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**Surveillance Methodologies for Nosocomial Infections in Virginia Hospitals: Results of a Statewide Survey**  
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## Abstract

**Background:** As states grapple with the issue of mandatory reporting of nosocomial infections (NIs) and public disclosure, surveillance activities and methodologies are receiving renewed interest.

**Objective:** To assess NI surveillance methodologies currently employed in Virginia hospitals in an effort to identify potential common areas, which could be useful in drafting legislation for mandatory reporting.

**Methods:** A one-page questionnaire was mailed to the infection control department of each acute care hospital (n=94) in Virginia.

**Results:** Seventy-four hospitals (79%) responded. Of the reporting hospitals, 85% collected surveillance data both concurrently and retrospectively. 46% of hospitals performed hospitalwide surveillance for infections. Nearly half of all hospitals monitored for line-related bloodstream infection (BSI) and ventilator associated pneumonia (VAP) in ICUs (47% and 39%, respectively), whereas only 15% monitored BSI in the ward setting. 80% conducted surveillance continuously, whereas 20% used both continuous and episodic surveillance. 96% utilized case definitions that required review of both microbiology and clinical data; 81% employed CDC case definitions as written and an additional 16% used some modification of CDC definitions. Organism specific surveillance was most commonly performed for MRSA (77%) and VRE (66%), and less commonly for ESBL-producing gram-negative bacilli (33%) and resistant *Pseudomonas aeruginosa* (31%). 51% performed surveillance for surgical site infections on all procedures and the remaining 49% on at least one selected procedure. Only 32% utilized software to manage surveillance data and only one hospital had an electronic medical record.

**Conclusions:** A wide variety of NI surveillance activities are occurring in Virginia hospitals and the majority of hospitals collect surveillance data manually. Should an incremental approach to mandatory reporting be taken, highest priority should be given to reporting of ICU catheter-related BSIs utilizing CDC definitions since this activity is already ongoing at half of the hospitals.

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**Data sources for case detection**

- Microbiology & clinical data 96%
- Only microbiology data 4%

**Case definitions used**

- CDC 81%
- Modified CDC or locally developed 19%

**Organism-specific surveillance**

- MRSA 77%
- VRE 66%
- ESBL-producing GNRs 32%
- MDR *Pseudomonas aeruginosa* 31%

**Infections surveyed**

- CVC-associated bloodstream (ICU) 47%
- CVC-associated bloodstream (ward) 15%
- Surgical site (all procedures) 51%
- Surgical site (selected procedures only) 49%
- UTI 26%
- Ventilator-associated pneumonia 39%

**Denominators used for rate calculations**

- Patient days 62%
- Device days 62%
- Admissions 14%
- Discharges 18%