Getting it Done! Implementing Transformational Change to Improve Patient Outcomes

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Disclosures

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APIC-Consulting

Arrowsight

Global Life Technologies Corp.

Molnlycke Health Care

Relias

Inception Xr inc.

Learning Objectives

1. Define Transformational and sustainable change.
2. Discuss the need to Identify priorities, strategies and obtain approval approval for change.
3. Describe barriers to change and strategies to mitigate.
4. Identify the steps to effective change management.

The Day - to - Day Life of the Infection Preventionist

How are We Doing?

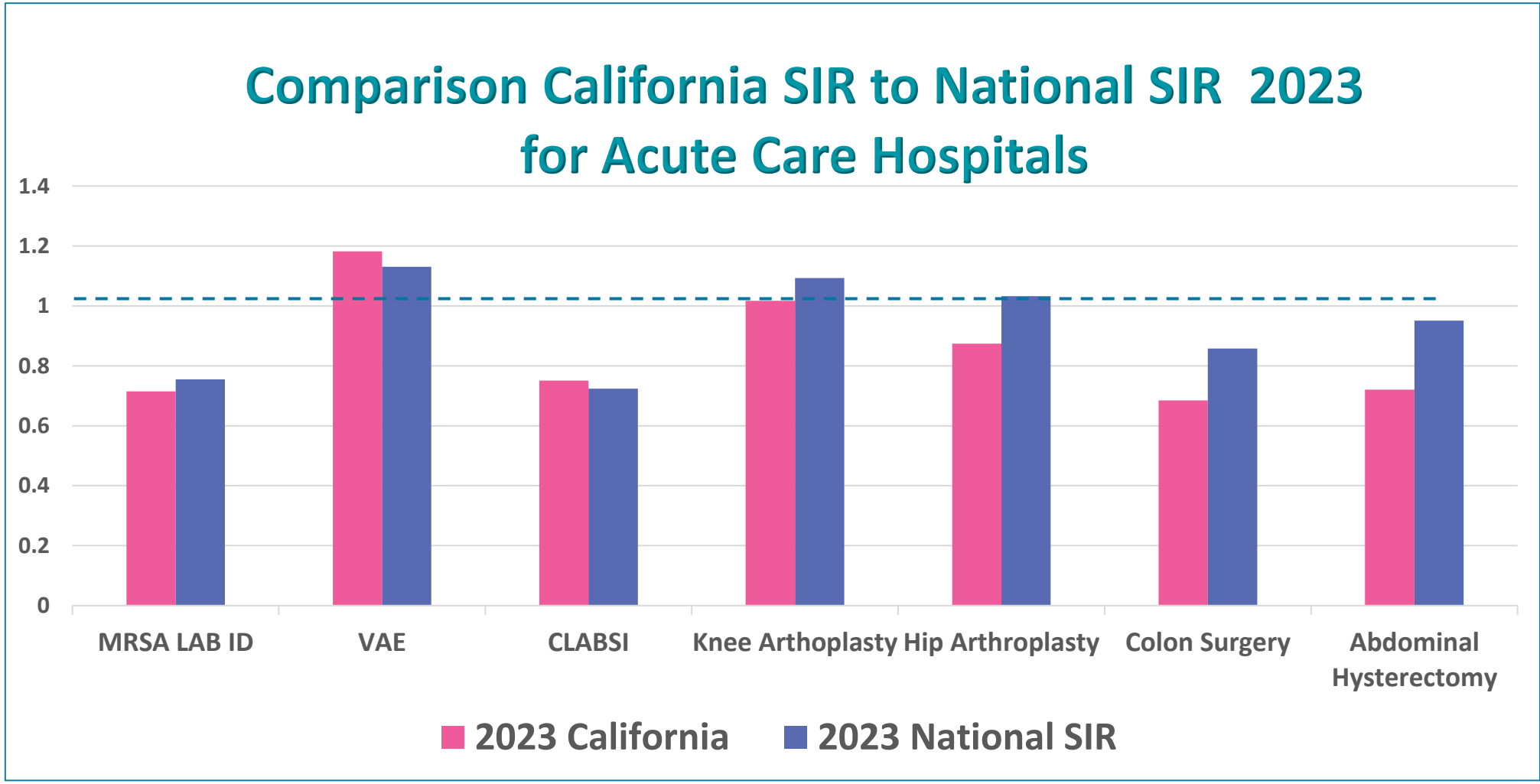
A Good Day?

Its Been a Rough Week.

2023 NHSN California SIR Comparison to National SIR

.

CDC. Current HAI Progress Report. 2023. Retrieved April 8,, 2025 @Current HAI Progress Report | HAI | CDC



Penalties and Reputation Scores

Hospital	Leapfrog Score	HRRP Penalty*	HAC Penalty*
Hospital 1	A	-0.23% ($62k loss)	No penalty
Hospital 2	C	-0.73% ($385k loss)	No penalty
Hospital 3	C	-0.94% ($838k loss)	No penalty

***The Hospital Readmissions Reduction Program (HRRP)** is a Medicare initiative that looks at excess readmissions within 30 days for the following 6 categories: Heart failure, acute myocardial infarction, COPD, pneumonia, CABG surgery, and elective total hip or knee replacement. If the hospital has higher than expected readmissions in any of those 6 categories, they get a penalty in the form of loss reimbursement of up to 3% of their total annual Medicare payments.

***Hospital Acquired Conditions (HAC)** score totals determine the worst-performing quartile of all subsection hospitals based on data for 6 quality measures: CLABSI, CAUTI, SSI (hysterectomy and colon procedures), MRSA Lab ID, CDI, and Composite measure of (10) pt safety and adverse events (serious but potentially avoidable). Hospitals with a total score greater than the 75% percentile of all total HAC scores (the worst-performing quartile) will receive a 1% payment reduction Payment reduction applies to all Medicare discharges for the applicable fiscal year.

Retrieved April 9 @ https://www.definitivehc.com/

Average Length of Stay

Hospital	Length of Stay (LOS)
Hospital 1	4.74
Hospital 2	6.17
Hospital 3	5.19

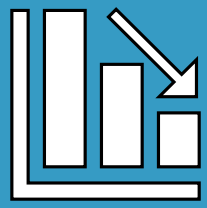
4.5 Days

NATIONAL AVG LOS

4.9 Days

CA AVG LOS

INCREASE LOS
DECREASE THROUGHPUT



DECREASE LOS
GAINED REVENUE

https://www.definitivehc.com/resources/healthcare-insights/average-length-of-stay-by-state

9 things to know about length of stay - Becker's Hospital Review | Healthcare News & Analysis

Change: Transform & Sustain

Transformational Change

Fundamental change in how the organization operates and is often triggered by changes in the environment:

- **New vision**
- **New goals**
- **Culture change**
- **New ways of doing things**

[What is Transformational Change? | HR Glossary - AIHR]

Sustainable Change

The process of making sustainable improvements that will last over time:

- **Why change?** (need, readiness, scope)
- **Plan** (Approach, Stakeholders/ buy-in; transition & integration)
- **Implement** (Communicate, mobilize, process change)
- **Manage & Sustain** (ongoing measurement & communication)

[The 4 Phases of Sustainable Change - Ava S. Butler (avasbutler.com)]

The Challenge of Change

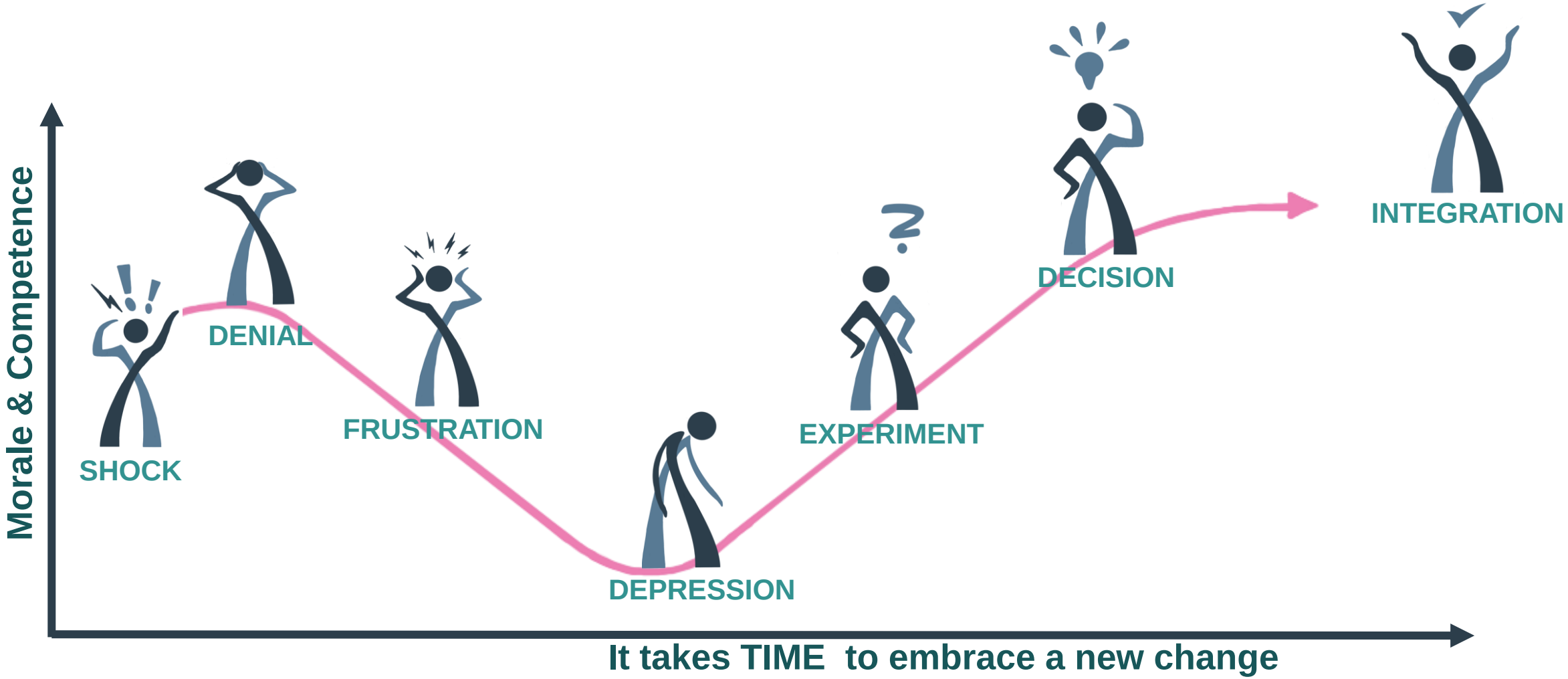
Saving lives is worth the effort.

- **70% of change efforts fail**
- **33% - Management behavior does not support change**
- **39% - Employees are resistant to change**
- **14% - Lack of resources**

Focus on strategies and processes that will have a MEANINGFUL impact!

Jones-Schenk J. 70% Failure Rate: An Imperative for Better Change Management. J Contin Educ Nurs. 2019 Apr 1;50(4):148-149

Real Change Does Not Happen Overnight



Preunderstanding the Kubler-Ross Change Curve | Cleverism: What is Kubler Ross Change Curve? | Stages & Advantages CMI (changemanagementinsight.com)

Focus on Infection Prevention Programs with Meaningful Impact

TIME X ENERGY / PASSION X FOCUS = IMPACT

Meaningful Impact?

Alignment With Organizational Priorities

- Quality Care
- Fiscal and Operational Improvement
- Regulatory Penalties / Accreditation Readiness
- Reputation

Economic Burden

Summary of Meta-analysis of Additional Cost of Selected Hospital-Acquired Conditions			
Hospital-Acquired Conditions		**Estimate (95% CI)**	**Studies (n)**
Central Line-Associated Bloodstream Infections	**$48,108**	($27,232-$68,983)	**7**
Ventilator-Associated Pneumonia	**$47,238**	($21,890-$72,587)	**5**
Surgical Site Infections	**$28,219**	($18,237-$38,202)	**5**
Venous Thromboembolism	$17,367	($11,837-$22,898)	4
C. difficile Infections	**$17,260**	($9,341-$25,180)	**9**
Pressure Ulcers	$14,506	(-$14,506-$41,326)	4
Catheter-Associated Urinary Tract Infections	**$13,793**	($5,019-$22,568)	**6**
Falls	$6,694	(-$1,277-$14,665)	3
Adverse Drug Events	$5,746	(-$3,950-$15,441)	2
Obstetric Adverse Events	$602	(-$578-$1,782)	2

AHRQ. Estimating the additional hospital inpatient cost and @https://www.ahrq.gov/hai/pfp/haccost2017-results.html. mortality associated with selected hospital-acquired conditions . 2017, Retrieved, 3/1/2023@Results | Agency for Healthcare Research and Quality (ahrq.gov)

The Transformational Change

How to get programs approved, supported and implemented

EXAMPLE:

CLABSI REDUCTION PROGRAM

- A major paradigm shift in nasal colonization risk mitigation.

THE PROCESS:

Go Slow to Go Fast: Accelerate approval and gain ongoing support.

Change Acceleration Process Formula

Quality x People = Effectiveness

People = (Acceptance, Accountability, Alignment)

FAILED:

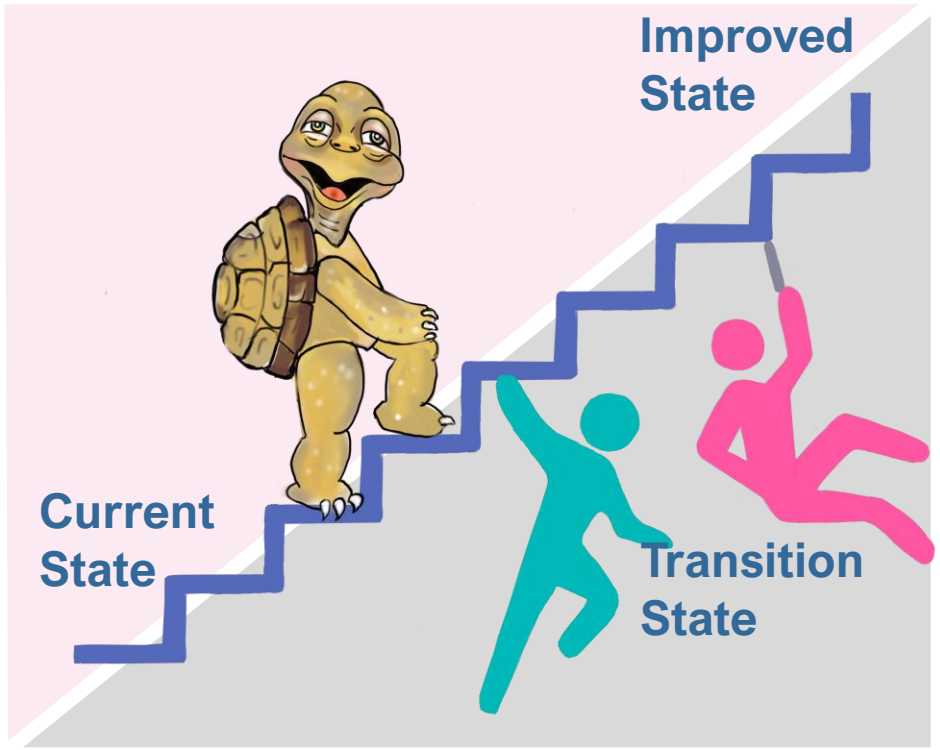
- 70% of quality/ change efforts fail

REASON:

- Lack of attention to the culture and the people side of change.

Feldman, K. GE Change Acceleration Process (CAP). 2018. isixsigma.com.

Change Acceleration Model
"Go Slow To Go Fast"



IMPORTANCE

CHALLENGE

Finding your Way

Finding Excuses

Leading Change

- Monitor Progress
- Implementation
- Mobilize Commitment
- Shaping a Vision
- Creating a Shared Need

Changing Systems & Structures

The Classic Change Commitment Curve, Daryl Conner's 8 Stages - Change Management World

Change Acceleration Process (CAP) - isixsigma.com

Team Consensus

Includes

- ✓ Pooling opinions
- ✓ Listening effectively
- ✓ Discussing ideas & differences
- ✓ Not getting all you want
- ✓ Coming to an agreement that everyone "can live with"

Consensus is not

- X A unanimous vote
- X Majority or minority rule
- X One person rule ; or
- X Bargaining

Team Consensus

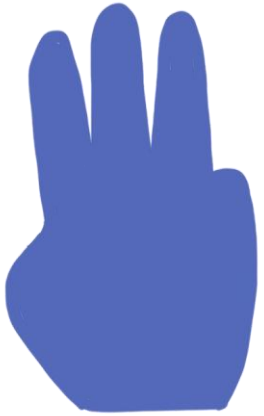
Change Acceleration Process (CAP) - isixsigma.com

Consensus Tool: Fist to Five

No Way!

We need to talk about this

I have Reservations



I 'm OK With it

Sounds good

Total Agreement

What is fist to five? (techtarget.com)

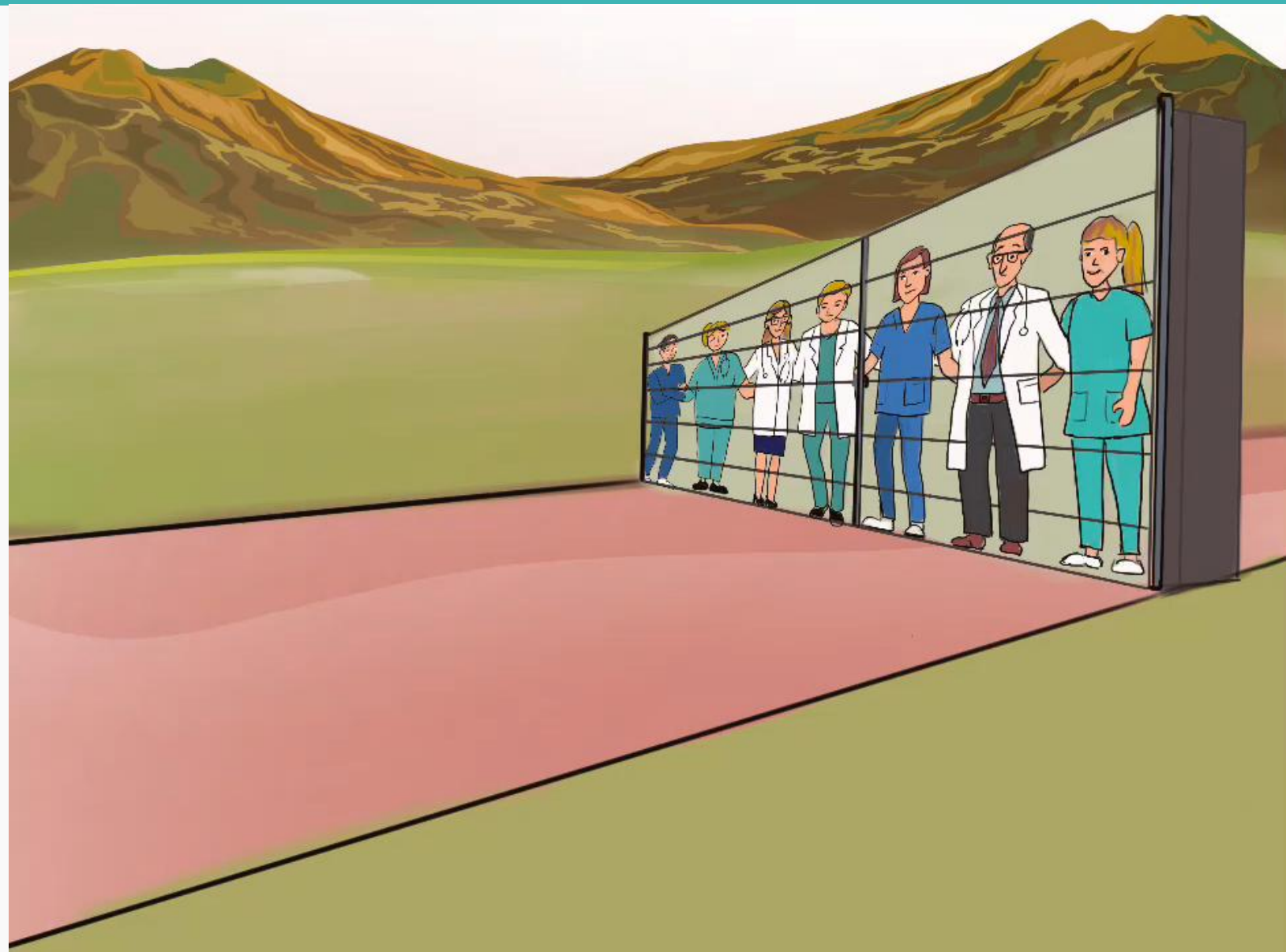
The Wise Tortoise & The Speedy Hare

1. This is a story of two Infection Preventionists trying to make a transformational change in their organization to improve patient outcomes

The Speedy Hare Implementation Process

Hare Implementation Process

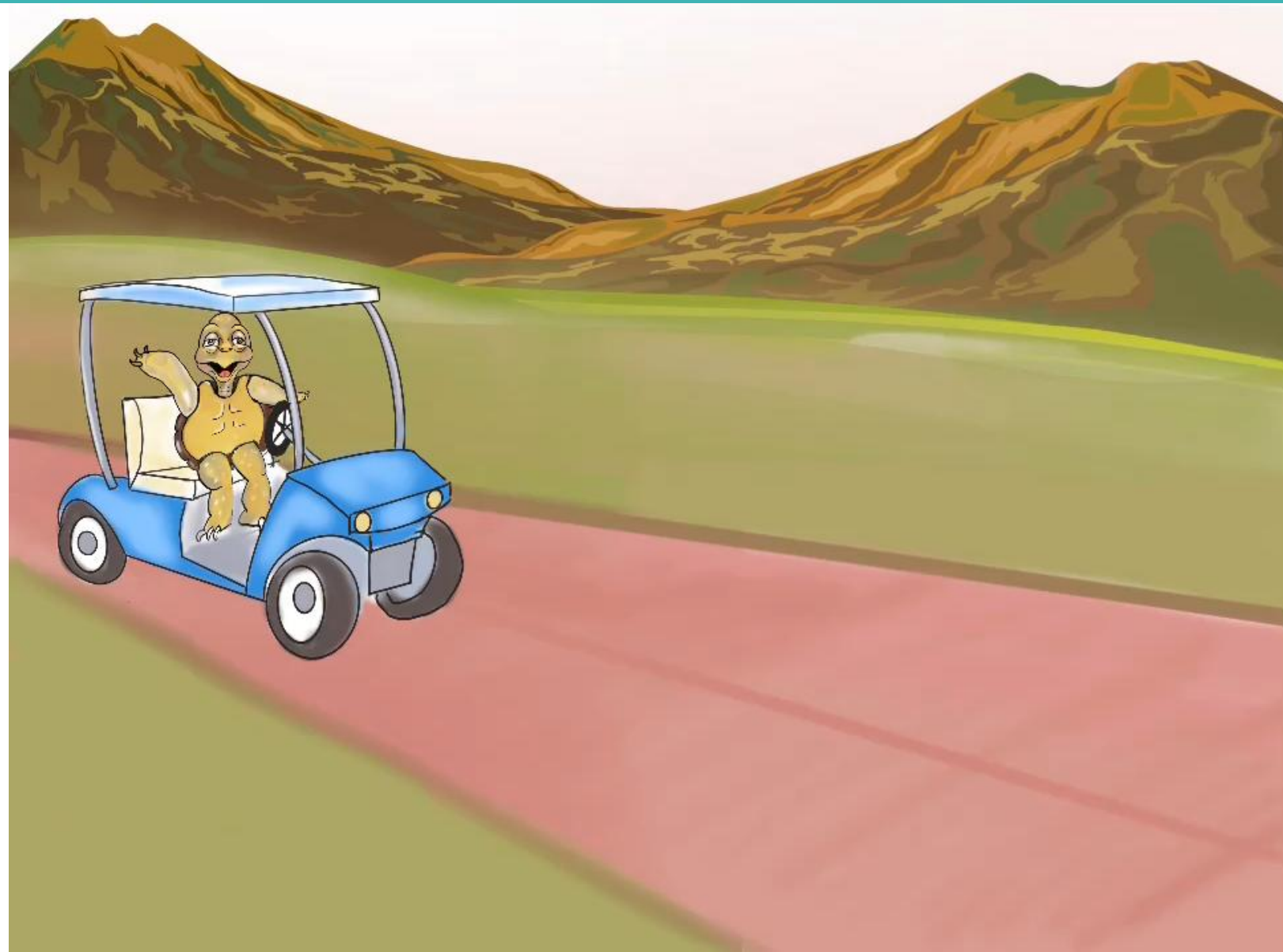
1. Identify the problem
2. Develop an excellent protocol
3. Build a strong business case
4. Prepare implementation program
5. Present protocol for approval



Go Slow to Go Fast

Change Management Process

1. Create a Shared Need
2. Shape a Vision
3. Mobilize Commitment
4. Implement Change
5. Monitor Progress



Example of Transformational Change- Background

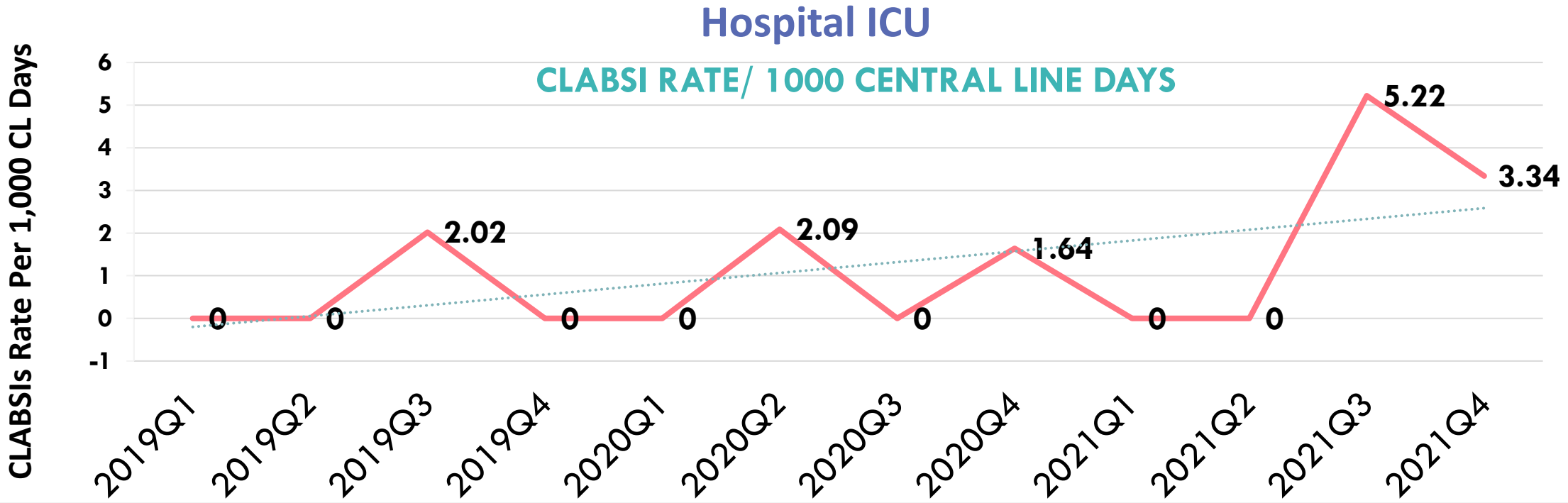
- Infection Preventionist's previous experience in another acute care hospital:
  - Reduced CLABSI to Zero for 625 days
- Targeted Screen & Isolate
  - Pilot to assess replacing Screen & Isolate with nasal antiseptic
- Baseline:
  - Antimicrobial bathing of patients since 2016
  - Existing Device related Prevention Bundles in place
  - Strong Quality organization
  - CLABSI, PVAP, and other HAI rate increases during 2021

Lou IP

Ty, IP Director

White T, Zalusky-Kamm L. APIC Breakfast Symposium: Getting to Zero: Mission impossible to mission completed. 2023. 2023 APIC conference, Orlando; Global life Tech Corp.

Create a Shared Need Statement



CLABSI #	0	0	1	0	0	1	0	1	0	0	4	3
CL Days	339	375	495	420	391	479	487	610	728	629	766	899
Infection Rate	0	0	2.02	0	0	2.09	0	1.64	0	0	5.22	3.34

CLABSIs rates have dramatically increased putting our patient's safety in jeopardy

White T, Zalusky-Kamm L. APIC Breakfast Symposium: Getting to Zero: Mission impossible to mission completed. 2023. 2023 APIC conference, Orlando; Global life Tech Corp.

Shaping a Vision

Reduce CLABSI: Get to Zero

ACTION

- CLABSI Team Conducted Literature Review/ Root Causes

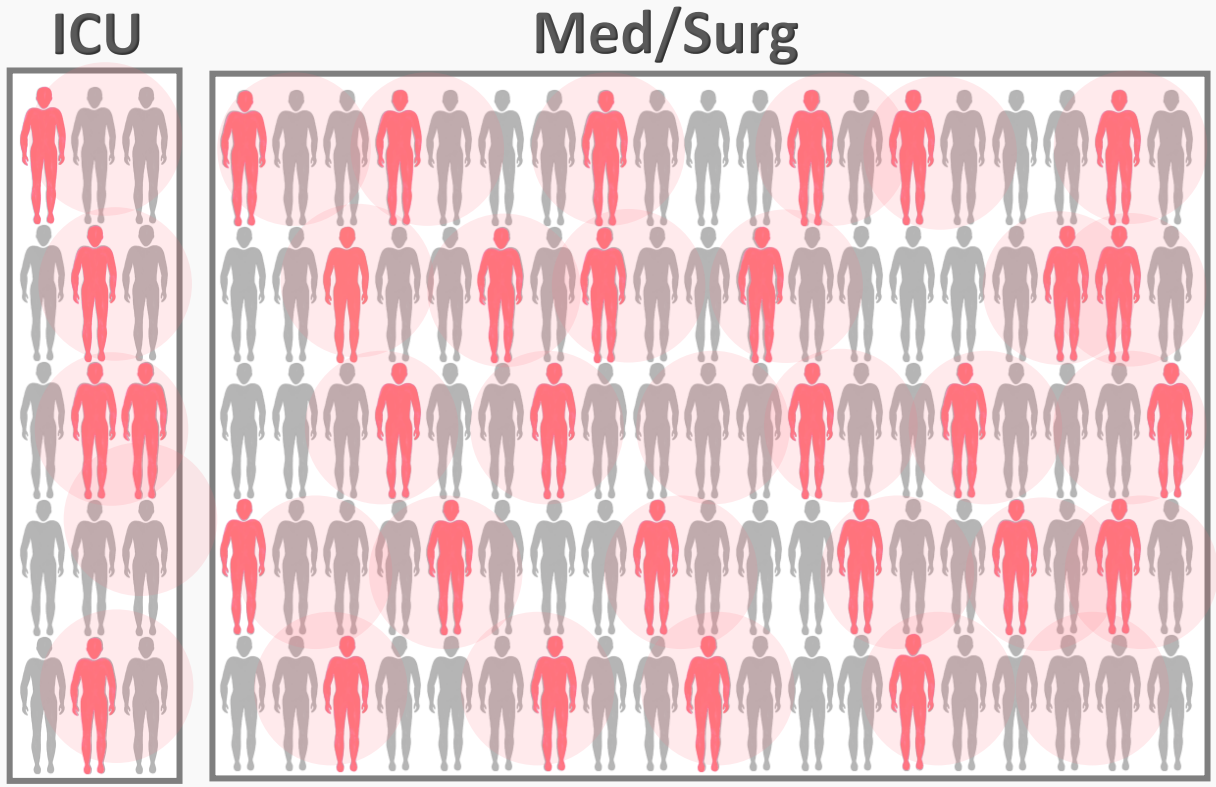
RECOMMENDATIONS

- Bundle compliance improvement
- Remove Midlines within 14 days
- Add nasal decolonization with broad-spectrum nasal antiseptic

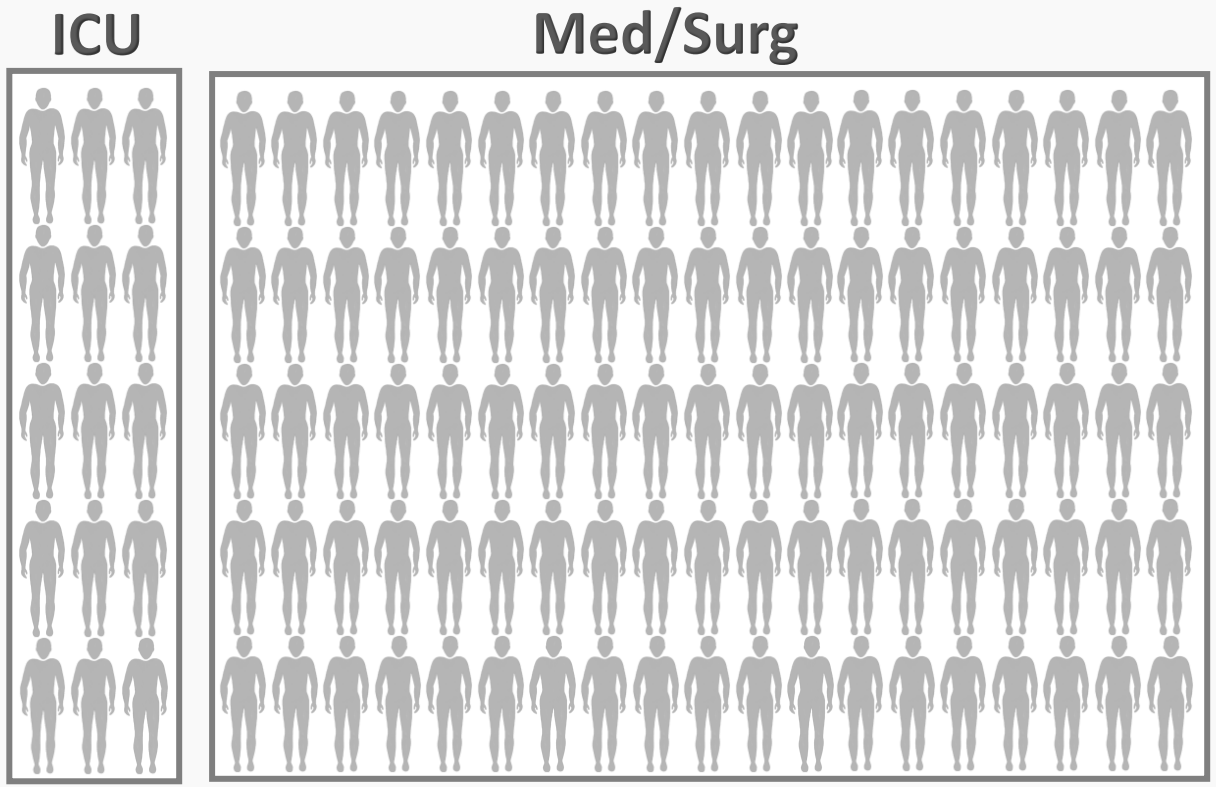
White T, Zalusky-Kamm L. APIC Breakfast Symposium: Getting to Zero: Mission impossible to mission completed. 2023. 2023 APIC conference, Orlando; Global life Tech Corp.

Create a Compelling Vision of the Solution

Colonized Patients Increase Colonization Pressure Through Transmission and Acquisition



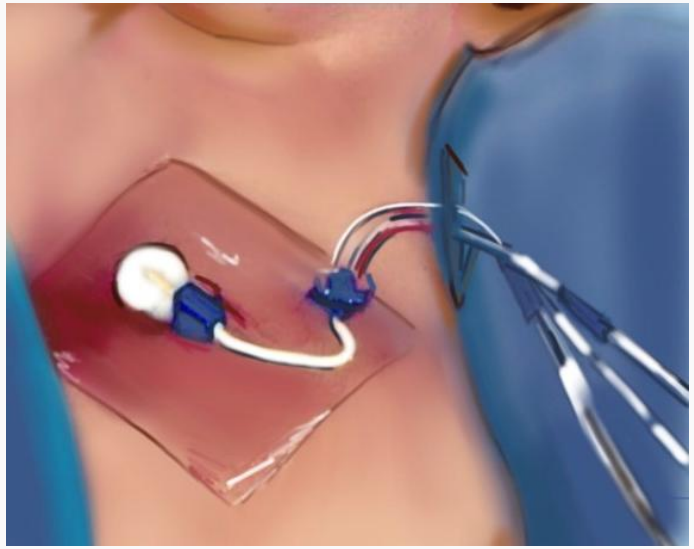
* Illustrative example of admitted patients that are colonized and pose an ongoing transmission risk



Universal Nasal Decolonization

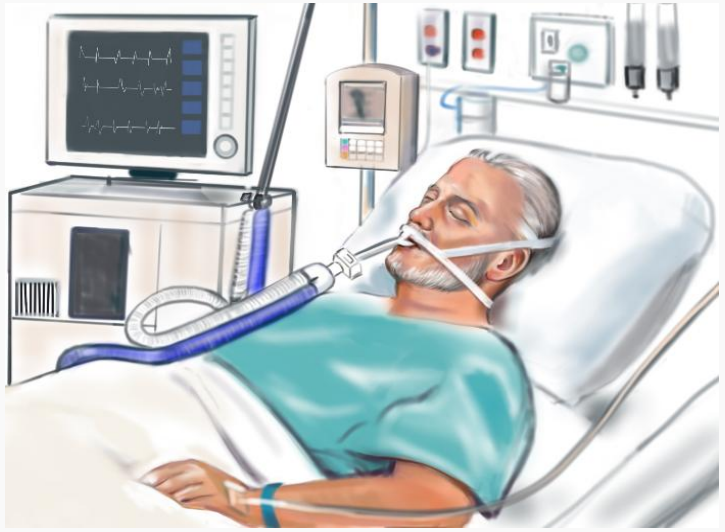
The Why: The Role of the Nasal Vestibule in HAIs

Nasal vestibule colonization is a main risk factor for infection [1,2]



Staph aureus BSI

Staph aureus SSI



Staph aureus Pneumonia

80% of Staph aureus BSI[1,2] and SSI[3] and 94% of Staph aureus bronchial strains[4] can be traced to the patient's own nasal vestibule flora.

[1] Von Eiff, *NEJM.* 2001; 4.344 (1): 11-6. [2] Wertheim HF, *Lancet* 2004; 364: 703–05. [3] Kalmeijer, *ICHE.* 2000;21:319-323. [4] Corne P, et al. J Clin Microbiol. 2005;43(7):3491-3493.

The Flora of the Nasal Vestibule

Normal Flora

Propionibacterium spp.

Corynebacterium spp.

Streptococcus spp.

Lactobacillus spp.

Staphylococcus spp.

Coag-negative staphylococci

Staphylococcus aureus

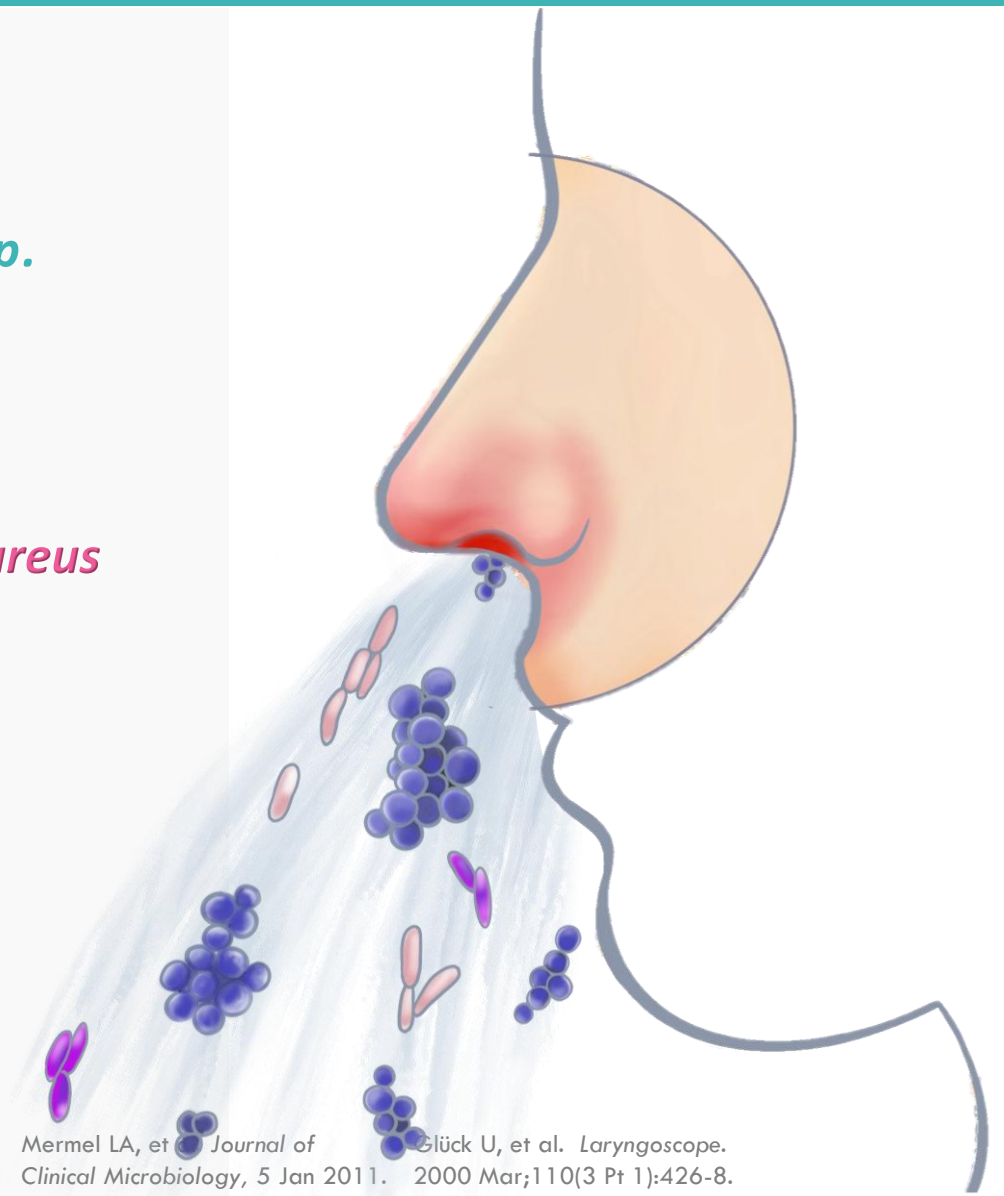
Intermittent Low-Level

Enterobacteriaceae

Pseudomonadaceae

Moraxellaceae

Yeast



Human Microbiome Project. *Nature.* 2012 Jun 13; 486(7402):207-14.

Lina G, et al. *Appl Environ Microbiol.* 2003 Jan; 69(1): 18–23.

Yan M, et al. *Cell Host Microbe.* 2013 Dec 11; 14(6): 631–640.

Mermel LA, et al. *Journal of Clinical Microbiology,* 5 Jan 2011.

Glück U, et al. *Laryngoscope.* 2000 Mar;110(3 Pt 1):426-8.

Breaking The Chain Of Infection

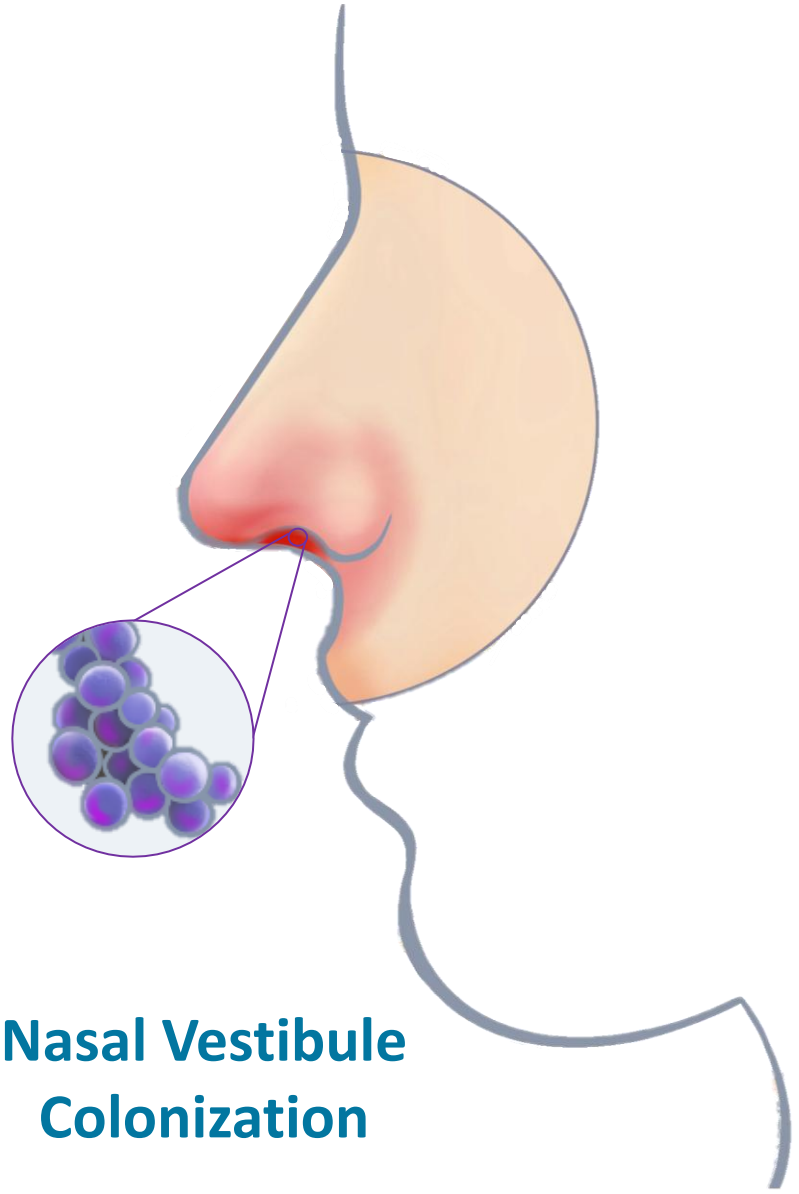
The nasal vestibule as the main reservoir

MAIN RESERVOIR

PORTAL OF EXIT

TRANSMISSION

PORTAL OF ENTRY



Nasal Vestibule Colonization

Breaking The Chain Of Infection

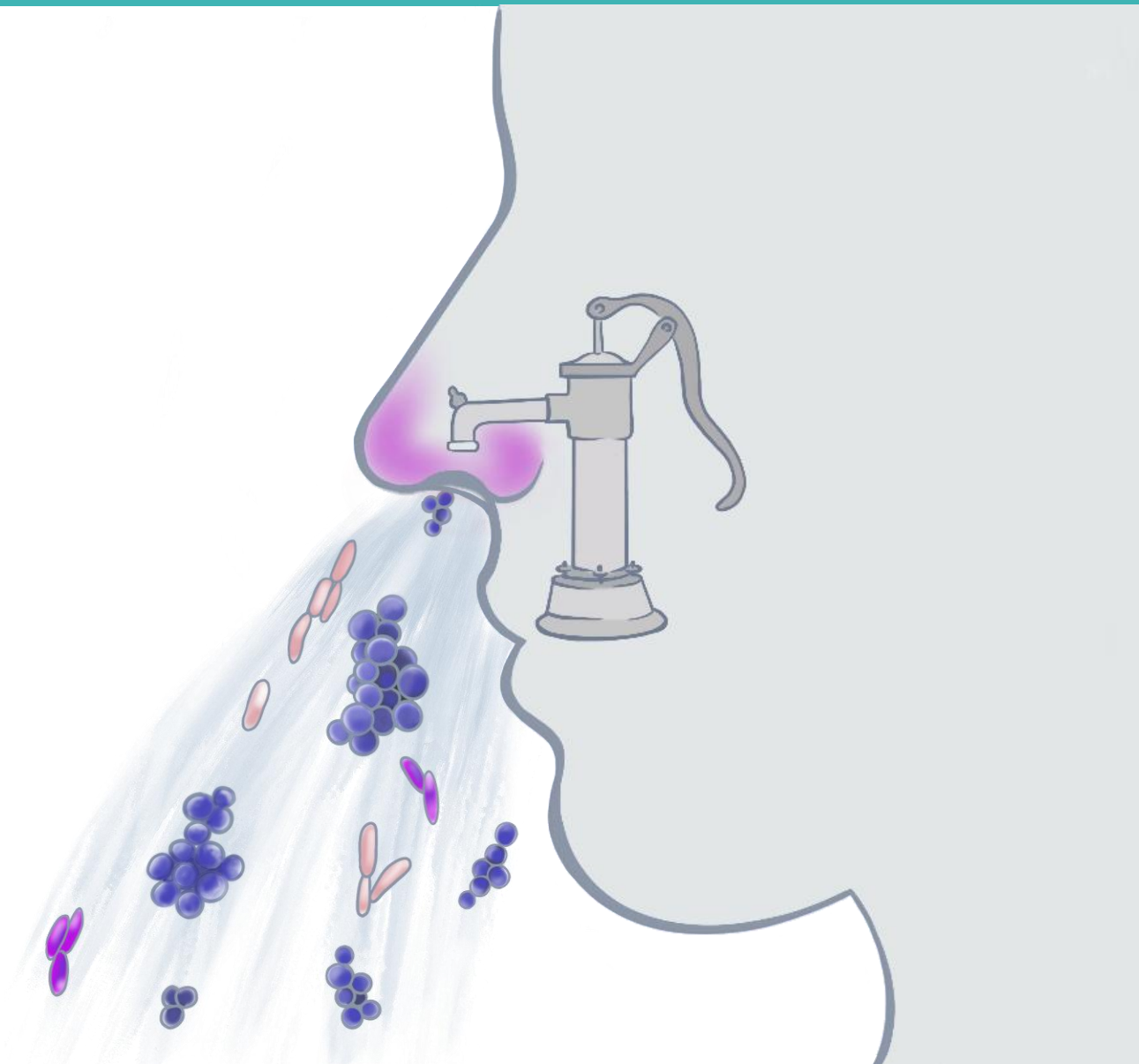
Example: Nasal vestibule as the main reservoir

MAIN RESERVOIR

PORTAL OF EXIT

TRANSMISSION

PORTAL OF ENTRY



Breaking The Chain Of Infection

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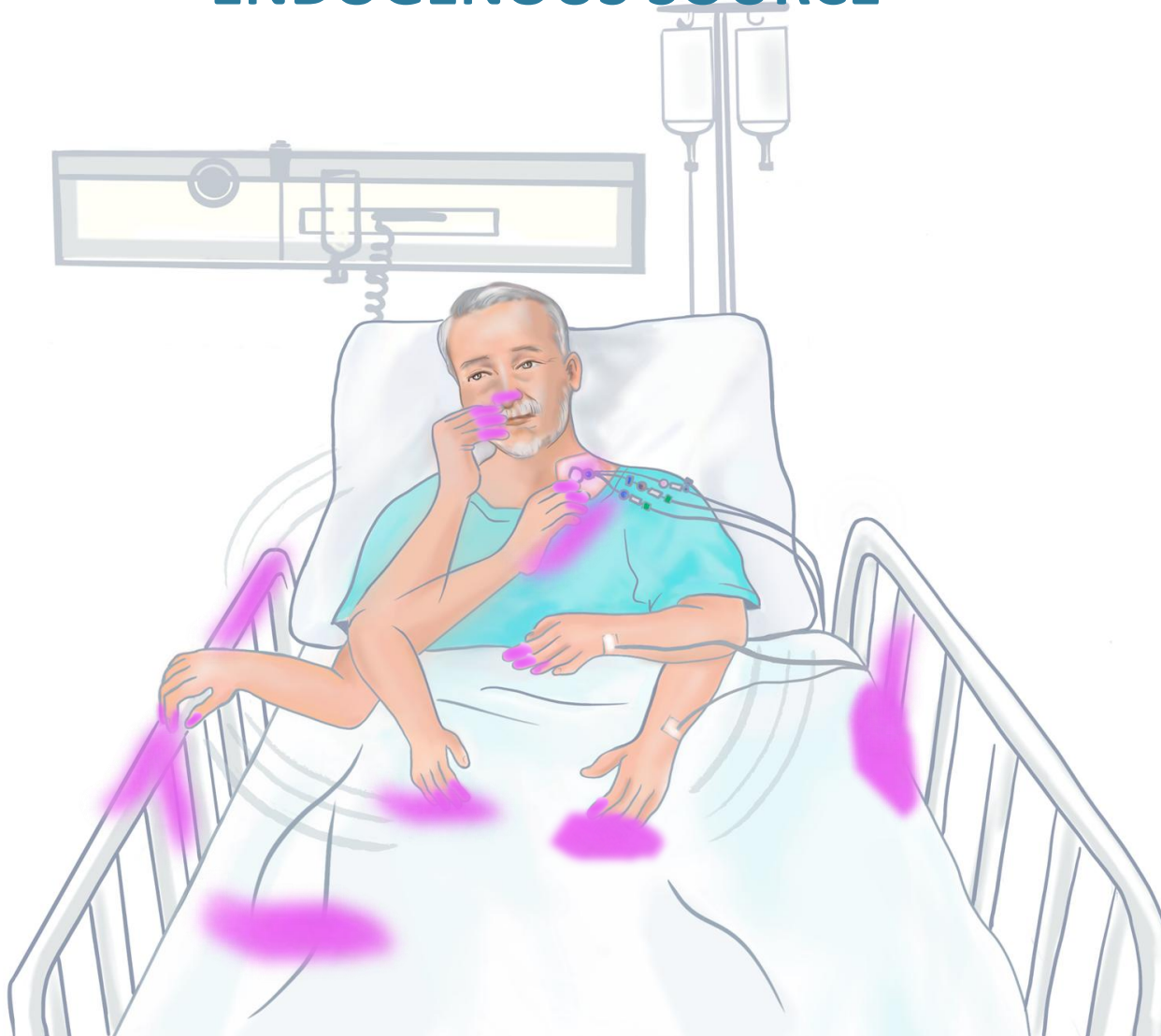
TRANSMISSION

PORTAL OF ENTRY

ENDOGENOUS SOURCE



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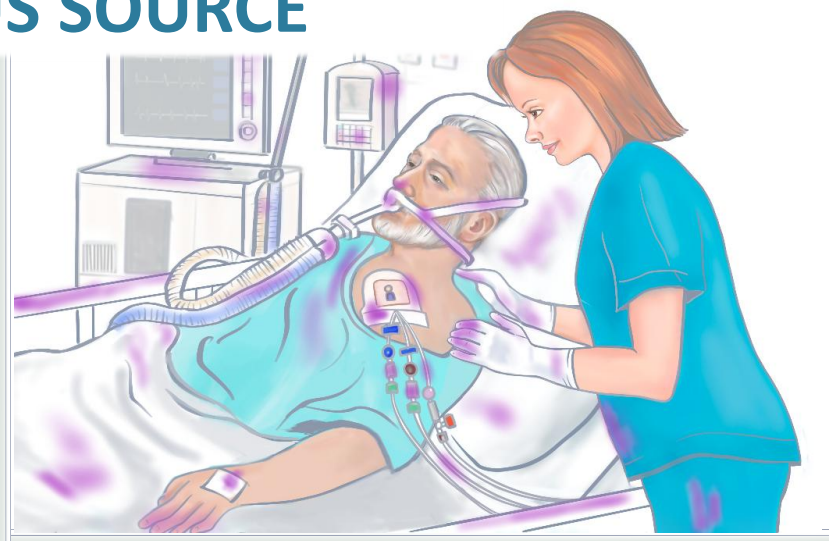

Breaking The Chain Of Infection

The nasal Vestibule as the main reservoir

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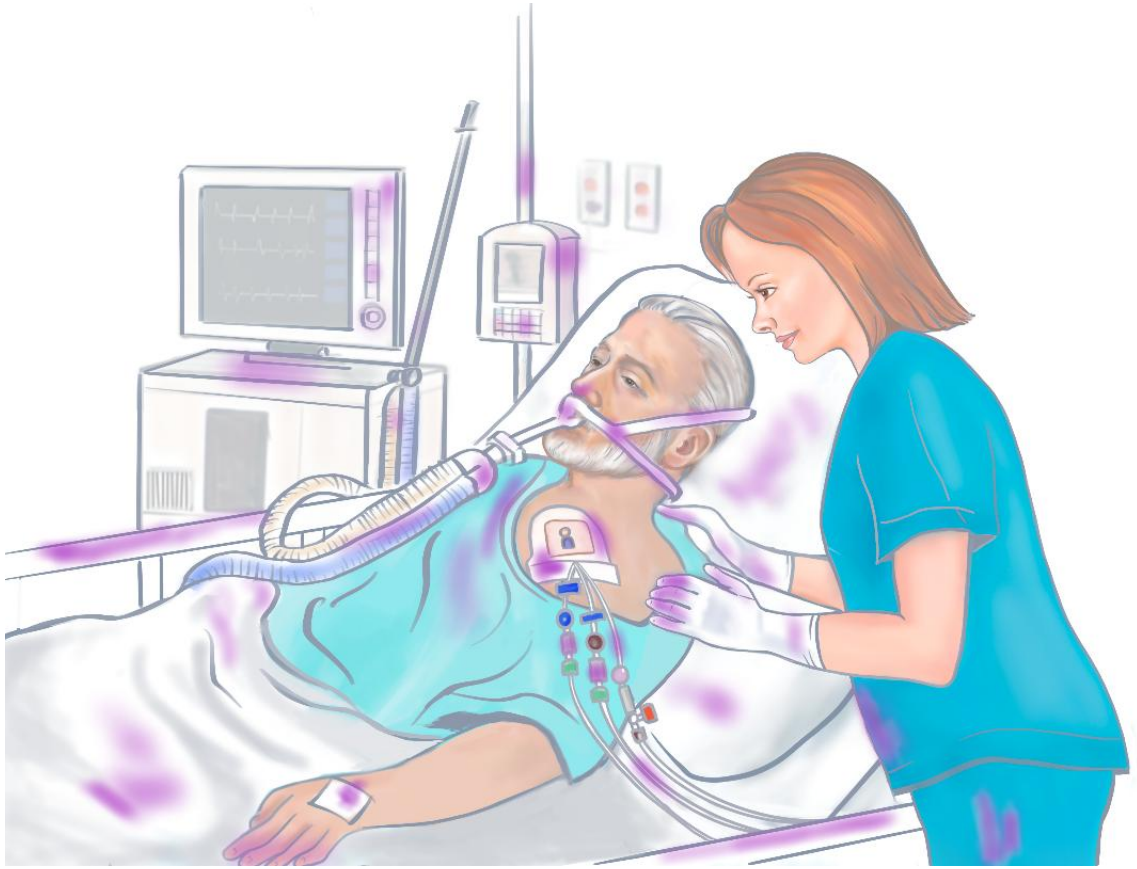


DEVICES:

√ Lines, Ports, Trach sites, Hubs, Drains, Tubing,

√ Dressings, Wounds, Pressure sores, Skin

√ Surgical incisions

Current Strategies to Contain Transmission

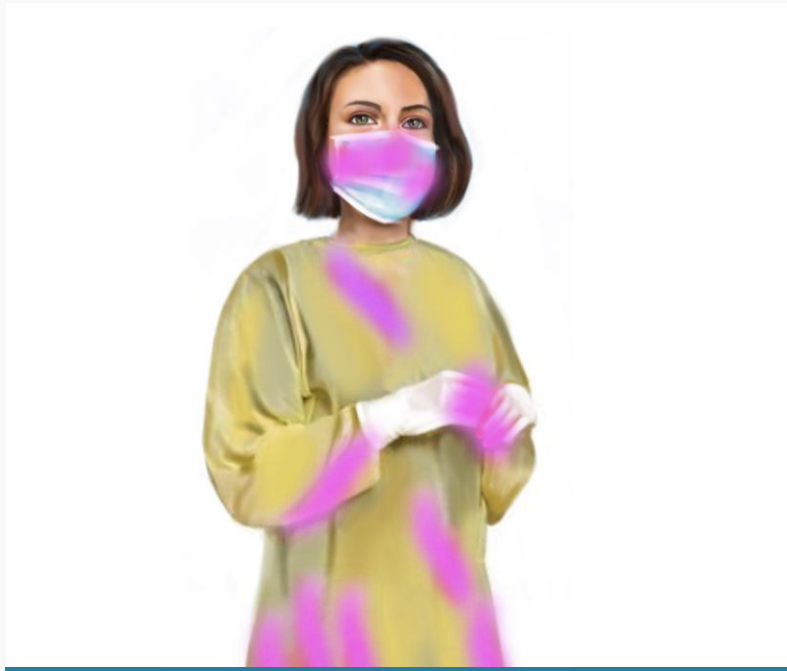
Hand Hygiene

50% compliance after contact with the environment and 80% after direct patient contact.[1]

Environmental Cleaning

~68 % of surfaces are NOT disinfected either by routine daily cleaning or at terminal cleaning. [2]

PPE



HCP contaminated: 36% to 80% post doffing PPE simulations [3]

1 Dancer S. .*Clin Microbiol Rev.* 2014; 27: 665-690

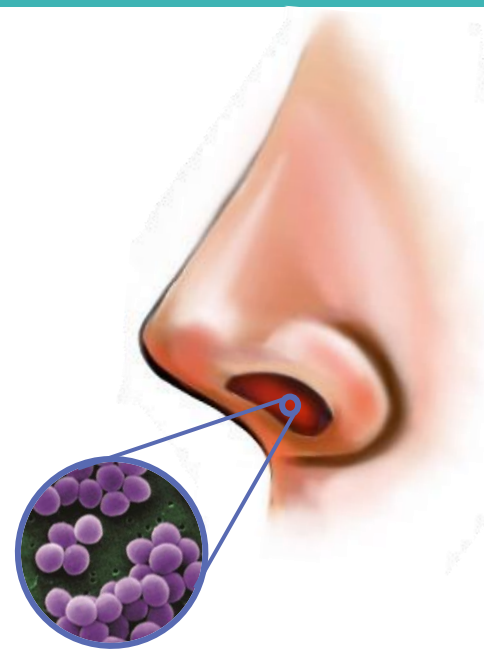
2 Carling et al European Society of Clinical Microbiology and Infectious Diseases, Milan, Italy, May 2011

3 Kang J, et al. Am J Infect Control. 2017 Jan 1;45(1):17-23

Shaping a Vision
Literature Review: Nasal Decolonization?
Independent Studies

Guidelines CDC/SHEA/IDSA/APIC

NASALLY DECOLONIZE PATIENTS



ICU patients: Decolonize all patients with intranasal anti-staphylococcal antibiotic/antiseptic* plus topical CHG (core strategy).

Non-ICU patients: Decolonize patients with CVC or midline catheter with intranasal staphylococcal antibiotic/antiseptic* plus topical CHG (supplemental strategy).

Surgical patients: For all patients undergoing high-risk, unless known to be *S. aureus* negative, use an intranasal anti-staphylococcal antibiotic/antiseptic* and CHG wash or wipes before surgery (core strategy).

*** Decolonization agents recommended include mupirocin or antiseptic (e.g. povidone iodine). Not enough research to recommend an alcohol-based nasal antiseptic.**

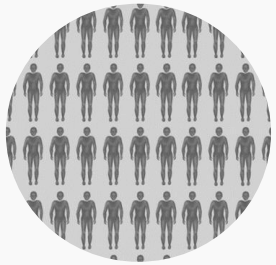
https://www.cdc.gov/hai/prevent/staph-prevention-strategies.html

Popovich KJ, Aureden K, Ham DC, et al. SHEA/IDSA/APIC : 2022 Update. *ICHE.* 2023. doi: 10.1017/ice.2023.102

AORN Recommendation Highlights for Nasal Decolonization

AORN eGUIDELINES+

Updated AORN Guidelines on Preoperative Skin Antisepsis (2021)



Interdisciplinary Risk Assessment

Section 1.2.1

Universal decolonization (vs. targeted) resulted in greater efficiency and lower cost due to SSIs prevented

Nasal Decolonization Agent

Section 1.3.1

An alternative to mupirocin is the use of an antiseptic

Implementation

Section 1.4

Postop decolonization: Surgical patients may benefit from relatively short-term decolonization or until the surgical incision has healed

Stanton C. Guideline for preoperative patient skin antisepsis. *AORN J*. 2021 Apr;113(4):P5-P7. doi: 10.1002/aorn.13380. PMID: 33788247.

SSI Reduction

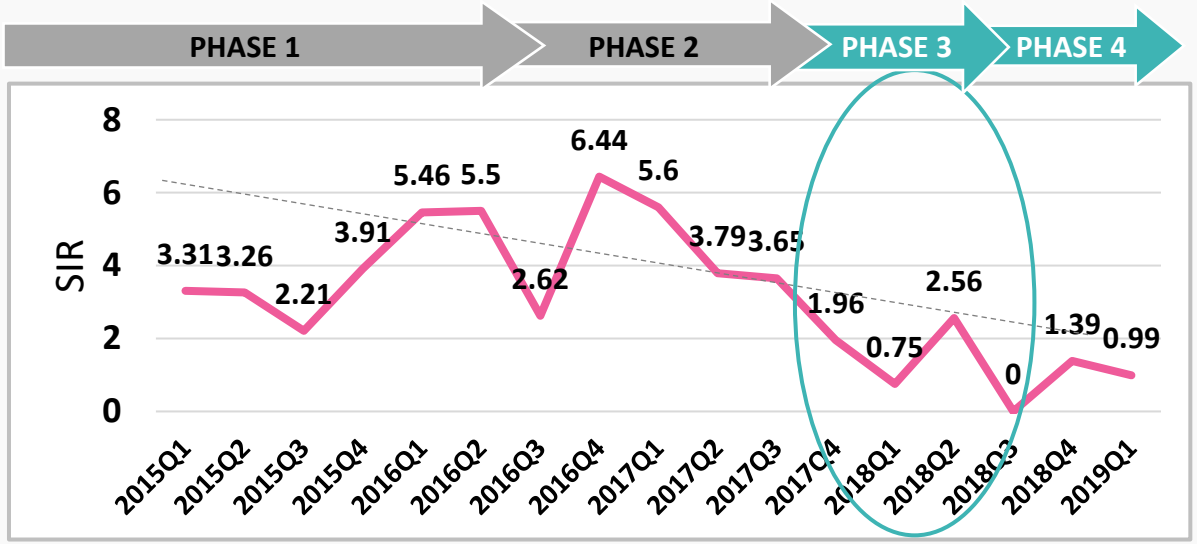
AUTHOR	BASELINE		INTERVENTION	PATIENT POPULATION	OUTCOME Infection Reduction
	Nasal Product	CHG			
Bostian, 2023 Surgical Infections	none	✓	Pre-Op and Post-Op Daily Alcohol Nasal Antiseptic	All Total Joint Arthroplasty Patients	41% All cause SSI total joints (1.5 to .64)
Franklin, 2020 AJIC	none	✓	Pre-Op and Post-Op Daily Alcohol Nasal Antiseptic	All Total Joint Arthroplasty Patients	100% All-cause SSI total joints (Hip .91 to 0) (Knee .36 to 0)
Gnass, 2020 Open Forum Infec. Dis	Povidone-Iodine	✓	Pre-Op and Post-Op Daily Alcohol Nasal Antiseptic Voluntary Staff Use	All Surgical Patients	63% All-cause SSI (2.27 to .80)
Arden, 2019 Open Forum Infec. Dis	Mupirocin	✓	Pre-Op and Post-Op Daily Alcohol Nasal Antiseptic	All Inpatients	100% All-cause SSI (.069 to 0)

MRSA Bacteremia Reduction

Impact of a Stepwise Intervention on HO MRSA Bacteremia SIR

Phase 1(Baseline) ICU PATIENTS	Phase 2 ICU PATIENTS	Phase 3 ADD ALL INPATIENTS	Phase 4 CONTINUE ALL INPATIENTS
-Target, Screen, and Isolate detected MRSA (+) -Universal daily CHG wipes.	• Continue Targeting, Screening, and Isolating for detected MRSA (+) • **Add 5 BID course with mupirocin for all ICU patients** • **Add Daily CHG bathing for all inpatients**	• **Stop** Targeting, Screening, Isolating, and Mupirocin • **Add Universal Decolonization with Daily Nasal Antiseptic for LOS** • Continue CHG bathing	• Continue Universal Decolonization with Daily Nasal Antiseptic for LOS • Continue CHG bathing • **Add Hand-sanitizing wipes**

HO – MRSA Bacteremia SIR



74% Reduction in MRSA Bacteremia SIR

MRSA Bacteremia SIR decreased significantly from 3.65 (Phase I baseline) to 0.96 (Phase 4)* p-value= 0.003

Jimenez, A., et al , (2019). Reduction of Hospital-Onset Methicillin-Resistant Staphylococcus aureus (MRSA) Bacteremia in an Acute Care Hospital: Impact of Bundles and Universal Decolonization. Open Forum Infectious Diseases, 6(S2), S268. https://doi.org/10.1093/ofid/ofz360.635 .

The Efficacy of an Alcohol-based Nasal Antiseptic versus Mupirocin or Iodophor for Preventing Surgical Site Infections - A Meta-analysis

QUESTION:

Does an alcohol-based antiseptic (ABA) used for nasal decolonization work as well as mupirocin or iodophor to decrease surgical site infections?

METHODS: META-ANALYSIS AND SYSTEMATIC REVIEW

147 Nasal titles for decolonization prevention were identified

7 Cohort studies met criteria

16,212 Total patients

8129 Patients (50.14%) Intervention group

7983 Patients (49.24%) Control group

HYPOTHESIS 1

Alcohol-based nasal antiseptic does not improve SSI outcomes.

HYPOTHESIS 2

Replacing mupirocin with an alcohol-based nasal antiseptic does not improve SSI outcomes.

HYPOTHESIS 3

Replacing povidone-iodine with an alcohol-based nasal antiseptic does not improve SSI outcomes.

Hoffmann KK, Steed CJ, Kremelberg D, Wenzel RP. The efficacy of an alcohol-based nasal antiseptic versus mupirocin or iodophor for preventing surgical site infections: A meta-analysis. Am J Infect Control. 2024 Oct;52(10):1202-1208. doi: 10.1016/j.ajic.2024.07.003. Epub 2024 Jul 8. PMID: 38986954.

Meta-analyses Conclusions

- ✓ **Statistically significant positive effects were identified in all three meta-analyses.**
- ✓ **An alcohol-based antiseptic appears to be a viable alternative to mupirocin or iodophors to reduce SSIs.**

Hoffmann KK, Steed CJ, Kremelberg D, Wenzel RP. The efficacy of an alcohol-based nasal antiseptic versus mupirocin or iodophor for preventing surgical site infections: A meta-analysis. Am J Infect Control. 2024 Oct;52(10):1202-1208. doi: 10.1016/j.ajic.2024.07.003. Epub 2024 Jul 8. PMID: 38986954.

In Vitro Studies
Alcohol Nasal Antiseptic Pathogen Kill Test

GRAM-POSITIVE STAIN MICROORGANISMS

Challenge Microorganism	Exposure Time in Seconds	Percent Reduction
Enterococcus faecalis[1]	15	99.99
Mycobacterium smegmatis[2]	60	99.99
Staphylococcus aureus MRSA[2]	60	99.99
Staphylococcus aureus MSSA[2]	15	99.99
Staphylococcus epidermidis[1]	30	99.99
Streptococcus pneumoniae[2]	60	99.99
Streptococcus pyogenes[2]	60	99.99
Candida albicans[1]	15	99.99
Candida auris[1]	60	99.99

GRAM-NEGATIVE STAIN MICROORGANISMS

Challenge Microorganism	Exposure Time in Seconds	Percent Reduction
Acinetobacter baumannii[1]	15	99.99
Enterobacter aerogenes[1]	30	99.99
Escherichia coli[1]	15	99.99
Haemophilus influenzae[2]	60	99.99
Klebsiella aerogenes[1]	30	99.99
Klebsiella pneumoniae[1]	30	99.99
Proteus mirabilis[1]	30	99.99
Pseudomonas aeruginosa[1]	15	99.99

[1] GLTC Testing: Microbiological Consultants, Inc., Huntington, WV [2] GLTC Testing: BioScience Laboratories, Inc., Bozeman, MT

This list is not exhaustive and does not include many others of the approximate 1,200 bacterial and fungal human pathogens known, to be highly susceptible to killing by alcohol nasal antiseptic. The tested product is an OTC topical drug. No claim is made that it has an effect on any specific disease. This message is intended for healthcare professionals.

Mobilizing Commitment

KEY CO-CHAMPIONS

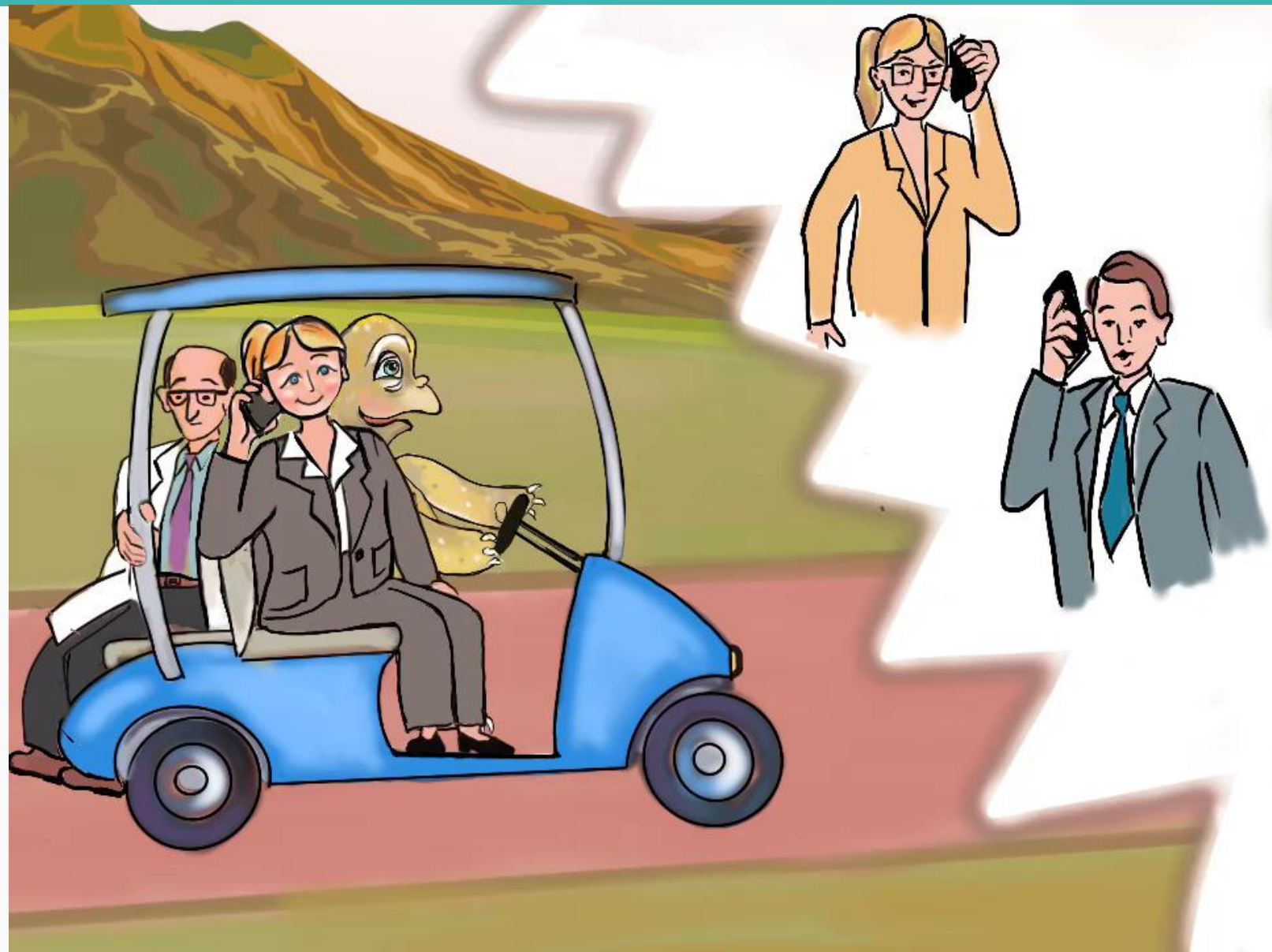
- Director of Nursing / CNO
- Quality Leader
- Infection Disease Physician

KEY INFLUENCERS

- Surgeon Representative
- Administration Representative
- Quality Leader
- Pharmacy
- Medical Staff
- Supply chain/Material
- C-Suite
- Frontline Staff

Identification of potential resistance

- Conversion of key influencers



Strategies to Address Resistance to change

Resistance is a normal human response to change

- **Plan for resistance**
- **Right from the start:** practice change management
- **Frontline:** engage & involve in the change from the beginning
- **Engage:** senior leaders as active sponsors
- **Recruit:** influencers and champions
- **Communicate:** the need for change and its impact on employees and patients

What is in it for me?

- **Listen:** work to address resistance and mitigate it.
- **Celebrate Success in Making a Difference:** positive feedback

Sensing Sessions

Informal Meetings with employees

- Speak Freely about change
- Listen
- Identify resistance/under-the-radar issues
- Address the "why change"

Mobilizing Commitment
Executive Committee

Executive Committee

- CFO
- CNO
- CEO
- CIO
- Legal Counsel
- CMO
- VP Quality
- Administrator

The Success of Implementation

WE ARE BETTER TOGETHER

Mobilize Commitment

Facilitator
Infection Preventionist
Nurse Leader
Industry Partner

Front Line Representatives

Administrative Sponsor

Nurse Manager Representative

Supply Chain Representative

Clinical Educator

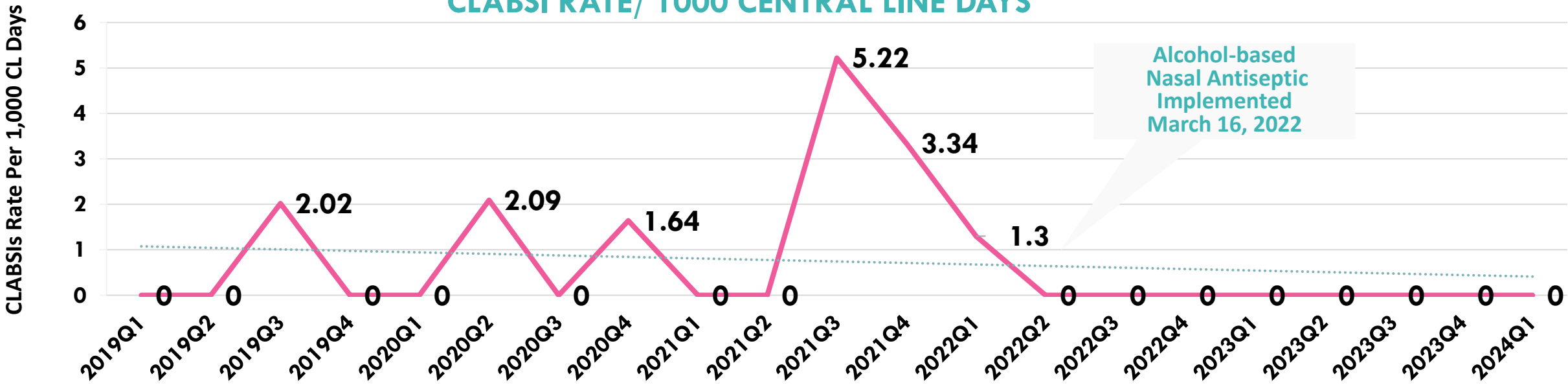
Pharmacy

Information Technology Representative

APIC 2024 - The Addition of Nasal Antiseptic to Universal Decolonization Programs Reduces Central Line Associated Blood Stream Infections in Intensive Care Units

MH Rapid City ICU

CLABSI RATE/ 1000 CENTRAL LINE DAYS



	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2022Q3	2022Q4	2023Q1	2023Q2	2023Q3	2023Q4	2024Q1
CLABSI #	0	0	1	0	0	1	0	1	0	0	4	3	1	0	0	0	0	0	0	0	0
CL Days	339	375	495	420	391	479	487	610	728	629	766	899	770	568	617	386	571	689	603	551	532
Infection Rate	0	0	2.02	0	0	2.09	0	1.64	0	0	5.22	3.34	1.3	0	0	0	0	0	0	0	0

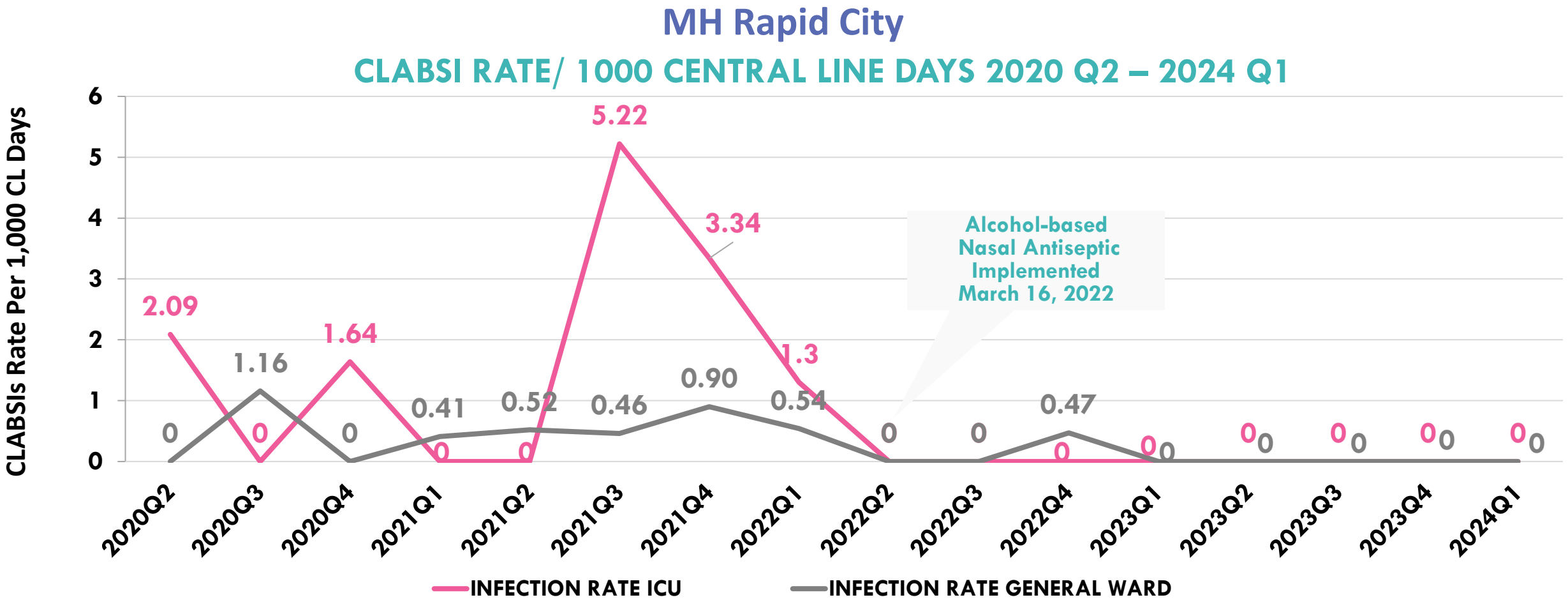
Pre-Implementation

Post-Implementation

100% decrease in CLABSIs, 1.54 to 0 (p=.01) ICU

Zalusky-Kamm, L, et al. (2024). AJIC, Volume 52, Issue 6, S74

MH Rapid City ICU vs General Ward



100% decrease in CLABSIs in ICU, 90% decrease in General Ward

Zalusky-Kamm, L, White,T.. (2025).MH Rapid City CLABSI Data Retrieved March.

Nasal Decolonization Program

(Hospital Example continued)

~Cost of CLABSI Pre versus Post-Implementation

Q2 2020 - Q1 2022				Q2 2022 – Q2 2024			
Type of Infection	Avg cost/ infection*	Pre- Implementation		Post-Implementation		% Reduction	Total Estimated Treatment Cost Reduction
		No. of HAIs	Cost of HAI	No. of HAIs	Cost of HAI		
CLABSI	$48,108[1]	19	$914,052	1	$48,108	95%	$865,944

Potential Gained Revenue through Excess LOS Days Avoided

Q2 2020 - Q1 2022				Q2 2022 – Q2 2024			
Type of Infection	Avg excess LOS per [1] infection	Pre-Implementation		Post-Implementation		% Reduction	Potential Gained Revenue through Excess LOS Days Avoided[3]
		No. of HAIs	Excess LOS	No. of HAIs	Excess LOS		
CLABSI	7.54[2]	19	143.26	1	7.54	95%	$852,153

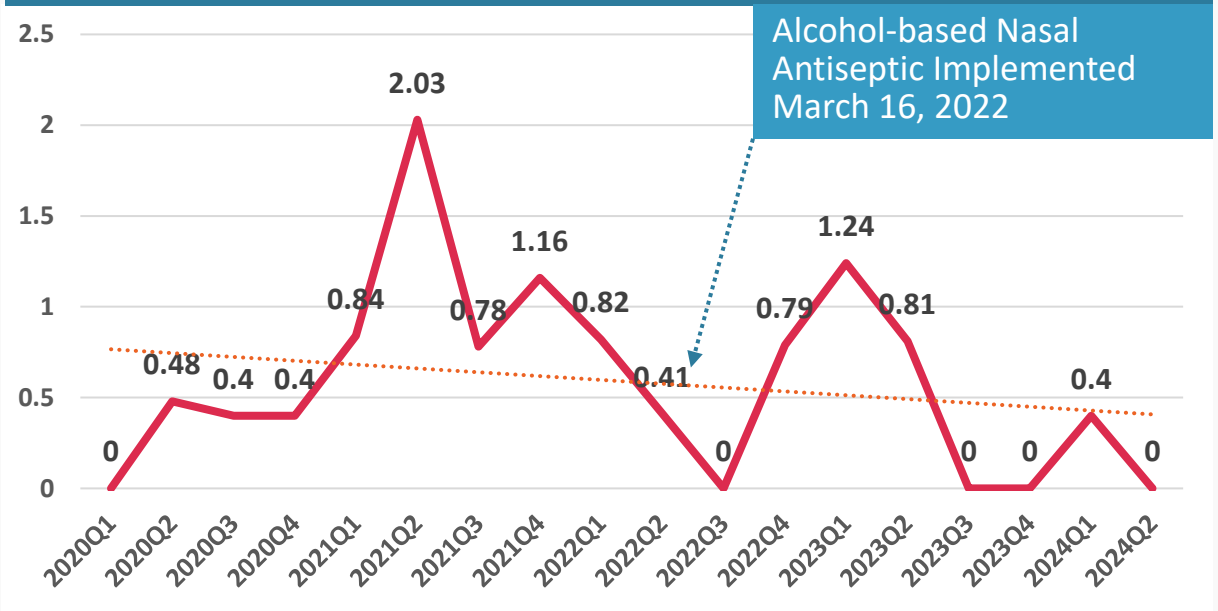
[1]AHRQ. Estimating the additional hospital inpatient cost and @https://www.ahrq.gov/hai/pfp/haccost2017-results.html. mortality associated with selected hospital-acquired conditions . 2017, Retrieved, 3/1/2023

[2] O'Grady NP. Prevention of Central Line-Associated Bloodstream Infections. N Engl J Med. 2023 Sep 21;389(12):1121-1131.

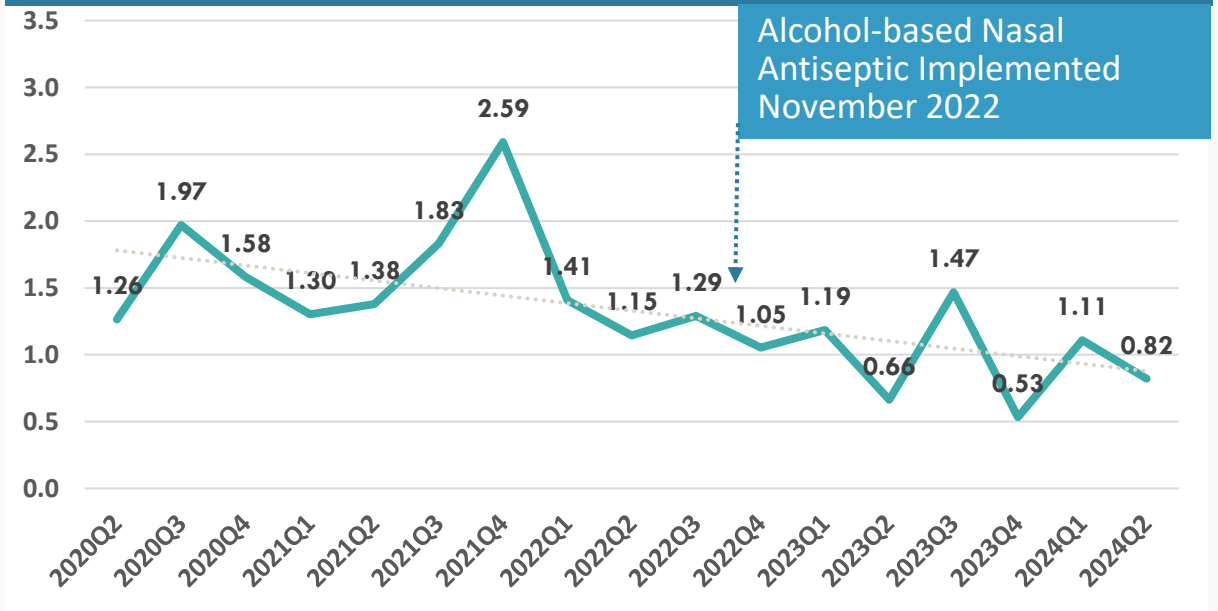
(Excess LOS avoided) x (census) x (est. daily net patient revenue) (136) x (96.3%) x ($6,520/day Monument Health) = $852,153

MH Rapid City Expansion of Nasal Decolonization Program

MRSA Bacteremia Lab ID per 10,000 pt Days 2020 Q1 – 2024 Q2



NHSN SSI All Procedures Adult Complex SIR by Quarter



49% decrease in

MRSA Bacteremia, p=0.82

38% decrease in SSI

All Adult NHSN Procedures, p=.003

Zalusky-Kamm, L, White,T. (2025).MH Rapid City NHSN MRSA Lab ID & SSI All procedures adult complex data retrieved March.

Estimated Avoidable HAIs & LOS

(Business Case Hospital Example continued)

Health Outcomes and Potential Fiscal Profitability

Outcome	HAIs Avoided	Avg Cost of Infection	Avoidable Treatment Cost	Avg Excess LOS	~Excess LOS Avoided	~Gained Revenue Through Excess LOS Avoided*
CLABSI	18	$48,108[1]	$865,944	7.54[3]	136 days	$852,153
SSI	37	$28,219[1]	$1,044,103	9.7[4]	359 days	$2,253,447
MRSA Lab ID	9	$23,579[2]	$212,211	10[2]	90 days	$565,088
TOTAL			$2,122,258	TOTAL	586 days	$3,670,688

[1]AHRQ. https://www.ahrq.gov/hai/pfp/haccost2017-results.html. mortality associated with selected hospital-acquired conditions. 2017, Retrieved, 3/1/2023

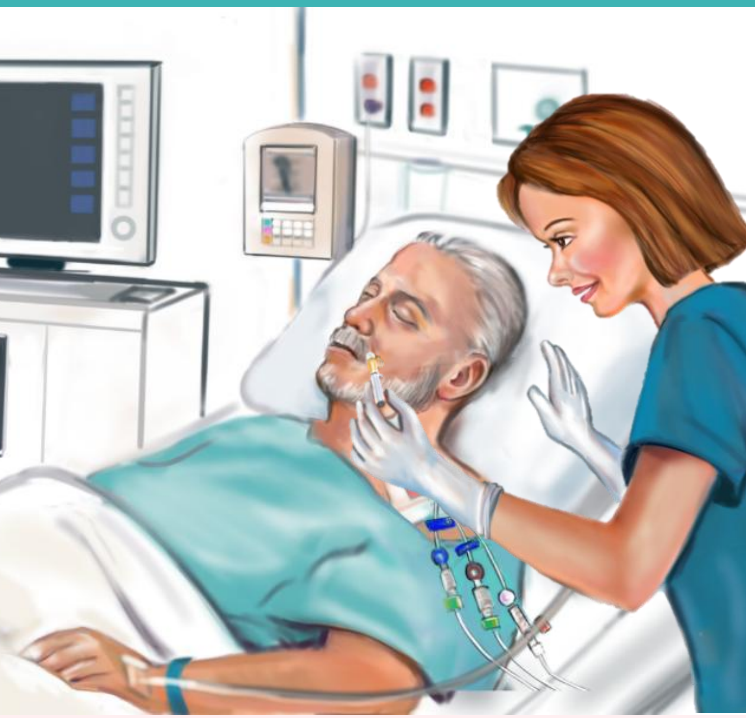
[2] Kengo et al , CID, 69:12, 15 Dec 2019, Pgs 2112–2118

[3] O'Grady NP.. N Engl J Med. 2023 Sep 21;389(12):1121-1131.

[4] Ban, et al. Journal of the American College of Surgeons 224(1):p 59-74, January 2017

*(Avg LOS * HAIs avoided) x (96.3%) x ($6,520/day Monument Health) = Potential Gained Revenue

Celebrate Success!



Improved Patient Safety & Quality

- Reduce HAIs
- Improved Patient and Staff Satisfaction
- >90% Compliance
- Product Acceptance

Cost Reduction

Discontinued Screen and Isolate

Hospital Health Success

Sustainable Change
Continual Monitoring of Nasal Decolonization Process

- Monitor the MAR/EMR documentation
- Communicate compliance findings to managers and frontline staff
- Address barriers
  - Product availability
  - Non-compliance
  - New staff education

Summary of Keys to Successful Change

WE MADE IT HAPPEN TOGETHER

- **A shared need of the people**
- **Time:** Go Slow to Go Fast
- **Planning/Structure:** clear definition of change/ project
- **Shaping a vision:** identify full value to patient & facility
- **People:** influencers, decision makers; champions; frontline
- **Monitoring:** data; observation & feedback
- **Systems and supplies:** to make it happen

QUESTIONS?

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Quality x People = Effectiveness

Thank you!

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