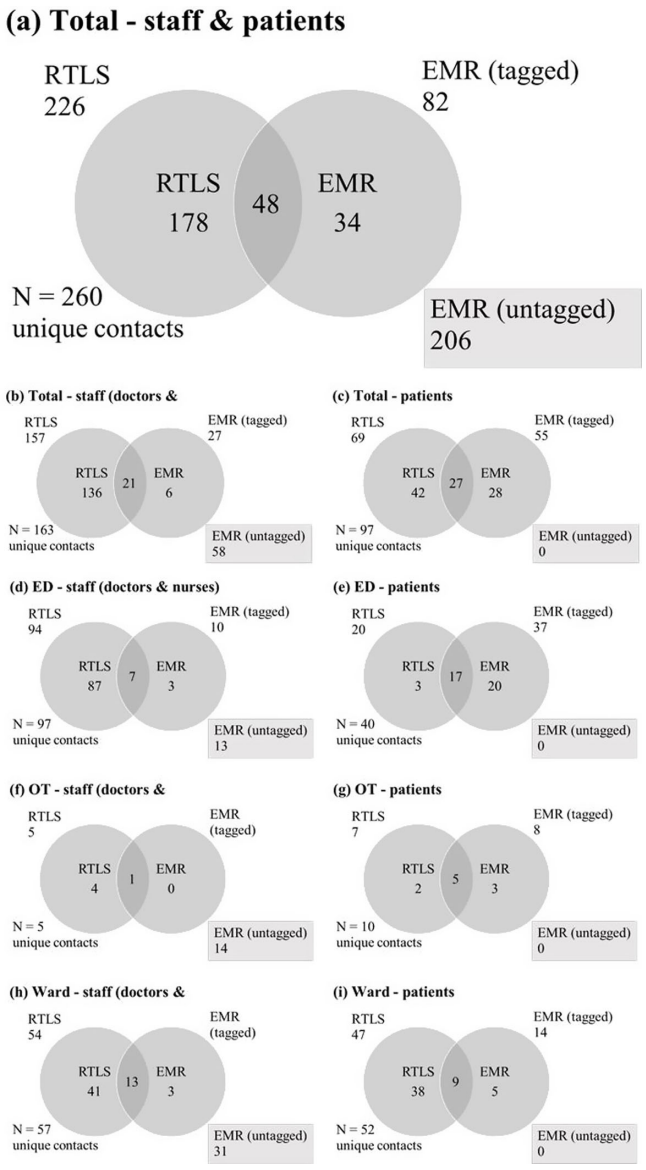

Cost	RTLS	EMR
[a] Equipment cost (for first three years)	$653,594	$0
[b] Manpower cost (for each contact tracing episode)	$62	$2,125
Case scenarios		
36 contact tracing episodes in 3 years	$655,826	$76,500
156 contact tracing episodes in 3 years	$663,266	$331,500
317 contact tracing episodes in 3 years	$673,248	$673,625

[a] Equipment cost (RTLS) = cost of RTLS platform + cost of staff tags

[b] Manpower cost = (manpower-hours of Staff 1*norm cost of Staff 1) + (manpower-hours of Staff 2*norm cost of Staff 2) + … + (manpower-hours of Staff N*norm cost of Staff N)

particularly one like COVID-19. **Conclusions:** Albeit costly, RTLS is effective at contact tracing. RTLS has the potential to be the gold standard in contact-tracing methods of the future, particularly considering the current pandemic.

Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2023;3(Suppl. S2):
doi:10.1017/ash.2023.372

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Surveillance/Public Health

Colonization screening positivity rates for novel multidrug-resistant organism healthcare containment responses during 2019–2022

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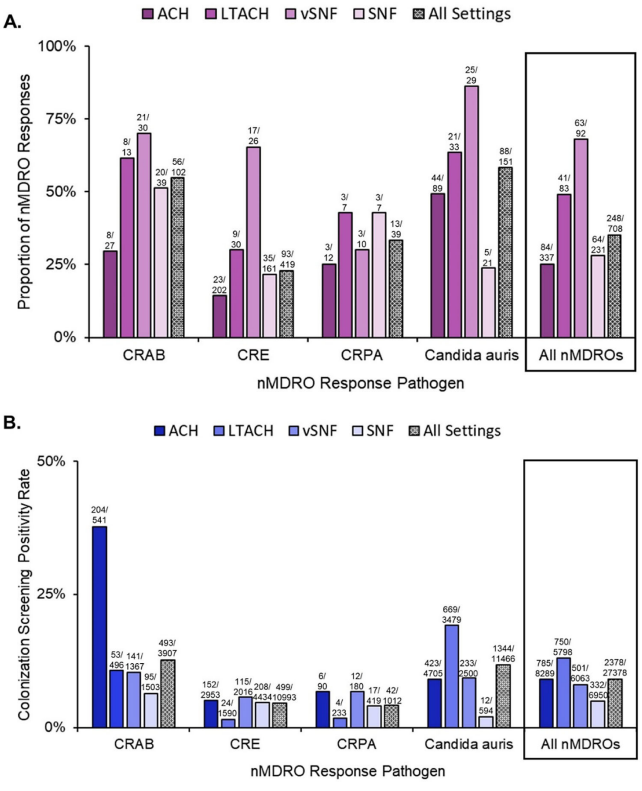
Background: The CDC recommends a public health response when novel and targeted multidrug-resistant organisms (nMDROs), such as carbapenem-resistant organisms or *Candida auris*, are identified in healthcare settings in nonendemic areas. nMDRO responses are supported by healthcare-associated infection-antimicrobial resistance programs in 50 state and 6 local and territorial health departments. Annually, health departments report nMDRO responses to the CDC. We summarize nMDRO responses nationally and report our assessment of colonization screening positivity rates by healthcare setting and pathogen. **Methods:** We analyzed nMDRO response data reported by health departments for the period August 2019–July 2021; we excluded prevention efforts (ie, widespread screening based on facility-level risk factors). Among nMDRO responses in which colonization screening was performed, we calculated the proportion of responses in which screening detected additional cases of the index nMDRO and the colonization screening positivity, by healthcare setting and pathogen. **Results:** Among 2,051 nMDRO responses, 732 (36%) had ≥1 colonization screening (representing 44,845 colonization screenings), of which 24 (representing 17,467 colonization screenings) were prevention efforts and were excluded. Among the remaining 708 nMDRO responses, the healthcare setting most frequently included was acute-care hospitals (ACHs; 337 of 708, 48%); the least frequently included was long-term ACHs (LTACHs; 83 of 708, 12%). Carbapenem-resistant Enterobacterales were the most common index nMDRO prompting a response (408 of 708, 58%). Screening identified additional cases of the index nMDRO in 248 responses (35%) and 2,378 (9%) of 27,378 colonization screenings. Identification of the index nMDRO varied by pathogen and setting (Fig. 1). Overall, ventilator-capable skilled nursing facilities (vSNFs) were the facility type in which



colonization screening most frequently identified additional cases of the index nMDRO (63 of 92 responses, 63%), and LTACHs had the highest colonization screening positivity (750 of 5,798, 13%). Similar colonization screening positivity was observed in ACHs (9%) and vSNFs (8%). On average, *Candida auris* and carbapenem-resistant *Acinetobacter baumannii* (CRAB) had the highest colonization screening positivity rates across all healthcare settings: CRAB, 493 (12.6%) of 3,907 screened; *Candida auris*, 1,344 (11.7%) of 11,466 screened (Fig. 1B). More than one-half of responses identified ≥1 case of the index nMDRO. **Conclusions:** During public health nMDRO responses, additional cases were regularly identified through colonization screening. Responses in vSNFs and LTACHs and to environmental pathogens like *Candida auris* and CRAB detected additional cases in more than one-half of responses, suggesting that spread commonly occurred prior to detection of the first clinical case. The use of colonization screening is an effective strategy to detect unidentified nMDRO colonization, especially in high-acuity postacute-care settings.

Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2023;3(Suppl. S2):s101–s102
doi:10.1017/ash.2023.373

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Surveillance/Public Health

Use of contact precautions for multidrug-resistant organisms and the impact of the COVID-19 pandemic: An Emerging Infections Network (EIN) survey

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Background: The CDC recommends routine use of contact precautions for patients infected or colonized with multidrug-resistant organisms (MDROs). There is variability in implementation of and adherence to this recommendation, which we hypothesized may have been exacerbated by the COVID-19 pandemic. **Methods:** In September 2022, we emailed an 8-question survey to Emerging Infections Network (EIN) physician members with infection prevention and hospital epidemiology responsibilities. The survey asked about the respondent's primary hospital's recommendations on transmission-based precautions, adjunctive measures to reduce MDRO transmission, and changes that occurred during the COVID-19 pandemic. We sent 2 reminder emails over a 1-month period. We used descriptive statistics to summarize the data and to compare results to a similar EIN survey (n = 336) administered in 2014 (Russell D, et al. doi:10.1017/ice.2015.246). **Results:** Of 708 EIN members, 283 (40%) responded to the survey, and 201 were involved in infection prevention. Most respondents were adult infectious diseases physicians (n = 228, 80%) with at least 15 years of experience (n = 174, 63%). Respondents were well distributed among community, academic, and nonuniversity teaching facilities (Table 1). Most respondents reported that their facility routinely used CP for methicillin-resistant *Staphylococcus aureus* (MRSA, 66%) and vancomycin-resistant *Enterococcus* (VRE, 69%), compared to 93% and 92% respectively, in the 2014 survey. Nearly all (>90%) reported using contact precautions for *Candida auris*, carbapenem-resistant Enterobacterales (CRE), and carbapenem-resistant *Acinetobacter* spp, but there was variability in the use of contact precautions for carbapenem-resistant *Pseudomonas aeruginosa* and extended-spectrum β-lactamase–producing gram-negative organisms. In 2014, 81% reported that their hospital performed active surveillance testing for MRSA, and in 2022 this rate fell to 54% (Table 2). The duration of contact precautions varied by MDRO (Table 3). Compared to 2014, in 2022 facilities were less likely to use contact precautions indefinitely for MRSA (18% vs 6%) and VRE (31% vs 11%). Also, 180 facilities (90%) performed chlorhexidine bathing in at least some inpatients and 106 facilities (53%) used ultraviolet light or hydrogen peroxide vapor disinfection at discharge in some rooms. Furthermore, 89 facilities (44%) reported institutional changes to contact precautions policies after the start of the COVID-19 pandemic that remain in place.

Table 1: Characteristics of the 283 EIN Survey Respondents

Characteristic	No. (%)
Field of practice	
Adult infectious diseases	226 (80)
Pediatric infectious diseases	57 (20)
Region	
Northeast U.S.	66 (23)
Midwest U.S.	75 (27)
South U.S.	72 (25)
West U.S.	67 (24)
Canada and Puerto Rico	3 (1)
Years' experience since ID fellowship	
<5	43 (15)
5-14	66 (23)
15-24	59 (21)
≥25	115 (41)
Primary hospital type	
Community	67 (24)
Non-university teaching	83 (29)
University	102 (36)
VA hospital or DOD	15 (5)
City/county	15 (5)
Outpatient only	1 (0.4)

Table 2: Proportion of facilities routinely using contact precautions (CP) and active surveillance testing for select multidrug-resistant organisms

	No. (%) of respondents whose facility routinely **uses CP** for these organisms		No. (%) of respondents whose facility routinely **performs active surveillance** for these organisms	
Organism	2014 survey (n = 336)	2022 survey (n = 201)	2014 survey (n = 336)	2022 survey (n = 201)
MRSA	337 (93)	133 (66)	272 (81)	109 (54)
VRE	335 (92)	138 (69)	114 (34)	28 (14)
Candida auris	N/A	194 (97)	N/A	48 (24)
CRE	N/A	200 (99)	N/A	43 (22)
CRAB	N/A	178 (91)[a]	N/A	N/A
CRPA	N/A	163 (85)[b]	N/A	N/A
ESBL-producing organisms	N/A	140 (71)[a]	N/A	N/A

N/A indicates the organism was not asked about in this question/survey

Abbreviations: MRSA, methicillin-resistant *Staphylococcus aureus;* VRE, vancomycin-resistant Enterococci; CRE, carbapenem-resistant Enterobacterales; CRAB, Carbapenem-resistant Acinetobacter spp; CRPA, Carbapenem-resistant *Pseudomonas aeruginosa;* ESBL, extended-spectrum beta-lactamase

a. Question answered by 196 participants
b. Question answered by 192 participants

Table 3: Duration of contact precautions employed for patients once identified to have select multidrug-resistant organisms

	No. (%) of respondents			
Organism	Indefinitely once positive	Until cleared or decolonized	For one year after last positive culture	For specific inpatient encounter only
CRE[a]	97 (51)	50 (26)	30 (16)	21 (11)
Candida auris[b]	117 (62)	32 (17)	16 (8)	16 (8)
MRSA[b]	11 (6)	73 (38)	25 (13)	34 (18)
VRE[c]	21 (11)	53 (29)	3 (16)	28 (15)

Participants instructed to select all that apply for this question so percentages may sum up to more than 100%.

Abbreviations: MRSA, methicillin-resistant *Staphylococcus aureus;* VRE, vancomycin-resistant Enterococci; CRE, carbapenem-resistant Enterobacterales

a. Question answered by 191 participants
b. Question answered by 190 participants
c. Question answered by 183 participants