CNISP **Canadian Nosocomial Infection Surveillance Program**

ICU

SSI

2005

Enterococcus

Established in 1994, CNISP conducts national surveillance in sentinel acute-care hospitals across Canada on healthcareassociated infections such as bloodstream infections and on antimicrobial resistant organisms such as methicillinresistant Staphylococcus aureus

ABBREVIATIONS

- **AMMI** Association of Medical Microbiology and Infectious Disease Canada Bloodstream infection BSI CA Community-Associated **CCDIC** Centre for Communicable
- **Diseases and Infection Control CHEC** Canadian Hospital Epidemiology
- Committee CDI Clostridium difficile infection
- Health Intelligence CRGN Carbapenem-resistant gramnegative bacterium

CNPHI Canadian Network for Public

- Central venous catheter CVC
- **CSF** Cerebrospinal fluid
- ESBL Extended Spectrum Beta-Lactamase

HAI

HA

- Healthcare-Associated Infection Healthcare-Associated
- CNISP hospitals span across all 10 provinces. Intensive Care Unit MRSA Methicillin-resistant Staphylococcus aureus NML National Microbiology Laboratory, PHAC **PHAC** Public Health Agency of Canada Surgical site infection VRE Vancomycin-resistant

2040

Data and specimens collected annually by CNISP produce national infection rates, identify organism strain types, monitor antimicrobial resistance and antibiotic usage patterns which all help to reduce the impact of HAIs and antimicrobial resistance in hospitals, which in turn impacts the community

Since 1995, CNISP has produced over 260 publications including scientific articles, reports and conference abstracts that provide scientific evidence to inform public health action to reduce infections

Canada

This time-line highlights the significant milestones initiated by CNISP which have provided the data needed to monitor and help reduce the impact of healthcare-associated and antimicrobial

| 1994 • 18 HOSPIT • CNISP esta PHAC (CCD Canada pai | infections. | borative effo inel hospitals CHEC/AMMI | art between s across | 1998 • BSI surveillance in ICUs and hemodialysis units conducted for 6-month pilot period | | 2000 35 HOSPITALS participate in CNISP Post CSF shunt insertion SSI pilot study conducted from 2000–2002 Surveys of infection control practices relating to MRSA and VRE infections conducted NML identified a new gene that makes an Enterococci papeies related to the artibility papemerie. | | | 43 HOSPITALS participate in CNISP Febrile respiratory illness surveillance among children in acute-care hospitals initiated HA-CDI 6-month pilot surveillance and infection control practice study conducted NML identified molecular characteristics of <i>E.coli</i> resistant to the aptibility conduction | | | 2008 • Switched from paper- based surveillance data submission by CNISP hospitals to a secure on-line data collection platform housed on CNPHI thereby improving data quality. | | 52 HOSPITALS participate in CNISP Ongoing CNISP flu data submitted to FluWatch thereby en national flu data Post pediatric cardiac surgery SSI surveillance initiated NML detects and molecularly characterizes first heteroge vancomycin intermediate resistant <i>Staphylococcus aureus</i> bacteria identified in Canada NML molecularly characteri of CA MPSA | | | | y enhancing od ogeneous terized 254 | aneous • NML analyzed four plasmids from <i>E.coli</i> and <i>S.marcescens</i> bacteria that carry a gene which makes them resistant to multiple antibiotics rized • Addition of CA and recurrent CDI added to HA CDI surveillance | | |
|--|-------------|---|---|--|--|--|--|---|--|--|--|--|---|---|--|---|--|---|--|---|--|
| 1994 1995 1996 1 1994 1995 1 1 • MRSA surveillance initiated • MRSA surveillance initiated • MRL initiated molecular characterization (strain typing) and antibiotic resistance testing of MRSA • MRSA | | 1997 1997 • 6-week HA surveilland completed | 6-month p 1997 1997 • 6-week HA-CDI surveillance study completed | | 2000 200 L pilot study initiated llance initiated red molecular ration (strain typing) a esistance testing of V | 1 2002 2002 • A point preval survey countin HAIs that werd during a 24-hd in acute-care was conducte | 2003 2000 ence a present hor period hospitals d | 4 2005 4 analyzed <i>E.coli</i> an <i>siella</i> organisms produce enzymes ing them resistant e penicillin family itibiotics | 2006 2006 • Post CSF surveillar surveillar patients i • CVC-BSI with a su | 2006 2007 2007 • Ongoing H/ CVC-BSI st initiated • Post CSF shunt insertion i surveillance as well as in surveillance among hospi patients initiated • CVC-BSI surveillance pilo with a survey regarding th insertion and ma CVCs in adult, pe neonatal intensiv and stem cell tra | | 2009 2009 • A second pr present dur • Pandemic H sent to Flut • Surveillanc to the grou as carbape • Data colleco acute-care | 2010 2011 20 2011 • Surveillance of S Surveillance of S S S S S S S S S S S S S S S S S S S | | 2012 ce of SSIs pos hetic surgery ng all HAIs tha care hospital ult flu surveil onal flu data tant tant cs in | 2013 t Hip and initiated it were s conducted lance, data | 2014 2014 • NML ident character <i>C.difficile</i> reduced s to vancom | 2015 tified and ized a e isolate with susceptibility nycin | surveillance 2016 2016 AND BEYOND • 65 HOSPITALS now participate in CNISP • CNISP will continue to conduct surveillance on existing healthcare-associated infections and their resistance patterns and monitor for new and emerging infections | | |
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