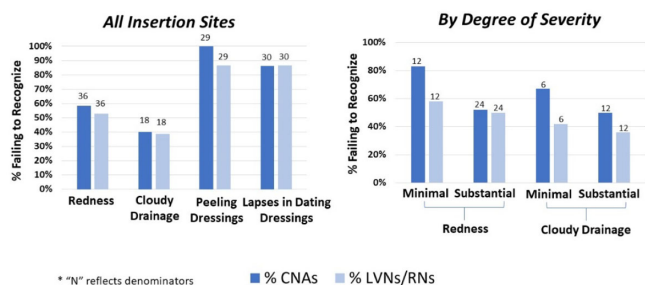


Failure to Recognize Problems at Central Line Sites



(40%) and LVNs or RNs (39%), peeling dressings [CNAs (100%) and LVNs or RNs (87%)], and inappropriately dated dressing [CNAs (71%) and LVNs or RNs (68%)]. For both CNAs and LVNs and RNs, recognition of redness and cloudy drainage improved with severity. Failure to recognize minimal erythema [CNAs (83%) and LVNs or RNs (58%)] was higher than substantial erythema [CNAs (54%) and LVNs or RNs (50%)]. Similarly, failure to recognize minimal cloudy drainage [CNAs (67%) and LVNs or RNs (50%)] was higher than substantial cloudy drainage [CNAs (42%) and LVNs or RNs (36%)]. Overall, identification of problematic elements did not vary by whether the staff member was assigned to care for that resident. Descriptions of “picture-perfect lines” were uniformly poor, with respondents not knowing what elements to mention. **Conclusions:** Failure to recognize redness, cloudy drainage, peeling dressings, and lapses in dressing change dates was common for CNAs and LVNs and RNs in nursing homes. This lack of recognition could prevent proper response to early and late signs of localized infection at central-line sites. Dedicated training regarding key elements of a “picture-perfect line” is needed, including changing the threshold for concern for both small and large amounts of redness and pus.

**Disclosures:** None

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**Presentation Type:**

Poster Presentation - Poster Presentation

**Subject Category:** Long-term Care

**Does universal nasal/skin decolonization in nursing homes affect risk factors for MRSA carriage?**

Gabrielle Gussin; Raveena D. Singh; Thomas Tjoo; James A. McKinnell; Loren Miller and Susan Huang

**Background:** A regional decolonization intervention (SHIELD-OC) involving universal chlorhexidine for routine bathing and 5 days of twice-daily nasal iodophor every other week in nursing homes (NHs) recently demonstrated marked reductions in multidrug-resistant organisms, all-cause hospitalizations, and infection-related hospitalizations in Orange County, California. Specific to methicillin-resistant *Staphylococcus aureus* (MRSA), NH prevalence (nares, skin, or perirectal) decreased from 43% to 29%. **Methods:** We conducted a retrospective cohort study evaluating the impact of decolonization on factors associated with MRSA carriage. The cohort included residents from 18 SHIELD-OC NHs who were sampled for MRSA using nares, axilla, groin, and perirectal cultures. A point-prevalence survey was conducted in 2016–2017 (before decolonization, 50 randomly sampled residents per NH) and in 2018–2019 (decolonization, all residents sampled). Resident characteristics were obtained from their most proximal admission, quarterly, and/or discharge assessment using data mandated for NH reporting (CMS minimum data set), and included demographics, medical devices, comorbidities (including Alzheimer’s disease and related dementias or ADRD), and mobility and hygiene needs. We used generalized-linear mixed models stratified by decolonization and clustered by NH to identify differences in factors associated with MRSA carriage. **Results:** Of the 2,351NH residents, 2,255 (96%) had characteristics available in the CMS data set. Of the 2,255

Characteristic	Baseline N=844		Decolonization N=1411	
	OR (95% CI)	P-value	OR (95% CI)	P-value
Presence of Any Medical Device <sup>1,2</sup>	2.5 (1.7-3.7)	<0.001	1.1 (0.8-1.5)	0.64
Total Dependence on Staff for Mobility Needs <sup>3,4</sup>	1.6 (1.1-2.2)	0.01	1.7 (1.3-2.2)	<0.001
Diabetes	1.4 (1.1-2.0)	0.02	0.9 (0.7-1.2)	0.49
Alzheimer’s Disease or Related Dementia <sup>5</sup>	1.3 (0.9-1.8)	0.10	1.2 (0.9-1.5)	0.25
Cancer	1.3 (0.9-2.1)	0.22	1.1 (0.7-1.5)	0.71
Male Gender	1.3 (1.0-1.8)	0.07	1.6 (1.2-2.0)	<0.001
Hispanic Ethnicity	1.5 (1.0-2.2)	0.06	1.0 (0.7-1.5)	0.78

<sup>1</sup> Resident had at least one of the following devices: indwelling urinary catheter, ostomy, tracheostomy, ventilator  
<sup>2</sup> Presence of a medical device was collinear with post-acute stay (length of nursing home stay <100 days) and Medicaid insurance  
<sup>3</sup> Total dependence on staff for walking and/or locomotion (including wheelchair)  
<sup>4</sup> Dependence on staff for mobility needs was found to be collinear with dependence on staff for hygiene needs  
<sup>5</sup> Alzheimer’s Disease or Related Dementia was collinear with age

residents included, 774 (34%) were MRSA carriers. Before decolonization, medical devices (OR, 2.5), limited mobility (OR, 1.6), and diabetes (OR, 1.4) were significantly associated with MRSA carriage in an adjusted model (Table). During decolonization, these effects were mitigated (medical device OR, 2.5–1.1; diabetes OR, 1.4–0.9) and were no longer significantly associated with MRSA carriage. Male sex appeared to have more of an effect in the decolonization phase (OR, 1.3–1.6), but limited mobility remained stable (OR, 1.6–1.7). Several variables were collinear. Presence of a medical device was collinear with postacute stays (<100 days) and Medicaid insurance. Limited mobility was associated with limited ability for hygienic self-care. ADRD was collinear with age. Final adjusted models accounted for medical devices, limited mobility, diabetes, ADRD, cancer, sex, and ethnicity. **Conclusions:** In a large interventional cohort of 18 NHs, factors associated with MRSA carriage changed after adoption of universal decolonization. Specifically, the increased risk of MRSA associated with medical devices and diabetes were substantially mitigated by decolonization, suggesting that these risks are modifiable. These long-term care findings are consistent with clinical trials showing reductions in MRSA carriage after implementing chlorhexidine bathing in ICUs and in non-ICU patients with devices. The ability of decolonization to attenuate the risk of MRSA carriage among diabetics or other potential high-risk groups deserves further study.

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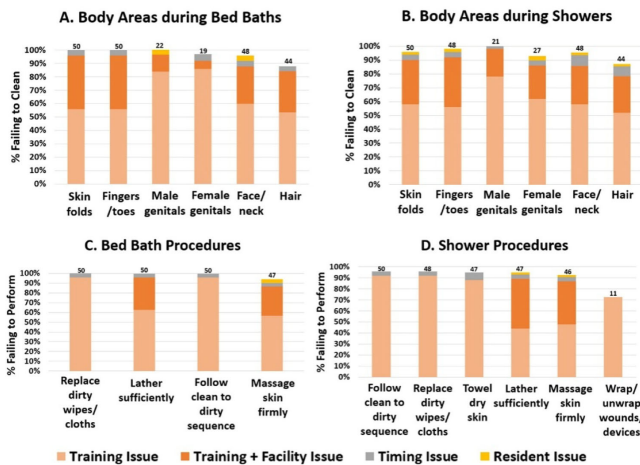
**Subject Category:** Long-term Care

**Not as simple as it seems: Extensive facility and training gaps in nursing home bathing**

Kristine Nguyen; Raveena Singh; Raheeb Saavedra; John Billimek; Steven Tam and Susan Huang

**Background:** Existing training for resident bathing in nursing homes (NHs) is brief and limited, likely because bathing is assumed to be intuitive. However, residents have complex skin issues, devices, dressings, and limited ability for self-care. We sought to assess bathing quality and to identify barriers to proper bathing techniques. **Methods:** We conducted a prospective observational study of bathing in 8 NHs in Orange County, California, involving a convenience sample of observed bed baths and showers conducted for quality improvement. NH staff were told that observation was occurring, and no feedback was given during or after bathing. Survey elements included cleansing of 6 specific body sites and adherence to bathing procedures (11 for bed baths and 17 for showers). Surveys also included queries to staff to further assess knowledge and perceived barriers. Observed lapses were documented, along with observer-determined reasons for noncompliance (ie, training issue, time pressure, facility issue (insufficient water temperature), resident refusal/behavior). Frequency of noncompliance with each element was tabulated for bed-baths and

Frequency and Reasons for Failures during Bed Baths and Showers



\* Values above bars reflect numerators out of 50 bed baths or 50 showers, except for "Male genitals," "Female genitals," and "Wrap/unwrap wounds/devices," which are out of the eligible population

showers separately. Reasons for failure were displayed graphically. **Results:** In total, 50 bed baths (NH range, 5–8) and 50 showers (NH range, 4–7) were observed across 8 NHs. Lapses in bathing quality and process were extremely common for both bed baths and showers (Fig.). Inadequate body cleansing occurred for all observed body sites (88%–100% failure for bed baths, 58%–100% failure for showers). Most body areas were either skipped or sprayed with water without soaping. Procedural failures were high for both bed baths and showers (insufficient lather: 100% for bed bath and 40% for shower) lack of firm massage for cleaning (94% for bed bath and 90% for shower), failure to change wipes or cloths when dirty (100% for bed bath and 96% for shower), failure to follow clean-to-dirty sequence (100% for bed bath and 96% shower). In addition, failing to wrap or unwrap devices (73%) and failing to towel dry (94%) were common after showering. Reasons for failure were largely based on training or facility shortcomings (eg, insufficient hot water, inflexible showerhead attachment). Also, 86% of residents complained of being cold. Timing constraints and resident combativeness or refusal were rare. Staff-to-staff bathing advice most commonly involved competing for the “better shower” and “bathing early to get hot water.” **Conclusions:** Knowing how to appropriately bathe NH residents is not intuitive, and current training is brief and insufficient for high-quality resident care. Unacceptably high failures in proper bathing techniques in NHs necessitate re-evaluation of formal training and standardized practices to better cleanse residents. Moreover, common failures in facility processes for ensuring adequate water temperature and showerhead mobility for bathing or showering should be addressed.

**Disclosures:** None

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**Subject Category:** Long-term Care

**Change to hospitalist providers had a minimal influence on overall antibiotic use in a VA long-term care setting**

Taissa Bej; Brigid Wilson; Federico Perez and Robin Jump

**Background:** In long-term care settings, practice patterns among practitioners are stronger determinants of antibiotic use than resident characteristics. In July 2021, hospitalists from the acute medicine service replaced geriatricians and assumed the care of residents in a 110-bed community living center (CLC) at a large academic Veterans Affairs (VA) medical center. We assessed changes in antibiotic use associated with that change of practitioners to guide stewardship efforts. We hypothesized that

antibiotic use in the CLC would shift, reflecting the practice pattern of practitioners accustomed to treating patients in acute-care settings. **Methods:** We conducted a retrospective cohort study from July 1, 2020, through June 30, 2022, 1 year before and after the change of practitioners on July 1, 2021. We assessed resident characteristics and the following metrics of antibiotic use at monthly intervals: days of therapy (DOT) per 1,000 bed days of care (BDOC), antibiotic starts per 1,000 BDOC, and mean length of therapy (LOT) in days. We also compared the DOT per 1,000 BDOC for various antibiotics, in groups and individually. **Results:** In the years before and after the change of practitioners on July 1, 2021, the characteristics of CLC residents were comparable. Before and after July 1, 2021, monthly DOT per 1,000 BDOC (Fig. 1A), antibiotic starts per 1,000 BDOC, and mean LOT (Fig. 1B) were similar. After July 1, 2021, the use of fluoroquinolones decreased (14.31 vs 5.83 DOT per 1,000 BDOC;  $P < .01$ ), and variations in anti-MRSA, narrow-spectrum, and broad-spectrum hospital agents were small, whereas the use of broad-spectrum community agents increased (29.42 vs 47.81 DOT per 1,000 BDOC;  $P < .01$ ). Within this group, there was increased use of doxycycline (7.42 vs 19.13 DOT per 1,000 BDOC;  $P < .01$ ), ertapenem (2.03 vs 4.58 DOT per 1,000 BDOC;  $P < .01$ ), and, modestly, azithromycin (0.40 vs 1.80 DOT per 1,000 BDOC) (Fig. 2B). **Conclusions:** The overall use of antibiotics, as measured by DOT, antibiotic starts, and LOT did not change after hospitalists assumed care of CLC residents. However, a notable decrease was observed in the use of fluoroquinolones, and an increase was observed in the use of doxycycline and ertapenem. Stewardship that is tailored to the type of provider and incorporates their practice patterns is needed to reinforce the prudent use of antibiotics.

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Fig. 1A

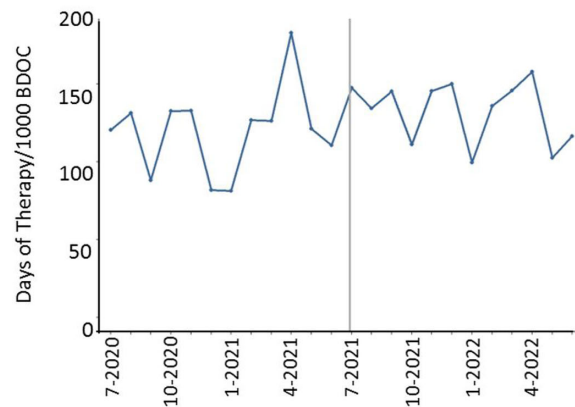


Fig. 1B

