

Utilizing Emergency Department Data to Evaluate Primary Care Clinic Hours

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OBJECTIVE

This paper highlights the use of syndromic surveillance data to examine daily trends in emergency department (ED) volume at an urban public hospital.

BACKGROUND

In addition to utilizing syndromic surveillance data to respond to public health threats and prepare for major incidents [1,2], local health departments can utilize the data to examine patient volumes in the EDs of local hospitals [3,4]. The information obtained may be valuable to hospital and clinic administrators who are charged with allocating resources.

Indianapolis represents 92% of Marion County's population. The county's public hospital and clinic network provide care for 1 in 3 county residents who are Medicaid enrollees or uninsured. To assess the need for extended hours at eight public primary care clinics in Marion County, Indiana, this study examined the hospital's ED volume. We hypothesize that changes in the ED volume trends that corresponded to the start or end of usual clinic hours (8am-5pm) would be evidence of clinic hours' impact on ED use.

METHODS

All 2007 ED visits from ESSENCE for the urban public hospital were analyzed for average daily visit volume on weekdays and weekends. The average daily visit volume per hour on weekdays and weekends was computed using the total number of days constituting the weekdays and weekends in 2007. A line graph and stack chart display time of ED visits by weekdays and weekends.

RESULTS

Over half of the ED visits occurred during clinic hours on weekdays and weekends. The highest volume visits on weekdays occurred from 10am-2pm and at 1pm on weekends. The greatest volume of visits occurred between 5pm and 6pm on weekdays when most clinics were closed. An average of 23% more ED visits occurred during clinic hours on the weekdays compared to those occurring during the same hours on the weekend after adjusting for time of day and for weekdays versus weekends. There were more ED visits associated with GI and Fever outside clinic hours, and the syndrome category accounting for the highest volume visits on both weekdays and weekends was "Other".

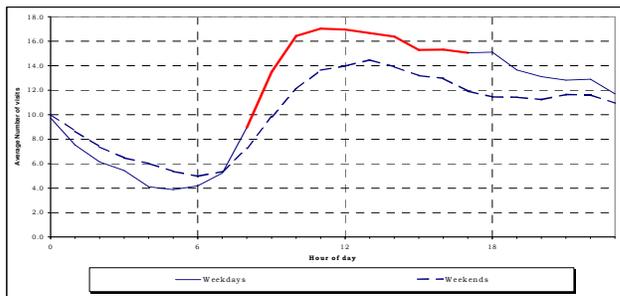


Figure 1 – Weekdays and Weekends Average ED Visits by Hour.

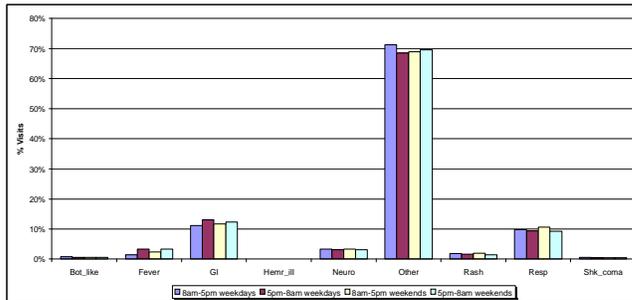


Figure 2 – Weekdays and Weekends ED Visits-Syndrome Categories

CONCLUSIONS

The ED had its highest volume visits when the primary care clinics were open. It was not evident that clinic hours had substantial impact on the ED volume. If clinic hours were extended to relieve ED volume, they might most fruitfully be extended until 6pm or perhaps until as late as 10 pm on weekdays.

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