

*difficile* test order protocol with a “hard stop” to prevent inappropriate indications was placed in the EMR. Last, a multidisciplinary form, called the *C. difficile* Team Huddle Form, was created for use by all members of the patient’s team. This form gave MDs, RNs, and PCAs a framework to decide together whether the test was indicated for the patient. If the team agreed to test, the ID physician on service was called for approval. **Results:** These 3 interventions yielded a sustained and statistically significant decrease ( $P = 0.0007$ ) in the facility-wide hospital-onset *C. difficile* from a preintervention rate of 5.6 cases per 10,000 patient days in 2015 to 0.4 in 2019. **Conclusions:** Multidisciplinary use of the *C. difficile* testing interventions led to further reduction of the hospital-onset *C. difficile* infection rate. To sustain this rate reduction over time, infection prevention specialists must work with providers and frontline staff on an ongoing basis.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.613

**Presentation Type:**

Poster Presentation

**Acquisition Rate of Scabies in Employees After Care of an Undiagnosed Crusted Scabies Patient**

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**Background:** Scabies is a contagious dermatosis caused by human mites, (*Sarcoptes scabiei*, variant *hominis*). In crusted (Norwegian) scabies, the burden of mite infestation is higher and up to 2 million per person, facilitating easy skin-to-skin transmission and nosocomial transmission. We describe a case of undiagnosed crusted scabies and subsequent transmission to employees in our hospital. **Methods:** A 90-year-old female was admitted to our 636-bed, non-profit, academic hospital for 22 days prior to diagnosis of crusted scabies by skin scraping. The patient was admitted to 2 different medical-surgical wards and the medical intensive care unit. We

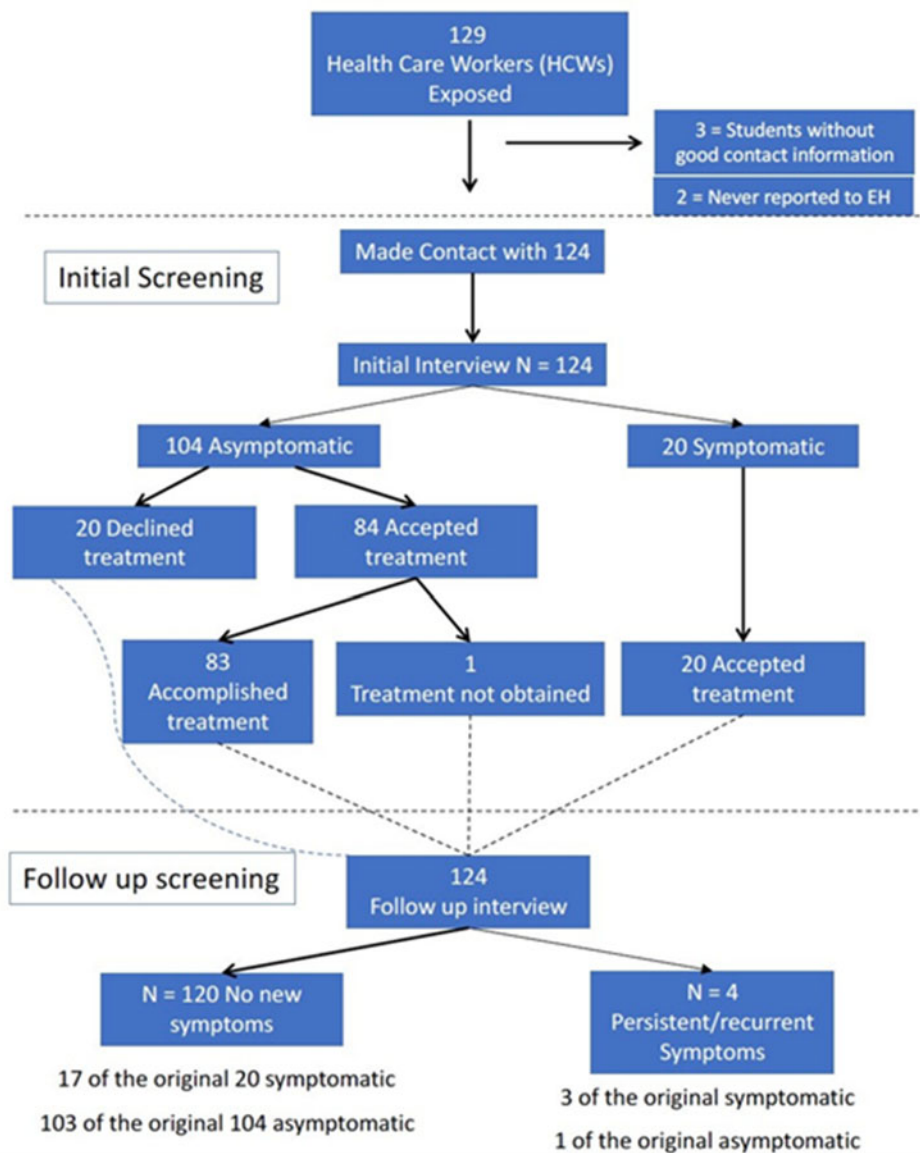


Fig. 1.

collected healthcare worker (HCW) demographics, including department of service, age, sex, pregnancy, and breastfeeding status in those who were at risk of exposure. We interviewed HCWs at 2 time points and collected information related to infestation, allergies to treatment, acceptance of empiric treatment, and whether employee was furloughed. **Results:** On initial screening, 20 of 124 at-risk HCWs had symptoms (Fig.). Most had a “new onset raised red rash or new pimple like rash (not on face), or linear rash” and 4 had “new onset uncontrollable itching.” All 124 HCWs were contacted 28 days later. One HCW that had not been compliant with prophylaxis became symptomatic and was diagnosed with scabies by dermatology. Of the remaining 20 HCWs, 3 were still having symptoms (2 had itching and 1 had a rash and a scrape performed by dermatology with confirmation of mites). All 3 were retreated with ivermectin. Overall, 21 of 124 exposed HCWs were ultimately symptomatic. **Conclusions:** During a 22-day admission of an undiagnosed and unisolated elderly patient with crusted scabies, the scabies mite was transmitted to 21 HCWs for an acquisition rate of 17%. Persistence of symptoms after treatment with permethrin occurred in 14%. The infectivity of this disease necessitates early recognition and infection control measures.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.614

#### Presentation Type:

Poster Presentation

#### Adjustments to an Existing Colorectal Surgical Site Infection Prevention Bundle Lead to Fewer Infections

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**Background:** Surgical site infections (SSI) related to colorectal procedures are detrimental to patients and publicly reportable events. Our institution implemented a successful bundle of interventions to decrease SSI rates in 2014. In 2018, compliance started to wane, with a concurrent increase in infections. In an effort to enhance compliance and incorporate up-to-date information, we convened a multidisciplinary team to streamline this process.

**Methods:** Our team evaluated published studies on successful bundle components and updates to professional guidelines for SSI prevention to determine adjustments. Modifications included allowing surgeon preference for (rather than mandating) wound protector use and simplification of clean closure protocol (determined by intraoperative contamination, leading to more efficient closure time). In addition, measures were added to achieve perioperative patient optimization (maintenance of normothermia, prevention of intraoperative hypoxia, tighter glucose control and postoperative bathing). The bundle was implemented in stages starting January 2019. SSI rates were monitored throughout the

process using NHSN definitions, and rates were compared using  $\chi^2$  analysis (Epi Info, CDC). **Results:** From 2015 to 2017, bundle compliance was 90%, and 8 SSIs (rate, 3.8 per 100 procedures) were detected (Table 1). In 2018, compliance was 82%, with 4 SSIs (rate, 6.6 per 100 procedures). From January through September 2019, SSI rates decreased to a rate of 4.8 per 100 procedures, with notable increase in superficial SSI, with zero cases of deep or organ-space infections. Feedback from operating-room personnel indicated their commitment to bundle compliance and perceived intraoperative time savings. **Conclusions:** Revamping an existing colorectal SSI bundle, including relaxation of time-intensive and expensive intraoperative measures and increased focus on evidence-based guidelines, resulted in decreased deep-organ space SSI rates, as well as increased satisfaction from procedural team members. Successful implementation of care pathways to prevent infections is an iterative process and requires the engagement of practitioners.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.615

#### Presentation Type:

Poster Presentation

#### Administrative Coding Methods Impact Surgical Site Infection Rates

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**Background:** Surveillance for surgical site infections (SSI) is recommended by the CDC. Currently, colon and abdominal hysterectomy SSI rates are publicly available and impact hospital reimbursement. However, the CDC NHSN allows surgical procedures to be abstracted based on *International Classification of Diseases, Tenth Revision* (ICD-10) or current procedural terminology (CPT) codes. We assessed the impact of using ICD and/or CPT codes on the number of cases abstracted and SSI rates. **Methods:** We retrieved administrative codes (ICD and/or CPT) for procedures performed at the University of Iowa Hospitals & Clinics over 1 year: October 2018–September 2019. We included 10 procedure types: colon, hysterectomy, cesarean section, breast, cardiac, craniotomy, spinal fusion, laminectomy, hip prosthesis, and knee prosthesis surgeries. We then calculated the number of procedures that would be abstracted if we used different permutations in administration codes: (1) ICD codes only, (2) CPT codes only, (3) both ICD and CPT codes, and (4) at least 1 code from either ICD or CPT. We then calculated the impact on SSI rates based on any of the 4 coding permutations. **Results:** In total, 9,583 surgical procedures and 180 SSIs were detected during the study period using the fourth method (ICD or CPT codes). Denominators varied according to procedure type and coding method used. The number of procedures abstracted for breast surgery had a >10-fold difference if reported based on ICD only versus ICD or CPT codes (104 vs 1,109). Hip prosthesis had the lowest variation (638 vs 767). For SSI rates, cesarean section showed almost a 3-fold increment (2.6% when using ICD only to 7.32% with both ICD & CPT),

Table 1.

	Deep/Organ Space		Superficial		Overall	
	# SSI	Rate	# SSI	Rate	Rate	Procedures
2015-2017	8	2.4	5	1.5	3.8	339
2018	5	4.1	3	2.5	6.6	122
YTD 2019	0	0.0	5	4.8	4.8	105
p value (old bundle compared to new)	0.06		0.24		0.84	