Jumanji! Improving Hand Hygiene Compliance by Use of a Code Word on Inpatient Medical Units

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ABSTRACT

Background: Despite substantial evidence linking hand hygiene (HH) of healthcare workers (HCWs) to prevention of healthcare-associated infections, rates of HCW HH compliance remain low nationally. At BIDMC, inpatient medical unit HH rates had plateaued despite multiple efforts using incentives and data feedback over a 10-year period.

Objective: We sought to improve hand hygiene compliance by promoting use of a “code word” among physicians (MDs), nurses (RNs), and patient-care technicians (PCTs), as a fun, non-accusatory reminder of appropriate HH during routine patient care.

Methods: A 3-week intervention was designed by 3 medical residents on the Stoneman quality improvement elective. In Phase 1, residents were trained by infection control personnel in measurement of HH by direct observation. Baseline HH compliance was measured on 3 inpatient medical units during day shifts with daily observation sessions of approximately 10 room entries and 10 exits during rounds as well as less busy times. In Phase 2, an email was sent to all unit-based MDs, RNs and PCTs encouraging HCWs to use the code word “Jumanji” whenever a missed HH opportunity was observed. During Phase 2, resident observers participated in use of the code word as real-time feedback and also encouraged other staff to participate. Repeat HH observation was performed in the final week of Phase 2.

Results: Overall HH compliance improved from 71% to 86% (p<0.001, Fisher exact test), with improvement among all three HCW types.

Conclusion: Use of a code word by staff to encourage awareness and provide real-time reminders on appropriate HH performance was effective in improving hand hygiene compliance on inpatient medical units. Repeat data collection is necessary to determine the durability of this intervention.

BACKGROUND

Figure 1. Data from Infection Control/ Hospital Epidemiology (IC/HE) suggests HH compliance rates among BIDMC HCWs have decreased from fiscal year (FY) 2011 to FY2015 on Farr 2 (FA2), Farr 7 (FA7), and Rosenberg 7 (R7).

Figure 2. IC/HE data shows that all provider types, on the medical units have room for improvement in their HH performance. Red dotted line at 90% is HH goal compliance rate for BIDMC

METHODS

• A 3-week intervention was designed by 3 medical residents on the Stoneman quality improvement elective consisting of 3 phases. Each phase took place over 1 week.
  • Daily observations took place during day shifts and included at least 10 patient room entries and 10 exits during rounds as well as less busy times

Phase 1
  • Residents were trained by IC personnel in measurement of HH by direct observation.
  • baseline HH compliance was measured on FA2, FA7, and R7 medical units.

Phase 2
  • email sent to all unit-based MDs, RNs, PCTs encouraging use of code word “Jumanji” whenever a missed HH opportunity was observed
  • resident observers used code word as real-time feedback and also encouraged other staff to participate.

Phase 3
  • repeat observation of HH compliance, without resident observer participation in code word use
**RESULTS**

- 230 HH opportunities were observed during Phase 1 and 241 in Phase 2, including 144 PCT, 209 RN and 118 MD opportunities.
- Overall HH compliance improved from 71% to 86% (p<0.001, Fisher exact test), with improvement among all three HCW types (see Figure 5).

![Pre-intervention Hand Hygiene](image1)

**Figure 3.** Pre-intervention HH data was collected by medical residents in Phase 1

![Post-intervention Hand Hygiene](image2)

**Figure 4.** Post-intervention HH data was collected in Phases 2-3 and showed improvement in all provider types

**RESULTS (CONTINUED)**

- Use of a code word by staff to encourage awareness and provide real-time reminders on appropriate HH performance was effective in improving hand hygiene compliance on FA2, FA7, and R7 medical units.
- Repeat data collection is necessary to determine the durability of this intervention.

**CONCLUSIONS**

- **Figure 5.** Significant increase in HH compliance among PCTs, RNs and overall after code word intervention implementation
  
  *p<0.05, Fisher exact test

**REFERENCES**

