

### Abstract 2985

#### Short-term peripheral venous catheter-related bloodstream infections in French healthcare settings, 2019

Marie Decalonne<sup>1</sup>, Rémi Gimenes<sup>1</sup>, Florent Goube<sup>1</sup>, Agnès Petiteau<sup>1</sup>, Anne Berger-Carbonne<sup>2</sup>, Stéphane Le Vu<sup>2</sup>, Nathalie Laure Van Der Mee-Marquet<sup>\*1</sup>

<sup>1</sup>CHRU Hôpitaux De Tours, Hôpital Bretonneau, Tours, France, <sup>2</sup>Agence santé Publique France, Saint-Maurice, France

#### Abstract third-party references: SPIADI network

**Background:** Widely used in healthcare settings, short-term peripheral venous catheters (PVCs) can be responsible for potentially severe bloodstream infections (pvcRBSI), especially when caused by *S.aureus*, in relation to the possible severe complications associated with *S.aureus*-BSIs. pvcRBSI- and *S.aureus*-pvcRBSI-incidence rates are scarce. Through a large French hospital network we aimed at quantifying pvcRBSI incidence and associated factors.

**Materials/methods:** A nation-wide 3-month survey of central and peripheral venous catheter\_RBSIs (january-april2019) in ICU and non-ICU settings was conducted by the SPIADI (Surveillance\_and\_Prevention\_of\_Invasive\_Devices\_Associated\_Infections) network, using a unit-based protocol close to ECDC-HAI-Net-ICU protocol1.02. For all nosocomial BSIs in SPIADI network, patient age and sex, place of acquisition, portal of entry, and for catheter\_RBSI, insertion site and time between insertion and first signs of BSI were collected. BSI-incidence rates are provided per 1000 patient-days (PD).

#### Results:

- 1001 participating hospitals (including 64% of the 529 French tertiary-hospitals, 54% of the 570 acute-care clinics, 89% of the 18 oncology specialized-hospitals), covering 179477 beds (including 60% of the 6313 French ICU-beds), 13390393 patient-days (PD) and 701277 dialysis-sessions.
- Of 9381 nosocomial BSIs, 31% were Catheter\_RBSIs, and of these 13% were pvcRBSIs recorded in medical wards (73%), surgical wards (17%), ICUs (4%), and other wards (6%).
- pvcRBSI incidence ranged between 0 and 1,11/1000PD, according to hospital-type and patient-category.
- pvcRBSIs were mostly associated with *S.aureus* (52%) of which 11% were MRSA, *Enterobacteriaceae* (21%) and CoNS (15%);
- the time between PVC-insertion and the first signs of BSI was >7days in 22% of the pvcRBSIs, and 20% of the *S.aureus*-pvcRBSIs.

**Conclusions:** The pvcRBSIs remain scarce events. However, as *S.aureus*-BSI is associated with possible severe complications, the preponderance of *S.aureus* responsible for pvcRBSI is worrying. The frequent >7days-lapse of time between PVC\_insertion and first signs of pvcRBSIs suggests substantial long-term use of PVCs. In line with the current guidelines, the local infection control teams should promote an appropriate length of PVC use: PVC should be removed as soon as it is no longer required. Our findings provide multiple opportunities for improvement, and allows defining local observation of catheter insertion and use as a SPIADI-network priority for 2020.

**Presenter email address:** n.vandermee@chu-tours.fr

