





Going "Behind The Door" to Increase Hand Hygiene Compliance

Introducing the HanGenix[™] compliance assurance system

Transformational Technology for Hand Hygiene Compliance

- Encourages behavioral adherence to protocols
- Supports increased hand hygiene compliance
- Lowers the risk of hospital acquired infections
- Provides operational insight to increase effectiveness
- Saves millions of dollars in unnecessary cost

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The Problem

2,000,000 Reasons for Clinicians to Wash Their Hands

- Failure to perform appropriate hand hygiene is considered the leading cause of Hospital Acquired Infections (HAIs).*
- Nearly 2 million patients suffer from HAIs in the U.S. annually*, of whom ~5% or 100,000 patients die each year as a result.*
- Despite these facts, clinicians within patient healthcare settings are less than 50% compliant with current hand hygiene guidelines.*
- Incremental treatment costs exceed **\$40 billion annually.**

*Data on file at HanGenix[™].



Risks to Hospitals are Far Beyond Higher Treatment Costs

- Losing millions of dollars in CMS reimbursements
- Building negative reputation due to published infection rates
- Losing Joint Commission accreditation
- Accelerating anti-microbial resistance
- Fighting expensive litigation

"Best Practice" for Monitoring Hand Hygiene is Hardly "Best"

The primary means of monitoring clinician compliance with hand hygiene guidelines is observation – an approach fraught with inaccuracies, unreliable data and high costs.

- Sampling of less than 1% of hand washing opportunities
- Rates skewed higher because individuals know they are being observed (Hawthorne effect)
- Data capture impacted by human bias and human error
- Lack of individual accountability
- Limited, actionable insights

Technologies Using RFID, Real-Time Location Systems (RTLS), and Soap Counters Fail to Deliver

- Lack accuracy and granularity
- Only measures room entry and exit versus W.H.O. guidelines
- Are very expensive, difficult and time consuming to install

These limitations have resulted in <1% adoption of the hand hygiene technology market in US hospitals.

"You can't manage what you can't measure."

Peter Drucker

The Solution

Introducing the HanGenix[™] Compliance Assurance System

Invented and developed by Massachusetts General Hospital in collaboration with an MIT/Harvard incubator, the HanGenix[™] Compliance Assurance System is an **ultrasound-based** hand hygiene detection technology that reduces the risk of infection through proactive notification.

The HanGenix[™] System creates **Patient Protection Zones[™]**, which dictate proper hand hygiene in accordance with industry guidelines, prior to patient contact. Clinicians are notified, in real-time, if they have broken hand-hygiene protocol.

Enabling a Facility to Implement and Execute Hand Hygiene Programs That Reduce the Risk of HAIs

Affordable Implementation – Simple, Easy, Flexible

- Does not require expensive hardware
- No need for rewiring or IT integration
- Integrates seamlessly into existing workflow

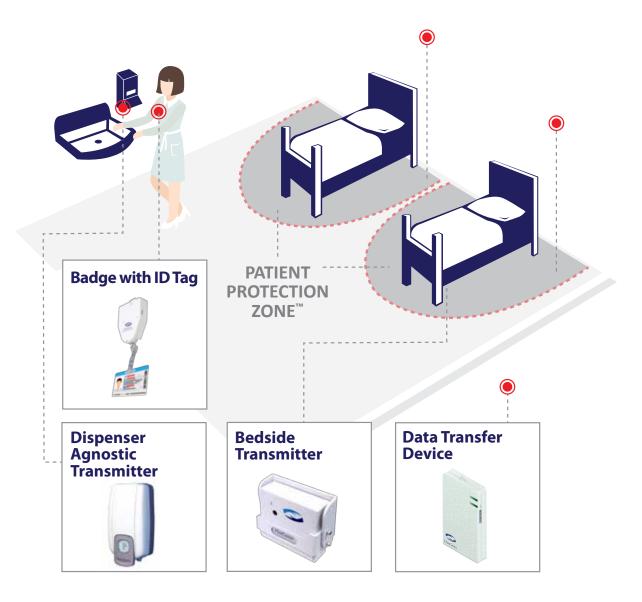
Actionable Execution – Collect, Verify, Improve

- Transports data to the cloud wirelessly, in real time
- Identifies who, when and where hands were sanitized
- System delivers critical, verifiable, actionable data analytics

"The HanGenix" Compliance Assurance System enables the effective facilitation of W.H.O. guidelines."

The Technology

The HanGenix[™] Compliance Assurance System Let's You See **"Behind The Door"**



HanGenix[™] Puts You "In The Zone" for Hand Hygiene Compliance

- The HanGenix[™] system works "**Behind the Door**" not just at point of entry or exit like other technologies
- Distinct **Patient Protection Zone**[™] is created around specific patient care areas (bed, exam table, stretcher, etc.)
- A **Patient Protection Zone**[™] can be customized to address various protocols and different zone sizes
- Audible reminder sounds if healthcare worker enters a Patient Protection Zone[™] without performing hand hygiene just prior to entering
- Encourages immediate hand washing to remain compliant

See How HanGenix[™] Technology Compares to RFID/RTLS

Customer Need	HanGenix [™] (Ultrasound)	RFID/RTLS
Provides reminder system	\checkmark	1
Collects data at individual user level	\checkmark	1
Works with any soap dispenser	\checkmark	1
Requires no IT integration	\checkmark	1
Monitors compliance "behind the door," not just at the door	\checkmark	
Creates distinct/accurate Patient Protection Zone™	\checkmark	
Designed to enforce W.H.O. guidelines	\checkmark	
System efficacy validated by randomized, controlled trial	\checkmark	
Real-time, granular, actionable analytics	\checkmark	
Able to perform outbreak forensics	\checkmark	
Easy to install (minutes per room)	\checkmark	
Requires no hard wired power source in patient room	\checkmark	

The Power

Compliance Assurance Data – Turning Insights Into Action

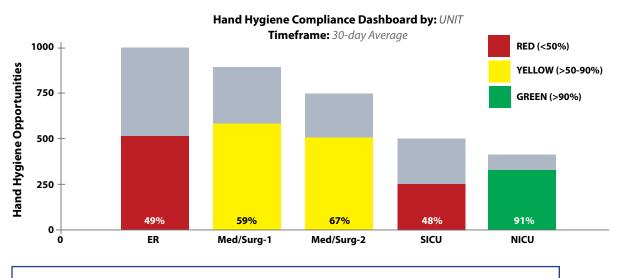
What sets the HanGenix[™] Technology apart from any other hand hygiene system is its ability to capture, 24/7, critical clinician-specific hand hygiene data within the **Patient Protection Zone**[™].

These insights provide the Infection Prevention team, as well as hospital administration, the information they need to accurately and precisely measure individual hand hygiene compliance in accordance with W.H.O. guidelines, in order to:

- Establish baselines and track continuous improvement
- Enable immediate feedback to correct non-compliance
- Recognize and reward hand hygiene compliance

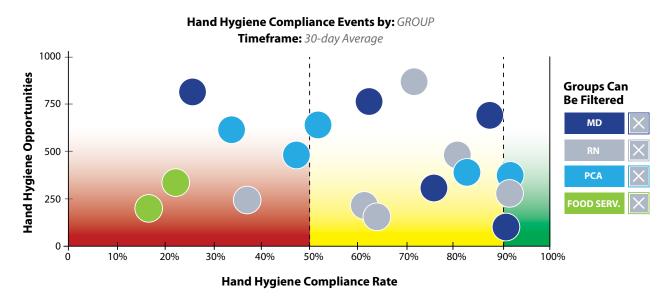






Identifies which of your hospital Units are achieving hand hygiene compliance requirements. Drilling down on any Unit will display individual hand hygiene compliance rates.

Group Level Hand Hygiene Compliance



Identify HCW groups that require additional hand hygiene compliance training. Scrolling over bubbles will identify individual performance regarding hand hygiene compliance.

Individual Level Hand Hygiene Compliance

Hand Hygiene Activity by: INDIVIDUAL Saint Lee Hospital: Dr. John Stevens Date: 9/1/2015

PPZ = Patient Protection Zone

Entry Into PPZ	Exit From PPZ	Room #	Bed #	PPZ Entry Compliance	PPZ Exit Compliance	Daily Compliance 27%
9:15	9:28	145	A	Y	Y	30-Day
9:33	9:44	145	В	Y	N	Average 63%
10:02	10:04	145	А	Y	N	03%
10:23	10:24	145	В	N	Y	
10:29	10:52	145	A	Y	Y	
10:55	10:58	123	А	Y	N	
11:08	11:08	431	А	Y	Y	
11:14	11:20	125	В	N	N	
11:30	11:43	146	В	N	Y	
11:43	11:44	123	А	Y	Y	
11:44	11:50	145	В	N	Y	
11:55	11:56	231	А	N	N	
11:58	12:03	253	А	Y	N	
12:05	12:22	145	А	N	N	
12:29	12:53	152	А	Y	Y	

Provides individual details regarding hand hygiene compliance performance.

"Just imagine what HanGenix[™] Compliance Assurance Data can do to improve hand hygiene compliance in your facility."

Room Level Hand Hygiene Compliance

Hand Hygiene Activity by: ROOM

Saint Lee Hospital: Room 123 / Beds A & B Date: 9/1/2015

PPZ = Patient Protection Zone

Staff Names	Group	Entry From PPZ	Exit From PPZ	Room – Bed #	PPZ Entry Compliance	PPZ Exit Compliance
Wright, Mike	MD	0:12	0:15	123 - A	Y	Y
Wright, Mike	MD	0:22	0:27	123 - B	N	Y
Wright, Mike	MD	0:56	1:07	123 - A	Y	Y
Hammer, Tim	RN	1:48	1:53	123 - A	N	Ν
Jenkins, Sally	RN	2:38	2:41	123 - A	N	Ν
Goldberg, Sally	RN	3:11	3:15	123 - A	N	Ν
Wright, Mike	MD	3:31	3:34	123 - A	N	Y
Manley, Mike	FOOD SERV	3:44	3:49	123 - A	Y	Ν
Martin, Mike	PCA	4:22	4:27	123 - A	Ν	Y
Goldberg, Sally	RN	4:44	4:48	123 - A	Ν	Ν
Martin, Mike	PCA	4:54	4:59	123 - A	Y	Y
Hamer, Tim	RN	5:30	5:45	123 - A	N	Y
Goldberg, Sally	RN	6:25	6:32	123 - A	Y	Ν
Goldberg, Sally	RN	6:56	6:57	123 - B	N	N
Martin, Mike	PCA	7:04	7:12	123 - B	Y	Y
Wright, Mike	MD	7:52	8:01	123 - B	Y	Y

Displays hand hygiene compliance "**Behind the Door**" for a given room. Provides detailed forensics in the case of an outbreak.

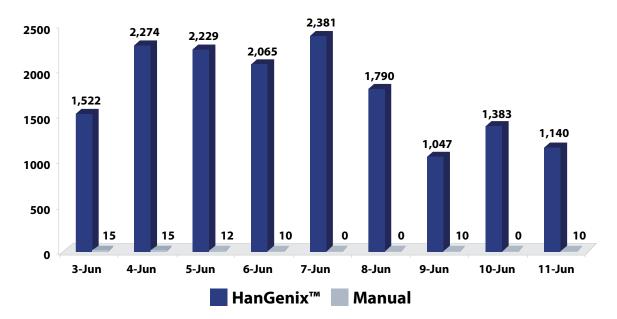
Data. Insights. Action.

The Evidence

The HanGenix[™] Compliance Assurance System has been evaluated and validated by some of the most prominent acute care facilities around the world. Results consistently demonstrate a marked improvement in hand hygiene compliance rates following implementation.



HanGenix[™] vs. Manual Data Capture - Typical Trial Results*



*Average of .4% of possible opportunities captured by manual audit in a U.S. hospital trial.

The **National University Hospital**, **Singapore** published a clinical study in the September 2013 issue of *Journal of Infection Control and Hospital Epidemiology* validating the accuracy of the HanGenix[™] Compliance Assurance System.

"The HanGenix" Compliance Assurance System has been validated by a peer reviewed published clinical study."

920 INFECTION CONTROL AND ROSPITAL EPID Pro Wa-INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY SEPTEMPER 2013, VOL. 34: NO. 9 Automated Measures of Hand Hygiene Compliance an Healthcare Workers Using Ultrasound: Validation at Dale A. Fisher, FRACP;^{1,2} Theresa Seetoh, MSci^{1,5} Helen Oh May-Lin, FRCP;⁴ Sivakumar Vis Yanling Toh, BEng⁴ Wong Chiang Yin, MMed(PH);⁴ Loh Siw Enge⁴ Tan Shine Yangi Suere Dale A. Fisher, FRACP;¹² Theresa Seetoh, MSc¹³ Helen Oh May-Lin, FRCP;⁴ Sivakumar Vis Yanling Toh, BEngs' Wong Chiang Yin, MMed(PH)⁵ Loh Siw Engs⁴ Tan Shire Yangi Steve Yanling Minkyu Je, PhD;⁴ Ruey Feng Peh, BEngs⁴ Fiona Wei Ling Loke, MS;⁴ Michael Dent oalECTIVE. The primary objective of this study was to validate a novel method of assessing hand hygier transmitters in patient zones and staff tagged with receivers. The secondary objective was to assess the objective. The primary objective of this study was to validate a novel method of assessing hand hygier transmitters in patient zones and staff tagged with receivers. The secondary objective was to assess the quantified individual feedback. quantined individual regenack. DESIGN: An observational comparison against manual assessment followed by assessment using an open estors: An observational comparison against manual association contract of association manual association for the second se a hours of manual observation using trained band bygiene quantified individual feedback.

The Opportunity

Something Has To Change

Same problem. Different day. Published studies by the Center for Disease Control continue to document hand hygiene compliance rates at less than 50%.

Healthcare institutions need to take a courageous step forward ... to demonstrate leadership ... to commit to operating at the highest level of patient safety ... by enforcing W.H.O. guidelines through the implementation and utilization of the HanGenix[™] Compliance Assurance System.

A Real Opportunity To Save Money

A Duke University Medical Center study by Keith Cummings, MD, et.al., published in the April 2010 issue of <u>Infection Control and Hospital</u> <u>Epidemiology</u>, entitled Hand Hygiene Noncompliance and the Cost of Hospital-Acquired Methicillin-Resistant Staphylococcus aureus Infection, estimated that for every 1% increase in hand hygiene compliance, a typical 200-bed hospital would achieve annual savings of \$39,650.

Change Starts Today!

We invite you to be among the first to get a peak "**behind the door**" and experience for yourself this transformational technology for hand hygiene compliance.



If you or a colleague would like to schedule an in-person demonstration of the HanGenix[™] Compliance Assurance System, please call **561-542-5689**.

The Leadership

Backed By a Team of Healthcare Industry Experts



Jeff Kline, MBA Chief Executive Officer

Experience with Baxter, CR Bard, Xerox, and Deloitte

www.linkedin.com/in/ jfkline69



Bob Lee Vice President, Business Development

Experience with Baxter, Cardinal, GE, and Johnson & Johnson

www.linkedin.com/pub/ robert-p-lee/3/788/913



Francis Blais, DO, FACOI Chief Medical Advisor

Board certified healthcare professional in infectious diseases and internal medicine, and Clinical Professor of Medicine at Ohio University

www.linkedin.com/pub/ francis-blais/11/849/ab7



Eleanor Savariau, MBA, BHSA, RN Clinical Advisor

Siinical Advisor

International healthcare executive. Provider experience in IDNs and AMCs. Industry experience with Baxter, Cardinal, Cap Gemini, Interim Healthcare and Medline Industries.

www.linkedin.com/in/ eleanorsavariau

Co-Inventors/Technical Advisors

Ron Newbower, PhD

Strategic advisor at Massachusetts General, Harvard faculty

Mike Dempsey

Entrepreneur in residence at CIMIT, MIT faculty

