

Socio-demographic and temporal patterns of Emergency Department patients who do not reside in Miami-Dade County, 2007

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OBJECTIVE

To describe socio-demographic and temporal patterns of patients who reside outside Miami-Dade and who visited Emergency Departments (EDs) of hospitals located in this County during 2007.

BACKGROUND

Visitors from areas outside Miami-Dade County have the potential to introduce diseases and/or strains of microorganisms circulating in their regions of residence. Immunocompromised and immunonaive travelers are at higher risk of contagion by locally-transmitted pathogens. The first encounter with a local health care facility for many of these visitors is often an ED. Little is known about this group of patients with regard to socio-demographic and temporal patterns. This knowledge is essential to further characterize their syndromic patterns as well as to integrate this knowledge to the growing use of syndromic surveillance as an early-warning public health tool.

METHODS

All ED patients who visited each of the 14 hospitals of Miami-Dade County that fed data into ESSENCE during 2007 were included in the analysis. The countywide percentage of ED patients who reside in regions outside Miami-Dade County was calculated by age group, gender, and quarter of the year, and compared to similar values for ED patients who are local residents. The chi-square statistics was calculated in SPSS 12.0 to test whether the difference of proportions by age group, gender and quarter between outsiders and local patients were due to chance. The inter-hospital proportions of ED patients from regions outside Miami-Dade were calculated to determine which facilities carry the main burden when it comes to providing emergency health care services to these visitors.

RESULTS

33 856 persons who reside outside Miami-Dade County visited EDs of the 14 facilities included in ESSENCE (4 % of all ED visitors in 2007). The majority of patients, whether outsiders or local residents, are in the 18-64 age group, though the proportion among outsiders (79.7 %) is higher than among local residents (52.5 %). The opposite pattern was observed among children 0-4 and 5-17 as well as

adults 65+ (chi-square = 28.34, d.f. = 3, $p < .001$). There was a predominance of males among outside ED patients - 56.6 %, unlike a female majority among locals - 54.5 % (chi-square = 4.6, d.f. = 1, $p < .05$). As for quarterly patterns, 29 % of outsiders visited EDs during the first quarter of the year, as opposed to 25.8 % among local residents. The third quarter accrued the lowest percentages, 22.7 among outsiders, 24.1 for locals (chi-square = 0.6, d.f. = 3, $p > .05$). Two of the fourteen hospital EDs listed in ESSENCE received nearly half of all outsiders, one with 29 % and the other with 19 %. Two other hospitals accrued 9.9 and 8.2 %, raising the cumulative percentage to 66.1 %. The lowest proportions were among facilities that cater mostly to local catchment areas composed of relatively homogeneous populations in terms of ethnicity.

CONCLUSIONS

ED patients who live outside Miami-Dade have distinctive socio-demographic patterns in comparison to local residents. Tracking of ED patients who live outside Miami-Dade and who may introduce diseases can be most effectively done by focusing on just four of the fourteen hospitals that feed data into ESSENCE, as they account for two thirds of these visitors. Further research should consider differences in terms of socioeconomic and health insurance status, as they might be reflected in variable syndromic patterns.

LIMITATIONS

An unknown number of outsiders who were staying in Miami-Dade might have visited EDs of hospitals located in neighboring territories, particularly Broward and Monroe County. The extent of this subgroup is unknown. However, there is a high density of facilities with high-quality services in Miami-Dade. Hence, supply-side considerations are probably not a major issue. Nearness of an ED is usually an important factor that is considered during emergencies requiring prompt care, thus discouraging traveling longer distances to out-of-county facilities.