

Access to Emergency Department in the Marche Region During 2011-2023: Exploring Differences between Italian and Migrant Residents (MIGHTY PROJECT P2022ASXKR)

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INTRODUCTION

Scientific literature reports high geographical variability in migrants' health status and access to healthcare services in Europe and inconsistent evidence on their access to Emergency Department (ED) respect to natives [1-3]. Nevertheless, migrants' accesses to ED for non-urgent conditions, presenting as "walk-ins", and during unsocial hours seems to be higher than natives [4-5].

AIM

We want to investigate whether people coming from High Migratory Pressure Country access to the ED differently than Italians and to explore differences according to their demographic characteristics and clinical presentation, in Marche Region between 2011 and 2023, using healthcare utilization databases.

METHODS

In this cross-sectional study, we used the Emergency Department and the Regional Beneficiary databases of the Regional Healthcare System as data sources. In this study, residents in the Marche Region were distinguished by citizenship

as Migrants, considering only those who came from High Migration Pressure Countries (HMPC) [6], and Italians. Sex, age, arrival mode (walk-in, ambulance, other emergency medical services), access time (daytime: 8:00-20:00; nighttime: 20:00-8:00), and distribution of main access diagnosis (first three digits of ICD-9 CM code) were analyzed by citizenship.

ED admission rates per 1,000 person-years (py) were standardized by age and stratified by sex using the direct method and the Italian ISTAT population as of January 1, 2019, as the standard population [7]. The standardized rate ratios (SRRs) were calculated as the ratio of HMPC to Italian rates and estimated with a 95% confidence interval (95%CI). SRRs were also stratified by three age groups (0-19, 20-65, over 65 years) and by triage categories based on priority: emergent (red), urgent (yellow, orange, blu), less urgent (green), non-urgent (white), according to the new Regional Guidelines, DGR n. 1457/2019. All data were processed in compliance with the European (GDPR, EU 2016/679) and national privacy laws (D.lgs. 196/2003 and subsequent amendments).

RESULTS

In the period 2011-2023, there were 5,189,603 visits to the ED for Italians and 442,514 for HMPCs, corresponding

to 1,253,820 and 114,503 subjects, respectively. In the entire period, HMPC subjects accessing the ED were younger (mean age, SD: 33, 18 years) and more frequently female (54%) than Italians (mean age, SD: 50, 27 years; female: 49%). Both HMPCs and Italians presented to the ED more frequently as “walk-ins” (79% vs 73% respectively), in ambulance (12% vs 17% respectively), and at night (66% and 64% respectively). The most frequent main access diagnoses were “trauma or poisoning” (27% Italians vs. 21% HMPC), followed by “symptoms, signs, ill-defined conditions and unknown causes of morbidity” (16% Italians vs. 18% HMPC), in both populations.

Overall standardized ER access rates for Italians and HMPCs were 279.1 per 1,000 py (95%CI 279.1 - 279.2) and 275.6 per 1,000 py (95%CI 275.5 - 275.6), respectively. Excluding the pandemic years, the lowest values were observed in 2012 (266 per 1,000 py) in Italians and in 2015 (250 per 1,000 py) in HMPCs, while the highest values were observed in 2019 (321 and 317 per 1,000 py, respectively) for both populations. During the pandemic years, as expected, a decrease in access rates was observed in both populations (213 and 240 for Italians versus 212 and 249 for HMPCs in 2020-2021, respectively).

SRRs showed that HMPC men had lower access rates than Italian men between 2012 and 2020, while HMPC women had lower access rates than Italian women between 2014 and 2018; SRRs were above 1 in other years (Figure 1).

In the stratified analysis by age group, the standardized ED access rates and SRRs comparing the HMPC with Italians were: 341.7 versus 314.7 in the 0-19 age group (SRR 1.085, 95%CI 1.085-1.086); 272.6 versus 231.8 in the 20-65 age group (SRR 1.176, 95%CI 1.176-1.176); 243.0 versus 381.9 in the over 65 age group (SRR 0.636, 95%CI 0.636-0.637).

Overall, ED admission rates standardized by HMPC and Italian triage categories were, respectively: emergent 4.9 vs 6.4 per 1000 py (SRR 0.757, 95%CI 0.756-0.758); urgent 68.6 vs 75.1 per 1000 py (SRR 0.913, 95%CI 0.913-0.914); less urgent 169.7 vs 171.3 per 1000 py (SRR 0.991, 95%CI 0.991-0.991); non-urgent 24.9 vs 18.9 per 1000 py (SRR 1.317, 95%CI 1.316-1.318).

CONCLUSIONS

The use of healthcare utilization databases has allowed us to assess the heterogeneity of emergency department access in Migrant and Italian populations. However, analyses stratified by age and triage highlighted a higher emergency department access in Migrants younger than 65 years and for non-urgent conditions compared to Italian citizens. Further analyses are needed to identify factors associated with different emergency department access based on citizenship, in order to promote healthcare strategies for appropriate access to emergency care.

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Figure 1 - Standardized Rate Ratios (95% CI) between emergency department access rates of Migrants from High Migratory Pressure Country and Italians in the Marche Region (2011-2023)

