



The Many Ways to Involve Patients in Hand Hygiene

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 - Lady Davis Research Institute
 - Jewish General Hospital Foundation
 - AMG Medical



Objectives

- Provide an overview of **different ways to involve patients** in hand hygiene
- **Effectiveness**
- Provide **Tips and ideas**





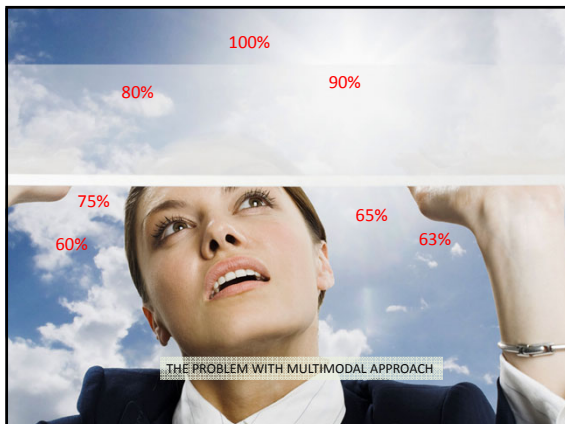
Importance recognized

Hand hygiene, either by handwashing or hand disinfection, remains the single most important measure to prevent nosocomial infections.¹ The importance of this simple procedure is not sufficiently recognised by health-care workers (HCWs),² and poor compliance has been documented repeatedly.³⁻⁵ Although some previous

Pittet D et al., Lancet, 2000

Multimodal HH approach "Geneva Model"

http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf WHO 2009



HOW CAN I INVOLVE PATIENTS IN HAND HYGIENE?

Could it help me break the glass ceiling?

Hôpital général de la
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HUG
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Patient Participation in Hand Hygiene: a Global Survey of Current Practices

A. J. Stewardson¹, B. Allegranzi², Y. Longtin³, A. Gayet-Ageron¹,
N. Prasopa-Plaizier², A. Lee², D. Pittet¹

¹ University of Geneva Hospitals and Faculty of Medicine, Geneva, SWITZERLAND
² World Health Organization, Geneva, SWITZERLAND
³ Laval University Infectious Diseases Research Centre, Québec, QC, CANADA

Stewardson A et al. ICAAC 2013


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Methods

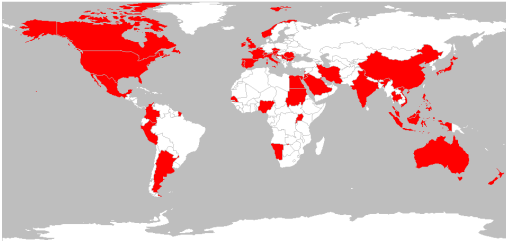
- Describe **practices and perceptions regarding patient participation (PP)** for hand hygiene promotion
- **Design:**
 - **Cross-sectional survey** (December 2012 to March 2013)
- **Population:**
 - **Infection control professionals** at institutions with PP programs
 - One participant per institution
 - Potential participants extracted from a prior global survey based on the WHO Hand Hygiene Self-assessment Framework
- **Procedure:**
 - Invitation by email
 - Online survey
 - The survey was available in English and French
 - Two reminders were sent to non-respondents

Stewardson A et al. ICAAC 2013



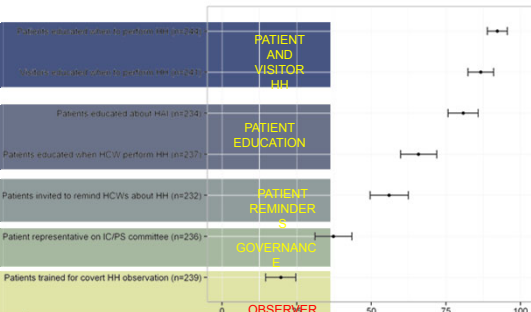
Respondents

- Responses received from 260/658 institutions
 - Response rate, 40%
 - 41 countries in all six WHO regions



Stewardson A et al. ICAAC 2013

Patient participation strategies



Strategy	Sample Size (n)	Approximate Proportion (%)
PATIENT AND VISITOR HH	1292	~90
PATIENT EDUCATION	274	~75
PATIENT REMINDER	232	~55
GOVERNANCE	236	~45
OBSERVER	239	~35

Stewardson A et al. ICAAC 2013


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Patient Hand Hygiene

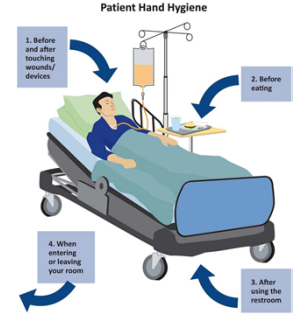
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What are the HH Moments for patients?



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Four Moments for Patient Hand Hygiene



1. Before and after touching secondary devices

2. Before eating

3. After using the restroom

4. When entering or leaving your room

4 Moments or 6?

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Sankarula et al Infect Control Hosp Epidemiol 2015; 36(8): 986-989

Patient Hand Hygiene

5 Moments of 7?

Hybrid general hospital Jewish General Hospital | HOSPITAL MANAGEMENT | MEDICAL UNIVERSITY | FACULTY OF MEDICINE | www.ftshealth.com/mainblog/winwin

Patient Hand Hygiene – Hong Kong

3 Moments

Hybrid general hospital Jewish General Hospital | HOSPITAL MANAGEMENT | MEDICAL UNIVERSITY | FACULTY OF MEDICINE

Patient Hand Hygiene

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When you come to a hospital, hand cleaning is your job too.

Whether you are a patient or a visitor, do your part to prevent germs from spreading.

Think about the reason that you would clean your hands at home, such as:

- Before and after eating
- After using the bathroom
- After sneezing or coughing

Make sure you clean your hands at these times and even more often when you are in the hospital.

There are two ways to clean hands.

You can clean your hands by using:

1. Hand rub provided by the hospital
2. Soap and water using the soap in the dispensers at the sink

After cleaning, make sure your hands are dry before you touch anything. This is very important when you use the hand rub.

Visitors who do not feel well should not come to see you.

When you are in the hospital, don't be shy about telling visitors to stay home if they are not feeling well. That's the best thing you can do to keep infections from spreading in the hospital.

CLEAN HANDS PROTECT LIVES.
Your Health Care - Be Involved

CHHA | Ontario

HH education

Hybrid general hospital Jewish General Hospital | HOSPITAL MANAGEMENT | MEDICAL UNIVERSITY | FACULTY OF MEDICINE

How often do they comply?



Hospital general staff
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HEALTH PERFORMANCE | PATIENT CENTRED CARE | COMMUNITY ENGAGEMENT | RESEARCH EXCELLENCE

Compliance of self-initiated patient hand hygiene with respect to different age group (overall compliance ~ 38%)

Patient aged	Observed Moment 1 (before snacks, drinks, prn drugs at the bedside)	Observed Moment 2 (after use of bedpan/urinal at the bedside)	Observed Moment 3 (after attending toilet facilities)	Overall P value
≤ 34 years	12.2% (6/49)	66.7% (4/6)	90.9% (20/22)	<0.001
35 to 49 years	21.0% (17/81)	33.3% (2/6)	86.4% (19/22)	<0.001
50 to 64 years	34.7% (33/95)	28.6% (4/14)	81.0% (17/21)	<0.001
65 to 79 years	32.7% (36/110)	30.8% (8/26)	95.7% (22/23)	<0.001
≥ 80 years	24.7% (20/81)	5.9% (1/17)	100% (9/9)	<0.001
Overall	26.9% (112 /416)	27.5% (19/69)	89.7% (87/97)	<0.001

Between 14 January and 30 June 2015, a total of 582 conscious patients were observed for 114 working days, with an average of 5 patients per day.

Hospital general staff
Jewish General Hospital

HEALTH PERFORMANCE | PATIENT CENTRED CARE | COMMUNITY ENGAGEMENT | RESEARCH EXCELLENCE

Cheng VC et al. Am J Infect Control. 2016 Jun 1;44(6):621-4.

Measurement of Patient Hand Hygiene in Multiorgan Transplant Units Using a Novel Technology: An Observational Study

Jocelyn A. Srigley, MD, MSc¹ Colin D. Furness, PhD, MPH² Michael Gardam, MD, MSc³

- 279 patients, Canadian hospital
- Automatic electronic monitoring of patient HH behavior

Patient hand hygiene compliance

Indication	Compliance
Mealtime	39.1%
Upon room entry	2.9%
Upon room exit	6.7%
After bathroom visit	29.7%

Hospital general staff
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HEALTH PERFORMANCE | PATIENT CENTRED CARE | COMMUNITY ENGAGEMENT | RESEARCH EXCELLENCE

Srigley JA et al. Infect Control Hosp Epidemiol. 2014 Nov;35(11):1336-41.


Measurement of Patient Hand Hygiene in Multiorgan Transplant Units Using a Novel Technology: An Observational Study

Jocelyn A. Srigley, MD, MSc¹ Colin D. Furness, PhD, MPH² Michael Gardam, MD, MSc³

TABLE 2. Descriptive Statistics and Hand Hygiene Rates by Sex for Bathroom Visits

Variable	All patients	Females	Males
No.	222	96	126
No. of bathroom visits	12,649	6,428	6,221
Proportion of visits associated with hand hygiene, %	29.7	35.6 ^a	23.6 ^a
Proportion of soap use (vs ABHR), %	92.0	94.6 ^b	87.9 ^b

NOTE. ABHR, alcohol-based hand rub.
^a P < .001.
^b P < .001.



Srigley JA et al. Infect Control Hosp Epidemiol. 2014 Nov;35(11):1336-41.

American Journal of Infection Control 45 (2017) 551-3

Contents lists available at ScienceDirect


American Journal of Infection Control

journal homepage: www.ajicjournal.org

Brief Report

A randomized trial to determine the impact of a 5 moment for patient hand hygiene educational intervention on patient hand hygiene

Herleen Rai MD^a, Shanina Knighton RN^{b,c}, Trina F. Zabarsky RN^d, Curtis J. D



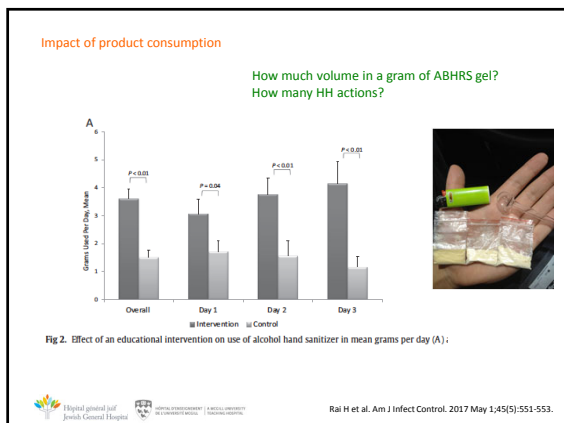
- 87% (54/62) patients agreed to participate and randomized in 2 groups (intervention vs control)

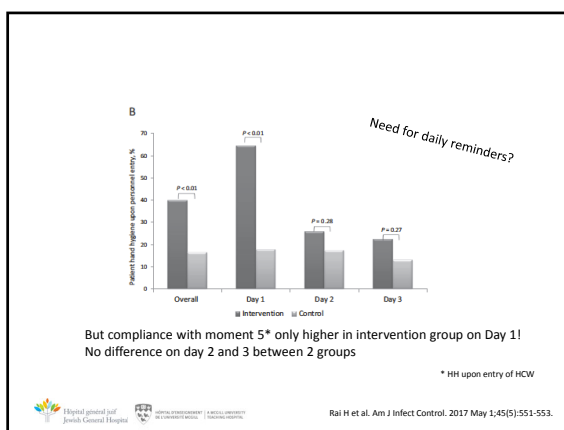
Rai H et al. Am J Infect Control. 2017 May 1;45(5):551-553.

Patient HH (5 moments)

- Both groups given ABHRS bottle
- Intervention
 - Personal education about the 5 moments by a trained nurse
- Control: no education
- Baseline patient HH rate moment 5 (HCW entry): 1/43 observations (2%)

Rai H et al. Am J Infect Control. 2017 May 1;45(5):551-553.





American Journal of Infection Control 45(2017) 626-9

Contents lists available at ScienceDirect

American Journal of Infection Control

Journal homepage: www.elsevier.com/locate/ajic

Major Article

Feasibility: An important but neglected issue in patient hand hygiene

Shantina C. Knighton RN ^{1,2,3,4}, Cherece McDowell RN ⁵, Herleen Rai MD ⁶, Patricia Higgins PhD ^{1,2}, Christopher Burant PhD ^{1,2}, Curtis J. Donskey MD ^{1,2,3,7}

¹ Henry Phipps Arden School of Nursing, Case Western Reserve University, Cleveland, OH
² Cleveland OH Quality Strategy, Case Western Reserve Medical Center, Cleveland, OH
³ Nursing Services, Cleveland OH Medical Center, Cleveland, OH
⁴ Research Services, Louis Stokes Veterans Affairs Medical Center, Cleveland, OH
⁵ Geriatric Research, Education, and Clinical Center, Louis Stokes Veterans Affairs Medical Center, Cleveland, OH
⁶ Department of Systems Biology and Biostatistics, School of Medicine, Case Western Reserve University, Cleveland, OH


- Preference of 88 patients (42 ACH and 47 LTCF) regarding type of HH sanitizer

Patient ABHRS preference

Table 2
Demographic data, including age, hand grip strength, mobility, and product preference for participants in acute-care versus long-term care

Demographic data point	Acute care (n = 42)	Long-term care (n = 46)	Total (N = 88)
Age range, y	42-98	31-97	31-98
Mean age, y	65.4	68.3	66.92
Mobility			
Ambulatory	21 (50)	15 (32.6)	36 (40.9)
Chair fast	11 (26.2)	16 (34.8)	27 (30.7)
Bedbound	10 (23.8)	15 (32.6)	25 (28.4)
Mean hand grip strength, kg	48.8 ± 14.6	47.2 ± 12.6	48 ± 13.5
Product preference			
Pushdown hand sanitizer	41 (97.6)	45 (97.8)	86 (97.7)
Pocket-size hand sanitizer	1 (2.4)	1 (2.2)	2 (2.3)
Alcohol-impregnated wipes	0	0	0

NOTE. Values for mobility and product preference are presented as n (%), whereas hand grip strength values are presented as mean ± standard deviation.



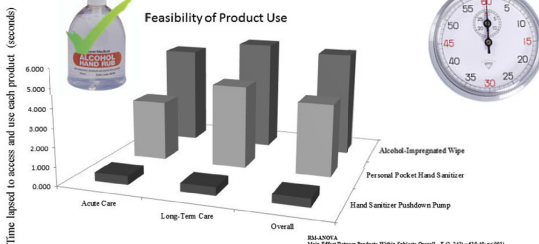
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Knigh-ton 5 et al. Am J Infect Control. 2017 Jun 1;45(6):626-629. doi:

Patient ABHRS preference

Feasibility of Product Use




Time lapsed to access and use each product (seconds)

Acute Care Long-Term Care Overall

Alcohol-impregnated Wipe
Personal Pocket Hand Sanitizer
Hand Sanitizer Pushdown Pump
ABHRS

884,930.1
Main Effect Between Products Within Subjects Overall: F (2, 142) = 616.48, p < .001
Main Effect Between Acute Care & LTTC: F (1, 86) = 6.026, p = .02



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Knigh-ton 5 et al. Am J Infect Control. 2017 Jun 1;45(6):626-629. doi:

American Journal of Infection Control 47 (2018) 334–336

Contents lists available at ScienceDirect

American Journal of Infection Control

Journal homepage: www.ajicjournal.org

ELSEVIER

Brief Report

A pilot study to assess the impact of an educational patient hand hygiene intervention on acquisition of colonization with health care–associated pathogens

Herleen Rai MD^{a,b}, Carlos Saldana MD^{a,d}, Melany I. Gonzalez-Orta MD^{a,b}, Shamina Knighton RN^{b,c,d}, Jennifer L. Cadnum BS^{b,c}, Curtis J. Donskey MD^{a,b,c,e}

- Can a patient HH program decrease acquisition of MDRO?
- Pilot study unblinded
- Exclusion of patients with dementia or unable to perform HH
- Intervention:
 - Patient 5 moments for HH poster
 - Poster of hand culture before vs after HH
 - An additional ABHRS bottle
 - Training by trained HCW with daily reinforcement
 - Daily “mandatory HH” with monitoring of technique

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Rai H et al. Am J Infect Control. 2019 Mar;47(3):334–336.

Journal of Hospital Infection

Components of Patient HH

Interventions to improve patient hand hygiene: a systematic review

J.A. Srigley^{1,2,3,*}, C.B. Furness^{1,4,5}, M. Gordon^{1,6}

• Education

• Reminders

• Audits + feedback

• Provision of HH product

Hygiene global just
Joseph General Hospital



INFECTION CONTROL & HOSPITAL EPIDEMIOLOGY MAY 2018, VOL. 28, NO. 5

ORIGINAL ARTICLE

Role of Hand Hygiene Ambassador and Implementation of Directly Observed Hand Hygiene Among Residents in Residential Care Homes for the Elderly in Hong Kong

Vincent C. C. Cheng, MD^{1,2}, Hong Chen, MD³, Shuk-Ching Wong, MVars², Jonathan H. K. Chan, PhD³, Wing-Chun Ng, MVars², Simon Y. C. So, MMedSci¹, Tsun-Ciang Chan, MD⁴, Sally C. Y. Wong, FRCPath⁵, Pak-Lung Ho, MD¹, Lona Mody, MD², Felix H. W. Chan, MD⁴, Andrew T. Y. Wong, MD³, Kwok-Yung Yuen, MD¹

• Cluster rct of 10 LTCF (5 per arm)

• Intervention:

- Direct observation of patient HH by a HH ambassador (trained nurse)
 - Frequency: q 2h during the day (weekdays), at mealtime, before medications
 - Only able patients

Hygiene global just
Joseph General Hospital

Cheng VCC et al. Infect Control Hosp Epidemiol. 2018 May;19(5):571-577. doi: 10.1017/S0950268818000000

Directly observed hand hygiene (DOHH) before taking meals & drugs
進餐吃藥前潔手 超級惡菌難入口

Clean hands with alcohol

Entry Control

Before drugs (入口管制) Before meals

Joint Council Hospital

Personal hygiene in toilet
如廁衛生要遵守 預防惡菌莫留手

BEFORE TOILET
Wipe the toilet seat with tissue sprayed with disinfectant

AFTER TOILET
Wash hands with soap and water

Exit control

283 toilet seat disinfectors:
46 wards' toilet

(出口管制)

Joint Council Hospital

入院七件事，確保你安全
Seven Important Things To Protect Yourself While in Hospital

請主動要求病房的護理人員協助
凡用或清潔手潔淨手或殺菌高平
Please take the initiative to ask ward staff to perform hand hygiene before touching you.

預防病從口入 PREVENT ILLNESS FROM INTAKE

◎ 進食前請洗手潔淨手或殺菌/清潔
Hand hygiene before meals and drugs.
◎ 用後請將手潔淨手或殺菌/清潔
Wipe water tap hands with disinfectant wetted tissue before getting water for mouth rinsage/brushing.

預防病從廁出 PREVENT ILLNESS FROM TOILET

◎ 入廁前：請用含有殺菌劑的紙巾清潔廁座。
Wipe the toilet seat with disinfectant wetted tissue before use.
◎ 入廁後：請用皂液洗手。
After defecation and urination, wash hands with soap and water.

◎ 在廁上用藥後大便後，請用皂液洗手。
After defecation using toilet paper, please use wet tissue to wipe hands; then ask ward staff to provide alcohol handrub to disinfect hands.

Cheng VC, et al. Emerging Microbes & Infections (2015) 4, e8.


TABLE 3. Consumption of Volume of Alcohol-Based Hand Rub (ABHR) per Conscious Resident per Week in 10 Residential Care Homes for the Elderly Under the Category of Intervention Arm (5 Homes) and Nonintervention Arm (5 Homes)

ABHR Consumption	ABHR per Resident per Week in the Intervention Arm, mean mL \pm SD	ABHR per Resident per Week in the Nonintervention Arm, mean mL \pm SD	P Value
Baseline	19.7 \pm 12.6 ^a	18.8 \pm 15.5 ^b	.921
Week 1	29.9 \pm 11.0	10.1 \pm 6.5	.008
Week 2	55.2 \pm 15.2	18.6 \pm 16.1	.006
Week 3	63.6 \pm 12.6	25.6 \pm 19.2	.006
Week 4	73.3 \pm 21.2	27.1 \pm 35.1	.036
Week 5	64.2 \pm 22.1	24.0 \pm 20.1	.018
Week 6	69.2 \pm 35.1	34.5 \pm 33.3	.148
Overall, weeks 1–6	59.3 \pm 12.9 ^a	23.3 \pm 17.2 ^b	.006

NOTE. SD, standard deviation.
^aThe volume of ABHR consumption per resident per week was statistically higher compared with the baseline ($P < .001$).
^bThe volume of ABHR consumption per resident per week was not statistically difference compared with the baseline ($P = .207$).

Significant increase in ABHRs volume consumption...


But still just approx 9mL per patient per day...


Cheng YCC et al. Infect Control Hosp Epidemiol. 2018 May;38(5):571-577. doi: 10.1017/ica.2018.23. Epub

Environmental contamination during intervention

Organism	Intervention	Control	P
MRSA	79/600 (13.2%)	197/600 (32.8%)	<0.001
CRA	56/600 (9.3%)	94/600 (15.7%)	0.001

No difference in MRSA and CRA contamination at baseline between arms (but small sample size)
 MRSA: 32% vs 34%
 CRA: 32% vs 20%


Cheng YCC et al. Infect Control Hosp Epidemiol. 2018 May;38(5):571-577. doi: 10.1017/ica.2018.23. Epub

Patient Hand Hygiene

Reframing the message to include patient HH...
 ... so that HCWs are not targeted



CLEAN HANDS PROTECT LIVES.

Your Health Care - No Infection.



Hand cleaning is one of the best ways you and your health care team can prevent the spread of many infections.

Ottawa Ontario

<https://www.oha.com/Documents/English%20-%20Poster.pdf>

2

Patient Education



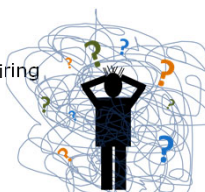
Increase Health Literacy

- Doctor more likely to involve you in the decision-making;
- Will increase your confidence in your capacity to take decisions



Obstacles to Patient Participation

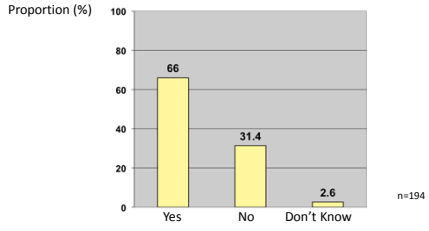
- Lack of Knowledge and Low Health Literacy
 - Patients less likely to be involved in decisions requiring medical knowledge and clinical expertise¹



Thompson, S.C. et al. Patient Educ Couns, 1993. 22(3): p. 133-40

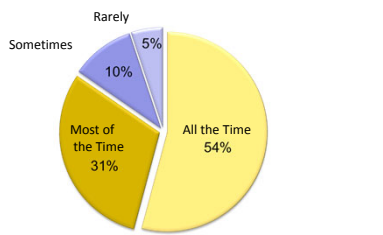
Erroneous Perception of HH Indications

Should Healthcare Workers Cleanse their Hands Before Shaking a Patient's Hand?



Longtin Y. et al. Infect Control Hosp Epidemiol. 2009 Sep;30(9):830-9

Eroneous Risk Assessment



HOW OFTEN DO YOU THINK NURSES WASH THEIR HANDS BEFORE CARING FOR YOU?



Longtin Y. et al. Infect Control Hosp Epidemiol. 2009 Sep;30(9):830-9

KEYWORDS AND VECTORS
CLEAN HANDS COUNT
KNOW THE TIPS TO PROTECT YOURSELF FROM SERIOUS INFECTIONS

TIPS
Use proper technique: scrub for 20 seconds with soap and water. If you don't have soap and water, use alcohol-based hand sanitizer.

TIPS
If you don't have soap and water, use alcohol-based hand sanitizer.

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Use proper technique: scrub for 20 seconds with soap and water. If you don't have soap and water, use alcohol-based hand sanitizer.

www.cdc.gov/handhygiene

[HCWs] 'clean their hands less than half of the times they should'.

Increase Health Literacy

- Healthcare centers reach out to the general population to give lectures on HAI and PP
 - E.g. YMCA
 - Talks in LTCF with invitation to both HCWs AND patients to attend





How to Protect Yourself Against Infections
During a Hospital Stay

Neil Lings, MD
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Chair of Hospital Prevention and Control Unit
Montreal General Hospital

Yves Lussier@mgm.ca

TALKS GIVEN TO GENERAL POPULATION
REACH THEM BEFORE THEY GET SICK!

Patient education → Patient autonomy

VOS INDICATIONS À L'HYGIÈNE DES MAINS



Pour vous protéger contre les infections, profitez l'hygiène des mains en les frottant avec une solution hydro-alcoolique au moins 1 fois de 15 secondes.

- 1. Avant et après les repas
- 2. Après être allé aux WC
- 3. Après avoir toussé
- 4. Lorsque vous touchez ou touchez votre visage (il est préférable de ne pas le faire)

VOS INDICATIONS À L'HYGIÈNE DES MAINS

Il est préférable de vous protéger des infections en évitant de toucher le patient.

- 1. Avant de toucher le patient
- 2. Avant un geste simple
- 3. Après un contact avec des surfaces biologiques
- 4. Après avoir touché le patient
- 5. Après avoir touché l'environnement du patient

Stewardson AJ, Sax H et al. Lancet ID. 2016;16:1345.

Patient Hand Hygiene

CLEAN HANDS PROTECT LIVES.

Your Health Care - Be Involved

How to HANDRUB



1. Apply hand rub and rub hands together for 20 seconds.
2. Rub hands together for at least 20 seconds or until dry.

CLEAN HANDS PROTECT LIVES.

1. Wash hands with soap and water.
2. Apply soap and lather over hands.
3. Rub hands together for at least 20 seconds.
4. Rinse hands under running water.
5. Pat hands dry with a clean towel. Turn off the tap with your hand.

HH technique for patients

https://www.oha.com/Documents/English/20-10Cards.pdf





Patient Hand Hygiene

Hand cleaning is one of the best ways you and your health care team can prevent infections from spreading.

Did you know that the main way germs can spread is by hand?

Keeping hands clean is the best thing you can do to prevent germs from spreading to others. That's so important in hospitals and other places where the risk of infection is high.




Your health care team works hard to keep their hands clean.

Your health care team plays a big role in preventing the spread of infection. They are committed to giving you clean, safe care.

In Canada, one in nine patients gets an infection while in hospital.

Sometimes patients get infections when they are in the hospital.

Thousands of times a day, members of your health care team handle things that could have harmful germs. Without good hand hygiene, those germs can spread to patients and cause infections.



When should your health care team wear gloves?



Wearing gloves does not prevent germs from spreading from patients to patients. So, don't expect your health care team to always wear gloves. But the right time to wear gloves is when at the right time and in the right way.

There are times when your health care team should wear gloves. For example, they wear gloves when they are touching your wounds or taking blood.

They may also wear gloves when taking care of a patient in isolation (in a room by themselves). These patients need special care and protection. If you are visiting a patient in isolation, you may also have to wear special gloves, such as gloves, a mask, or a gown.

Once your health care team is finished with a task, they will remove the gloves and they clean their hands carefully with before and after using the gloves.

HH education


3

Patient Engagement in Reminding Staff to perform HH

The Swiss Experience









Canadian Patient Safety Institute
Institut canadien pour la sécurité des patients

Si vous êtes suivi par un professionnel de la santé, n'hésitez pas à lui demander de se nettoyer les mains avant de vous examiner.
Les patients, les membres de leur famille et les travailleurs de la santé ont tous un rôle à jouer dans la réduction des infections nosocomiales. En tant que patient, en plus de veiller à vous laver souvent les mains, n'hésitez pas à demander à votre professionnel de la santé de faire de même avant de vous prodiguer des soins. Ensemble, nous pouvons changer les choses et réduire les infections en adoptant pour de bon une hygiène des mains optimale.



Patients as reminders

<http://www.saferhealthcarenow.ca>




手衛生, 要做到你我齊參與
有你提示會更好

Promotion & Implementation of Patient Empowerment in Hand Hygiene

瑪麗醫院 感染控制組

A journey of patient recruitment

Review of record for newly admitted patients
↓
Communication with ward manager or nurse in charge
↓
Interview to newly admitted patient for health education
↓
Invitation patient to participate in patient empowerment program

Enhanced performance feedback and patient participation to improve hand hygiene compliance of health-care workers in the setting of established multimodal promotion: a single-centre, cluster randomised controlled trial

Andrew James Stewardson¹, Hugo Saiz², Angèle Gayet-Ageron³, Sylvie Tacconelli⁴, Yves Longtin⁵, Walter Zingg⁶, Didier Pittet⁷

Summary
Background Hand hygiene compliance of health-care workers remains suboptimal despite standard multimodal promotion, and evidence for the effectiveness of novel interventions is urgently needed. We aimed to assess the effect of enhanced performance feedback and patient participation on hand hygiene compliance in the setting of multimodal promotion.

Keywords [Hand hygiene](#), [Patient participation](#), [Performance feedback](#), [Compliance](#), [Health-care workers](#), [Multimodal promotion](#)

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http://dx.doi.org/10.1016/j.ijid.2018.09.025

- The Swiss Experience
- Large scale study to evaluate efficacy of patient reminders to improve HH


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Enhanced performance feedback and patient participation to improve hand hygiene compliance of health-care workers in the setting of established multimodal promotion: a single-centre, cluster randomised controlled trial

Andrew James Schwarbock, Hagar Sar* , Angèle Goyet-Agones, Sylvie Touveneau, Yves Longtin, Walter Zingg, Didier Pittet*


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 Published online September 2, 2016
[http://dx.doi.org/10.1016/S1473-3099\(16\)30154-8](http://dx.doi.org/10.1016/S1473-3099(16)30154-8)

- Single-center Cluster RCT
- 3 groups:
 - ① Control (n=21 wards)
 - ② Enhanced Performance Feedback (EPF) (n=24)
 - ③ EPF + PP (n=22)
- 15 months baseline and 2 year intervention





Enhanced performance feedback and patient participation to improve hand hygiene compliance of health-care workers in the setting of established multimodal promotion: a single-centre, cluster randomised controlled trial

- **Enhanced Performance Feedback**
 - Immediate Feedback on HH compliance at the end of each session to HCWs present on ward
 - Individualized report cards





611 cards distributed (34% of all HCWs audited)




Enhanced performance feedback and patient participation to improve hand hygiene compliance of health-care workers in the setting of established multimodal promotion: a single-centre, cluster randomised controlled trial

- **Enhanced Performance Feedback**
 - Immediate Feedback on HH compliance at the end of each session to HCWs present on ward
 - Individualized report cards
 - Reports and Posters q 3 months
 - Reports emailed to head nurses and senior medical staff



Enhanced performance feedback and patient participation to improve hand hygiene compliance of health-care workers in the setting of established multimodal promotion: a single-centre, cluster randomised controlled trial

Patient Participation


- Welcome pack on admission (If HCW judges patient capable)
 - Brochure
 - ABHRS bottle
- Patient HH indications
- Patient Education by Ward Staff
 - About HCW HH and Patient HH
- Partnership
 - Agreement to remind each other – focus on Moment 1
 - Patients invited to remind Staff about HH
 - HCWs invited to remind Patients about HH

Patient indications for hand hygiene

1. Before and after eating
2. After going to the toilet
3. After blowing your nose
4. When you leave and return to your space




33% of patients received a welcome pack



Enhanced performance feedback and patient participation to improve hand hygiene compliance of health-care workers in the setting of established multimodal promotion: a single-centre, cluster randomised controlled trial

• Patient Participation

- Posters displayed promoting PP
- HCWs invited to wear promotional badges
- Information sessions to HCWs at beginning of study
- HCWs determined if patient was “eligible” to PP
 - Excluded for the duration if incapacity



VOS INDICATIONS À L'HYGIÈNE DES MAINS


Pour vous protéger contre les infections, pratiquez l'hygiène des mains en les frictionnant avec une solution hydro-alcoolique ou en les lavant à l'eau et au savon.

- 1 Avant et après les repas
- 2 Après être allé aux WC (avec du foin et du savon)
- 3 Après vous être mouché
- 4 Lorsque vous quittez et regagnez votre espace (lit et table de nuit)

NOS INDICATIONS À L'HYGIÈNE DES MAINS

Si l'un d'entre nous oublie l'hygiène des mains, aidez-le. Vous pouvez dire lui!


- 1 Avant de toucher le patient
- 2 Avant un geste aseptique
- 3 Après un contact avec des liquides biologiques
- 4 Après avoir touché le patient
- 5 Après avoir touché l'environnement du patient



Enhanced performance feedback and patient participation to improve hand hygiene compliance of health-care workers in the setting of established multimodal promotion: a single-centre, cluster randomised controlled trial

RESULTS

- 1367 Observation sessions
- 12,579 HH opportunities found
- Inter-observer agreement: 0.94
- Median No. observed HCWs per session: 3 (IQR, 2-4)



Enhanced performance feedback and patient participation to improve hand hygiene compliance of health-care workers in the setting of established multimodal promotion: a single-centre, cluster randomised controlled trial


Overall HH

Increased HH compliance in all 3 groups (p<0.0001)

No group met the a priori threshold for clinical significance of 15% increase

Overall hand hygiene	Number of hand hygiene actions	Number of hand hygiene opportunities	Mean compliance* (95% CI)	Absolute change*† (95% CI)	Odds ratio* (95% CI)
Control					
Baseline	935	1430	66% (62-70)	-	1
Intervention	1631	2239	73% (70-77)	7% (4-10)	1.41 (1.21-1.63)
Follow-up	631	949	70% (66-75)	4% (0-8)	1.21 (1.00-1.47)
Enhanced performance feedback					
Baseline	1040	1629	65% (62-69)	-	-
Intervention	2160	2920	75% (72-77)	10% (7-13)	3% ↑ Attributable P=0.19
Follow-up	1356	1956	72% (68-75)	7% (4-10)	-
Enhanced performance feedback plus patient participation					
Baseline	1024	1594	66% (62-70)	-	-
Intervention	2107	2767	77% (74-80)	11% (8-14)	4% ↑ Attributable P=0.048
Follow-up	1485	2100	72% (69-76)	6% (4-10)	-

F/Up: 2 year period post intervention



Enhanced performance feedback and patient participation to improve hand hygiene compliance of health-care workers in the setting of established multimodal promotion: a single-centre, cluster randomised controlled trial

Moment 1 only


Increased M1 HH compliance in all 3 groups (p<0.0001)

Increase PFE+PP significantly superior to control arm (but only 10% increase)

WHO Moment 1—before patient contact	Number of hand hygiene actions	Number of hand hygiene opportunities	Mean compliance* (95% CI)	Absolute change*† (95% CI)	Odds ratio* (95% CI)
Control					
Baseline	216	474	54% (46-61)	-	1
Intervention	355	604	61% (54-67)	7% (1-14)	1.34 (1.03-1.75)
Follow-up	135	236	62% (54-71)	9% (0-17)	1.45 (1.02-2.06)
Enhanced performance feedback					
Baseline	244	494	51% (44-58)	-	-
Intervention	473	750	65% (59-71)	14% (8-20)	7% ↑ Attributable P=0.099
Follow-up	301	481	65% (58-71)	4% (0-20)	-
Enhanced performance feedback plus patient participation					
Baseline	199	432	48% (41-55)	-	-
Intervention	470	743	65% (59-70)	17% (11-23)	10% ↑ Attributable P=0.035
Follow-up	325	543	62% (56-68)	14% (7-20)	-


*Obtained from a generalised linear mixed-effects model with ward included as a random effect. †Absolute percentage point difference between baseline and intervention period, and from baseline to follow-up.

Table 2: Hand hygiene compliance overall and with WHO Moment 1




Enhanced performance feedback and patient participation
to improve hand hygiene compliance of health-care workers
in the setting of established multimodal promotion:
a single-centre, cluster randomised controlled trial

“Observers witnessed no episodes of
patients reminding HCWs to perform
HH during HH opportunities before
patient contact”




Help yourself,
help others!



Help yourself, help others

- A single patient enquiry can induce long-lasting change in HCW behaviour
 - 81% of HCWs reminded to perform hand hygiene by a patient were **more careful** about it during subsequent patient care activities

Julian KG et al Infect Control Hosp Epidemiol 2008;29:781–782.



4

Engagement in Governance,
Policymaking and Promotion



Regular meeting with patients' group representative with
hospital management team, Queen Mary Hospital





Patients are your partners.
Why and how this partnership works.



Reasons PFPSC engage:

- We have a story to tell
- We have insights into system improvements
- When engaged we are healthier, safer
- **Together we can do better**
 - so that,
 - Every Patient is Safe*

Policy

Consultation

- Presentations <http://www.patientsafetyinstitute.ca/en/bootsResources/Pages/You-are-kidding-right-Patients-1-4-hi-with-antimicrobial-resistance-2016-11.aspx>
- Campaigns <https://www.canada.ca/en/public-health/services/antibiotic-antimicrobial-resistance/tru-sciences.html#v10>
- Briefs to Government <http://parlvy.parl.gc.ca/XRenderItem/PowerBrowser/PowerBrowser/2/2017/1107/1/283067?language=English&Stream=Video&useragent=Mozilla/5.0>
- Multi-media (video – where have your hands been)

Involvement

- Publish <https://doi.org/10.1108/JHG-02-2016-0008>
- Citizen voice


Partnership

- CPSI
- Regulatory body: public rep

Requests management

- Best fit between patient and initiative
- Initial and on demand support to all parties
- Evaluation

About the requesting organization			
Name or organization and department (print)			
Contact person name, position, email, phone			
About the collaboration			
Why is it requested to form a patient/family representative committee to the initiative? (purpose, aim of collaboration)			
What: Provide enough information so the patient/family committee can understand the type and content of work/programs which their role is one of specific skills are needed			
WHO	Describe the patient/family representative		
WHERE	Place and location of collaboration		
CLASSIFICATION	Degree of collaboration		
Type of organization <input type="checkbox"/> Standing engagement (e.g. Clinical Services, Infectious Diseases, Inpatient, Intensive Care, etc.) <input type="checkbox"/> Consultant service (group) <input type="checkbox"/> Product, service, design, development or implementation (e.g. drug, medical device, etc.) <input type="checkbox"/> Other	<input type="checkbox"/> Consult (e.g. share experience, provide input to the process) <input type="checkbox"/> Inform (e.g. inform, influence decision, promote) <input type="checkbox"/> Partner (e.g. co-develop, co-design, develop, etc.) <input type="checkbox"/> Resource (e.g. for resource allocation)	<input type="checkbox"/> Care delivery engagement or training <input type="checkbox"/> Promotional/educational <input type="checkbox"/> Other	System area: <input type="checkbox"/> Care delivery <input type="checkbox"/> Promotional/educational <input type="checkbox"/> Other
Is this more details			
Has this group worked with a patient representative before?	Yes	No	Details
Is there a previous patient representative?			Name(s):
Is it a local (e.g. within province) organization a goal?			
Is there an institutional mandate for this initiative?			
Confirm request reimbursement (Funding, accreditation, etc.)			Is it expected to offer reimbursement?
By whom is request supported?			Date:
Are supporting documents available (FOK, charter, agenda)?			Attach to email



Partnership outcomes


- 100% of programs developed/ delivered in partnership with patients
- Key corporate functions (CEO, staff recruitment, strategic and operational planning)
- The National Patient Safety Consortium including the Infection Prevention and Control Action Plan

<http://www.patientsafetyinstitute.ca/en/About/PatientSafetyForwardWith/Pages/Infection-Prevention-and-Control.aspx>

Every patient safe. Le dévouement pour tous les patients. www.patientsafetyinstitute.ca | www.securitepatients.ca | [cpsf-icscp](http://www.cpsf-icscp.ca) Canadian Patient Safety Institute / Institut canadien de la sécurité des patients

Canadian guidance

- To help HCWs, managers, patients and other stakeholders work together effectively to improve patient safety
- 76 pages!
- For all types of individuals
 - HCWs,
 - Managers
 - Patients
 - Families
 - Anyone else




www.patientsafetyinstitute.ca/engagingpatients


Canadian guidance

Components
Evidence-based **GUIDANCE** on:

- Practical patient engagement practices
- Consolidated information, resources, and tools
- Supporting evidence and examples from across Canada
- Experiences from patients and families, providers, and leaders
- Outstanding questions about how to strengthen current approaches
- Strategies and policies to meet standards and organizational practice requirements




www.patientsafetyinstitute.ca/engagingpatients




**ACCREDITATION
CANADA**

- Increase patient and family involvement in:
 - Medication safety
 - Surgical care safety
 - **Infection Prevention and Control**
 - Patient-provider communication
 - Patient identity
 - Transition of care
 - Family presence




Accreditation Canada Standards – infection prevention and control


- **6.0 The organization engages clients and families in infection prevention and control practices.**
 - **6.1** The organization provides **clients and families** with **information** about routine practices and additional precautions as appropriate in a format that is easy to understand.
 - **6.2** The organization provides client, families and visitors with **access to hand hygiene resources and PPE** based on risk of transmission of microorganisms.
- **14.3** The organization **seeks input from** staff, services providers, volunteers, and **clients and families** on components of the IPAC program.
 - Surveys, focus groups, interviews, meetings, etc.
- **14.5** The organization **shares evaluation results with** staff, service providers, volunteers, **clients, and families.**




Patient as Staff HH Observers





Compliance measurement



Required Organizational Practice




Standardized by WHO






DIRECT OBSERVATIONS

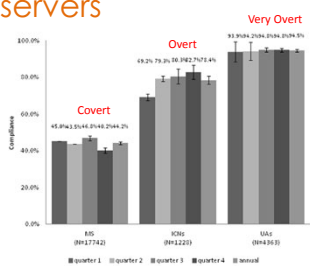
Observations made by trained nurses who scout wards to (1) identify HH opportunity and (2) whether the HCW performed HH as indicated

PROs	CONS
Standardized Methodology	Labor-intensive
Distinguishes among HH indications	Requires training and certification
Recognizes the "patient zone"	Limited scaling-up potential
Can collect additional information (type of HCW, glove use, time of day, etc.)	Impossible in some settings (outpatient, homecare, "drawn curtain")
	Disruptive to care
	Hawthorne Effect

 WHO: new strategies are needed






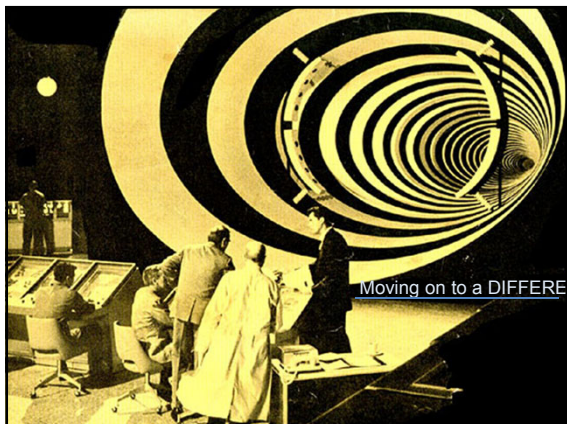
Impact of covert vs. overt observers



Setting	Observer Type	Quarter 1	Quarter 2	Quarter 3	Quarter 4
B55	Covert	45.8%	43.5%	44.4%	44.4%
	Overt	69.2%	79.2%	78.3%	78.2%
U45	Covert	83.3%	82.4%	82.4%	82.4%
	Overt	83.3%	82.4%	82.4%	82.4%

Figure 1. Hand hygiene compliance rates by type of observer and quarter. The compliance rates observed by medical students (MS) were significantly lower than those by infection control nurses (ICN) and unit RN ambassadors (U45) in each quarter (all the P-values <0.001). The numbers in parentheses represent hand hygiene opportunities observed. † See supplemental online data. doi:10.1371/journal.pone.0213746.g001







Patient Participation to Prevent Medical Errors

- Strong patient desire to ↓ medical errors¹
 - Heavy media coverage
 - 91% believe that patients can help prevent medical errors
 - 98% believe that hospitals should train patients how to prevent errors


1. Waterman, A.D., et al., J Gen Intern Med, 2006, 21(4): p. 367-70.



Patient Participation in the Evaluation of the quality of care


Already accepted in the form of [Patient Satisfaction Surveys](#)


1. Hampton T. 7-country survey of patients: US adults most unhappy with health care. *Jama* 2007;298:2730-1
2. Howell E et al. Comparison of patients' assessments of the quality of stroke care with audit findings. *Qual Saf Health Care* 2007;16:450-5
3. Durieux P et al. Comparison of health care professionals' self-assessments of standards of care and patients' opinions on the care they received in hospital: observational study. *Qual Saf Health Care* 2004;13:198-202
4. Idvall E et al. Patient and nurse assessment of quality of care in postoperative pain management. *Qual Saf Health Care* 2002;11:327-34



Patient Participation in the Evaluation of the quality of care

- Limitations of patient satisfaction surveys
 - Reliability of patient assessment?
 - Patients not trained
 - Limited medical knowledge
 - Retrospective evaluation
 - Capacity to assess outcomes other than “satisfaction”?





Cite this article as: BMJ, doi:10.1136/bmj.38874.499167.7C (published 22 June 2006)


Research BMJ

Patients' own assessments of quality of primary care compared with objective records based measures of technical quality of care: cross sectional study

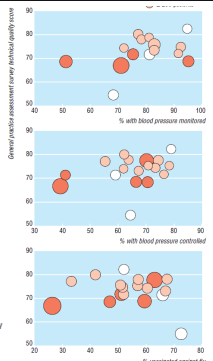
Mala Rao, Aileen Clarke, Colin Sanderson, Richard Hammersley

- Relationship between patient assessment of technical quality of care (medical knowledge, thoroughness of physical examination, arrangement of tests when needed, making the right diagnosis, and prescribing the right treatment) and
- 3 indicators of technical quality:
 1. Monitoring of BP
 2. Control of BP
 3. Influenza vaccination coverage of patients

23 clinical practices (3487 patients) evaluated




No relationship between patient assessment of the quality of care and 3 indicators of quality



Scatter plots for general practice assessment survey scores for technical quality compared with three records based measures. Size of marker indicates confidence interval around survey score estimate

Rao M et al. BMJ 2006



Annals of Internal Medicine | IMPROVING PATIENT CARE

Patients' Global Ratings of Their Health Care Are Not Associated with the Technical Quality of Their Care

John T. Chang, MD, MPH; Ron D. Hays, PhD; Paul G. Shekelle, MD, PhD; Catherine H. MacLean, MD, PhD; David H. Solomon, MD; David R. Reeb, MD; Carl P. Roth, RN, MPH; Cassi J. Kamborg, MSPH; John Adams, PhD; Roy T. Young, MD, and Neil S. Wenger, MD, MPH

Background: Patient global ratings of care are commonly used to assess health care. However, the extent to which these assessments of care are related to the technical quality of care received is not well understood.

Objective: To investigate the relationship between patient-reported global ratings of health care and the quality of providers' communication and technical quality of care.

Design: Observational cohort study.

Setting: 2 managed care organizations.

Patients: Vulnerable older patients identified by brief interviews of a random sample of community-dwelling adults 65 years of age or older who received care in 2 managed care organizations during a 13-month period.

Measurements: Survey questions from the second stage of the Consumer Assessment of Healthcare Providers and Systems program were used to determine patients' global rating of health care and provider communication. A set of 236 quality indicators, defined by the Assessing Care of Vulnerable Elders project, were used to measure technical quality of care given for 22 clinical conditions; 207 quality indicators were evaluated by using data from chart abstraction or patient interview.

Results: Data on the global rating item, communication scale, and technical quality of care score were available for 236 vulnerable older patients. In a multivariate logistic regression model that included patient and clinical factors, better communication was associated with higher global ratings of health care. Technical quality of care was not significantly associated with the global rating of care.

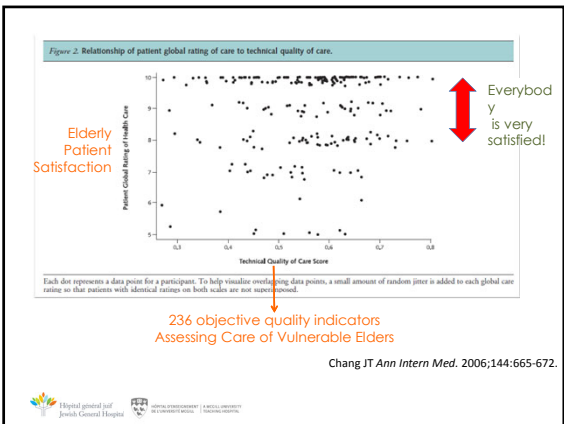
Limitations: Findings were limited to vulnerable older patients who were enrolled in managed care organizations and may not be generalizable to other age groups or types of insurance coverage.

Conclusions: Vulnerable elders' global ratings of care should not be used as a marker of technical quality of care. Assessments of quality of care should include both patient evaluations and independent assessments of technical quality.

Ann Intern Med. 2006;144:665-672. For author affiliations, see end of text. www.annals.org

Hospital general staff Jewish General Hospital

DEPARTMENT OF COMMUNITY HEALTH SCIENCE AND SERVICES | FACULTY OF MEDICINE | MCGILL UNIVERSITY





Patient evaluation of quality of care

- Retrospective evaluation of technical quality of care = not reliable

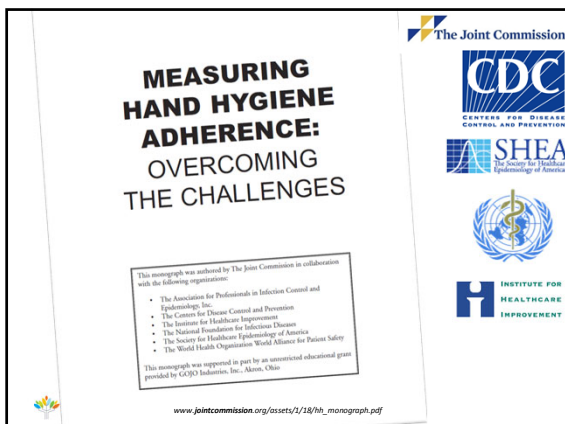
– Reasons

- Lack of training?
- Lack of expertise?
- Patient do not pay attention
 - Easy to miss something you are not looking for
 - Assume it is correctly done
- Delay between events and survey/ recall bias?



Professional organizations and patient involvement in hand hygiene evaluation





The Joint Commission


Patients

In some organizations, patients are asked to provide information on health care worker hand hygiene. (Using patients as observers is not the same as using patients to remind health care workers to perform hand hygiene, which is a commonly used strategy for improvement; that strategy is described in more detail in Chapter 9.) Using patients as observers may be most effective in settings such as ambulatory care, in which patients are relatively healthy and where independent observers are rarely used. Keep in mind that staff need to know they should perform hand hygiene in front of a patient; the patient will not see hands being cleansed if it is done outside a patient's field of vision.

www.jointcommission.org/assets/1/18/hh_monograph.pdf

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ACCREDITATION CANADA



Driving Quality Health Services
Force motrice de la qualité des services de santé

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ACC





Client and Family-centered care requirements:

- Partner with patients and families in planning, assessing, and delivering their care
- Include patient partners on advisory boards and planning groups
- Monitor and evaluate services and quality with input from patients and families

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Accreditation Canada

- **Standard 4.5**
 - The organization monitors compliance with IPC policies and procedures and makes improvements to the policies and procedures and/or education program based on the results
 - Observation can be done by a trained observer within an organization, or by patients/families within an organization or in the community
 - Organizations providing services in client homes who find direct observation not possible can consider alternative methods, such as Questions on client satisfactions surveys that ask about staff's hand hygiene compliance.
- **Standard 8.2**
 - Hospitals must implement processes for clients and families to report non-compliance with IPC policies and Procedures

On what evidence are these recommendations based?





Patient evaluation of Hand Hygiene compliance

- Semmelweis Hand Hygiene Project
 - Published as abstract only (AJIC 2008)
 - Tripler Medical Army Center, Honolulu, HI
 - Single Hospital outpatient clinic
 - Intervention:
 - Patients handed a 3x5" card upon registering
 - Patients invited to fill out and drop in designated receptacle

Yamada SM AJIC 2008:36(5):E114-E115

Patient information card

Be Involved in Your Care!

- Using soap and water or alcohol rubs is one of the ways that helps us to prevent the spread of germs.
- Please observe our health care provider to see if they wash or use the alcohol rub before providing your care.
- Take an active part in your care by completing the reverse side of this card and placing it in the receptacle in the reception area.

Name of clinic: _____ Date: _____

Type of healthcare worker

Physician

Nurse

Other

Performed Hand Hygiene? Yes No

Yamada SM AJIC 2008:36(5):E114-E115

Semmelweis Hand Hygiene Project

Table 1. Number and Percent Observation Tools Returned

Patient Surveys	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
# Distributed	NA	NDC	150	NDC	NDC	348	331	288	NDC	365
# Returned	65	NDC	65	NDC	NDC	212	165	165	NDC	272
% Return	NA	NDC	43.3%	NDC	NDC	60.9%	49.8%	55.4%	NDC	74.5%

NA = Not available
 NDC = No Data Collection
 Overall monthly compliance for all providers varied from 87% to 99%.

Table 2. Monthly Compliance Data by Provider

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Physician	99.2%	NDC	92.4%	NDC	NDC	91.3%	91.4%	94.4%	NDC	96.9%
Nurse	100.0%	NDC	100%	NDC	NDC	100%	90.0%	100%	NDC	94.4%
Other	100.0%	NDC	100%	NDC	NDC	96.6%	80.0%	80.0%	NDC	100%
Overall	99.7%	NDC	97.9%	NDC	NDC	96.0%	87.1%	94.8%	NDC	97.1%

NDC = No Data Collection

Yamada SM AJIC 2008:36(5):E114-E115

The Joint Commission Journal on Quality and Patient Safety

National Patient Safety Goals

Engaging the Patient as Observer to Promote Hand Hygiene Compliance in Ambulatory Care

Mark J. Bittle, Dr.PH., M.B.A.; Suzanne LaMarche, M.B.A.

- Johns Hopkins Hospital
- Switch in HH policy:
 - HH upon entering and leaving patient room
- Baseline HH compliance rate (trained nurses):
 - 68% (range, 63-78%)
- Need: extend **compliance to outpatient clinics**

Bittle MJ et al. Jt Comm J Qual Patient Saf. 2009;35(10):519-25.


The Joint Commission Journal on Quality and Patient Safety


National Patient Safety Goals

Engaging the Patient as Observer to Promote Hand Hygiene Compliance in Ambulatory Care

Mark J. Bittle, Dr.PH., M.B.A.; Suzanne LaMarche, M.B.A.

- **Methods**
 - Patients recruited upon registering at outpatient clinic
 - If patient accepts
 - Scoring card (yellow) + pencil
 - Patient drops card in ballot box upon leaving clinic





JOHNS HOPKINS
HOSPITAL

BE A PARTNER IN YOUR HEALTHCARE

Clinic: _____
Date: _____

Healthcare Worker: _____
Performed hand hygiene: _____

Other: _____ Yes _____ No _____ Unsure

Comments: _____

Be a partner in your health care!


➤ Our goal is to provide you with safe, high quality healthcare. We welcome any additional comments or suggestions.

➤ Using soap & water or alcohol rubs (such as mouth holes) to prevent the spread of germs.

➤ Be a partner in your health care by completing the reverse side of this card and placing in receptacle in the reception area.

“Engaging the patient to report on hand hygiene compliance was found to be efficient and acceptable to patients and providers, and the results of the observations were representative of actual provider behavior.”

The card is issued to the patient at check-in. The patient receives a small pencil to complete the card and places the card in a yellow drop box on leaving the clinical practice.



The Joint Commission Journal on Quality and Patient Safety


National Patient Safety Goals

Engaging the Patient as Observer to Promote Hand Hygiene Compliance in Ambulatory Care

Mark J. Bittle, Dr.PH., M.B.A.; Suzanne LaMarche, M.B.A.

- **Results**
 - Number enrolled patients: ?
 - Response rate: 22% (range, 12-77%)
 - Observed compliance: 88%
 - Validation of accuracy of observation (n=65)
 - Independent observer in room
 - Concordance: 100%

Bittle MJ *et al.* *Jt Comm J Qual Patient Saf.* 2009;35(10):519-25.



The Joint Commission Journal on Quality and Patient Safety

National Patient Safety Goals

Engaging the Patient as Observer to Promote Hand Hygiene Compliance in Ambulatory Care


Mark J. Bittle, Dr.PH., M.B.A.; Suzanne LaMarche, M.B.A.

- Number of patients enrolled?
- Ethical approval?

Hybrid generalist | Jewish General Hospital | HEC-UNIVERSITÉ DE MONTRÉAL | HEC-UNIVERSITÉ DE QUÉBEC | HEC-UNIVERSITÉ DE LIÉGÈRE

Patient Involvement in HH observation


- Logical step in the involvement of patients
- Recommended by many organizations (CDC, Accreditation Canada)
- However, many questions remain unanswered:
 - Reliability, Validity
 - Patient acceptance
 - HCW perception
 - Impact on patient-HCW relationship
 - Support from organizations
 - Ethical considerations



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Patient Observer Study (POST)

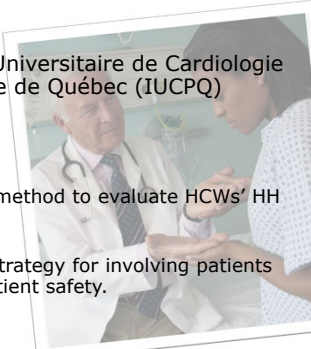
Engaging hospitalized patients in the evaluation of staff hand hygiene compliance – a prospective study



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POST


- Initiated Institut Universitaire de Cardiologie et de Pneumologie de Québec (IUCPQ)
- Objectives
 1. Develop a new method to evaluate HCWs' HH compliance
 2. Explore a new strategy for involving patients in improving patient safety.



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POST

- Principal research question
 - Can patients be engaged to evaluate prospectively staff HH compliance?
- Primary hypothesis
 - A sizeable proportion of patients will **accept** to participate, be **able** to correctly recognize indications for HH and appreciate whether HH occurred according to institutional recommendations, and **appreciate** their experience



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Methodology




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Methodology


- Study design
 - Interventional, uncontrolled prospective study
 - “proof-of-principle” pilot study
- Population
 - Patients from bariatric surgery unit, IUCPQ
 - 32-bed unit
- Collaborators
 - Maria-Cecilia Gallani RN, PhD
 - Laval University Faculty of Medicine
 - Lori Côté RN IPC cert.
 - Msc candidate



Methodology




Timeline. Patient recruitment and observation



Methodology

- Eligibility criteria
 - Recovering from bariatric surgery (24h post-op)
 - No acute or life-threatening condition
 - Absence of additional precautions
 - Adequate language and writing skills
 - >18 years old



Methodology

- Identification of potential participants
 - Research nurse in conjunction with head nurse/assistant head nurse
- Pre-enrollment questionnaire
 - Objectives
 1. Determine proportion who accept to participate
 2. Understand the reasons for declining to participate
 3. Collect very limited demographic information

Methodology

- Training
 - Required to provide the patient with sufficient knowledge
 - Given by research team
 - Objective: teach HH Moment # 1
 - Patient Zone
 - Recognize opportunities for HH
 - Determine whether HH was performed as required
 - Record observations in form

Training of patients 20-30 minutes

Section 1: theoretical basis

- Role of hands in transmission of microbes and infections : importance of hand hygiene to prevent nosocomial infections in the community and in healthcare settings;
- 2 hand hygiene techniques (hand rubbing and hand washing);
- Notion of « patient zone »
- 4 Moments to hand hygiene (in particular Moment No. 1)
- Concept of hand hygiene opportunity
 - Only encounters in which there was an opportunity to perform HH may be evaluated;
 - Only HCW who touch either the patient or a surface within the patient zone must be evaluated
 - Some encounters are « not evaluate » if cannot assess whether the HCW has touched a surface outside of the patient zone;
- Significance of not witnessing HH
 - May have been conducted in the corridor so care may still be safe.
- Observations only concerns HCWs, not patients or visitors.

Section 2 : Practical training

- Scenarios of encounters between patients and healthcare workers and are enacted by the research nurse.
- The subject is invited to fill out the observation booklet. Any uncertainty or error is corrected by the research nurse.
 - Moment No. 1 correctly performed (nurse touches object outside of Patient Zone and then touches the patient)
 - Moment No. 1 not respected (HCW comes directly from corridor and touches the bed without performing HH)
 - Moment No. 1 respected (HCW places cup on bedside table, performs HH and touches the patient)
 - Moment No. 1 not respected (HCW touches the bedside table before HH)
 - Superfluous HH (HCW performs HH but does not touch the patient or the patient zone)
 - Moment No. 1 missed (HCW puts on gloves instead of performing HH)

Miscellaneous information

- Observations must be discreet but not hidden;
 - If HCW asks about HH, answer that you are participating in a study to see whether patients can evaluate quality of care
 - Remember: HCWs are aware of this project and posters have been placed to explain the objectives
- Anonymous observations (do not identify the HCW)
- DO not present results to HCW (data will be aggregated before restitution)
- Keep booklets in the room. Research assistant will pickup booklet in 24h.

**WHO observation tools:
too complicated for patients**

Hand Hygiene Observation Form

1. Did the healthcare worker touch the patient or an object within the patient zone? No → Do not fill out form
Yes

2. Did you see the healthcare worker touch an object or a surface outside of the Patient Zone before entering the Patient Zone of the patient? No
I don't know

3. Did you see the healthcare worker perform hand hygiene before touching the patient or a surface within the Patient Zone? No
Yes
I don't know

4. Type of Healthcare worker: Nurse
Physician
Other
I don't know/unsure

Date: _____ Time: _____ AM PM

Research Assistant:

Ms. X

For any question/comment :

- Dial XXXX on the phone in the patient room. You can leave a message if no answer.

OR

- Dial XXX-XXXX (paper) and enter the number to call back after the beep. The research nurse will call you back as soon as possible.


**Patient observation tools:
- Focusing only on moment # 1**


Certification of participants

- Essential prior to actual observations
- Only certified patients will proceed to actual observations
- Methods: 6 HH videos from WHO
 - Used to certify IPC nurses to conduct HH observations
- Passing mark: 100% (6/6)

Methodology


- **Observation sessions**
 - Patients invited to systematically collect HH observations during 24-hour period
 - Record their observations in booklet






Methodology


- **Post-observation survey**
 - Objective: collect participants' experiences and perceptions
 - 20-minute verbal survey
 - >30 items + sociodemographic information
 - Based on Theory of Planned Behavior (TPB) + Health Action Process Approach (HAPA)
 - Open questions and Likert scales





Methodology

- **Post-observation survey – Key Elements**
 - General perception of the experience
 - Perception of being sufficiently competent to conduct observations
 - Trust in one's observations
 - Technical difficulty
 - Unforeseen difficulties/challenges
 - Comments from HCWs
 - Uneasiness to perform observations
 - Modification of perception of quality of care
 - Modification of relationship with HCWs
 - Whether observer has witnessed non-compliance
 - Whether observations were anxiety-provoking
 - Would accept to evaluate other aspects of care



Support from Institution

- Support obtained from CEO of IUCPQ with **ONE CONDITION**:
 - Should not start study before [obtaining support from all stakeholders](#)
 - Ethical Committee and Scientific Committee
 - CEO
 - DSI
 - DSP
 - CMDP (Medical Executive)
 - HR
 - Unions
 - Head nurse + nurses on bariatric surgery unit
 - All bariatric surgeons
 - Funded by the Foundation of IUCPQ
 - Research focusing on patient rather than the HCW
 - Ask HCWs to help patients succeed and asked to let us know if any adverse events



Information signs

Results



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RESULTS

- Recruitment period: August 2014- March 2015
- No. eligible patients: 71
- No. patients not available: 25
 - Main Reasons: sleep 17/25 (68%)
 - Other reasons: Visitors, Other HCWs
- No. patients approached:
 - 46
 - Accepted: 25 (54%)
 - Age: average = 44 (range, 23-67)
 - 64% female

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Reasons for refusing to participate

- Physically unwell, pain, nauseated (n=6)
- Not interested (n=5)
- Tired (n=3)
- Need to receive care (HD, therapy) (n=2)
- Will soon be discharged (n=1)
- Visitors (n=1)
- Fear of annoying HCWs (n=1)



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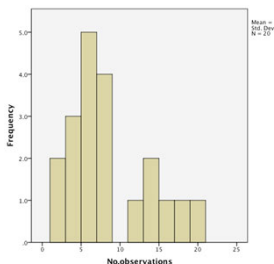
Training

- Average duration **training**:
 - 19 minutes (range, 13-40)
- Average duration **validation**:
 - 11 minutes (range, 10-20)
- Score:
 - 100% 7/25
 - 80% 12/25
 - 60% 5/25
 - 40% 1/25

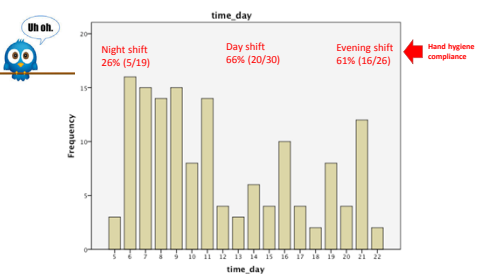


OBSERVATIONS

- No. observations: 167
 - 83 (49%) excluded because patient had not seen HCW touch a surface outside patient zone
- Average: 8 obs/24h



Time of the day vs. observations



Patients' experience

- Qualitative assessment
 - Positive experience: 23/25


- Funny
- easy
- not a burden
- happy to collaborate
- feel useful
- kills time
- important study
- will help improve HH
- not a burden
- not afraid to be judged by HCW
- Helps you realize importance of HH

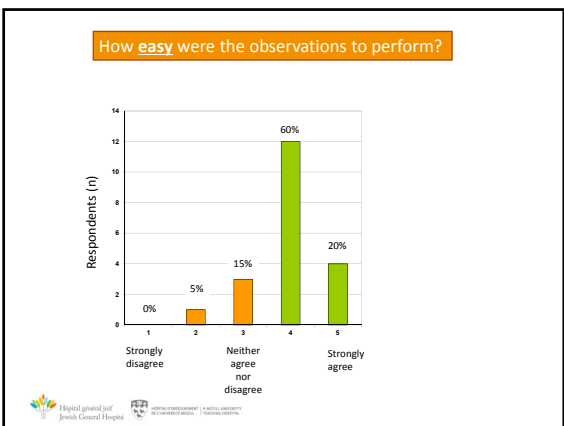


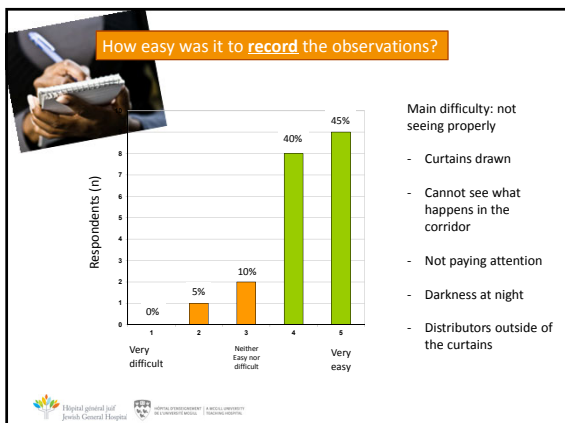
Patients' experience

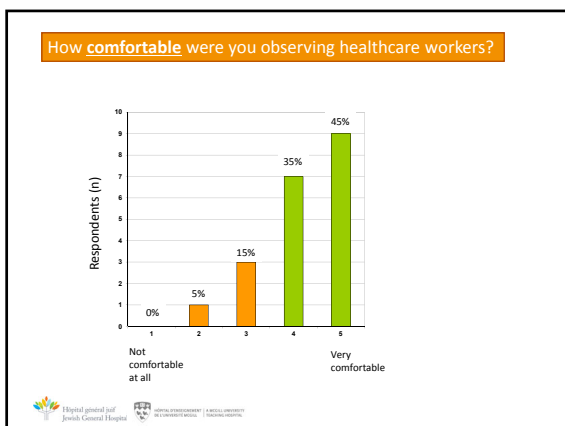
- Qualitative assessment
 - Negative experience: 2/25

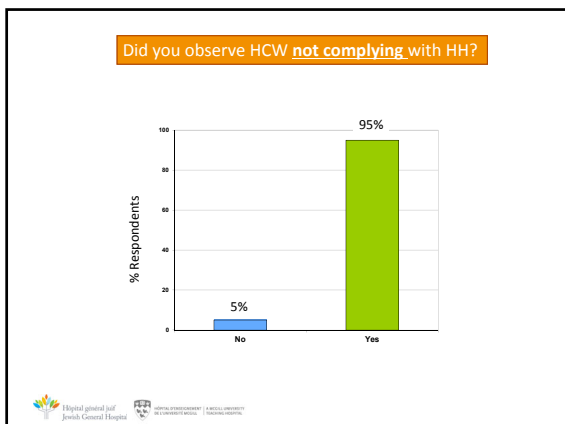
- Surprised to witness such low HH compliance
- Afraid will affect relation with MD
- Have other priorities

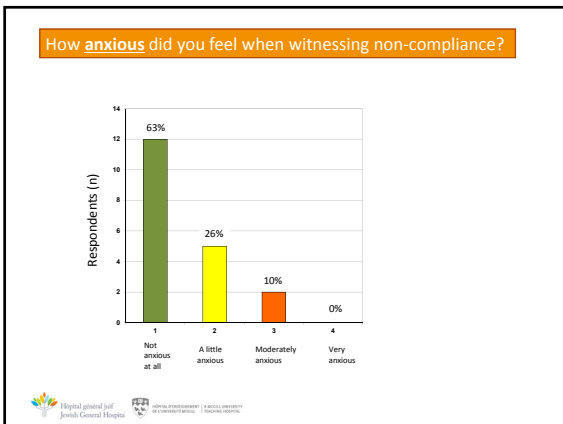


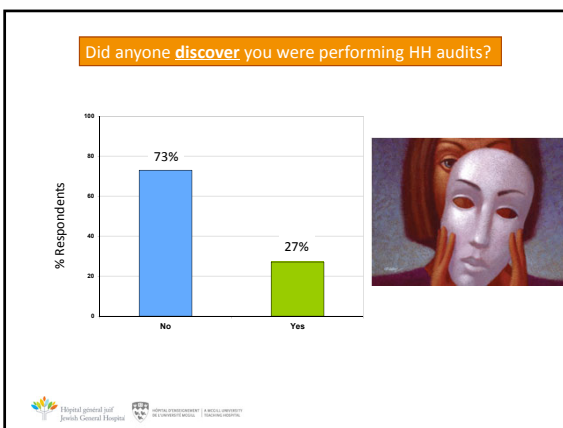


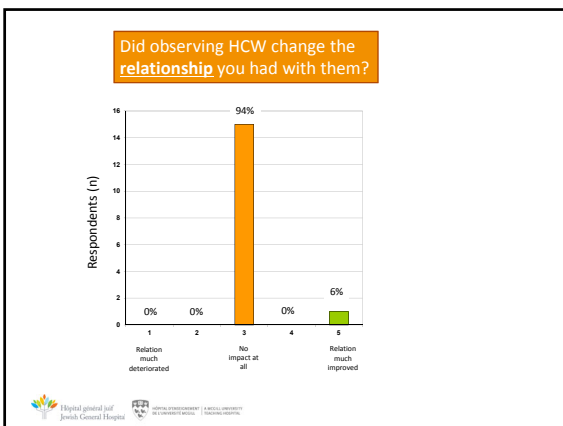


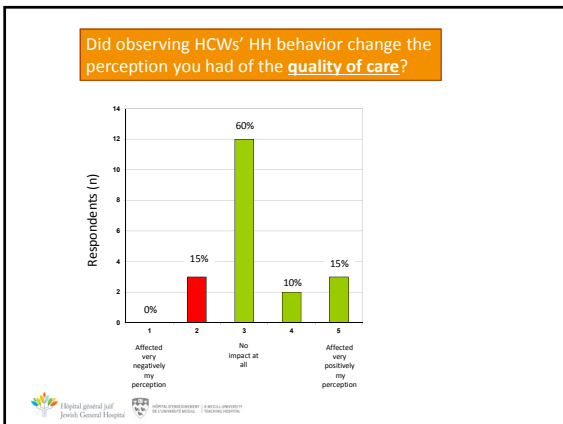


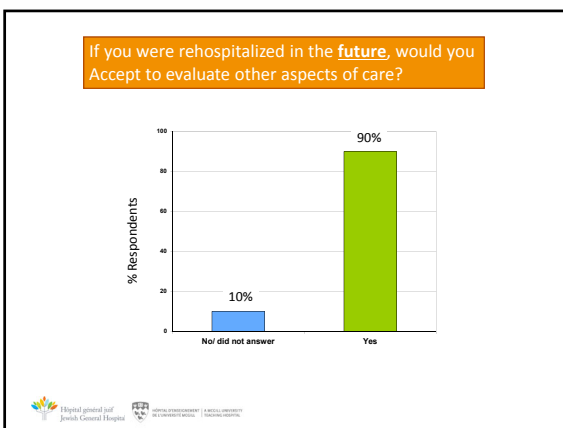






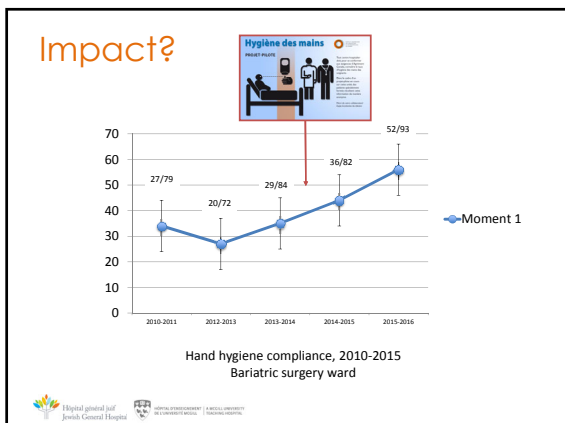






HH compliance

- HH compliance
 - Valid observations: 43/84 (51%)
 - Including events without observation touching surface outside patient zone: 67/154 (44%)



Harnessing the Hawthorne Effect

Present only in the presence of the observer
Biases observations

Present at all time
Improves compliance

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Hand Hygiene Monitoring

Direct Observation **by patients**

PROs	CONS
Standardized Methodology	Labor-intensive
Distinguishes among HH indications	Requires training and certification
Recognizes the "patient zone"	
Can collect additional information (type of HCW, glove use, time of day, etc.)	
Scaling-up potential	
Possible in all settings	
Less disruptive to care	
Hawthorne Effect exploited ?	

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Potential areas for involvement



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Mains dans la Main

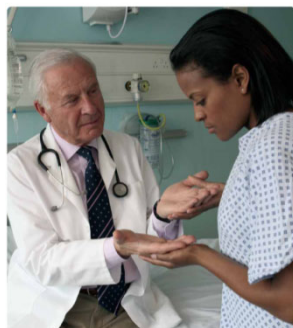
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Questions?



Thank you!

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