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Identifying the Problem

Suboptimal hand hygiene (HH) is a modifiable cause of healthcare-associated infections (HAIs), including spread of multi-drug resistant organisms (MDROs). Through improving HH, we can ensure patient safety by reducing transmission of infections, as well as adhere to hospital-wide quality metrics.

The Cost:

- Every \$1 spent on HH promotion could result in a \$23.7 benefit (1)
- Total cost of HH promotion corresponded to less than <1% of the costs associated with nosocomial infections (2)
- According to one model, a 200-bed hospital incurs \$1,779,283 in annual MRSA infection-related expenses attributable to HH. The model estimated that a 1% increase in HH compliance would result in annual savings of \$39,650 (3)

Evidence for Handwashing

Highlights from systematic review undertaken by the World Health Organization (WHO) on the impact of HH:

- When HH compliance increased from poor (<60%) to excellent (90%) each level of improvement was associated with a 24% reduction in the risk of MRSA acquisition (4)
- Similarly, there was a significant reduction in the annual overall prevalence of HAI (42%) and MRSA cross-transmission rates (87%) with increase in HH compliance from 48% to 66% (5)

Objective and Intervention

SMART AIM

- Improve hand hygiene (HH) on 6-1400 to 80% by November 2022

DEFINITIONS

- Wash-Glove-Wash: washing hands with soap and water or alcohol-based hand sanitizer prior to patient interaction, gloving during patient interaction, then degloving and rewashing hands upon ending the interaction

METHODS

- Data collection based on observations by “secret shoppers” who documented compliance with HH among staff
- Weekly compliance report provided to the UPP 614 team which was used to trend compliance and compare to goal of 80%
- Implement PDSA cycles throughout the year with various interventions to engage and educate nursing staff and residents

a	Date	Intervention
1	8/13/2021	Information in weekly email sent to IM Residents
2	8/27/2021	Information in weekly email sent to IM Residents
2	9/3/2021	Daily education for nursing (Safety huddle) x 2 week
3	9/3/2021	IM Residency noon conference
4	9/3/2021	Information in weekly email sent to IM Residents
5	9/7/2021	Information in monthly IM Residency Business Meeting
5	9/7/2021	Hospital Medicine Division (HMD) newsletter
6		Poster and flyers throughout Unit 614 with wash-glove-wash logo
7	11/12/2021	Information about improvement in weekly email to IM Residents
8	12/6/2021	Signs posted in each patient doorway
9	12/6/2021	Weekly awareness at Interdisciplinary Rounds among nursing, pharmacy, SW, and senior residents on hospital medicine teams
10	July 2022	Increased awareness of auditing process
11	July 2022	Ongoing education about handwashing
12	July 2022	Frequent communication with staff - utilizing specific examples of wash/glove/wash scenarios for clarity
13	10/10/2022	Washing was an area for improvement - need to have education for washing

Table 1: Dates and description of PDSA cycles implemented since the start of project. Refer to chart below to track % compliance after each intervention.

Results

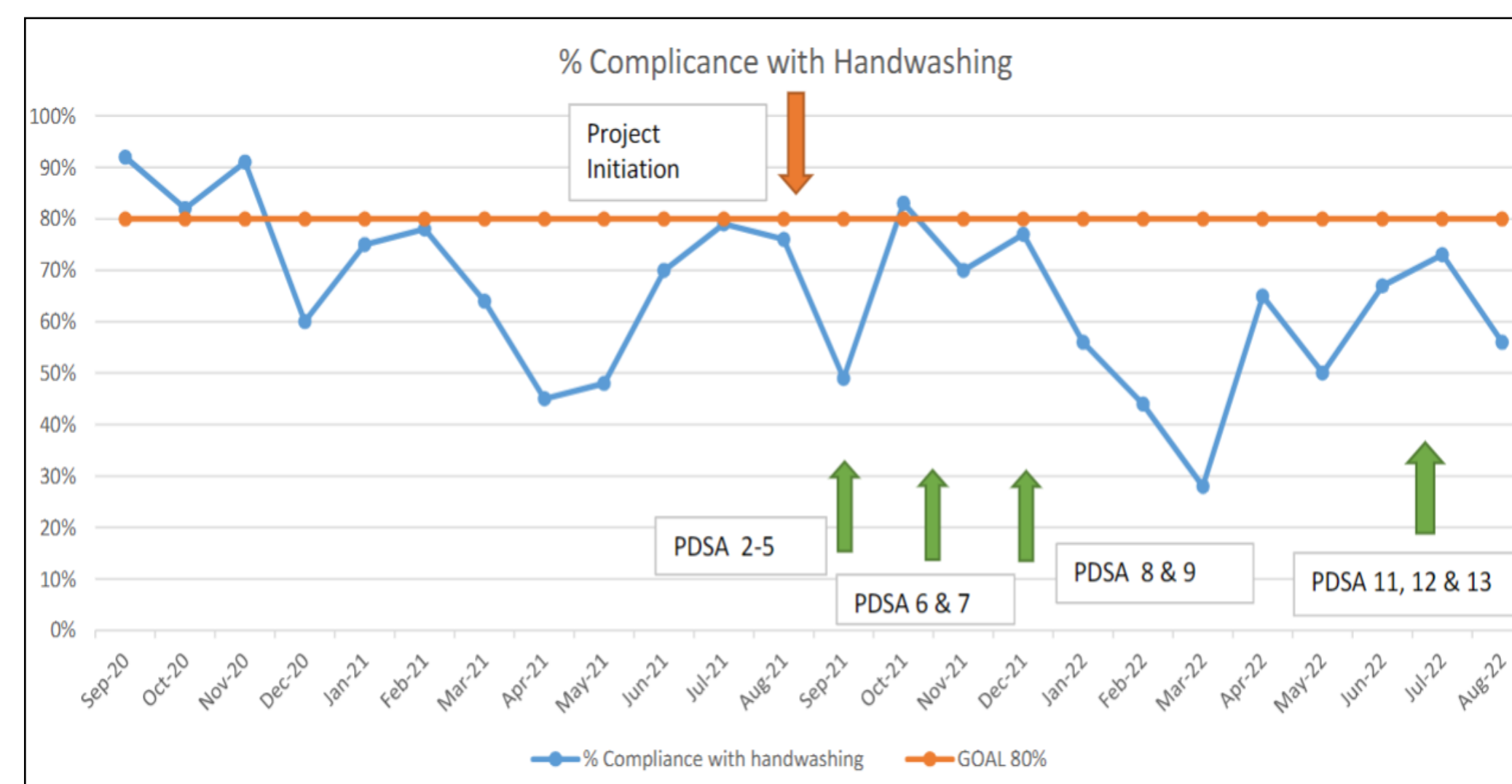


Chart 1: % compliance with handwashing compared to set goal of 80%. Green arrows demonstrate points at which PDSA cycles were implemented. Refer to table above for description of PDSA interventions.

Discussion

Results

- Notable increase in HH compliance after PDSA cycle 2-5
- Compliance decreased despite implementation of cycle 8 and 9
- HH compliance still below target goal of 80% as of Aug 2022
- Authors concluded education and messaging were not enough to maintain adherence to wash-glove-wash

Limitations

- Turnover among nursing staff and residents who were not targeted by original PDSA interventions
- Large size of rounding teams may impact adherence for team members not directly involved in the patient interaction
- Changes in recommendation for universal precautions, including the need for protective eyewear during COVID-19 pandemic

Future Goals

- Improve HH among patients and visitors
- Provide education for transportation staff, nutrition staff, and environmental service workers regarding HH initiative
- Utilizing new dashboard for targeted interventions in order to improve success of HH initiative

References

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