Large Geographic Variation in Rates of Visits to the Emergency Department for Ocular Problems Among 306 US Communities

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BACKGROUND

• Use of the ED by U.S. patients rose rapidly from 108 million visits in 2000 to 130 million visits in 2010.1

• A 2012 systematic review estimated that nearly 40% of all ED visits were for non-urgent medical conditions.2

• Recent publications show that the trend of increased ED use is also true for eye conditions.3,4

• 23-44% of visits to the ED for eye conditions are for non-urgent diagnoses.3,4

• However, the geographic variation of ED use for eye conditions has not previously been explored.

• Understanding the geographic variation of ED use can help providers and policy makers in their efforts to ensure that patients are receiving care in the most appropriate setting.

METHODS


Data Source

• The Clininformatics DataMart database (OptumInsight, Eden Prairie, MN) contains detailed records of all beneficiaries in a large nationwide U.S. managed-care network. The dataset includes all individuals with ≥1 ED-9 CM codes for eye-related diagnoses (360-379.9), one or more Current Procedural Terminology (CPT) codes capturing all visits, diagnostic, and therapeutic procedures (99281-99285) for ocular problems.

Sample Selection

• Inclusion criteria: age ≥21 years, continuous enrollment in the medical plan, and enrollment in the plan for ≥1 year during 2001-2014.

Defining Urgent and Non-urgent Ocular Conditions

• Using billing codes, we identified all visits to an ED for ocular problems and classified each as urgent, non-urgent, or other.

• We defined urgent ocular conditions as sight or life threatening ocular conditions. E.g. temporal arteritis, retinal detachment.

• We defined non-urgent ocular conditions as those which rarely affect vision or cause considerable discomfort, E.g. chalazion or conjunctivitis.

• A subset of ocular conditions could not be easily classified as urgent or non-urgent and were called “other.”

Geographic Areas

• We divided the US into 306 hospital referral regions (HRRs) representing regional health care markets, following methodology described in The Dartmouth Atlas of Health Care.5

• Enrollees were assigned a specific HRR based on their residential zip code at plan enrollment.

Analyses

• For each HRR, we determined the number and percentage of visits to ED for eye-related diagnoses per 10,000 person-years. Similar calculations were done for urgent and non-urgent visits for ocular problems.

• We ranked communities from lowest to highest in number of urgent, non-urgent, and any ED visit for an ocular problem per 10,000 person-years.

REFERENCES


CONTACTS

Research supported by:

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