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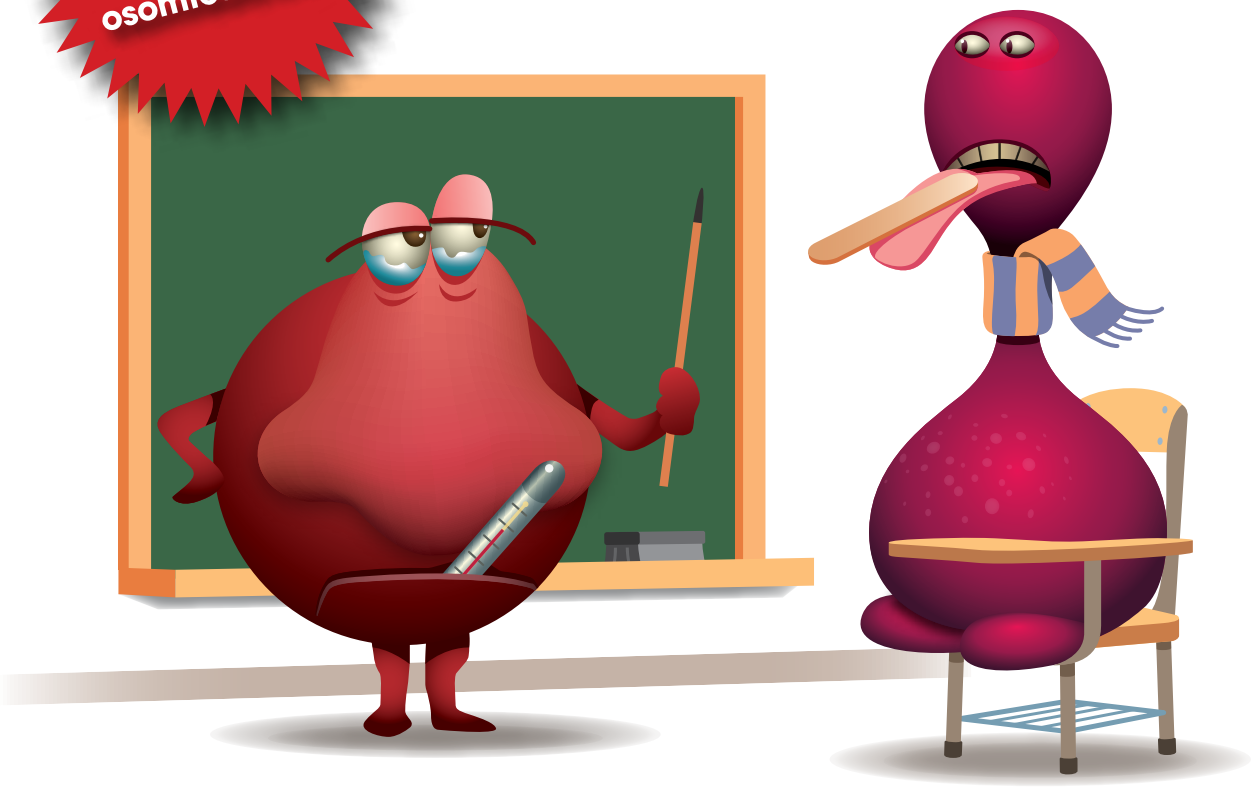

Oh no...not you two again!

School is almost in session which means Flu and Strep season is on the way! Accurately diagnosing our friends Sniff and Streppy here can be a challenge as clinical symptoms overlap—which is why rapid tests have many advantages, including determining the right diagnosis and treatment in minutes.

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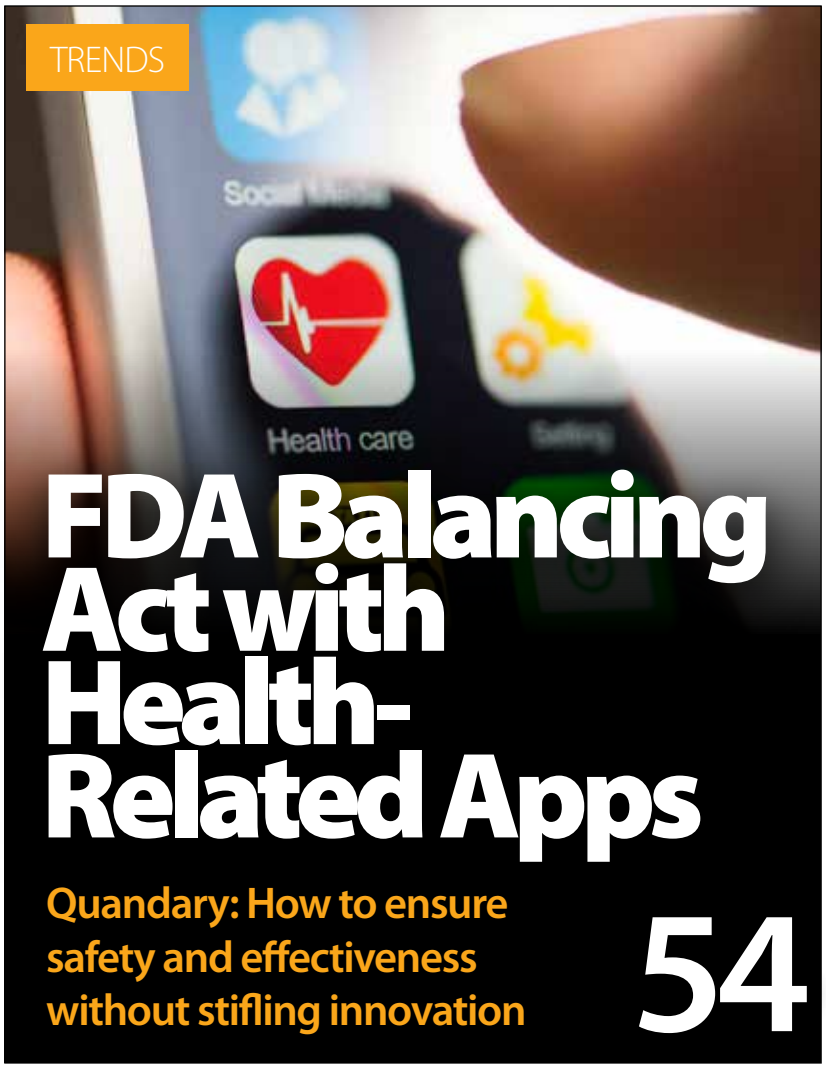

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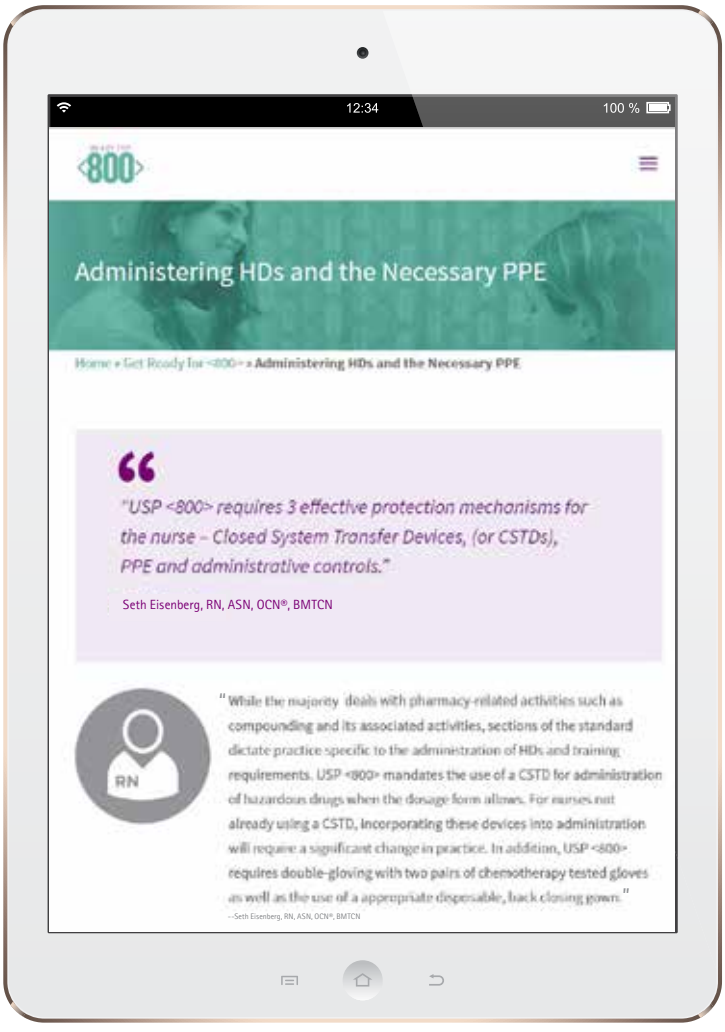

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Develop Your Swagger


Scott Adams

The best distributor reps I went on calls with always had swagger. Not arrogance or rudeness like a door-to-door salesman, but an air of confidence. No matter what the setting was, these reps walked into every facility with the mentality that they were there to help the organization. These reps knew without a doubt that what they were doing mattered.

Reps today have so much coming at them from so many angles that it seems easy to stumble. Just to name a few of today's distractions/opportunities:

- ACA
- HEDIS
- Consolidation
- Amazon
- MACRA
- EMR
- Corporate Initiatives

The list could go on and on, but the reality is all of these topics are opportunities to get your swagger back.

At the end of the day, no one knows these practices better than you. No one cares about the people in these practices more than you. It's time to get your swagger back and start believing in the fact that what you do matters to every practice and patient in your territory. You have the ability to invest in the lives of our nation's caregivers and help them provide better quality outcomes. Never forget how important that is to everyone in this country.

As we head into selling season, it's time to put a little pep back in your step and walk in to your practices, health systems, Post-Acute facilities, and ASCs with your head held high and the confidence you are there to improve healthcare in the United States.

My challenge to you this month is to pick a product – preferably one advertised in this issue – and go sell it to your accounts. Don't sell exclusively on feature and benefits. Instead, take one of the topics above and show how this product helps improve quality measures and better patient outcomes.

Content selling is how you harness your swagger back!

Dedicated to Distribution,
R. Scott Adams

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^ https://www.cdc.gov/std/prevention/screeningreccs.htm

Investing for Growth

McKesson Medical-Surgical national sales meeting highlights investments in distribution network, technology and tools

Collaboration, celebration and acceleration were themes of McKesson Medical-Surgical's national sales meeting this spring in Las Vegas, Nevada. Approximately 1,600 McKesson Medical-Surgical attendees and 187 supplier companies were on hand.

"We are making the conscious decision to invest for growth," Gary Keeler, president, sales and marketing, told those in attendance. "We are investing in our distribution network and new distribution centers, our private fleet, technology and tools for you and our customers, and we are investing in you." Keeler reported that the company is adding over 100 people in supporting roles across the business.

"Our National Sales Conference brings together our sales teams from across the country and across all market segments in one location," added Randy King, senior communications

"We are making the conscious decision to invest for growth."

– Gary Keeler

manager. "It's a great chance for our team to network, further develop key relationships and learn how to solve problems.

"The meeting is also where we recognize our top performers and celebrate everything our teams accomplished in the previous year. Most importantly, we plan the meeting so our sales teams leave equipped to more rapidly grow and succeed. It's always a kickoff to our fiscal year, and Vegas was no exception." rep


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Alere Knowing now matters.™

1. International Diabetes Federation (accessed March 2017). http://www.idf.org/about-diabetes/facts-figures

What it Takes to Survive

By bringing urgent care centers into its fold, Banner Health believes it will serve more patients with higher quality care.

Editor's note: *In our June issue,* Repertoire *reported on the effects of Banner Health's 2016 acquisition of Urgent Care Extra on the Banner supply chain. This month, we hear from Rob Rohatch, M.D., CEO of Banner Urgent Care and Retail, about the benefits for hospitals and patients of mergers and acquisitions such as that of Banner Urgent Care.*

Rob Rohatch

***Repertoire*: What prompted the recent acquisition of Urgent Care Extra's Arizona clinics by Banner Health? Had Banner already offered urgent care services?**

Rob Rohatch: Historically, Banner has not been in the urgent care business. The landscape in the healthcare industry is changing rapidly. Over the last several years, Banner has been transforming from a hospital company to a health integration company. Banner recognizes that in order to be successful, we must have a laser focus on a consumer-centric strategy. Now more than ever, personal household economics are driving how patients make their healthcare decisions.

The link between quality healthcare and cost containment has been well studied. In order to fully operationalize strategy around this concept, Banner recognizes the need for increased accessibility into the system. A robust urgent care platform addresses these two critical legs of the triple aim "chair."

The third support leg is the patient experience, an area where Banner has always placed emphasis.

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Well-run urgent care centers can provide care to an estimated 25-75 percent of patients seen in the emergency department. Here is the rub: They can do it for 20 percent of the cost. When those numbers are coupled with a consumer experience driven by short wait times and delivering the "wow" factor, it becomes a powerful value proposition in a competitive market.

***Repertoire*: What did the acquisition process involve, from its announcement in August 2016 to the November completion? What Banner departments were impacted?**

Rohatch: Any [merger and acquisition] process is a huge undertaking. With [Banner Health's acquisition of Urgent Care Extra], multiple departments were involved because the downstream effect can be very impactful. So the process not only involved all the normal transactional diligence, but also required careful analysis of how our services will impact emergency department utilization, fully at-risk insurance products, and the overall business health of Banner itself. Being prepared to fully capitalize on integration strategies in a timely and efficient manner is crucial.

The goal is, nobody leaves a Banner Urgent Care center without a primary care physician assigned. If they already have one, that's great. But for the estimated 40 percent who don't, we do not want to miss the opportunity to capture that patient and initiate a relationship with Banner that is based on health and wellness.

***Repertoire*: Four hundred Urgent Care Extra employees joined Banner with the acquisition. Will Urgent Care staff and Banner staff remain separate, or will there be crossover among staff and facilities?**

Rohatch: Banner Urgent Care maintains a separate tax ID number and, in that regard, is a separate business entity. Because of legal and logistical complications, there is currently limited employee crossover permitted. We anticipate that next year this will become less of an issue.

***Repertoire*: In the months after the completion of the acquisition, what successes have you seen, and what challenges remain?**

Rohatch: Getting more than 400 employees on-boarded and integrated into Banner is no small task. We had to make some difficult decisions around ensuring that all our providers and staff were up to Banner standards. For example, we mandated that all our medical assistants be certified. This is not the industry norm, but Banner is interested in being distinguished based on quality and setting the bar high as part of the overall long-term strategy in a competitive market.

We have already seen efficiencies gained by streamlining the transfer process from urgent care to the emergency department for patients who need a higher level of care. We are currently working on IT solutions geared toward providing a seamless referral process to capture unassigned patients. The goal is, nobody leaves a Banner Urgent Care center without a primary care physician assigned. If they already have one, that's great. But for the estimated 40 percent who don't, we do not want to miss the opportunity to capture that patient and initiate a relationship with Banner that is based on health and wellness.

***Repertoire*: Why does it make sense for health systems such as Banner Health to acquire and operate urgent care centers?**

Rohatch: The pyramid is upside down in healthcare now. Systems that don't understand that or fail to operationalize strategies to address it are not going to last. A patient-centric, cost-effective, high-quality organization will survive. The "playbook" has been thrown out, and embracing the fact that disruptive innovation does not just belong in the for-profit, private equity-backed sector is imperative. Trying to be where the hockey puck is going has never been more critical. Banner has made a strategic decision to be there and a robust urgent care strategy is part of that.

Regardless of where the new national healthcare policy shakes out, it will very likely remain focused on quality healthcare with an affordable cost structure. rep

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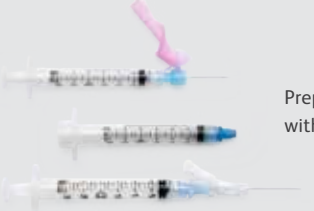

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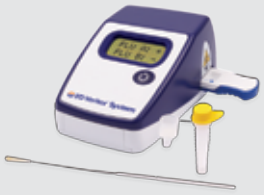

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Understanding MACRA: Improvement Activities

Editor's Note: *MACRA – the Medicare Access and CHIP Reauthorization Act of 2015 – replaces the Medicare Sustainable Growth Rate (SGR) with the Quality Payment Program (QPP), in an effort to emphasize the quality – over quantity – of services provided to patients. (Read* Repertoire*'s February issue for an overview of the law.)*

The QPP, open to qualifying clinicians, is divided into two paths, of which clinicians must take one. One of these paths is the Merit-based Incentive Payment System, or MIPS.

Within MIPS, quality accounts for the biggest portion of data (60 percent) that physicians must report to the Centers for Medicare and Medicaid Services for reimbursement. That quality component was the subject of *Repertoire*'s April MACRA segment. *Repertoire*'s June MACRA segment focused on Advancing Care Information (ACI), which, at 25 percent, is the second largest portion of data physicians must report to CMS.

This month, *Repertoire* focuses on the last component of MIPS: Improvement Activities. At 15 percent, Improvement Activities is the smallest component of MIPS on which physicians must report data to CMS in 2017. (Beginning in 2018, a fourth category – cost – will be implemented.) Here is a summary of what the Improvement Activities category entails.

Doctors rated on Improvement Activities

The Improvement Activities performance category within MIPS assesses providers' participation in activities that improve clinical practice. Examples of these activities include ongoing care coordination, clinician and patient shared decision-making, regular implementation of patient safety practices, and expanding practice access.

Doctors can choose from activities listed under the Improvement Activities inventory, which divides the activities into nine subcategories:

1. Expanded Practice Access
2. Population Management
3. Care Coordination
4. Beneficiary Engagement
5. Patient Safety and Practice Assessment
6. Participation in an APM (Alternative Payment Model)
7. Achieving Health Equity
8. Integrating Behavioral and Mental Health
9. Emergency Preparedness and Response

There are no subcategory reporting requirements, so providers can choose to implement the activities that are most meaningful to their practice. That is, they do not have to select activities in each subcategory or select activities from a certain number of subcategories. They must complete improvement activities for a minimum of 90 days to earn credit for them. In this case, "completing" means implementing the activity and attesting that the practice has done so.

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Examples of improvement activities

MIPS-eligible care providers have 92 improvement activities from which to choose. Each activity, which falls under one of nine subcategories, is weighted either medium or high. Depending on its size, a practice must choose a certain combination of activities to implement to earn the maximum 40 points available in this MIPS component. For example:

Practices with more than 15 doctors
Since each medium-weighted activity is worth 10 points, and each high-weighted activity is worth 20 points for large groups, these practices might choose to implement a combination such as:

- Collection and use of patient experience and satisfaction data on access (medium weight; 10 points)
- Implementation of medication management practice improvements (medium weight; 10 points)
- Engagement of new Medicaid patients and follow-up (high weight; 20 points)

Practices with 15 or fewer doctors
Using the same measures from above, since each medium-weighted activity is worth 20 points for smaller practices, and each high-weighted activity is worth 40 points, these practices might implement a combination such as:

- Collection and use of patient experience and satisfaction data on access (medium weight; 20 points)
- Implementation of medication management practice improvements (medium weight; 20 points)

OR

- Engagement of new Medicaid patients and follow-up (high weight; 40 points)

(For more information on the Improvement Activities category, or to view the activities, visit https://qpp.cms.gov/mips/improvement-activities.)

'Virtual physician groups' possible in 2018

The Quality Payment Program, established under the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), began in 2017, known as the transition year. In preparation for Year 2, the Centers for Medicare & Medicaid Services this spring proposed changes to the program, to be put into place in 2018.

One of the biggest proposals for Year 2 is Virtual Group participation. Virtual Groups would be composed of solo practitioners and groups of 10 or fewer eligible clinicians, eligible to participate in MIPS, who come together "virtually" with at least one other such solo practitioner or group to participate in the Merit-based Incentive Payment System (MIPS) for a performance period of a year.

Other proposals for Year 2 include:

- Increasing the low-volume threshold so that more small practices and eligible clinicians in rural and Health Professional Shortage Areas (HPSAs) are exempt from MIPS participation.
- Continuing to allow the use of 2014 Edition CEHRT (Certified Electronic Health Record Technology), while encouraging the use of 2015 edition CEHRT.
- Adding bonus points in the scoring methodology for caring for complex patients.
- Incorporating MIPS performance improvement in scoring quality performance.
- Incorporating the option to use facility-based scoring for facility-based clinicians.

CMS is also proposing changes for clinicians in small practices that would add a new hardship exception for clinicians in small practices under the Advancing Care Information performance category, and add bonus points to the Final Score of clinicians in small practices.

For a table describing the proposed changes, go to https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/Proposed-rule-fact-sheet.pdf

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How providers are scored

Groups with more than 15 clinicians:
Each activity is weighted either medium or high. To get the maximum score of 40 points for the Improvement Activities score, large practices may select any of these combinations:

- Two high-weighted activities
- One high-weighted activity and two medium-weighted activities
- Up to four medium-weighted activities

Each medium-weighted activity is worth 10 points of the total Improvement Activities performance category score, and each high-weighted activity is worth 20 points of the total score.

Groups with 15 or fewer clinicians, non-patient-facing clinicians and/or clinicians located in a rural area or HPSA (Health Professional Shortage Area):
Again, each activity is weighted either medium or high. To achieve the maximum 40 points for the Improvement Activities score, small practices may select either of these combinations:

- One high-weighted activity
- Two medium-weighted activities

For these clinicians, each medium-weighted activity is worth 20 points of the total Improvement Activities performance category score, and a high-weighted activity is worth 40 points.

(**Source:** Centers for Medicare and Medicaid Services. To view CMS' fact sheet, visit https://qpp.cms.gov/docs/QPP_2017_Improvement_Activities_Fact_Sheet.pdf.)

Help for your docs with MACRA

Your physician customers can get some free, hands-on help understanding and participating in Medicare's Quality Payment Program – either the Merit-based Incentive Payment System (MIPS) or the Advanced Alternative Payment Model (APM track).

Smaller practices

Small practices of 15 or fewer clinicians can get help from one of 11 local organizations. (Practices in rural locations, health professional shortages areas and medically underserved areas will be helped first.) They are:

States	Organization
Illinois, Indiana, Kentucky, Ohio, Michigan, Minnesota, Wisconsin	Altarum (qppinfo@altarum.org)
Florida, Georgia, North Carolina, South Carolina	Alliant GMCF (QPPSURS@alliantquality.org)
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	Healthcentric Advisors (NEQPPSURS@healthcentricadviors.org)
Arizona, California, New Mexico	Health Services Advisory Group (HSAG) (HSAGOPPSupport@hsag.com), 844-472-4227
New York	IPRO (ny-qppsupport@atlanticquality.org)
District of Columbia	IPRO (dc-qppsupport@atlanticquality.org)
Maryland	IPRO (MD-QPPsupport@atlanticquality.org)
Virginia	IPRO (Virginia)
Nevada, Oregon, Utah	Network for Regional Healthcare Improvement (QPP@healthinsight.org)
Alaska, Montana, Wyoming	Network for Regional Healthcare Improvement (QualityPaymentHelp@mpqhf.org)
Alabama, Tennessee	QSource (techassist@qsource.org)
Idaho, Washington	Qualis (QPP-SURS@qualishealth.org), 877-560-2618
Delaware, New Jersey, Pennsylvania, West Virginia	Quality Insights (WVMI) (qpp-surs@qualityinsights.org), 877-497-5065)
Iowa, Nebraska, North Dakota, South Dakota	Telligen (qpp-surs@telligen.com, 844-358-4021)
Puerto Rico	TMF (QPP-SURS@tmf.org)

For larger practices

Practices with 16 or more clinicians can get support from these organizations. (For email addresses of each, go to http://qioprogram.org/contact-zones?map=qin)

North Carolina, Georgia	Alliant GMCF
New York, South Carolina	Atlantic Quality Improvement Network
Alabama, Indiana, Kentucky, Mississippi, Tennessee	atom Alliance
Kansas, Nebraska, North Dakota, South Dakota	Great Plains Quality Innovation Network
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	Healthcentric Advisors
Nevada, New Mexico, Oregon, Utah	Healthinsight
Arizona, California, Florida, Ohio	HSAG
Michigan, Minnesota, Wisconsin	Lake Superior Quality Innovation Network
Montana, Wyoming	Mountain Pacific Quality Health Foundation
Idaho, Washington	Qualis
Delaware, Louisiana, Maryland, New Jersey, Pennsylvania, West Virginia	Quality Insights Quality Innovation Network
Colorado, Illinois, Iowa	Telligen
Arkansas, Missouri, Oklahoma, Texas	TMF
Maryland, Virginia	VHQC

Source: Centers for Medicare & Medicaid Services, https://qpp.cms.gov/docs/QPP_Technical_Assistance_Resource_Guide.pdf

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Think Outside the Box

Successful equipment sales calls for a broader look at the customer's wants and needs.

A medical equipment sale used to be just about selling a table or light, says Kurt Forsthoefel, director, medical marketing, Midmark. "But, in today's marketplace, the sale is about helping the customer determine the right equipment and technology, as well as helping them identify the workflow that provides the best experience for both the medical staff and the patient."

Says Garrison Gomez, senior director of vital signs and cardiopulmonary devices, Welch Allyn, "Accuracy and durability are expected, but they're no longer all that's expected. It's now a standard requirement for devices to be EMR-connected, in a secure fashion. To help improve today's workflows and satisfy IT requirements, analog devices don't make the cut. Customers demand secure, digital devices."

An 'ecosystem'

"Today's healthcare providers need not only improved efficiency and throughput, but a holistic exam room solution that facilitates evidence-based care," says Forsthoefel. A case in point is Midmark Clinical Solutions, a web-based workflow tool that helps customers determine the right space and the right equipment for their needs, he says.

"Especially as the industry shifts toward value-based care, it's important to create a point-of-care ecosystem in the exam space, which supports compliance efforts and focuses on patient satisfaction," he says.

"Today's equipment and technology solutions must also marry long-standing value traits like accuracy and durability with the need for better outcomes." Equipment such as the Midmark IQvitals Zone helps to standardize vitals acquisition by removing variability associated with manual measurements and reduces data entry errors by directly porting data to an electronic medical record, says Forsthoefel. "This not only improves the quality of care and accuracy of the measurements, but it also reduces errors. This makes the care provided more efficient (no medical assistant time is required to enter the data) and more accurate (fewer errors) to help support better outcomes."

Connectivity

The point-of-care ecosystem goes beyond the direct interaction between patient and caregiver to include everything that happens within the practice or clinic as well as experiences that occur outside this environment, says Forsthoefel. "When viewed through this broad lens, it is easier to understand just how important interoperability – the ability of networks, devices and equipment to work together – is. Within the point-of-care ecosystem, there is a lot of equipment and software that need to 'talk' to each other to help deliver quality care.

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Think Outside the Box

"Unfortunately, for most healthcare organizations, the point-of-care ecosystem is comprised of disconnected processes, devices and components, making it tough to achieve the level of interoperability mentioned above," he adds. "Additionally, the isolated processes and disconnected data flows can create inefficiencies, communication breakdowns and human errors.

"We see healthcare organizations looking for solutions that introduce new levels of connectivity and interoperability, which integrate processes, equipment and caregivers at the point of care to ensure a more satisfying and seamless care experience. They need equipment that can not only communicate directly to an EMR to avoid errors, but also EMRs that can share information between providers and networks with ease."

> "Within the point-of-care ecosystem, there is a lot of equipment and software that need to 'talk' to each other to help deliver quality care."
>
> **– Kurt Forsthoefel**

Says Gomez, "Interoperability can refer to connecting data between two devices, but connecting to the EMR is the most common scenario. EMR connectivity is not negotiable anymore. It's a requirement and a necessity. No practice should invest in a device today that cannot connect to their EMR. Even if they don't

The changing decision-maker

The consolidation of health systems and physician practices has changed equipment decision-making.

"It's no longer one person – traditionally the physician or office manager – making the decision," says Kurt Forsthoefel, director, medical marketing, Midmark. "There are now committees with decision-making processes. Each person on the committee has specific benefits, challenges, features and issues they are weighing to make a decision.

"Often, these decisions are no longer concerning a few pieces of equipment or furniture for one location," he says. "It's now many pieces of equipment for an entire network looking to standardize.

"The manufacturers and distributors who understand these changes and continue to evolve with the industry are the ones that will be successful in this new environment. While we must listen to our customers, it's also an opportunity to help educate them on how certain technology or equipment will positively impact their point-of-care ecosystem and allow them to provide quality care and impact clinical outcomes. This is especially important as the market shifts to value-based reimbursement models."

Garrison Gomez, senior director of vital signs and cardiopulmonary devices, Welch Allyn, says, "In many cases, the hospital supply chain is now involved in the purchase of equipment for ambulatory care offices. As a result, many hospitals now use GPO contracts to source equipment. Today, these two groups – hospital supply chain and GPOs – have much more prominent seats at the table than before.

"Welch Allyn continues to focus on helping our distribution partners succeed in the changing healthcare landscape. We organize our teams to provide expertise in ambulatory and acute care settings, and those teams collaborate every day to provide the best possible customer experience across the continuum of care.

Says Forsthoefel, now more than ever, manufacturers and distributors need to maintain an ongoing dialogue. "It's important that both parties understand the customers' challenges and the types of technology they need to provide quality care.

"At Midmark, our sales and marketing teams work closely with our partners to be able to adapt to changing customer needs, and it's absolutely vital to stay in close connection."

connect it today, they will almost definitely want to connect before the end of the device's life cycle. The investments they make today should support that reality."

Creating that "connected" environment isn't always easy.

"In ambulatory care, there is not yet an established standard for connectivity like there is in acute care with HL7," says Gomez. "Furthermore, the ambulatory care workflow isn't barcode-driven with wristbands, as it is in acute care. This can make patient-to-device association more challenging. It's why we work directly with more than 50 EMR partners to establish direct integrations and make it easy for end-users."

Says Forsthoefel, "As you better understand the point-of-care ecosystem and view it through the lens of a complex integrated system, you quickly realize just how disconnected much of the processes and equipment are. This disconnection creates barriers that can lead to inefficiencies, communication breakdowns and human error throughout the continuum of care. This can have a significant impact on the diagnosis and treatment of a patient.

"Standardization and consolidation of practices are also certainly challenges. Everyone may have a slightly different way of completing certain tasks, and the directive from an organizational level is usually to identify a common workflow or process. They need equipment that helps make standardization possible."

"Whenever you develop a new technology for the ambulatory environment it's also important for the manufacturer to consider how it fits into existing workflows and processes, or identify if a new process has to be created for the technology to be effectively used to its full potential," he says.

"For instance, it's one thing to introduce wireless auto-connecting to bring important data to the point of care. It's another thing entirely to ensure that physician interaction and discussion with patients is not negatively impacted by the placement of the laptop or tablet." rep

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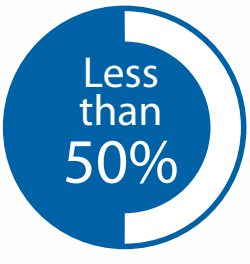

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[1] http://www.cdc.gov/visionhealth/basic_information/eye_disorders.htm:CDC - About Vision Health – Common Eye Disorders - Vision Health Initiative (VHI)

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Home is Where the Health is

Care transitions programs meet discharged patients in the home, to prevent readmissions and hasten a return to health

Healthcare providers have known for some time that patient out-comes are determined in large part by what happens outside the hospital – especially the home – not in it.

Today, given hospital-readmission penalties, bundled and episode-of-care payments, and concerns about population health, providers are addressing patients' post-acute-care issues with evidence-based "care transitions" programs. Rather than allowing recently discharged patients to fend for themselves, often with a poor understanding of how to care for themselves properly, providers meet with them prior to discharge, make a home visit or two, and promote self-management through education.

The need is great. Nearly one in five Medicare patients discharged from a hospital – approximately 2.6 million seniors – are readmitted within 30 days. Readmissions cost over $26 billion every year, says the Centers for Medicare & Medicaid Services. And that's not to mention the human suffering.

In 2012, the Centers for Medicare & Medicaid Services launched its Community-based Care Transitions Program (CCTP), a five-year demonstration project designed to study and measure the impact of transitional care arrangements on recently discharged patients. Criteria for inclusion in the program was Medicare-fee-for-service patients, 65 years of age or older, discharging home or to a skilled nursing facility, with an admission diagnosis of a chronic condition, such as congestive heart failure, acute myocardial infarction or pneumonia, with certain exclusions (dementia with no live-in caregiver, active addiction, or enrollment in Medicare hospice).

Community-based organizations have been about the task of reducing unnecessary readmissions for years, says Connie Benton Wolfe, president and CEO, Aging & In-Home Services of Northeast Indiana Inc. (AIHS), which participated in the CMS project. "Community-based organizations have a history of being in the home, assessing at-risk populations and of connecting those individuals to services across care settings – locally, regionally, and statewide," she says. "As our clients have transitioned from one care setting to another, for example, from the hospital to home, we have been there for them – reviewing medications, determining needs, arranging services, monitoring health status.

"Today, we use the term 'care transitions' in a more defined way, to refer to a set of services, now evidence-based, to achieve the specific outcome of reducing hospital readmissions," she says. "However, as we move forward in integrated care, we are adopting use of the term 'population health management' at the department level."

Patient education and self-management

In 2010, AIHS partnered with Parkview Health System's two Allen County hospitals on a Care Transitions pilot, explains Benton Wolfe. "The pilot came together quickly, as we were both focused on how health happens at home," she says. "Parkview was aware that a significant percentage of patient outcomes were determined by factors outside of the hospital setting, and AIHS – as a community-based organization – was and had always been in the home documenting social determinants of health, such as economic stability, neighborhood and home environment, community resources, and healthcare literacy."

With the experience and expertise gained in that pilot, AIHS successfully applied to CMS to become part of the Community-based Care Transitions Program. The project began in March 2013 and was renewed through the end of the program in January 2017.

In both the Parkview pilot, and the CMS program, AIHS followed the Coleman Care Transitions Intervention® method, explains Benton Wolfe. The evidence-based model focuses on patient education, goal-setting, primary care and specialist follow-up, medication self-management, and awareness of red flags.

"Today, we use the term 'care transitions' in a more defined way, to refer to a set of services, now evidence-based, to achieve the specific outcome of reducing hospital readmissions."

– Connie Benton Wolfe

The need for such intervention is clear, she says. Studies have shown that patients immediately forget 40 to 80 percent of medical information provided by healthcare practitioners. Of the information that is recalled, only about half is remembered correctly.

The CCTP program had a positive impact on 30-day hospital readmissions, says Benton Wolfe. AIHS formed a nationwide coalition of high-performing CCTP programs, who together served 254,225 individuals with an estimated net saving to Medicare of close to $87 million due to reduced readmissions, she says.

AIHS' own results on 15,730 individuals showed a 10.8 percent readmission rate at the end of the program versus a baseline rate of 17.7 percent. Parkview Health System was selected recently for inclusion in the Truven Health Analytics/IBM Watson Health "15 Top Health Systems for, 2017," and 30-day readmissions rate was one of the performance measures, she adds.

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Break the cycle of readmissions

Another participant in the CMS project was Sun Health Care Transitions, a program of Sun Health, an Arizona nonprofit serving the community of the West Valley of metropolitan Phoenix. It owns and operates three of the 14 Life Care retirement communities in Arizona, which offer independent housing options, and health and rehabilitation facilities.

Sun Health launched Care Transitions in November 2011 after analyzing the community need for this type of assistance, says Deb Richards, MSN, RN, director of Care Transitions. "Patients don't want to be in the hospital, and they don't want to return, either. We all want to be well, and Sun Health was determined to find a way to provide the community seniors a way to age in place as healthy as possible."

> "We found that by going to the patient's home, sometimes the real evaluation of needs is discovered."
>
> **– Deb Richards**

The Sun Health Care Transitions (SHCT) program focuses on supporting patients after hospitalization to self-manage their health conditions and break the cycle of readmissions. Sun Health partnered with Banner Boswell and Banner Del E. Webb medical centers during the five-year CMS project, employing the Coleman Care Transitions Program® model as its basis.

Sun Health nurses screened potentially eligible Medicare fee-for-service patients, then presented the program to selected patients and their loved ones while they were still in the hospital.

Sun Health modified the Coleman model based on the specific needs of its community, says Richards. For example, registered nurses – instead of non-clinical health coaches – made the initial home visits to the post-discharged patients. LPNs followed up by phone to review patients' progress and adherence to their action plan for recovery.

Sun Health insisted on a home visit, because "that's where the wealth of knowledge is," says Richards. Only in the home can the nurse sit down with the patient, engage them and ask open-ended questions. He or she can see how easy – or difficult – it is for the patient to move around in the house, or how much – or how little – comprehension the patient has of the discharge plan. "Being able to provide one-to-one education and care makes a great deal of difference, no matter what the health literacy level is." Based

The Medicare test for care transitions

Nearly one in five Medicare patients discharged from a hospital – approximately 2.6 million seniors – are readmitted within 30 days, at a cost of over $26 billion every year.

To address the issue, the Centers for Medicare & Medicaid Services – as part of the Affordable Care Act – launched the Community-based Care Transitions Program in February 2012. The program, which ran until January 2017, tested models for improving care transitions from the hospital to other settings, and reducing readmissions for high-risk Medicare beneficiaries.

Community-based organizations that participated in the program were required to provide care transition services across the continuum of care, including at least one of the following:

- Care transition services beginning no later than 24 hours prior to discharge.
- Timely and culturally and linguistically competent post-discharge education to patients so they understand potential additional health problems or a deteriorating condition.
- Timely interactions between patients and post-acute and outpatient providers.
- Patient-centered self-management support and information specific to the beneficiary's condition.
- Comprehensive medication review and management, including, if appropriate, counseling and self-management support.

Source: https://innovation.cms.gov/initiatives/CCTP/

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Center of Medicare and Medicaid Innovation Project (CMMI) on Reducing Unnecessary Hospitalizations in Nursing Home" – Charles A. Crecelius, MD, PhD, CMD; Clare I. Hays, MD, CMD; Arif Nazir, MD; Steven Phillips, MD

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A care transitions model

The Coleman Care Transitions Intervention® – used by a number of participants in the Centers for Medicare & Medical Services' Community-based Care Transitions Program – is a self-management model, which draws from principles of adult learning and uses simulation to facilitate skill transfer. As many patients are likely to experience another transition in the near future, the Care Transitions Intervention aims to address both the patient's current and future needs.

The program was developed by Eric Coleman, M.D., MPH, professor of medicine and head of the Division of Health Care Policy and Research at the University of Colorado Anschutz Medical Campus.

During a four-week program, comprising a home visit and three phone calls, patients with complex care needs and family caregivers receive specific tools and work with a Transitions Coach® to learn self-management skills that will ensure their needs are met during the transition from hospital to home.

"The Transitions Coach is key to encouraging the patient and family caregiver to assume a more active role in their care," according to the organization. "The Transitions Coach does not fix problems and does not provide skilled care. Rather, Transitions Coaches model and facilitate new behaviors, skill transfer, and communication strategies for patients and families to build confidence that they can successfully respond to common problems that arise during care transitions."

According to the organization, patients who underwent the Coleman program are:

- Significantly less likely to be readmitted to a hospital.
- Less likely to incur further high cost utilization.
- More likely to achieve self-identified personal goals around symptom management and functional recovery.

Furthermore, these findings are sustained for at least six months after working with the Transitions Coach®, says the organization.

Source: The Care Transitions Program®, www.caretransitions.org

on those observations, the nurse can modify the action plan or connect the patient with other resources, such as meal or transportation services.

Goal-setting was an important element of the program. "And those goals don't have to be monumental," says Richards. "It could be, 'By the end of the month, I want to be able to walk to the end of the block and back,' or something as simple as 'I want to go to my grandson's soccer game.' There's a sense of accomplishment."

For the nurses, the experience was very fulfilling, she adds. "We just had a patient call us about one of our nurses who had come to see her. She told us, 'Now I understand what atrial fib is all about, what is going on with my body, and why it's important to do certain things.'

"That's the kind of thing that means everything to our team – making a difference in someone's life."

Lessons learned

Sun Health participated in the CMS program from May 2013 through January 2017, when the demonstration program ended. Its readmission rate was 7.72 percent, which was lower than the national Medicare average of 17.8 percent. The program resulted in a 57-percent reduction in readmissions, with an estimated savings of $16 million. The program proved to be a tremendous learning experience for Richards and the Sun Health Care Transitions team, she says. "We would have monthly calls with other CCTP teams, and would come together in Baltimore once a year. Everyone shared their expertise and 'aha' moments."

Other lessons learned:

- The interaction at the hospital proved to be invaluable in regard to patient acceptance of the program.
- Having RNs perform the home visit was very important, because they were able to perform an assessment, identify urgent issues, and provide a medication review as well as medication education for the patient.

- Providing the education on patients' chronic disease helped them understand what was happening with their bodies and how to maintain or improve their current level of health.
- Home visits also proved invaluable in identifying the true issues (some medical, some psychosocial) that can affect someone's recovery and health status.

"Our biggest challenges would be poor discharges from the hospital, when all of the patient's needs are not identified and addressed," says Richards. "This is not always the hospital's fault. We found that by going to the patient's home, sometimes the real evaluation of needs is discovered."

Three simple questions

If a discharged patient "strongly agrees" with the following three questions, there's a good chance he or she will avoid being readmitted to the hospital unnecessarily. The questions form the basis of the Care Transitions Measure® from the Care Transitions Program®, www.caretransitions.org.

1. "The hospital staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left the hospital."

2. "When I left the hospital, I had a good understanding of the things I was responsible for in managing my health."

3. "When I left the hospital, I clearly understood the purpose for taking each of my medications."

Source: © Eric A. Coleman, M.D., MPH

What's next?

AIHS continues to work on care transitions with private insurance groups and a Medicaid managed care organization, and at press time was preparing to launch pilots for other payers in population health management, says Benton Wolfe.

"Beyond AIHS, I believe in the valuable role that care transitions, aka population health management, plays in improving health outcomes while lowering healthcare costs. I don't see the need diminishing for those type of results."

Sun Health Care Transitions is looking for partnerships with other hospitals, payers, accountable care organizations and others to leverage its expertise for the benefit of other patients, says Richards. "Our program has a proven 200 percent ROI," she adds. rep

After surgery, what?

For patients undergoing complex abdominal operations in the United States, poor transitions from the hospital to home contribute to hospital readmission rates ranging from 13 to 30 percent, reports the American College of Surgeons. To address this situation, a research team investigated the effectiveness of a phone-based transitional care program adapted to the needs of surgical patients. The researchers found the program was feasible for hospital staff to implement and provided a positive experience for patients, according to study results published in the *Journal of the American College of Surgeons*.

> "Patients were unbelievably happy to have someone whom they could reach directly on the phone and they didn't have to go through a phone tree."

Previously, physicians at William S. Middleton Memorial Veterans Hospital, Madison, Wisconsin, previously demonstrated that implementation of a transitional care program for hospitalized patients had led to a reduction in readmissions and cost savings. However, no evidence-based transitional care program existed for surgical patients, according to lead study author Sharon Weber, MD, FACS, professor and chief of the division of surgical oncology, department of surgery, University of Wisconsin School of Medicine and Public Health, Madison.

The needs of post-surgical patients differ from those of patients discharged with chronic medical conditions, she said. The latter typically have prior knowledge of their condition and how to treat it, whereas many surgical patients have no idea what to expect following discharge. "And today, there is a clear recognition of post-hospitalization syndrome," she said. "The patient is sleep-deprived, possibly on narcotics, and unable to think as clearly as usual. There is a realization that the education patients need in that post-operative period differ from what they need any other time in their life."

To implement the adapted surgical program, known as sC-TraC, University of Wisconsin Hospital hired nurses, who underwent five weeks of intensive training to prepare them to counsel patients on postoperative recovery. The pilot study was conducted from October 2015 through April 2016, and included 212 patients enrolled after complex abdominal procedures, defined as colorectal, hepatobiliary, or other gastric or small bowel resections.

The nurses met patients before they were discharged from the hospital, and then contacted them 24 to 72 hours after discharge. They focused on four areas:

- Medication reconciliation.
- Any symptoms that would warrant direct contact between the nurse and patient.
- Scheduling a follow-up appointment.
- Ensuring the patient had the nurse's contact information.

The nurses initiated phone calls every three to four days as needed. The program was completed once the patient and/or caregiver and the sC-TraC nurse mutually agreed that no further follow-up was needed, the patient had been discharged for six weeks, or the patient was readmitted to the hospital within 30 days after discharge, study authors wrote.

"Patients were unbelievably happy to have someone whom they could reach directly on the phone and they didn't have to go through a phone tree," said Weber.

Ninety-five percent of patients participated in the post-discharge protocol for at least one phone call. Seventy-two percent of them ended the program after mutual agreement that no further follow-up was necessary. A small percentage refused further follow-up or were readmitted to the hospital. Of all 212 patients, 17 percent were readmitted within 30 days of discharge.

Researchers also found that 46 percent of patients had medication reconciliations (meaning the patients weren't taking medications correctly) noted on the first phone call. Study authors said this finding was concerning, because it is the hospital's routine practice to have a pharmacist-led medication reconciliation before the patient leaves the hospital. "It reiterates that what we are providing at discharge in a routine way is not enough to meet patients' needs," Weber said.

"We clearly saw in the VA population this was a 'pro' from a cost perspective, because readmissions are so expensive, she said. "The other thing is this: Hospitals such as ours are constantly maxed out from a census perspective. If you have to turn away patients to accommodate those who have been readmitted, that's an opportunity cost."

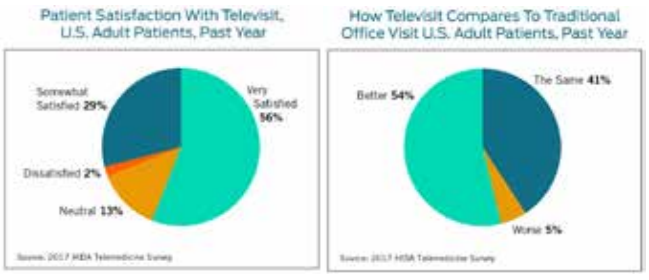
Still, further study of the cost-effectiveness of a post-surgical care-transitions program is needed, she said.

Satisfaction, Convenience to Drive Televisit Growth

There has been a lot of talk about how telemedicine could affect patients' relationships with doctors in the future. HIDA's latest research shows this field is taking off right now, and big changes are underway.

One in 10 patients report having a televisit with their primary care provider within the last year, and consumers are planning to increase these visits in 2017 at the expense of traditional office visits. The leading reason patients choose televisits is the convenience they offer and because they are highly satisfied with the experience. Compared to a traditional doctors' office visit, most patients say televisits offer the same quality of care at a reduced cost.

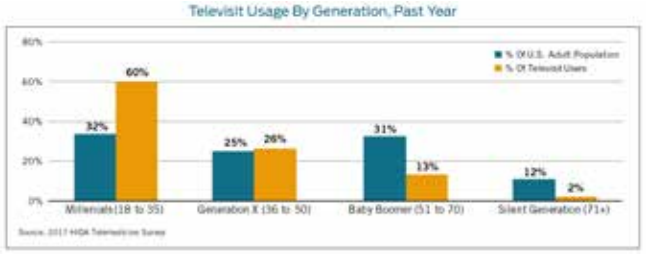
These are just some of the insights from the latest Horizon Report Telemedicine: Patient Perspectives. This report draws on a nationwide survey of over 1,000 patients on their experience with televisits. Below is a deeper look at our findings:



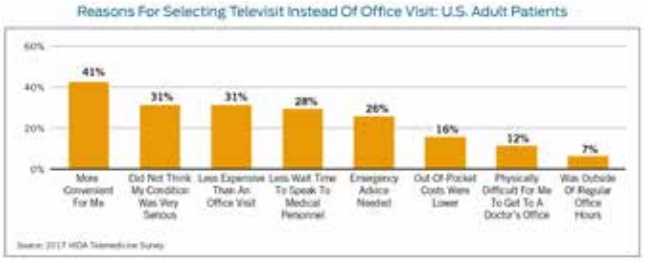
Most patients are upbeat on their recent televisits, with 85 percent reporting they are satisfied with their experience. Additionally, 54 percent report their televisits are better than traditional office visits.

Many respondents praise the convenience of the experience, adding they did not have to take time off from work for their visits or even leave their homes. One respondent described it as the "coolest service ever offered."

The majority of televisits are 50 years old or younger, with Millennials comprising 60 percent of televisits users.



One key reason patients use televisits is to save money, as 40 percent of patients 50 and under with high-deductible health plans used televisits, compared to 26 percent of patients with other types of insurance.



Patients say the top reason for using televisits is convenience. Even patients who currently do not use televisits identify it as a leading benefit. Nearly 30 percent said televisits offered shorter waiting times for speaking to medical personnel.

HIDA's research indicates that patients plan to increase their televisits in 2017, with a majority saying they plan to replace more than half of traditional office visits with televisits over the next three years. Additionally, offering televisits can increase total physician visits, according to an analysis from the RAND Corporation released earlier this year.

Conclusions from this report support our earlier findings that patients, particularly Millennials, are strongly motivated by quality and convenience. This new generation of patients also seeks providers who make visits convenient for them and offer ways to limit unnecessary visits.

Suppliers still play key role in driving patient satisfaction

HIDA's earlier Horizon Report *Patient Satisfaction: How Medical Products Improve Consumer Experience* showed how suppliers have a key role in helping providers improve patient satisfaction. This research revealed that patients want fast results and value up-to-date technology and equipment.

The ability to offer televisits is one key way your physician customers can impress Millennial consumers, since it uses modern technology and is more convenient to patients. Bear this in mind when helping your customers think of new ways to appeal to patients.

To access our telemedicine research, or any of our earlier Horizon Reports, visit www.HIDA.org/HorizonReport.

Ambulatory surgery centers: Unique services, unique needs, unique opportunity

Ambulatory surgery centers are a growing part of the U.S. healthcare system. They provide high-quality, same-day surgery efficiently and cost-effectively. Distributors who address their unique equipment and product needs will earn grateful customers and increased sales.

It has been 35 years –1982 – since Medicare first cov-ered and paid for surgical procedures provided in ambulatory surgery centers. In 2015, nearly 5,500 centers treated 3.4 million fee-for-service Medicare beneficiaries in 2015. The number of ASCs increased 81 percent between 2000 to 2015. And Medicare program and beneficiary spending on ASC services in 2015 was about $4.1 billion.[1]

Private payers and patients have recognized the efficiency and quality of ambulatory surgery centers too. A review of commercial medical-claims data found that U.S. healthcare costs are reduced by more than $38 billion per year due to the availability of ambulatory surgery centers. More than $5 billion of the cost reduction accrues to the patient through lower deductible and coinsurance payments.[2]

The right equipment

Three years ago, one study reported that procedures performed in ambulatory surgery centers are more efficient, taking 25 percent less time than those performed in hospitals.[3] This efficiency, and corresponding cost-effectiveness, is due largely to ambulatory surgery centers' focus on a limited number of procedures, a vital owner/operator culture, a specialized nursing and support staff – and equipment specially suited for the ambulatory surgery setting.

DUKAL's Tech-Med division, for example, has developed an oversized, cost-efficient instrument stand to address the unique needs – and budgets – of ambulatory surgery centers. The #4366 model allows the user to have 30 percent more space, and is made to the same specifications as the corresponding hospital product, at less than half the price.

The ambulatory surgery center segment continues to grow. New facilities are being built every day. Distributors can promote efficient setups by offering a facility layout formulary, which can be duplicated for each new build.

Ambulatory surgery centers: By the numbers

- Medicare provides separate payments for 3,400 surgical procedures under the ASC payment system.
- In 2015, there were more than 16,000 ORs in ambulatory surgery centers, or an average of three per facility.
- Most Medicare-certified ASCs in 2015 were for-profit (94 percent), urban (93 percent), and located off a hospital campus (99 percent).
- Sixty-one percent of ASCs in 2015 were single-specialty facilities. Twenty-two percent specialized in gastroenterology, and another 22 percent specialized in ophthalmology.
- Physicians who invest in ASCs and perform surgeries there can increase their revenue by receiving a share of ASC facility payments. The federal anti-self-referral law (also known as the Stark Law) does not apply to ASC services.

Source: *Report to the Congress: Medicare Payment Policy, Medicare Payment Advisory Commission, March 2017 (http://medpac.gov/docs/default-source/reports/mar17_entirereport.pdf)*

Tech-Med offers numerous products to help make this process easy and efficient.

From eye charts to blood draw chairs to alcohol bottles, DUKAL can make sure your ASC customers have high-quality products and equipment, a consistent brand, at the right price, delivered at the right time. The DUKAL sales team, customer service, and product managers are ready to answer your questions, work on new product opportunities, and listen to your comments. rep

Type of ASC	Number of ASCs	Share of all ASCs
Single specialty	2,878	61%
Gastroenterology	1,027	22
Ophthalmology	1,020	22
Pain management	355	8
Dermatology	191	4
Urology	124	3
Podiatry	95	2
Orthopedics/musculoskeletal	23	0
Respiratory	16	0
Cardiology	10	0
OB/GYN	9	0
Neurology	5	0
Other	3	0
Multispecialty	1,802	39
More than 2 specialties	1,421	30
Pain management and neurology/orthopedics	221	5
Gastroenterology and ophthalmology	160	3
Total	4,680	100

Note: ASC (ambulatory surgery centers), OB/GYN (obstetrics and gynecology). "Single-specialty ASCs" are defined as those with more than 67 percent of their Medicare claims in one clinical specialty. "Multispecialty ASCs" are defined as those with more than 67 percent of their Medicare claims in more than one clinical specialty. ASCs included in this analysis are limited to those in the 50 states and the District of Columbia with a paid Medicare claim in 2015.

Specialization of ASCs, 2015. (Source: MedPAC analysis of Medicare carrier file claims, 2015)

Distributors can open a discussion with ASC operators about DUKAL Tech-Med Mayo stands with questions such as these:

- What size instrument stand do you currently use?
- Are you performing more complicated procedures, requiring more space, than you did just a few years ago?
- What challenges do you or your staff face with the your current stands?
- Would a larger surface area allow you to more effectively stage your procedures?
- Could standardizing to a larger instrument stand reduce duplication and provide a more "all-in-one" solution?
- Is the long-term durability of your stands important to reducing the total cost of ownership?
- Are you satisfied with the quality of the trays that are currently supplied by your current instrument stand supplier? (Tech-Med's trays are made in a surgical stainless steel manufacturing facility.)
- Would a larger tray be beneficial when suturing, or providing treatments – i.e., nebulizer treatments – to patients?
- Can you use an oversized stand for other specialties, such as plastic surgery, orthopedic surgery or OB-GYN?

Volume of ASC services per FFS beneficiary increased in 2015

	2010	2011	2012	2013 (actual)	2013* (adjusted)	2014	2015
Volume of services (in millions)	6.5	6.7	6.9	6.9	6.3*	6.2	6.4
Volume per 1,000 FFS beneficiaries	202.6	206.1	209.2	210.3	189.6*	187.8	191.2
Percent change in volume per FFS beneficiary from previous year	1.7%	1.7%	1.5%	0.5%	N/A	–0.9%	1.8%

Note: ASC (ambulatory surgical center), FFS (fee-for-service), N/A (not applicable).
*The adjusted 2013 values reflect adjustments we made to the larger actual values for 2013. The adjusted 2013 values reflect policies established in 2014 that changed the status of many services that had been separately payable in 2013 to packaged with another service in 2014. The purpose is to make the method for counting services in 2013 consistent with the method for counting services in 2014 and 2015.

The 20 most frequently provided ASC services in 2015 were similar to those provided in 2010 (Source: MedPAC analysis of physician/supplier standard analytic files, 2010 and 2015)

1. Report to the Congress: Medicare Payment Policy, Medicare Payment Advisory Commission, March 2017 (http://medpac.gov/docs/default-source/reports/mar17_entirereport.pdf)
2. Commercial Insurance Cost Savings in ASCs, Ambulatory Surgery Center Association, June 2016 (http://www.ascassociation.org/advancingsurgicalcare/reducinghealthcarecosts/costsavings/healthcarebluebookstudy)
3. Munnich, E. L., & Parente, S. T. (2014). Procedures Take Less Time At Ambulatory Surgery Centers, Keeping Costs Down And Ability To Meet Demand Up. Health Affairs, 33(5), 764-769.

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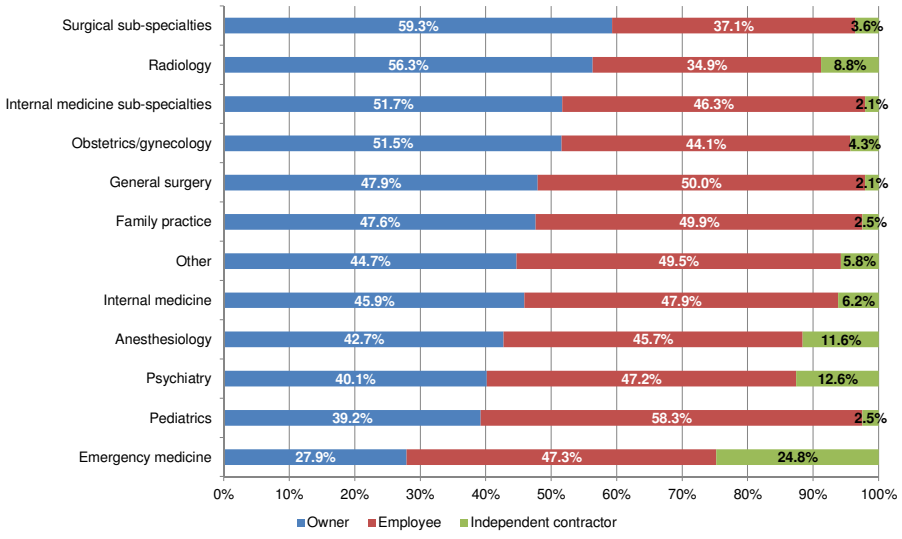
No Longer the Majority

AMA study reveals that physician practice owners fell below a majority portion of nation's patient care physicians

Less than half of patient care physicians have an own-ership stake in their medical practice, according to an updated study on physician practice arrangements by the American Medical Association (AMA). This marks the first time that physician practice owners fell below a majority portion of the nation's patient care physicians since the AMA began documenting practice arrangement trends.

Distribution of Physicians by Ownership Status, Specialty-Level Results (2016). AMA: Policy Research Perspectives.



Source: Author's analysis of AMA 2016 Physician Practice Benchmark Survey.

The share of patient care physicians with ownership stakes in a medical practice declined 6 percentage points to 47.1 percent in 2016 from 53.2 percent in 2012. In contrast, the share of patient care physicians with employed positions increased about 5 percentage points to 47.1 percent in 2016 from 41.8 percent in 2012. As a result, there were equal shares of physician employees and physician practice owners in 2016, while 5.9 percent of patient care physicians were independent contractors.

The share of patient care physicians with ownership stakes in a medical practice declined 6 percentage points to 47.1 percent in 2016 from 53.2 percent in 2012.

The preference of younger physicians toward employed positions has had a prominent impact, according to the AMA. Nearly two-thirds (65.1 percent) of physicians under age 40 were employees in 2016, compared to 51.3 percent in 2012. The share of employees among physicians age 40 and older also increased between 2012 and 2016, but at a more modest pace than younger physicians.

Whether physicians are owners, employees, or independent contractors varied widely across medical specialties in 2016. The surgical sub-specialties had the highest share of owners (59.3 percent) followed by radiology (56.3 percent). Emergency medicine had the lowest share of owners (27.9 percent) and the highest share of independent contractors (24.8 percent). Pediatrics was the specialty with the highest share of employed physicians (58.3 percent).

While the majority of patient care physicians (55.8 percent) worked in medical practices that were wholly owned by physicians in 2016, this majority decreased from 60.1 percent in 2012. Although this share is more than 4 percentage points lower than that of 2012, most of this change occurred between 2012 and 2014. Physician movement toward hospital-owned practices and direct hospital employment appears to have slowed since 2014. The share of physicians who worked directly for a hospital, or in practices with at least some hospital ownership, was the same in 2014 and 2016 – 32.8 percent.

Most physicians (57.8 percent) remain in small practices of 10 or fewer physicians. However, signs point to a gradual shift toward larger practices. In 2016, 13.8 percent of physicians were working in practices with 50 or more physicians compared to 12.2 percent in 2012.

To view the complete AMA report, go to www.ama-assn.org/sites/default/files/media-browser/public/health-policy/PRP-2016-physician-benchmark-survey.pdf

Studies show 71% of C. difficile infections are associated with exposure to outpatient settings

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Retail Clinics: Two Points of View

Retail clinics are a growing part of today's healthcare delivery system. On that point, the American Medical Association and the Convenient Care Association (which represents retail health clinics) agree. But they differ in just how important – and independent of physicians – those clinics should be. Those differences became apparent this summer.

Meeting at the 2017 AMA Annual Meeting in June in Chicago, the AMA House of Delegates affirmed that retail health clinics "have been playing a steadily growing role in healthcare."

But delegates also warned that the clinics should not "expand their scope of services beyond minor acute illnesses," such as sore throat, common cold, flu symptoms, cough, sinus infection or others. They also said that retail clinics should:

- Avoid offering services such as infusions or injections of biologics.
- Have a "well defined and limited scope of clinical services."
- List the services they offer as well as the qualifications of the onsite health professionals before providing care.
- Use local physicians as medical directors or supervisors of retail clinics.

They added that such clinics should:

- Help patients who lack a primary care physician or usual source of care to identify one in the community.
- Use electronic health records to transfer a patient's medical records to his or her primary care physician and to other healthcare providers, with the patient's consent.

- Produce patient visit summaries, which are transferred to the appropriate physicians and other healthcare providers in a meaningful format that prominently highlights salient patient information.
- Work with primary care physicians and medical homes to support continuity of care and ensure provisions for appropriate follow-up care are made.

'Complementary role'

In a written response to the AMA's statement, Convenient Care Association Executive Director Tine Hansen-Turton said, "Convenient care clinics can play a complementary and access-enhancing role with respect to the delivery of chronic care.

"[R]etail clinics fill a gap that would otherwise be filled by costly and unnecessary emergency room visits," she said. "Patients who do not have a primary care provider are educated about the importance of such a relationship, provided with a list of primary care providers in the area, and encouraged to establish a relationship with a primary care provider.

"For patients with chronic conditions, compliance with treatment and medication regimes is critical to long-term health, and CCA members believe that [retail clinics] can serve as a valuable partner to the [primary care physician] and Patient Centered Medical Home (PCMH) community in the treatment of these patients," said Hansen-Turton. CCA cited three reasons why retail clinics are well-suited for the task: guidelines-based care; commitment to collaboration and data-exchange with primary care physicians; and convenient, community-based locations and extended hours.

The first retail clinics opened at the turn of the millennium. The AMA estimates more than 2,800 clinics will be in operation this year, but the Convenient Care Association pegs the number closer to 2,300.

Hansen-Turton added:

- Convenient care clinics already use electronic health records "to ensure high-quality healthcare and monitor evidence-based practice performance. Indeed, there was widespread use of EHRs in CCCs well before it became even moderately accepted by most primary care physician offices."
- Members of the Convenient Care Association pledge to "provide access to the visit record, written discharge instructions and educational materials to patients upon leaving the clinic to ensure that patients understand any diagnosis made, recommended treatment and care plans."
- Retail clinics in CCA pledge to "encourag[e] patients to establish an ongoing relationship with a primary care provider, and to mak[e] appropriate and careful referrals for follow-on care and/or for conditions that are outside of the scope of the clinic's services."
- CCA members pledge to "build collegial relationships with the traditional healthcare system and its providers, to share patient information as appropriate and ensure continuity of care.

"[R]etail clinics fill a gap that would otherwise be filled by costly and unnecessary emergency room visits. Patients who do not have a primary care provider are educated about the importance of such a relationship, provided with a list of primary care providers in the area, and encouraged to establish a relationship with a primary care provider."

– Tine Hansen-Turton, Convenient Care Association Executive Director

All patients are given the option of sharing their healthcare record with other providers."
- Convenient care clinic providers agree to "adhere to evidence-based protocols that adhere to established clinical practice guidelines and regulations.

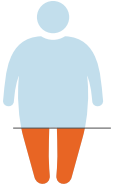
"CCCs are not operating off of standing orders, but rather employ educated professionals who make decisions based on evidence-based practices as well as individual patient needs," said Hansen-Turton. "Moreover, studies have demonstrated that retail clinics have excellent clinical quality outcomes, adhere to evidence-based guidelines, and provide cost-effective care.

"Many CCCs already work collaboratively with multiple large health systems and physician groups, providing ongoing monitoring and care for patients with chronic disease."

Understanding and Addressing the Costs of Vital Signs Acquisition

What's influencing ambulatory care today?

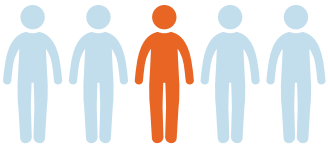
EVOLVING PATIENT DEMOGRAPHICS



36.5%
Number of U.S. adults who are obese.[1]

Obesity costs the United States $147B to $210B per year.[1]

Patients over the age of 65 have twice as many ambulatory office visits per year.[1]



1/5 Number of U.S. adults with a disability.[2]

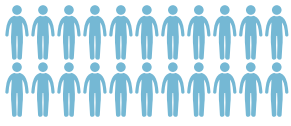
CHANGING LANDSCAPE

86% Increase

in hospital ownership of physician practices from 2012-2015, creating a deluge of disparate processes and opportunities for standardization.[3]

MORE PATIENTS

22 million adults entered the healthcare system with the passing of the Affordable Care Act.[4]



10,000
people reach retirement age each day in the U.S. and begin making more office visits each year.[5]

Sources:
[1] Obesity statistics: https://www.cdc.gov/obesity/data/adult.html; https://nccd.cdc.gov/NPAO_DTM/LocationSummary.aspx?statecode=94
[2] Disability statistic: https://www.cdc.gov/ncbddd/disabilityandhealth/infographic-disability-impacts-all.html
[3] Hospital ownership statistic: http://www.modernhealthcare.com/article/20160907/NEWS/160909936
[4] Adults with medical coverage statistic: The Advisory Board Company interviews and analysis
[5] Baby boomer statistic: https://www.washingtonpost.com/news/fact-checker/wp/2014/07/24/do-10000-baby-boomers-retire-every-day/?utm_term=.60b8a346f810
[6] Vitals acquisition statistics: https://my.midmark.com/docs/default-source/marketing-collateral/ihi_storyboard_poster-17x11-final.pdf?sfvrsn=2
[7] Error rate statistic: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2409998/
[8] Wasted time statistic: https://my.midmark.com/docs/default-source/marketing-collateral/ihi_storyboard_poster-17x11-final.pdf?sfvrsn=2
[9] Experience of a Midmark customer

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What's the actual cost of variability?

As providers are dealing with a changing landscape and diverse patient needs, some costs may go unnoticed.

Take nonstandardized, manual vitals acquisition:

Increased patient cycle time

1.6X

More time required to gather vitals in a traditional workflow than one that integrates vitals acquisition at the point of care.[6]

Decreased staff efficiency

5%

Time wasted by each medical assistant.[6]

Variations in manual techniques

125/70
VS.
140/90

One patient's blood pressure readings manually taken within moments of one another.[9]

Greater risk for error

6.5%

Rate of data entry errors with manual transcription.[7]

Wasted time alone equates to about $1,600 per year per medical assistant.[8]

What's the solution?

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0 Number of cables or clicks required to connect the IQvitals Zone monitor to a computer or tablet.

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69 Number of seconds saved per patient by automating vitals acquisition.[6]

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How is Our Health?

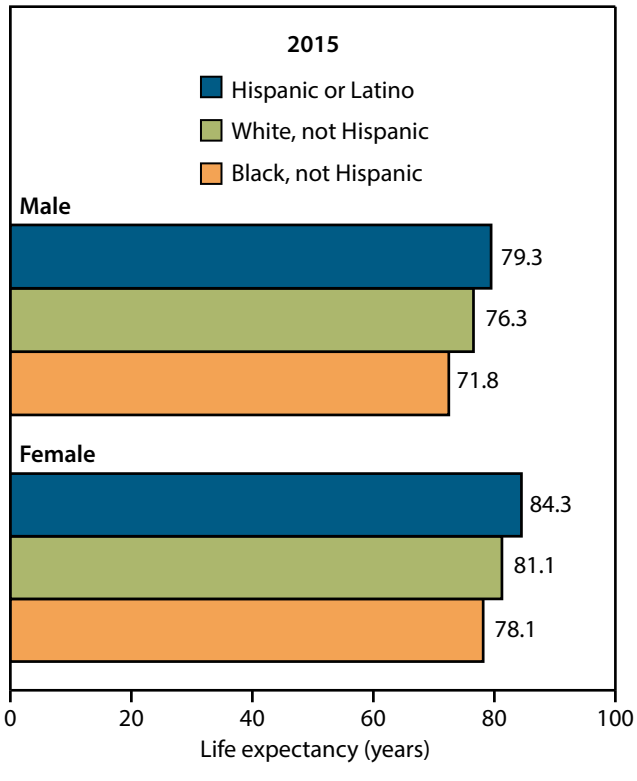
Not bad, says CDC

Deaths from heart disease, cancer, chronic lower respira-tory diseases, stroke and Alzheimer's are down, but deaths from unintentional injury and suicide are up. The incidence of hypercholesterolemia, obesity and diabetes are up, but so is the percentage of Americans engaged in aerobic activity and muscle-strengthening. One more spot of good news: Cigarette smoking continues a downward trend.

Among the highlights of the Centers for Disease Control and Prevention's 40th annual report on the health of the nation:

- Between 1975 and 2015, life expectancy increased for the total population. However, between 2014 and 2015, life expectancy declined by 0.1 years for the total population – 0.2 for males, and 0.1 for females.

Life expectancy at birth, by sex, race and HIspanic origin: United States, 1975-2015



Source: NCHS, National Vital Statistics System (NVSS).

- The infant mortality rate decreased 63 percent, from 16.07 to 5.90 deaths per 1,000 live births between 1975 and 2015.

- Heart disease and cancer remain the top two causes of death in the United States. However, between 1975 and 2015, the age-adjusted heart disease death rate decreased 61 percent, from 431.2 to 168.5 deaths per 100,000 population. The age-adjusted cancer death rate decreased 21 percent, from 200.1 to 158.5 deaths per 100,000 population.

Between 1975 and 2014, the number of community hospital beds per 1,000 resident population fell by almost one-half, from 4.6 to 2.5.

- Between 1974 and 2015, the age-adjusted prevalence of current cigarette smoking declined from 36.9 percent to 15.6 percent among persons aged 25 and over.

- The age-adjusted percentage of adults aged 20 and over with obesity increased steadily, from 22.9 percent in 1988–1994 to 37.8 percent in 2013–2014.

- Prescription drug use increased for all age groups between 1988-94 and 2013-14. Among adults 65 and over, use of five or more prescription drugs in the past 30 days increased from 13.8 percent to 42.2 percent during the same period.

- The percentage of persons with an overnight hospital stay was lower in 2015 than in 1975 for males and females under age 75, but was not significantly

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different in 2015 than in 1975 for males and females aged 75 and over.

- Between 1975 and 2014, the number of community hospital beds per 1,000 resident population fell by almost one-half, from 4.6 to 2.5. The average length-of-stay per hospital stay fell by almost one-third, from 7.7 to 5.5 days, and occupancy rates declined almost 16 percent, from 75 percent to 62.8 percent.

Personal spending

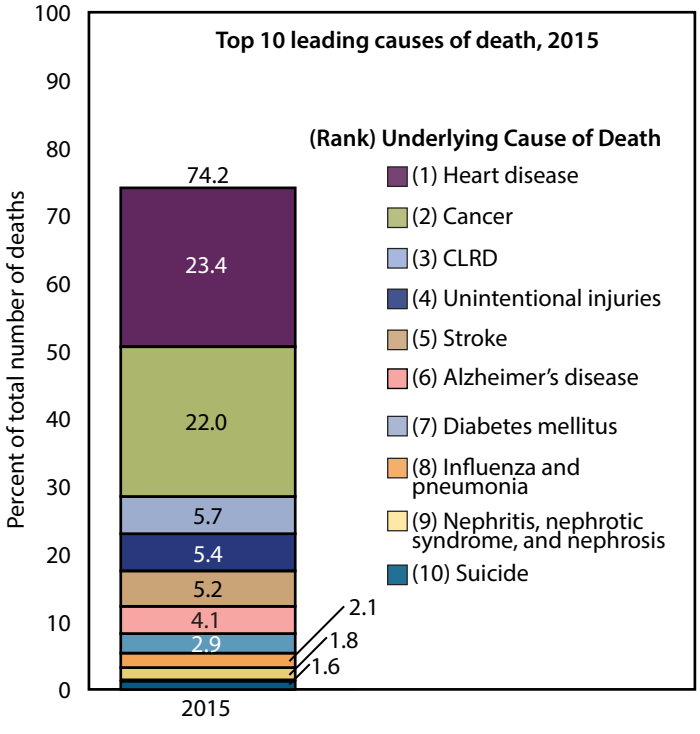
Between 1975 and 2015, the share of personal health care expenditures paid for:

- *Hospital care* decreased from 45.3 percent to 38.1 percent.
- *Physician and clinical services* remained the same, at about one quarter (22.4 percent–23.4 percent).
- *Nursing care facilities and continuing care retirement communities* decreased, from 7.1 percent to 5.8 percent.
- Home health care increased from 0.5 percent to 3.3 percent.
- *Dental services* decreased from 7.1 percent to 4.3 percent;
- *Prescription drugs* increased from 7.1 percent to 11.9 percent;
- *Other types of care* increased from 10.6 percent to 13.2 percent.

Between 1978 and September 2016 (preliminary data), the percentage of children under age 18 who were uninsured decreased from 12 percent to 5 percent; the percentage with Medicaid coverage increased from 11.3 percent to 39.2 percent; and the percentage with private coverage decreased from 75.1 percent to 53.5 percent.

Between 1975 and 2015, the age-adjusted heart disease death rate decreased 61 percent, from 431.2 to 168.5 deaths per 100,000 population. The age-adjusted cancer death rate decreased 21 percent, from 200.1 to 158.5 deaths per 100,000 population.

Leading causes of death in 1975 and 2015: United States, 1975-2015



Source: NCHS, National Vital Statistics System (NVSS).

U.S. population changes

These trends in health and healthcare have occurred alongside changes in the demographic characteristics of the U.S. population:

- The U.S. population grew older between 1975 and 2015, as the number of Americans 65 and over increased from 22.6 million to 47.8 million.
- The U.S. population became more diverse. In 1980, 20.1 percent of the population were racial or ethnic minorities; by 2015, 38.4 percent of the population identified as racial or ethnic minorities.
- During 1975-2015, the percent of children under age 18 living in poverty reached a high of 22.7 percent in 1993, declined to 16.2 percent in 2000, rose to 22 percent in 2010, and then declined to 19.7 percent in 2015.
- The rural (nonmetropolitan) share of the population declined between 1970 and 2015; the suburban share of the population increased.

The full report – Health, United States, 2016 – is available at https://www.cdc.gov/nchs/hus/.

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FDA Balancing Act with Health-Related Apps

Quandary: How to ensure safety and effectiveness without stifling innovation

With some 165,000 health-related apps available for Apple or Android smartphones, the U.S. Food and Drug Administration has its hands full ensuring that they – and other digital health innovations – are safe and effective. In a newly unveiled "Digital Health Innovation Plan," FDA Commissioner Scott Gottlieb, M.D. suggested how the agency intends to encourage safe and effective innovation without stifling new technology.

Innovative digital technologies have the power to transform healthcare in many ways, said Gottlieb in a recent blog:

- Empower consumers to make more and better decisions every day about their own health through fitness, nutrition and wellness monitoring.
- Enable better clinical practice and decision-making through decision-support software, to help providers make accurate diagnoses and develop treatment options.
- Help address public health crises, such as the opioid epidemic that is affecting many American communities.

"To encourage innovation, FDA should carry out its mission to protect and promote the public health through policies that are clear enough for developers to apply them on their own, without having to seek out, on a case-by-case basis, FDA's position on every individual technological change or iterative software development," he said.

Congress has already taken a major step to advance these goals in the 21st Century Cures Act, Gottlieb said. Expanding upon policies advanced by FDA's Center for Devices and Radiological Health (CDRH), the Act revised FDA's governing statute to make clear that certain digital health technologies – such as clinical administrative support software and mobile apps that are intended only for maintaining or encouraging a healthy lifestyle – fall outside the scope of FDA regulation. Such technologies tend to pose low risk to patients but can provide great value to the healthcare system, said Gottlieb.

"FDA will provide guidance to clarify our position on products that contain multiple software functions, where some fall outside the scope of FDA regulation, but others do not," he said. "In addition, FDA

will provide new guidance on other technologies that, although not addressed in the 21st Century Cures Act, present low enough risks that FDA does not intend to subject them to certain premarket regulatory requirements. Greater certainty regarding what types of digital health technology is subject to regulation and regarding FDA's compliance policies will not only help foster innovation, but also will help the agency devote more resources to higher risk priorities."

The FDA is also considering whether and how it can create a third-party certification program under which lower-risk digital health products could be marketed without FDA premarket review, and higher-risk products could be marketed with a streamlined FDA premarket review, Gottlieb said. "Certification could be used to assess, for example, whether a company consistently and reliably engages in high-quality software design and testing (validation) and ongoing maintenance of its software products. Employing a unique precertification program for software as a medical device (SaMD) could reduce the time and cost of market entry for digital health technologies.

The FDA is considering whether and how it can create a third-party certification program under which lower-risk digital health products could be marketed without FDA premarket review, and higher-risk products could be marketed with a streamlined FDA premarket review

"In addition, post-market collection of real-world data might be able to be used to support new and evolving product functions. rep

Can America Compete?

Medical device makers weigh the costs and benefits of building in the USA

The present and future state of American manufacturing is a hot topic for discussion. Witness the last presidential campaign. In anticipation of Labor Day 2017, *Repertoire* asked executives from three medical companies that manufacture products in the United States to share their thoughts about the challenges and opportunities of doing so. They were:

- Jonathan Sabo, vice president of marketing, DETECTO.
- Ken Harris, vice president, sales and marketing, Health-o-meter.
- Harold Chan, vice president, IVD, R&D and manufacturing, Sekisui Diagnostics.

***Repertoire*: What are the greatest challenges facing companies that make medical products in the United States?**

Jonathan Sabo: We face a lot of competition from overseas manufacturers that attempt to undersell based on price. Most DETECTO products are made in the USA of American and foreign components at our factory in Webb City, Mo., so our production standards are different here than would be employed in Asia and developing countries. Because we fight against lower-cost medical products made overseas on a daily basis, we have to combat that with intelligent engineering that incorporates state-of-the-art, next-generation features in our products, like sonar height rods in our physician scales or ultra-low platforms in our wheelchair scales. We have to harness better technology to produce products that are unlike anything else on the market.

In the medical industry, lower cost isn't always the distinguishing factor it might be in other industries, so that's one reason why DETECTO has been able to stay highly competitive over the years. Consumers don't always naturally gravitate to the cheapest-cost product in the medical industry, especially products used on children, such as our baby scales with weighing trays and stand-on patient scales.

Ken Harris: We make products all over the world. At the end of the day, those products have to meet our customers' needs. Those needs are wide and deep, and they cover a spectrum of topics. Healthcare has an incredibly limited amount of resources. Every dollar that our customers save can be allocated to treating patients. Some say, "We want 'made in the USA.'" We understand that. But if "made in the USA" drives costs up, that may be in direct conflict with the customer's need to control spending. So we work with them on balancing their priorities.

Years ago, I read a book whose author showed that a cheap supply of labor isn't the only factor that drives manufacturing to particular parts of the world. It's the ancillary support mechanisms as well. For example, when electronics moved to Asia, it wasn't just chip makers, but screw manufacturers, glass manufacturers, injection moulding suppliers. We see some of that coming back to the United States. In our case, as in the case of the iPhone and other products, regardless of where our products are assembled, all of our scales are designed, engineered and supported by our U.S.-based employees; the actual assembly is not the largest part of our overall costs.

Also, while labor costs clearly do matter, supply chain costs do, too, especially for sophisticated equipment. Shipping parts, equipment or finished goods around the world is a cost that has to be considered.

Harold Chan: Producing in the United States does have its challenge. Probably the single biggest one is the labor cost. As product matures, companies tend to move overseas for lower cost labor.

***Repertoire*: One publication described the so-called "Fourth Industrial Revolution," sometimes referred to as Industry 4.0, as "a catch-all term for talking about the integration of smart, internet-connected machines and human labor." Are you seeing indications of the Fourth Industrial Revolution, the "smart factory," or the "Internet of Things" in your manufacturing systems?**

Jonathan Sabo: IoT devices are very much a part of life at DETECTO, and we utilize IoT machinery in our manufacturing for real-time efficiency reporting. Each time we replace production equipment with the newest generation, the equipment becomes smarter and more connected. We're also developing IoT scales in the future for the industrial market and other sectors, so that our customers can view real-time diagnostics on the equipment they use. Consumers now have higher expectations for the products they purchase and use every day. Real-time data reporting on those products is simply a part of life now.

Ken Harris: Like a lot of revolutions, every industry has to consider, "Is this making my product more efficient to make and cheaper for my customers to use?" I've been in manufacturing since 1980, and I have watched companies implement the "next thing" before it is clear whether it adds value for the customer. The only thing that matters is, "Can this technology help us make products that are better to use or cheaper to make?" So, the Internet of Things may actually provide little function for our users, and end up adding cost rather than taking it away.

> "Because we fight against lower-cost medical products made overseas on a daily basis, we have to combat that with intelligent engineering."
>
> **– Jonathan Sabo**

Harold Chan: As we scale and introduce new manufacturing systems, we have the "smart factory" in mind and have incorporated design elements to meet those new requirements. We have also introduced new platforms that allow us to connect to existing manufacturing equipment, which then provides real time, actionable information. This will help us with on-time delivery to our customers as well as further improvement to already good product quality.

Repertoire: **What is the future of "additive manufacturing," or 3D printing, in the medical products industry?**

Jonathan Sabo: At DETECTO, we use 3D printing often for our engineering prototypes, so research-and-development personnel can see how parts work together within a new product design. 3D models also allow product managers to see and feel the product design and make critical changes before more concrete prototypes are manufactured. It has become a part of our standard R&D workflow to develop 3D-printed prototypes for review within the design stages of a new product.

Ken Harris: I think 3D printing will be a transformational technology in every industry, including the medical business. But I will go back to what I said earlier: All of these technologies matter only if they create value at some level for someone. NASA has figured out that with 3D printing, astronauts can build necessary wrenches while in space, rather than carrying multiple wrenches with them. It makes for a lighter payload. And if we don't have to make parts until we absolutely need them, we will drive down supply chain costs. But at some point, the cost of making 3D parts may exceed the value. The market will have to tell us how to balance those two things.

> "The only thing that matters is, 'Can this technology help us make products that are better to use or cheaper to make?'"
>
> **– Ken Harris**

Repertoire: **Last year, the Guardian newspaper wrote, "Customer experience encompasses a number of things, customer service being one of them. But essentially it is any interaction a consumer has with an organization, and the perception of how a company treats them. Ultimately, a positive customer experience leads to customer satisfaction and loyalty, which results in customer retention as well as increasing cross-selling and up-selling opportunities." Would you agree? If so, how is this exhibiting itself in the U.S. medical marketplace, and how is your company responding?**

Jonathan Sabo: Yes, we find this very much to be true. This fact influences how we go about our daily customer service experience. When a customer interacts with DETECTO, all of our customer service and sales, technical support, and aftermarket parts orders are handled through our factory in Webb City, Mo., where those personnel are highly trained in how best to treat a customer, so they have fluid communication and feedback from us at the factory. We view everything the customer sees and touches about DETECTO as highly critical for how they shape their opinion of our brand, from our websites, catalogs, and advertisements to our exhibitions at clinical trade shows and videos showcasing our products. We want the customer experience with DETECTO to be not only positive, but one of the highlights of the day for our customers.

By taking care of our customers properly since the company was founded in 1900, DETECTO has earned a reputation for quality and good customer care. This, in turn, leads to cross-selling and up-selling opportunities. I think you'll find, especially in recent years, that DETECTO has diversified itself well beyond just being a "scale company," with our product offerings in waste receptacles, glove box holders, medical carts, stadiometers, and the HealthySole UVC disinfection device.

Ken Harris: We all have to create a customer experience that causes people to want to use our products again and again. I think that where you manufacture something can affect a customer's experience, but that's just one component. You also have to consider other things, like how you service it. In all aspects, a total customer experience drives loyalty and satisfaction completely. You want to buy from companies who give you the experience that helps you meet your goal. All companies strive to do that, though we approach it differently. We focus on ensuring that we not only have excellent products for our customers, but that we also make the acquisition and use of our products as easy and simple as possible at all times. rep

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Distributors Converge on Capitol Hill to Talk Supply Chain

By Linda Rouse O'Neill, Vice President, Government Affairs, HIDA

In June, HIDA hosted more than 85 leading distributor and manufacturer executives at its fourth annual Washington Summit. During this event, 72 attendees took part in 120 meetings with members of Congress and their staff, a new HIDA record.

Once again, HIDA staff and members were reminded of the powerful changes that can be accomplished through focused advocacy efforts. Participants met with members and staff of the Senate Finance and HELP (Health, Education, Labor, and Pensions) Committees, as well as the House Ways and Means and Energy and Commerce Committees. Meetings focused on key healthcare supply chain issues, including pandemic/emergency preparedness, wholesaler licensing standards, competitive bidding, and the medical device tax.

Preparing for pandemics/ emergency public health events

In their meetings on Capitol Hill, participants educated policymakers on the critical role the supply chain plays in public health events from Ebola and H1N1 to Hurricane Sandy and the Boston Marathon bombing. They explained to lawmakers that the healthcare supply chain is extremely lean, so that ongoing efforts are needed to ensure greater elasticity when epidemics occur that strain available inventories.

This is an important effort as the Pandemic and All Hazards Preparedness Act (PAHPRA), which includes numerous public health programs and federal initiatives in to improve preparedness, is up for reauthorization next year. HIDA is asking that the PAHPRA Reauthorization direct HHS through the Strategic National Stockpile to create a commercial "cushion" of key products for preparedness through a private-public partnership. Implementing a product inventory process that determines need, what the commercial market can support, and identifies gaps is necessary to ensure continuity.

From left to right: Rep. Leonard Lance (R-NJ) meets with Emily Berlin, Cardinal Health; Dana Frank, Concordance Healthcare Solutions; Christine Skok, PDI; Leonard Swedarsky, Roche; and Malloy McDaniel, West Front Strategies.

HIDA members ask Congress for competitive bidding support

HIDA members expressed deep concerns about the sustainability of Medicare's competitive bidding program. In particular, participants noted that enteral nutrition, especially when provided in the skilled nursing facility setting, is not well suited for the program. Distribution leaders asked their representatives to sign a letter calling on HHS Secretary Tom Price and CMS Administrator Seema Verma to make needed changes that would guarantee the long-term stability of the program.

From left to right: Scott Adams, Share Moving Media; Chol Pak, Thermo Fisher Scientific; Dave Myers, Concordance Healthcare Solutions; and Mark Zacur, Thermo Fisher Scientific meet with Rep. George Holding (R-NC).

Participants call for wholesaler licensure standards

HIDA members asked Congress to implement a uniform national standard for licensing wholesale distributors of prescription medical devices. Specifically, they called for a measure that allows individual states to continue to license wholesale distributors. Meeting participants added that this measure should not require a separate prescription device license if the wholesaler has a pharmaceutical wholesaler license pursuant to the Drug Supply Chain Security Act (DSCSA).

Distribution leaders thank congress for medical device tax delay

HIDA members outlined how the two-year moratorium on the medical device tax has allowed them to invest heavily in research and development, as well as hire additional staff. They also asked that the tax be permanently repealed so they could continue these strategic investments.

In response to recent discussions about potential border adjustment tax policy, summit attendees educated lawmakers on the complexity of the healthcare supply chain. They explained how many products used in pandemic preparedness, lifesaving surgical procedures, as well as everyday medical measures, are made outside of the U.S. While HIDA does not have a position on any specific tax measure, meeting attendees asked that Congress carefully examine how any reform measure could affect the supply chain.

Key takeaways from policy speakers

On the second day of the Summit, lawmakers and experts shared their perspectives on key policy and industry issues. Among the key takeaways:

Paying for Medicaid is a growing challenge for states. Reps. Greg Walden (R-OR) and Ami Bera (D-CA) shared insights on how rising costs for Medicaid and other programs are constraining state budgets. They add that this pressure is causing states to seek more help from the federal government. Both lawmakers believe this challenge will become more acute as the national debt grows.

In response to recent discussions about potential border adjustment tax policy, summit attendees educated lawmakers on the complexity of the healthcare supply chain.

Reps. Greg Walden (R-OR) and Ami Bera (D-CA) discuss the growing challenges states face in paying for Medicaid and other federal programs.

Provider consolidation has led to cost pressures for insurers. Jonathan Blum, CareFirst, discussed how the rise in hospital and physician practice mergers has led to growing costs for payers. During his presentation, Blum discussed how insurers are working with primary care physicians to control costs. He also shared observations about how physicians' referral practices can affect the cost of care.

As both acute and long-term care providers face growing challenges from federal regulations, distributors have the opportunity to deepen their customer relations by identifying new ways to find savings.

CareFirst Executive Vice President Jonathan Blum discusses the challenges payers face from provider consolidation.

Distributors can play a vital role in helping providers control costs. Nancy Foster, American Hospital Association, and James Michel, American Health Care Association, observed that distributors have access to a wide array of provider spending data, adding that this could help healthcare leaders better manage their organizations' spending. As both acute and long-term care providers face growing challenges from federal regulations, distributors have the opportunity to deepen their customer relations by identifying new ways to find savings.

Nancy Foster, American Hospital Association, and James Michel, American Health Care Association, share how distributors can help providers improve efficiency.

While HIDA advocates on behalf of distributors through its partnerships with federal agencies and meetings with lawmakers year-round, attending the Washington Summit and connecting directly with your lawmaker is the best way to advance key industry initiatives. By meeting with lawmakers, distributors can put a human face on some of the most important healthcare supply chain issues.

Chances are you spend a lot of time in your car. Here's something that might help you appreciate your home-away-from-home a little more.

Automotive-related news

Summer safety

Drivers may be surprised to learn the late summer months present some not-so-safe driving conditions. For instance, the month of August had the second highest number of fatal car accidents – 3,037 – in 2014, according to the Insurance Institute for Highway Safety (IIHS). Also in 2014, June, July, and September each had over 2,800 fatal accidents. Esurance shares some of the most common of these dangers:

- **More teens on the road.** When school's out, more teen drivers hit the roads, and data shows that teens are more likely to be involved in accidents than other age groups. Indeed, their lack of experience can lead to questionable judgment, increasing the risk of an accident.
- **Drivers on vacation add to road congestion.** Congested roads make for harder driving conditions and the potential for road rage, so plan ahead and watch out for drivers who might cut you off.
- **Lack of familiarity.** Vacationing drivers are often unfamiliar with the roads, as well, which can lead to slow, erratic or unpredictable driving.
- **Tire blowouts.** Hot weather causes the air inside the tires to expand, which can lead to a blowout in well-worn wheels, according to the AAA. It's important to check one's tires regularly, especially during heat waves.
- **Construction.** Summertime is a popular time for road construction. The Centers for Disease Control and Prevention reports that construction and maintenance work zones averaged 773 driving fatalities per year, from 2005 through 2014.
- **Sun and excess heat.** The summer sun can dehydrate passengers, so it's wise to keep a bottle of water handy. And, running the air conditioner increases the chance that the engine will overheat. If this occurs, the driver should pull over and let the engine cool down.

By knowing what you might encounter, you can keep yourself safe and enjoy the better weather. For more information visit https://www.esurance.com/info/car/dangers-of-summer-driving.

Taking a stroll

Walking is healthy…until it's not. U.S. pedestrian deaths jumped in 2016 and researchers cited distraction as likely the biggest factor. Indeed, pedestrian deaths are climbing faster than motorist fatalities, reaching nearly 6,000 deaths

in 2016 – the highest total in more than two decades, according to an analysis of preliminary state data recently released. Increased driving due to an improved economy and lower gas prices, together with more people walking for exercise and environmental factors, are some of the likely reasons behind the estimated 11-percent spike in pedestrian fatalities in 2016. The figures were prepared for the Governors Highway Safety Association, which represents state highway safety offices. But, while difficult to confirm, researchers say they think the biggest factor may continue to be that more drivers and walkers are distracted by cellphones and other electronic devices.

The report is based on data from all states and the District of Columbia for the first six months of 2016 and

extrapolated for the rest of the year. It shows the largest annual increase in both the number and percentage of pedestrian fatalities in the more than 40 years that the national records on such deaths have been kept, with the second largest increase occurring in 2015. Pedestrian deaths as a share of total motor vehicle crash deaths increased from 11 percent in 2006 to 15 percent in 2015. For more information visit https://www.wsj.com/articles/u-s-pedestrian-deaths-spiked-in-2016-1490871774?mod=cx_picks&cx_navSource=cx_picks&cx_tag=poptarget&cx_artPos=6#cxrecs_s.

Is lighter safer?

Recent research suggests that lighter, more fuel-efficient cars are safer, according to a Green Car Report by John Voelcker. Unfortunately, the analysis is flawed. The researchers, who published the NBER analysis, collected weight data for vehicles sold in the U.S. from 1954 to 2005, and analyzed reports of 17 million crashes from 1989 through 2005. For each one, they noted the weights of the vehicles involved and whether the crash caused one or more fatalities. Vehicle weight started to decline after the original set of CAFE standards were introduced in 1975 and a first round of lighter vehicles began to hit the roads over the next 10 years. The original argument that lighter-weight vehicles may increase injuries or deaths from crashes between vehicles works if you lighten one vehicle while keeping the other at a constant weight. But that's not what's happening. As CAFE standards continued to make new vehicles more fuel-efficient, every new vehicle got lighter. At the same time, crash-safety tests have gotten more stringent. The paper, however, appears to lack any discussion – or even recognition – of the fact that safety standards notably strengthened for all new cars sold between 1989 and 2005, the period of the crashes studied. In 1989, only a few cars had even a single airbag, for instance, while by 2005, six airbags was the standard. Without addressing the mandated improvement in crash safety and survival equipment in cars during the period studied, the conclusion that lighter cars actually improve safety seems unwarranted. For more information visit http://www.greencarreports.com/news/1110294_lighter-more-fuel-efficient-cars-are-safer-study-says-ignoring-safety-rules.

A growing connection

The connected car devices market is expected to reach USD 57.15 billion by 2021.

The major factors responsible for the growth of this market include the introduction of advance technologies, such as adaptive cruise control and lane departure warning systems in premium and mid-segment cars, and rising awareness about vehicle, driver and pedestrian safety. The global connected car devices market is dominated by the globally established players such as Continental AG (Germany), Denso Corporation (Japan), Delphi Automotive, PLC (U.K.), Robert Bosch GmbH (Germany), and Autoliv Inc. (Sweden). The key growth strategies adopted by these players include expansion and new product development. For more information visit http://www.prnewswire.com/news-releases/connected-car-devices-market-to-reach-usd-5715-billion-by-2021-300453605.html.

Speed

Land Cruiser, Toyota's iconic go-anywhere four-wheel-drive sport-utility vehicle, has earned myriad accolades and records over the 60-plus years it's been in production. Today, it's earned the title, "World's Fastest SUV," thanks to a record speed of over 230 mph, attained by the custom 2,000-horsepower Land Speed Cruiser driven by former NASCAR driver Carl Edwards. For more information visit http://www.prnewswire.com/news-releases/toyota-land-speed-cruiser-claims-worlds-fastest-suv-title-300452070.html.

Lithium battery spurs popularity of electric vehicles

A new report by Variant Market Research projects that the global lithium-ion battery market is estimated to reach $56 billion by 2024, growing at a CAGR of 10.6 percent from 2016 to 2024. Lithium-ion batteries are rechargeable and therefore the lithium compound plays a crucial role, acting as an anode. The report indicates that lithium cells can produce voltage from 1.5 V to about 3 V based on the types of materials used. These batteries have a potential to achieve an exorbitant energy and power solidity in high-density battery applications, such as automotive and standby power. Lithium-ion batteries are now widely implemented as the power or energy source of a wide range of products, from portable electronics to electric vehicles, increasing adoption of smartphones, tablets and digital cameras around the world. For more information visit http://www.prnewswire.com/news-releases/growth-of-lithium-increases-popularity-of-electric-vehicles-621297943.html.

Editor's note: Technology is playing an increasing role in the day-to-day business of sales reps. In this department, *Repertoire* will profile the latest developments in software and gadgets that reps can use for work and play.

Technology news

Facial recognition

According to an article in the MIT Technology Review, computers are quickly becoming incredibly good at recognizing faces. Indeed, facial recognition has existed for decades, but only now is it accurate enough to be used in secure financial transactions. The technology is expanding quickly in China, where it possibly may transform everything from policing to the way people interact every day with banks, stores and transportation services. For instance, technology from Face++ is already being used in several apps, and it is now possible to transfer money through Alipay, a mobile payment app used by more than 120 million people in China, using only one's face as credentials. Additionally, Didi, China's dominant ride-hailing company, uses the Face++ software to let passengers confirm that the person behind the wheel is a legitimate driver. For more information visit https://www.technologyreview.com/s/603494/10-breakthrough-technologies-2017-paying-with-your-face/.

A merge

Cars are getting smarter and smarter, according to an article in the MIT Technology Review. During one computer simulation, for instance, a group of self-driving cars were merging on a four-lane virtual highway, with half trying to move from the right-hand lanes while the other half attempted to merge from the left. Interestingly, the software governing the cars' behavior wasn't programmed in the conventional sense; rather, it learned how to efficiently and safely merge by practicing. During training, the control software repeatedly performed the maneuver, altering its instructions with each attempt. For the most part, the cars merged too slowly, interfering with each other. But, whenever the merge went smoothly, the system learned to favor the appropriate behavior. This approach, known as reinforcement learning, is not only used to train self-driving cars. The technology can also teach a robot to grasp objects it has never seen before,

and it can figure out the optimal configuration for the equipment in a data center.

Reinforcement learning works because researchers have figured out how to get a computer to calculate the value that should be assigned to, say, each right or wrong turn that a rat might make on its way out of its maze. Each value is stored in a large table, and the computer updates all these values as it learns. For larger, complicated tasks, this traditionally has been computationally impractical. In recent years, however, researchers have discovered an extremely efficient way to recognize patterns in data, whether the data refers to the turns in a maze, the positions on a Go board, or the pixels shown on screen during a computer game.

In fact, it was in games that artificial intelligence research firm DeepMind made its name. In 2013 it published details of a program capable of learning to play various Atari video games at a superhuman level, leading Google to acquire the company for more than $500 million in 2014. These and other accomplishments have inspired various researchers and companies to turn to reinforcement learning. Today, a number of industrial-robot makers are testing the approach as a way to train their machines to perform new tasks, without manual programming. And researchers at Google are working with DeepMind to use deep reinforcement learning to make its data centers more energy efficient. Along the same lines, today's driverless vehicles often falter in complex situations that involve interacting with human drivers, such as traffic circles or four-way stops. If we don't want them to take unnecessary risks, or to clog the roads by being overly hesitant, they will need to acquire more nuanced driving skills, like jostling for position in a crowd of cars. Companies such as Mobileye plan to test their software on a fleet of vehicles in collaboration with BMW and Intel later this year. And, both Google and Uber report to be testing reinforcement learning for their self-driving vehicles.

> Both the 360fly and the $499 ALLie camera use Qualcomm Snapdragon processors, similar to those that run Samsung's high-end handsets.

For more information visit https://www.technologyreview.com/s/603501/10-breakthrough-technologies-2017-reinforcement-learning/.

The full picture

Harvard ecological researcher Koen Hufkens recently devised a system to continuously broadcast images from a Massachusetts forest to a website called VirtualForest.io, according to an article in the MIT Technology Review.

Because he used a camera that creates 360-degree pictures, visitors can do more than just watch the feed; they can use their mouse cursor (on a computer) or finger (on a smartphone or tablet) to pan around the image in a circle or scroll up to view the forest canopy and back down to see the ground. By viewing the image through a virtual-reality headset, they can rotate the photo by moving their head, intensifying the illusion that they are in the woods. Hufkens says the project will allow him to document how climate change is affecting leaf development in New England. The camera system costs $550, which includes the $350 cost of the Ricoh Theta S camera that takes the photos.

Traditionally, we experience the world in 360 degrees, surrounded by sights and sounds. Until recently, there were two main options for shooting photos and video that captured that context: Using a rig to position multiple cameras at different angles with overlapping fields of view, or pay at least $10,000 for a special camera. The production process was cumbersome and generally took multiple days to complete. Once the photographer shot footage, he or she had to transfer the images to a computer; wrestle with complex, pricey software to fuse them into a seamless picture; and then convert the file into a format that other people could view easily. Today, it's possible to purchase a decent 360° camera for less than $500, record a video within minutes and upload it to Facebook or YouTube. But, much of this amateur 360-degrees content is blurry; some of it captures 360 degrees horizontally, but not vertically; and most of it is mundane.

Indeed, the best user-generated 360-degree photos and videos are said to deepen the viewer's appreciation of a place or an event. Journalists from the New York Times and Reuters have been using $350 Samsung Gear 360 cameras to produce spherical photos and videos that document anything from hurricane damage in Haiti to a refugee camp in Gaza. One New York Times video that depicts people in Niger fleeing the militant group Boko Haram puts viewers in the center of a crowd receiving food from aid groups. You start by watching a man heaving sacks off a pickup truck and hearing them thud onto the ground.

When you turn your head, you see the throngs that have gathered to claim the food and the makeshift carts they will use to transport it.

The 360-degree format is so compelling that it could become a new standard for raw footage of news events – something Twitter is trying to encourage by enabling live spherical videos in its Periscope app. Spherical videos are also enhancing doctors' ability to teach medical procedures. For instance, the Los Angeles startup Giblib uses this technology to teach students about surgery. The company films the operations by attaching a $500 360fly 4K camera (about the size of a baseball) to surgical lights above the patient. The 360-degree view enables students to see not only the surgeon and surgical site, but also the way the operating room is organized and how the operating room staff interacts. Additionally, inexpensive 360-degree cameras such as Kodak's $450 Pixpro SP360 4K are showing up on basketball backboards, football fields and hockey nets during practice for professional and collegiate teams. Coaches say the resulting videos help players visualize the action and prepare for games in ways that conventional sideline and end-zone videos can't.

These applications are feasible because of the smartphone boom and innovations in several technologies that combine images from multiple lenses and sensors. For instance, 360-degree cameras require more horsepower than regular cameras and generate more heat, but that can be handled by the same energy-efficient chips that power smartphones. Both the 360fly and the $499 ALLie camera use Qualcomm Snapdragon processors, similar to those that run Samsung's high-end handsets. Camera companies have also benefited in recent years from smartphone vendors' continuous quest to integrate higher-quality imaging into their gadgets. The competition has forced component makers like Sony to shrink image sensors and ensure that they offer both high resolution and good performance in low light. As the huge smartphone market has helped bring down component prices, 360-degree camera makers are finding it possible to price their devices accessibly, often at less than $500 multiple points. Spherical cameras represented 1 percent of worldwide consumer camera shipments in 2016 and are expected to reach 4 percent in 2017, according to the research firm Futuresource Consulting. For more information visit https://www.technologyreview.com/s/603496/10-breakthrough-technologies-2017-the-360-degree-selfie/. rep

rep corner

A Sales Professional

Amy Annis is grateful for what sales – and the people in it – have taught her

If you need to be reminded why medical sales is a great career, talk to Amy Annis, account manager for CME (formerly Claflin Medical Equipment). She is the beneficiary of some good training in the matter, and she has put it to good use.

"It's a great window into life," she says of the profession.

Born and raised in Simi Valley, California, Annis thought about going into veterinary medicine. Logical, for someone with a deep love for animals. But after graduating from UCLA, she decided to pursue a medical-related field, and in 1991 became an alternate-site sales rep for BD in Los Angeles. In 1995, she was promoted to manager of distributor sales for BD, and moved to the corporate office in Franklin Lakes, New Jersey. In 1998, she relocated to Largo, Florida, where she became sales manager for the Dermagraft® specialty sales force within Smith & Nephew Wound Management.

Her work in manufacturing taught Annis a valuable lesson: The stronger the business relationship between manufacturer and distributor, the more the customer benefits.

It was at BD, reporting to Stan Britton, that she got early lessons in successful selling. A great educator, Britton would challenge the young saleswoman when she got stumped. "He would ask questions that forced me to find a totally different solution," she says. "He made me examine how I was looking at problems, and think through all the options." He also taught her to "hire smarter than you are, and make sure each new hire is better than the last. You will be successful as a manager because your good people will make you look good."

After three years on the East Coast, Annis was anxious to return to California. At the time, Cindy Juhas, a customer with General Medical, then McKesson Medical-Surgical, had acquired a small distributor called Hospital Associates in Anaheim, and asked Annis to join her. "The location was good, the boss was good, and I knew something about distribution," says Annis. "It seemed like it would work, and it would certainly be a challenge." She joined Juhas in February 1999, and the two continue to work together today. (Hospital Associates was acquired by Claflin Medical Equipment, now CME, in 2015.)

"Cindy taught me to think creatively and take risks," says Annis. "She believes in finding out what the customer needs, and then figuring out how we can build it and create a competitive advantage. Cindy is great at empowering people. If you have an idea, she is more than behind it, and she lets you run with it."

For Annis, medical sales is a continual learning experience. Of course, education is in her blood. Her mom, Diane, was a teacher for 35 years, and her father, Art, was a clinical psychologist who practiced organizational

psychology and taught at Pepperdine University School of Business.

About working as a sales professional she says, "You get people skills. You learn how to handle objections. You learn how to work independently. You are accountable. You learn time management; you learn how to plan, forecast, think strategically, prioritize. You certainly learn persistence, but you learn when to 'fold 'em,' too.

"Every job has some element of sales to it," she adds. "Sales allows you to see all different aspects of any business – production, operations, supply chain, marketing." And being a salesperson brings you places one might not otherwise go. "It allows you to get out there and see a huge amount of landscape.

"You get people skills. You learn how to handle objections. You learn how to work independently. You are accountable. You learn time management; you learn how to plan, forecast, think strategically, prioritize. You certainly learn persistence, but you learn when to 'fold 'em,' too."

"If you're results-oriented and hard-working, sales is one of the few professions that allows you to have an income commensurate with your ability to deliver."

When she's not working, Annis very likely is riding one of her three horses. Her love of animals is in her DNA, she says. Growing up in Simi Valley, the family had loads of pets – chickens, too. Even today, she has three horses, two tortoises and two dogs.

She has been riding horses since she was four, and today, competes in six to eight horse shows – jumping competitions – a year. "It's part of who I am."

Industry news

IMCO adds Supreme Medical Fulfillment to its preferred distributor team

IMCO Home Care partnered with Supreme Medical Fulfillment, a wholesale distribution company focused on the fulfillment of medical supplies and durable medical equipment to the post-acute market. Supreme Medical joins the team of IMCO independent family owned distributors that will help service IMCO Home Care members around the US. Terms of the partnership were not disclosed.

Owens & Minor awarded Supplier Legacy Award from Premier Inc

Owens & Minor Inc (Richmond, VA) announced that for the fourth consecutive year it has received the Supplier Legacy Award from Premier Inc (Charlotte, NC). Recognized by the Premier members for its long-standing support, Owens & Minor was praised for exceptional local customer service and engagement, value creation through clinical excellence, and commitment to achieving the best cost. Legacy Award winners must have tenure of more than three years as a Premier contracted supplier before they are eligible for the Legacy Award.

Roche acquires mySugr GmBh

Roche announced it acquired all shares of mySugr GmbH. mySugr is one of the leading mobile diabetes platforms in the market and will become an integral part of Roche's new patient-centered digital health services platform in diabetes care. As a focal point for Roche`s integrated diabetes management strategy, mySugr is foreseen to remain a separate legal entity with an open platform for all diabetes devices and services. Users will continue to have the ability to automatically upload blood glucose data from their preferred device into the mySugr logbook app as well as the facilitated data sharing with healthcare professionals and caregivers.

Cleveland Clinic creates insurance joint venture with Oscar Health

Cleveland Clinic is launching a joint venture health insurance company with Oscar Health (NY). The JV will offer individuals coverage on and off the Affordable Care Act's exchanges at a time when most other insurers are jumping ship because of financial losses and regulatory uncertainty perpetuated by the Trump administration and Republican-controlled Congress. One of Oscar's founders Joshua Kushner is the younger brother of Jared and brother-in-law of Ivanka Trump. Oscar Health, which has struggled with financial losses in the past few years, gets to align itself will a well-known system that it hopes will attract enrollment. Starting January 2018, Cleveland Clinic and Oscar will together offer individual coverage in five northeast Ohio counties. The 50-50 joint venture takes some risk of the move away from Cleveland Clinic, because the companies will share equally in the losses and profits. The Cleveland Clinic will handle care delivery and Oscar will provide the tech platform and insurance operations expertise. Oscar now covers about 105,000 people, and expects a few thousand to enroll in Ohio in the first year. According to a Modern Healthcare article, Oscar has struggled with losses despite raising millions in venture capital. This year, it sold coverage on exchanges in New York, California, and San Antonio. It lost more than $200 million on plans in 2016 and $120 million in 2015. Oscar previously pulled out of exchanges in Dallas and New Jersey, and recently filed requests with New York regulators to raise its individual rates in the state by 11% on average.

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