Medical tourism market trends – an exploratory research*, Proceedings of the International Conference on Business Excellence, 2017, no. 11(1), p. 1111–1121, <https://doi.org/10.1515/picbe-2017-0114>.

<sup>24</sup> N. Lunt, R. Smith, M. Exworthy et al., *Medical Tourism: Treatments, Markets and Health System Implications: A scoping review*, OECD, 2011.

<sup>25</sup> A. Chambers, *Trends in U.S. Health Travel Services Trade* [pdf], 2015, [https://www.usitc.gov/publications/332/executive\\_briefings/chambers\\_health-related\\_travel\\_final.pdf](https://www.usitc.gov/publications/332/executive_briefings/chambers_health-related_travel_final.pdf), 30 Nov. 2019.

<sup>26</sup> R.-M. Stephano, *Top 10 Medical Tourism Destinations in the World*, Medical Tourism, <https://www.magazine.medicaltourism.com/article/top-10-medical-tourism-destinations-world>, 25 Nov. 2019.

had increased by almost one billion Malaysian ringgit since 2011.<sup>27</sup> Thailand has the highest number of internationally accredited hospitals in Southeast Asia<sup>28</sup> and receives 1 million visitors per year.<sup>29</sup> Bumrungrad International Hospital in Bangkok is one of the best such institutions in Thailand, and it provides healthcare for over half of the country's medical tourists each year.<sup>30</sup>

The countries most eagerly visited in Europe for medical purposes include Hungary, Poland, the Czech Republic, Romania, and Latvia.<sup>31</sup> Budapest has become Europe's dental capital, with a 50–70% savings rate for dental treatment in Hungary.<sup>32</sup> Poland is one of the top destination countries, largely thanks to patients seeking various forms of dentistry, ophthalmology, and reproductive medicine. This country is also popular among foreign tourists interested in dental services. Thanks to qualified staff and cutting-edge medical equipment in Poland, 89% of patients are highly satisfied with the performance of medical services.<sup>33</sup>

The main medical tourism specialties worldwide are:<sup>34</sup>

- plastic surgery – liposuction, breast implants, rhinoplasty;
- ophthalmology – LASIK, LASEK, cataract surgery;
- hair restoration – hair transplant;
- bariatric surgery – gastric sleeve, gastric bypass;
- reproductive medicine – *in vitro* fertilisation;
- orthopedics – knee replacement, hip replacement, spine surgery;
- dermatology – mole removal, acne treatment;
- cardiology – CABG surgery, heart valve replacement;
- oncology – breast cancer treatment, chemotherapy.

Based on estimates of the Institute of Research and Development of Medical Tourism, which is established on data from the official statistics office in Poland (which collects only part of the data covering the phenomena of medical tourism), as well as expert interviews and an investigation of the demand of medical tourism in Poland – we are in the position to evaluate the number of medical tourists in this country. We know the number of foreigners coming to Poland due to health reasons (but the scope

<sup>27</sup> J. Müller, *Revenue from medical tourism Malaysia 2011–2018*, 2020, <https://www.statista.com/statistics/1013817/medical-tourism-revenue-malaysia/>, 25 Nov. 2019.

<sup>28</sup> R.-M. Stephano, *Top 10 Medical Tourism Destinations in the World*, Medical Tourism, <https://www.magazine.medicaltourism.com/article/top-10-medical-tourism-destinations-world>, 25 Nov. 2019.

<sup>29</sup> A. Chambers, *Trends in U.S. Health Travel Services Trade* [pdf], 2015, [https://www.usitc.gov/publications/332/executive\\_briefings/chambers\\_health-related\\_travel\\_final.pdf](https://www.usitc.gov/publications/332/executive_briefings/chambers_health-related_travel_final.pdf), 30 Nov. 2019.

<sup>30</sup> A. Chambers, *Trends in U.S. Health Travel Services Trade* [pdf], 2015, [https://www.usitc.gov/publications/332/executive\\_briefings/chambers\\_health-related\\_travel\\_final.pdf](https://www.usitc.gov/publications/332/executive_briefings/chambers_health-related_travel_final.pdf), 30 Nov. 2019; R.-M. Stephano, *Top Medical Tourism Destinations in the World*, Medical Tourism, <https://www.magazine.medicaltourism.com/article/top-10-medical-tourism-destinations-world>, 25 Nov. 2019.

<sup>31</sup> R. Fink, *Health Tourism in the EU: Facts and Figures*, 2018, <https://pro.regiondo.com/health-tourism-eu/>, 26 Nov. 2019.

<sup>32</sup> R. Phinyowan, *Top 10 dental tourism destinations*, 2018, <https://www.dentaldepartures.com/article/top-10-dental-tourism-destinations/>, 26 Nov. 2019.

<sup>33</sup> A. Lubowiecki-Vikuk, D. Dryglas, *Medical tourism services and medical tourism destinations in Central and Eastern Europe – the opinion of Britons and Germans*, “Economic Research-Ekonomska Istraživanja” 2019, no. 32(1), p. 1256–1274.

<sup>34</sup> <https://www.medigo.com/blog/medical-tourism-facts-figures/>, 26 Nov. 2019.

of these arrivals is more extensive than medical tourism) and the number of tourists who use treatments in health resorts. In 2018 this number was 55,000. Expert interviews and data collected by the Institute of Research and Development of Medical Tourism have depicted that the most prominent Polish clinics have no more than a few hundred foreign patients each year. This means that about 12,000 medical tourists come to them to undergo operations. The largest groups are dental tourists. This is due to a very competitive Polish offer in this field and because patients must pay for many dental services out-of-pocket in most Western European countries. It can be estimated that in 2018 90,000 dental patients came to this country. Considering the similarity between dental and aesthetic clinics and based on the market analysis, we can assume that we have about 25,000 medical tourists coming for a beauty treatment. In summary, we can estimate that in 2018 the total number of medical tourists in Poland was approximately 182,000.

Thanks to its accessibility, great image, and excellent medical offer, Cracow comprises one of Poland's central medical tourism regions. As the research has shown, the current trends indicate a rapid development of this segment in the City.

## **Conclusions**

This study demonstrates that Cracow is one of the largest travel destinations for medical tourism in Poland. Concerning its tourism and medical potential, Cracow has untapped resources for providing medical services to foreign tourists. Starting with one of the highest numbers of medical professionals in the whole country, it also offers high-quality healthcare facilities in the City, spa resorts near Cracow, quality-assured accommodation, and infallible transport. Foreign patients purchasing services in Cracow come mainly from Ukraine, Britain, Germany, France, and Russia. It is evident that the number of foreign patients is constantly increasing. Due to the competitive Polish offer in this field, a large percentage of foreign tourists are interested in dental services provided by qualified professionals and modern medical equipment. Other services also include plastic surgeries, ophthalmology, oncology treatment, cardiac procedures, as well as gynecology and orthopedics. The medical and tourism industries must work together to create a host of offers for foreign tourists to be successful. The language differences need to be minimised for medical personnel to be more approachable. To reach persons interested in treatment, it is necessary to have a system for spreading out information about the medical services in Cracow and promoting its medical resources to foreign patients.

Future studies may analyse the changes in medical tourism in the City. Further research in the patients' country of origin can also help estimate the number of Polish citizens living abroad that come to Poland for medical purposes.

### **Declaration of interest statement**

The authors reported no potential conflict of interest.

## Summary

Medical tourism is organised travel abroad to make use of medical treatment for economic, qualitative, and innovative reasons. Poland is considered to be one of the top choices for medical tourism in Europe. In 2018, 640,600 persons travelled to this country due to health-related reasons. Cracow, except for its historical and cultural values, offers high-quality healthcare services. We present the medical potential of Cracow by assessing its medical tourism market. Material and methods: A paper-based questionnaire was carried out yearly from 2015 to 2018 to evaluate the situation in the medical market in Cracow. It analysed the type of medical facilities, the percentage of revenue from providing services (with their structure) for foreign patients, and the opportunities and barriers to medical tourism development. It also included questions about methods of patients' acquisition and the marketing activities of the institutions concerned. Results: The number of foreign patients with hospital treatment in Cracow in 2015 was 1,959 and in 2018 – 3,030. In 2018 the two largest groups of foreigners were the citizens of Ukraine (51%) and Britain (35%). The main medical tourism specialties in Cracow include dentistry, plastic surgery, ophthalmology, oncology, cardiology, gynecology and obstetrics, and orthopedics. Conclusions: Concerning its tourism and medical potential, Cracow has untapped resources for providing medical services to foreign tourists. The advantages include one of the highest numbers of medical professionals in the whole country, high-quality healthcare facilities in the City, spa resorts near Cracow, quality-assured accommodation, and infallible transport.

**Key words:** medical tourism, global healthcare resources, Cracow, medical care units

## Analiza skali turystyki medycznej

### Streszczenie

Turystyka medyczna to zorganizowane wyjazdy zagraniczne w celu skorzystania z leczenia ze względów ekonomicznych, jakościowych i innowacyjnych. Polska jest uważana za jeden z najlepszych wyborów dla turystyki medycznej w Europie. W 2018 r. do Polski ze względów zdrowotnych przyjechało 640 600 osób. Kraków poza walorami historycznymi i kulturowymi oferuje wysokiej jakości usługi zdrowotne. Publikacja przedstawia medyczny potencjał Krakowa oceniając jego rynek turystyki medycznej. W latach 2015–2018 przeprowadzano corocznie ankietę papierową w celu oceny sytuacji na rynku medycznym w Krakowie. Analizowano rodzaj placówek medycznych, procent przychodów ze świadczenia usług (wraz z ich strukturą) dla pacjentów zagranicznych oraz szanse i bariery rozwoju turystyki medycznej. Zawierał także pytania o sposoby pozyskiwania pacjentów oraz działania marketingowe placówek. Liczba pacjentów zagranicznych objętych leczeniem szpitalnym w Krakowie w 2015 roku wyniosła 1959 pacjentów, a w 2018 roku – 3030. W 2018 roku dwie największe grupy cudzoziemców to obywatele Ukrainy (51%) i Wielkiej Brytanii (35%). Główne specjalizacje turystyki medycznej w Krakowie to stomatologia, chirurgia plastyczna, okulistyka, onkologia, kardiologia, ginekologia i położnictwo oraz ortopedia. Pod względem potencjału turystycznego i medycznego Kraków posiada niewykorzystane środki na świadczenie usług medycznych dla turystów zagranicznych. Atuty to jedna z największych liczby lekarzy w całym kraju, wysokiej jakości placówki służby zdrowia w mieście, podkrakowskie uzdrowiska, wysokiej jakości zakwaterowanie i niezawodny transport.

**Słowa kluczowe:** turystyka medyczna, światowe zasoby ochrony zdrowia, Kraków, jednostki opieki medycznej