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Electronic Outbreak Reporting System for Public Health Surveillance in Germany

Submitted by Germany

1. Outbreaks of infectious diseases deserve major attention in surveillance because they are signs for deficiencies in infection control management and often require intervention by the health department. Germany therefore developed a system to allow standardised, up-to-date and easily retrievable epidemiologic data management of outbreaks on all administrative levels.
2. Methods: Case-based data in the German notifiable diseases reporting system are administered and forwarded electronically via a distributed SQL database developed by the Robert Koch Institute (RKI). Outbreak reporting is integrated into this system by linking individual cases to groups. On the group level, standardised descriptive data is entered describing the source of the outbreak and the evidence that lead to the identification. The system generates automated reports, based on case specific data. Multiple outbreaks can be linked to meta-outbreaks, allowing multi-state outbreaks to be analysed. For the presented data, only outbreaks with a size of 5 or more cases are taken into account.
3. Results: In the year 2002 7700 outbreaks were reported through this system (2001 = 4220). Of these outbreaks 2982 (39%) were caused by Salmonella and had a median duration of 2 days, 2083 (27%) by Norovirus (8d), 943 (12%) by Rotavirus (4d), 534 (7%) by Campylobacter (2d) and 241 (3%) by measles (11d).
4. Discussion: The electronic outbreak reporting system has already in the first years of its implementation provided important information relevant for public health interventions. It shows the immense amount of outbreaks already identified by local health departments. A revision of the system is expected to further reduce the workload and at the same time improve the ability for flexible retrieval of data. The system could serve as a blue print for multi-national outbreak reporting systems such as required for the European Union zoonosis regulation.
5. Further details and additional information are available on the CD-ROM prepared by the Federal Foreign Office for participants at the BTWC Meeting of Experts in July 2004.