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Healthcare Resource Use Among Patients with Migraine Who Have Failed Previous Prophylactic Treatments: Findings from the BECOME Study

BACKGROUND

- The global pooled prevalence rate of migraine among 6 million individuals was 11.6%, with 11.4% in Europe¹
- Migraine was the second leading cause of years lived with disability (YLDs) in 2016, contributing to 45.1 million YLDs globally, and the first cause of disability in individuals aged less than 50 years²⁻⁴
- A retrospective, non-interventional, panel-based chart review study across all four European countries (France, Germany, Italy, and Spain) showed the healthcare resource utilisation (HRU) burden of migraine was high among patients with ≥2 prior prophylactic treatment failures (PPTF); 83% patients had ≥1 outpatient visit for migraine in the physician's office, and 27% went to the emergency room (ER)/accident & emergency⁵
- To date, there is limited European data available on HRU in patients with migraine by PPTF

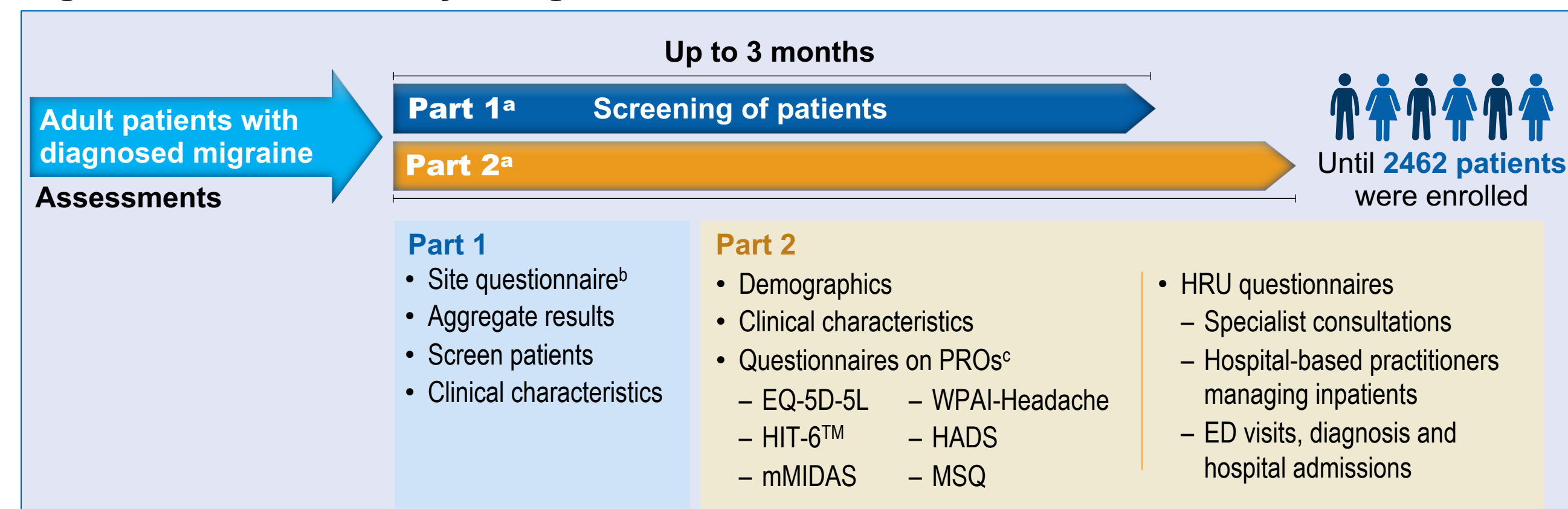
OBJECTIVE

- In this study we report the HRU in patients with migraine visiting headache specialised centres in 17 European countries and Israel from the BECOME study

METHODS

- BECOME (Figure 1) was an observational study conducted in two concurrent parts
 - Part 1: Cumulative hospital data
 - Part 2: Patient-level data

Figure 1. BECOME study design



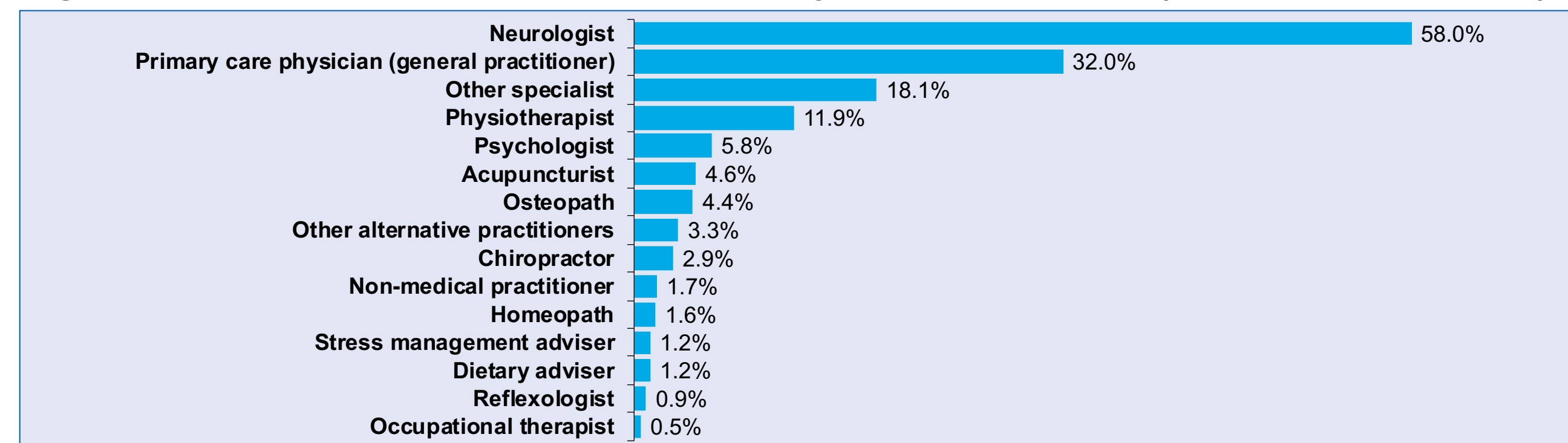
^a Part 1 and Part 2 of the study could be completed on the same day
^b The 20-item site questionnaire described the properties of the site and its management of migraine patients
^c Intended for all patients and completed within 1 day
 ED, emergency department; EQ-5D-5L, EuroQol 5 dimensions 5 levels; HADS, Hospital Anxiety and Depression Scale; HIT-6, Headache Impact Test; HRU, healthcare resource utilisation; mMIDAS, Modified Migraine Disability Assessment (1-month recall period); MSQ, Migraine-Specific Quality of Life; PROs, patient-reported outcomes; WPAI, Work Productivity and Activity Index

- Eligible patients (aged 18 to 65 years) included in Part 1 of the study were invited to participate in Part 2
- Part 2 included adult patients with ≥4 monthly migraine days and ≥1 PPTF in the previous 5 years attending headache centres as outpatients/inpatients
- The BECOME study assessed disease characteristics of all patients with migraine visiting headache specialist centres (Part 1); in Part 2, we assessed the burden of disease and migraine-related HRU among patients
- HRU includes all-cause or migraine-specific office visits, ER visits, and hospitalisations in patients, at participating European healthcare specialist sites with 4-7 migraine days per month, 8-14 migraine days per month or ≥15 headache days per month, at least 8 of which are migraine days, who had 1, 2 or 3 or more prophylactic treatment failures

RESULTS

- Overall, 2419 patients (mean age 43 years) were included in the Part 2 analysis, and majority were women (86.9%)
- In the 3 months prior to survey, 58% (n=1403) of the overall population consulted neurologist about their headache (highest: Croatia [98.9%] and United Kingdom [96.1%]) and 32% (n=773) consulted a primary care physician (highest: Belgium [58.9%] and Croatia [55.8%]) (Figures 2a and 2b; Figures 3a and 3b)

Figure 2a. Proportion of patient consulted any of the specialists (Part 2 population set)



Note: Percentage do not add up to 100% as patients might have consulted more than one specialist

Figure 2b. The mean number of consultations (Part 2 population set)

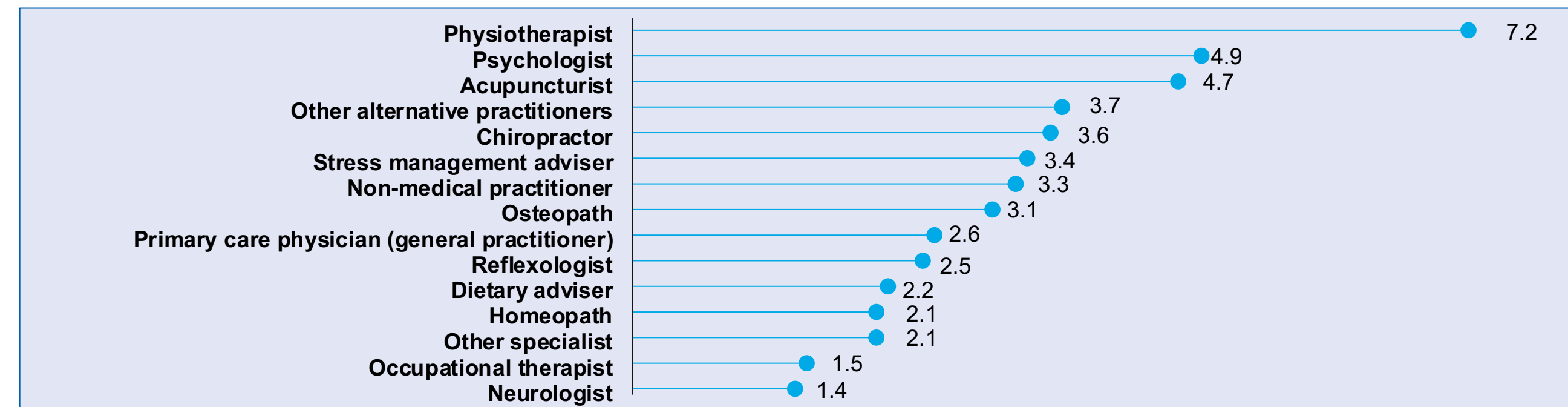


Figure 3a. Proportion of patient who consulted neurologist in last 3 months about their headache across countries (Part 2 population set)

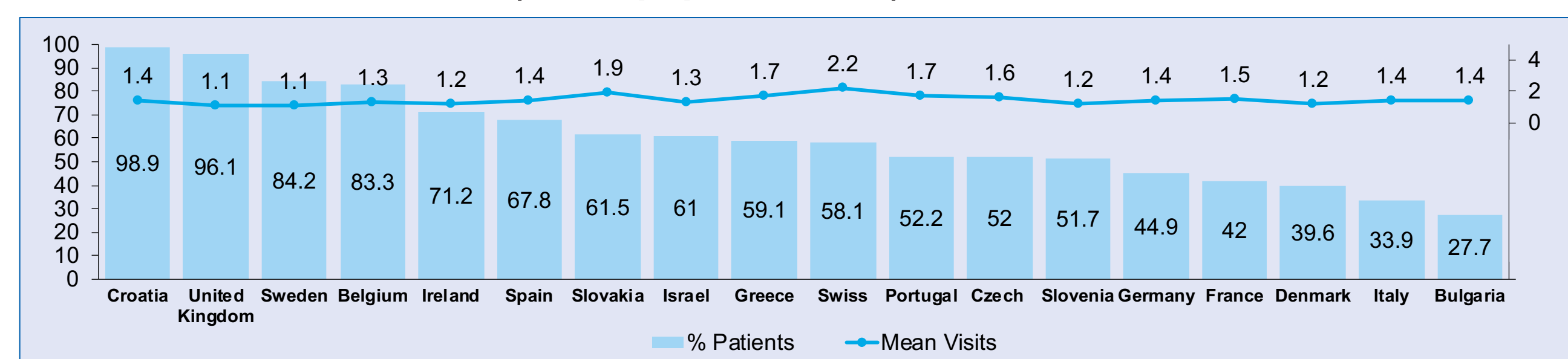
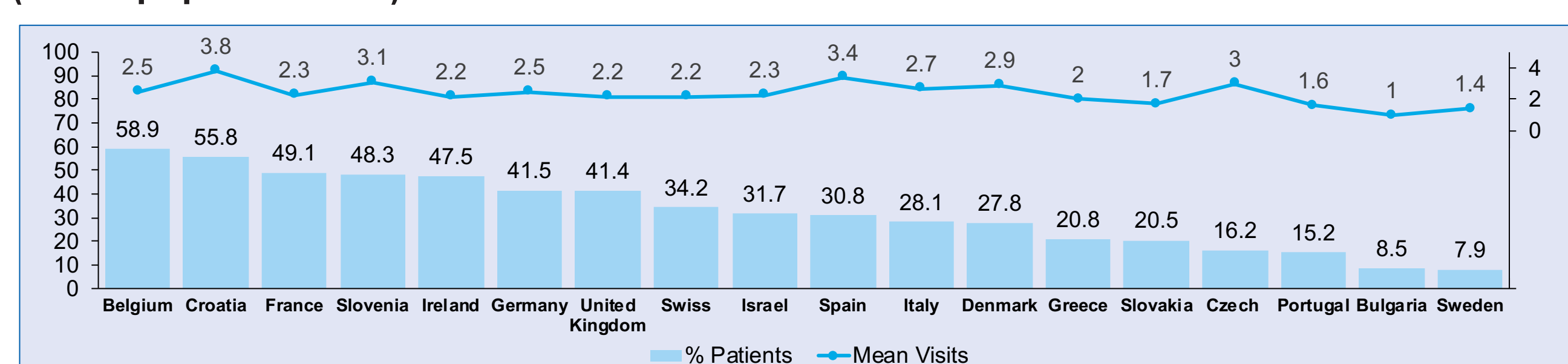
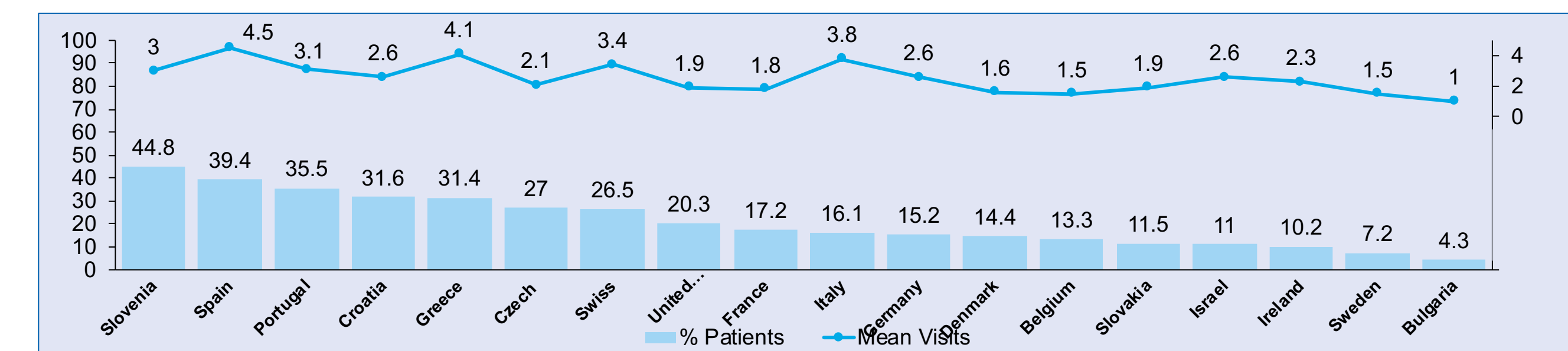


Figure 3b. Proportion of patient who had consulted primary care physician (general practitioner) in last 3 months about their headache across countries (Part 2 population set)



- In the year prior to Visit 1, 21.2% patients (n=514) visited the emergency department for their headache/migraine (the mean [standard deviation; SD] number of ED visits or investigations was 3.0 [5.5]) (highest: Slovenia [44.8%] and Spain [39.4%]; lowest: Bulgaria [4.3%] and Sweden [7.2%]) (Figure 4a)

Figure 4a. Proportion of patient who had visited the emergency department in the last 12 months about their headache/migraine across countries (Part 2 population set)



- In the year prior to Visit 1, CT scan and MRI were performed to exclude other possible neurological causes of headache in 11.6% (n=281) and 20.4% (n=493) patients, respectively (highest: Portugal [26.1%] [CT scan]; Slovenia [41.4%] [MRI]) (Figures 4b and 4c)

Figure 4b. Proportion of patient who had CT scan performed in the last 12 months about their headache/migraine across countries (Part 2 population set)

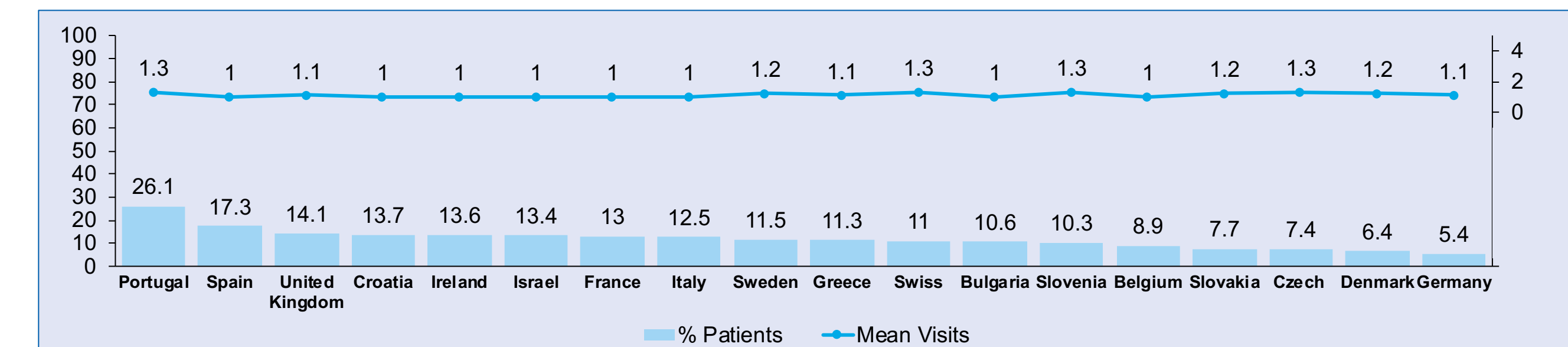
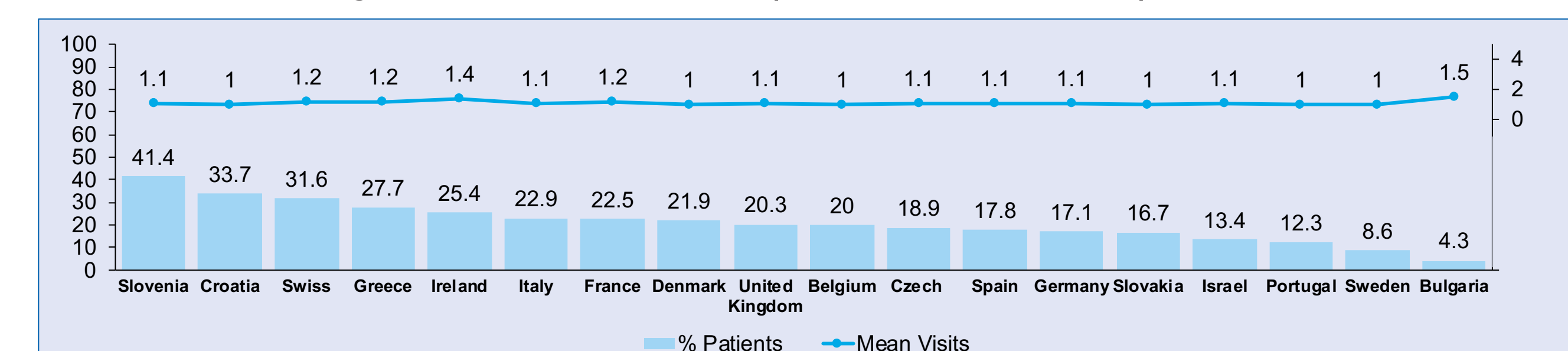
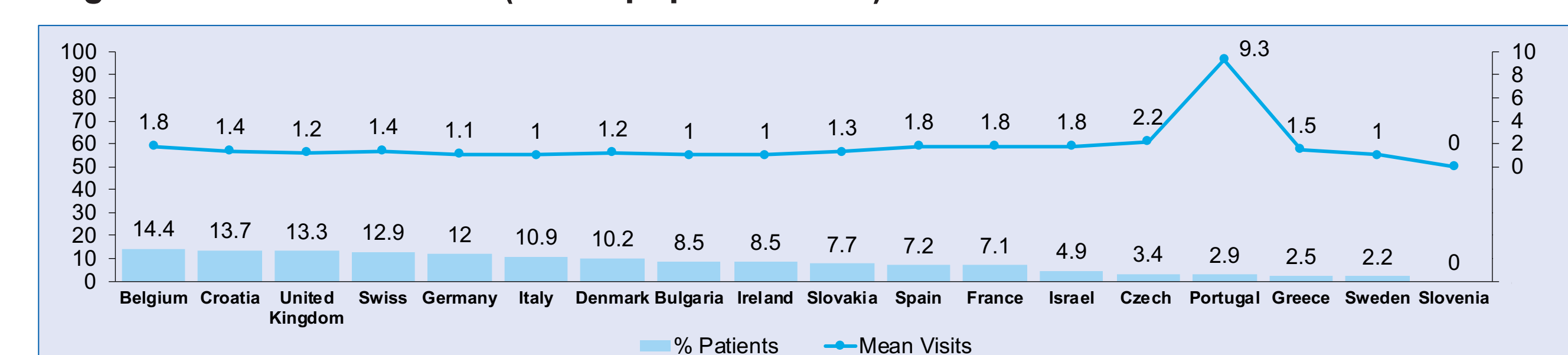


Figure 4c. Proportion of patient who had MRI performed in the last 12 months about their headache/migraine across countries (Part 2 population set)



- The average proportion of patients with at least one inpatient admission due to headache/migraine was 8.4% (n=203) (highest: Belgium [14.4%] and Croatia [13.7%]) (Figure 4d)

Figure 4d. Proportion of patient who had been admitted as an inpatient because of their migraine across countries (Part 2 population set)



CONCLUSION

- Analysis of HRU reveals differences in healthcare systems and migraine management among participating countries
- Regardless of healthcare system, high HRU was observed, indicating a need for improved treatment options for difficult-to-treat migraine patients with PPTF

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DISCLOSURES

Patricia Pozo-Rosich — received honoraria as a consultant and speaker during the last 5 years from Allergan, Almirall, Chiesi, Eli Lilly, Novartis and Teva. Her research group has received research grants from Allergan and funding for clinical trials from Alder, Boehringer Ingelheim, MSD, electroCore, Eli Lilly, Janssen Cilag, and Novartis. She is a trustee member of the board of the International Headache Society and a member of the Council of the European Headache Federation. She is on the editorial board of Revista de Neurologia. She is an editor for Frontiers of Neurology and The Journal of Headache and Pain. She is a member of the Clinical Trials Guidelines Committee of the International Headache Society. She has edited the Guidelines for the Diagnosis and Treatment of Headache of the Spanish Neurological Society. She does not own stocks from any pharmaceutical company.

Christian Lucas — collaborated as an expert, investigator or coordinator of clinical trials with Novartis, Teva, Sanofi, Grünenthal, Eli Lilly, Biogen, and Etypharm.

Charly Gaul — received honoraria for consulting and lectures within the past 3 years from Allergan, TEVA, Ratiopharm, Eli Lilly, Novartis Pharma, Desitin Arzneimittel, Cerbotec, Bayer Vital, Hormosan Pharma, Grünenthal, and Reckitt Benckiser. He does not hold any stocks of pharmaceutical companies or medical device companies.

David Watson — received honoraria from Novartis, Teva and Allergan in the last 12 months for consultancy and educational work.

Paolo Martelletti — Section editor, Medicine, Springer Nature Comprehensive Clinical Medicine; editor-in-chief, The Journal of Headache and Pain; Headache Books Series editor, Springer; EU expert, European Medicines Agency. Former president of the European Federation and chairman of the School of Advanced Studies of the European Headache Federation. He does not hold any stocks of any pharmaceutical companies or medical device companies.

Shannon Ritter and Josefin Snellman — employees and stocks: Novartis.

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