

acute-care hospital in Indianapolis, Indiana, identified a healthcare worker (HCW) with HAV who had potentially exposed patients via medicine administration. **Objective:** We began an investigation and mitigation plan to determine the source of the HAV and the risk to patients. **Methods:** The investigation and mitigation consisted of 6 measures. (1) We searched the electronic medical record (EMR) tracer report to determine whether any of the HCW's patients had HAV during the incubation period (15–50 days prior to diagnosis) or were potentially exposed during the infectious period (0–14 days prior to diagnosis). 2. We searched the EMR and CHIRP (Indiana's electronic vaccine database) for potentially exposed patients to determine HAV immunity or HAV vaccination (HAVx). (3) We contacted potentially exposed patients. (4) We communicated with public health partners. (5) We investigated other potential exposures. (6) We communicated with employees regarding free HAVx and the community HAV outbreak via e-mail newsletters (reaching almost 6,000 unique addresses) and posts on our internal website. **Results:** The HCW had not provided care for a patient with diagnosed HAV during the incubation period. The HCW had provided care for 14 patients during the infectious period. No potentially exposed patient had evidence of HAV immunity or HAVx in EMR or CHIRP. We initiated communication to all 14 patients or their surrogates regarding the potential exposure, symptoms of HAV, testing, and HAVx. We could confirm HAV testing for only 1 of 14 patients, and the result was negative. None of the 14 patients developed HAV. Public health partners confirmed notification of the HCW case. No further information about the HCW's HAV source was determined. The HCW did not share community food at work. No workplace source of HAV was identified. HAVx dispensed at the pharmacy increased after communication about availability: December 2018–February 2019, 4 HAVx dispensed and March–May 2019, 82 HAVx dispensed. **Conclusions:** Traditionally,

hospitals view infection risk in terms of HCWs acquiring infections from or spreading infections among patients. Viewed this way, the Indiana HAV community outbreak, although serious for the community, did not appear to be a threat to the hospital: HAV acquisition in hospitals has been rare, which is supported by our results. However, this episode demonstrates that the traditional view needs to be flipped: HCWs can bring community-acquired HAV into the hospital. Nudges can quickly increase HAVx uptake among HCWs.

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Poster Presentation

Role of the Environment in Transmission of Multiresistant *Enterobacter cloacae* in a Hematology-Oncology Department

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Background: The patient environment is increasingly considered a major source of transmission of nosocomial bacteria to patients. In May 2019, a cluster of 3 patients with multiresistant *Enterobacter cloacae* was discovered in the hematology-oncology department of the Maastricht University Medical Center (built in 1991). The strains had an identical antibiogram: ESBL-positive, ciprofloxacin R, cotrimoxazole R, meropenem S, and colistin S. One neutropenic patient had a positive blood culture for this strain,

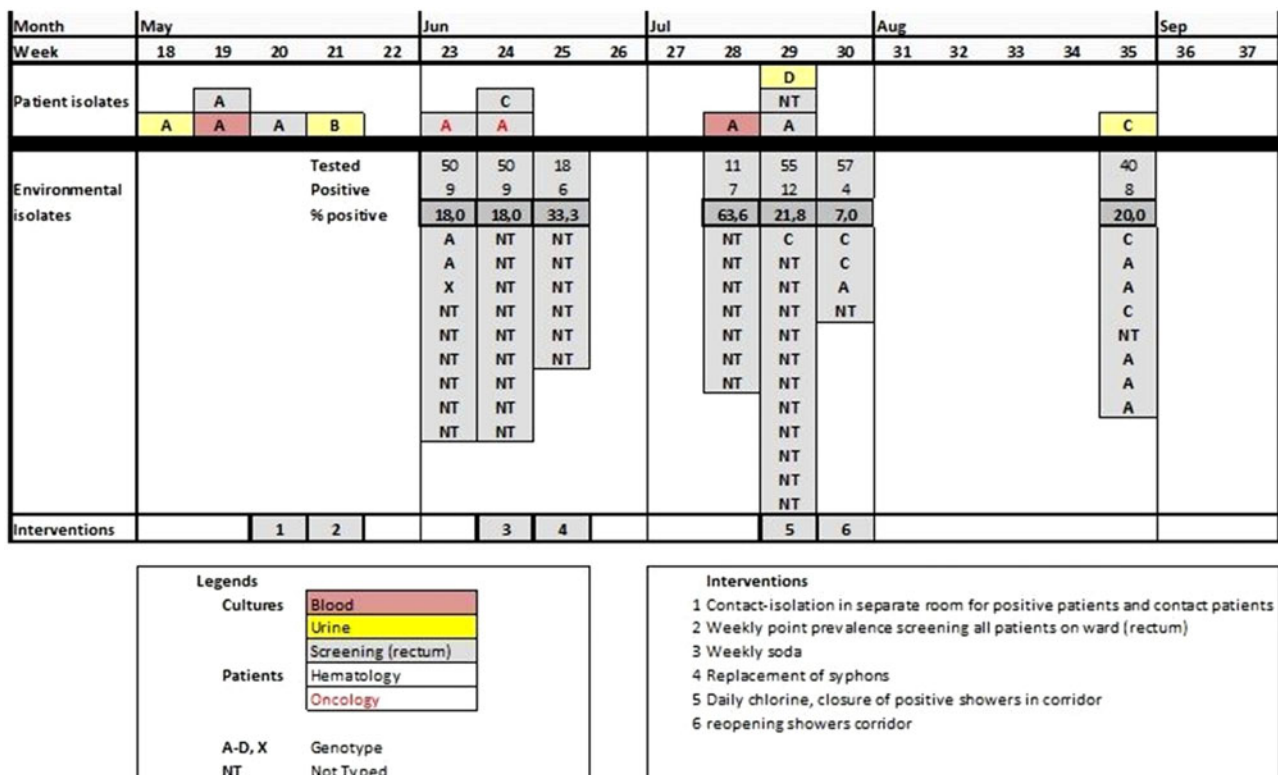


Fig. 1.

resistant to the empiric treatment with piperacillin-tazobactam, but the patient recovered after switching the antibiotic regimen to meropenem. All strains were determined to be identical by amplified-fragment length polymorphism and whole-genome multi-locus sequencing typing (genotype A). New cases occurred, despite the introduction of contact isolation of positive and contact patients. Therefore, weekly point-prevalence screening was introduced, in which more newly colonized patients were identified in the subsequent weeks. Attention to hand hygiene was enforced, and the hypothesis of contamination from “wet” environmental locations was tested by performing cultures of sinks and shower drains. In June and July, 47 of 241 environmental cultures (19.5%) were positive for *E. cloacae* with an identical antibiogram, among which some were typed as genotype A. To diminish the environmental contamination, all siphons of sinks were replaced, and disinfection of sinks and shower drains was intensified using chlorine and soda on a daily basis. Replacement of shower drains was not possible. After this intervention, the incidence of newly colonized patients declined gradually. A change in the regimen of selective gut decontamination in hematology patients was considered as an alternative intervention, but with the decrease in new patient cases, this was not implemented. A final round of environmental cultures at the end of August revealed 8 positive cultures, of which 5 were positive for genotype A. In retrospect, this finding could be explained by the fact that the cleaning team did not follow the intensified instructions for disinfection. From week 29, genotype A *E. cloacae* was no longer cultured in weekly patient screenings. Based on this observation, it is important that in (re)building plans for hospitals, a master plan for the prevention of nosocomial transmission from environment to patients is incorporated.

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Rotavirus Vaccination in the NICU: Where Are We? A Rapid Review of Recent Evidence

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Background: Rotavirus is a leading cause of viral acute gastroenteritis (AGE) in infants. Neonates hospitalized in neonatal intensive care units (NICUs) are at risk of rotavirus infections with severe outcomes. The administration of rotavirus vaccines is only recommended, in the United States and Canada, upon discharge from the NICU despite rotavirus vaccine being proven safe and effective in these populations, due to risks of live-attenuated vaccine administration in immunocompromised patients and theoretical risks of rotavirus vaccines strains shedding and transmission. We summarized recent evidence regarding rotavirus vaccines administration in the NICU setting and safety of rotavirus vaccines in preterm infants. **Methods:** We conducted a rapid review of the literature from the past 10 years, searching Medline and Embase, including all study types except reviews, reporting on rotavirus vaccine 1 and rotavirus vaccine 5; NICU setting; shedding or transmission; and/or safety in preterm. One reviewer performed data extraction and quality assessment. **Results:** In total, 31 articles were analyzed. Vaccine-derived virus shedding following rotavirus vaccination existed for nearly all

infants, mostly during the first week after dose 1, with rare transmission described only in the household setting. No case of transmission in the NICU was reported. Adverse events were mild to moderate, occurring in 10%–60% of vaccinated infants. Extreme premature infants or with underlying gastrointestinal failure requiring surgery presented more severe adverse events. **Conclusions:** Recommendations regarding rotavirus vaccine administration in the NICU should be reassessed in light of the relative safety and absence of transmission of rotavirus vaccine strains in the NICU.

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Disclosures: Sicard Mélanie: I reference the use of rotavirus vaccines in the NICU setting, which is not recommended; I discuss possible reassessment of these recommendations.

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Rubella Outbreak in Heballi Agasi Ward, Dharwad District, Karnataka, India, 2014–2015

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Background: Countries that have good rubella surveillance, report ~10,000–20,000 rubella cases annually. In India, not many cases of rubella are reported. The Heballi Agasi ward of Dharwad district in Karnataka state, India, reported rubella cases on the last week of January 2015. **Objective:** We investigated the outbreak by time, place, person, and clinical symptoms. **Methods:** We performed a cross-sectional study. We defined a case as any resident of Heballi Agasi who had fever and rash, with or without lymphadenopathy, arthralgia, conjunctivitis, coryza, and cough, after December 15, 2014. We collected sociodemographic details and clinical symptoms of patients. We collected 5 serum samples and sent them to the National Measles Laboratory, Bangalore. We tested for measles and rubella antibodies. We drew an epidemic curve and a spot map. We computed mean age of cases, and we calculated attack rates by mean age and gender. We calculated proportions to describe clinical symptoms, and we interviewed stakeholders regarding rubella vaccination. We continued surveillance until March 2015. **Results:** The population of Heballi Agasi was 1,458. We identified 15 rubella cases (9 girls and 6 boys). The outbreak lasted between December 10, 2014, and February 21, 2015, with a peak on January 16, 2015. The overall attack rate was 1% (15 of 1,458). The mean age of the cases was 6 years (range, 1–23). The attack rate was high (7.7%) among those aged 1–6 years (11 of 143). The attack rate among those aged >6 years was 0.3% (4 of 1,315). In addition to fever and rash, 93% of cases (14 of 15) had coryza, 47% had cough (7 of 15), and 40% had conjunctivitis (6 of 15). Lymphadenopathy was present in only 1 case (1 of 15), and arthralgia was absent among all 15 cases. There was no death among the cases. All 5 sera were positive for rubella and negative for measles. Rubella vaccination was not given for any of the cases because no rubella vaccination is provided in the routine immunization program. **Conclusions:** There was a rubella outbreak in Heballi Agasi ward. Children aged 1–6 years were most affected. We recommend rubella vaccination in the routine immunization.

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