

**Understanding  
How Hand Hygiene Improves:  
A Look at New Hampshire Hospitals During  
a Statewide Hand Hygiene Campaign**

**December 2011  
Kathy Kirkland, MD**

Sponsored by the Foundation for Healthy Communities



# Thanks to

- **Sienna Craig, PhD, Dartmouth College**
- **Emily Unger, Ioana Lavric, Laura Mantell, Dartmouth College students**
- **Louise Davies, MD, Dartmouth Medical School**
- **Shawn LaFrance, Rachel Rowe, Judy Proctor, NH Foundation for Healthy Communities**
- **The many infection preventionists, hospital leaders and staff who shared their experiences with me over the last year**

# Goals for Today

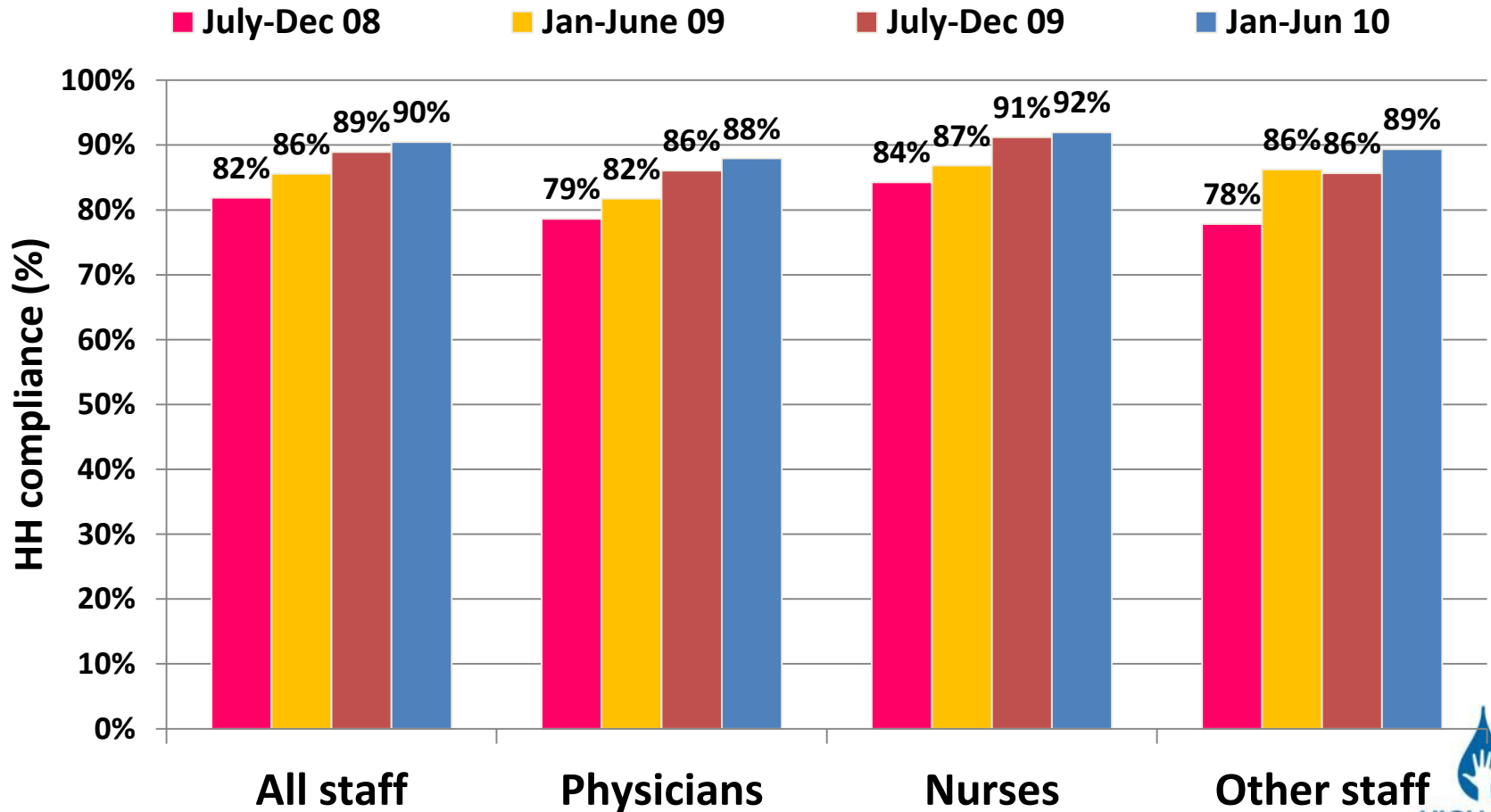
- Review background leading to this work
- Summarize data sources and methods
- Review results
  - What we did
  - What we learned
- What next?
- Discussion

# In 2008, NH Hospitals Launched a Statewide Campaign to Improve Hand Hygiene (and Reduce HAI)



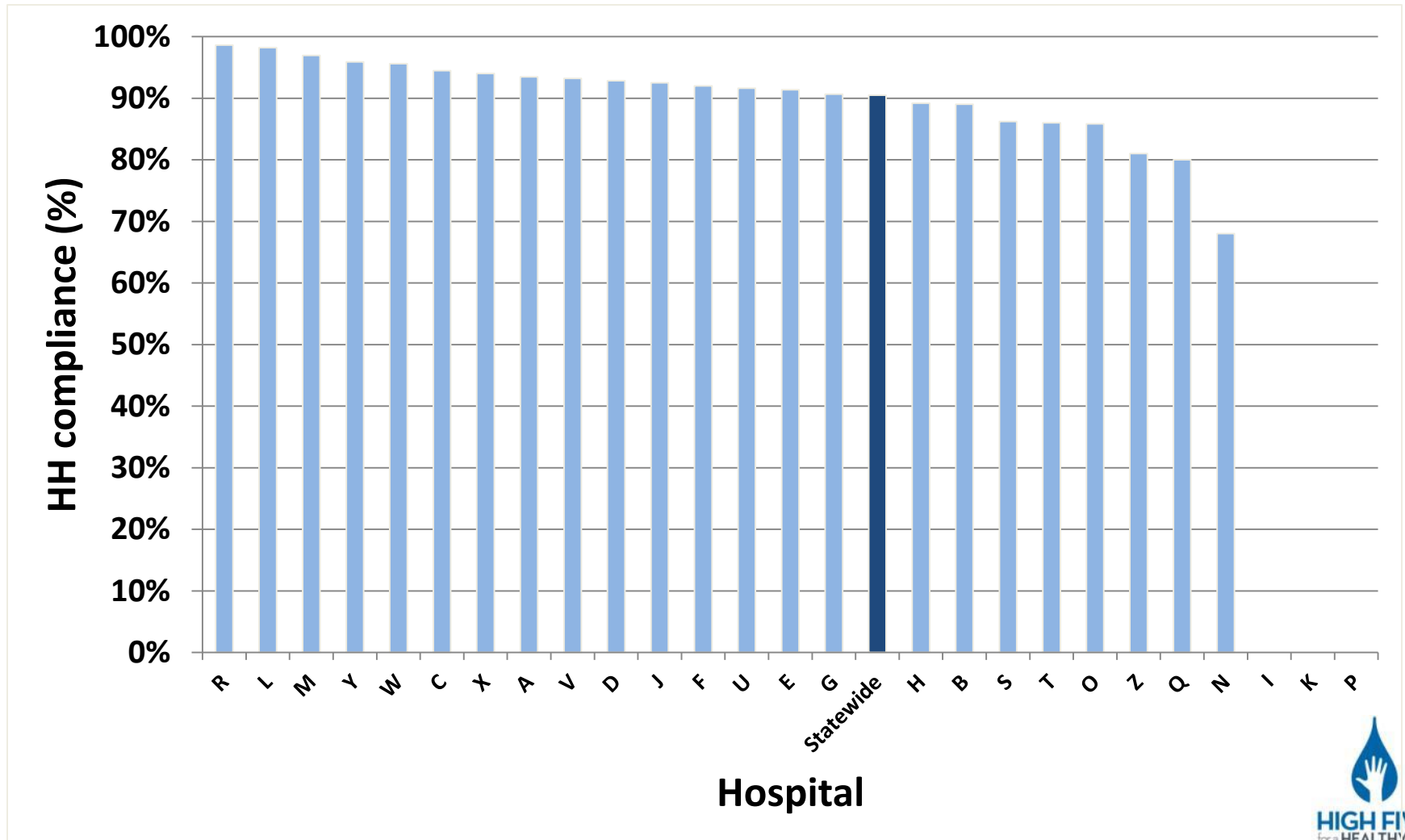
# A Successful Campaign

**Hand Hygiene improved!**  
*For 2 years, NH HAI rate has been lower than national benchmark!*



# Variation Across Hospitals

## Reported Performance Jan-Jun 2010



# Our Questions


- 1. What factors explained the variability?**
- 2. Could we identify characteristics of higher and lower performing hospitals?**
- 3. Were there common barriers to improvement?**
- 4. How had the most successful hospitals succeeded?**
- 5. What could we learn from one another?**

# What We Did

- **Solicited self-assessments from NH hospitals**
- **Visited every NH hospital**
  - **Conducted focus groups with front line staff**
  - **Interviewed infection preventionists, auditors, and medical center leaders**
  - **Toured facilities**
- **Transcribed taped sessions**
- **Analyzed all the data for themes**

# New Hampshire Acute Care Hospitals, Critical Access Hospitals and Population Distribution


## New Hampshire Hospitals

 - Acute Care Hospitals

 - Critical Access Hospitals

## Population Distribution\*

 - 0 - 999

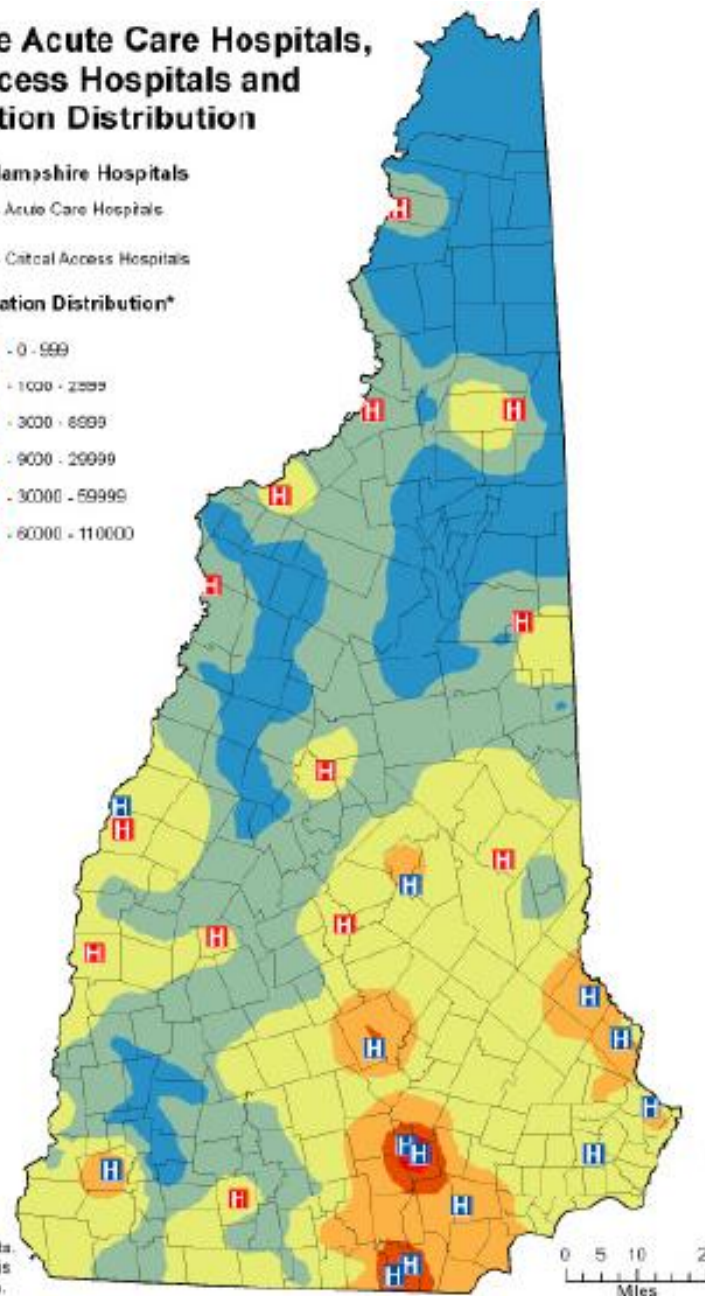
 - 1000 - 2999

 - 3000 - 6999

 - 7000 - 29999

 - 30000 - 59999

 - 60000 - 110000



\*Taken from 2010 US Census data.  
Not actual population. This map is  
intended to only show distribution.













TO RE  
1. Put  
2. Det  
# LEAD  
Drops in

Department	Code
CCU	3023
ED	3080
Nursing Supervisors	3140
Same Day Surgery	3102
Three North	3021
Three South	3061
Three West	3020
Two South	3121
Seacoast Cancer Ctr	8061
Medical Oncology	8062





**PROTECTING YOU**  
**PROTECTING US**



**SANITIZING**  
**IS A MUST**

**THANK YOU FOR CARING**

**VOUS PROTÉGER**  
**NOUS PROTÉGER**



**DETERGENT**

**EST UN PLUS - +**

*Merci de votre générosité*

# Data Sources

- **Self-assessment completed by 22 hospitals**
- **Site visits included 26 hospitals and 3 ASCs**
- **29 focus groups with 242 total participants**
  - **83% female; 58% >45 y**
  - **Job types included**
    - 122 nursing staff
    - 25 physicians
    - 19 housekeepers
- **Individual interviews with 28 IPs, 12 auditors**
- **Interviews or focus group participation by senior leaders (CEO, CMO, COO, CNO) at 18 hospitals**

# What We Learned

# An Early Observation

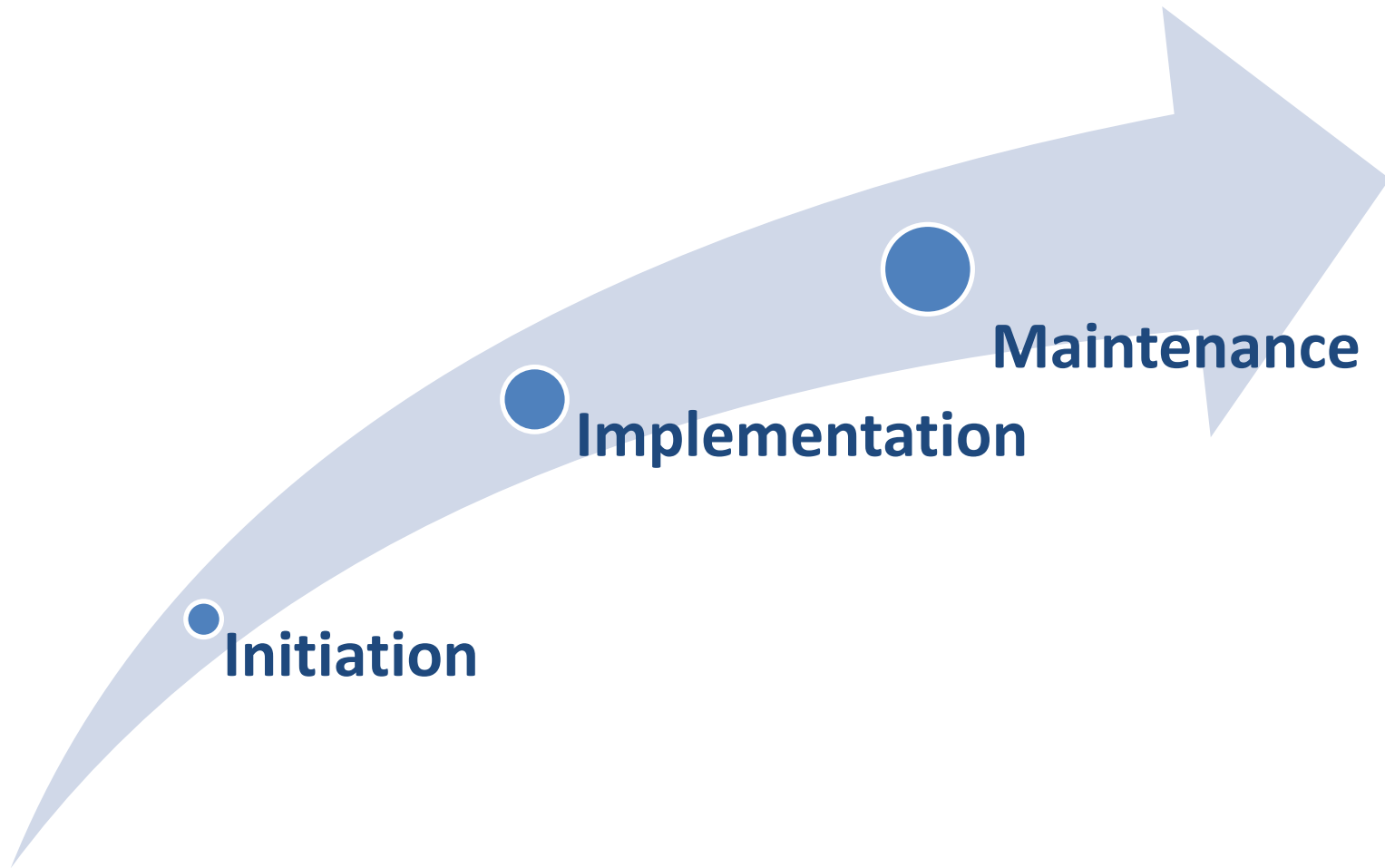
## Variation in Measurement Methods

- Standard campaign audit tool used by most

***BUT . . .***

- Everything else varied
  - Who audits
  - When and for how long audits are done
  - What is measured
  - Covert or overt; with or without immediate feedback
- Validity of data
  - Possibly useful for internal trends
  - Probably not legitimate for inter-hospital comparison

# Emerging Pattern Phases of Improvement



# Initiation

***“Well I think what we’ll be focusing on first, is actually getting the baseline data, and then actually getting the things installed in one unit. It was very overwhelming to think of doing this in the entire...I want to accomplish something in addition to measuring something.”***

*(infection preventionist interview, hospital in initiation phase)*

# Implementation

***“I think we’ve made some good progress but we have certainly a long way to go.”***

*(focus group, hospital in implementation phase)*

***“I think 94% is good, but its not as good as it needs to be... I would say keep the light shining on it as long as it take to get up to 100%.”***

*(leader interview, hospital in maintenance phase)*

# Maintenance

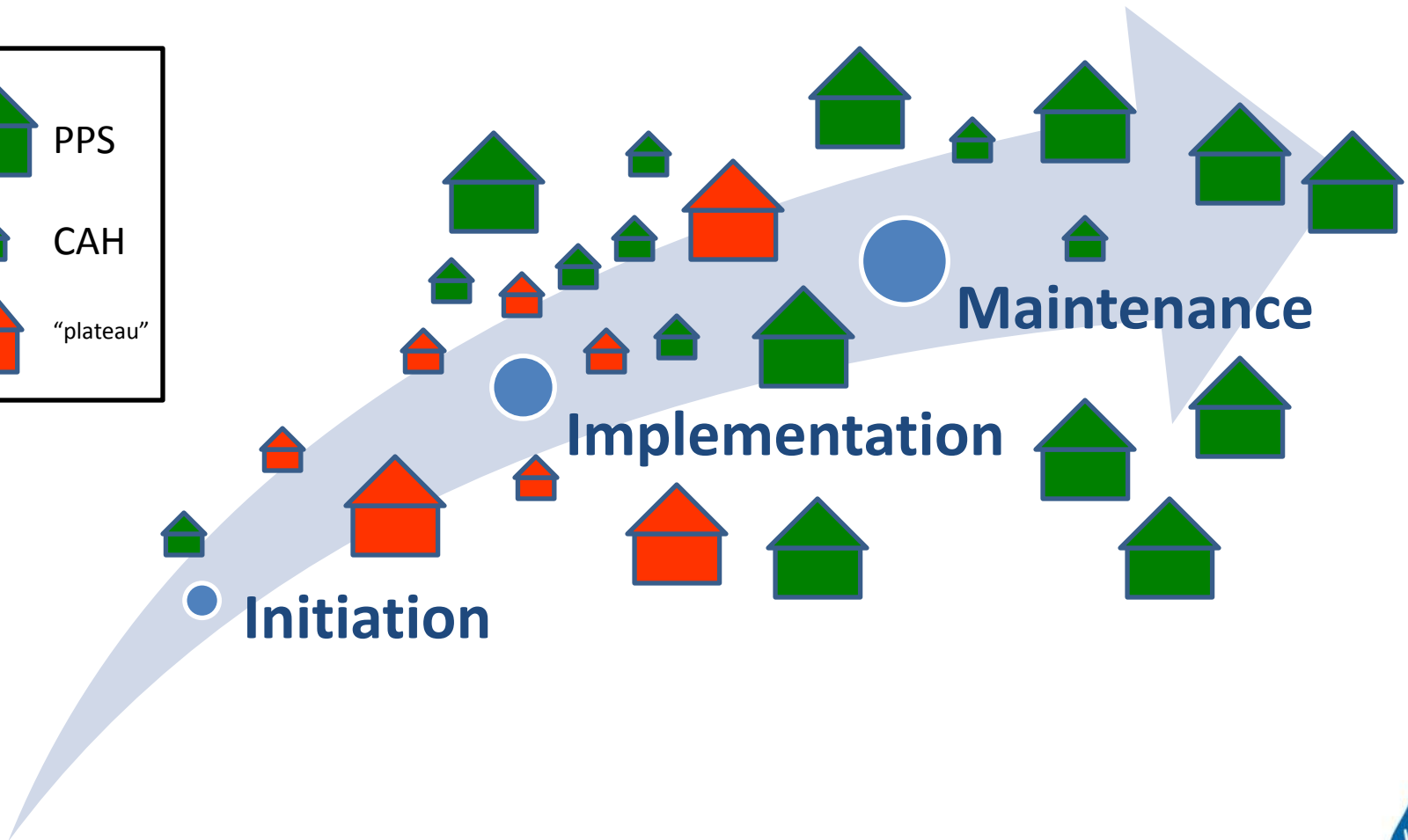
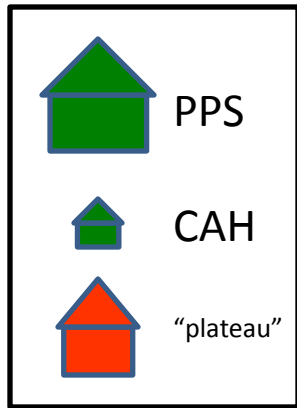
***“You can’t just have a campaign and have an end date. It really has to be an ongoing process.”***

*(focus group, hospital in maintenance phase)*

***“It’s not a project, it’s a forever thing.”***

*(focus group, hospital in maintenance phase)*

# Phases of Improvement of NH Hospitals



***Are there “best practices” and common barriers for each phase?***

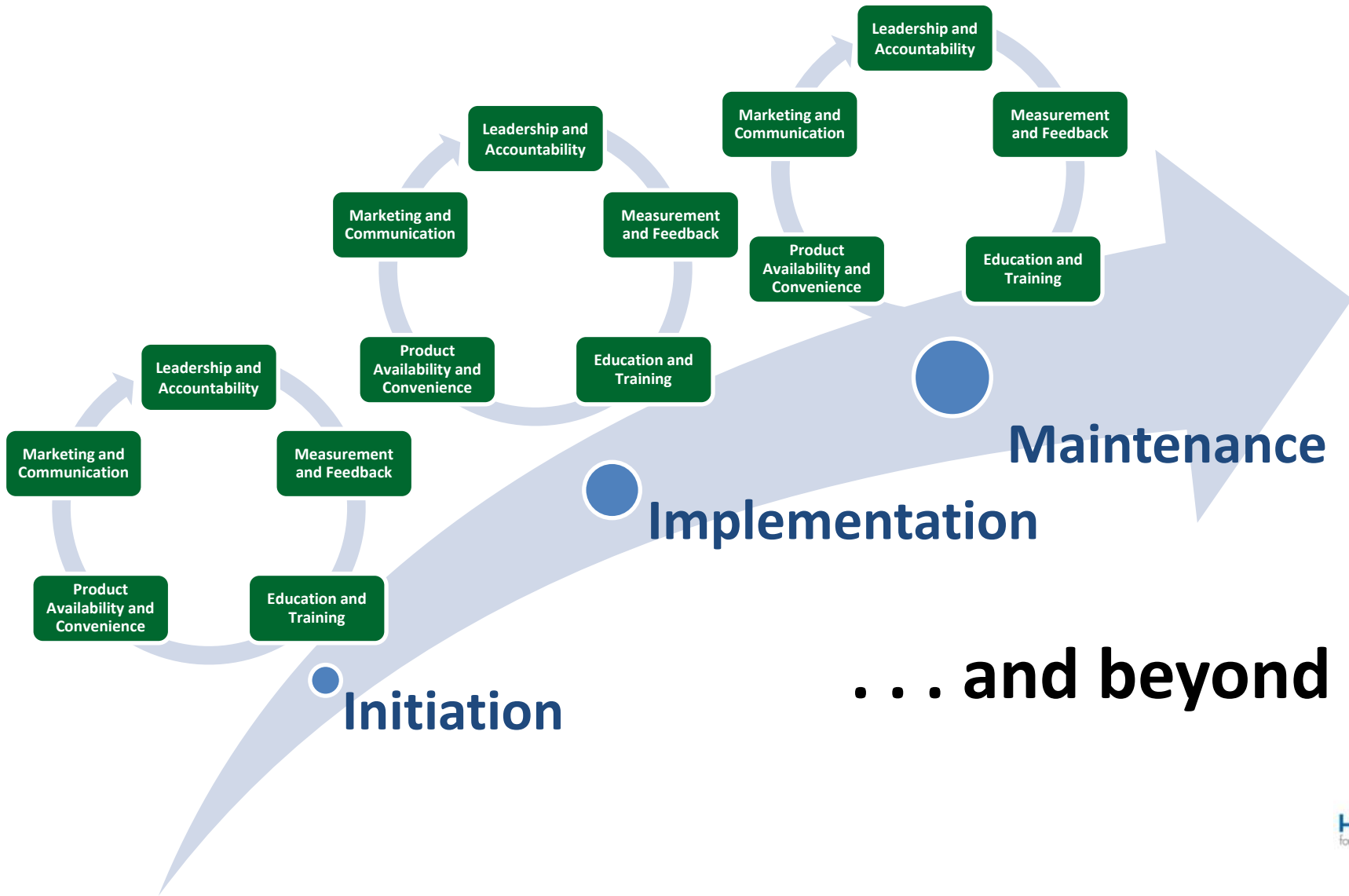
**Initiation**

**Implementation**

**Maintenance**

***Are there options that have been used successfully to overcome common barriers?***

# The Five Fingers . . .



# Accountability

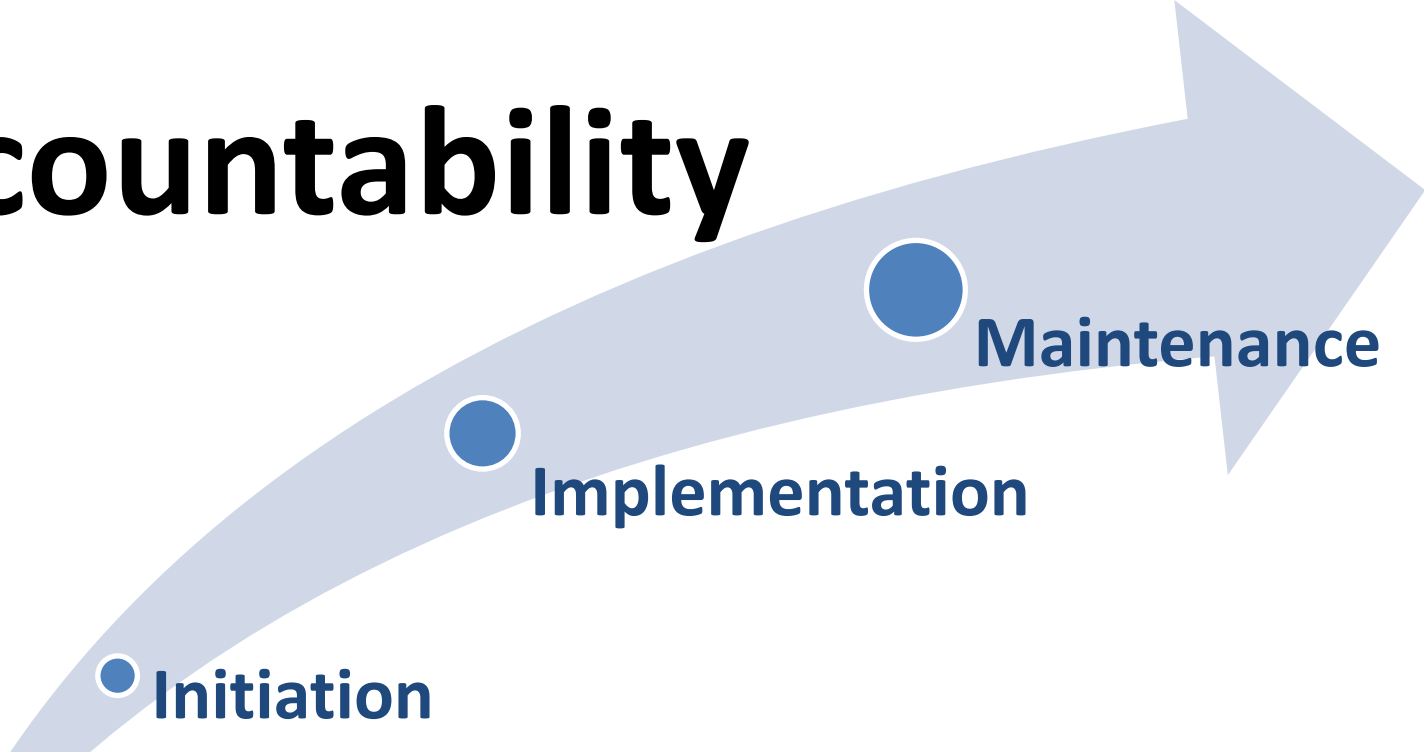
***“It really does boil down to personal accountability. You can have an ICP nipping at people’s heels until the cows come home, reminding people. But in the end, people have to take it in as their own personal accountability.”***

*(infection preventionist interview, hospital in implementation phase)*

***“And I said ‘I don’t want to hear that a physician pushed back at one of those observers, if I heard that I’m going to be coming and talking to people.’”***

*(leader interview, hospital in maintenance phase)*

# Accountability



***System accountability*** is maintained across the continuum.....

Ensure people know what to do and have tools to do it

.....Make expectations clear----establish clear consequences for failure

.....Avoid double standard for MDs

.....Establish response to willful disregard

.....***Personal accountability*** begins at initiation and spreads.....

Early personal pledge/commitment

.....Increasing personal responsibility

...Shared accountability by and for all

# Leadership

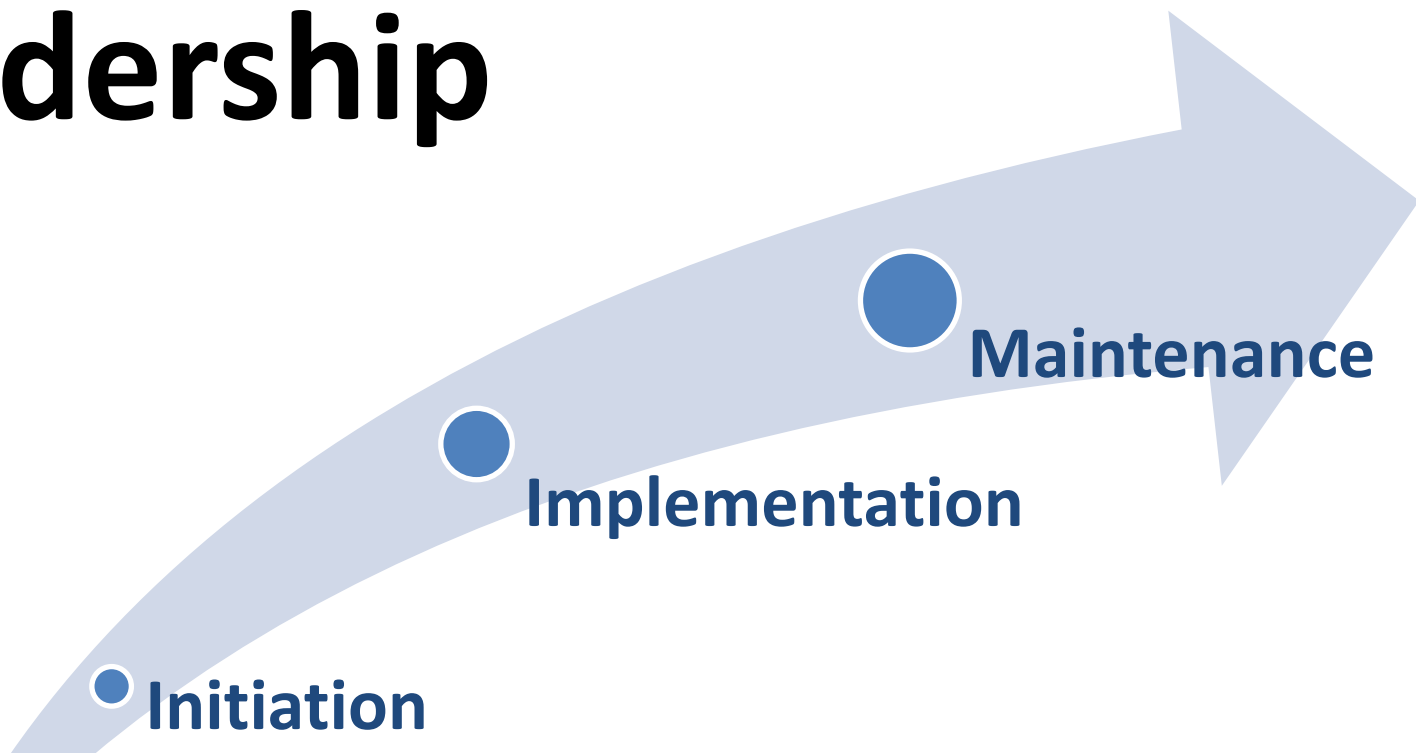
***“We’ve had a lot of support from the administration and down the chain, having as many resources available for hand hygiene as possible which has been key to our success.”***

*(focus group, hospital in maintenance phase)*

***“I felt this is a no brainer, this is something that needs to be supported. So I’ve been keeping track of how its going, asking how I can be supportive of it, trying to be more conscientious myself about hand hygiene because I know part of it is example. Of course I don’t treat any patients, but having the leaders step up makes a big difference.”***

*(leader interview, hospital in maintenance phase)*

# Leadership



***Single leader (often IP) → Team/committee → Local champions***

***Senior leader support important throughout***

Access to resources

Link to expectations and accountability

***Physician leadership important to avoid divide***

***Important activities***

Goal setting (“100%” ideal).....Address organizational culture....Maintain focus

# Measurement and Feedback

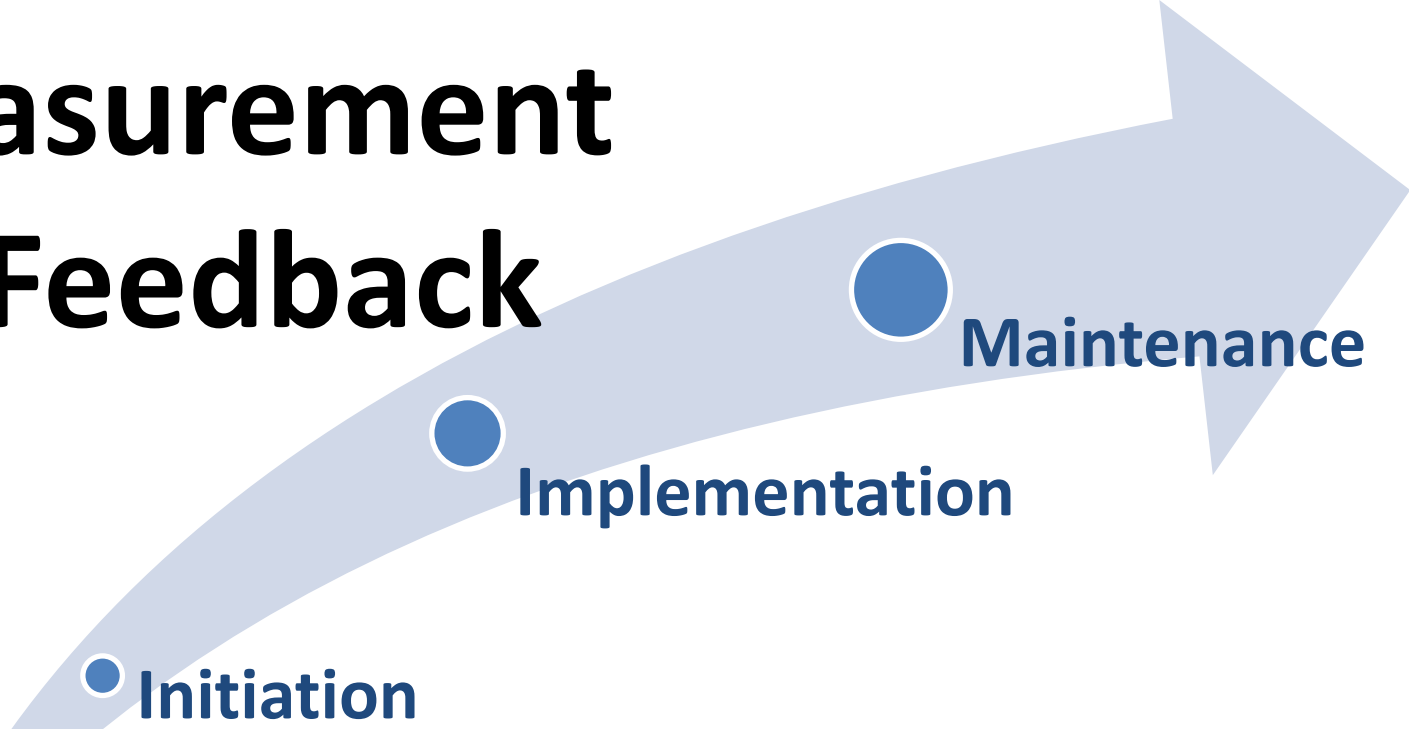
***“And finally what we did was we expanded that so everybody in the whole staff was given shifts to do the observations which raised their consciousness. So not only were they looking to their observations once a week or every two weeks, but they knew they were being looked at all the time and that’s when I think if you look at our data points that’s when you see that take-off, where we made that fairly quick jump.”***

*(focus group, hospital in maintenance phase)*

***“I think I’d rather have immediate feedback than like get a form saying, “seven times you didn’t wash your hands.” A) because you could say maybe, “well, I did wash my hands inside.” But if I wasn’t, I’d rather have the chance to like... it would remind me to think about it more if I was forgetting to do it, if it’s right at that time...and also to change my ways.”***

*(focus group, hospital in implementation phase)*

# Measurement & Feedback



## ***Covert audits at every phase to***

Establish baseline → Identify problem areas → Monitor success  
Identify gap Highlight progress

→→→ ***Increasing overt audits for***

Immediate feedback  
Improvement

***Auditing shifts from individuals →→local staff →→everyone***

## ***Establish early:***

Clear definitions  
Clear and consistent auditing method

# Education and Training

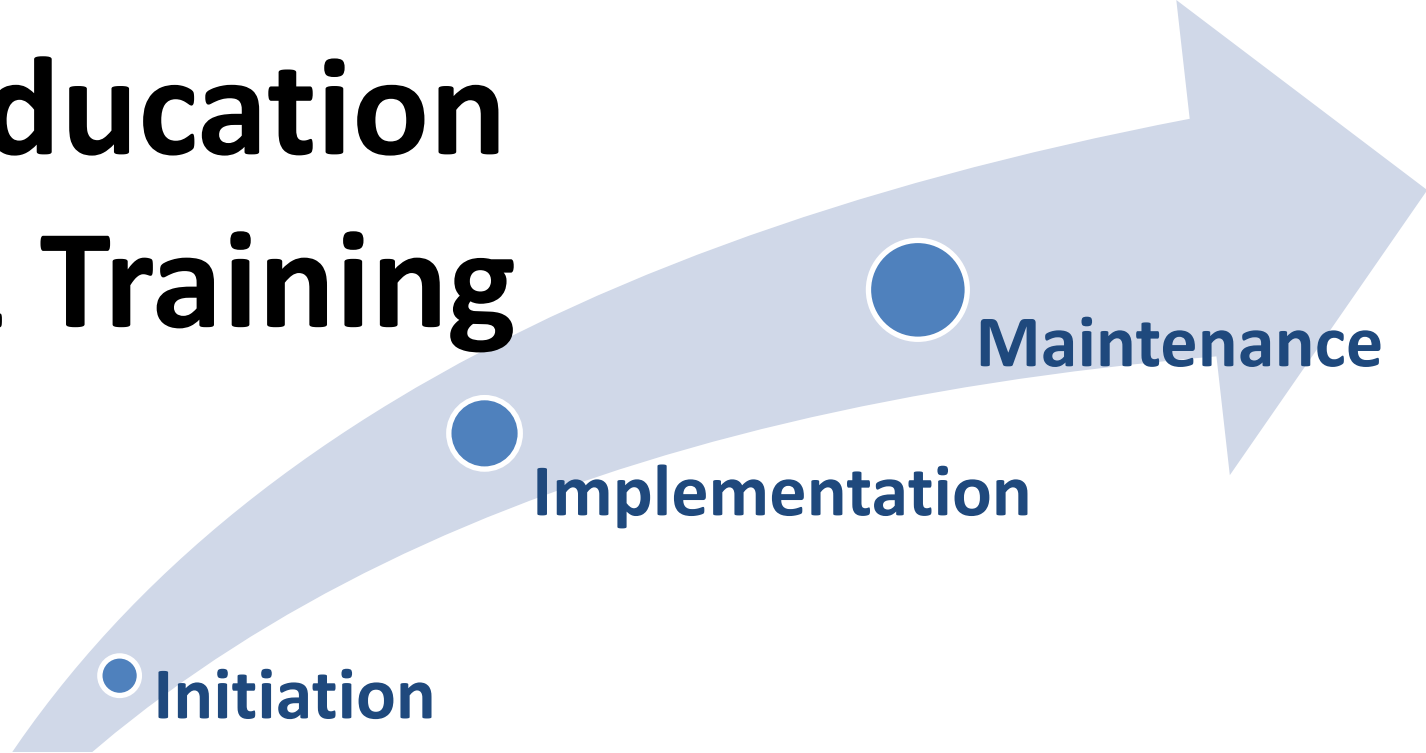
***“That’s one of the education pieces I – I say that all the time: I want you to picture yourself, sitting in the exam room, waiting to have your physical, um... and your, your – your doc comes in. And... you know you’re going to be thinking: are his hands clean?”***

*(focus group, hospital in maintenance phase)*

***“And just a word on education and training: we have E-Learning modules that... are not very effective. It’s set up that they can go straight to the test without doing the module. And there’s like three test questions that are, you know, kindergarten level.”***

*(IP interview, hospital in implementation phase)*

# Education & Training



***Role in communicating goals and expectations***

***Focus shifts from***

***→ → → to***

How to do hand hygiene  
Why to do hand hygiene

Increasing just-in-time education  
How to give and receive feedback  
Other initiatives

***Ideas/Tools:***

Make link to HAI prevention explicit  
Use to educate about audit methods

Hands-on demos (e.g. glo-germ) → → → Scripting and role plays

# Product Availability and Convenience

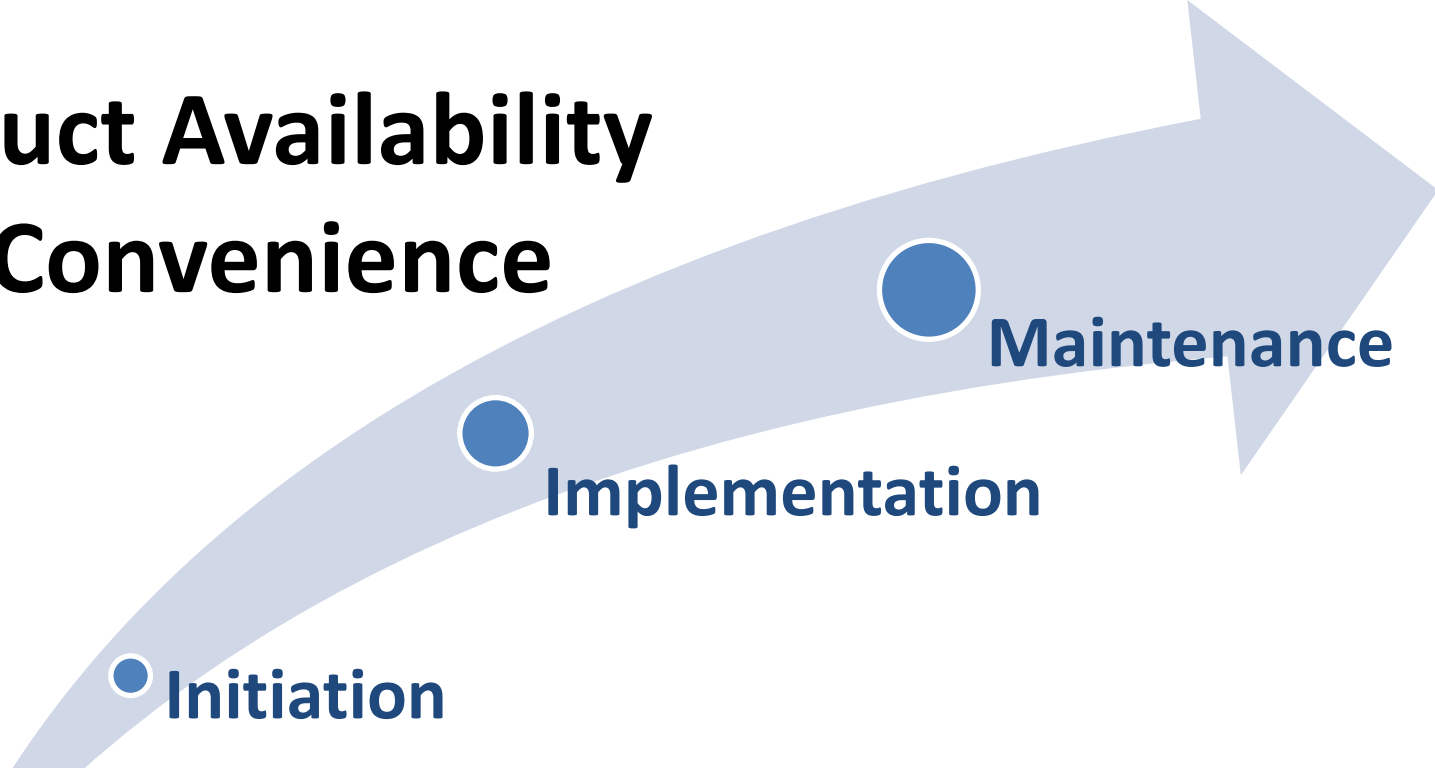
***“I think this hand gel has changed the world. I mean, it’s everywhere and you see everyone using it – I mean visitors, doctors, nurses, everybody uses it.”***

*(focus group, hospital in maintenance phase)*

***“They’re in, they’re in the rooms, they’re outside of the rooms. And if you take a trip to med-surg you’ll see they are every like, four feet, every three feet, they’re in the room, they’re outside the room. There, there’s no reason why someone cannot sanitize their hands.”***

*(focus group, hospital in maintenance phase)*

# Product Availability & Convenience



**-----Necessary part of every phase →→**

## ***Important elements:***

Uniform hand sanitizer location

In-room access to hand sanitizer near point of care

Ease of refill and replacement

Personal hand sanitizer option

Involve staff in product selection

# Marketing and Communication

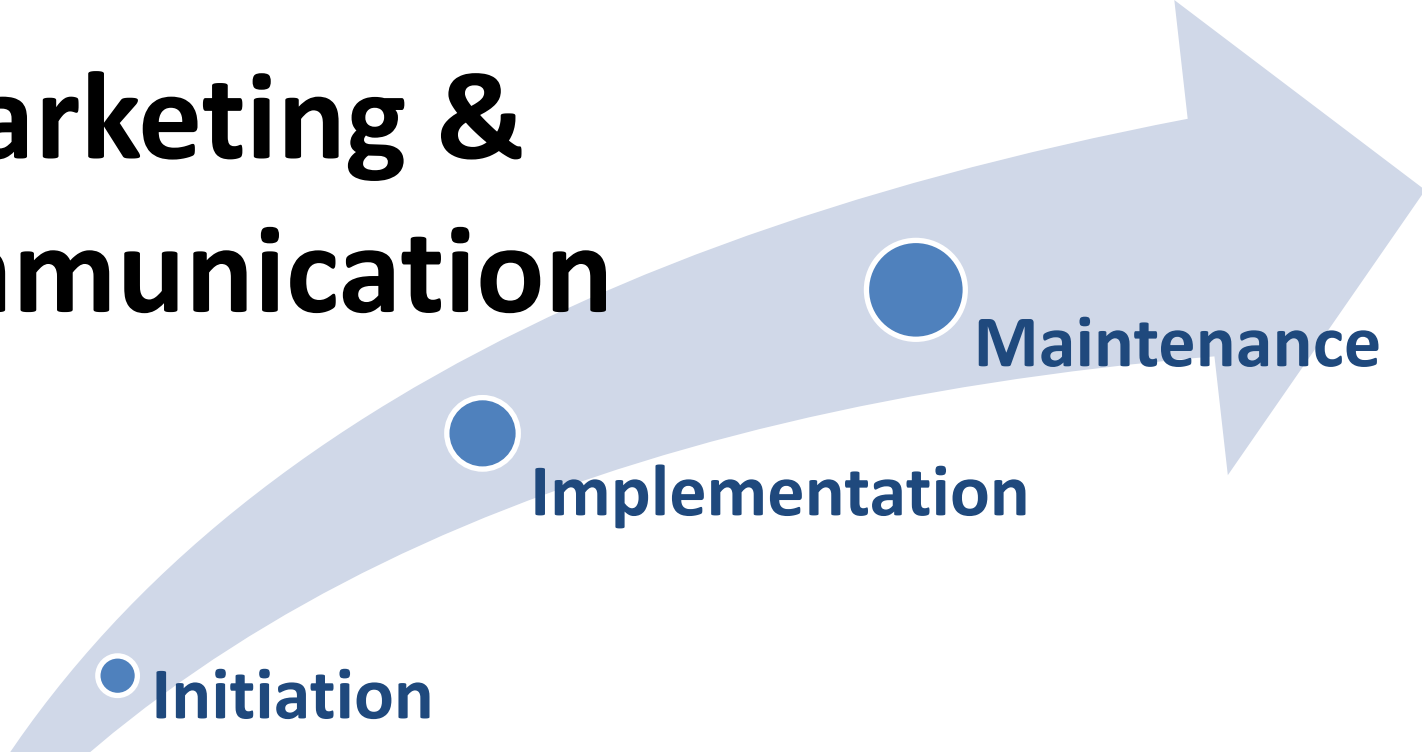
***“We have one [sign] in the back of the door in the bathroom that says, “One out of every six people don’t wash their hands, I hope it’s not you.” Visitors see that and they go, “Gasp.” I love that sign. So that, to me, was effective.”***

*(focus group, hospital in implementation phase)*

***“They don’t stop looking at them...because there’s something new to look at.”***

*(focus group, hospital in maintenance phase)*

# Marketing & Communication



***Key role in generating, maintaining enthusiasm for meeting goal***

## ***Key themes:***

Goals and progress

Leadership commitment → → → → Innovative mini-campaigns like  
Link to infections “Be Seen Being Clean”

Patient safety

## ***Important issues:***

Short targeted messages: “bumper sticker” or “tweets”

Periodic changes to keep message fresh

# Beyond the 5 Fingers

## The Emerging Role of Culture and Relationships

- Resistance to audits, skepticism about audit data
- Relationships between staff
  - **Issues of trust and safety around peer feedback**
    - Fear of retribution
    - Fear of being labeled critical, self-righteous, police
  - **Hierarchical structure** (overt or covert) vs Team focus
- Relationships with patients and families
  - **Is it really “ok to ask?”**
  - Varying approaches to **patient rights vs responsibilities**

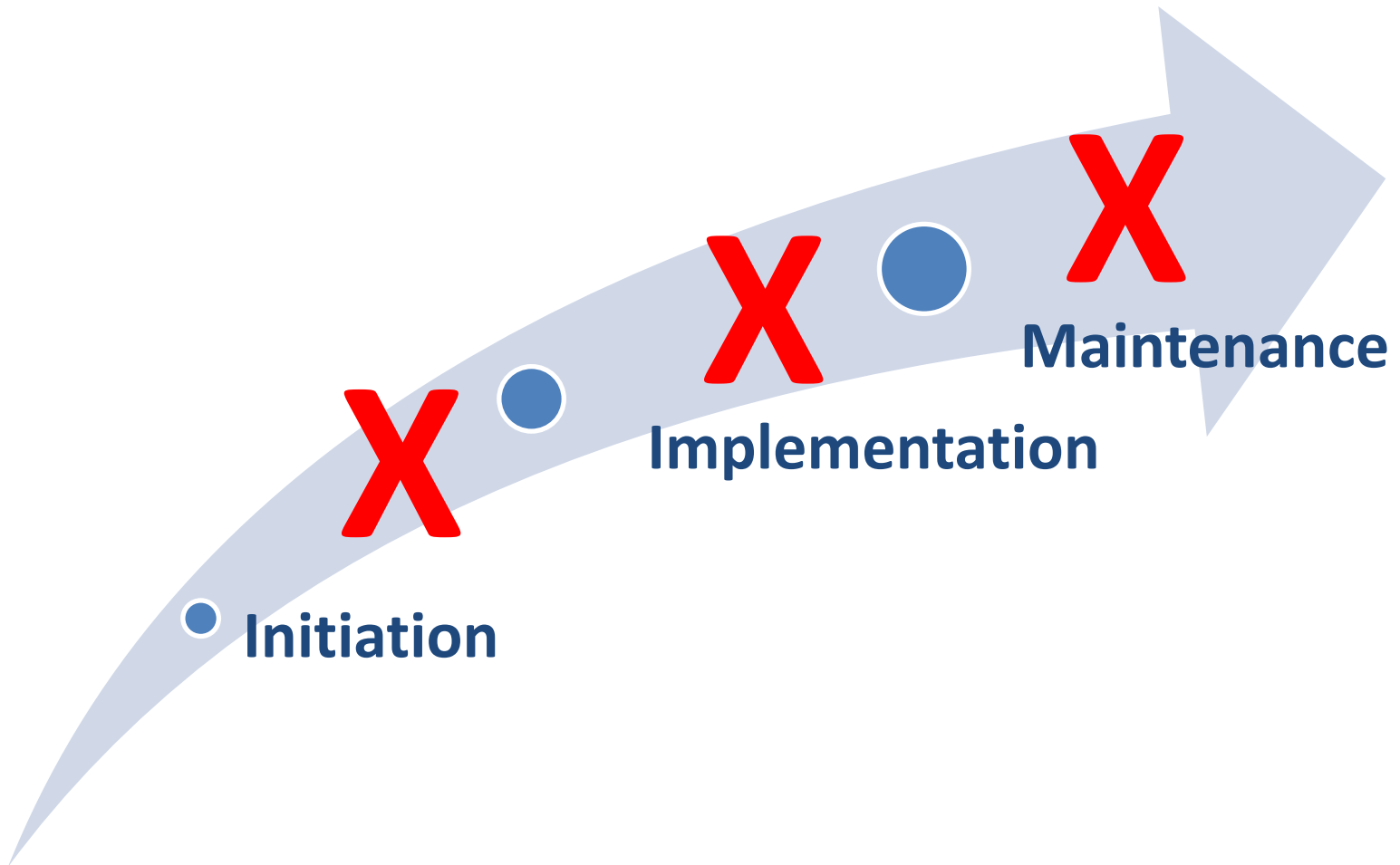
# Ten Fingers?



# Common Features of Hospitals in Maintenance Phase

- **View hand hygiene as engrained activity (like seatbelts) but looking to innovate**
- **Use real-time peer and cross-discipline feedback for education and improvement**
- **Staff able to articulate hospital's approach to accountability around hand hygiene**
- **Sophisticated approach to involving patients**
- **Strong sense of "Team" and community**
- **Good morale in face of economic challenges**

# Barriers and Threats to Progress



# Barriers that Impede Initiation

***“Even though I have a hand hygiene team it’s hard with all their other duties to get them together to help me work on the campaign. Basically I am the hand hygiene campaign.”***

*(infection preventionist interview, hospital in implementation phase)*

***“It’s not outside every room. There’s one, like, every other room. And I know when I came out, it wasn’t actually easy for me to find the hand sanitizer.”***

*(focus group, hospital in initiation phase)*

# Barriers that Impede Initiation

- **Lack of connection with NHHA and FHC**
- **IP-related factors**
  - Turnover in position
  - Competing roles for IP
  - IP feels unsupported, alone, persecuted
- **Lack of confidence that resources are committed**
- **Lack of senior leadership support**
- **Inconveniently located, or not enough, hand sanitizer**

# Barriers during Implementation

***“I think that, again, it’s that human nature. People are afraid to hurt people’s feelings. People are afraid to embarrass people in front of others, and so it’s a very difficult, difficult thing.”***

*(focus group, hospital in maintenance phase)*

***“So we’re back to resources again we’re in this day and age of streamlining and downsizing and leaning you know, we don’t have resources to do that kind of stuff.”***

*(leader, hospital in implementation phase)*

***“It’s hard to implement new things or push or accelerate things when the organization is just sort of consumed with day-to-day and trying to keep things going and trying to keep their lives going outside.”***

*(focus group, hospital in implementation phase)*

# Barriers During Implementation

- **Availability and convenience**
  - Fire code restrictions
  - Financial disincentives to use more products
- **Measurement/feedback:**
  - Failure to establish clear criteria for hand hygiene opportunity and measurement
  - Lack of consistency in auditing (leading to lack of confidence in the data)
  - Preoccupation with (and skepticism about) data validity
  - Resistance to the idea of performance measurement
  - Continued reliance on covert audits only
  - Resistance to peer feedback

# Barriers During Implementation

- **Leadership/accountability:**
  - Continued reliance on single campaign leader
  - Lack of active senior leader engagement
  - Ongoing resource issues
  - Tolerance of disruptive behavior
- **Other cultural issues**
  - Hierarchical culture
  - Acceptance of MD disengagement or under-engagement
  - Hostility between administration and MDs and/or staff
  - Resistance to patient involvement in campaign

# Threats to Sustainability

***“I don’t think it’s, it’s self-sustaining by itself, I think that there’s somebody – a group, or individuals or, or you know, all of us have to drive it, all of these have to drive it, I don’t think it’s just – I don’t think it’s self-sustaining, where we fixed it and we can move on to something else, that kind of thing.”***

*(leader, focus group, hospital in maintenance phase)*

***“I think as long as we can keep it right there and it’s an automatic thing, I guess we’ll be okay. But if you’re asking what my concern would be, it’s if there are competing priorities for what they have to do, and it gives any room for them to say, ‘well it’ll be alright this time,’ then we might start slipping.”***

*(leader interview, hospital in maintenance phase)*

# Threats to Sustainability

- **Complacency**
- **Competing QI initiatives**
- **Redirection of resources**
- **Lack of formalized program to train, sustain and provide ongoing support for local champions**

# Insights into Variation Across Disciplines

***“I think it’s important because when you’re trying to communicate, engage, request support from the high offenders, and frankly it’s the physicians, it is a challenge to communicate to them as scientists what the data is, how it was gathered and then therefore say based on this we need your behavior to change. It is a challenge, does that mean it can’t be done? No I’m not saying that. But it does create a speed bump to that conversation.”***

*(leader interview, hospital in implementation phase)*

# Preliminary Insights into Variation Across Disciplines

- **Physicians less involved in planning and implementing campaigns**
- **Campaigns often not optimized for MDs:**
  - Product placement often unit specific
  - Feedback often provided by unit
- **MDs take “scientific” approach: want ongoing proof, link to HAI**
- **Historical role models:**
  - Florence Nightingale vs Ignaz Semmelweis
- **Complex relationship issues with patients**
- **Double standard for MDs a common feature of “stuck” hospitals (formal accountability structure helps address)**

# What Next?

- **Comprehensive report provided to all facilities**
- **Brief summaries for each hospital**
  - Stage
  - Plateau or not
  - Strengths of current program
  - Vulnerabilities
  - Recommended next steps, interventions
- **Opportunities to share resources**
  - Posters and other marketing tools
  - Educational tools (e.g. WDH training for peer feedback)
  - New tools (leadership resource, auditing for measurement training)
  - Specific initiatives (e.g. CHAMPS, Be Seen Being Clean)

# Remaining Questions for Further Investigation

## Gender

Is hand hygiene a feminine activity?

\*

## Generation

Are younger doctors and nurses more accepting of the need to perform hand hygiene?

\*

## Educational background

Are some people too advanced to participate?

\*

## Professional roles

Why are nurses *expected* to clean their hands and doctors *applauded* for doing so?

\*

## Morale

Optimistic vs cynical view of challenges



**HIGH FIVE**  
for a **HEALTHY NH**

*Clean your hands!*



**HIGH FIVE**  
for a **HEALTHY NH**  
*Clean your hands!*