The Benefits of Cloud Continue

It's August, which means MESC time! For you all not in the know, MESC stands for the [Medicaid Enterprise Systems Conference,](#) the largest meeting for Medicaid health IT state providers and contractors. As we gear up to host in [our own backyard](#), we are reminded of a [post we published](#) last year on cloud-based, multi-state MMIS partnerships. Another acronym you may not know. MMIS stands for Medicaid Management Information Systems. These systems are responsible for processing claims for over 70 million Medicaid beneficiaries across the U.S. They are complex, costly, and historically siloed.

That's where Health IT comes in, specifically in the form of cloud-based solutions. In fact, *Healthcare IT News* [identifies 17 unique ways the cloud](#) is changing the face of health IT, from [cybersecurity](#) to [collaboration](#). Each of the articles offer a fascinating look at the changes that are taking place across health IT landscape as it relates to cloud technology.

But although much has been written about the [advantages for cloud-based solutions](#), CNSI is the only company to apply the Cloud to state Medicaid. The [award-winning Michigan solution](#) uses cloud technology to share its infrastructure with other states, like Illinois, saving both an enormous amount of time, energy and money. For example, the partnership between the two states saved Illinois a whopping 67 percent on implementation costs and a projected 40 percent on long-term operational costs. As the host state, Michigan has already reduced its operational costs by 20 percent.

So regardless of whether we are talking streamlining patient records, developing new payment models, or processing claims for Medicaid, the cloud solution is bringing forth better

patient services at a lower cost to tax payers.

Want to chat more about our cloud-based solution? Come visit us at booth 27/28 at MESC!

Another State Leveraging Big Data for Big Opioid Problem

A week ago, Missouri Governor Eric Greitens signed an [executive order](#) for the state to create a [prescription drug monitoring database](#). This measure comes after the state legislature failed to pass its own program back in May. Missouri comes in as the last state to implement such a program with the idea gaining popularity in the last year as both [law enforcement](#) and health care providers struggled to address the intensifying opioid epidemic.

Since the distribution of opioids in prescription form is restricted, states are turning to databases to monitor signs of overprescribing, which may indicate illicit distribution to addicts. At least, that's the basic idea, which CNSI's Chief Strategy Officer, Sharif Hussein, explains in this [MedCity article](#).

It seems like a slam dunk public health policy, right? Well, not exactly. Even an initiative that is undoubtedly good for public health is not without its challenges. The questions around what source(s) should supply the data, who has access to the data, and how systems will achieve interoperability have no easy answers.

For example, while the majority of state monitoring programs allow both physicians and pharmacists to access the data, the

proposed Missouri system specifies that prescription and dispensation information received by the Missouri Department of Health and Senior Services will be confidential. However, doctors with access to such data have reduced the number of painkiller prescriptions from 81 to 71 per 100 people between 2012 and 2015, indicating the clear benefits of granting access to such information. As [Amy Tiemeir](#), St. Louis College of Pharmacy Director of Community Partnerships, points out:

"When medications are being used and there are negative consequences, there is a clear role for pharmacists to be involved based on their knowledge of the drugs, how they work and being able to provide insight into the appropriateness of therapy and potential therapies that might be less harmful."

Regardless of who ends up seeing the data in Missouri, programs that leverage big data—if executed properly—have the potential to make a real impact and save lives. What else do you think we in the health IT space can do to facilitate such important progress?

Determining the Longitude of Data

What do you think of when you hear the word longitude? Your 4th grade history class? The term opposite of latitude? We can't blame you. It's important geography vocabulary, after all. But, we'd be remiss if we didn't introduce you to its health IT-related cousin: longitudinal data.

Last week, we [tweeted](#)a link to [an article](#) on longitudinal data, but upon further thought we decided it was worth a deeper explanation. Something tells us that it's going to be

an important buzzword very soon.

Simply put, longitudinal data is data gathered during a longitudinal survey- a type of observational study. The data itself is a collection of information about a patient, recorded over the course of many years to [track the patient's health](#). Too often, doctors rely on incomplete data sets or inaccurate patient memories when creating a course of treatment. Take for example, there is always the possibility that a patient has forgotten key symptoms after a procedure years ago. The collection of data consistently, over a long period of time, increases the chances of doctors making [better informed decisions](#) for their patients.

That's the most basic principal of longitudinal data, but there are so many more possibilities. Consider a longitudinal data set that not only contains your complete medical history, but also your demographic data. It can then be compared to other patients in similar circumstances with similar medical histories to offer doctors a wealth of information from which to make a recommendation.

Much like a sextant is needed to measure longitude and latitude, interoperability is needed for this time of data configuration. So, you can add the benefits of longitudinal data among the many reasons to have secure, integrated data sharing across healthcare systems.

Clearing the Path for Medical Device Innovation

Did you know that it is [estimated that health-related apps](#) will be downloaded 1.7 billion (yes, with "b") times by

the end of this year? This includes everything from personal fitness apps to clinical decision support software. It is no surprise that digital technologies have and will continue to transform health care in important ways. They help address public health crises, enable faster diagnosis and treatment by clinicians, and empower consumers to take control of their health. But the line between private innovation and public health is ambiguous at best.

Make no mistake. The government must walk a tightrope when it comes to regulating medical devices and apps. On one hand, it has the responsibility to ensure that the technology companies produce are safe and effective. On the other hand, the government doesn't want to overstep and stifle innovation that could lead to life-saving technology. This balance can be hard to find. However, one agency is making plans to walk that fine line.

In a [recent blog post](#), the Food and Drug Administration (FDA) Commissioner Scott Gottlieb, M.D. announced the administration's new Digital Health Innovation Plan. The plan proposes to eliminate ambiguities (as they currently exist) in the 21st Century Cures Act and provides increased guidance for digital health products.

While the program is still being developed, the FDA appears to be pursuing a third-party process that would eliminate a full FDA review for lower-risk products, making it easier for higher-risk products to work their way through the pipeline. The plan also includes provisions for post-market research and data collection that is promised to spur even more innovation down the line.

As one industry stakeholder told [Fierce Healthcare](#), "All in all, I feel like I've died and gone to heaven."

Good work, FDA. We look forward to seeing how this plan enables innovative health IT products. What do you think of

the FDA's announcement? How else can the government aid the development of health IT? Join the conversation by tweeting us [@CNSIcorp](https://twitter.com/CNSIcorp).

Big Data: Powering Longer, Better Lives

Here at CNSI, we see day-in and day-out how innovation in healthcare can improve the lives of millions of Americans. That's why it came as no surprise that modern technology and big data has made its mark on yet another area of healthcare—this time for cancer patients.

The [Journal of the American Medical Association](#) (JAMA) recently published a [study](#) on the effectiveness of an online tool that patients with advanced cancer utilized to report

chemotherapy symptoms. The researchers found that the real-time reporting gave nurses the ability to adjust patient medications, which allowed patients to withstand chemotherapy treatment longer. In turn, patients who electronically reported their symptoms lived five months longer than those who waited to speak with their doctors during office visits.

Lead author and oncologist at the Lineberger Comprehensive Cancer Center of the University of North Carolina Chapel Hill, Dr. Ethan Basch, told The Washington Post, "We have limited time to see a lot of people as oncologists. But we can harness technology to improve the quality of how we practice and to bring us closer to our patients."

This groundbreaking research, which was recognized as one of four "clinically significant" studies presented at the American Society of Clinical Oncology Annual Meeting, reaffirms the value of utilizing technology and patient-generated data to improve quality of care. So, whether its capturing patient-reported outcomes, tracking opioid abuse, or reporting on cause-of-death trends, innovation and big data both have their role in improving the health and quality of life for Americans.

Medicaid's Role in the Opioid Epidemic

Earlier in the year, CNSI's Chief Strategy Officer, Sharif Hussein, wrote an article about how predictive analytics can help solve the growing opioid epidemic—specifically in Medicaid population. Turns out, we aren't the only ones looking at the data behind these drug-related deaths.

An infographic published by [The Henry J. Kaiser Family Foundation](#) is chockfull of numbers that demonstrate the severity of the issue as well as how Medicaid coverage can help. Look below or [read here](#) for more information.
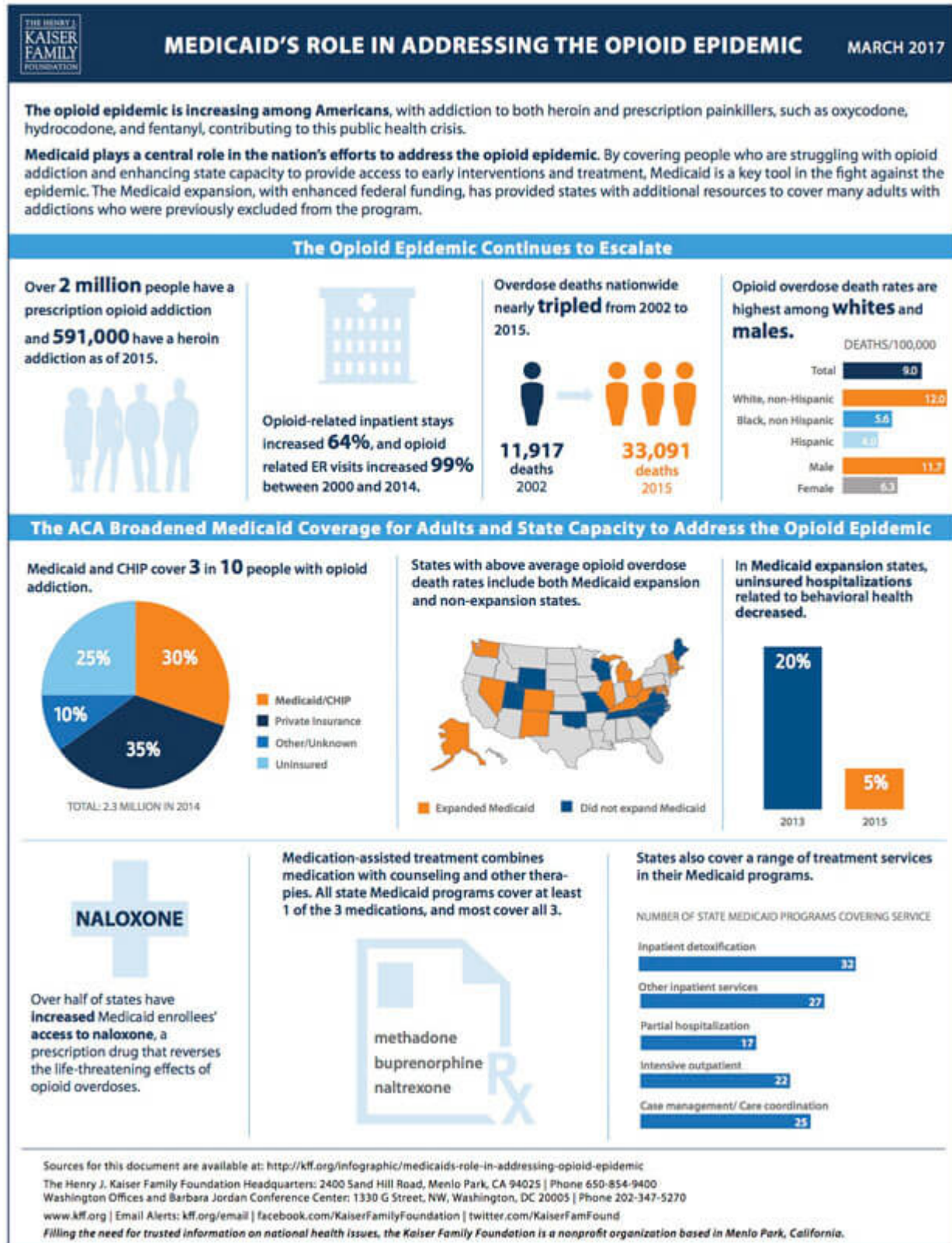
Antibiotic Effectiveness Decrease; Data Opportunity Increase

We've all been there. One day it's a scratchy throat and the next it's full-blown strep. Luckily, a round of antibiotics should solve the problem in a matter of days. But the [effectiveness of antibiotics](#) has created problems over the course of the past half century. The Centers for Disease Control and Prevention is [well aware](#) of the problem. However, solving this challenge is a whole other issue.

That's where big data comes in.

[Debra Goff](#), a clinical associate professor and infectious disease specialist at the Ohio State University [Wexner Medical Center](#), told *[Fierce Healthcare](#),* "I seldom attend a hospital meeting without the IT team present, because they hold the key to long-term success through data collection and analysis."

To put it simply, an agency's ability to aggregate millions of patient records, prescriptions, and health history is the key to identifying, analyzing, and addressing critical health issues, such as the effectiveness of antibiotics. Or, as in the case of the [New Hampshire Electronic Cause of Death (eCOD) app](#), provide real-time [situational surveillance](#) on the growing opioid overdose epidemic.

There may be disagreement on health problems, priorities, or even payment. But those of us in the field can all agree that accurate collection and timely analysis of big data is critical to the future of effective health care.

CNSI Counts on Kids Day

Every year, CNSI plays hosts to our employee's children on "[Take Your Sons and Daughters to Work Day](#)". But every year, the theme, activities, and fun we have changes. Yesterday's event was no exception.

Taking the idea "[Count on M](#)e" and applying it to every aspect of the day was our goal. We kicked off the day with our Co-Founder and Chief Administrative Officer, Reet Singh, explaining how we here at CNSI count on each other to:

* Work together as a team
* Give back to others in our community; and
* Provide technology that helps our clients and improves the lives of Americans

The theme actually served as a great extension of our corporate culture. Here at headquarters, we weaved in components of our modular Medicaid system, evoBrix, our iCare Philanthropy and volunteer partnerships, and our core values. The kids of CNSI got a feel for what is like to work at CNSI. Through Lego builds, meal prepping, and outdoor games, the kids were taught critical listening, communication and teamwork skills.

To wrap it all up, everyone was invited to an ice cream party where we talked about all the things we learned. They even got to take home a part of the day with an awesome CNSI goodie bag. Given the number of smiles, high-fives and hugs, it is safe to say this year's event was a success. We COUNT on seeing everyone back again in 2018!

Making Innovation Stick: It

All Comes Down to Relationships

[Healthcare IT News](#) editor-in-chief [Tom Sullivan](#) authored a great piece earlier this week on his top [takeaways from the Population Health Forum 2017](#) in Boston. All four are worth a read — but one stuck out to us in particular: Creating a Culture of Innovation. As noted innovation enthusiasts, we at CNSI can directly relate to the approach presented by New York University Langone Medical Center Director, [Leora Horwitz, MD](#).

For example, Dr. Horwitz stresses the importance of working directly with frontline end-users from the very beginning. Too often, tech specialists forget that they have users at the end of a process. If a doctor or other care providers doesn't have a need for a product or won't use it because of poor design, what good is it? As Horwitz puts it, "The most successful interventions to improve care delivery share some hallmarks. They're user-centered, incorporating input from the frontline end-users. They're designed to fit workflow." [Apple](#), a company that provides over a million apps in their [App store](#), [gives](#)

[similar advice](#) to wannabe app developers: "If you're app doesn't do something useful, unique or provide entertainment…it may not be accepted."

Her second and third steps, however, are (ironically) quite innovative in their own right: find and keep champions.

It's all too easy to get caught up in a seemingly effective product and move directly from design to implementation. But, Horwitz points out, this skips a crucial step: finding—and keeping—support from your stakeholders. Depending on type of product, this may mean educating users, soliciting feedback and encouraging further adoption. Even the most innovative product on the planet is doomed to fail if the users never get around to giving it a try and the designers don't refine their solution based on feedback.

The lesson? Don't rest on the laurels of a good idea or even a good design. Constantly maintain relationships with end users who will be the voice of your innovation in the field. Yes, they can be your worst critic, but this feedback may actually help you create your best product yet!

Big Data. SaaS. Innovation. A Few of Our Favorite Buzzwords.

The term Big Data has been a [buzz word in the health IT](#) world for a few years, along with Cloud Computing, Interoperability, and IoT. And these buzz words usually follow the same cycle—trend identified, buzzword created, term defined, and term applied. Big Data has come full cycle to to the

application phase. Its applicability is especially evident in health care, where millions and millions of unique health records weave a pattern that often reveals trends and offer real-world health solutions. But the task of analyzing enormous piles of data — and doing so efficiently and effectively — is no small task.

Enter the follow-on trend of [Software as a Service](#) (SaaS), which is defined as a "delivery model that is centrally hosted. However, SaaS is not really new. It actually started in the [1960s when the computer industry began](#) hosting business applications for government agencies and large manufacturing firms such as General Electrics. But CNSI was the [first to apply this approach](#) in the Medicaid space.

The idea is simple. Organizations outsource their system to a cloud-based SaaS. Using machine learning (i.e., advanced computer systems that can analyze information and adapt as they progress), the smallest of organizations can reap the

benefits of big data.

To quote [Jennifer Bresnick](#) of [Health IT Analytics](#), "These cloud-based tools reduce development burdens and infrastructure requirements… that can make it difficult to move forward with the clinical analytics and population health management programs that underpin value-based care."

As an [award-winning innovator](#) of SaaS for Medicaid, we love to see this solution at work. And of course, we root for *any* solution that can improve health outcomes for patients.