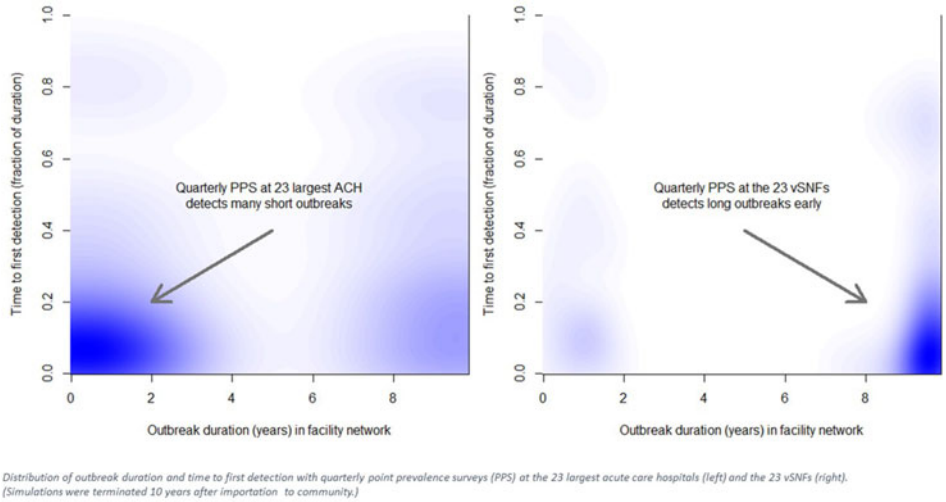


*Distribution of outbreak duration and time to first detection with quarterly point prevalence surveys (PPS) at the 23 largest acute care hospitals (left) and the 23 vSNFs (right). (Simulations were terminated 10 years after importation to community.)*

**Fig. 1.**

Dartmouth Atlas of Health Care hospital referral region. To estimate the potential burden, we quantified the "facility-time" period during which infectious patients presented a risk of subsequent transmission within each healthcare facility. **Results:** Of the 28,000 simulated outbreaks initiated with an importation to the community, 2,534 resulted in patients entering the healthcare facility network. Among those, 2,480 (98%) initiated a short outbreak that died out or quickly attenuated within 2 years without additional intervention. In the simulations, if containment responses were initiated for each of those short outbreaks, facility time at risk decreased by only 3%. If containment responses were initiated for the 54 (2%) outbreaks lasting 2 years or longer, facility time at risk decreased by 79%. Sentinel surveillance through point-prevalence surveys (PPSs) at the 23 skilled-nursing facilities caring for ventilated patients (vSNF) in the network detected 50 (93%) of the 54 longer outbreaks (median, 235 days to detection). Quarterly PPSs at the 23 largest acute-care hospitals (ie, most discharges) detected 48 longer outbreaks (89%), but the time to detection was longer (median, 716 days to detection). Quarterly PPSs also identified 76 short-term outbreaks (in comparison to only 14 via vSNF PPS) that self-terminated without intervention. **Conclusions:** A vSNF-based sentinel surveillance system likely provides better information for guiding regional intervention for the containment of emerging MDROs than a similarly sized acute-care hospital–based system.

**Funding:** None
**Disclosures:** None
Doi:10.1017/ice.2020.945

**Presentation Type:**
Poster Presentation

**Outbreak of *Burkholderia cepacia* Complex Due to Multiple Brands of Contaminated Aqueous Chlorhexidine in Hong Kong**

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**Background:** Contaminated chlorhexidine produced by a single company has been implicated in the outbreak or pseudo-outbreak of *Burkholderia cepacia* complex (BCC). However, simultaneous occurrence of multiple brands of contaminated chlorhexidine supplied by different manufacturers resulting in a persistent outbreak for >1 year has not been well described. **Objective:** We report an outbreak of BCC with epidemiological investigation and using whole-genome sequencing (WGS) analysis of patient and environmental isolates in Hong Kong. **Methods:** Upon the investigation of a cohort of renal patients undergoing peritoneal dialysis colonized or infected with BCC in their exit sites, different brands of 0.05% aqueous chlorhexidine (aqCHX) used for exit site dressing, supplied from hospital or purchased from community pharmacies by patients, were cultured. A risk factor analysis for exit-site acquisition of BCC was performed. A site visit to a local manufacturer was conducted to investigate the process of production and to collect environmental samples for culture, which were further analyzed by WGS along with the BCC isolates cultured from patients and aqCHX purchased from community pharmacies. **Results:** Four patients undergoing peritoneal dialysis had cultures positive for BCC in the exit site swab in September 2019. A snapshot screening revealed 88 (32.0%) of 275 renal dialysis patients colonized with BCC. Of these patients, 47 (17.1%) were newly diagnosed and 41 (14.9%) were known to be colonized or infected with BCC according to retrospective data retrieval from January 1, 2018. A significantly greater proportion of patients with newly diagnosed BCC (cases) had used contaminated aqCHX for exit-site dressing than those with culture negative for BCC (controls): 38 of 47 (80.9%) versus 54 of 187 (28.9%) ($P <$ .001). Of 161 aqCHX samples, 10 brands from 4 manufacturers (purchased from community pharmacies), 125 (77.6%) were culture positive for BCC, whereas all 77 aqCHX samples supplied by the hospital, which are different brands and are produced by different manufacturers, were proven to be sterile. Of the 28 environmental samples taken from a local manufacturer during the site visit, 19 samples (67.9%, 3 collected from the instrument for production of aqCHX and all 16 newly produced aqCHX samples) were culture positive for BCC. WGS revealed 3 major clusters characterized by *B. cenocepacia* genomovar IIIA ST1547 and 2 novel MLST clusters from 52 patients and 26 environmental isolates selected. **Conclusions:** This outbreak was terminated by product recall, and the government has decided to take regulatory actions to ensure the sterility of antiseptics, including aqCHX.

**Funding:** None
**Disclosures:** None
Doi:10.1017/ice.2020.946