

VARIATION IN VISITS CLASSIFIED BY GI ICD9 BIOSURVEILLANCE SUB-FILTERS AS A FUNCTION OF AGE

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BACKGROUND

The CDC recently developed sub-syndromes for classifying disease to enhance syndromic surveillance of natural outbreaks and bioterrorism. They have developed ICD9 classifiers for six GI illness sub-syndromes: Abdominal Pain, Nausea and Vomiting (N&V), Diarrhea, Anorexia, Intestinal infections, and Food poisoning. If the number of visits for sub-syndromes varies significantly by age it may impact the design of outbreak detection methods.

OBJECTIVE

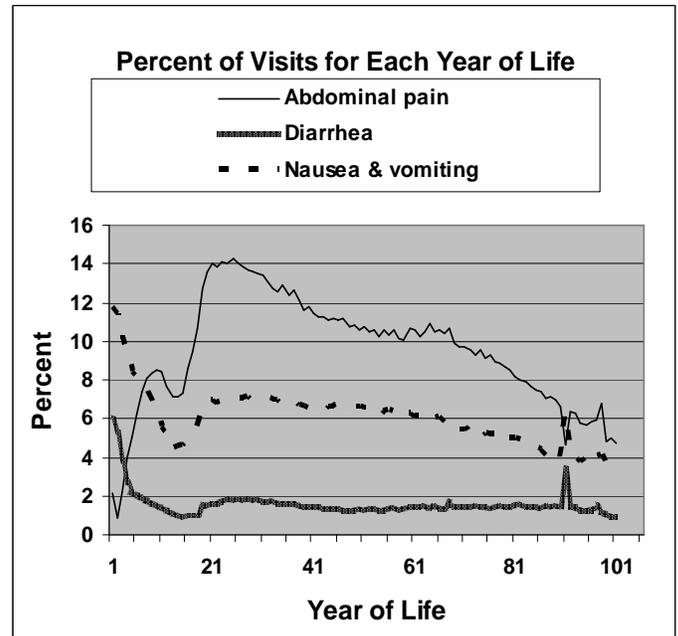
We hypothesized that the percentage of visits for the GI sub-syndromes varied significantly with age.

METHODS

Design: Retrospective cohort Setting: 19 New Jersey and New York EDs Population: Consecutive visits from 1-1-99 to 11-31-07. Protocol: We used CDC GI ICD9 classifiers to assign visits into sub-syndromes. For each sub-syndrome we then calculated its count and its percent of all visits for each year of life. The Student's t-test was used to determine 95% confidence intervals (CI).

RESULTS

For the 4,873,531 total visits, the counts and (percentages) were: Abdominal Pain 483,265 (9.9%), N&V 325,642 (6.7%), Diarrhea 88,178 (1.8%), Anorexia 10,324 (0.21%), Intestinal infections 814 (0.02%), and Food poisoning 557 (0.01%). The percent of visits for abdominal pain was lowest at age 0 to 1 (2.2%), rose to a peak at age 22 (14.1%) then gradually decreased reaching 8.2%, at age 80. Diarrhea was highest for age 0 to 1 (6.0%), dropped rapidly by age 6 (2.1%), and remained in the 1% to 2% range for older ages. N&V was highest for age 0 to 1 (11.8%), dropped to a low of 4.5% at age 12, then rose to a peak of 7.1% at age 27 and fell slightly across the older age group reaching 5.0% at age 80. The 95% CI was less than +/- 0.3% in all cases. We did not attempt to characterize further Anorexia, Intestinal infections or Food poisoning because of the low counts.



CONCLUSIONS

The percent of total visits for the GI sub-syndromes varied significantly by age. This may impact the design of outbreak detection methods. The sub-syndromes anorexia, food poisoning and intestinal infections ill-defined occur so infrequently that they may not be useful for syndromic surveillance.