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Population — ealth

Communities Hold the Key to Addressing the Opioid Epidemic—Here's Why

by Dr. Garth Graham, MD, MPH, FACP, FACC, President of the Aetna Foundation

ccording to the Centers for Disease Control and Prevention (CDC), more than 72,000 Americans – or 200 people a day – died from a drug overdose in 2017, making it the worst year for drug overdoses in U.S. history. Nearly two-thirds of these deaths were directly linked to opioids. This is more people than have died from our violence, car crashes or HIV/AIDs in the U.S. in a single year.

Declaring the opioid crisis a national public health emergency has continued to bring attention to an issue that is impacting communities across the country. Because there are unique elements to how this epidemic has impacted different communities, states have been experiencing a mixed bag of success in tackling the opioid epidemic.

Those like Massachusetts, Vermont and Rhode Island, who have embarked on major public health campaigns and are actively working to increase access to addiction treatment services, have seen 2018 death rates decline. Conversely, many states have seen death rates increase.

The Impact of the Opioid Crisis on Life Expectancy

That's not all—according to the CDC's Mortality in the U.S. 2016 Report, the opioid epidemic is also responsible for driving down U.S. life expectancy (currently 78.7 years of age) for the past two years. Early signs indicate the epidemic is on track to have the same impact on life expectancy for the third year in a row as long as drug overdoses remain the leading cause of death among Americans under 50.

These reports only make the call to action even louder for diverse, community-based solutions to this epidemic. (continued on page 2)

In This Issue

- 1 Communities Hold the Key to Addressing the Opioid Epidemic— Here's Why
- 1 Childhood Obesity and Declining Life Expectancy: A Health Plan Addresses the Growing Problem
- 2 Editor's Corner
- 4 Symbiosis of Specialized Population Health and Systemized Palliative Care
- 6 Thought Leaders'
 Corner: How will the increasing emphasis on population health impact hospital finances?
- 7 Industry News
- 12 Catching Up With... Baha Zeidan

Childhood Obesity and Declining Life Expectancy A Health Plan Addresses the Growing Problem

by Dr. Richard Seidman

ife expectancy in the United States has declined two years in a row. This news from the Centers for Disease Control and Prevention (CDC) comes more than a decade after a *New England Journal of Medicine* report found that for the first time in two centuries, the current generation of children in the U.S. may have a shorter life expectancy than their parents. The Journal pointed to a rapid rise in childhood obesity as the biggest contributing factor.

One in three children in this country is either overweight or obese. The CDC says the percentage of children and adolescents affected by obesity has more than tripled since the 1970s. This is causing health problems in children that, in the past, were primarily seen in adults – type 2 diabetes, hypertension, and elevated cholesterol levels. Obesity will follow these children into adulthood and what could become an unending cycle of doctor and hospital visits.

As the Chief Medical Officer of L.A. Care Health Plan, the largest publicly-operated health plan in the country, I know that preventing a health problem is always better than treating it after the fact. Prevention requires education.

(continued on page 3)

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Editor's Corner

reetings readers of *Population Health News*! We are very pleased to be bringing another content packed issue with contributions with experts from across the healthcare field. Thank you again for subscribing and as always, if you have any questions, comments or concerns please contact me personally. We also welcome suggestions for articles or other content.

Kind Regards,

Peter Grant Editor, *Population Health News* peter@granteventmanagement.com

Communities Hold the Key to Addressing the Opioid Epidemic— Here's Why ...continued from p.1

Taking A Local Approach to the Opioid Epidemic

With Americans increasingly recognizing that drug addiction is a problem in their local communities and more than 2.6 million people addicted to opioids, health organizations such as the Aetna Foundation are turning to a state-based approach to tackle the opioid epidemic and address the unique opioid-related challenges communities face.

The Aetna Foundation has believes in solutions that are local in origin, be measured within communities, but can be eventually have a national impact. We have begun working with a number or organizations to develop and support local solutions within communities hit hardest by the opioid epidemic. These state based solutions highlight the innovation happening at the local level:

Pennsylvania

To better respond to the opioid crisis in Pennsylvania, the Aetna Foundation teamed up with the state of Pennsylvania to put funding behind an innovative, comprehensive data dashboard to connect real-time information from multiple state agencies. By using new evidence and real-time data, the dashboard will aim to better connect responders and experts across academia, the public and private sectors, and government agencies in order to change the trajectory of the opioid epidemic in Pennsylvania.

Florida

The Aetna Foundation also formed a partnership with the Florida Alcohol Drug Abuse Association to help expand and enhance the behavioral health and community support aspects of existing programs. This includes All in For Florida: The ER Intervention Project, which will provide those who suffer from opioid use disorder in the ER with access to treatment services, and All in for Florida: A Recovery Project, which will turn informal networks of recovery groups across Florida into accredited Recovery Community Organizations.

North Carolina

North Carolina, a state where five people a day were dying from drug overdoses in 2016, was the first to receive a \$1 million grant from the Aetna Foundation. The grant recipient, North Carolina Harm Reduction Coalition (NCHRC)'s "Rural Opioid Overdose Prevention Project", seeks to provide community-level risk education in five rural counties (Vance, Cumberland, Brunswick, Haywood and Johnston). Funding received will go towards the distribution of Narcan (naloxone) kits to rural, high-risk opioid users and spur adoption of best practice policies on overdose prevention.

To date, NCHRC's Outreach Workers have provided naloxone kits and overdose prevention education to **1239** unique high-risk opioid users and also distributed **2678** naloxone kits. Between January 1-June 1, NCHRC had received **169** overdose reversal reports. These early reports show that NCHRC is having a significant impact in their communities by providing education and ensuring individuals at high risk of experiencing or witnessing an overdose have access to naloxone.

(continued on page 3)

Communities Hold the Key to Addressing the Opioid Epidemic—Here's Why ... continued from page 2

Winning the War on Opioids

The monumental impact the opioid epidemic has had on America's public health is clear: It has evolved to become one of the biggest public health threats of our time.

Adequately addressing this epidemic requires that we must approach the crisis as both a public health and socioeconomic issue at the local level and create a multi-pronged strategy that includes prevention, intervention, and support.

Most importantly, public health organizations and partners must continue to shift their work to address the social determinants of health that impact local communities, their families and in many cases the most vulnerable people in our society.

"To date, NCHRC's Outreach Workers have provided naloxone kits and overdose prevention education to 1239 unique high-risk opioid users and also distributed 2678 naloxone kits."

Childhood Obesity and Declining Life Expectancy ... continued from page 1

In 2009, L.A. Care launched *Health in Motion*™, a health education program that includes pediatric weight management. Families with an overweight child are referred to the program, either through their physicians or internal L.A. Care staff, like care managers, social workers or personnel from our family resource centers that are strategically located throughout our coverage area.

"Common contributing factors include a lack of knowledge about healthy eating, little or no physical activity, challenges obtaining healthier foods or finding a safe place to play, a lack of time or some combination of them all."

Upon receipt of a referral, an L.A. Care registered dietician (RD) conducts a telephone consultation with the child's parent or caregiver. During the call, the RD determines the underlying cause(s) of the weight issues. Common contributing factors include a lack of knowledge about healthy eating, little or no physical activity, challenges obtaining healthier foods or finding a safe place to play, a lack of time or some combination of them all. Once an assessment has been made, the RD works with the family to create an action plan with obtainable, measureable goals, taking into consideration cultural beliefs, environmental challenges, or misconceptions about what constitutes a healthy weight.

L.A. Care is expanding the *Health in Motion*™ program to include three in-person workshops. The primary goal of the workshops is not necessarily weight loss, but rather to increase the likelihood of a child growing into his/her appropriate weight. The first

session focuses on *MyPlate*, the current nutrition guide published by the U.S. Department of Agriculture, which details proper portion size and nutrients of the five food groups – vegetables, fruits, grains, protein and dairy.

The second session focuses on appropriate mealtime behavior according to a child's developmental stage and abilities. It will identify healthier behaviors for toddlers and preschoolers that can be incorporated into family traditions at mealtime. Mealtime should be for eating, not for watching TV or playing with digital devices. A mealtime routine can be especially helpful in maintaining a healthy eating lifestyle.

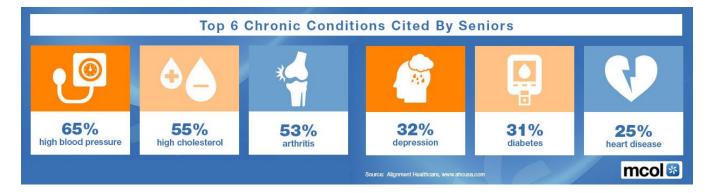
The third session focuses on physical activity and the benefits of getting the body moving. The session includes demonstrations of fun, low-cost activities to improve strength, endurance, and coordination.

We use population health management strategies to gather data about our young members, determining who is overweight or obese. We have determined that certain regions in our coverage area have a greater percentage of children dealing with weight issues. This helps us pinpoint ideal locations for our workshops.

Reaching out to members in the communities where they live is important, and will help build their knowledge about leading healthy, active lives. While this effort alone will not

solve the childhood obesity epidemic and the related declining life expectancy, we hope it will help inform and empower our members to make positive changes for their families.

"Mealtime should be for eating, not for watching TV or playing with digital devices. A mealtime routine can be especially helpful in maintaining a healthy eating lifestyle."



Symbiosis of Specialized Population Health and Systemized Palliative Care

by Greer Myers, President, Turn-Key Health

ne of the most notable synergies in this current healthcare environment is the growing complement between two disciplines: *population health*, which focuses on improving the health of populations, with a special emphasis on reducing disparities in health outcomes and improving the value of health care, and *palliative care*, which focuses on improving the quality of life for patients and families facing the challenges of a serious or advanced illness.

Driving this relationship are two distinct market forces: 1) the maturity of traditional population health into specialized population health, with capabilities to specifically address a defined senior population with a greater likelihood of health problems and higher costs of care, and 2) the resulting transition from palliative care to *systemized* in-home palliative care within the framework of broader PHM programs.

"The next steps to foster even greater collaboration involve PHM methodologies and continued innovation to achieve a systemized approach to palliative care." Taken together, this combination plays a pivotal role in addressing the needs of the whole person and the family, improving quality of life for all. Furthermore, as payers assume financial responsibility for these patients and follow the path to value-based reimbursement, they will benefit from the complementary and supportive roles of these disciplines.

The next steps to foster even greater collaboration involve PHM methodologies and continued innovation to achieve a systemized approach to palliative care.

Specialized Predictive Analytics

The need to determine member eligibility for in-home palliative care rests upon accurate patient Identification. Newer approaches utilize historic and temporal claims encounter and clinical data for predictive modeling. This identifies patients who are at risk of poor quality, over-medicalized care in the last six to twelve months of life, leading up to a very short length of stay in hospice. Patients are also directly identified through case managers and clinicians within risk-bearing entities.

This type of technology platform leverages analytics in three ways. First, proprietary analytics are utilized to identify and stratify a patient's likelihood to prevent avoidable medicalization as it relates to a serious or advanced illness. Second, a custom palliative population health system manages patient populations, reports interventions, and standardizes care. Last, a Palliative Activation Scale (PAS™) is used to measure a patient's propensity to adopt a palliative care approach to improve quality of life and outcomes.

Palliative Activation Scale (PAS)

PAS™ optimizes care quality by measuring a member's propensity to make healthcare choices that are in congruence with their personal goals of care. The PAS evaluates member clinical stability (i.e., symptom management, satisfaction), member engagement (such as completion of goals of care, advanced care planning, communication), and member alignment (i.e., psychosocial, family dynamics, and physician communication). PAS predicts behavior, as well as informs areas in need of improvement to maximize quality outcomes.

Systemized In-Home Palliative Care

As part of the transition to value-based care and reimbursement, payers are viewing palliative care in the context of the larger continuum of care and starting to see the value of moving their PHM programs from a generalized approach to one that is far more targeted to the specific needs of individuals with a serious or advanced illness. This process provides an ideal segue to the implementation of systemized palliative care beyond the hospital environment and into the home.

One unique community-based model utilizes predictive analytics as described above to identify, engage and improve the member and caregiver quality of life. This approach deploys a rapidly scalable solution by utilizing predictive analytics/AI for appropriate member identification, leveraging analytics and technology in three ways:

- Proprietary analytics are utilized to identify and stratify a patient's likelihood of experiencing avoidable medicalization related to a serious or advanced illness.
- A custom palliative population health system manages patient populations, reports interventions, and standardizes care.

To maximize improvement in PAS, this innovative model utilizes comprehensive, standardized, baseline and follow-up palliative phone and home visit motivational interviewing logic. Specially trained palliative care teams review symptoms, perform medication reconciliation, and discuss and document goals of care.

"A custom palliative population health system manages patient populations, reports interventions, and standardizes care."

They guide advance care planning, provide psychosocial support and identify caregiver needs. These clinicians then create a palliative plan of care based upon patient goals, while providing ongoing support for enhancing home supports, providing patient education and assisting with patient decision-making.

(continued on page 5)

Symbiosis of Specialized Population Health and Systemized Palliative Care ... continued from page 4

Comprised primarily of palliative care trained nurses and social workers, the palliative care teams are also augmented by nurse practitioners and physicians, where medical intervention is needed. These teams utilize an interdisciplinary approach to manage populations, meeting weekly, and drawing in community-based resources to benefit the patient and decrease caregiver burdens.

This systemized and structured model serves as an extension of medical practices, enabling a palliative medical home model. Palliative care teams provide supportive home-based assessments and interventions, communicating relevant information to the primary treating physician / medical home to foster better communication and to ensure care delivery that is consistent with patient goals.

Bringing a standardized process of palliative care delivery that can be provided along with curative treatment, this represents a consistent approach across geographic regions to track and measure outcomes.

Impact of New CMS Changes for Supplemental Benefits

The evolution of specialized PHM and systemized in-home palliative care is expected to meet even greater receptivity given the recently finalized guidance and policies for the Medicare Advantage program from the Centers for Medicare & Medicaid Services (CMS). These changes will expand the supplemental benefits afforded to beneficiaries and include home-based palliative care, in-home support services and support for caregivers of enrollees to be included in the newly allowable supplemental benefits.

Additionally, CMS also reinterprets benefit uniformity rules. Beginning with 2019 applications, Medicare Advantage plans may tailor benefits for beneficiaries who are "similarly situated" and meet a set of clinical criteria. Starting with 2020 applications, CMS may offer waivers of benefit uniformity for benefits tailored to "chronically ill beneficiaries."

These changes reflect the inclusion of items and services that address certain "Social Determinants of Health" (SDoH). SDoH refers to a wide range of factors and conditions that are known to have an impact on healthcare, ranging from socioeconomic status, education and employment, to one's physical environment and access to healthcare.

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Previously, CMS did not allow an item or service to be eligible as a supplemental benefit if the primary purpose was for daily maintenance. CMS' reinterpretation of the statute to expand the scope of the primarily health-related supplemental benefit standard is an important step in encouraging value-based care.

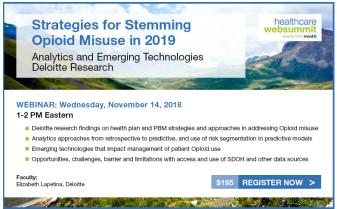
This latest development aligns Medicare Advantage with commercial payers and states across the country that recognize the importance of addressing SDoH in achieving better health outcomes and lower costs. The newer, innovative model, as described earlier, leverages SDoH in the Palliative Activation Scale.

Looking Back - Looking Ahead

In 2016, a JAMA viewpoint suggested that combined approaches from palliative care and population health would improve care quality for elderly and frail populations. The authors were prophetic in forecasting that each discipline could learn from the other and that the incorporation of more social aspects of palliative care into PHM programs would be beneficial.

Since that time, the refinement of these disciplines and introduction of specialized population health and systemized in-home palliative care have become a reality. This symbiotic relationship is expected to flourish even more, given the new CMS policy providing greater opportunities to integrate evidence-based programs and other key community-based services and supports into Medicare Advantage plans.

Most Medicare Advantage plans have already developed a Plan Benefit Package for their 2019 application and are likely to offer supplemental benefits. In-home palliative care programs that result from specialized PHM are the expected winners in this evolving marketplace.





Thought Leaders' Corner

Each month, *Population Health News* asks a panel of industry experts to discuss a topic suggested by a subscriber. This month, there are two questions.

Q. How will the increasing emphasis on population health impact hospital finances?

In a traditional sense, population health adversely impacts hospital finances because of population heath's focus on reducing avoidable utilization, and hospitals' traditional reliance on revenue from any hospitalizations and emergency room visits. That said, value-based care (such as ACOs and other "at-risk" models) changes the equation significantly by shifting hospital reimbursement so that it is more aligned with the population health model.

If we define population health based on its original definition of keeping populations happy, healthy and in control of their health (and reducing unnecessary and avoidable test, procedures, and utilization), then no one can argue that population health is aligned with the "public good." This definition is far broader than the current usage of the term, which is essentially focused solely on caring for the sick in order to reduce avoidable hospitalizations and emergency room visits. The original definition is far deeper with its roots in improving patient access, satisfaction, mental and physical decline, quality, medication adherence and health literacy. In other words, the intent of population health is to improve all of the components described above, and thereby reduce avoidable utilization. All said, in a vacuum, it would seem sensible and desirable that the concepts of "public good," greater cost efficiency and profitability be aligned. That is the intent of population health and also the intent of the shift to value-based care.

The reality is that value-based care is going through growing pains and some of the desired alignment has not manifested itself. The transition to population health and at-risk models is challenging hospitals' operating margins because some of these hospitals do not have the infrastructure to manage their finances based on population health metrics, and they are having a difficult time shifting their finance models to account for this way of thinking. Compounding this is the fact that hospitals are also challenged with labor and wage pressures because of the tight market for healthcare workers.

Another dimension of this equation is data and its relationship to outcomes and infrastructure. In other words, who are my patients who need help, why do they need help, and what can I do about it? For example, why are pediatric asthma patients consistently showing up in the emergency room and hospital? Who are the patients that need the most help? Is this the kind of help that hospitals can provide to them? Data seeding population health programs need to include social determinants of health so that hospitals can understand the combination of clinical, socio-economic and psycho-social factors that can influence health and consequently hospitals (in partnership with health plans and other entities) can craft health programs (most of which needs to occur outside of the hospital or doctor's office) that can truly impact a person's future health status.



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There's no cost to participate in the *Population Health News* LinkedIn Group, where you can network and discuss and monitor population health-related activities. You can sign up now at https://www.linkedin.com/grp/home?gid=6635305. We encourage you to contact us any time with feedback of any kind regarding *Population Health News*. We especially would like to hear from you regarding what topics you'd like to see addressed in future issues.

Industry News



NACDD Celebrates Diabetes Awareness Month: Shares Successes from Groundbreaking Diabetes Prevention

As Americans turn their focus to National Diabetes Awareness Month in November, the National Association of Chronic Disease Directors (NACDD) pledges to continue its 30 years of leadership to help people manage and prevent this potentially disabling and life-threatening condition.

Since 1988, NACDD has partnered with the Centers for Disease Control and Prevention (CDC) to bring diabetes management and prevention interventions to communities, health systems, health departments, and individuals through its national network. These efforts have ranged from providing support for individual diabetes self-management education programs in rural health departments to national media campaigns focused on prediabetes and preventing type 2 diabetes.

"Diabetes prevention is at the heart of our organization's work because it is linked to so many other chronic diseases such as heart disease and stroke," said NACDD CEO, John Robitscher

NACDD is one of only 10 organizations receiving Centers for Disease Control and Prevention funding to scale and sustain the National Diabetes Prevention Program (National DPP) in rural counties during a five year period. The Association continues to work with State Health Departments to engage strategic partners to scale and sustain the National DPP, and since 2012, NACDD has supported 35 states and several large cities.

Specifically, NACDD and CDC collaborated to develop a State Engagement Model to enhance stakeholder engagement to catalyze commitment and action. Use of the model results in coordinated and collective action among diverse stakeholders rather than activities done in silos. NACDD released the National Diabetes Prevention Program, State Engagement Model Collective Impact Report detailing program success across the US. An Executive Brief of the report also is available.

Additionally, NACDD's Medicaid Coverage for the National DPP Demonstration Project is showing how state Medicaid agencies and State Health Departments can collaborate to implement and deliver a sustainable coverage model for the National DPP.

Finally, in collaboration with CDC's Division of Diabetes Translation, NACDD launched the online National DPP Coverage Toolkit, a resource to help states and organizations navigate the potential complexities of offering the program as a covered health benefit. NACDD also provides individual and group-based technical assistance to eight states that selected coverage of the National DPP as a focus in the CDC 6|18 Initiative.

NACDD Celebrates Diabetes Awareness...continued

"Working with our national partners and with CDC support, NACDD and its Members from State Health Departments are turning promising practices into practical solutions that are resulting in improved population health for people with prediabetes and those at high risk for developing type 2 diabetes," said Robitscher.

More than 100 million Americans have diabetes or prediabetes, according to the CDC, many of whom are unaware that they are at risk. However, modest changes—such as losing 5 to 7% of one's body weight and becoming physically active for at least 30 minutes a day—are examples of approaches that can prevent type 2 diabetes or lessen its complications.

While diabetes can be managed successfully to allow for an abundant life, it also can cause blindness and result in limb or extremity amputation as well as kidney failure and heart disease. Incidences of diabetes have been growing for decades, and NACDD continues to expand its network of strategic partners that can work together to meet the growing need many Americans face in preventing and managing diabetes.



Amgen And Provention Bio Announce Co-Development Collaboration In Celiac Disease

Amgen and Provention Bio, Inc, a clinical-stage biopharmaceutical company focused on immune-mediated diseases, today announced a licensing and co-development agreement for AMG 714, identified by Provention as PRV-015. AMG 714 is a novel anti-IL-15 monoclonal antibody being developed for the treatment of gluten-free diet non-responsive celiac disease (NRCD). Development efforts at Provention will be led by researchers with previous experience developing AMG 714.

Under the terms of the agreement, Provention will conduct and fund a Phase 2b trial in NRCD and lead the next phase of development and regulatory activities for the program. Amgen will make a \$20 million investment coincident with Provention's next financing event, subject to certain terms and conditions. Amgen is also responsible for the manufacturing of AMG 714. Upon completion of the Phase 2b trial, Provention will be eligible to receive a \$150 millionmilestone payment, as well as additional regulatory milestone payments and royalties if Amgen continues AMG 714 development.

"Celiac disease impacts millions of people around the world and remains the only common autoimmune disease with no approved therapeutic treatment," said David M. Reese, M.D., executive vice president of Research and Development at Amgen. "We are pleased to collaborate with Provention, given their expertise and familiarity with AMG 714, in advancing a potential new treatment option for patients living with this life-interrupting illness."

(continued on page 8)

Industry News

Amgen And Provention Bio ...continued

"Our AMG 714 co-development collaboration with Amgen is a significant milestone in the growth and advancement of Provention. AMG 714 has the potential to be the first FDA-approved treatment for celiac disease and aligns with Provention's mission to prevent and intercept immunemediated disease," said Ashleigh Palmer, co-founder and chief executive officer of Provention.

"Data presented at Digestive Disease Week 2018 from two Phase 2a clinical trials of AMG 714 demonstrated the drug's potential in celiac disease and refractory celiac disease type II (RCD-II), an in situ gastrointestinal T cell lymphoma, and confirmed that IL-15 plays a central role in non-responsive celiac disease and RCD-II," said Francisco Leon, M.D., Ph.D., co-founder and chief scientific officer of Provention. "We are delighted to be collaborating with Amgen to advance AMG 714 by way of the planned Phase 2b NRCD study."



Trans-Pacific Institutional Agreement Fosters Close Research Partnership

The Presidents of The Hong Kong Polytechnic University (PolyU) and The University of Waterloo signed a Strategic University Partnership institutional agreement today with the objective to foster closer partnership in education, research and entrepreneurship.

This historic agreement will see the two universities exploring opportunities for collaboration in research, furthering ties on faculty and student mobility and discussing connections in entrepreneurship, amongst other key areas.

"University of Waterloo is one of our valued partners. We both are an aspiring university, committed to shaping the future through conducting world-changing research and sending forth graduates who are ready to lead in a global economy. With a solid foundation, our new partnership will serve as an institutional framework for expanding the scope of our bilateral cooperation including diversifying areas of interdisciplinary academic, research and entrepreneurial collaboration; fostering greater mobility between our universities; and paving the way for the development of dual or joint programmes together," said Professor Timothy W. Tong, President of PolyU.

"It is exciting to partner with exceptional institutions like PolyU and we cannot wait to expand on an already fruitful relation-ship through more international exchanges, joint programmes, research projects and more," said Professor Feridun Hamdullahpur, President and Vice Chancellor of the University of Waterloo.

The signing of the PolyU-University of Waterloo Strategic University Partnership Memorandum of Understanding and an Implementation Agreement as an addendum marks an important milestone for advancing the initiative of establishing a global Centre for Ocular Research and Development (CORD).

Trans-Pacific Institutional Agreement ...continued

The Centre will operate under the umbrella of the Waterloo Biomedical Research and Innovation Node (WBRIN) in Hong Kong.

CORD will address vital population health and aging imperatives in Hong Kong by partnering with local and internationally recognised leaders in ocular and vision science, and translating the research to commercial applications. According to the World Health Organization, vision problems cost the global economy US\$200 billion annually to lost productivity. The Centre for Myopic Research at PolyU found that 70 percent of people born between 1950 and 1980 in Hong Kong are myopic.

The two institutions have broadly agreed on the three possible research areas under CORD, namely aging eye, sight-saving technologies and the eye as a window to the brain. The researchers will explore new approaches in the detection and treatment of eye diseases, study the use of tear fluid as biomarkers to predict and diagnose diseases, and innovate technologies related to myopia prevention and reversal, visual neuro-rehabilitation and nanotechnology-based drug delivery. CORD will also research into early diagnosis and disease monitoring in particular for diabetes and Alzheimer's disease through peripheral retinal imaging or optic nerve examination.

One of the key members in the CORD research team is Professor Donna Strickland of the Physics & Astronomy Department at the University of Waterloo, Laureate of the 2018 Nobel Prize in Physics. Professor Strickland will lead a flagship project to treat age-related macular degeneration. She will expand on her award-winning work on chirped pulse amplification (CPA) to develop a laser-based two-photon excitation technique for photodynamic drug therapy to remove abnormal blood vessels in the retina with a high degree of accuracy.

Translating research into commercialisation will also be a key focus of CORD. The Centre aims to bring the University of Waterloo's entrepreneurial culture to Hong Kong, developing spinoffs and multinationals to commercialize research, and creating a sustainable long-term business model.

The two institutions intend to submit a proposal to the HKSAR Government under the recently announced Health@InnoHK research cluster initiative, with a plan to establish a research node in the Hong Kong Science Park.



Approximately 1 in 3 Adults with Diabetes May Develop Chronic Kidney Disease

DaVita Kidney Care, a division of DaVita In, a leading provider of kidney care services in the United States, today acknowledged National Diabetes Awareness Month by highlighting the link between diabetes and chronic kidney disease (CKD). (continued on page 10)

Industry News

Approximately 1 in 3 Adults with Diabetes May Develop Chronic Kidney Disease ...continued

"Diabetes is imperative to monitor and control, as it's the number one cause of CKD. We encourage everyone to educate themselves, schedule routine check-ups, maintain a healthy diet and refrain from smoking to lower the risk of developing kidney disease with diabetes" said Dr. David Roer, vice president of medical affairs at DaVita.

Diabetes is a disease that affects the body's ability to produce or use insulin. If the body produces little to no insulin, too much sugar—or glucose—remains in the blood. The higher than normal glucose levels can result in either Type 1 or Type 2 diabetes.

Kidney disease occurs when the kidneys are no longer able to clean toxins and waste product from the blood and perform their functions to full capacity. Diabetes and kidney disease are linked because high blood glucose can damage the blood vessels in kidneys.

In fact, according to the Centers for Disease Control and Prevention, approximately 1 in 3 adults with diabetes may develop chronic kidney disease.

However, there are several ways to help manage diabetes and kidney disease. Maintaining a kidney-friendly diet that's low in potassium, phosphorus and sodium may help. Make sure to consult a dietitian regarding tips for accurately measuring a serving size.

What may be measured as one serving on a regular diet may count as several servings on the kidney diet.

DaVita also offers hundreds of healthy recipes through the DaVita Diet Helper, an easy-to-use online meal planning tool for those with diabetes and kidney disease. DaVita Diet Helper™ offers a Dining Out Guide, Fluid Tracker and ability to create a personalized shopping list.

Additionally, DaVita has multiple collections of kidney-friendly cookbooks. The most recent edition is "Today's Kidney Diet: Fall Comfort Foods." Each recipe is tailored to those with kidney disease, but can easily be adapted for those with other comorbidities, such as diabetes.



Coalition to Convene Personalized Medicine Conference at Harvard to Address Unresolved Challenges FDA Commissioner Says May Discourage Development of 'Potentially Curative' Treatment Strategies

The Personalized Medicine Coalition (PMC) will convene its 14th Annual Personalized Medicine Conference at Harvard Medical School from November 14 – 15, 2018, to address unresolved challenges in health care that FDA Commissioner Scott Gottlieb, M.D., warns may discourage the development of "potentially curative" treatment strategies.

Coalition to Convene Personalized Medicine Conference at Harvard ...continued

The conference will examine the landscape and outlook for personalized medicine, an evolving approach to health care that is designed to translate higher up-front costs for tests and treatments into a more effective and efficient health system through targeted health care interventions with unprecedented benefits.

With remarks during last month's Future of Health Summit that exemplify how personalized medicine challenges health systems still accustomed to facilitating access to one-size-fitsall, daily maintenance medications,

Gottlieb said he is "extremely worried" that unresolved questions related to reimbursement for "potentially curative" personalized therapies that deliver long-term benefits in just a few doses may discourage the development of similar products.

"I'm extremely worried that if we don't adapt the approach to reimbursement soon, we may foreclose the therapeutic opportunities," Gottlieb said.

The conference will feature a fireside chat with Roche Pharmaceuticals CEO Daniel O'Day moderated by CNBC Reporter Meg Tirrell.

It will also explore issues related to costs, pricing and access during a panel discussion titled "Considering Costs: Evaluating Emerging Pharmaceutical and Insurance Industry Business Models in Personalized Medicine," during which pharmaceutical industry representatives from Amgen and bluebird bio will discuss the future of innovation in health care and payment policies with Michael Sherman, M.D., Chief Medical Officer and Senior Vice President of Harvard Pilgrim Health Care.

During the final session of the conference, titled "Impasse or Inflection Point? — An Investment Analysis," a panel of investors including Salveen Richter, C.F.A., a Vice President at Goldman Sachs whose report titled The Genome Revolution prompted headlines about whether "curing patients is a sustainable business model," will join us to draw conclusions about the field's business prospects.

And during the first part of the program, titled "The Infrastructure for Innovation," LabCorp CEO David King, J.D., and Brigham Health President Elizabeth Nabel, M.D., will deliver keynote addresses while panelists will explore scientific developments in the field, assess the potential of artificial intelligence, and discuss outstanding regulatory challenges.

"The 14th Annual Personalized Medicine Conference: Preparing for the New Possible presents an opportunity for the personalized medicine community to consider solutions that can facilitate health care that is tailored to each patient's biological characteristics, circumstances, and values, instead of perpetuating one-size-fits-all approaches that fail to help significant portions of the patient population because we have not paid sufficient attention to scientific discoveries and the development of new technologies," said PMC President Edward Abrahams.

Industry News



New Blended-Distance Nursing School Launches in Brigham City

With the help of local health care facilities in and around Brigham City, Nightingale College is the newest institution to launch its accredited associate and bachelor's degree nursing programs.

"Pioneer Care Center is excited for the opportunity to partner with Nightingale College to be the host site for the clinical practice for both new nurses and experienced LPNs and RNs looking to advance their career," said Richard Anderson, Administrator of Pioneer Care Center. "As our population continues to age, the health care profession will continue to need clinically astute nurses that have the knowledge, experience, and compassion to care for those in need. Pioneer Care Center has proudly served the Brigham City area for over 50 years and is happy for the opportunity to provide additional nursing education and training in our local community."

Nightingale College's unique education model combines online classroom instruction and local, on-ground learning activities under the supervision of a faculty member to deliver its nursing program courses. Learners complete classroom assignments and lectures online then commute to their designated experiential learning hub to practice the hands-on portion requirements of the courses.

Nursing college acceptance and admittance remains competitive and attending a nursing program is not always feasible for some community residents while others travel, even relocate, to attend a nursing program.

Health care facilities struggle to employ enough nurses due to potential nurses relocating for school and the current nursing workforce reaching retirement age. These factors make it difficult for health care facilities to meet the community's needs. Alongside the demand for registered nurses is the rising need for accessible educational options—a necessity recognized by Nightingale College.

"Nightingale College's delivery model was designed to provide the best possible chance of keeping graduates working locally after program completion," said Jonathan Tanner, Vice President of Partnerships and Business Development at Nightingale College. "Evidence shows that smaller communities struggle to recruit newly graduated nurses, our local model is a potential solution."

Health care employers like Pioneer Care Center in Brigham City partnered with Nightingale College to provide an educational opportunity designed to expand the pool of local ready-to-work registered nurses and supply an additional advanced degree nursing program that is available to the community.

These health care employers investing in local education and employment prepare their communities to support fully staffed and safe nursing units while contributing to the increase in the number of qualified RN applicants in the area.

New Blended-Distance Nursing School Launches in Brigham City ...continued

"Maple Springs of North Logan is thrilled to be partnering with the learners of Nightingale College for their long-term care clinical experiences. We feel that both our residents and our staff will enjoy the compassion and selfless service that the learners will bring to our community," said Lindsay Christensen, Director of Nursing at Maple Springs of North Logan, another local partner of Nightingale College's Brigham City DDC. "There continues to be a nursing shortage here in Cache Valley, and Nightingale College will help to fill this gap by admitting cohorts three times a year."

As of October 2018, Brigham City joins Nightingale College's three other partnership cohorts in Utah and becomes the tenth Dedicated Distance Cohort (DDC) area.

"We are looking forward to the opportunity to continue partnering with facilities in Utah and expanding our nursing programs reach to provide a solution that will not only assist our partners in supporting competent RNs in their facilities but help improve the community's health care," said Tanner.

Nightingale College's is currently enrolling in both the associate and bachelor's degree nursing programs.



Allegheny Health Network Announces Fifth Community Cancer Center

Allegheny Health Network (AHN) announced plans to open a cancer center in Hempfield Township, Westmoreland County, as part of a neighborhood hospital complex the Network is building at the junction of Agnew Road and Route 30. AHN Cancer Institute

– Hempfield will be the fifth community cancer center AHN expects to open in 2019, joining others already being developed in Monroeville, Erie, Butler and Beaver County. All are part of AHN's commitment to providing high quality cancer care in closer-to-home settings for patients throughout the greater Pittsburgh region.

"At AHN, we believe cancer patients and their families deserve one-stop access to comprehensive clinical and support services in locations that are most convenient to them," said Cynthia Hundorfean, AHN's President and Chief Executive Officer. "We are excited to bring a high level of cancer care to our patients who live in Westmoreland County, and to see our network of cancer treatment sites continue to grow across western Pennsylvania."

As the U.S. population continues to grow older, the number of cancer diagnoses is rising. About 1.7 million new cancer cases – 81,000 in Pennsylvania alone - are expected to be diagnosed in 2018, a two percent hike from 2015, according to the American Cancer Society. In addition, the number of cancer survivors in the U.S. is expected to rise to from 15.5 million to 20.3 million in 2026. (continued on page 11)

Industry News

Allegheny Health Network Announces Fifth Community Cancer Center ...continued

"In Pennsylvania, about 80 percent of new cancer diagnoses happen outside Allegheny and Philadelphia counties," said David Parda, MD, Chair, AHN Cancer Institute. "We are committed to addressing the increasing cancer care needs of the western Pennsylvania community in the most effective and affordable manner by investing in more services close to where our patients live and by closely integrating them with our affiliated academic and quaternary cancer programs at AGH, West Penn and Johns Hopkins."

Designed to support a patient-centered care model, the 55,000 square foot cancer center will provide a wide array of services, including; comprehensive diagnostic imaging – such as MRI, ultrasound, CT Scan, X-Ray, DEXA – Bone Density Scans and mammography; radiation oncology; medical oncology and infusion therapy; an on-site pharmacy; nutritional counseling; social services; and access to cancer clinical trials. The center's decor will incorporate natural light and soft colors to create a calming atmosphere for patients and their families, with quiet exam rooms and comfortable waiting areas.

Expected to employ approximately 50 health care professionals, the cancer center is the latest in a number of steps taken over the past year to expand access to AHN physicians and programs in Westmoreland County.

Earlier in 2018, the AHN Outpatient Center – Westmoreland opened on Nature Park Road in Hempfield Township, offering access to a variety of medical and surgical specialists, as well as physical and occupational therapy and lab testing and imaging services.

AHN Hempfield-Neighborhood Hospital is one of four new, smaller format hospitals that the network is building across western Pennsylvania. The facilities will be fully licensed hospitals that are open 24/7 and offer an assortment of onsite clinical care, including an emergency department, 10-12 inpatient beds, diagnostic care and other complementary medical services.

The AHN Cancer Institute provides leading oncology expertise and programs at the network's hospitals and affiliated clinics that serve patients from western Pennsylvania, Erie, West Virginia and Ohio.

AHN Cancer Institute – Hempfield is part of a nearly \$300 million investment being made by Highmark Health and AHN to expand and enhance cancer care options in the western PA region. In addition to the five new community cancer centers, AHN is also building a new academic cancer center at Allegheny General Hospital and further strengthening its unique collaboration with the Johns Hopkins Kimmel Cancer Center, offering enhanced local access to Hopkins' cancer expertise and clinical trials.

Catching Up With Baha Zeidan ... continued from page 12

Population Health News: Lastly, what role does Chronic Care Mangement have in all of this?

Mr. Zeidan: Rural areas have a higher percentage of death from the five leading causes - cancer, heart disease, stroke, chronic lower respiratory disease and unintentional injuries - according to a study by the Centers for Disease Control and Prevention (CDC).

CMS' CCM initiative, which offers reimbursement for managing patients with two or more chronic conditions non-face-to-face encounters (such as CPT Code 99490), was rolled out to engage patients in their healthcare and, by doing so, improve patient outcomes

By helping high-needs populations control their health through a CCM program, which includes 24/7 access to qualified health professionals and regular remote health assessments between visits, providers can help them stay out of the hospital.

Yet far too few medical practices take advantage of this reimbursable service — according to one 2017 survey, fewer than half of all physician providers queried said they incorporated CCM into their practice.

For providers who want to get started, they typically look at their inhouse resources first. Depending on workload, dedicated RNs can take responsibility for launching and overseeing a CCM program. For practices that are limited on resources, it might make more sense to outsource the management of programs such as CCM to third-party vendors, which can help with outreach and documentation efforts. In fact, ChartSpan, a third-party CCM vendor we know of, helped providers save a reported \$6.5 million in patient hospitalizations in 2017.

It's important to weigh the benefits and drawbacks of both approaches before moving forward. While a dedicated clinician could help keep some costs down, a clinician is not typically skilled at marketing a new program to patients, or gauging satisfaction among existing patients. A third-party vendor, however, may be able to provide support on both the clinical and business side.

Whatever efforts a provider organization embarks on, technology-driven or otherwise, it's important to consider whether the effort aligns with the larger goal: to improve population health. As we continue to move towards a culture that emphasizes quality and value, making patient care more impactful and less cumbersome should be the overarching goal that guides our actions.

Peter Grant serves as editor of *Population Health News*. He invites you to submit bylined articles on population health issues and case studies illustrating successes with the model. He can be reached at peter@granteventsmanagement.com.



Catching Up With



Baha ZeidanChief Executive Officer, Azalea Health
Atlanta, GA

Baha Zeidan is the Co-founder and CEO of Azalea Health, where his unmatched commitment to improving healthcare experiences and outcomes for both providers and patients drives the corporate vision and strategic direction for the organization. In addition to being the driving force behind the company's long-term growth and technology development, he consistently cultivates meaningful strategic relationships with industry partners and other shareholders who contribute to Azalea's continued evolution.

Population Health News: What are some population health issues unique to rural communities?

Mr. Zeidan: In rural communities, which are frequently plagued by a smorgasbord of challenges — like transportation issues, physician shortages and poverty — effective population health may seem unattainable.

According to recent figures, the patient-to-primary-care physician ratio in rural areas is only 39.8 physicians per 100,000 people, compared with 53.3 physicians per 100,000 in urban areas, which means physicians are often booked to capacity. And because so many patients live an hour or more by car from the nearest healthcare provider — if they even have a car at all — simply being seen by a provider is often a challenge in and of itself.

Yet it is precisely *because* of these circumstances that rural health providers should prioritize population health and aim to help the highest possible number of patients with chronic- and age-related diseases and unfavorable social determinants.

In launching an effective population health strategy, providers should start by focusing on three things: interoperability, cost control and chronic care management.

Population Health News: Can you describe some best practices when it comes to interoperability?

Mr. Zeidan: Because rural providers have their hands full with patients, the most important tools in their repository are those that make their job easier, so they can focus on improving the health of individual patients and entire groups of patients — e.g., seniors with diabetes or CoPD who are high-risk for hospitalization.

Take the EHR, which many consider the "nucleus" of a well-functioning medical practice. While primarily used for collecting data and streamlining documentation, the EHR should also ideally help providers communicate with each other and coordinate care. In this capacity, the EHR is key to ensuring information as basic as a patient's medication allergies can be sent or retrieved by any health provider at any time – and on any device.

A fully interoperable EHR is central to these goals, particularly in rural areas. It allows for clean lines of data to flow across all systems and communications, which, in turn, means more accurate and in-depth data for population health. By seeing a clearer view of our patients, we are better able to leverage changes. Also, a fully interoperable EHR platform supports cutting-edge tools such as telehealth capabilities, which offer virtual consultations to patients who are busy, remote or have limited transportation.

For rural communities specifically - where, according to the U.S. Census Bureau's American Community Survey the median of adults is six years older than their nonrural counterparts - telehealth visits provide an alternative option for individuals can't drive and rely on family or friends to get them to their clinical visits.

When built on cloud-based platforms, comprehensive EHRs can be used in rural communities for a fraction of the cost of traditional server-based systems.

Population Health News: What about cost control? How does this play into rural population health?

Mr. Zeidan: Efficiency is a core tenet of population health, but managing complex, chronically ill patients is pretty costly, whether you're an independent practice or part of a coordinated care group such as an Accountable Care Organization (ACO).

Having a billing system that fully integrates with an EHR makes documentation and remittance processes much less cumbersome. An integrated billing platform can also lend support to revenue-generating initiatives such as Chronic Care Management (CCM), which require precise documentation. In doing so, a built-in billing system also frees up a lot of time for medical practices, which can be redirected into population-health activities, such as leveraging insights not only to improve patient care, but also clarify which initiatives are directly linked with lowering costs and streamlining care.

(continued on page 11)