

2014

# Hand-washing in the FM Outpatient Setting

Madeline Eells  
*University of Vermont*

Follow this and additional works at: <https://scholarworks.uvm.edu/fmclerk>



Part of the [Medical Education Commons](#), and the [Primary Care Commons](#)

---

## Recommended Citation

Eells, Madeline, "Hand-washing in the FM Outpatient Setting" (2014). *Family Medicine Clerkship Student Projects*. 43.  
<https://scholarworks.uvm.edu/fmclerk/43>

This Book is brought to you for free and open access by the Larner College of Medicine at ScholarWorks @ UVM. It has been accepted for inclusion in Family Medicine Clerkship Student Projects by an authorized administrator of ScholarWorks @ UVM. For more information, please contact [donna.omalley@uvm.edu](mailto:donna.omalley@uvm.edu).

# Hand-washing in the FM Outpatient Setting

Madeline Eells

Class of 2016

Family Medicine, Rotation 4 (Oct-Nov)

Project Mentors:

Dayle Klitzner, MD

Jean Anderson-Swayze, MD

Linn Larson, MD

Eileen Fuller, MD

# Problem Identification & Description of Need

- The threat of healthcare-associated infections (HCAIs) is universal, affecting every healthcare facility and system around the world
- The diagnosis of HCAI is complex and relies on diverse diagnostic criteria and methods
- Although there are many routes of transmission of HCAI, one of the most easily preventable vectors is bacteria carried on healthcare workers hands
- The physicians at Middlebury Family Health identified a need for evaluation of hand hygiene among physicians and staff followed by implementation of quality improvement measures to increase hand hygiene compliance
  - Problem 1: Lack of formal training on ideal hand hygiene technique as well as staff education about key moments for hand hygiene during patient encounters increases risk of HCAIs
  - Problem 2: Busy office environment distracts staff and decreases hand hygiene compliance

# Public Health Cost of HCAs

- Annual financial losses due to health care-associated infections are significant; they are estimated at approximately €7 billion in Europe, including direct costs only and reflecting 16 million extra days of hospital stay, and at about \$6.5 billion in the USA.
- Risk of HCAI from outpatient settings is less than hospitals, but exact level of risk is difficult to determine because of the short length of patient stay and difficulty distinguishing these from community-acquired infections (CAIs).
- Factors leading to increased risk of HCAI in outpatient settings include lack of organized formal training and supervision regarding hand hygiene protocol and high frequency of social contacts interspersed with patient encounters.
- Given the proximity of Middlebury Family Health to Porter Hospital, frequent physician visits to hospitalized patients and closely timed follow up of patient after discharge from hospital, this particular outpatient setting had higher risk of HCAs through close association with inpatient setting than average outpatient clinic

# Community Perspective and Project Support

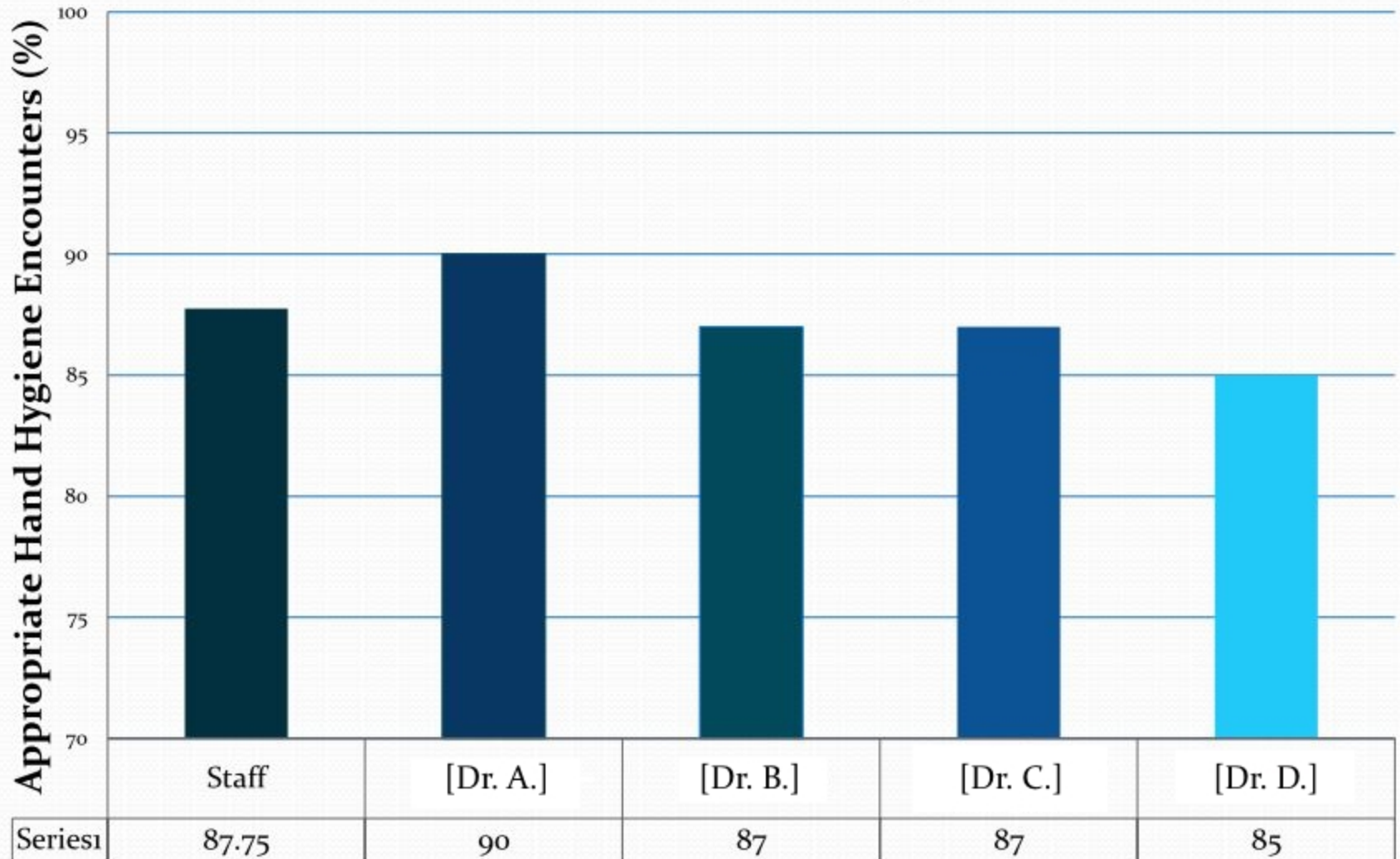
- [Name Withheld] – Nursing assistant, Middlebury Family Health
  - “I received formal handwashing training and feel comfortable with my technique. It all boils down to time. Sometimes my handwashing can be cut short by rushing around on a busy day. Alcohol hand sanitizers are the most convenient and I try to make sure the patient always can see my using them.”
- [Name Withheld] – Middlebury resident
  - “I support handwashing and understand how it’s an important part of the doctor visit...I feel that more attention has come to this since my childhood. I never remember washing my hands, and now I see nurses and doctors doing it six times when they’re in the room with me.”
- B.N. – patient at Middlebury Family Health
  - “I see a nurse or doctor washing her hands as a reflection of how much she cares about me and my health. She shows her concern for me in the small details of the visit like that... I’m glad to see them do it regularly here, since I don’t think I could call my doctor out for not washing her hands before touching me. I feel that would be disrespectful to her.”
- [Name Withheld] – Clinical laboratory scientist and Safety Officer at Mercy Folsom Hospital
  - “I’m responsible for randomly spot-checking everyone in my department for good hand hygiene. This includes my peers and superiors. It can be awkward sometimes, but it’s a constant struggle to ensure maximum compliance with protocol.

# Intervention and Methodology

- Proposed intervention: Use patient observation and reporting to evaluate staff compliance with recommended hand hygiene protocol and implement evidence-based strategies recommended by WHO/CDC to improve education and implementation of hand hygiene protocol
- A 4-question survey was circulated to 120 patients, asking them to report on staff and physician hand hygiene before and after patient contact
- After baseline cycle data was collected, an improvement strategy would be chosen and implemented for one week. Following this week, a second cycle of data would be collected. A second week-long improvement strategy would be undertaken, followed by a third and final cycle of data collection. An office-wide compliance rate of 95% was set as the final goal.
- From the various evidence-based improvement strategies suggested, the two selected by myself and the Middlebury Family Health staff included:
  1. Staff education via a formal training video in combination with posted flyers reminding staff about hand hygiene
  2. Posting of cycle data in a public space to motivate staff members to increase hand hygiene compliance through “healthy competition and peer pressure”



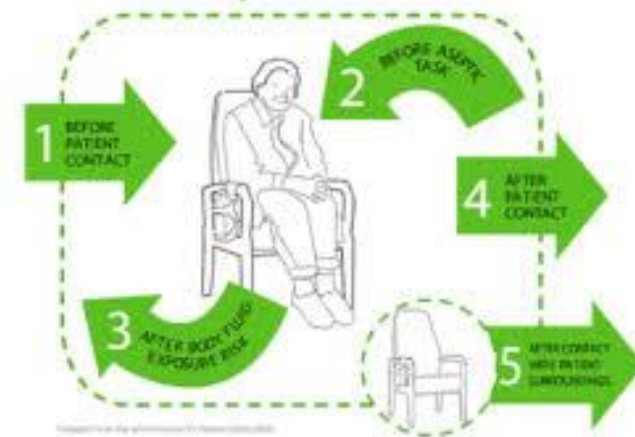
# Hand Hygiene Compliance Results Baseline Cycle



# Response to Baseline Cycle Results

- First improvement strategy to be implemented was staff re-education on optimal hand hygiene technique using soap and water as well as alcohol-based handrub
  - Formal training video on hand hygiene shown to staff
  - Posters and flyers from the CDC/WHO covering proper hand hygiene technique as well as key moments for hand hygiene during patient encounters were posted in exam rooms, bathrooms and the nursing station

Your 5 moments for hand hygiene at the point of care\*





# Evaluation of Effectiveness

- Currently collecting second set of patient-reported evaluations assessing improvement in staff/physician hand hygiene 7 days after posting flyers and circulating educational video on hand-washing technique and key moments for hand hygiene throughout patient visit
- After second round of evaluation is complete, results from baseline cycle and first improvement strategy cycle will be posted publicly to demonstrate progress and to encourage positive peer pressure toward goal of 95% compliance with optimal hand hygiene protocol
- After two week-long improvement strategies are complete, a final set of evaluations will be completed to assess final results and compare to goal

# Limitations

- Staff knew patients were evaluating them, influencing compliance (Hawthorne effect)
- Patients reported no hand hygiene for staff who cleaned hands before entering patient room\* (observer bias)
- Patients reported hand hygiene for staff when none was conducted\* (acquiescence bias)
- Patient reported no hand hygiene after negative interactions with staff, regardless of whether hand hygiene was conducted\* (nay-saying bias)

\*Discrepancies noted between reported patient data and staff self-reporting and peer observation