



Evolution of Healthcare Accelerating Innovation

With the support of Medline Industries



Together for a healthier world

Introduction

Florida International Medical Expo (FIME), the largest medical trade show for the Americas, returned to its traditional physical format in Miami Beach in July 2022.

The event highlighted the latest technology and medical innovations in the healthcare sector, and brought together thought leaders, technologies and industry experts from the U.S. and Latin America to South Florida.

At this year's show, the Transformation Zone pavilion for the first time played host to the launch of FIME's Healthcare Transformation Talks.

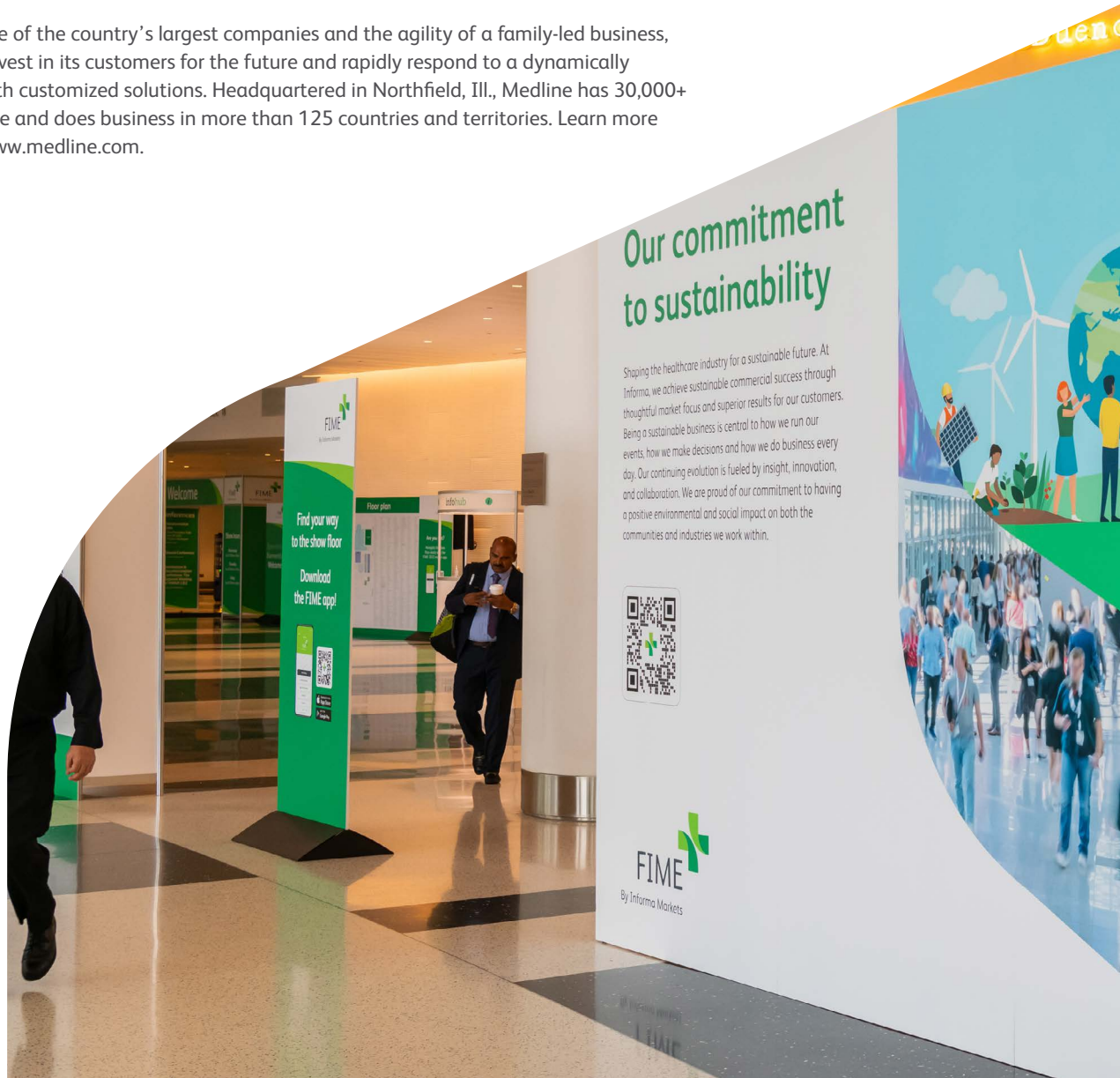
In this report we shine a spotlight on innovation in healthcare, with a focus on AI, and how to make it happen through insights shared at the talks by today's healthcare leaders spearheading transformation in the U.S. and Latin America.

The report was produced in association with Medline — a leading manufacturer, distributor and solutions provider helping healthcare systems and facilities across the continuum activate the clinical and supply chain resources needed to deliver the best care.

About Medline

Medline is a healthcare company; a manufacturer, distributor, and solutions provider focused on improving the overall operating performance of healthcare. Partnering with healthcare systems and facilities across the continuum of care, Medline provides the clinical and supply chain resources required for long-term financial viability in delivering high-quality care.

With the scale of one of the country's largest companies and the agility of a family-led business, Medline is able to invest in its customers for the future and rapidly respond to a dynamically changing market with customized solutions. Headquartered in Northfield, Ill., Medline has 30,000+ employees worldwide and does business in more than 125 countries and territories. Learn more about Medline at www.medline.com.



Contents

AI opportunities in healthcare

Dr. Jhonatan Bringas Dimitriadis, Wearables and Digital Health Expert, CEO and Co-Founder, Lapsi Health, Partner and Managing Director, JBD Healthcare, Ambassador for Medical Education, Medscape, Amsterdam, The Netherlands, explained that it is important to realise that technology is not replacing doctors.

“It is there to make their lives more efficient, to help them reach diagnostics in their own terms, faster and in a better way to decrease the amount of administration time that they must go through actually to get them together with their patients.

The number one role of a doctor at the end of the day is talking to your patient and creating that symbiosis and doctor-patient relationship, which is so important. So yes, adoption is going to be a big limitation.”

His views were echoed by **Dr. Eric Eskioglu**, Executive Vice President, Chief Medical and Scientific Officer of Novant Health, Charlotte, North Carolina.

“AI is not going to replace you. But the physicians and nurses who use AI are going to be superior to the physicians and nurses who reject it. You have all seen the Top Gun movie. Fighter pilots in the cockpit have data on the left-hand side but at the end of the day they make the decision.”

He described AI and data analytics as a “growth area” for the healthcare industry, and genetics as a field that needs to incorporate AI.

“I suspect with primary care in the next couple of years the physician is going to see three or four diagnoses that they must pay attention to. For example, the physician might be told that a patient’s blood value has been trending downwards and that maybe they should be checked for colon cancer. Or maybe the patient’s genetics suggest that a different drug should be prescribed.”

Jon Stine, Executive Director, The Open Voice Network, Portland, Oregon, highlighted the power of voice technology. “Voice is not a ‘thing’ or an object. It is the ability of a computer to listen and respond. This is artificial intelligence, natural language processing, and I can place this on any device.” More than 30 per cent of adults in the UK, US and Germany presently use voice assistants daily, he added.

He invited the audience to consider the adoption of voice in a clinical or hospital setting, in Remote Patient Management, that would allow “a human to speak to the digital world and the digital world to speak back.”

Stine revealed the findings of a survey that showed that patients would like to use voice technology to find a physician, learn more about a disease and search for information on symptoms. Voice is the most convenient and comfortable solution for finding information.

Voice is also a major business opportunity, he said: there is 22 to 25 per cent compound annual growth forecast over the next five years by multiple firms in what is termed “conversational AI”, of which voice is a part.





The effects of colloidal oatmeal-coated gloves on nurses' hands, morale and hand hygiene.

A case study from Medline

Background

The necessity to follow hand hygiene practices, including frequent washing and gelling, creates an endless wet-dry cycle that may lead to dry, irritated skin. In a recent study, 55 per cent of nurses observed were diagnosed with irritant contact dermatitis. Dry, cracked and irritated skin is not simply a vanity issue; it may impact morale and even job satisfaction.

According to one of the study's authors, Dr. Matthew Zirwas, Ohio Contact Dermatitis Center: "Hand eczema in healthcare workers is much more common than most physicians and hospital executives realize because it is rarely reported by hospital staff unless it reaches an extraordinarily severe level." He added: "Hand eczema has a major adverse impact on the quality of life of nurses who get it."

Restore® Nitrile Exam Gloves

Restore is a nitrile exam glove coated on the inside with maxOat+™, a proprietary blend of colloidal oatmeal that helps relieve conditions associated with dry, itchy skin.

Study Design

To assess the impact of Restore exam gloves on nurses' hands, their morale and hand hygiene compliance, Medline partnered with Scrubs Magazine to recruit registered nurses to participate in a 10-day product trial. Participants were given a supply of Restore gloves and instructed to use them in place of their respective facilities' gloves. Nurses were asked to fill out pre- and post-trial surveys covering general skin conditions, morale, and hand hygiene.

Participants included:

- 240 nurses (84 per cent were RN's) participated in the pre- and post-trial survey: 93 per cent female and 7 per cent male.
- 88 per cent were full-time workers and 12 per cent were part-time, while 43 per cent worked in hospitals with 200-500 beds;
- 21 per cent 500+ bed facilities; 19 % 100-199 bed facilities and 17 % with less than 100 beds.

Results

Participants overwhelmingly expressed the positive impact Restore had on skin hydration (96 % were content with the condition of their hands at work after wearing Restore versus 11 % before). A similar positive reaction was seen on the impact of their job satisfaction (84 % said Restore had a positive impact on job satisfaction).

“Nearly half (48%) of nurses agreed that they washed or used hand sanitizer more often when wearing Restore because their hands felt less irritated.”



Study Objectives

Assess the impact of exam gloves with colloidal oatmeal on nurses' hands, their morale and hand hygiene compliance.

Methodology

230 volunteers (registered nurses) trialed the glove for 10 days at their place of work. They were given a pre-trial survey and a post-trial survey covering general skin conditions, morale and hand hygiene practices.

Results

Before using the glove with colloidal oatmeal, only 11 % of participants were content with the condition of their hands at work. After the trial, 96 % said they were satisfied with their hands at work.

Conclusions

Nurses (94 % of respondents) overwhelming experience skin irritation on their hands with 79 % saying the condition of their hands impacts their quality of life. By using gloves made with colloidal oatmeal, 96 % of participants were content with the condition of their hands and 84 % said it had a positive impact on their job satisfaction.



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per second**

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84%

“Restore improved my job satisfaction.”

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“I recommend Restore to my colleagues.”



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1. Lampel HP, Patel N, Boyse K, O'Brien SH, Zirwas MJ. Prevalence of hand dermatitis in inpatient nurses at a United States hospital. *Dermatitis*. 2007 Sep; 18(3):140-2. doi: 10.2310/6620.2007.06024. PMID: 17725920. <https://pubmed.ncbi.nlm.nih.gov/17725920/> Accessed February 14, 2022. 2,3,4,5. References a Medline-conducted nationwide 10-day product trial and survey. Data available upon request.

Investing in healthcare innovation

The Private Sector

As a healthcare organisation employing approximately 80,000 people, Mass General Brigham brings in a very large research footprint, according to **Dr. Adam Landman**, Vice President, Chief Innovation Officer, Digital Innovation Officer, Brigham and Women's Hospital, Boston, Massachusetts.

"We bring in about US\$2 billion in research, contracts and grants every year, spending on over 1,600 clinical trials," he said, allowing innovators to partner on robust and reliable studies to evaluate the impact of new devices or apps that they are building.

"Mass General Brigham is an opportunity to partner with early-stage companies and help advance at all stages."

This spans across R&D and product conceptualization where focus groups and strategy sessions with our subject matter experts, clinicians and administrators are enabled.

"We have sandbox environments for you to test your products," he added.

An investment fund was also launched recently by Mass General Brigham, specifically for AI and digital innovation in healthcare.

Dr. Landman described how the organization increasingly looks at the financial value and clinical value in a product, in addition to its ability to solve problems for health systems.

"The easiest way to summarise is: how does your innovation address the 'Quadruple Aim'?" he asked, adding that they also aim to understand the primary and secondary use of data.

A product or innovation also needs to fit within institutional priorities. Mass General Brigham seeks to identify internal champions or leaders who are supportive and wish to advance the innovation, as well as executive sponsors. Additional considerations include how the product is to be implemented, and how long it will be supported in the long term.





Public-Private Partnerships

On a more local level, there are more than 8,000 registered businesses in the city of Miami Beach. Many of these are in the health and wellness sector.

James Kohnstamm, Executive Vice President, Miami Dade Beacon Council, Miami, Florida, said of the county's economic development agency: "We do a lot of work to help local health and life sciences companies grow and create jobs for local citizens."

Indeed, any life sciences and healthcare business committed to job creation are eligible to receive a tax rebate over a 10-year period through a Miami Dade County incentive program.

Other benefits available through Miami Dade County include opening doors and promoting businesses.

"We help make connections at the municipal, county or industry levels of public and private connections to help companies grow and retain," Kohnstamm said. "We also help in the marketing and promotion of companies that are in the community."

Information on all incentives at state, county and city level, Kohnstamm continued, is available on the Miami Dade Beacon Council website (www.beaconcouncil.com).

"Applications are public," he added. "They are available through Miami Dade County's government website, if you just look at a program called the Target Jobs Incentive Fund."

Public Sector

Gustavo A. Vergara, Business Opportunity Specialist, U.S. Small Business Administration (SBA), Miami, Florida, revealed that the SBA advises healthcare startups on how to research the market they wish to do business in. "Know your agency, know your product. We are talking NIH (National Institute of Health), HHS (Health and Human Services), and the VA (Veterans Affairs) – one of the largest suppliers of all medical supplies."

Understanding areas of government spending is also key, Vergara said, as is knowing the competition. “One of the tools used by federal government is the dynamic small business search (DSBS). It tells you everything you need to know about either your business or a competitor’s business.”

Among the 6,000 startups supported in Europe by the European Innovation Council (EIC) with grants and equity, only three in healthcare have reached “unicorn” status of one billion Euros, according to **Grzegorz Ambroziewicz**, Deputy Head of Unit, European Innovation Council – Accelerator, EIC and SMEs Executive Agency (EISMEA), Brussels.

The EIC steps in where the private sector is not ready to invest, said Ambroziewicz, seeking small startups with innovative deep-tech solutions.

Available funding includes “blended finance,” a combination of non-reimbursable grants and investment – that is, equity anywhere from half a million to 15 million euros.

The EIC is much more prudent in Europe, compared to the U.S. where investors are happier to fund companies “even if not fully supported by the nitty gritty and not generating revenue.”

“We invest in companies with an impeccable reputation that follows all the ethical rules and financials that we have set up. We make sure that we spend taxpayer money in a responsible way.”

Once a deal is agreed, business acceleration services are on offer that include access to knowledge and coaching, and to large corporates such as P&G.

Conclusion

To conclude, the following were highlighted as key points by the contributors in this report:

- AI will not be replacing doctors. Instead, it will make augment the work of physicians and nurses by reducing the administrative burden that they face. AI instead is an opportunity: healthcare professionals who adopt AI will be in a stronger position than those who not.
- One AI growth area is voice, in the form of “conversational AI”.
- Assistance is available to product innovators in the healthcare space in areas that include investment funding and research, from strategy sessions to sandboxing.



About the report

The **Evolution of Healthcare – Accelerating Innovation** is the latest report in a series looking at the latest trends shaping healthcare, based on opinions voiced by healthcare leaders at Informa Markets' Healthcare events.

Prevalent insights were drawn by an expert Informa Markets team from commentary during FIME 2022 an event brought by the organisers of Arab Health, Africa Health and Medlab Middle East.

From July 27 to 29, 2022, the latest healthcare and health tech products, speakers, and innovators gathered at the event's Transformation Zone, a new addition to the show.

With a focus on healthcare innovation, the Transformation Zone hosted an array of conversations and sessions that provide leading experts in the sector with a one-of-a-kind platform to showcase their groundbreaking ideas, techniques, and industry insights.

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