

FOUNDATION



MEETING REPORT



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INTRODUCTION

he year 2015 marks the 25th anniversary of the Academy of Managed Care Pharmacy (AMCP) Foundation. "The subject of this fifth annual AMCP Foundation symposium is a perfect example of the important work carried out by the Foundation," said Edith A. Rosato, RPh, IOM, Chair of the AMCP Foundation and Chief Executive Officer of AMCP.

The symposium "Opportunities and Challenges in Patient Care, Prevention, and Adherence" broadly focused on chronic disease management, and it reflected the breadth of interest and activities of the AMCP Foundation. Foundation-led projects have included:

- Establishing the role of pharmacy in a value-based health care system
- Encouraging evidence-based decision-making processes
- Enhancing pharmacy literacy to improve adherence and persistence
- Helping to define the role of specialty pharmacy in managed care

Ms. Rosato commented, "The task before us is to address one of the most significant challenges facing the United States today—treating and preventing chronic disease. According to the Centers for Disease Control and Prevention, the treatment of chronic disease accounts for more than four-fifths of total health care costs. About 50% of American adults have at least one chronic illness. About one-half of the medications for chronic conditions are not taken as prescribed. Nonadherence accounts for \$300 billion in avoidable health care costs. Some of the top leaders from the public and private sectors discussed these topics through the lens of prevention."

The conference included sessions on innovations and challenges in adherence, obesity as a chronic disease, the revolution in data collection and patient care monitoring, cardiovascular disease and prevention, and the patient perspective.

"The ideas and recommendations that come out of this event," said Ms. Rosato, "will result in tangible strategies, programs, and actions that will help improve the quality of health care delivery and patient outcomes."

Fauzea Hussain, MPH, Senior Vice President, Avalere Health, led the attendees through a highly interactive symposium of learning and discussion, and facilitated conversation about health outcomes, health in general, and how to increase collaboration in efforts to improve prevention, treatment, and adherence in chronic disease.

The AMCP Foundation would like to express its thanks to the generous sponsors of this conference. This live symposium and the summary of its proceedings are made possible through unrestricted grants from Amgen Inc., Eisai, Merck & Co, Inc., and Novo Nordisk, Inc.



EDITH A. ROSATO, RPh, IOM



FAUZEA HUSSAIN, MPH

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FACULTY

Fauzea Hussain, MPH

Senior Vice President, Avalere Health (moderator)

Lisa C. Clough, MSEd, CHES

Vice President, Public & Patient Programs, WomenHeart: The National

Coalition for Women With Heart Disease

G. William Hoagland, MS

Senior Vice President, Bipartisan Policy Center

Tom Hubbard, MPP

Vice President of Policy Research, The Network for Excellence in Health Innovation

Scott Kahan, MD, MPH

Medical Director, Strategies to Overcome and Prevent (STOP) Obesity Alliance

Theodore Kyle, RPh, MBA

Principal and Founder, ConscienHealth, and Chairman of the Board, the Obesity Action Coalition

Joseph Nadglowski

President/CEO, Obesity Action Coalition

Eleanor M. Perfetto, PhD, MS

Senior Vice President, Strategic Initiatives, National Health Council

Kyu Rhee, MD, MPP

Chief Health Officer and Vice President, IBM Corporation

Edith A. Rosato, RPh, IOM

Chief Executive Officer, Academy of Managed Care Pharmacy and Chairman,

Board of Trustees, Academy of Managed Care Pharmacy Foundation

Kathleen Shoemaker, PharmD, MBA

Director, Quality Integration Project/HIT, American Heart Association

Kirstin Siemering, DrPH, RD

Health Initiatives Manager, American Heart Association

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KEYNOTE ADDRESS: A PRESCRIPTION FOR HEALTH CARE IN AMERICA

A report of a presentation by G. William Hoagland, MS, Senior Vice President, Bipartisan Policy Center, Washington, DC

> ven though the political climate is polarized, both parties can come together on specific issues. For example, legislators on both sides of the aisle were able to reach a solution on the sustainable growth rate (SGR), resulting in passage of the "Doc Fix."

> "Eighty-six percent of health care spending is associated with chronic disease," said Mr. Hoagland, and 50% of the U.S. adult population has at least one chronic disease. "Yet, it is surprisingly difficult to find support (bipartisan or partisan) for emphasizing prevention." This is partly the result of demographics and budgeting, according to Mr. Hoagland, but it is also related to the challenge of gathering better evidence around prevention and measuring its return on investment (ROI). He pointed out that measuring the effect of an intervention—not only the costs of the intervention but the cost savings and implications of extending life—are very difficult and complex calculations.

> "There is a recognition throughout the country that, when done correctly, prevention delivers value," said Mr. Hoagland. Not all prevention strategies will be effective in improving health outcomes, he noted, and the best ways to realize the potential of prevention are unclear. Work is ongoing to help clarify and measure the value proposition for prevention.

A TASK FORCE ON PREVENTION

The Bipartisan Policy Center initiated its efforts on prevention in 2011, focusing first on the obesity epidemic in the United States. It formed a task force, which included a former U.S. Secretary of Agriculture and a U.S. Senate Majority Leader, "to specifically determine how to get to the value proposition of prevention," according to Mr. Hoagland. "We wanted to utilize a core group of experts to craft a sustainable strategy." The task force worked closely with the Center for Medicare & Medicaid Innovation (CMMI) and the Congressional Budget Office, issuing its recommendations in May 2015 for focusing on opportunities to invest in prevention that will improve health outcomes and reduce health care costs.

From his perspective, Mr. Hoagland said, there is a recognition throughout the country that prevention, when delivered correctly, holds vast potential to improve health at the individual and population levels, while also reducing avoidable health care expenditures. Just as not all prevention strategies will be effective in improving health outcomes, not all improvements in health will result in immediate or



G. WILLIAM HOAGLAND, MS

scalable cost savings. "Yet, we've come to the conclusion that a better integrated, more prevention-focused approach has a role to play in advancing the goal of better health and lower health care spending," he stated. The monograph outlining the task force's recommendations, "A Prevention

Prescription for Improving Health and Health Care in America," included a two-part framework for both building the evidence base for prevention and embedding prevention into health care reforms. First, the task force advised building a strong evidence base on the value of prevention, with support on the cost and impact of prevention (Table 1). The second part of the framework involved embedding prevention as a key part of health care delivery system and reform. The task force recommended several tactics to accomplish this objective:

- The Centers for Medicare & Medicaid Services (CMS) should integrate at least two population health care quality measures into the next iteration of accountable care organizations (ACOs)
- CMS, through the CMMI, should invest in a robust demonstration of an "accountable health care community" model, which goes further than current ACO models, by focusing on the health care outcomes of a population in a defined geographic area
- CMS should invest in evaluation of accountable health care community models that focus on establishing funding mechanisms that can be both scaled and sustained over time
- CMS should support efforts to synthesize and translate lessons learned from CMMI and other programs, including investing in infrastructure to help spread and scale what works
- Communities, public health officials, and hospitals should collectively explore ways to improve Community Health Needs Assessments and better use them as a tool for aligning goals and implementation plans. Also, these groups should engage with other stakeholders to identify existing organizations that could function as integrators

Health reform efforts have specifically emphasized a shift from a volume-based to a value-based system. "This offers the opportunity to create linkages between providers and communities," Mr. Hoagland stated, including the evolution to accountable health care communities.

The Affordable Care Act (ACA) emphasized the promise of prevention, said Mr. Hoagland. He believes that the Act is no longer at risk of repeal, but it will be modified, regardless of the outcomes of the next Presidential election; in any case, he does not believe that the prevention aspects of the ACA will be affected. Such prevention efforts cannot be optimized without incentives to both providers and to individuals, Mr. Hoagland acknowledged, "but monetizing positive outcomes in health and wellness is inherently difficult in policy terms."

The greater part of any successful prevention program, according to the task force, happens outside the walls of the clinic. Therefore, "an integrated approach is necessary," said Mr. Hoagland, "including evidence-based policy, which aligns financial incentives with objectives, and can be self-sustaining."

THE TASK FORCE WORKED CLOSELY WITH CMS AND THE CONGRESSIONAL BUDGET OFFICE, **ISSUING ITS RECOMMENDATIONS** IN MAY 2015. He concluded, "The task force understands that health care delivery is undergoing tremendous change, and we sought to identify policy actions and recommendations that can accelerate progress." The Bipartisan Policy Center would like to advance the delivery of effective prevention and prevention strategies. He concluded by restating the proverb, "Prevention is better than cure."

AUDIENCE PARTICIPATION

Incentives for Payers. A participant pointed out that the average membership turnover in commercial plans tends to undercut the desire for longer-term investment in prevention. Mr. Hoagland responded that payers must have greater monetary incentives for prevention, beyond current policies, and give them "more skin in the game."

Collaboration and Integration. An audience member asked where the concepts of teamwork and collaboration, "which may be the most important things to be developed in communities big and small," fit into an integrated plan to improve vaccination. Mr. Hoagland replied that integration is emphasized in the task force report, and that "the task force did recommend working at the community level, gaining integration with the health care system."

TABLE 1: TASK FORCE RECOMMENDATIONS

The task force recommends the following specific changes and actions to be taken to build the evidence base on the value of prevention:

- The Centers for Disease Control and Prevention (CDC) and the National Institutes of Health should include a requirement for economic analysis in clinical and public health funding opportunity announcements.
- The Centers for Medicare and Medicaid Services should include a requirement for economic analysis in funding opportunity announcements.
- Public health journals should give priority to, and thereby encourage, economic analysis in studies of prevention strategies.
- Public and private funders should encourage and fund studies of the health and economic effects of proven and emerging population-level interventions and prevention strategies.
- Congress should assure adequate funding for the CDC Community Preventive Services Task Force with the aim of expanding the number of community-level public health interventions.
- Congressional budget committees should direct the Congressional Budget Office (CBO) to use "present discount accounting" to bring long-term savings from prevention "up" in time and to align better with CBO's 10-year scoring window.

Source: Bipartisan Policy Center: A Prevention Prescription for Improving Health and Health Care in America. May 2015.

THE GREATER PART OF ANY **SUCCESSFUL PREVENTION** PROGRAM, **ACCORDING TO** THE TASK FORCE, HAPPENS OUTSIDE THE WALLS OF THE CLINIC.

Investment in Data. For the organization's prevention efforts in obesity, an attendee noted that Avalere Health was involved with data collection and integration, which would imply a large investment in data. Mr. Hoagland agreed, in that "interoperability is one of the bigger health care challenges today. Data are not being exchanged, which could generate the teamwork required to optimize prevention efforts of several groups and stakeholders. It requires investment and time."

He commented that the rationale for this investment in data may be enhanced through the process of "dynamic scoring," which is used to account for future savings in the federal budget. Mr. Hoagland said, "The same thing applies to investment in prevention. But it would require 'real heavy' policy changes."

Which Preventive Services Are of Most Value? A participant pointed out that the recent announcements regarding the use of mammography for breast cancer screening demonstrate that not all preventive services have been shown to have great value. Additionally, in the U.S. health system, there are different policies for primary versus secondary prevention. In many cases, if primary prevention identifies a problem, "as soon as you have a diagnosis, patients have to pay out of pocket for secondary prevention. Yet, some secondary prevention services have greater [economic and clinical] value than primary prevention." Mr. Hoagland agreed that primary prevention services are not subject to out-ofpocket payments, "but we have not identified whether these preventive services are the 'right ones.'" He mentioned that he's been receiving significant feedback on whether there should be a cap on patients' responsibility for drug costs.

OPPORTUNITIES AND CHALLENGES: MEDICATION MANAGEMENT AND PATIENT MEDICATION ADHERENCE

A report of a presentation by Tom Hubbard, MPP, Vice President of Policy Research, The Network for Excellence in Health Innovation

> decade ago, the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) implemented Medicare Part D and introduced electronic prescribing. In 2012, the Congressional Budget Office claimed that medical offsets from the prescription drug benefit for seniors resulted in at least modest savings in the overall Medicare program, said Mr. Hubbard.

BETTER ADHERENCE AND LOWER HEALTH CARE COSTS

Multiple researchers have published studies that demonstrate medical cost offsets from prescription drug utilization (Figure 1), and the amount of savings is directly related to patients' degree of adherence with drug therapy. In one study of a population of those older than 65 years, Mr. Hubbard commented, Medicare Part A or B costs decreased in patients with diabetes who demonstrated greater adherence to antihypertensive drugs (angiotensin-converting enzyme inhibitors or angiotensin-receptor blockers). After three years, the gap in medical spending widens considerably for patients taking their statins regularly compared with those who discontinue use, resulting in a difference of about \$500 per member per month for patients taking statins at year 3.

This large difference in health care expenditures is compelling a harder look at how to integrate medical and pharmacy benefits and improve pharmaceutical utilization. The continuum of medication care, from the initial doctor's visit through dispensing at the pharmacy and subsequent refills, offers several opportunities for improving adherence and better use of medications. For example, Mr. Hubbard pointed out that "E-prescribing is actually an adherence intervention." He explained that when an E-prescription is received by the dispensing pharmacy, it may trigger a call to the patient to fill that medication.

The Center for Medicare & Medicaid Innovation (the Innovation Center) is gambling that medication therapy management (MTM) is the best way to reach, on a patient-by-patient level, a better continuity of medication care and enhanced adherence in those with chronic disease. In 2017, the Innovation Center will roll out its new "next-generation MTM" pilot. In addition, the U.S. House Committee



TOM HUBBARD, MPP

THE INTEGRATION OF MFDICAL AND PHARMACY **BENEFIT** AND CLAIMS **INFORMATION** CAN PROVIDE ROBUST DATA FOR ANALYSIS, INSIGHT DEVELOPMENT, AND PREDICTIVE MODELING.

on Energy and Commerce has developed its own proposal on MTM. It seems that policy makers are relying more than ever on pharmacy-led MTM efforts. Yet, Mr. Hubbard fears, "MTM has become untracked; its uptake in everyday practice has been guite limited." He pointed to the issues of reimbursement and scarce time as the limiting factors in introducing MTM widely. Other policy levers to affect medication care throughout the continuum include value-based insurance design and focusing additional efforts on those with chronic care needs.

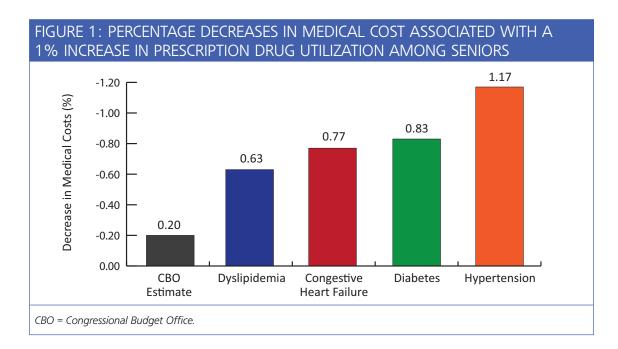
TRENDS TO WATCH

Mr. Hubbard said that, as with many innovations in health care, Medicare has been on the forefront of efforts to improve medication management. He wondered, however, "whether this will extend to Medicaid and to commercially insured patients."

The evidence generally supports that improved medication use and better adherence to the medication regimen lowers health expenditures. Mr. Hubbard believes that payers and providers have not taken swift enough action to grab these savings. He emphasized that it will be critical to quickly implement targeted strategies for better medication use.

The integration of medical and pharmacy benefit and claims information can provide robust data for analysis, insight development, and predictive modeling. He believes that this may have significant implications for controlling the total costs of care, but confirmatory evidence still needs to be accumulated and reported.

Mr. Hubbard also believes that routine utilization management, pharmacy communications with patients, and other existing administrative processes hold the potential to further improve the medication use of patient populations.





These may include providing prescription fill-status feeds to prescribers, appointment-based reviews at the pharmacy, and better use of medication packaging, among others. The questions remaining are whether these tools which are available today—can be optimized by the health care delivery system and what incremental gains in medication adherence may result.

AUDIENCE PARTICIPATION Moving the Needle on MTM. How can the health care community "move the

needle" on MTM? Mr. Hubbard responded that "all of the major chain drugstores have strategies around MTM. Some very strategically thinking, well-placed players are interested in this. But we need more recognition from policy makers that coordinating pharmaceutical care is important and [a consensus] about how to do it."

Digital Therapeutics. One attendee asked whether Mr. Hubbard regarded digital therapeutics (e.g., smart pills that send information) a trend to watch. Although he could not predict the influence of digital therapeutics, Mr. Hubbard did say that manufacturers introducing expensive new medications are seeing safe harbor relief by providing programs that improve adherence." He added, "Maybe that's where smart pills can be useful."

OBESITY AS A CHRONIC DISEASE: CLINICAL CARE, STIGMA, AND ACCESS TO CARE

A report of panel presentations and discussions by Scott Kahan, MD, MPH, Medical Director, Strategies to Overcome and Prevent (STOP) Obesity Alliance; Theodore Kyle, RPh, MBA, Principal and Founder, ConscienHealth, and Chairman of the Board, the Obesity Action Coalition; and Joseph Nadglowski, President/CEO, Obesity Action Coalition. Moderated by Fauzea Hussain, MPH, Senior Vice President, Avalere Health



SCOTT KAHAN, MD, MPH



THEODORE KYLE. RPh, MBA



JOSEPH NADGLOWSKI

erhaps more than any other chronic disease, obesity affects society, the health care delivery system, and individuals. Its prevalence has risen over the last three decades, said Dr. Kahan, to about 35% of all U.S. adults, and the prevalence of extreme obesity has skyrocketed 10-fold since 1985. Obesity costs the U.S. health care system close to \$300 billion annually (\$65 billion in indirect expenditures), and its comorbidities cover nearly the entire spectrum of chronic disease in addition to numerous acute disorders (e.g., acute pancreatitis and gall bladder disease). "Yet we still do not treat obesity like we would any other chronic disease," stated Dr. Kahan. The U.S. Office of Personnel Management claimed that some plans in the Federal Employee Health Benefits Program were failing in their responsibility to treat obesity by refusing to cover obesity medications because of a perception that it is the result of "lifestyle choice."

THE DIFFICULTY IN TREATING OBESITY EFFECTIVELY

Obesity results from a complicated mix of genetics, environmental factors, human physiology, diet, and behaviors, explained Dr. Kahan. He noted that obesity is related to hundreds of contributing factors and interdependencies.

A study in the New England Journal of Medicine showed that levels of hunger are significantly higher after losing weight—and remain elevated even a year after an initial weight loss. "Both right after a moderate weight loss and a year later," said Dr. Kahan, "the levels of hormones driving hunger and satiety are increased, thereby innately driving weight regain. This illustrates the difficulty in losing weight and keeping it off."

Treating obesity effectively does not necessarily mean reducing the patient's body weight to normal, emphasized Dr. Kahan. In terms of efficacy, a treatment that reduces patient weight by 5% to 10% can have very positive effects on health, in general and on comorbidities like diabetes (e.g., lowering blood glucose levels and reducing the need for antiglycemic medications). A study of the effect of intensive lifestyle modification in more than 5,000 overweight patients with type 2 diabetes revealed that more than 85% of participants completed the eight-year trial,

STATES LIKE **COLORADO** ARE STARTING TO RECOGNIZE THE IMPACT OF OBESITY AS A DISEASE BY COVERING ALL TREATMENTS FOR **OBESITY IN THEIR BENCHMARK** PLANS.

losing a mean 4.7% of body weight. Thirty-eight percent lost at least 10% of their body weight after year one, and 27% kept it off after eight years. Also, 11% receiving intensive lifestyle modification kept off more than 15% of their original weight after eight years. Weight reduction of 15% or more is reflective of the types of success seen with some types of bariatric surgery, he explained.

Dr. Kahan stated, "With medications, many can lose 10% or more of their body weight, and keep it off over time." Combining treatments in an integrated way results in additive weight loss (Figure 2). The Centers for Disease Control and Prevention recommends addressing the behavioral influences of home, school, community, and worksite environments; addressing the individual factors of genetic, psychosocial, knowledge, motivational, and treatment factors; and including the mass influencers, such as the food and beverage industry, media, health care industry, government, and educational systems.

BUILDING EVIDENCE AND ERODING BIAS

Access to care for obesity treatment can be extremely variable and severely limited in some areas, said Mr. Kyle. He added that without good care, costs mount guickly, "because untreated obesity harms nearly every organ system."

Many of the benefit tools that health plans typically use discourage people from addressing their disease. These include routine policy exclusions, lifetime procedure caps, and high out-of-pocket costs. Plans' low reimbursement rates for medical and surgical treatment of obesity discourage providers from more aggressively treating the disease, commented Mr. Kyle. In some cases of bariatric surgery, copays can be 70% to 80%, he said. Sometimes, plans require patients to receive behavioral health therapy before moving on to bariatric surgery. He explained that if behavioral therapy results in some weight loss, plans will refrain from paying for bariatric surgery, citing the success of other therapy. "It seems like old habits still linger [for health plans], believing that obesity is not a disease," according to Mr. Kyle, "but the bias that obesity is not a chronic disease is fading." He cited the publication of American College of Cardiology and American Heart Association professional society guidelines on the treatment of obesity and the



U.S. Food and Drug Administration (FDA) approval of seven new obesity treatments since 2012. He also pointed to another important sign of ongoing progress—the emerging specialty of obesity medicine. Mr. Kyle added that states like Colorado are starting to recognize the impact of obesity as a disease by covering all treatments for obesity in their benchmark plans. There is little doubt today that good obesity care can deliver good value, Mr. Kyle said. The treatment or prevention of obesity has been shown to have positive effects not only on diabetes and heart disease, but on musculoskeletal disorders like arthritis and even the incidence of cancer.

"UNLESS YOU LIVE IN THE STATE OF MICHIGAN, YOU CAN BE FIRED **BECAUSE OF** YOUR WEIGHT," **ACCORDING TO** MR. NADGLOWSKI.

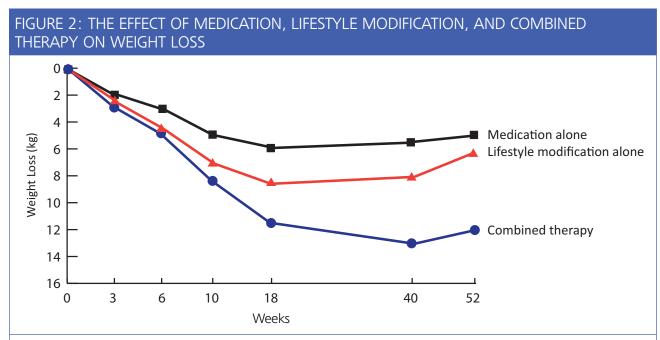
He commented that "good obesity care will often result in substantial improvements in quality of life, better physical function, and even improved productivity."

THE STIGMA OF OBESITY AND ITS CONSEQUENCES

"People with weight problems are often subjected to prejudice, discrimination, rejection, and abuse," stated Mr. Nadglowski. Though recognizing the negative perception of obesity and its consequences, he asked whether we have compassion for people with obesity because it is a chronic disease.

Mr. Nadglowski said, "The stigma of obesity is reinforced every day. You hear that it's ok to tell a fat joke. When the television series Mike and Molly came on the air, the network received thousands of complaints from people saying that they did not want to watch a show depicting people with obesity in a romantic relationship, even though they could have watched something else." He also pointed out the media's reinforcement of the social acceptability of bias against individuals fighting overweight problems.

"Unless you live in the state of Michigan, you can be fired because of your weight," according to Mr. Nadglowski. Adequate evidence exists to demonstrate that employers routinely discriminate against potential job candidates with obesity. Individuals with weight problems receive lower wages than their colleagues of healthy weight. He emphasized that weight bias is no different than other forms of bigotry; "It dehumanizes people, it's a violation of their dignity. It's like any other disease, except for bias."



Adapted from Wadden T, Berkowitz R, Womble L, et al: Randomized Trial of Lifestyle Modification and Pharmacotherapy for Obesity. N Engl J Med 2005:353:2111-2120.

"Even health care providers have a bias against people with obesity," declared Mr. Nadglowski. Those with weight problems don't get the preventive services they need. Health care providers are not delivering empathetic care to these patients, he said, even though obesity is driven more by biology than by behavior. The stereotypical view of obesity and of the "typical" characteristics of people with obesity reinforces its pejorative nature. He added that "bias against those who are overweight is counterproductive. It compromises research, care, health, and policy." Instead, progress comes from empowering people, he pointed out, confronting bias, access to care, and innovative research.

"WE NEED TO SHOW **COMPELLING EVIDENCE THAT** THE OBESITY **MEDICATIONS** WORK, BUT WE'RE HINDERED IN **COLLECTING THE** DATA BECAUSE PATIENTS MANY TIMES DON'T HAVE ACCESS TO THEM."

AUDIENCE PARTICIPATION

Starting with Policy Makers. The meeting moderator, Ms. Hussain, commented that the speakers put forth a three-pronged approach on this panel—ensuring that payers cover obesity treatments, addressing obesity as a preventable and treatable disease with providers, and helping patients in their battle with discrimination and bias.

Dr. Kahan added that "simply educating policy makers goes a long way," and he has now seen instances where payers are more willing to cover evidencebased treatments for obesity. He believes that a lot of progress can be made by first addressing obesity as a chronic disease in the nation's medical schools and with allied health professionals.

"People with obesity should not be characterized by their condition," urged Mr. Kyle. People can easily make erroneous assumptions regarding a person with obesity they meet in a hotel. "You don't know their history," said Mr. Kyle; "that person, with a BMI of 40 kg/m², may have once had a BMI of 60 kg/m²."

A Catch 22: How to Build the Evidence Base if Access Is Limited? A meeting participant commented that coverage of obesity treatment is spotty, even though several new obesity drugs have been approved by the FDA in the past few years. When these medications are paid for with cash, they are not entered into the claims database. "We need to show compelling evidence that the obesity medications work, but we're hindered in collecting the data because patients many times don't have access to them. What's the solution?" he asked.

Mr. Nadglowski responded that he is seeing more payers covering these medications, and Dr. Kahan reminded, "We do have very compelling data that these drugs work: The FDA requires at least 5% weight loss for approval. Today, we're seeing closer to 10% weight loss, sometimes more, especially if combined with behavioral therapy, in clinical studies." He added, "What we don't have is long-term cost-effectiveness data."

Not treating their obesity doesn't mean that the patients disappear, said Mr. Kyle. "We just wind up paying more for it later."

REVOLUTION IN DATA **COLLECTING AND MONITORING:** TRANSLATING BIG DATA INTO **BIG INSIGHTS**

A report of a presentation by Kyu Rhee, MD, MPP, Chief Health Officer and **Vice President, IBM Corporation**

> ot too long ago, I was working with paper-based charts. Three or four medical journals were being sent to me in the mail each week," Dr. Rhee reminisced. "Now so much of this information is digitized, especially in the United States, [whereas] in some parts of the world, it is still paper based." For many years now, one of the premier challenges in improving medical practice is the existence of a tremendous amount of information and the continual input of new evidence on best practices. No one physician can stay absolutely current; no one physician can assimilate the latest medical information into daily decision making at the point of patient care.

Adding to the complexity, health involves much more than strictly health care, commented Dr. Rhee. Many stakeholders are involved, he explained, and when thinking about chronic diseases like obesity or smoking, personal behaviors play a significant role. What then is the role of a person's social network on his or her behavior? These should be considered in both individual and population health.

THE TRIPLE AIM AND PATIENT ENGAGEMENT

The Affordable Care Act focused on improving each component of the "triple aim" (i.e., cost of health care, quality of care, and consumer experience). Patient engagement is also a foundational need, according to Dr. Rhee, essentially creating the quadruple aim.

He asked, "How do we get people engaged in their health care? The average person makes 15 health care decisions each day (sometimes based on what others tell them to do), and those with chronic disease make even more.

"Ultimately, we all want to be healthier; we want diseases to be prevented," commented Dr. Rhee, but today's "sick-care system model" might not be the best way to achieve this. If health is the main objective, "we need to find a way to keep people healthy (primary prevention). Then we need a way to detect diseases earlier (secondary prevention), and finally, we need to treat active disease (tertiary prevention)." He explained that much of the evolution of health care today needs to focus on the behaviors and health care decisions people make that lead to the development or progression of chronic diseases.



KYU RHEE, MD, MPP

CAN THE **TRADITIONAL EXPECTATION OF** 17 YEARS FROM **INITIAL RESEARCH** FINDINGS TO INCORPORATION INTO REAL-WORLD PRACTICE BE REDUCED TO 17 DAYS?

THE IBM WATSON APPROACH

United States health care spending generally falls into one of four categories: (1) inpatient, (2) outpatient, (3) pharmacy, and (4) other (including laboratory and diagnostic testing, and surgical interventions). Of the health care choices made each day in the United States within these four categories of spending, Dr. Rhee asked whether the population is getting the right care at the right value at the right time. This is the foundational guestion that IBM Watson tries to answer in analyzing the health care decisions people make daily.

Considering that only 10% of health outcomes are related to health delivery, "it's really important that we consider health care and all other influences and opportunities for positively affecting the right health and health care choices," he emphasized. The remaining 90% of health outcomes is more related to a slew of other behavioral, environmental, and genetic factors.

If a physician only sees a patient for a matter of minutes throughout the year, and these other factors influence the majority of health outcomes, the need for other sources of health information becomes clear. Dr. Rhee said, "This is helping to drive the evolution of an instrumented, connected, and more intelligent health care system (e.g., through medical wearables). There can be so many more access points and information sources."

However, this requires a system that can collate and integrate all sources of information and the tremendous amount of generated data (published information, observational evidence, and real-world data), and derive knowledge from it ("cognitive computing"). This is not possible through a physician's evaluation of paper charts and the medical literature. "Watson can read 80 million pages per second," stated Dr. Rhee. "All of these generated data need to be distilled for patients and physicians to help health care providers do their jobs better."

The traditional expectation is that it takes 17 years from the time of initial research findings to their incorporation into real-world practice. "With today's cognitive computing abilities and real-world evidence, this can be more like 17 days," he said. "We're already doing this in areas like cancer and genomics." Dr. Rhee described IBM Watson as a system that learns and adapts, generates and evaluates, and understands natural language. It is able to use real-world evidence to create data-driven insights, "which you will not find in a typical NIH-funded, peer-reviewed article."

The first Watson health and wellness application using cognitive computing will be available next year for use on the Apple Watch.

This application's goal is "to help nudge people toward the right behaviors," stated Dr. Rhee.

Further cognitive computing systems are in development as well, with IBM and CVS partnering to exploit the opportunities that retail pharmacy clinics can have on health management. The two companies' new systems will:

- Predict risk, by applying Watson's cognitive computing to a wide range of data from electronic medical records, pharmacy records, wearables, fitness devices, home monitoring devices, and consumer-oriented mobile apps
- Prevent disease, by improving health and reducing bad health outcomes such as hospitalizations and unnecessary emergency room visits

Personalize health care, by leveraging Watson's capabilities to translate evidence-based interventions into real-world practice, empowering CVS pharmacists and health care providers to better individualize and "nudge" patients toward their best possible health

AUDIENCE PARTICIPATION

From Analysis to Practice. The question was raised whether there is evidence or experience for the clinical utility of tools such as Watson. How are the data translated into changes in health care delivery? Dr. Rhee pointed to Watson Health's work with Memorial Sloan Kettering (MSK) Cancer Center, in which MSK clinicians and analysts are training Watson to interpret patients' clinical information and identify individualized, evidence-based treatment options, leveraging the MSK oncologists' decades of experience and research. This enables oncologists to make better individualized decisions at the point of care, said Dr. Rhee. "We now offer it globally on the cloud for access by physicians. We're democratizing that new knowledge."

In another partnership, Watson Health has worked with the Mayo Clinic on a clinical trial identification tool. Dr. Rhee explained that most patients don't know about current clinical trials or about how to access or enter them. "With this tool, their doctor can push a button and find out what clinical trials a patient may be eligible for," he said.

Concerns About Data Sharing. When the Health Information Portability and Accountability Act (HIPAA) was first passed in 1996, said an audience member, it included the provision that every American would receive a universal identification number. This component of HIPAA was never passed because of people's concerns about tracking and privacy issues. Dr. Rhee agreed that privacy and confidentiality are supremely important. In other lines of business, IBM handles sensitive financial, retail, and banking information. "You have to protect health care information at all costs," he said. "Data collection is about trust. What the health care system lacks is the trust needed to share data bidirectionally across stakeholders in the system. As a result, there's a lot of wasted opportunities in data that aren't analyzed. This trust won't be built overnight."

Personalizing Incentives. Mentioning Watson's app for the Apple Watch, one person asked, "How does the device reward the wearer for doing the right thing? How does it pat me on the back for taking 10,000 steps in a day?" Dr. Rhee replied that one of the historical problems is that not everyone reacts the same way to the same incentives. "A lottery trip to Hawaii will move me to do something," he said. "Others are moved through financial incentives." This points to the need for personalized incentives, and a way to do it in a cost-effective manner.

Dr. Rhee explained that if the system knows the personal habits of the wearer (e.g., understands the type of exercise that you like or which foods you enjoy), this can form a basis for incentivized health apps. Part of the problem is maintaining engagement, he pointed out. This might involve leveraging connectivity. For example, if you want to cheer on someone else through Facebook if they achieve their goal—there's an app for that. "We really need to think broadly to motivate people's behaviors," said Dr. Rhee.

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CARDIOVASCULAR DISEASE: PROMOTING PATIENT-CENTERED HEART HEALTH

A report of presentations and panel discussion by Kathleen Shoemaker, PharmD, MBA, Director, Quality Integration Project/HIT, American Heart Association; Kirstin Siemering, DrPH, RD, Health Initiatives Manager, American Heart Association; Lisa C. Clough, MSEd, CHES, Vice President, Public & Patient Programs, WomenHeart: The National Coalition for Women With Heart Disease. Moderated by Fauzea Hussain, MPH, Executive Vice President, Avalere Health



KATHLEEN SHOEMAKER, PHARMD, MBA



KIRSTIN SIEMERING, DrPH, RD



LISA CLOUGH. MSEd, CHES

ypertension is the cause of serious cardiovascular (CV) disorders, like stroke and heart failure. The research establishing the effectiveness of prevention in CV disease is well accepted. "Every 10-point drop in systolic blood pressure is associated with a 30% to 50% lowering of CV risk," said Dr. Shoemaker. About 80 million people have hypertension but only 54% have their high blood pressure under control, and 17% have not been diagnosed (and therefore are completely untreated). The American Heart Association (AHA) decided to consider programs in which it can be an "integrator," addressing this widespread problem by moving forward with a multimodal approach that involves systems of care, providers, patient engagement, and the communities.

CONNECTING COMMUNITIES AND CARE

In the past, said Dr. Shoemaker, "most of AHA's clinical initiatives had focused on hospitals or providers." Dr. Siemering said that these initiatives essentially comprised two areas: increasing individual access to self-monitoring in community settings and linking these individuals to community support (Table 2). These efforts have evolved over 5 to 6 years, led by Kaiser Permanente pharmacists, culminating in a rigorous study done in partnership with Duke Clinical Research Institute and involving 2,000 North Carolina patients. "Across this time span, we have seen that self-monitoring in the communities, linked to support, leads to improved blood pressure control," according to Dr. Siemering.

Very recently, AHA has partnered with the American Diabetes Association and the American Cancer Society to initiate an outpatient quality improvement project, "which takes quality measurement data from the electronic medical record to give information back to clinicians," said Dr. Shoemaker. "We're also looking at the biometric data that comes out of the community reporting and giving it to clinicians, who can use that at the time of the office visit to drive improved blood pressure control."

In 2013, AHA published an algorithm that looked at a step-by-step approach to hypertension treatment and control that directly involved the community, in addition

THE SAN DIEGO **PROGRAM HAS** THE "COOL TOOL," WHICH **ALLOWS PATIENTS** TO ENTER THEIR **BLOOD PRESSURE** INTO A SECURE PLATFORM FOR **SELF-REPORTING** AND SUPPORT.

to providers. It emphasized population health by creating systematic linkages between community and clinical settings in an effort to improve blood pressure control in African-Americans, a group at particularly high risk of hypertension. This model is being piloted in San Diego and Atlanta, with funding by the Kaiser Family Foundation, explained Dr. Shoemaker. These initiatives start with clinics and federally qualified health centers "where physicians receive a bit more than just the data. They get the algorithm, community tools, and become part of a learning system," Dr. Shoemaker stated. "Its tools and capabilities are being used and merged from both the physicians and community sides."

They highlighted what the San Diego program has dubbed the "cool tool." It allows patients to enter their blood pressure into a secure platform (based on AHA's Heart360 Tracker), not only for self-monitoring, but which can also be fed to volunteers supporting the patients and health care providers designated by the patients. This motivates them and connects them to the community system.

"We have a broad vision for the effort—transforming clinical settings," Dr. Siemering said. "It represents an opportunity to use these programs to make systems changes into community and clinical settings that will be sustained beyond the end of the initiative. We're seeking to move from patient health to population health." Also, they seek to not only link providers and communities with data but link them in trusting relationships. "We view blood pressure as just a spark," she stated, to move into other areas of health care.

Community partners included churches, fire stations, YMCAs, and pharmacies, and in Atlanta, the Grady Memorial Health System. Though originally planned as a 3-year project, it has become a 4-year effort (as a result of the time and energy needed to build authentic partnerships and in implementing the infrastructure).

Dr. Shoemaker added that the algorithm published in 2013 was incorporated by the American Medical Association as part of its M.A.P. (Measure accurately; Act rapidly; and Partner with patients, families, and communities) curriculum.

Table 2: Check. Change. Control—Connecting Communities and Care				
Transforming Clinical Settings.	Transforming Community Settings.	Strengthening Existing and Creating New Linkages and Relationships.	Using Blood Pressure to Spark Dialogue and Action.	
Create integrated and seamless systems for identifying, treating, and tracking patients with high blood pressure according to scientific best practices and state-of-theart technologies	Make regular blood pressure monitoring and education a natural part of physical, social, and virtual landscapes	Focus on linkages and relationships between and among clinical and community settings to raise awareness and invite access to resources	Build a culture of health that translates to improved quality and length of life for all	
Source: American Heart Association				



This was tested on a platform similar to that used by the AHA, which will be testing it themselves in the near future.

"It's not just about education but also about access," summed Dr. Siemering. It's about the importance of broad engagement, where the approach includes expanding awareness, lifestyle modifications, access to care, evidence-based algorithms for treatment, medication adherence, and follow-up strategies.

Dr. Shoemaker agreed,

"We're going to learn a lot about the process and practice, but we'll also need to figure out how to scale it."

WOMEN LIVING WITH HEART DISEASE

Heart disease is the number one killer of women, accounting for more deaths than cancer or any other disorder, but even today, it receives relatively little attention. WomenHeart, Ms. Clough emphasized, "is the only patient-centered organization supporting women living with heart disease." She said, "These women are living with something very complex, especially when it comes to medication management. Every year, WomenHeart takes on a series of national public health educational campaigns. These start with a literature review, followed by a survey of women living with heart disease. These data are collated and evaluated by a group of key opinion leaders, she explained, who issue recommendations for improving the lives of women living with that condition.

In March 2015, WomenHeart conducted a survey of women with heart disease to help determine what they need to obtain better care and to improve their outcomes—to take charge of their heart health. The results indicated the need for:

- Improved access to primary care
- Prompt referrals to specialty care
- Referral to subspecialty care as needed
- Good coverage for cardiac testing, treatments, and devices
- Access to medications, as prescribed
- Referral and coverage for cardiac rehabilitation
- Availability of mental health/counseling

Ms. Clough added, "A few other things that came out of the survey were their desire for care coordination, assistance with additional health care services

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Source: WomenHeart

as needed (e.g., smoking cessation, dietary counseling), improved patientprovider communications, and better access to support services and support networks."

In asking these women what types of factors affect their health plan choices, they elicited similar responses to other patient groups (Figure 3). Noting the complexity of their condition, continuity of providers may weigh more heavily in their choice. "They also want coverage for those additional support services," Ms. Clough stated.

A campaign on heart failure in women was launched in November 2014. It is the leading cause of hospital readmission in women ageg 65 and older. Two hundred fifty-five women responded to the survey (mean age, 52 yr). They indicated that in addition to the findings of the previously mentioned survey, these women desired better diagnostic accuracy and more services to address mental health issues associated with heart failure. The key opinion leader workgroup recommended that more stakeholder collaboration is necessary to support these patients and notably, more women be recruited for clinical trials of heart failure management and treatment.

In January 2015, WomenHeart launched its national medication adherence campaign. This included a national patient education webinar. "When we do these

> with a pretext to learn a bit about the audience. They reported that 82% were receiving heart medications, and 41% take at least 4 medications. which is low for these women." The good news about this survey, she commented, is that most of those attending the webinar talk to their doctors about their medications at every office visit. "The perplexing news though is that one-quarter still elected not to refill prescriptions and 29% stopped their medication prematurely negative side effects and cost were leading reasons for nonadherence. There is a lot of work that needs to be done to educate these women and to

webinars," Ms. Clough said, "we start

In February 2015, a WomenHeart survey on hypercholesterolemia was undertaken, which included 795 women (mean age, 59 yr). This survey demonstrated relatively good adherence to treatment (62% adherence, compared with 30%-50%

empower them on these two issues,"

explained Ms. Clough.

Figure 3: Factors affecting the Choice of Health PLAN BY WOMEN WITH HEART DISEASE Availability of additional Choice of services providers Continuity of Actual out-ofcare with pocket cost providers **Predictability** of costs



adherence for patients with other disease states). Eighty-three percent reported taking statins, and 61% of patients with familial hypercholesterolemia were taking a medication with an indication for this genetic disorder. The barriers to adherence were pretty much the same, according to Ms. Clough, and side effects were prominent (e.g., muscle pain).

AUDIENCE PARTICIPATION

Don't Forget Payers. The meeting moderator, Ms. Hussain, asked whether the payers have been engaged with similar models. Dr. Siemering replied that they are always looking at which members of the community have an interest in participating in these activities.

"We want to be as inclusive as possible, addressing the

people, businesses, and the faith-based community, but we're not yet focused on payers." Dr. Shoemaker added, "You have to think about those businesses and organizations that are active locally, that you are able to work with on this community level. We are sure we'll find out that what we do (and who we work with) in Atlanta will look very different compared than in San Diego." As a rule, payers are working with all of the health systems in the community. It is a great opportunity to leverage payers as a point of central contact.

More Detail on Patient Self-Monitoring Systems. An audience member asked Dr. Siemering how AHA is providing the self-monitoring machines to members of the community? She explained, "We offer the app for upload to their computer, tablet, or some electronic device, like a smartphone. When someone is registered in Heart360 Tracker system, they can upload measures on a regular basis." She added that this seems to be well accepted by participants, but "some people are nervous about the technology—there are trust issues."

Virtual Communities for Medication Adherence? Another question was raised regarding the impact of communities on improving medical adherence, "but we see fewer people involved in communities over time. Have you looked into virtual communities?" Dr. Shoemaker acknowledged that funding for the pilot did not include the virtual community concept, "but as we scale the project into other communities, we can look into this." Dr. Siemering commented that for the current project, they have considered using virtual connections "in the spirit of collaborative learning."

How Women's Access to Medicine Is Affected by Heart Disease. In the general population, access to medicines is not a widespread issue. An audience member asked in what ways women with heart disease may not be able to receive prescribed medicines. Ms. Clough responded, "One of the challenges women told us about is that once they have a heart attack, they have a relatively high likelihood of losing their job and thus their insurance. We have public policy initiatives on the federal level to address this concern."

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THE PATIENT PERSPECTIVE

A report of a presentation by Eleanor M. Perfetto, PhD, MS, Senior Vice President, Strategic Initiatives, National Health Council

> o date, the health care community has not done a good job of including "the patient's voice" in both policy decision making and in individual clinical decision making, began Dr. Perfetto.

> The concept of patient centeredness, which is supported by the National Health Council and the individual patient advocacy organizations it represents, includes the involvement of patients in all aspects of care and care delivery, such as: (1) active involvement of patients and families in the design of new care models and in decision making; (2) providing care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions; and (3) ensuring active patient engagement at every level of care design and implementation (Figure 4).

PATIENT CENTEREDNESS IN CARE AND DATA SHARING

"Taking the example of a patient enrolling in a clinical trial," said Dr. Perfetto, "clinicians may think that simply participating in the study represents engagement." That is the lowest level of engagement. The greatest levels of engagement are driven by the patient him- or herself." In between, she pointed out, the spectrum of engagement includes partnerships as co-investigators or chairpersons of the clinical trial committee. Dr. Perfetto said the goal is to move toward greater direct patient involvement, where the patients are not just asked questions, rather "the patients help develop the questions to be asked."

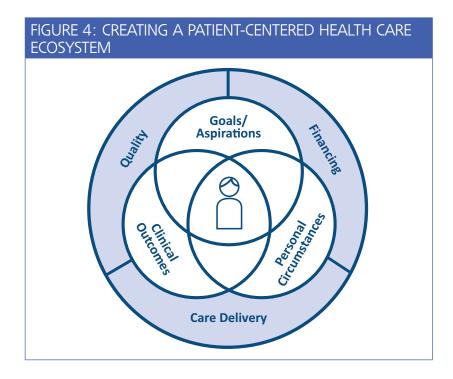
When discussing adherence and chronic disease, "we need also to talk about data sharing," Dr. Perfetto noted. "Patients are actually pretty amenable to data sharing." Typically, these data-sharing programs are developed by clinicians for clinicians, without participation of the patient. She urged consideration of patient centeredness in the overall health care system's quality measures, financing, and care delivery components.

An important way to proceed, she emphasized, is to work toward a health system that asks patients about their own goals, their needs, and what they are trying to achieve. For example, can they achieve their goals given their personal circumstances? Dr. Perfetto said, "Without a patient partnership, disease management, prevention, and adherence programs have had limited success and limited return on investment. We just have not been successful in telling patients what to do and expecting them to do it."

In trying to improve adherence and encourage patients to take advantage of prevention, "we need to get away from clinician-generated models," she stated. For example, a physician may advise a patient to make an appointment for



ELEANOR M. PERFETTO, PhD, MS



a colonoscopy. However, this person may fail to do it, because it takes too much time to schedule and too much effort to perform the bowel preparation. "We don't have a system that works around the person's life," said Dr. Perfetto.

AUDIENCE PARTICIPATION Patients and Quality

Measures. Dr. Perfetto mentioned listening to the "patient's voice" in health care decision making. How should this be incorporated into quality care? She replied that in health care quality measurement, metrics exist for the spectrum of services but there is no measure for

patient centeredness. "Patients may look at the existing quality measures and say, 'that's kind of silly. It's not important to me,'" according to Dr. Perfetto. "Instead, credit for achieving these patient-defined goals."

we would implement measures that are important to patients, and give clinicians Shared Decision-Making Tools. The meeting moderator, Fauzea Hussain, MPH,

Senior Vice President, Avalere Health, asked how shared decision-making tools can facilitate the dialogue between the clinician and the patient to better understand what patients consider of value. Dr. Perfetto acknowledged that several so-called shared decision-making tools exist, but (1) they have not been well tested and (2) they do not truly utilize shared decision making.

"We've done a poor job of testing them," she said. "We need to test new shared decision-making tools to find out if they actually do help patients make better decisions and obtain better outcomes based on their own goals. These tools need to be co-developed with patients. Today, clinicians may have an educational tool that helps them tell patients 'you have three treatment options and this tool tells you about them.' That's not truly shared decision making," Dr. Perfetto emphasized.

Care Coordination and Patients. An audience member asked whether good models of care coordination between clinicians and other health care providers are proven to work and meet patients' needs. Dr. Perfetto replied that, yes, a few do exist, but they are predominantly found in environments where the care is already coordinated to some degree. Generally, this occurs where the pharmacy and medical care are integrated. She pointed to the Veterans Affairs

IN TRYING TO IMPROVE **ADHERENCE AND ENCOURAGE PATIENTS** TO TAKE **ADVANTAGE OF** PREVENTION. "WE NEED TO **GET AWAY** FROM CLINICIAN-**GENERATED** MODELS."



"VALUE FRAMEWORKS" **REPRESENT VALUE FROM** THE PAYER'S **PERSPECTIVE BUT NOT THE** PATIENT'S **PERSPECTIVE** system and Geisinger Health System, where care is coordinated and it is more of a team effort than in other care environments.

For areas or systems with poor care coordination, "we need better technology to help us with that, maybe electronic health records that can be accessed by different providers," she said. "That's a barrier that's very difficult to overcome."

Value Models. The use of "value frameworks" is becoming popular in oncology today. One person asked whether there will be a shift to similar value frameworks for other chronic diseases. Dr. Perfetto answered that from a societal perspective, there isn't consensus that these models really get at value. "They represent value from the payer's perspective,

but not from the patient's perspective. This is not surprising, as patients haven't been part of the conversation and development of those value models."

To illustrate, she used the example of familial hypercholesterolemia (FH). According to Dr. Perfetto, patients with FH often don't find out they have the disorder until they have a heart attack at a young age. They may have found out earlier that they were at high risk, because a parent had a heart attack and died when they were very young. She explained, "If you have FH, and you had a parent who died from it, you may decide not to have children as a result—you don't want them to have to live through their parent dying while they are very young." If a drug comes along that treats FH very effectively, it could change this patient's mind regarding whether to have children. That's life changing. But, that's not included in the value model for PCSK9 medications, said Dr. Perfetto. "The patient's voice was not included in the construction of the value model."

FINAL COMMENTS AND KEY TAKEAWAYS

A report of concluding comments by Fauzea Hussain, MPH, Senior Vice President, **Avalere Health**

> The day's agenda, presenters, and active audience participation resulted in not only valuable conversation but also some specific messages for the health care community. Ms. Hussain outlined the key takeaways:

- Compelling clinical and individual patient information supports the need for prevention and the need to expand dissemination of the prevention message, especially as it pertains to chronic disease
- The magnitude of the implications, both in financial and human terms, of chronic diseases like obesity and cardiovascular disease cannot be overemphasized to stakeholder groups
- Broader systemic changes are needed to support care integration and coordination to drive improvement in prevention efforts
- Integrating population health into the health care environment is challenging. Medicare has led a new movement to pay physicians for chronic care management (e.g., covering care transitions)
- Some innovative activity in accountable care community models is occurring at the state level, particularly in Colorado and Minnesota. In Colorado, policy makers are employing capitated payments across social and clinical services, illustrating the ability to go beyond the walls of the clinic and into the community, but with the understanding that fiscal responsibility must be shared. Scaling these programs to larger populations and geographic areas represents a challenge and an opportunity for progress
- Effective and meaningful engagement is needed at all levels, with payers (to determine the value of services and interventions), with the community (to identify the intrinsic and extrinsic value factors), as well as with the patient (to support that engagement, motivating them to make the appropriate choices)
- In efforts to engage the patient specifically, the patient's point of view must be incorporated much earlier in the process for developing chronic disease prevention, treatment, and adherence programs. Quite often, the metrics for improving outcomes are not patient centered, and therefore fail in a basic way to incentivize or motivate the patient

Ms. Hussain stated that one of the keys to attaining goals in prevention (primary, secondary, and tertiary), is proving complex. "The real-world evidence to prove



FAUZEA HUSSAIN, MPH

prevention's value and return on investment has been elusive," she said. "Finding value in many of the interventions we've talked about today is complicated by the monetization of those interventions. If we take off our clinician and science hat, many times those interventions resonate with common sense. But often the monetization aspect gets in the way."

Ms. Hussain concluded, "There's a lot of opportunity and room for growth, and health plans, health systems, and pharmacy professionals are at the forefront."

