

Reducing Contact Gown Waste - A Quality Improvement Initiative A3

Joel Poliskey¹, Sarah Smith¹, Abhishek Manjunathan¹, Jawad Al-Khafaji MD^{1,2}

No disclosures: 1: University of Michigan Medical School. 2: Department Veterans Affairs (The views expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the Department of Veteran Affairs or the United States Government.



BACKGROUND

- Healthcare is expensive: Healthcare cost the US \$3.5 Trillion according to the CDC.
- Health care is wasteful: hospitals average 33.8 pounds of waste per day, per staffed bed.
- Caring for low acuity patient using contact isolation standards could generate 5 kg of solid medical waste in one day
- At UCSF, these gowns cost 2.6 million dollars annually and generated 234 tons of waste annually before intervention.
- No clear guidelines for medical trainee gown usage have been created. This leads to gowns being liberally used
- Medical Students report that they waste gowns when they enter patient's rooms unnecessarily
- No safety benefit for additional trainees to enter to room
- The current situation at the VA in Ann Arbor: from June 2018-2019, the VA used 94,500 gowns, which cost \$72,937.65.
- Gowns cost \$0.77 per gown (not including mask, or gloves).
- Specifically, on wing 5W, yellow gown usage was: 1290 Gowns in October 2018, 430 Gowns in November 2018, and 950 Gowns in December 2018.

PROBLEM

Yellow contact precaution gowns are wasted when medical trainees enter a patient's room at the VA when educationally or therapeutically unnecessary while rounding.

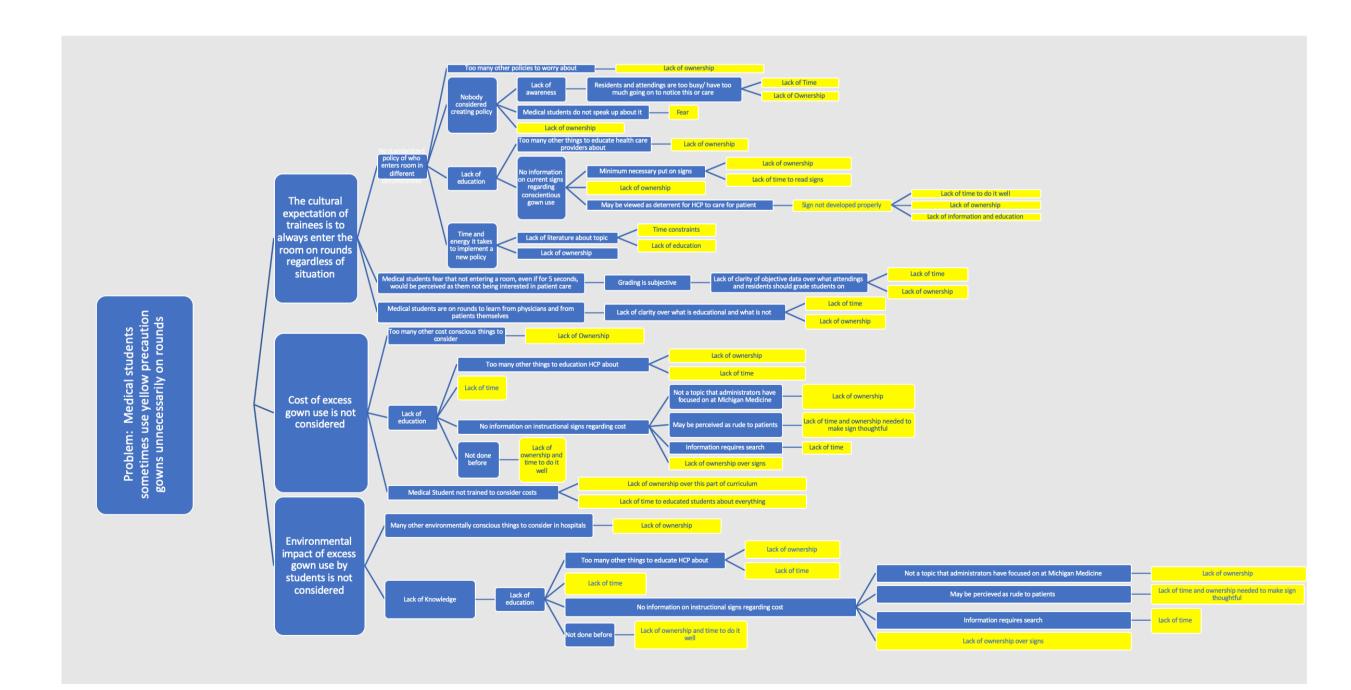
GOAL/OBJECTIVE

Decrease yellow gown usage on 5 West at the VA by 15% by April 1st, 2020

CURRENT CONDITIONS

- -At the Ann Arbor VA Health System there are 4 general medicine teams that are made up of an attending physician, 3 resident physicians and 4 medical students.
- -Teams round outside of each room. During rounds they discuss the patient and the plan.
- -Following rounds they enter rooms to evaluate and share the information discussed with the patient.
- -If the patient is on contact precautions, frequently the attending and residents gown up and enter the room first, and medical students follow suit.
- -"Gowning up" by trainees is necessary when there is educational value as determined by the attending and senior residents
- -There is no standard for when it is "gowning up" is unnecessary for medical trainees to enter patient's rooms from an educational perspective.
- -Medical trainees report frequently finishing gowning up only to take gown off without hearing a word of the evaluation or plan, and having no educational benefit.

ROOT CAUSE ANALYSIS



ROOT CAUSES IDENTIFIED:

- 1. Lack of ownership over cost, waste, and education
- 2. Time Constraints preventing thoughtful utilization of gowns, research on the issue
- 3. Fear from medical students about seeming disinterested or unengaged leading to poor grades

RECOMENDATIONS

- 1. Develop expectation for when it is appropriate for medical trainees to enter patient's rooms while they are on contact precautions.
- 1. Create educational intervention for Chief Resident led inpatient wards orientation for residents.
- 2. Create sign
- 3. Speak to senior residents, interns, and medical students while placing sign in call room

REDUCING CONTACT GOWN WASTE

Did You Know?

At the VA, the contact precaution gowns cos

he room, while considering education and

2. Help build an environmentally and cost-conscious culture amongst the general medicine teams by emphasizing individual ownership to reduce waste.

Task	Responsible Party	Date Due	Date Completed
Create sign	Sarah	2/1/2020	1/25/2020
Obtain permission from Senior	Joel	2/1/2020	1/29/2020
Medicine Resident to place signs in call rooms			
Create clear educational guidelines for	Joel, Sarah, Abhishek	2/1/2020	1/29/2020
residents Place signs in call rooms	Joel	2/1/2020	2/4/2020
Review Data, Conclusions, Future Steps	Joel, Sarah, Abhishek	3/20/2020	

OBSTACLES

- 1. Fear of sacrificing educational time and value.
- 2. Fear of compromising patient care.
- 3. Additional signs make patient doors overcrowded.
- 4. Sign burn-out leading to less attention per sign.

FOLLOW UP

- 1. Yellow Gown usage on VA 5 West February 1, 2020 to March 16, 2020
- 2. Compare gown usage to average over 5 years

MODIFICATIONS

- 1. In person, analyze the number of medical trainees on rounds who entered a patient's room when it was educationally unnecessary.
- 2. Modify educational intervention and reevaluate efficacy.
- 3. Create new sign and place in different location
- 4. Email senior residents, interns, and medical students with facts regarding contact gown usage and clear usage guidelines.

RESULTS

Pending

CONCLUSIONS

Pending

REFERENCES

FastStats - Health Expenditures. (2017, January 20). Retrieved February 20, 2020, from https://www.cdc.gov/nchs/fastats/health-expenditures.htm

McCauley, E. (n.d.). A CASE STUDY FOR REUSABLE ISOLATION GOWNS. Retrieved from

McCauley, E. (n.d.). A CASE STUDY FOR REUSABLE ISOLATION GOWNS. Retrieved from https://www.arta1.com/sites/arta1.com/files/7_A_Case_Study_for_Reusable_Isolation_Gowns.pdf Miltry, V. (n.d.). Single-Use Washable Precaution Gowns. Retrieved December 17, 2019, from https://sustainability.ucef.edu/upload/livinggreen/files/Single_Use_Reusable_Precatution_Gowns_7.23

Rastogi, N. S. (2010, October 19). How much trash do hospitals produce? Retrieved February 20, 2020, from https://slate.com/technology/2010/10/how-much-trash-do-hospitals-produce.html Saber, D., Howlett, B., Waterman, T., & de Tantillo, L. (2018). Solid Waste and Disposal Processes for Isolated Patients with

Infectious Disease. *Online Journal of Issues in Nursing*, 23(2). doi: 10.3912/OJIN.Vol23No02PPT33
Saint, S., Higgins, L. A., Nallamothu, B. K., & Chenoweth, C. (2003). Do physicians examine patients in contact isolation less frequently? A brief report. *American Journal of Infection Control*, 31(6), 354–356. doi: 10.1016/s0196-6553(02)48250-8