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MN Medical Examiner (ME) Infectious Deaths Surveillance

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Background

In 2006, the MN Department of Health (MDH) began an ME infectious deaths surveillance program (MED-X). This supplemented an existing Unexplained Deaths (UNEX) program targeted at young healthy people. MED-X was conducted at the MN Regional ME Office, which covers 7 counties (14.3% of state population).

Methods

The ME reported possible cases to MDH, and MDH reviewed all death certificates to identify additional cases. The case definition was any death with active ante or postmortem infectious signs/symptoms, or an unexplained death in someone <50 years. MDH distributed specimen kits containing collection and transport materials, to increase and improve diagnostic specimens obtained at autopsy. Specimens were tested by the ME, MDH, and in some cases at CDC.

Results

Of 1,563 deaths, 61 (4%) were MED-X cases, and 10 of these were UNEX cases. 12 cases were reported by the ME, and 49 additional cases were found by MDH through death certificate review. There were 18 (30%) confirmed infectious disease deaths (7 reported by ME and 11 from death certificates), 33 (54%) possible infectious disease deaths, 8 (13%) had no specified cause of death, and 2 (3%) were determined not to be infectious-related. Of the 18 confirmed infectious disease deaths, 3 were vaccine preventable (2 *S. pneumoniae*, 1 *N. meningitidis*). In addition, there were 2 CJD, 2 HIV/AIDS, 1 HSV, 1 metapneumovirus, and 1 norovirus-related death. The rate of infectious-related deaths was 12 per 1,000 for confirmed cases and 33 per 1,000 for both possible and confirmed cases. In the 4 cases that used specimen collection kits, all had pathogens identified as potential or confirmed causes of death.

Conclusions

Surveillance for infectious deaths through MED-X provided a specific etiology in almost a third of eligible cases. Diagnoses included pathogens of public health importance. Providing resources such as a specimen collection kit, improved the ability to diagnose a specific pathogen. Cases identified by the ME were more likely to have a confirmed infectious cause than cases found by death certificate review, although additional cases were detected by the latter. Enhanced surveillance of infectious deaths with ME can strengthen infectious disease surveillance systems and improve the accuracy of data regarding the burden of infectious diseases.



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