

Readmissions NEWS

The MVP Method to Improve Care for High Utilizers: Part 2

by Amy Boutwell MD MPP, President Collaborative Healthcare Strategies

This is the second in a series on the newly described “MVP Method” of improving care for high utilizers, a method developed by Dr. Boutwell and implemented by nearly 100 teams to date.

It doesn't take long for readmission reduction teams to realize that the best practices they work so hard to put into place to improve transitions of care do not seem to affect a subgroup of their high-risk patient population: patients with a personal history of multiple admissions. Often called “high utilizers” or “frequent flyers,” multi-visit patients (MVPs) are the small percentage of hospitalized patients who account for a disproportionately high proportion of admissions and readmissions.

If we observe that the “standard” selection of transitional care best practices do not seem to impact outcomes for MVPs, we may erroneously come to the conclusion that there are no effective strategies to impact MVP utilization rates. Because of this, it is common to find that readmission reduction teams consider multi-visit patients “un-impactable” and are thus excluded from receiving readmission reduction programs or services.

The “MVP Method” was developed specifically to address this important clinical and strategic gap in the readmission reduction portfolio of strategies: we can't be successful in reducing all-cause hospital-wide readmissions if we do not know how to effectively serve the patients who incur the majority of readmissions. Similarly, we can't achieve our delivery system redesign objectives until we develop the capability to understand and effectively address patients with “complex” needs – including co-occurring medical, behavioral, and social needs.

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House Calls to Prevent Readmissions: A Win-Win

by Dr. Megan E. Young

We pulled down the side street in a neighborhood of Boston. “Your destination is 800 feet on the left” said the Global Positioning System of my minivan's speakers. “Where are we?” came the voice of the medical resident from the backseat. I spotted the street number and did a U-turn so that I could park my van right in front of the small brick house. The lawn was small, the trees were overgrown, it looked deserted. There was a black sports utility vehicle parked in front of us. A woman in scrubs got out. She was a visiting nurse from Visiting Nurse Care of Boston. We had planned a home visit when she would be there. “The door is always open,” she said, “you can just walk in. The place is basically uninhabitable.” The medical resident got out of the backseat and stepped over a puddle to the sidewalk. We opened the front door of the house. Mr. S was sitting on a hospital bed in the living room. There was stuff everywhere. The shades were drawn. It was dark and hot.

The medical resident who I will call Jane had referred Mr. S to our geriatrics home visiting program after he had been admitted to our hospital with heart failure and late stage chronic kidney disease. Jane had sat at his hospital bedside and listened to his story.

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Editor's Corner

Greetings readers of *Readmissions News*! Thank you for subscribing to the publication. We are very pleased to be bringing you insights from experts and thought leaders on every aspect of the issue of readmissions. This month we have a particular focus on home health care and house calls. If you have any questions, comments or concerns related to the publications, please don't hesitate to reach out to me personally. As always, we welcome article submissions from qualified members of our readership. Thank you.

Kind Regards,

Peter Grant

Editor, *Readmissions News*

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The "MVP Method" is a systematic way of approaching improving care for multi-visit patients. The MVP Method was **designed for scale**: to be broadly applicable to a variety of MVP target populations across a variety of organizational and community contexts. In this way a "method" (*how* to do...) is distinct from a "model" (*what* to do...). The MVP method has already been successfully implemented by nearly 100 teams in small rural hospitals, community hospitals, safety net hospitals, academic medical centers; applied to ED, inpatient and disease-defined MVP target populations. As reported by the [New York State Department of Health](#), teams implementing the MVP method reduced all cause readmissions – for this population so many had considered "un-impactable" as recently as the day each program was launched.

MVP Core Concepts

The following core concepts have proven helpful and meaningful in the MVP Method:

1. **Define** "high" "utilization" numerically and consistently. Consider "high utilization" a condition that is present on admission: it is to be assessed upon admission in a dynamic way. In other words, do not look for last year's MVPs using a static list of patients who met MVP criteria last year; look for today's MVPs, identified in real-time. Use a numeric definition to define which patients meet MVP criteria. In a majority of cases, inpatient MVP teams define a patient as an MVP if they have had 4 or more inpatient admissions in the past 12 months. (We know from [AHRQ data](#) that this is more than 2 standard deviations above the median number of hospitalizations in the US). No further modifications (by age, payer, diagnoses, risk score or other screening tools) are needed when defining and identifying the target population we seek to serve. The most important exclusions we found were clinically meaningful were those for planned radiation and chemotherapy admissions. We will note there that MVPs of the ED and MVPs of the inpatient setting have different numeric definitions, and although there are some shared patients, ED MVPs should be considered one distinct MVP subpopulation and inpatient MVPs another distinct subpopulation.
2. **View** the MVP condition as a symptom, not as a problem. In medicine, we know that a symptom (such as cough) is a manifestation of an illness, but that many different illnesses (such as GERD, pneumonia, pulmonary edema, asthma, etc) can cause the symptom. We must develop the skills to accurately diagnose the underlying illness in order to effectively treat the symptom. Apply the same approach to multi-visit patients. High utilization of the acute care setting is a manifestation of an unmet, unidentified, or inadequately addressed need. In the MVP method, we develop the skill to identify the "driver of utilization" and develop a differential diagnosis for high utilization to facilitate effective identification of the need that must be addressed to slow the cycle of utilization.

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3. **Expect** the MVP Syndrome. A syndrome is a condition characterized by a set of associated symptoms. Quite often, multi-visit patients have a combination of medical, behavioral health, and social needs. Rather than consider these patients “complex,” it is a productive paradigm shift to anticipate these needs, seek to systematically identify and address these needs as part of a stabilization plan. When we expect to find a set of needs in a given clinical population, we can be better prepared to identify and address those needs; when we are better prepared, the perception of “complex” evolves.
4. **Prioritize** addressing the DOU. A breakthrough concept in MVP care is to develop the skill set to effectively understand the root cause of repeated utilization – referred to as the “driver of utilization” or “DOU.” Although it is expected that MVPs have medical, behavioral health, and social needs, the priority issue to address is the DOU. We may work hard to address myriad medical, behavioral health and social needs, but for MVPs, until and unless we effectively address the DOU, we can expect that we will not succeed in slowing the cycle of acute care use.
5. **Engage** MVPs on-site, and manage care over time and across settings. The MVP method calls for case finding in the acute-care setting. This is unique. However, it directly mirrors what we do in readmission reduction work: identify high risk patients when they are in the hospital, in real-time. The acute care encounter is the first opportunity to form a helpful, trusting relationship, assess and identify the DOU, and mobilize services to address the DOU. Often, effectively serving MVPs requires inter-agency and inter-disciplinary collaborative co-management across settings and over time.

“A breakthrough concept in MVP care is to develop the skill set to effectively understand the root cause of repeated utilization – referred to as the “driver of utilization” or “DOU.”

How do teams apply these core concepts to translate into a clinically credible, operationally feasible care process? We will describe that in our third MVP article.

Dr Amy Boutwell is President of Collaborative Healthcare Strategies, and a nationally-recognized expert in reducing readmissions and improving care for multi-visit patients. Dr. Boutwell advises local, state, and national efforts to reduce hospital utilization as a core capability of a transformed high value delivery system. She is a founding Advisory Committee member of Readmissions News. She can be reached by email at amy@collaborativehealthcarestrategies.com

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It was complicated but not more complicated than most of the patients we see at our safety net hospital which serves patients whose care is financed through Medicaid and Medicare. Mr. S was 84 years old. His wife had died several years ago and he had been living alone since. Poor eyesight and gait instability had prevented him from being able to take care of his house and himself. Although Jane knew about his wife, his trouble with balance and vision, his failing heart and his poorly functioning kidneys she could not have imagined the conditions in which he was living.

“I need something to eat” Mr. S said and got up. We walked through the small dining room watching Mr. S hold onto the wall and then the chair and then the table and then the door into the kitchen. His blue jeans were soiled and he didn’t have the dexterity required to pull up the zipper. Food was on the counter and the floor. The refrigerator was covered in different magnets. Some were decorative and some were from various community services and agencies who had come and gone, likely condemning the house and the man who lived inside. In the center of the fridge was the Massachusetts Medical Orders for Life Sustaining Treatment (MOLST) form signed by Jane and the patient several days earlier and placed on the fridge by EMS who had transported Mr. S home from the hospital.

“I’m so glad to see you” said Jane. She was crouched down on the filthy kitchen floor so she could be at eye level with Mr. S. Mr. S, who had mostly looked down until this point, looked up and smiled. “There are good people in this world. You said you would help me and you did.”

“Adverse events in older adult patients following discharge from the hospital are as high as 25 percent.”

Through funding from the Health Resources and Services Administration our home care program created an educational opportunity for internal medicine residents to participate in a post-hospital discharge home visit to older patients whom they had discharged from the hospital. The residents were able to review their discharge plan and determine its effectiveness after they had been in the home. Residents specifically identified parts of the discharge plan that did and did not work. By going into the patient’s home and seeing what services are needed (e.g. home-delivered meals, grab bars in the shower, medication delivery systems), we as doctors are able to provide more comprehensive care plans that allow community-dwelling older adults to stay in their home prevent readmission to the hospital. Our findings were published in *Gerontology and Geriatric Education (Posthospital home visit as teaching tool for internal medicine residents. Gerontol Geriatr Educ. 2018 Jul 18; 1-8. PMID: 30020032.)*

Adverse events in older adult patients following discharge from the hospital are as high as 25 percent. Medicare 30 day re-admission rates are still quoted around 18 percent and hospitals are penalized for the re-admission of patients like Mr. S.

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House Calls to Prevent Readmissions: A Win-Win ...continued from page 3

These are the most frail, vulnerable and costly patients. Although our study did not look directly at re-admissions, the goal was to teach residents how to develop comprehensive discharge plans that involved community agencies and resources so that future patients will have fewer adverse events and readmissions. When we asked doctors what they learned from going into a patient's home they responded with the following comments:

"I will better assess the patient's needs and feel more comfortable involving visiting nurse associations/physical therapy based on skill needs. I will better emphasize involving agencies to ensure patients are not only safe at home, but can function there as well."

"It is very important to understand who will be taking care of the patient meaning that communicating details to the healthcare proxy may not be useful if the primary care taker is different."

Back at Mr. S's house Jane, the visiting nurse and I went through seven different Tupperware containers full of medications bottles. Some were duplicates, some old, some discontinued and most of them never touched. We asked Mr. S what mattered to him. We took one of his home delivered meals out of the fridge and heated it up in the microwave. When we left we took with us all of his medications except for his diuretic and his stool softener which were the two medications he said he would take because those were the only two he needed to stay out of the hospital. We arranged to have a friendly visitor come a few times a week and the visiting nursing agency coordinated decluttering the house. The physical therapist had already starting working with him. Mr. S gave Jane a hug, told her to come back and bring some more doctors with her next time. A few days after we made the house call I received an email from Jane:

"It is very important to understand who will be taking care of the patient meaning that communicating details to the healthcare proxy may not be useful if the primary care taker is different."

"Hi Dr. Young, Thank you again for coordinating everything to make it possible for me to see Mr. S with you on Wednesday. That was truly one of the best days in residency so far!"

Since then I have seen Mr. S in his house monthly. I have had weekly phone calls with the visiting nurse and have kept Jane updated on how he is doing. Mr. S has not been back to the hospital. In an age where many are trying to re-discover the joy of practice in the setting of penalties for re-admissions I would say doctors making house calls is a win-win.

ROI for Care Management: Challenges of Establishing Measurement

by Phil Johnson, Data Scientist at [Decision Point Healthcare Solutions](#)

For health plans, one of the biggest challenges in measuring the effectiveness of care management programs is the difficulty in identifying a control group for comparison and measurement. Without a true control group, measuring the impact of a care management program (in terms of preventing avoidable utilization) is difficult.

Care management programs traditionally target high risk individuals – members who are highly likely to have a preventable hospitalization or multiple hospitalizations. These individuals generally have unmanaged chronic conditions and significant socio-economic constraints, such as health literacy, physician access, nutrition issues and more. Because every health plan's mission and charter are to assist all members that are at risk for adverse outcomes, plans have both a moral and financial obligation to help these members. Consequently, a health plan is not going to withhold critical services from high risk individuals for the purpose of creating a "pure" control group.

Creating the Control Group

Plans need an alternate approach to defining a control group so that they can measure the ROI of their care management programs without crossing over to the wrong side of the ethical boundary. The key is finding an approach that has the least bias, yet is valid and reliable enough for measurement.

Another way of measuring impact is to compare the outcomes of care management enrollees to the outcomes of members referred to care management, but who did not enroll. These members can be parsed into two categories.

1. Members whom the plan contacted for care management, but who declined to enroll in the program (refusers), and;
2. Members whom the plan attempted to contract for care management, but for various reasons were unreachable (unreachables).

While the refusers could be used as a control group, these members who decline care management are not directly comparable and may bias the impact analysis. This is because decliners may be healthier than those who accept, and, therefore, this population contains too much bias and is not reliably comparable.

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Members in the second group, the unreachable, do not directly decline an enrollment invitation. Because they are unreachable, their status is unknown. There are multiple reasons why plans are unable to contact a member. The member may simply choose not to engage with the plan or respond to a voicemail. They may have changed their phone number, their address, or they may be homeless. They may even be confused by the health plan's intentions or invitation to help.

Though there is still some bias in choosing this population as a comparable control group (the fact that they are unreachable may correlate to a greater incidence of negative outcomes), this population more closely mirrors the experience of people enrolled in care management. This makes them the preferred control group.

Short and Long-Term Measurement

Once a control group is identified, a plan can set parameters for both short-term and long-term measurement.

Short-term measurement allows the plan to quickly evaluate the directional success of a program, which can also be a predictor of the program's long-term financial ROI. Using claims and service authorization data to collect ER Visits, admissions and readmissions events, plans can compare utilization rates between care management enrollees to the unreachable control group. This methodology provides a directional indicator of success within the first 90 days.

But what plans really want to know is how successful their care management programs are over the course of six months or a year. For this, they should look to their medical claims data, which will give them not only their ER, admission and readmission counts, but also the costs of those services.

All told, the primary goal of care management is to reduce unnecessary and avoidable utilization, of which the highest cost and most acute points of care are ER and inpatient hospital admissions. If, at the end of the measurement period, the non-control group has an admission rate of 35 percent while the control group rate is 50 percent, then, clearly, the program has achieved its goal of reducing utilization.

"The primary goal of care management is to reduce unnecessary and avoidable utilization."

Identifying Care Management Costs

The final step in evaluating ROI is to identify the costs of care management.

Historically, plans measure costs by calculating per member, per month (PMPM) dollar values of the amount of money a member has spent, looking at a rolling average over the prior 12 months. The pitfall of this methodology is that by looking at a six-month post intervention figure for a member who has engaged with care management, that rolling average will also include the previous six months prior to care management.

The plan should, in fact, expect the cost before intervention to be higher than the cost post-intervention, particularly if the member had an episode that flagged them for care management. Also, once the member has been in care management, the care manager will encourage them to see their PCP, potentially visit a specialist, and adhere to their medications. Those activities are likely to cause an increase in short-term spend per patient costing the plan money during the initial engagement period in return for longer-term benefit and future cost reduction from avoided utilization.

To complete this phase of the analysis plans should exclude events and costs considered unavoidable, such as a traffic accident or a patient admitted for surgery who had additional complications, such as an infection, which will impact the cost analysis. To prevent these events and their corresponding unavoidable costs from being attributed to care management, the plan needs to segment them into an "episode grouper" outside of the overall cost analysis.

By following these steps, plans can compare the costs for members in care management to those in the control group and better gauge the financial impact their program has on medical expenditure. As plans gain new insight into their care management ROI, they can use the information to refine their care management strategies.

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Thought Leaders' Corner

Q. What Role Can Home Health Care Play in Reducing Preventable Readmissions?

Each month, Readmissions News asks a panel of industry experts to discuss a topic of interest to the hospital community. To suggest a topic, write to Editor@ReadmissionsNews.com.

For individuals with chronic kidney disease (CKD), and especially those suffering from end-stage renal disease (ESRD), hospitalizations can be a frequent occurrence. Each new medication, life event, dietary change or even a simple cold can result in a patient quickly going from managing their disease to needing urgent care and multi-day hospitalization.

As a practicing nephrologist, professor and researcher, I've seen first-hand the struggles that patients with kidney disease face, including hours spent at outpatient dialysis clinics and frequent hospitalization. Patients with CKD and ESRD experienced rehospitalization at rates of 21.4 percent and 35.2 percent, as compared to only 15.4 percent for older Medicare beneficiaries without a diagnosis of kidney disease. ESRD patients, on average, are admitted twice a year, and more than one-third face rehospitalization within 30 days following discharge.

The current healthcare system – which focuses more on reactive care after a catastrophic event results in kidney disease diagnosis and puts patients on a fast track to dialysis – is partially to blame for readmissions. I believe a new approach is necessary; one that empowers the patient with education, support and proactive care, and one that eliminates the silos that result in fragmented care, miscommunications and medical errors. Most importantly, the level of care and support should be personalized, and it should address specific health, social and functional needs for each patient.

Healthcare providers must focus on prevention of kidney disease, and screenings for individuals at highest risk, including those with diabetes or high blood pressure, or taking certain medications. A key to that is a multidisciplinary care team, comprised of a nephrologist, primary care physician and other medical professionals, who can educate patients, and their family/friends, and help them understand how best to manage their disease at home.

Home care is a critical component to proactively addressing kidney disease complications and key to preventing frequent rehospitalizations. One study published in the Journal of the American Medical Association noted that home care intervention for at-risk elderly patients demonstrated great potential in promoting several positive outcomes by reducing readmissions, lengthening the time between discharge and readmission, and decreasing the costs of providing healthcare.

The approach outlined in the study is equally relevant for those with CKD and ESRD. Home visits after hospital discharge or during care transitions have significant potential to reduce rehospitalizations by educating patients about fluid management, reconciling medication, offering needed support and coaching, and even providing in-home alternatives to outpatient dialysis.

It's time for the industry to look beyond our existing approaches to healthcare, particularly with regard to treating those with kidney disease. By shifting away from reactive approaches, like dialysis, to a more conservative, proactive approach that arms patients and caregivers with information about their disease – including options for care at home – we may actually reduce rehospitalization, while improving the patient's quality of life.



Carmen A. Peralta, MD, MAS
Chief Medical Officer, Cricket Health

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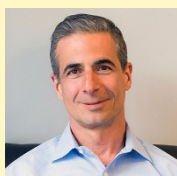
Thought Leaders' Corner

Readmissions are a function of clinical, socio-economic and engagement risk. Members who are at high risk for multiple, clustered admissions (admissions and subsequent readmissions) typically have an undesirable disease trajectory as well as a history of engagement challenges, such as poor preventive behavior, sporadic visits to their doctor, excessive use to the ER, challenges with medication adherence, PCP switching, etc. Also, when probed (or when data on social determinants of health is available), these members have other socio-economic barriers, such as limited home care support, undesirable nutrition, poor health literacy, and so forth, which further compound and elevate their risk.

Because of this, proactive Home Health Care and Home Care are critical in reducing readmissions. Home Health Care and Home Care can deliver a variety of personalized and needed services, all geared towards reducing avoidable admissions and readmissions. Home Health services can include nutrition therapy, patient education, wound care, help with medications, while Home Care can include services such as help with activities of daily living, transportation, and companionship.

The keys to making these programs successful are twofold: 1) directing the right combination of programs to the people that need it the most, and 2) being more proactive (and less reactive) in delivering these programs.

If healthcare organizations are able to proactively identify individuals that are high risk for multiple clustered admissions, and engage these individuals in appropriate programs, they would be better able to address the clinical, engagement and social challenges of these "at risk" members, and thereby reduce the chances of an avoidable admission, the subsequent readmission, or both.



Saeed Aminzadeh

Chief Executive Officer, Decision Point Healthcare Solutions

Medicare Advantage vs. Medicare FFS Chronic Conditions Outcomes

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Industry News



NYC's Allure Group Improves Care and Reduces Readmissions with Constant Care Technology's Vitals Integration to PointClickCare

Allure's team commenced their six-building implementation of Constant Care's Vitals Integration to coincide with the rollout of their EHR, PointClickCare, hoping to optimize and enhance the accuracy and time savings value of the new clinical system.

Nenita Alfonso, Director of Nursing at Allure's 300 bed Crown Heights Center, remarks, "I was a little worried about resistance to technology by some of my long-standing team members, but once they started using the Constant Care system, they became hooked on the ease, speed and accuracy they are experiencing. Now my RNs and LPNs have more quality time with their residents and that time savings has helped relieve stress levels."

"Better input yields better outcomes," remarks Chief Clinical Officer, Faina Kaganov. "We're eliminating errors and the costly time drain of paper to laptop documentation. No more 976°F temps appearing on our dashboard alerts! Not only are we confident in vitals measurement and documentation accuracy, but the alerting safety net has been a great tool for our team—triggering the opportunity for intervention with the immediate, bedside notification of out-of-range vitals.

Add to that the SMART* predictive analytics reporting that identifies combinations of change in condition that are precursors to a health crisis—and we've become exceptionally proactive in our ability to detect and avert conditions like sepsis and pneumonia. The doctors we work with love the SMART* trending and analysis. It really helps us to triage and treat!"



Catholic Health Home Care: 4.6% Average Readmission Rate Over 30 Months for CHF Patients

Catholic Health Home Care has maintained a low average readmission rate of 4.6% over 30 months for patients with CHF using the Health Recovery Solutions (HRS) telehealth platform. The rehospitalization data, collected from January 2016 to June 2018, is not time specific and instead reflects overall readmission rates for each quarter. During this time, Catholic Health Home Care served over 1,300 patients with telehealth and achieved quarterly readmission rates as low as 3% for their high-risk CHF patients.

Catholic Health Home Care ...continued

Catholic Health Home Care, one of the top home care agencies in the United States, partnered with HRS in November 2015 to enhance remote care and lower rehospitalizations for high risk patients. Over the past four years, they have demonstrated both long-term and short-term success. In the first two quarters of 2018, Catholic Health Home Care continued to demonstrate exceptional care with telehealth by achieving readmission rates of 3.8% and 3.6%.

Patients placed on Catholic Health's telehealth program are provided with 4G tablets loaded with the HRS software. The tablets pair with Bluetooth peripheral devices that allow patients to keep track of their blood pressure, weight, heart rate, and other relevant biometric data. Clinicians use the software to remotely monitor patient vitals, respond to risk alerts when patients are at risk for readmission, and conduct nursing visits through video, phone, and text chat all in real time.

In addition to maintaining low readmission rates, Catholic Health has increased referrals from certified nurses and physicians to their telehealth program. In January 2018, Catholic Health Home Care received 74 patient referrals, which was their highest number per month in four years.

Jenna Kowalski, Manager of Clinical Operations at Mercy Home Care of Catholic Health, recognizes the role of telehealth in reducing re-hospitalizations for high risk patients. She states, "Telehealth allows for improved surveillance of our homebound patients. It allows for our nurses to do daily vital sign and symptom management assessments; often catching issues early before they become emergent."

Rich Curry, Vice President of Business Development at HRS, adds, "Catholic Health has established a fantastic telehealth program with HRS. Their readmission rates are a direct reflection of the hard work of their staff and their dedication to patient care. We are honored to be a partner in their success."



VitalConnect Launches VistaTablet to Further Focus on Growing At-Home Patient Monitoring Space

VitalConnect, Inc., a leader in wearable biosensor technology for wireless monitoring, today announced the launch of VistaTablet™, which ushers in the next-generation of its Vista Solution™ platform for real-time patient monitoring. VitalConnect is the leading digital health patient monitoring company with U.S. FDA clearance for both hospital and in-home solutions. The mobile interface of the VistaTablet offers healthcare providers and patients unprecedented access to vital sign data continuously acquired by the VitalPatch® wearable biosensor regardless of patient location. The VitalPatch biosensor is the smallest and lightest FDA-cleared Class 2 medical device that measures eight vital signs in real-time.

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Industry News

VitalConnect Launches VistaTablet ...continued

The VistaTablet is a handheld mobile relay device that securely hosts and transmits the vital signs measured by the VitalPatch biosensor, presenting this data locally for the patient and to healthcare providers through the Vista Solution platform. The mobility of the VistaTablet supports timely remote analysis by caregivers for patients regardless if they are in the hospital or at home. The Vista Solution platform allows physiological data for all patients to be easily accessible through the accompanying cloud-based application or viewed directly on the VistaTablet.

As a result of increasing healthcare costs, an increasing aging population (the number of 65 and over adults is expected to double by 2060), and demonstrated improved patient outcomes with advanced remote monitoring technologies, healthcare providers are beginning to shift eligible patients toward home care programs. Quality care traditionally found in a hospital has not been technologically or economically possible outside hospital walls on any significant scale until now.

The Vista Solution, now with the mobile VistaTablet, helps change that paradigm, enabling at home programs to grow to meet the rising demands of quality home care. Within home care environments, "admit-to-home" patients receiving remote and continuous monitoring have shown a reduction in readmissions and an overall decrease in cost of care as compared to a traditional hospital stay. Enabling patients to be admitted to home, rather than lengthy hospital stays, has been shown to decrease healthcare costs while improving patient outcomes.

"For acute care and the aging population, home hospital programs offer an affordable solution to healthcare that works for providers and patients," said Dr. Nersi Nazari, PhD, CEO and founder of VitalConnect. "With the implementation of VistaTablet we are able to offer an easy-to-use mobile interface for physicians and patients to simultaneously monitor vital signs in real-time, allowing patients to recover at home while still under the care of their doctor."

The launch of the VistaTablet device further extends the Vista Solution platform's capabilities into use outside the hospital walls. Together, the VistaTablet and the VitalPatch biosensor offer the most discreet and comfortable monitoring solution to enhance patient care.



Nashoba Nursing Service and Hospice Partners with HRS to Enhance Patient Care with Telehealth

Nashoba Nursing Service and Hospice (NNSH), a progressive home healthcare, palliative, and hospice agency, has recently adopted telehealth technology from Health Recovery Solutions (HRS). NNSH officially partnered with HRS in April 2018 in order to improve remote care for patients with chronic conditions. By using telehealth to establish more touch points with patients, NNSH hopes to prevent and reduce hospital readmissions.

Analysis: Hospital Readmissions of All Ages ...continued

Patients participating in the telehealth program are provided with 4G tablets pre-loaded with HRS software. The tablets are paired with Bluetooth biometric devices that allow patients to seamlessly capture important physiological data, such as blood pressure, weight, heart rate, and glucose levels.

The patient information is automatically transmitted to the tablet and electronically delivered to the patient's nurse, allowing clinical staff to quickly address any abnormalities or changes in medical status.

NNSH decided to partner with HRS due to the software's ease of use for patients and clinicians. The patient-friendly display and the ability to text and video call patients are used to improve patient communication and participation. Patient engagement is also enhanced through the software's daily medication reminders and disease specific educational content.

The HRS software allows the clinicians at NNSH to identify high risk patients and intervene early, thus reducing avoidable readmissions and emergency department visits. Denise Sawyer, RN, Clinical Director at NNSH, states, "Our patients are thrilled that we can now be in contact with them on a daily basis. We are excited to use this technology solution to better communicate with patients and improve overall outcomes. Our decision to introduce HRS telehealth is a reflection of our commitment to our patients and the care we provide."

Alex Ellis, Director of Operations at HRS adds, "Nashoba Nursing Service and Hospice has demonstrated steadfast dedication to their patients through the establishment of this telehealth program. The clinicians clearly put their patients first and they are using the technology to improve the patient experience. We are honored to have been chosen as NNSH's telehealth partner and we are excited to be a part of their growth and success."



An initiative of the ABIM Foundation

Study: Patients Do Better When Physicians Follow Computerized Alerts

When physicians follow computer alerts embedded in electronic health records, their hospitalized patients experience fewer complications and lower costs, leave the hospital sooner and are less likely to be readmitted, according to a study of inpatient care.

The research examined alerts that popped up on physician computer screens when their care instructions deviated from evidence-based guidelines.

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Industry News

Study: Patients Do Better ...continued

The alerts were based on an initiative called Choosing Wisely, which identifies common tests and procedures that may not have clear benefit for patients and should sometimes be avoided. For example, an alert might pop up on the screen if a physician orders a CT scan when it's unnecessary and likely won't improve the patient's outcome. The alert would serve as a reminder that the order could expose the patient to unnecessary radiation and costs.

The Choosing Wisely alerts were backed by the American Board of Internal Medicine Foundation and created by various physician subspecialty societies.

"Sometimes the best care for certain patient conditions means doing less," said Scott Weingarten, MD, MPH, chief clinical transformation officer at Cedars-Sinai and a senior author of the study. "We have seen that real-time aids for clinical decision-making can potentially help physicians reduce low-value care and improve patient outcomes while lowering costs."

Many leaders in the healthcare industry have targeted unnecessary care as a means of improving patient safety while cutting wasteful spending. One 2010 estimate from the Institute of Medicine found that "unnecessary services" contribute to about \$210 billion in wasteful healthcare spending in the United States each year.

The study, conducted by investigators from Cedars-Sinai and Optum Advisory Services, was published in *The American Journal of Managed Care*. It examined data from inpatient visits at Cedars-Sinai Medical Center from October 2013 to July 2016 in which one or more of the 18 most frequent alerts was triggered.

For 26,424 of the inpatient visits studied, the treating physician followed either all or none of the Choosing Wisely guidance. In 6 percent of visits, physicians in the "treatment group" followed all triggered alerts; in the remaining 94 percent of visits, physicians in the "control group" followed none of the triggered alerts.

An alert was triggered, for example, if a physician tried ordering a sedative for a sleepless older patient or an appetite stimulant for an older patient who was ill and losing weight. Sedatives can put seniors at risk for falls, bone fractures and car accidents, and appetite stimulants can put seniors at risk of fluid retention, stroke and death.

The authors found a significant difference in health outcomes and costs between the two groups. For patients whose physicians did not follow the alerts, the odds of complications increased by 29 percent compared to the group whose physicians followed the alerts. Likewise, the odds of hospital readmissions within 30 days of the patients' original visits was 14 percent higher in the group whose physicians did not follow the alerts. Patients of these physicians also saw a 6.2 percent increase in their length of stay and an additional 7.3 percent – or \$944 per patient – in costs, after adjusting for differences in patient illness severity and case complexity.

"Sometimes doctors order tests that they think are in the patient's best interest, when research doesn't show that to be the case.

Study: Patients Do Better ...continued

Unnecessary testing can lead to interventions that can cause harm," said Harry C. Sax, MD, executive vice chair of Surgery at Cedars-Sinai and a senior author of the study. "This work is about giving the right care that patients truly need."

The authors acknowledge limitations to the study. Their strict definition of alert compliance, which excluded visits in which physicians followed some but not all alerts, limited their understanding of the clinical and financial impact of those visits. Additionally, the investigators were unable to measure the impact of specific alerts on outcomes to see if one alert was more significant than others.

Finally, it is possible that physicians with better patient outcomes and lower costs are more likely to follow Choosing Wisely clinical decision support alerts, rather than proving a "cause and effect" relationship between following the alerts and better outcomes.

Disclosures: Optum is a licensed reseller of Stanson Health, including its Choosing Wisely alert content evaluated in this study. Cedars-Sinai is the major shareholder of Stanson Health and employs the company's founders, Darren Dworkin, Cedars-Sinai chief information officer and stockholder of Stanson Health, and Weingarten, who is chairman of the board and stockholder of Stanson Health.



TripleCare Brings Physician-Based Telemedicine Services to Commonwealth Care of Roanoke

TripleCare, a national provider of telemedicine-based healthcare to the post-acute care sector, including skilled nursing facilities (SNFs), announced the Company will introduce its services across all Commonwealth Care of Roanoke (CCR) facilities. CCR provides senior care consisting of skilled services, including complex medical care and rehabilitation, as well as respite and long-term care from 12 modern facilities throughout Virginia.

Initially, during the 2018 third quarter, CCR will roll out TripleCare's virtual physician-supported services, which bring care to patients at their bedsides in real-time, at three facilities: Carriage Hill Health & Rehab Center in Fredericksburg, Va.; Abingdon Health & Rehab Center in Abingdon, Va.; and, Radford Health & Rehab Center in Radford, Va. Implementation of services at the remaining nine facilities will be completed by year-end 2018.

CCR is partnering with TripleCare to continue its commitment to the delivery of quality care. Since TripleCare's experienced physicians connect to patients using advanced technology at times when the CCR physician staff is not on site, such as overnight, during the weekends and on holidays, CCR facilities can offer uninterrupted care.

(continued on page 11)

Industry News

TripleCare Brings Physician-Based Telemedicine...continued

TripleCare, with support from CCR's on-site nursing staff, treats patients in place, allowing its physicians to differentiate from those who can be cared for at CCR versus those requiring a hospital transfer. By providing physician accessibility during these times, CCR is attempting to avoid patient hospitalizations.

"We look forward to working closely with CCR's 12 facilities to expand the level of quality of care for its patients and help reduce costs relating to hospital readmissions and transfers. With access to our physicians in the off hours, CCR is prudently bridging the care gap by ensuring ongoing coverage for their patients," stated TripleCare Chief Executive Officer Dr. Mary Jo Gorman.

"Our physician-based telemedicine services are gaining significant traction because facilities like CCR are fast recognizing the cost savings and benefits that result from deployment, including lower return-to-hospital (RTH) incidences, increases in both patient census and treat-in-place rates and solidifying competitive positions in their local communities," Dr. Gorman concluded.

Honor Chriscoe, Director of Operational Initiatives and Support at CCR, added: "Lora Epperly, our Director of Business Development and Care innovations, identified early on the advantages of technology to the patient and has worked to establish ways to move this type of innovation forward.

Our new relationship with TripleCare affords CCR the opportunity to deepen the quality of care to our patients and residents on which we have come to pride ourselves. CCR was built on a vision and mission to deliver caring, compassionate and complete complex skilled nursing and rehabilitative services, and by aligning with TripleCare, we're able to further strengthen both our ability to fulfill this promise as well as our commitment to deliver the best care around the clock.

"It is a well-established fact that unnecessary transfers to the hospital can be traumatic for the patient and delivering care on-site, as opposed to an ambulance, is preferable. We believe that telemedicine will play an increasingly important role in the post-acute sector in which we operate, and CCR strives to be at the forefront of this sea change.

TripleCare Brings Physician-Based Telemedicine...continued

By engaging TripleCare, which works in tandem with our expert on-site clinical team, we are enhancing care and improving patient outcomes. This relationship underscores our dedication to our talented employees and complements our patient-centric approach to provide evidenced-based care in a compliance-oriented setting," she concluded.



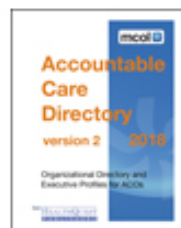
Global \$77.2 Billion Telemedicine Technologies Market - Opportunities & Strategies to 2022

The global market for telemedicine technologies was valued at \$26.7 billion in 2016 and is expected to reach \$77.2 billion by 2022, growing at a CAGR of 19.4% during the forecast period of 2017 to 2022.

The global telemedicine technologies market is primarily driven by pressure to reduce healthcare costs, increased use of mobile devices for healthcare and increase in government funding. In addition, rise in base of geriatric population, increased medical treatments in remote locations, technological advances and rise in demand for quality healthcare further propelling the growth of this market.

Despite the presence of several drivers, the market for telemedicine is facing some challenges and a major challenge is the lack of common standards. The specific standards of telehealth applications for various medical service segments still needs to be defined appropriately by healthcare administrators in various countries. Another challenge is the management of large volume of data that is increasing exponentially as a result of advances in telehealth technology.

Geographically, the market for telemedicine is led by North America and is followed by Europe and APAC. Strong regulatory support, early adoption and consumer awareness made US, the leading country for telemedicine technologies market.



The Accountable Care Directory 2018



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Catching Up With ...



Thomas Cornwell, MD

Chief Executive Officer, Home Centered Care Institute (HCCI)

Dr. Cornwell founded Home Centered Care Institute in 2012 after receiving a large philanthropic gift to create a national education and research organization whose mission is to expand house call programs and the workforce nationally. He has received extensive local and national media attention including features in the NY Times, TIME Magazine and PBS. Most recently Fast Company named him a 2017 top 100 Most Creative People in Business for bringing health care into the home.

Readmissions News: Why are house calls important in health care today?

Dr. Cornwell: Many people think house calls are a thing of the past. Not so.

Today's house call visits – known as home-based primary care (HBPC) – combine the expertise and advanced technology of a health care clinic with the convenience and comfort of home. This care model is proven to benefit providers, payers and, of course, patients.

House calls matter because 4 million Americans are unable to leave their homes to obtain basic primary care. Due to a lack in proactive care, a shocking 5 percent of Medicare beneficiaries account for 50 percent of Medicare spending. This statistic should come as no surprise to those familiar with the challenges posed by an aging and increasingly unhealthy population. Our current "911 culture" exacerbates the problem and leads to repeated, costly hospitalizations for chronically ill, medically complex patients, many of whom have no other health care resource. HBPC and home health care can break that cycle.

Readmissions News: How can home-based primary care reduce costs?

Dr. Cornwell: Today, the practice of health care is in a state of tremendous transition. Rising costs, a strain on resources, and ever-changing policies and fee structures have left health care providers struggling to provide cost-effective, quality care for patients. The aging population, especially, is at risk for being underserved. By working together, home health and HBPC providers can help achieve health care's "Triple Aim": improving the quality of life for our nation's most complex patients, delivering substantially better experiences for patients and caregivers, and dramatically reducing health care costs.

HBPC is proven to reduce health care costs for chronically-ill patients by keeping them at home, where they can be better cared for. In fact, according to figures from the Strategic Healthcare Programs in California, making more than one home health visit in the first seven days reduces the likelihood of readmission to as low as 11.4 percent. Collaboration with skilled HBPC providers further increases the likelihood of the patient remaining at home. For instance, a study published in the *American Journal of Medicine* found that discharge with home health care was associated with a significant reduction in healthcare utilization and decreased hazard of readmission and death. Moreover, the Agency for Healthcare Research and Quality review found supporting evidence that HBPC reduces utilization of hospital services and can lead to improved quality of life.

Readmissions News: What are some of the challenges related to implementation?

Dr. Cornwell: A significant challenge to providing proactive home-based primary care is the shortage of a trained HBPC workforce. The Home Centered Care Institute is working to address this gap in the workforce through classroom-based workshops, field experiences, and online learning resources. Education in building interdisciplinary teams and developing relationships with community-based services as part of the continuum of care is an important part of that curriculum.

We have the privilege and the responsibility of caring for patients in their homes. We owe it to them to build lasting collaborations and bring the best of what we provide individually to bear, together, upon this vulnerable population.

Readmissions News: Lastly, tell us something about yourself that few would know.

Dr. Cornwell: As a practicing physician with over 30 years of experience, I have dedicated my career to HBPC, and I've personally made over 33,000 house calls. I understand the difference that home-based care makes in patients' lives and the value it brings to the health care industry.