


Patient Empowerment & Measurement Program for Hand Hygiene

Dr. Maryanne McGuckin, McGuckin Methods International

A Webber Training Teleclass

Patient Empowerment
& Measurement Program
for Hand Hygiene

Dr. Maryanne McGuckin




McGUCKIN METHODS
INTERNATIONAL

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McGuckin Methods International (MMI)


- Providing education, statistical solutions, and monitoring for the early detection and prevention of healthcare associated infections (HAIs) since 1984.
- Dr. Maryanne McGuckin has over thirty years experience as faculty and staff at the University of Pennsylvania. Currently Senior Scholar, Health Policy Department, Jefferson Medical College.




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MMI's Standardization Efforts



Sites That Have Used Patient Empowerment and Product Volume Measurement as of Jan 2008



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Presentation Objectives

- Define and identify...
 - scientific evidence for patient empowerment
 - components of McGuckin Methods International's (MMI's) Measurement & Benchmarking Program
 - steps necessary to implement the program

Patient and Healthcare Worker (HCW) Empowerment

- **1982:** "Patients should be sure that any Physician, Nurse, and Therapist has washed his/her hands before touching them."
 - McGuckin M. Medical World News 1982; Feb 15.
- **25 years later:** "Encourage active patient involvement"
 - National Patient Safety Goals (NPSG) #13 – Patient Empowerment 2007



What is Patient Empowerment?

- Most definitions are found in nursing literature
- "A process in which clients participate with nurse facilitators to assist them to develop proactive healthy behaviors"
 - *Advance Nursing*
- WHO – Global Challenge Empowerment Models

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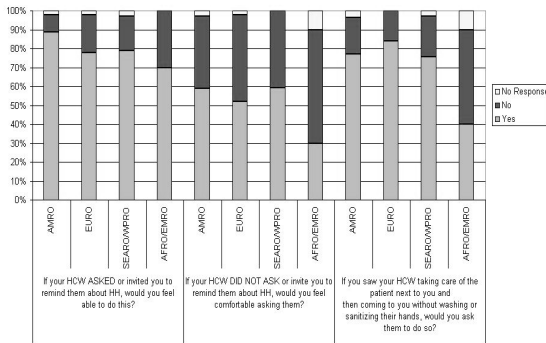
How do we Know Patients Want to be Empowered?

- **4 out of 5 - 80%**- of respondents in a national (USA) telephone survey said they would ask their HCW to wash hands if encouraged by staff.
- **52%** respondents saw HCW put on gloves instead of practice hand hygiene (HH)
 - McGuckin M, et. al. Consumer Attitudes about Healthcare-Acquired Infections and Hand Hygiene. *Amer Journal of Med Quality* 2006; 21:1-5

Consumers Ranking of Factors

- **94%** rate clean as very important
- **85%** low infection rates
- **93%** knowing infection rates for hospital or doctor would influence their selection.
- McGuckin M, et. al. Consumer Attitudes about Healthcare-Acquired Infections and Hand Hygiene. *Amer Journal of Med Quality* 2006;21:1-5

Fig. 1: Responses to scenarios given by respondents from the WHO regions




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Does Empowerment Work?


- **Acute Care – 34% HH increase in 6 weeks**
 - McGuckin M, et. al. Patient Education Model for Increasing Handwashing Compliance *Am J Infect Control* 1999;27 4:309-14
- **Acute Care – 50% HH increase in 6 weeks**
 - McGuckin M, et. al. Evaluation of Patient Empowering Hand Hygiene Programme in UK *The Journal of Hospital Infection* 2001;48:222-7
- **Rehab – 50% HH increase in 6 weeks**
 - McGuckin M, et. al. Evaluation of a Patient Education Model for Increasing Hand Hygiene Compliance in an In-Patient Rehabilitation Unit *Am J Infect Control* 2004;32:235-8
- **LTC – 90 less infections in 6 months**
 - McGuckin M, et. al. Validation of a Comprehensive Infection Control Program in LTC *The Director* 2004;12 1:14-17
- **ICU – 100% increase in sanitizer usage**
 - McGuckin M, et. al. The Effect of Random Voice Hand Hygiene Messages Delivered by Medical, Nursing, and Infection Control Staff on Hand Hygiene Compliance in Intensive Care *Am J Infect Control* 2006;34 10:673-5


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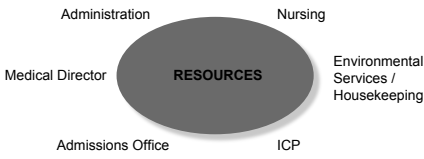
Empowerment Intervention Results


Period	Participants	Median % change
1	947	6.8966%
2	766	15%
3	641	26.087%
4	542	29.2892%
5	463	33.3333%
6	412	36.039%
7	362	33.3333%
8	288	34.7826%
9	254	45.7056%
10	197	45.4545%

- The percent change is statistically significant: p-value < 0.001.
- One sample t-test, n = 412.
- There is no evidence against the intervention being equally successful in all hospital sizes and unit types.


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Support is Key to Any Intervention




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Empowerment Plan

- Support for Empowerment
 - NPSG #13
 - Empowerment Research
 - Consumer Attitude






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Patient Materials and Tools: Keep them **Simple and Direct**



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Empowerment must Involve Patient *and* Healthcare Worker

<p>1997-2007 Partners In Your Care / PIYC • Focus on patients only</p> <p><i>Brochure</i></p> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p><i>Brochure</i> ←</p> </div> </div> <p><i>Patient visual reminder: Weeble</i> →</p> 	<p>2007 - Present Partners In Care: All for One® • Focus on patients and healthcare workers</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>← <i>Brochure</i></p> <p><i>Patient reminders:</i></p> <p><i>Weeble</i> →</p> <p style="text-align: center;">&</p> <p><i>Wallet Card</i> →</p> </div>  </div> 
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Implementing a Patient Empowerment Process

- Two Key Steps:
 - Decide on the best way to get the materials to the patient
 - Monitor process through patient satisfaction form:

	Yes	No
1. Did you read the pamphlet on hand hygiene or did you view the T.V. channel on the program?	0	0
2. Did you ask anyone if they washed/sanitized their hands?	0	0
3. Did you ask a nurse?	0	0
4. Did you ask a doctor?	0	0
5. Were you comfortable asking?	0	0
6. Did you receive a positive response?	0	0
7. How did they respond?		

Comments: _____

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Empowerment

- Most patients believe they should be involved in hand hygiene

■ Patients should not be involved

■ Patients should be involved

◦ Source: National Patient Safety Agency

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Measurement: Know Your Direction

- Policies and guidelines will not increase hand hygiene compliance unless measurement and feedback are part of the process

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Hand Hygiene Measurement Methods

- Direct Observation
- HCW Self-reporting
- Product Usage/Volume


◦ Excellent Review: Haas and Larson Journal of Hospital Infection 2007;66:6-14


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Method	Advantages	Disadvantages
Direct observation	"Gold standard" The only method that can give specific information on who is performing hand hygiene, or what indications for hand hygiene have good or poor compliance rates. The only method that can assess technique. Highest granularity of observations	Labour and resource intensive. Subject to Hawthorne effect. Small samples of all hand hygiene opportunities are usually observed. Can be subject to bias due to oversampling selected shifts (days) or units (e.g. ICUs) and inadequate sampling of others (nights/weekends). No standardized way to observe; some studies focus on frequency and others on technique
Remote observations	Videotaped observations less subject to selection bias, as they can operate at any time	Expensive to install and maintain equipment. Labour costs to review tapes. Can be subject to bias based on camera location
Self-report	Low cost. Involves healthcare workers self-awareness of hand hygiene behaviour	Poor validity in several studies
Product volume use per patient day	Less costly to monitor. Overall measure of use, not subject to selection bias	Cannot provide information about which indications for hand hygiene are being followed, or which types of staff members are in best/worst compliance. Not able to assess technique

Product Volume Measurement

- Referenced in:
 - NPSF
 - CDC
 - WHO Guidelines
 - IHI Bundle
 - JC Monograph


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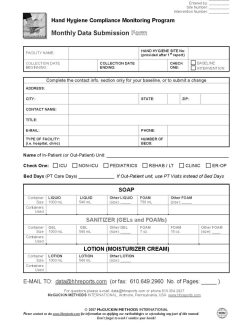
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Product Volume Usage

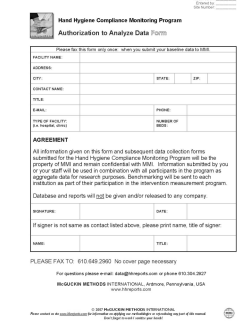
- How it works:
 - Track hand hygiene compliance through the measurement of product usage
 - Tracking
 - EVS Dates
 - Monitors
- Next screen: MMI's data submission form

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Data Form (Every Month, One per Unit)



Authorization Form (Just Once @ Start)



Product Volume Data Submission

- Submit form via e-mail to
 - data@hhreports.com
- Fax is okay
- Mail (must arrive on time)

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Monthly Timeline						
SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15 SUBMIT DATA	16	17	18
19	20	21	22 REPORTS SENT	23	24	25
26	27	28	29	30		

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Reports
<ul style="list-style-type: none"> • Individual Client Reports <ul style="list-style-type: none"> ◦ The standard report is sent as PDF. The file contains a compliance report for each unit (department, hospital wing, or functional area). The report contains: <ul style="list-style-type: none"> • HH/bed day rate for soap usage • HH/bed day for sanitizer • Combined HH/bed day soap + san • Mean, Percentile, Benchmark, and Goals • Chart format and Graph format

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MEASUREMENT	<div style="text-align: right; font-size: x-small;"> </div> <p style="font-size: x-small;">MMI Health Education Division and Analytic Business Services</p> <hr/> <p style="text-align: center;">Hand Hygiene Report Monthly Summary</p>	
COMPLIANCE		
INTERVENTION	www.hhrsports.com	

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How Comparisons are Made

- **Benchmarking**
The benchmarks are calculated using data from every hospital and unit in the program. The methodology used for the benchmarking is a linear regression model, and the percentile benchmarks are drawn from the same model, using prediction intervals calculated at the 10th and 90th percentiles.
- **Comparative Benchmark**
These benchmarks are drawn at the average overall comparable units and at the 10th and 90th percentiles.

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Compliance Goals

- Literature based
- Confirmed by observational studies

Sources at www.hhreports.com

Unit Type	Compliance Goal
ICU	144 HH/Patient Bed Day
Non-ICU	72 HH/Patient Bed Day
Pediatrics	72 HH/Patient Bed Day
ER / Outpatient	6 HH/Patient Visit
Clinics	3 HH/Patient Visit
Rehab/LTC	20 HH/Patient Bed Day

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Soap Report

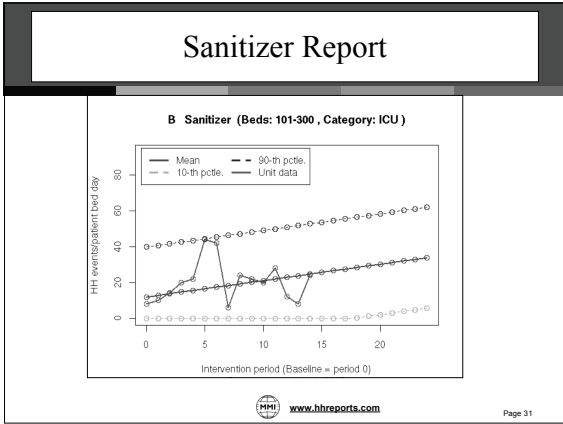
B Soap (Beds: 101-300, Category: ICU)

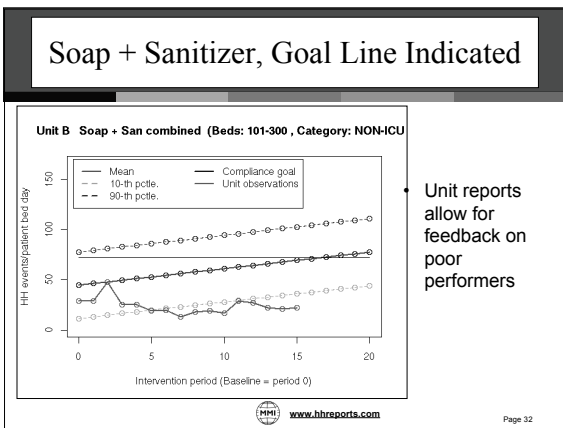
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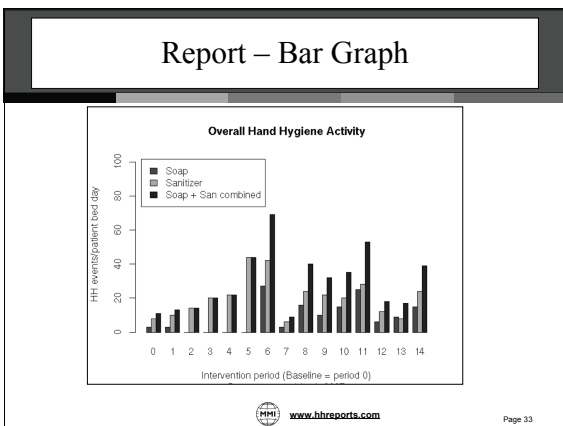
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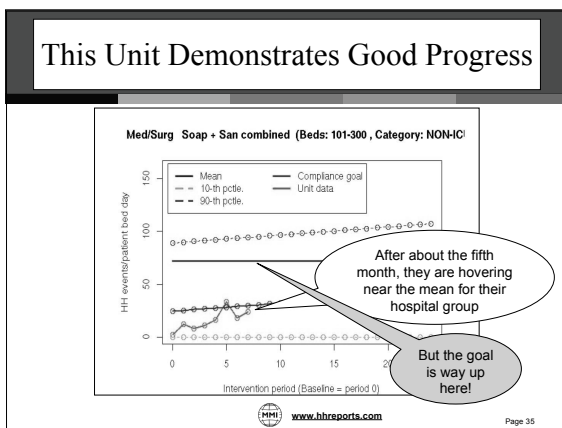
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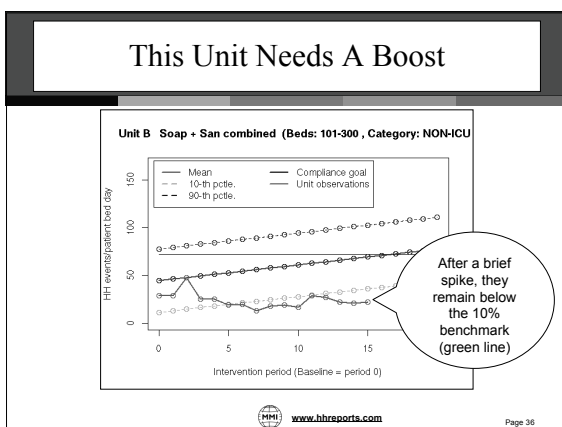
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Report: HH/bed day Summary with Percent Compliance				
	Soap	Sanitizer	Combined	Percent compliance
Baseline	3	8	11	7.6%
Intervention 1	3	10	13	9.0%
Intervention 2	0	14	14	9.7%
Intervention 3	0	20	20	13.9%
Intervention 4	0	22	22	15.3%
Intervention 5	0	44	44	30.6%
Intervention 6	27	42	69	47.9%
Intervention 7	3	6	9	6.2%
Intervention 8	16	24	40	27.8%
Intervention 9	10	22	32	22.2%
Intervention 10	15	20	35	24.3%
Intervention 11	25	28	53	36.8%
Intervention 12	6	12	18	12.5%
Intervention 13	9	8	17	11.8%
Intervention 14	15	24	39	27.1%



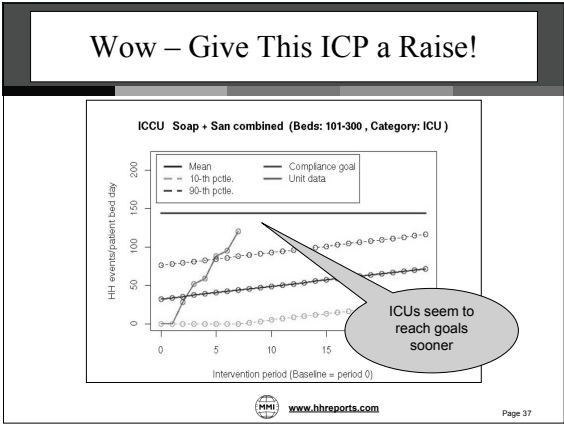


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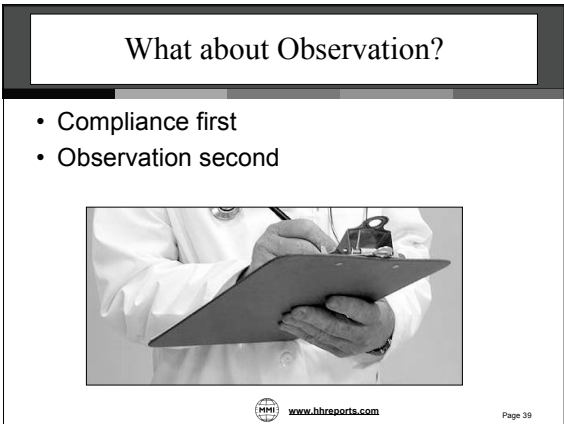
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- ### The Value of Reports
- Message to ICP: Use monthly reports for staff, CEO, Committee, Board, etc.
 - McCormick, et. al. The impact of feedback to HCWs using monthly reports on HH compliance. SHEA 2007
 - Various interventions – no effect
 - Monitor feedback (reports) to leaders and HCWs with “specific unit data” – effective in achieving their HH goals
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Observation Audits

- Observation never evaluated for accuracy – 3% yield




- Mortel Thea van de, et. al. An examination of covert observation audit as tools to measure the success of hand hygiene interventions. AJIC 2006


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Product Volume Measurement vs. Observation

	Observation	Product/Vol
Resource intensive	Yes	No
Staff recognize auditors and change behavior	Yes	N/A
Events are not always observable	Yes	N/A
Requires additional time/cost	Yes	No
Perceived as a "management thing"	Yes	No
Increases compliance evidence based	No	Yes
Proven to sustain compliance	No	Yes
Benchmarking capabilities	No	Yes


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Beginning Steps for the ICP

- Get support
- Make sure products are available
- Provide educational materials
- Use patient empowerment!
- Monitor compliance
- Provide feedback to the HCW
- Observe after compliance has increased

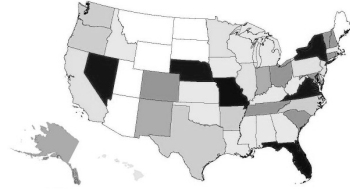

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Since 2003, half the states have passed infection reporting and control laws.



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Mandatory HAI rates and HH Compliance Rates

- If we are to see the value of mandatory reporting of HAIs on our health care systems, we must include rates for the significant predisposing factor for all HAIs
 - "Failure to Practice Hand Hygiene"
- HAI rates without HH rates can be compared to our first attempts at surveillance in which we reported rates without predisposing factors such as catheters, vent days, etc.

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Thank You



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