PA Hospitals Embrace Remote Patient Monitoring

In this era of Big Data, it seems like everything about us is being tracked in order to sell things to us; however, all the data that’s being collected can say a lot about us not only as customers, but also as patients. That’s the idea behind the Masimo Patient SafetyNet system, which St. Luke’s University Health Network is rolling out to more of its facilities after a successful test run at its Bethlehem campus.

If you’re familiar with Fitbit and other wearable fitness trackers and apps—which record metrics such as the number of steps you take, your heart rate, and how long you sleep—then you understand how knowing more about your ongoing health can affect your behavior and improve your health. This technology takes it a step further: Through noninvasive, wearable devices right at the bedside, it allows healthcare providers to remotely monitor a patient’s oxygen saturation and pulse rate via central view stations, smartphones, and tablets, and it also can notify clinicians of a potential decline in a patient’s condition. This remote patient monitoring data is automatically incorporated with their electronic medical record (EMR) as well, which saves time in entering the information and improves its accuracy.

Following the success of a pilot program in a 34-bed orthopedic trauma ward from 2015...
Scientists have long believed that in some cases, mental health issues may manifest physical symptoms, such as gastrointestinal (GI) problems. And a Columbia University–led study, published in March in Development and Psychotherapy, suggests not only that those gut instincts may be right, but also gut health in children may influence their neurological development as they get older.

It has already been established that a history of trauma or abuse can make adults more vulnerable to GI issues like irritable bowel syndrome (IBS), as well as mental health symptoms; however, this is the first research into the impact of early-life adversity on a child’s GI microbiome—i.e., the bacteria that live in their gut and play a regulatory role in bodily functions, including digestion and the immune response—and how it may be connected to their brain and behavior.

The Columbia study, “Mind and Gut: Associations Between Mood and Gastrointestinal Distress in Children Exposed to Diversity,” suggests that GI symptoms in kids could be a “red flag” for future emotional health problems. As childhood separation from parents is known to predict mental health issues, the researchers studied data from 115 children who were adopted from orphanages or foster care before the age of 2, and from 229 children raised by a biological relative. Those who experienced a disruption in caregiving showed more GI-related symptoms, such as stomachaches, vomiting, and nausea. Comparisons of behavioral histories, brain scans, and stool samples between members of each group showed that adoptees had less diverse gut microbiomes from those raised by family. Since gut microbiome diversity is linked to the area of the brain that helps handle emotions, this suggests that changes in the number and type of organisms in the gut due to adverse childhood experiences (ACEs) have an impact on brain function, especially at a young age—which could provide parents with another potential warning signal for mental health issues. Researchers have expanded the study to a larger group of children to try to replicate their findings.
Long-Term Care — Swapping Drugs for Suds to Beat Superbugs

Hospitals and nursing homes in Illinois and California are trying out a powerful new tool to fight bacteria: soap. But this is no mere mild-mannered bacteria, it’s antibiotic-resistant “superbugs” like *Staphylococcus aureus*, commonly known as MRSA, and the especially dangerous carbapenem-resistant *Enterobacteriaceae* (CRE), which spread quickly and widely, causing thousands of deaths a year—600 deaths annually by CRE alone. And this is no ordinary soap either. It’s a special antimicrobial cleanser called chlorhexidine, often used in hospital ICUs to prevent infections, which is basically kryptonite to these superbugs.

A project in Chicago, begun in 2017 and funded by the Centers for Disease Control (CDC), has implemented CRE-screening and daily chlorhexidine baths, along with a hand-washing campaign and education, to control the deadly infection. Preliminary results show a 25% drop in drug-resistant bacteria in nursing home residents, 34% in long-term care acute care hospital patients, and 9% in traditional hospital patients. Another CDC-funded project in Orange County, California, is using chlorhexidine as a cleanser and a mouthwash in combination with iodine-based nose swabs, and consequently reduced infection in MRSA carriers by 30%. Researchers have also been studying patient movement among hospitals and nursing homes, which happens more often than was assumed.

Chlorhexidine is sold over the counter, but in rare cases it may cause severe allergic reactions.

Infection Prevention — Superbug Fungus Among Us

It’s like something out of *The X-Files*: Since it was first discovered in Tokyo in 2009, a brand new fungus called *Candida auris*, which can cause blood infection in high-risk patients, has cropped up in 30 countries around the world. It seems to have sprung up out of nowhere, with origins on multiple continents, and it acts more like a bacterium than a yeast—one of the few hundred fungi that causes disease in humans out of five to six million species that are mostly harmless, including other *Candida* species.

Until recently, *C. auris* went largely undetected in healthcare facilities, and once discovered it has proven difficult to get rid of. Moreover, some types have developed permanent resistance to antifungals, giving it potential “superbug” status. As of February 28, 587 cases have been confirmed in 12 states—primarily New York (309 cases), Illinois (144), and New Jersey (104)—with more than 1,000 additional patients colonized with the fungus in seven of those states. In Illinois, many of those patients acquired the fungus in long-term care facilities; however, it is imperative that all facilities take measures to screen for *C. auris*, halt its spread, and use antibiotics responsibly.
Surgery — A New Mission for Traveling Surgeons

“Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime.” But fishing is one thing, and performing complicated reconstructive surgery in, say a rural village in Nepal, is quite another; nonetheless, the proverb may still be as true as ever when it comes to the controversial practice of medical missions.

Medical missions—trips where a surgeon from a first-world country travels to a developing nation and performs surgeries—have been a staple for decades. They were hailed as a way to bring much-needed care to areas that lacked clinical expertise. However, the traveling surgeons very rarely taught the local teams how to perform the procedures themselves, leaving a large gap after the mission ends. Now, the mindset is shifting, and traveling physicians spend most of their time training local clinicians.

Aside from concerns about the cost-effectiveness of surgery fly-ins, this reimagining of the medical mission comes about partially from criticism that the care provided isn’t culturally appropriate, and partially from the gradual realization that it may be safer for patients if they are treated by a local surgeon with adequate resources—training, equipment, and funding—who is also available to deliver follow-up care.

One nonprofit group that sponsors such missions, ReSurge, which in fact pioneered the practice of reconstructive surgery fly-ins in 1969 (then known as Interplast), has been running educator trips around the world since 2017. Their reasoning is that training local healthcare providers allows more patients to get the surgeries they need than traditional short-term clinics can, and patients trust caregivers who speak their language and share their values. Sociologist and author Judith Lasker sums it up: “One-off trips may help a few people for a lot of money but don’t really have any long-term impact and may be harmful.”

Child Patients Enjoy a Little Operating Vroom!

Surgery can be scary for anyone, especially for little kids, but Doctors Medical Center in Modesto, California, is helping drive those fears away—by allowing their children patients to drive themselves to the operating room in toy cars. Kids love the experience of navigating the halls of the hospital in a miniature vehicle, and it helps reduce anxiety and stress not only for them, but also for their parents. Adults also may envy their cool rides, a sleek, black Mercedes and a cheerful, pink Volkswagen Beetle, which even are equipped with stereos loaded with bubbly road trip songs. And, of course, seat belts—patient safety first!
Diagnostic Excellence — FDA Proposes New Mammogram Guidelines

For the first time in 20 years, the U.S. Food and Drug Administration (FDA) is proposing new mammogram guidelines that reflect current knowledge of breast cancer and modern methods of detection. Such a rule would require clinics nationwide to update their educational materials regarding mammogram services, including technological advances like 3-D digital screening tools and the challenge of detecting cancer in dense breasts. The FDA also recommends that women discuss their screening results and breast cancer risk with their doctors.

Medication Safety — Direct-to-Consumer Medication Poses Potential Health Risks

Today we can order pretty much anything online, so why not prescription medicine? Third-year medical student Vishal Khetpal explores why this might not be a great idea. While it’s incredibly convenient to have Amazon deliver a Times bestseller directly to your doorstep, reading the latest Robin Cook medical thriller is only going to raise your heart rate temporarily. On the other hand, if you order medication from a health and wellness company to treat self-diagnosed erectile dysfunction—without a comprehensive evaluation from a qualified physician—you might delay or forego a diagnosis of an underlying condition, such as depression, high blood pressure, diabetes, or clogged blood vessels. As the Greco-Roman god of medicine, Aesculapius, might have said to that, “Caveat emptor!”: “Let the buyer beware!”

General Interest — Putting a Lid on Fluid-Related Risk

With all the many things nurses must keep track of in caring for their patients, it can be a challenge to know which patients are at risk for dehydration and/or need fluids restricted. But not anymore. After six nurses shared a simple, adoptable solution on social media last year—using water pitchers with yellow lids instead of the usual blue ones—two UK hospitals have put the idea into practice. One ward in Sheffield University Hospital saw a threefold reduction in vulnerable patients at risk of dehydration and infection over a six-month trial period with the yellow pitchers. The clear visual cue is now being introduced across the Cwm Taf University Health Board.

Exploding E-Cigarettes Are No Joke

Smoking is bad for your health, especially in an oxygen-rich environment, which is one of the many reasons why cigarettes are not allowed in hospital rooms. E-cigarettes, and the rise of vaping, have been touted as safer, healthier alternatives to traditional cigarettes. However, one patient recently learned they are just as dangerous—at least while on oxygen—when she vaped while hospitalized for chronic obstructive pulmonary disease (COPD). She was receiving oxygen through a nasal cannula when she puffed on an e-cig and sparked an explosion that melted the cannula and resulted in first- and second-degree burns on her face and hands. Especially troubling was that the vendor who
sold her the e-cigarette told her it was safe to use while on oxygen.

Another complexity is that the safety of vaping is disputed between countries—in the United States, the use of e-cigarettes is often prohibited wherever tobacco products are banned. However, the National Health Service in the U.K. considers vaping part of a tobacco cessation program, and smoking e-cigarettes is allowed in some respect across several hospitals—meaning, in American hospitals with large international censuses, patients could be vaping in their rooms not realizing they’re breaking health system policies and potentially putting themselves at risk.

Because of such discrepancies, it may be beneficial for organizations to expand their admission screening from questions about general “tobacco use” to more specific questions around e-cigarettes.

May 5 is World Hand Hygiene Day

The importance of hand hygiene has been known for decades. Yet, the typical healthcare worker will clean their hands less than half of the times they should. Hand hygiene means cleaning hands by using the manual hand washing method with soap/antiseptic and water or cleaning hands with an alcohol-based hand sanitizer.

The main medical purpose of hand hygiene is to cleanse the hands of potential healthcare associated pathogens fostering sepsis. You can prevent the spread of infection through proper hand hygiene. Know what it takes to keep your patients safe. The spread of potentially deadly bacteria may be on your hands. Practice good hand hygiene at each moment identified by the World Health Organization every time.