TechBridge

Combating Ransomware: Preparation and Teamwork

How to Show Meaningful Data with Maps

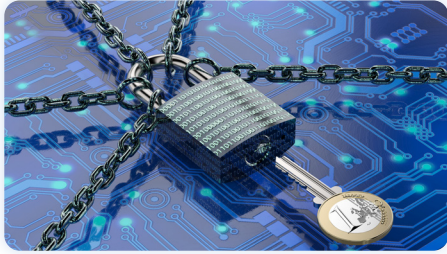**Tips for Creating Customized Measure Factory Stamps**

5 Trends That Will Impact Beverage Alcohol in 2021

Q&A with Forrester's Jeff Becker on Healthcare in 2021

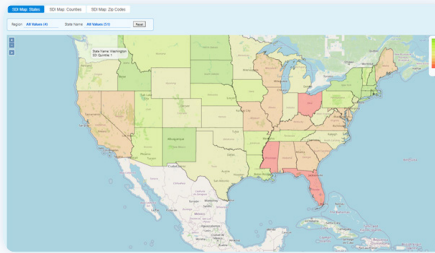**Ethical Considerations in Machine Learning**

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Table of Contents

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Combating Ransomware: Preparation and Teamwork

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The threat of ransomware dramatically increased in 2020, with security firm Check Point saying it saw a 50% increase in the daily average of ransomware attacks in Q3, as compared to the first half of the year.

In ransomware attacks, cyber-criminals hold your data hostage by encrypting it and demanding a payment for its release. 2020 has been a particularly challenging year for businesses when it comes to ransomware. As a result of the pandemic, many organizations have left gaps in their IT systems which are easier for cyber-criminals to exploit.

The cost of an infection can be very high—it will disrupt your business' ability to perform work at the very least, as impacted systems are reinstalled from backup. For healthcare organizations, this lack of availability can have a human cost.

In some cases, viable backups may not exist (or may have been encrypted as well), leaving an organization with a difficult choice to make regarding risking paying such a ransom (which only encourages this ransomware "business model"). Worse, a recent trend has been the disclosure of captured data, not just destruction, in the case of unpaid ransoms.

Dimensional Insight's preparedness

Dimensional Insight is well aware of the threat of ransomware. Our security office is actively engaged in protecting our own organization from this threat, as part of our overall information security program. This is important so we do not have interruptions that prevent us from providing service to our customers. Even more importantly, we do not want to become a malware vector into our customers' organizations via e-mail, VPN access, or software that we release.

Here are two key elements of our strategy:

The first is **endpoint protection**. Employee devices are required to have anti-virus and anti-malware software installed. This software reports centrally to us so we can audit compliance and observe threats. OS and software updates are mandated and enforced.
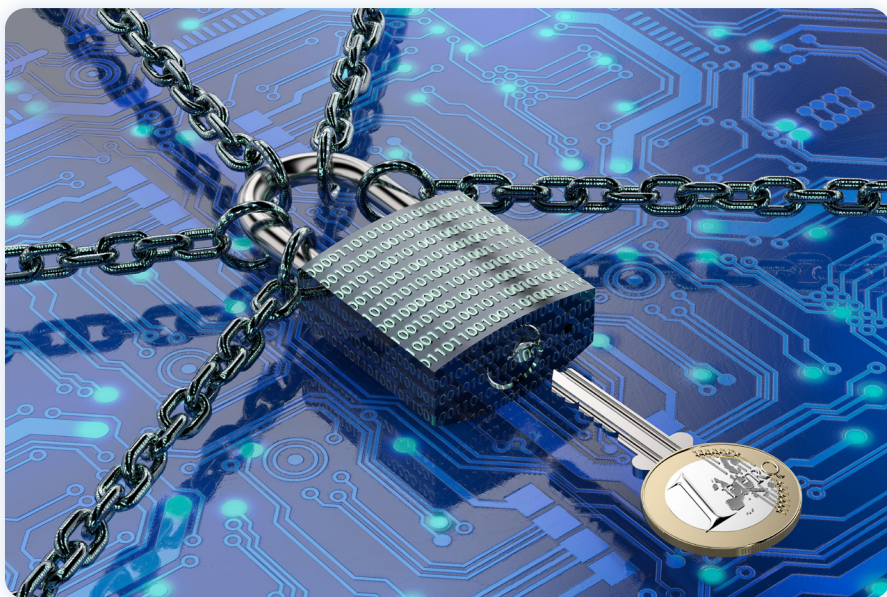
The second, and equally important, is **user education**. While we can keep machines up-to-date, a security-conscious culture across the organization is required to keep our systems safe. We achieve this with both dedicated training sessions and with a segment during our all-hands meetings. These weekly information security updates and refreshers are brief and to-the-point. They raise and maintain awareness, serving as a constant reminder to be vigilant.

In addition, we conduct annual risk assessment audits, and our security team meets weekly to advance risk mitigation projects, plan user education, and respond to active threats in the ever-changing cybersecurity landscape.

Working together to combat ransomware

Guarding your own organization against ransomware is a significant task. For help with that, you may wish to consult online resources published by the Cybersecurity & Infrastructure Security Agency (CISA), a U.S. governmental agency, at https://www.cisa.gov/publication/ransomware-guide.

In terms of more specific cooperation between Dimensional Insight and our customers, communication and access auditing are essential to keep us all safe.

Dimensional Insight will:

➢ Advise customers of any security vulnerabilities found within software we release

➢ Advise customers of possible infected e-mail malware sent to your domain

➢ Advise customers of malware detections on endpoints which have VPN access to your network

➢ Advise customers of personnel changes requiring termination of access to your systems

Conversely, our customers should:

➢ Notify us of possible e-mail malware sent to our domain

➢ Notify us of malware detections on servers our staff can connect to

➢ Regularly audit VPN access granted to our staff, verifying access is still needed

➢ Regularly audit other resource access (e.g. DiveLine accounts), verifying access is still needed ☐

How to Show Meaningful Data with Maps

Sometimes showing data by using a picture can tell a story that numbers or words alone just can't. And sometimes that picture is most effective when it's a map.

DivePort's map portlet allows you to show meaningful data in a variety of ways by using detailed geographical maps. Here is some information on what the map portlet is, what data is necessary for it to work, and how you can use it to make your data tell an amazing story.

Gabrielle Amarosa

Healthcare
Business Intelligence
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What is a map portlet?

Map portlets are one of the standard DivePort tools available. They come with out-of-the-box integration with OpenStreetMap, which provides a significant amount of geographic detail, down to street address. It's also interactive.

Map portlets support several different geographic regions, including countries, states, and provinces. If you're in the United States, the portlet supports states, counties, and zip codes, both at the 5-digit and 3-digit level.


County FIPS	County Name	State Abbr	Population	% Total
Totals	Totals	Totals	6,705,579	100.00
25001	Barnstable County	MA	217,053	3.24
25003	Berkshire County	MA	129,288	1.93
25005	Bristol County	MA	552,763	8.24
25007	Dukes County	MA	17,033	0.25
25009	Essex County	MA	764,187	11.40
25011	Franklin County	MA	70,738	1.05
25013	Hampden County	MA	467,657	6.97
25015	Hampshire County	MA	162,108	2.42
25017	Middlesex County	MA	1,546,615	23.06
25019	Nantucket, Town and County	MA	10,556	0.16
25021	Norfolk County	MA	701,993	10.47
	Plymouth County	MA	501,409	7.48
	Suffolk County	MA	753,482	11.24
	Worcester County	MA	810,697	12.09

ZIP Code	Population	Quintile	SDI Score
Totals	1,546,615	148	1,995
02148	60,725	4	74
02155	59,166	3	44
02149	43,717	5	84
01801	39,609	2	39
01752	39,425	3	43
01702	38,573	4	79
02138	37,252	2	38
02139	36,422	3	58
01760	34,683	1	9
01852	33,822	5	85
02472	33,350	2	37
01701	31,949	1	10
01821	31,607	1	15
01826	30,633	2	21

Data prep

In order to create a map portlet, you need a few features in your data. The first is geographic data, such as county codes or zip codes. Once the geographic information is there, the data needs to be transformed so that it can be easily read on a map. Something like a social deprivation index (SDI) score, which measures demographic characteristics to quantify socio-economic variation, is great information to display on a map. However, this score ranges from 1-100, which is too granular to show well.

For best results in this case, you can break down the data into quartiles or quintiles. The Integrator Rank function in Workbench can compute quantiles, giving you a more manageable score to display. This number goes into the marker that will feed into the map portlet.
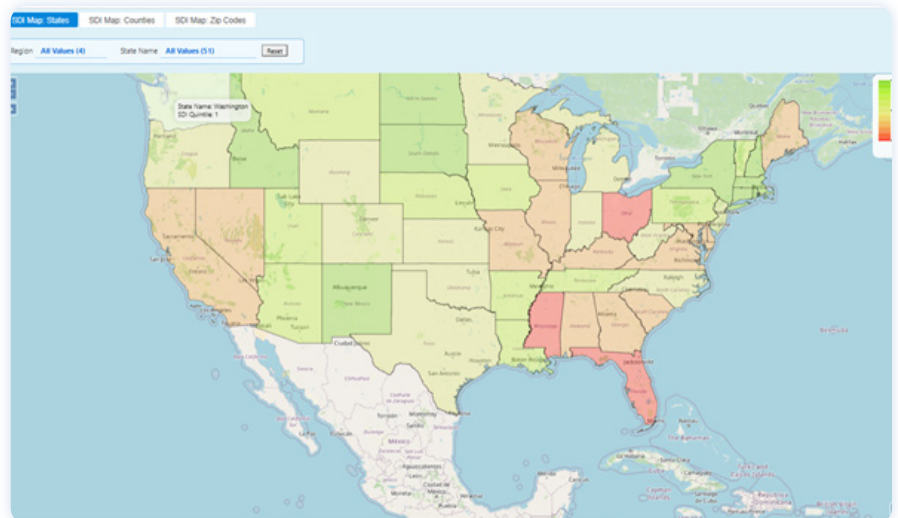
Configuring the map portlet

The map can be configured in a variety of ways to suit your needs. It will pull from the marker files that have the geographic information and the quantile that was calculated for the marker. Depending on the geographic layout you've chosen, you can display the data on the map from a wide view or narrow down into specific regions. There are also options that allow you to customize the map even further.

Colors can be assigned based on a gradient, a threshold, or in bins based on the data. If you're using quintiles, for example, a gradient can be set with 1 and 5 as minimum and maximum values, and the map portlet will generate a color scheme that will populate the map. Legends and labels also let you make sure the map is displaying the data and labeling everything the way you want it.

There are further steps you can take to make your maps even more detailed and able to display your specific data. For more information you can visit our website at https://dimins.com/help/maps/.

This article is part of our Knowledge Forum series. Learn more about this series and join us for our regular live webinars.

Knowledge Forum

Tips for Creating Customized Measure Factory Stamps

Did you know that most of the portlets on your Measure Factory dashboards can be created within stamps? Stamps are predefined visualizations that can include charts, indicators, measure portlets, and more.

Creating your own custom stamps is quicker and easier than you might think. Here are some things you need to know about creating custom stamps within Workbench.

Marissa Leone

Project Management Analyst

LinkedIn

Numbers are live

Like all portlets on Measure Factory applications, all of the numbers are live. If you click on a number you will launch a default analysis, and you can also bring up the information about a measure. Any information about a measure stored in the Measure Factory can be revealed through a stamp.

Don't start from scratch

When creating your own custom stamp, begin with an existing one rather than starting from scratch. When a Measure Factory application is installed, within each application you get dozens of custom stamps that you can use to create your own pages.
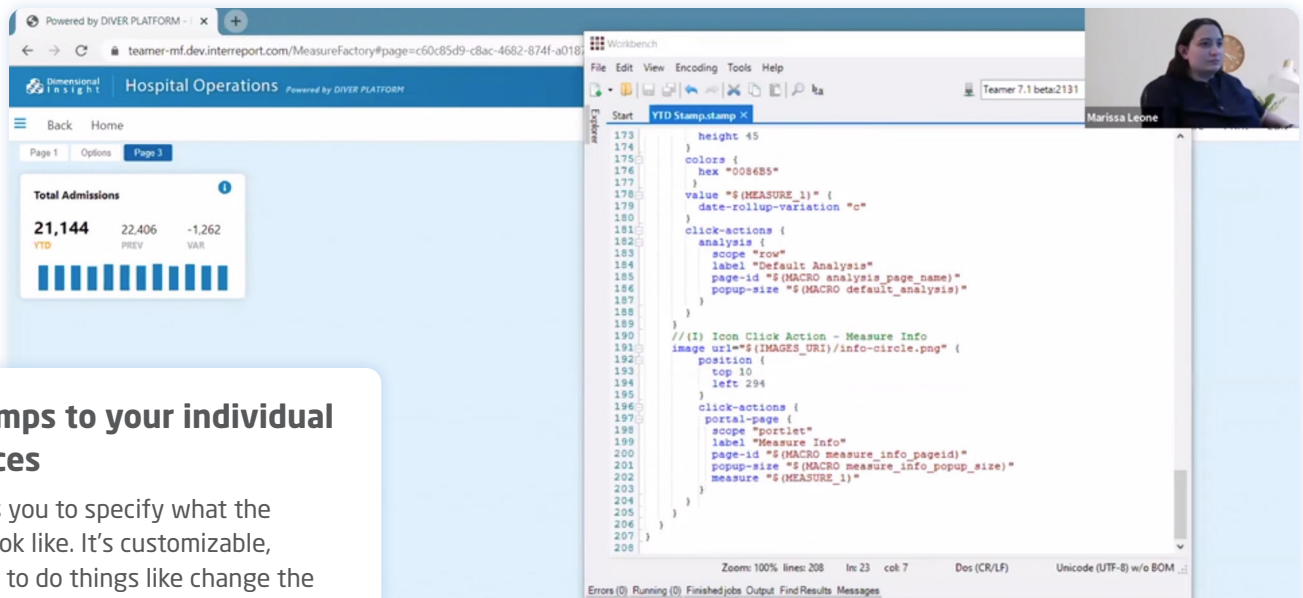
Style stamps to your individual preferences

'Style' allows you to specify what the stamp will look like. It's customizable, allowing you to do things like change the background or adjust elements like border ratio or shadows. Self-service functionality allows users without administrative access to quickly create dashboards. Stamp styles can use any CCS properties.

Make sure you give it a useful name

Naming your stamp is a required field, and we recommend you name the stamp something that indicates what it does, since this is what users will see when adding stamps to the DivePort page. "Category," which allows you to group your stamps together within the DivePort stamps selection, is an optional field. But we do recommend when you begin that you create a category called 'customized stamps' to keep track of all of the stamps you created. ☐
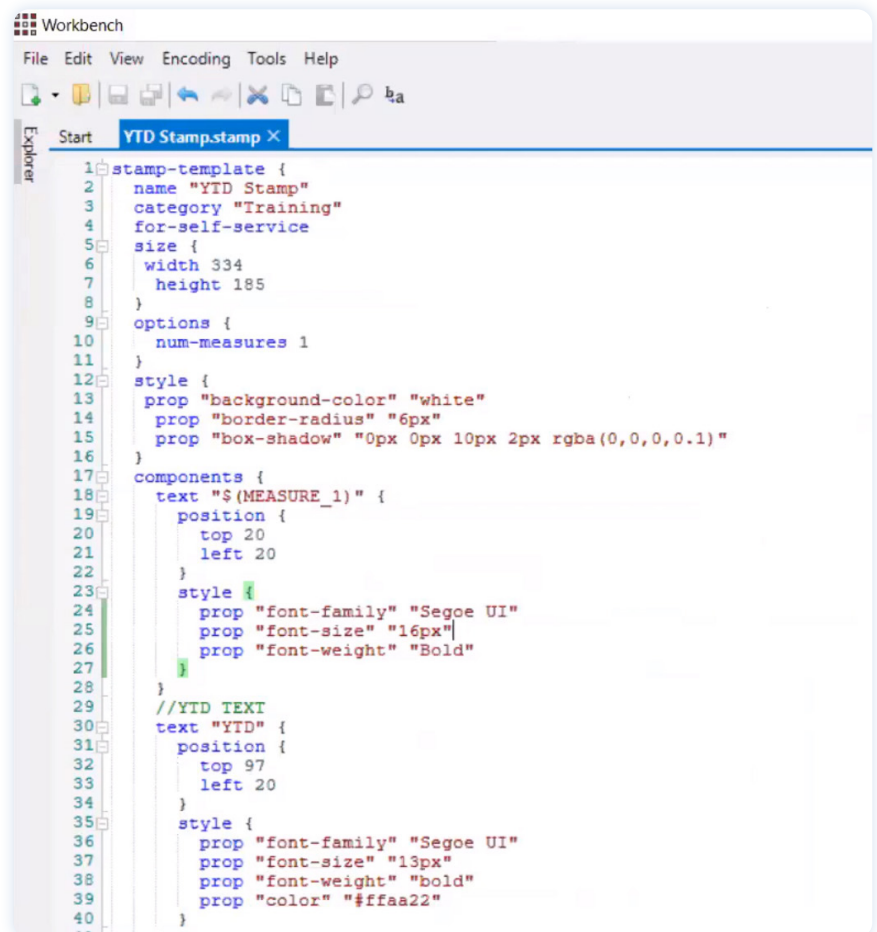
Click here to find a series of videos that walk you through stamps. The videos go into more detail on everything listed above, and cover everything about stamps, starting with an introduction.

Stamps

5 Trends That Will Impact Beverage Alcohol in 2021

Parker Jones

Public Relations Specialist
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Last year's pandemic caused massive shakeups for nearly every business sector, with wine and spirits being no exception. While these changes were, at first, wildly unpredictable, the dust has now settled enough for us to see them clearly, as well as the factors that led to them and how they might change in 2021.

Consumers are drinking off-premise instead on on-premise

While most bars and restaurants have reopened to some extent since March, few are able to seat their normal capacity, and still won't be back in full swing for some time. While the recently developed vaccine may functionally wipe out the virus, it is still the customers who will decide when they feel safe enough to return to their favorite establishments in full force. But if all goes well the vaccine could be in full deployment by early summer, giving customers two very good excuses to go back to all their old favorite places to order a drink.

Consumers are buying their cocktails to-go or in cans

Canned cocktails were already picking up popularity pre-pandemic, but in the past year their numbers have risen dramatically as they quickly filled some of the space left by the absence of on-premise drinking. While this trend was largely spurred by COVID, it is not just a bubble that will be popped by the vaccine. Many of these new customers are sure to get used to the taste and convenience of RTD cocktails and become repeat-buyers.

Canned cocktails aren't the only way that people are enjoying cocktails at home. More and more restaurants and bars are offering their cocktails through to-go pickup. The year 2020 led several states to change their laws regarding to-go drinks in order to help struggling establishments to survive. It is unclear at this point how many of these laws will revert once the pandemic is over.

Consumers are turning to eCommerce for their purchases

No sector of the wine and spirits industry is rising as meteorically as online orders. With customers striving to limit their trips outside of the house, the option of shopping from home has become much more appealing. While traditional liquor stores are also seeing an increase in business, a significant portion of their business is now supplying the drivers of these delivery services with the orders that they are bringing to customers. Like the RTD cocktails trend, the sudden spike of eCommerce is closely tied to the pandemic, but that does not necessarily mean that it will fall out of popularity as soon as the coronavirus subsides.

Consumers are shifting toward premium and well-known brands

For years leading up to 2020, there had been a steady trend of premiumization in the beverage alcohol industry, which quickly reversed in the early days of COVID-19. Premium drinks were mostly ordered on-premise, where customers were willing to pay more for higher quality drinks. Month later, the premiumization appears to be showing signs of recovery, even if on-premise consumption hasn't fully returned to normal. While sales of premium products are not rising at the same rate that they were before the pandemic, the data suggests that they will be back on track by the end of 2021.

At the same time, a trend towards well-known and recognizable brand-names seems to be emerging. It is most noticeable in online orders, probably because people are more likely to buy a product that they trust and are familiar with when they can't see the new products in front of them.

Craft distillers are relieved by the renewal of the CBMTA

The tax reform bill that was implemented in 2017 included the Craft Beverage Modernization and Tax Reform Act, which has been a tremendous benefit to small breweries, distilleries, and vineyards. The provision cuts the federal excise tax on the first 100,000 gallons of beverage alcohol that a company produces every year by as much as 500%. For smaller companies, this may cover their entire annual production. The act was due to expire by the end of the year, but fortunately legislators stepped in with only days to spare, and renewed the act indefinitely. This will be great news for small beverage companies moving forward, as they will no longer have to worry about their tax rates jumping to an unaffordable level.

Conclusion

The year 2020 was chaotic, and 2021 is shaping up to be equally uncertain. Many of the trends listed above are heavily influenced by or dependent on the status of COVID-19, but that doesn't mean that those trends will simply return to how they were before if the virus is eliminated. With a new administration, new laws, and a 'new normal', anything could happen. □

Q&A with Forrester's Jeff Becker on Healthcare in 2021

2020 was a sea change for healthcare organizations, which underwent a massive transformation in care delivery through the adoption of telemedicine as COVID-19 impacted in-person care.

What were some of the biggest takeaways from the past year, and what are the opportunities for 2021? We recently asked Forrester Senior Healthcare Analyst Jeff Becker to weigh in with his thoughts.

Jeff Becker, Senior Healthcare Analyst Forrester

Q: What are some of the biggest lessons that healthcare organizations can learn from 2020 around data and technology?

A: The most problematic element of our health IT strategy today remains data sharing, not data analytics. Health systems struggled to report key metrics up to state and national public health agencies. They also struggled to establish data-sharing strategies across the continuum in their communities. Moving forward, healthcare organizations (HCOs) will do well to establish a data strategy that creates a full picture of the continuum of care, inclusive of virtual care, ambulatory care, acute care, and post-acute care.

Q: What are some of the areas in which healthcare organizations can make the biggest gains from analytics in 2021?

A: The potential is seemingly immeasurable across multiple functional areas. The largest area of opportunity for analytics will be optimizing virtual care operations, either as an independent service line or integrated into existing clinical specialties. Analytics will help HCOs grow revenue streams stemming from both telehealth and remote patient monitoring services and will help grow patient enrollment, utilization, acquisition, and retention.

There are additional gains to be made in the study of patient throughput, including establishing a data strategy to analyze bottlenecks in the care journey—be it the ER, PACU, or discharge process—and optimizing the next best action across the care team to address those bottlenecks. These "command center"-style analytics tools will improve our ability to coordinate care at a much more granular level and will yield a reduced length of stay and increased bed capacity.

Finally, supply chain management has been a notably problematic area during the pandemic and will continue to be problematic as vaccinations arrive that require ultra-cold storage. Expect the supply chain to be the focus of increased analytics opportunities as demand forecasting and IoT-enabled supply chain management mature. □

Learn more on Jeff's thoughts about the COVID-19 pandemic and analytics. Download our full Q&A with him .

Download Full Q & A

Ethical Considerations in Machine Learning

We've all heard a lot about machine learning. But is this technology being applied in an ethical way? That topic was front and center in the latest episode of the Smarter Healthcare Podcast, sponsored by Dimensional Insight.

Host Kathy Sucich spoke to Kevin Ross, CEO of Precision Driven Health, about the ethics of machine learning and where some of the greatest machine learning innovations are today and will be in the future. Listen by visiting the Smarter Healthcare Podcast website or downloading the episode on your favorite podcast app. While you're there, please subscribe so you automatically receive all future podcasts!

Listen now

Kevin Ross, CEO
Precision Driven Health

"

Healthcare is in a lot of ways behind the rest of the experience that we have as individuals, especially as consumers. We're getting much more used to data being used in different ways for how we shop, how we bank, all these other areas. And health always feels somewhat behind.

However, at the same time there's a huge amount of research going on in health, and health has always been a very research-led industry, and so the whole idea of machine learning and artificial intelligence is going to come at a great pace for the next few years because of all the work that's been going on in the background, trying to integrate the same concepts from other industries into the health sector. But it's fair to say that health is slower to move. And in a lot of ways that's a good thing, we're making very important decisions about individuals and society, and so we don't want to make those in an ill-informed way.

We want to make sure we're retaining the really high level of trust that we have between people and those who provide care and advice to them. And by bringing machines into that conversation it can introduce all sorts of dynamics that we know can be really beneficial but also can add some risk to that.

News Brief

Upcoming Events

What's Next in Healthcare Innovation?

Webinar

Thursday, February 4, 2021 | 1–2 p.m. ET

Digital health expanded exponentially in 2020 during the global pandemic. As new vaccines and treatments provide hope that normality of some sort may resume in 2021, breakthroughs enabled by the accelerated pace of innovation will better equip us to face new challenges. With telemedicine now adopted widely, what other types of health technologies are emerging faster than we may have thought possible just a year ago? And how will they change the patient experience?

In this program we'll hear from digital health and technology leaders and learn more about how technology can inform care and promote health. We'll also hear about emerging digital infrastructures being created to better serve patients and keep up with the pace of technology. What types of home technologies and wearables are gaining traction? How are hospitals using AI applications? And what will healthcare look like in the next few years?

Join us for this exciting panel discussion led by **Kathy Sucich, VP at Dimensional Insight,** and learn about the next innovations powering healthcare.

John Brownstein, PhD, is the chief innovation officer at Boston Children's Hospital.

Alistair Erskine, M.D., is the Chief Digital Health Officer at Massachusetts General Brigham, teaching hospitals for Harvard Medical School.

YiDing Yu, MD, is Chief Medical Officer at Olive.

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News Brief

Upcoming Events

How to Solve Emergency Department Challenges with Analytics

Webinar

Wed, Jan 27, 2021 2:00 PM–2:30 PM EST

Your emergency department is the patient's gateway to your hospital. It's critical that it is running at peak efficiency in order to improve the quality of the patient experience, increase revenue, and save lives.

Dimensional Insight's Emergency Department Advisor is an application built on our seven-time Best in KLAS Diver Platform, and it provides analytics tailored to gain the data insights you need to make ED improvements.

In this 30-minute webinar, see how you can use Emergency Department Advisor to realize benefits that top hospitals have seen such as:

- An 83% decrease in the left without being seen rate, resulting in $2 million in increased revenue

- A reduction in cardiac throughput by 40%, resulting in a 67% reduction in mortality rate

- A 75% decrease in low-acuity and unnecessary visits

- Cost savings of $250,000 due to better scheduling insights

About the presenter:

Nora Lissy, RN, BSN, MBA is director of healthcare at Dimensional Insight. As a former ED nurse, Nora brings her clinical and data experience to her work in helping Dimensional Insight customers implement the processes and technology to gain the most impactful insights that get results for their organizations.

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News Brief