

The Sentinel Provider Surveillance System for Influenza in Maryland

Review of 2006-2007 Surveillance Season Findings: June 2007

Executive Summary

Background: Influenza virus infections cause tens or hundreds of thousands of illnesses in Maryland each year. Monitoring of influenza virus activity in Maryland depends on many sources of information, and in particular draws upon voluntary reporting by sentinel providers. These healthcare providers' practices provide information about influenza-like illnesses ("ILI") among their patients during each week of the reporting season (roughly early October to mid-May). For each week in the season, ILI data, in four age groups, in addition to the total number of patients seen for any reason in the sentinel provider's practice, are submitted to the Centers for Disease Control and Prevention ("CDC"). Data are compiled and interpreted at CDC and are also made available to states for review.

Sources and Methods: This review of the sentinel provider surveillance system ("SPSS") in Maryland was conducted following the 2006-2007 influenza season. Source data was extracted from the CDC database of sentinel provider reports from the United States. Maryland's SPSS data was reviewed using the following:

- Comparison with CDC targets for SPSS performance;
- Comparison with performance of the SPSS in other states, especially those states and the District of Columbia in the South Atlantic surveillance region (in which Maryland is included); and
- Comparison with Maryland's performance, as reported for recent past influenza seasons.

Detailed Findings: The findings this year about Maryland's SPSS include:

1. Sentinel providers reported on ILI in a total of 103,219 total patients seen for any reason in 17 sentinel provider practices during the 33 reporting weeks of the 2006-2007 season. This was a slightly higher total number of patients seen than had been reported by Maryland in any of the prior four surveillance seasons. However, it is (in proportion to population) fewer patients seen overall than in the rest of the South Atlantic surveillance region of the US this season.
2. 12 of Maryland's sentinel providers met the CDC criteria for "regularly reporting" sentinel providers. Maryland has had 12 or fewer "regularly reporting" sentinel providers in each of the 5 most recent surveillance seasons.
3. For the entire State and for certain regions of the State, sentinel provider coverage (specifically, the number of regularly reporting sentinel providers) did not meet CDC criteria for minimum numbers of "regularly reporting" sentinel providers.
4. Sentinel provider reporting in Maryland depends on a few large sentinel providers, especially in the National Capital area.
5. % ILI reported by sentinel providers for certain age groups is disproportionate to the proportion of Maryland's resident population in that age group.
6. Overall % ILI and % ILI by age group for the entire season is higher than comparable % ILI reported by sentinel providers in the South Atlantic surveillance area.

7. Inter-provider variation in reporting of % ILI was noted. Overall, during the entire season, the range of reported % ILI can vary from a minimum of 0% to a maximum of more than 14%. This variation is not explained by practice size.
8. Delay of reporting was observed in certain sentinel provider practices. A majority of sentinel providers with a delay of more than 10 days in reporting used Internet submission of reports. Evidence was noted in some sentinel providers' records of batching multiple weeks' reports for submission weeks after the reporting week had ended.

Results and Recommendations: The results of this review indicate that:

- Maryland's SPSS needs to be strengthened by adding more sentinel providers, especially in certain parts of the State.
- Timing and accuracy of reports submitted by sentinel providers are of concern, and need to be improved.
- To accomplish these enhancements will require
 - recruitment and training of sentinel provider staff prior to the beginning of the 2007-2008 season, and
 - enhanced monitoring and feedback to sentinel providers throughout the 2007-2008 season in Maryland.

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