Thanks, Tyler. Yes, I am very passionate about this topic. It is not only my role at Health Catalyst, being the VP of Care Management and Patient Engagement, it is my experience at the last 25 years in healthcare. And my passion comes from my experience as a clinician, it comes from being a military leader, and a community advocate. Let us admit it, we have not figured out the healthcare issues and the challenges. Healthcare, when we see patients in the hospital, it is just a symptom of the larger problem. I have led large and comprehensive care coordination programs and I am also involved with a lot of community action groups. And what I have come to realized is that we do need to do something different. Care management programs need to be part of that solution, but we have to also invest in our communities. I have a soft spot for veterans but I am also a huge advocate for those that have socio-economic challenges. Focusing on care management and community programs that focus on housing, jobs and education will help the US get help themselves. So I am passionate about care management but I also want us to think of the broader aspects of what we are trying to solve.

Great. Well, let us take it away and dive right in.
So, I am thrilled to kick off the first of two webinars focused on care management. During today's webinar, we are going to focus on three key things. One, the central role care management plays in the current healthcare environment. This section of the webinar will include the essential building blocks needed for an effective care management program. Secondly, we are going to focus on outcomes you need to be thinking about in a care management program. Third, how can data and analytics help you achieve your care management and population health goals. And if that is not enough, we will also have some excellent case studies of how data and analytics can help you identify, coordinate and outreach to patients that will have the most impact to your organization reaching its goals – because let us face it, healthcare has change dramatically in the last 10 years and healthcare resources are limited. I have experienced that. Building a care management program that is thoughtful and focused will impact this new value-based environment.

We will also take a peek at Health Catalyst Care Management Suite, a result of our partnership with experts in care management across the country, such as Allina Health in Minneapolis, MultiCare Health System in Washington State, Partners Healthcare in Boston, and Piedmont Healthcare in Atlanta.

So let us get started.
Care Management

Care management plays a central role in the world of value-based reimbursements, at-risk contracts, and population health management.

Care Management [02:45]

So why do we care about care management? So the agency for healthcare research and quality categorizes care management as fundamental vehicle for managing the health of populations. So care management is organized around the idea that appropriate interventions for individuals within a given population will reduce health risk and decrease the cost of care. And I am going to repeat that, because that is such a fundamental aspect of care management that I think anybody who is on this webinar needs to understand, whether you are clinical, whether you are an executive, whether you are in IT or that other category. If you do not do care management day to day, it is difficult to really understand what that means.

So I am going to repeat that core essence of what care management is. Care management is organized around the idea that appropriate interventions for individuals within a given population will reduce health risks and decrease the cost of care. So this case management, which is the historical root of care management, has its foundations in the provision of social services in the 1800s and public health nurses and social workers in the 1900s who coordinated services through the public health sector. As cost containment programs developed in healthcare, care management started to become a focus of health organizations and pairs with increased efforts to meet the client’s needs while also coordinating the use of services.

So care management, it is a team-based patient-centered approach designed to assist patients and their support systems in managing medical conditions more effectively. It also encompasses those care coordination activities needed to help manage chronic illness.
So who is on this team that I mentioned? You know, we need to surround our patients with a multitude of different team members. We need to include the physician. We need to include RNs. We need to include those care managers, pharmacists, social workers, dietitians, community health workers. When you think of care management and the care management activities in your organization, go beyond your four walls. Think about what other resources are available in your community that can help you support this patient-centered approach. You do not and should not have to do it alone. There are resources available.

So as we think about care management, we think about it being a critical role for population health strategy. So, why is it a critical component? Many of you are likely familiar with the content of this graph. This particular graph is from the National Institute of Healthcare Management that highlights the spending for healthcare services. As you can see on the graph, spending for healthcare services is highly concentrated among a small portion of people with very high use. To reduce this total cost of care, organizations are investing in platforms to understand and identify their high cost patients, patients who are high utilizers of resources and those with complex risk scores.

Then, successful care management programs outreach to those patients that they can impact the most and provide care management service to to eventually decrease those costs. While this makes sense, implementation of strategies directed at high risk patients presents a myriad of challenges. We will talk more about these challenges and how analytics can be used to address those challenges in a few moments.
So I am going to turn it over to Tyler to do our first poll question.

Poll Question #1
How effective are your organization’s care management programs?
154 respondents
a) Not at all effective – 6%
   b) Moderately effective – 43%
   c) Very effective – 6%
   d) We don’t have one – 6%
   e) Unsure or not applicable – 39%

[Tyler Morgan]
Alright. Well, let us get this poll question up. How effective are your organization’s care management programs? Not at all, moderately, very effective, we don’t have one, unsure or not applicable. We will leave this poll open for a few moments to give everyone a chance to respond. While that is open, we would like to remind everybody that you can download these slides right now from the handouts pane of your control panel but we will also be sending out an email afterwards. We are recording this webinar. We will have the recording available as well as the slides. And there are also a couple of questions about where to find that whitepaper again. The link to the whitepaper itself is in the chat pane. So we want you to follow that link to get that whitepaper, download that, read that. So a great resource both for today and also for the part two of this webinar series.

[Kathleen Clary]
Absolutely.

[Tyler Morgan]
So okay, let us go ahead and close this poll and let us share our results.
Poll Results [07:14]

So 6 percent of our audience responded not at all effective, 43 percent, the majority, responded moderately effective, 6 percent very, another 6 percent we don’t have one, and 39 percent unsure or not applicable.

[Kathleen Clary]
Well I am excited to see those results, Tyler, because moderately effective means that organizations, almost half, understand their care management program and can understand how to assess whether their care managements are effective. And I think, you know, this webinar is going to help highlight those areas that you are strong in and have strong skillset, and then I think this webinar is also going to identify areas that maybe you can modify and continue to develop.
So I am going to base my next slide on the building blocks of care management. So as I mentioned before, the focus of care management programs, much like healthcare as a whole, is to serve patients in the best way possible by providing high quality care that produces good outcomes. Now, isn't that what we are all trying to achieve in healthcare? But here are some of the key building blocks of care management. These key building blocks come from healthcare transformation task force, which is an industry consortium that brings together patients, payers, providers, and purchasers to align the public sector's efforts to transform healthcare. What a great concept to have a task force that is not just healthcare focused but really look at the individuals and stakeholders that really can impact the patient's health and quality of care.

So this consortium concluded that while affected care management programs take various forms, successful programs incorporate foundational building blocks that highlight the patient need and patient-centered approach. And I am going to go one by one through these and expand on them and we will continue to expand on the other topics as we go along. One of the necessary first building blocks to build and deliver an effective care management program is identification of the target population. You will hear me continually repeat this team in this webinar because it is such an important component of care management. We have already touched on the fact that healthcare costs are highly concentrated in a very small patient sub-population. However, most high need, high cost patients are not the same. So, what does that mean? It means that there are many factors that defines those high need, high cost patients. To be effective, healthcare organizations need to be able to aggregate data from multiple sources. It needs to include claims data, it needs to include clinical data, and socio-economic determinants to identify those high need, high risk patients that would be appropriate for care management programs to do outreach to. I will admit, most integrated delivery networks, ACOs and value-based programs,
can have 20 to 30 different EMRs and multiple sources of claims data that spans the continuum of care. The task force did not identify this, but data integration is a key part of identifying the target population in a well-organized care management program. Later in this webinar, I will be highlighting the Health Catalyst tool, Patient Stratification, that aggregates these data sources and allows organizations to identify target populations with specific inclusion criteria. So you will hear that identifying the target population as (10:43) of theme in this webinar.

The second building block I want to highlight of an effective care management program is patient and family caregiver engagement. I cannot stress enough the patient and the family caregiver engagement in this process. It involves healthcare team members forming meaningful partnerships and building trust at all levels of care delivery. From my experience, this is one of the hardest areas to support patients in their healthcare outcomes. It is hard to build trust with patients and that takes time. I once had a social worker that worked for me who said, "You know, it doesn't take just one session with a patient to build that trust with the patient. That relationship takes time." And so, you may not necessarily see that ROI or that relationship built in one session. Examples of this can include shared care planning, patient involvement in system design, representation of patients on governing boards and establishment of patient relationships with community-based organizations. By the conclusion of our two webinars, I will share with you a Health Catalyst mobile-first approach that enables secure real-time multi-point messaging, assessments, education, and care planning design to engage and support all care team members, patients, and families. We need to reach the patient where they are at and Health Catalyst has a multitude of tools to help that relationship between the patient and the family caregivers and the care managers.

The third building block of care management, which is often one of the main challenges, is ensuring the delivery of a team-based care. Care managers are responsible for developing care plans and goals and partnership with patients and providers, building that continuity of care, reviewing patient data and engaging with patients to manage their own health. That does not sound too complicated, right? Well, not mentioned by the task force, I truly believe that analytics and platforms can substantially improve the workflow and efficiencies of the care managers while significantly impact patients by allowing care managers to focus on tactics that directly impact the patients.

The fourth building block, care coordination and infrastructure, are the organizing care activities required for effective management and communication between providers, patients, and family caregivers. Let us be candid. The patients that are high cost and high risk are complex. They often require coordination of care across multiple services, programs, and facilities. For example, this may be someone you know. Some patients will need help coordinating ambulatory visits to primary and specialty physicians, ED visits, hospital and skilled nursing facility admissions, plus they may need help coordinating transportation, financial services, and a multitude of other services that need to be coordinated just to keep them out of the hospital, much less, improve their quality of life. Unfortunately, many care management solutions in the industry use claims or EHR data that rarely both to stratify, identify, and outreach to these patients who meet this criteria. As I mentioned previously, Health Catalyst Care Management Suite can take data from
multiple sources to identify patients, plus we have built tools that will help the care management program assist patients in the care management team. Organizations can use Health Catalyst analytics to integrate current utilization and trends, chronic conditions, active medications, and social determinants from disparate clinical and claims data, eliminating the need to manually review data and develop patient list.

The fifth block, health assessments and screening, are essential to evaluate the patient's clinical and socio-economic needs. Health Catalyst Care Coordination platform help the team facilitate timely all inclusive care team communication and collaboration on patient's assessments, care planning, and interventions.

The sixth block, health and disease management programs, are designed to improve the health of people with specific chronic conditions, reducing healthcare service utilization and costs associated with preventable complications. The patient stratification tool in Health Catalyst could help organizations identify those conditions that would most benefit from these types of disease management programs.

The seventh block, patient-centered care, is a critical component of effective care management programs and must be clinically appropriate and aligned with the patient's health goals and priorities. Again, we have to meet the patient where they are.

The eighth and second to the last block is transitional care services. These services are time limited and intended to ensure continuity of care. Transitions of care are a high risk time for patients with an increased risk of errors related to handoffs. Poor communication, incomplete transfer of information, inadequate education, limited access to services, and a lack of single point person during critical transitions can negatively impact the patient experience and are associated with adverse events. Effective care management services include support for these transitions of care. As an example, a key period is patients who are discharged from hospital within the first 48, it is key that the patient has a point of contact to really coordinate those services of care to prevent readmissions.

Lastly, an effective care management program includes quality measurement and an evaluation framework. In addition to traditional clinical quality measures, it is important to include patient-reported outcomes, functional status and patient satisfaction. And I would say, this is one of the hardest pieces in the puzzle.
So let us talk about the last building block a little bit further. An effective care management program includes quality measure and an evaluation framework. While the building blocks of effective care management are increasingly well understood, we frequently hear concerns about the cost of care management and determining return on investment. Why should we spend so much on care management when we do not understand what they are improving or we do not know how to measure those improvement. In 2014, the Advisory Board profiled leading care management organizations around the country, evaluating program structure and return on investment. One of their conclusions was that the only way to reign in healthcare spending is to actively manage care for their highest cost patients. When its researchers modelled out the impact of different care management approaches on a capitated contract with 25,000 Medicare patients, they found that if health systems managed only the high cost patients, they would end up with a nearly 5 percent negative margin by the fifth year of operation. Yes, you heard me right. If organizations only focus on the top 5 percent, they will have a negative margin. What they found is a positive margin required managing high cost and the moderate risk patients. It is an investment in their care management program.
Bending the Spending Curve...

Bending the Spending Curve... [17:54]

So we at Health Catalyst agree with the Advisory Board's analysis and believe that care management is vital for helping organizations meet population health goals. It is also consistent with what our patients, like Partners Healthcare in Boston is experiencing. In May of this year, Partners published an article 'Bending the Curve by Altering Care Delivery Patterns: The Role of Care Management within a Pioneer ACO in the Health Affairs Publication.' And I am going to repeat that, so if you want to look at that article and review it, it is a Partners published article that was published in May of this year, called 'Bending the Spending Curve by Altering Care Delivery Patterns. The Role of Care Management within a Pioneer ACO in the Health Affairs Publication.' The publication examined the impact of patient participation in a pioneer ACO and its care management program on rates of emergency department visits and hospitalizations and on Medicare spending. Partners used data from 2009 to 2014, reviewing naturally staggered program entry to create concurrent control groups, enabling isolation of program effects. The care management program targeted beneficiaries with elevated but modifiable risk for future spending. Participation in the care management program was associated with substantial reduction in rates for hospitalizations and both all non-emergency ED visits, as well as Medicare spending when compared to pre-participation levels and to rates in spending for a concurrent sample of beneficiaries who are eligible for but had not yet started the program. ED visits rates dropped by 6 percent and hospitalizations were reduced by 8 percent and Medicare spending was reduced by 6 percent.

In a study of an earlier iteration of this program, an independent evaluator commission by CMS found hospitalization rates were 20 percent lower than the comparison group. ED utilizations rates were 13 percent lower for enrolled patients and the annual mortality was 16 percent. Pretty compelling, right?
In fact, many of our clients at Health Catalyst use care management to decrease cost and improve outcomes. These success stories are available on Health Catalyst website and I will just take a little time to review some of those examples. As part of a broader effort to reduce length of stay, El Camino hospital, a multi-specialty community hospital, focused on care management by increasing the number of available care managers in the emergency department and acute units. These staffing changes were to improve discharge planning and improve care transitions. For care transitions, the team also focused their efforts on patients that are at high risk for readmission. Remember those key transitions of care? So they followed up with their post discharge to ensure the patient could successfully manage their care, avoiding costly and unnecessary hospital admissions. El Camino's patient-centered care management resulted in a 7.8 percent reduction in average length of stay and a 14.8 percent relative in improvement in the readmissions.

Another client, MultiCare, an integrated delivery network, focuses on care transitions for high-risk cardiac patients. Patient navigators serve as advocates and care managers, helping patients navigate the complexity inherent in any large health system. The navigators are the voice of patients. They are responsible for making sure the patient's preference are honored, that they receive the proper education and that they understand all the information. The navigators make follow-up appointments for the patients and ensure that they attend those appointments, and they also work with patients on medication adherence. In addition, they serve as a communications liaison, informing the care team of changes in the patient's condition.
MultiCare's focus on care transitions has successfully reduced readmission rates, achieving a 24 percent relative reduction in heart failure readmission rates and has improved mortality.

Another client, Allina Health, has several examples of effective care management, including its heart failure management program and the Courage Kenny Rehabilitation Institute, and I will refer to that as CKRI moving forward. The heart failure management program at Allina is designed to overcome persistent challenges with care coordination, particularly a lack of clear ownership of the heart failure care management process, which is a common issue at a large healthcare organization. The program focuses on five main functional areas – nursing, care management, protocols and guidelines, measurement and reporting, and education. Each area is led by a cardiologist, and then the care management function is co-led by a cardiologist and a primary care physician. There is also a nurse dedicated to the function who follows heart failure patients in all settings of care and the nurse sees the heart failure patients at the hospital, understand their care plan and assures that the plan is executed after their discharge.

Similarly, the CKRI at Allina provides comprehensive rehabilitation services for people with short and long-term conditions, injuries, and disabilities. There is an experienced registered nurse that serves as the assigned care manager, assisting patients and their caregivers to understand and navigate the complex healthcare delivery system. Care managers who are available from the time of diagnosis through the treatment work with a care guide and a social worker, all of whom collaborate to meet the patient support needs. Using the EDW and analytics platform, CKRI team members can easily identify and target high risk patients, planning interventions to meet the unique patient needs, and data from the EDW also enable them to demonstrate ROI and improve patient outcomes that result from the care management initiatives.

Allina's heart failure management program decreased readmission rates by 3 percentage points and that CKRI program is improving outcomes and costs, to include 7 percent reduction in hospitalizations, 7 percent reduction in hospital days, 46 percent reduction in ED visits, and 8 percent reduction in secondary stroke rates within 180 days of discharge. Allina has demonstrated similar success in improving care transitions for patients with mental health diagnosis. Allina put a new care transition process in place, redesigned workflows and added key patient support roles for its mental health patients and the organizations saw a 27 percent relative reduction and potentially preventable readmission rates. These are four of many success stories that you will find on our Health Catalyst website.
Another example is Texas Children's Hospital has taken a population health approach to diabetes care management with children incorporating focus improvement efforts in the clinic, community, and the inpatient arenas, including comprehensive patient and family education. For each child diagnosed with diabetes, Texas Children's predicts their risk for diabetes ketoacidosis (DKA) and mobilizes additional support such as a dedicated high risk social worker for those patients at greatest risk for DKA. Data and analytics from the Health Catalyst Analytics Platform inform their improvement efforts and enable data coordination across the continuum of care. This approach is achieving impressive results, including a 44 percent relative decrease in length of stay for patients with DKA. They have also seen a 30.9 percent relative reduction in recurrent DKA admissions and 34.4 percent relative improvement in the percentage of patients with diabetes who receive the influenza vaccination, and more than 90 percent of patients receive the annual preventative screening recommended by the American Diabetes Association for thyroid stimulating hormone, lipids, and retinal exams. More than 80 percent received the recommended microalbumin testing and all of which are important in identifying complications, supporting early treatment, lowering the risk of substantial complications and improving the quality of life long term.
Poll Question #2

What is your biggest challenge in delivering your care management program(s)? [26:10]

So I am going to shift us to our next poll question. And I will shift over to Tyler.

[Tyler Morgan]
Alright. So our next poll question is, what is your biggest challenge in delivering your care management program(s)? Is it patient stratification and intake, care coordination, patient engagement, performance measurement or ROI, or unsure or not applicable? And again, we will leave this open to give folks a chance to respond.

Now, we are getting a few folks saying they are not able to download the slides from the handouts pane. We apologize for that. We would like to let you know after the webinar we will be sending out an email with the link to the recording, as well as the slides. So if you are not able to grab them today, we will make those available to you in the future as we want to make sure you have these documents. So it is really important.

Alright. Let us go ahead and close our poll and let us share our results.
Sixteen percent of our audience responded patient stratification and intake was their biggest challenge, 14 percent care coordination, 24 percent patient engagement, 20 percent performance measurement/ROI, 26 percent were unsure or not applicable.

[Kathleen Clary]
That is great, Tyler. It is interesting to see it is a pretty even across the board on questions on each part of the care management programs, which works to my advantage in this webinar because we will be covering all of those aspects.

So let us talk about all of those pieces of a care management program.
Regardless of the type of care management program you design, the care management process typically involves these key steps outlined on this slide. So the poll question we asked was really about these different steps in your care management program. As mentioned previously, you first need to identify your target population. Accurate identification of patients presents challenges. Often organizations do not have comprehensive data and analyst and care managers end up working with multiple payor lists and results. Spending substantial time combining and reviewing reports to create a master patient list. Emailing the list of care managers who spend a substantial time looking at update in EMR, attempting to identify which patient should be enrolled in and engaged in your care management program. I can tell you, I had lots of RNs who are care managers who used to work with me in my previous position, who spent more time in an Excel spreadsheet than they would do outreaching to patients. And they were always baffled by the sense that they did not think they had gone to a nursing school to understand how to work in Excel spreadsheets. So understanding who your population is important.

Patient identification should use comprehensive data to stratify patients by utilization, risk and other factors. Then, critical judgment can be used to refine the patient list and add patients to specific care programs. This is an interesting portion of your care management program. As you think about building this part of your program, you need to think about how responsive is this portion of your program, is it static, is it something you can review once a month because you are only getting data into your system once a month, or is it responsive to your needs on a daily basis. Health Catalyst has built a tool that allows you to be responsive to your data when you need it and how you need it. So think about how you get that data and how often you can actually do that risk stratification on your patients.
Once patients are identified, a care manager reaches out to the patient to describe care management and invites the patient to participate in the program. Different programs have this component in a different way. I have seen organizations who review patient list between the care manager and the provider first to make sure it is an appropriate patient to do outreach. Sometimes programs have an understanding, if that we use certain inclusion criteria, providers are okay with care managers reaching out to patients. Some have systems in place where all care managers reach out to all patients that are discharged from the hospital. But you want a system that is responsive to your needs.

From there, care managers and clinicians use assessment tools and processes to identify problems associated with medical and mental health conditions, psychosocial issues, family support, substance abuse, and other factors. And as you build this part of it, be thinking about, as you build these assessments, is your program able to assess the productivity of your care managers, can you measure what tactics and what assessments are appropriate and whether they are having effect on that client or those patients' outcomes. So as you build those assessments, is there a way in your program to identify whether those assessments and those tactics are accurate and are improving the patient's care.

Based upon the problems identified, care managers then create a care plan that defines goals and activities as a path forward. Care teams then take steps to implement the plan and coordinate care, communicating with each other and engaging the patient family support and community resources, as I mentioned previously. That patient's plan of care should be updated regularly, and care managers, they know this, they know when patients need to be connected with, how often does this care plan need to be updated, and rely on that expertise of your care managers to understand the patient's plan of care and how they need to update that.

In addition to evaluating the individual's patient's plan of care, the overall care management program should be regularly measured, enabling identification of improvements in a patient stratification or work processes. As I mentioned, as you look at your care management process, think of the things that you want to measure in your care management process. You want to be able to measure your productivity in your program, you want to be able to measure your outcomes, you want to be able to measure whether your assessment and your tactics are appropriate through the population that you are doing outreach to.
So how will you identify the patients who most need care management? I am going to shift to that first part of your care management program which is identifying the patients you want to do outreach to. For care management to be effective, it is vital to choose patients who are most in need of care management interventions. Once patients are identified, they need to be separated or stratified into different groups. Your organization may need to stratify patients in multiple ways based on areas of strategic importance, such as payor requirements, infrastructure and capacity needs, or population health-related clinical goals. So for example, your organization may have a commercial payor contract that severely penalizes readmission. In this case, you may decide to focus on discharge patients and their risk for readmission. Another example, you may decide to focus on patients with rising risks, where intervention may be able to prevent poor clinical outcomes or increase utilization.

Another example is an ACO with a per-member-per-month contract. You may be focused on reducing unnecessary utilizations, such as ED visits, or you may focus on unique needs of Medicaid patients, or clinical leadership may want to improve outcomes for a specific chronic condition. As you can see, there are multiple ways to stratify your patient population but that can only be done with the right data and the analytics platform.
To focus care management services to meet strategic goals, organizations need to assess patients at risk based on multiple dimensions, not simply utilization and cost. Using those data sources, such as clinical and claims data, you can combine one or more of the following factors to stratify patients for care management. Many organizations first rank patients using one or more factors and then choose the top 5 percent or specific numbers of patients at the top of the rank.

So here are some of the factors commonly used when you stratify your patients. With the data that you have from clinical and claims data, you will want to look at utilization. This is utilization of services such as ED visits, skilled nursing facility stays, ICU stays, office visits, and imaging services. Those factors are endless. You also want to look at conditions. So other disease conditions vary in their acuity and the patient's disease state can have an impact on stratification. Each condition requires a different level of therapy, monitoring follow-up, and has a variable cost burden and presents a different risk of inpatient and acute needs. Some stratification models divide diseases into high, medium and low acuity. You may also focus on medications. Medications can be an important consideration for risk stratification, particularly for patients who are taking multiple medications to treat comorbidities. Patients can be stratified by a number of medication taken as multiple medications can prompt the need for care management, patient adherence, drug interactions, and affordability.

You may also look at social determinants. Social determinants that can affect health outcomes include economic stability, neighborhood environment, education and literacy, availability of healthy food and community support systems. Or you may look at risk models. There are risk models that use patient's characteristics and health conditions to predict negative health outcomes. Some models are based on clinical data, others are financial risk models based on

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**Assess and Stratify Patient Risk**

Utilization

Social Determinants

Conditions

Medications

ED visits, skills nursing facility stays, ICU stays, office visits, associated costs

HF, COPD, diabetes, asthma, cancer

# of medications, high risk medications (antiplatelets, anti-infective, alpha blockers)

Charlson-Deyo risk model, HHS-HCC risk model.

Geographic data, education and literacy, community support systems
claims data and some models may combine both types of data. There are numerous risk models available. Some are proprietary and others are publicly available.

Selecting the Right Patients for Care Management [36:06]

So using analytics, organizations can identify all of its patients under an at-risk contract, pull the patient risk factors into an analytics platform, configure and risk stratify the patients, right-size the list of patients to enroll and then engage the patients in participating in the appropriate care management program. Our analytics platform supports the five core components of care management, to include the data integration, the patient stratification and intake, the care coordination and the patient engagement, and measuring that performance. And let us spend a little bit of time talking about data integration and the patient stratification.
So I am going to show you a static view of our Patient Stratification tool. As I mentioned earlier, there are key steps in care management. Identify patients, enroll patients in your care management program, assess problems and create a plan of care, implement the plan and coordinate care, evaluate results and revise the plan of care, and evaluate and improve the program. Health Catalyst Care Management Suite is a solution to help organizations fulfill all of these key steps. Today, I am going to show you how Health Catalyst supports organizations in the first step, which is identify patients for the care management program.

Patient Stratification is an analytics application that enables the identification of patients for possible enrollment in the care coordination or care management program. This application supports client adjustment of waiting factors such as multiple risk model scores, utilization, costs, and other factors. Let me walk you through our tool a little bit. At the top, you are going to see little tabs, and again this is a static view of it. You can see on the left-hand side of the pane, as you get your data sources in, you are going to be able to select whether you want to just look at maybe clinical data or claims data. And I just want to point out that this is fake data. I do not want you to think that we are showing actual PHI. So just upfront I just want you to know this is fake data. In this group of data, we have 124,000 members that we could look at. On the left, we could sort it by our primary care physician. If you are a care manager that is specifically supporting, let us say, three providers that have a 15,000 patient panel, you could select your primary care physician. You could also select a very specific clinical program assignment.

So let us say you are associated with a community care program. There are 7,000 members, a little over 7,000 members in that program. You could click on that clinical program assignment and work with that and patient stratify those patients. You can look at financial class, which is if
you are a complex integrated healthcare delivery system and you are at risk for a combination of commercial contracts, Medicaid contracts, Medicare contracts, you can specifically look at those payors members. And then you can go by patient zip code. So if you know, for instance, that certain zip codes that we have, more of a readmission problem in a certain patient zip code, you can highlight and just specifically call out those patients.

In the middle at the bottom is the opportunity for you to select where you want to look at your patient stratification. So all of those are customizable. The ED visits here, you can show, that we put that at the far end and we wanted to weigh that as a heavy influence for upgrading a patient stratification list. We also identify cost as an option and also the HHS-HCC risk score. You can see there are other options here. You can add admits, SNF stays, a specialized visit, and the risk, you can either load your own risk score or you can use one of our own risk scores that we have included in this tool.

Once you build in those inclusion criteria, you can see what happens with that patient population. We started with a large number and we are down to 134 patients that met that inclusion criteria. You can see at the top it tells you what that inclusion criteria is that you picked, in the middle is a visual representation of those patients that you picked, and at the bottom is a little bit clear representation of that patient profile. So of those 134 patients, of that total number of 217,000 members, you get a little bit clearer picture of that patient profile. And I will tell you, there is an easy way you could always — you cannot break the system, I have tried and you cannot break it. So there is always an opportunity to start from scratch and start over. So it is very responsive to the needs and your ability to look at the different patient populations.
Patient Worklist [40:57]

Once you have identified which inclusion criteria you want to look at, it again creates a list for you of that patient population. So these are those 134 patients using those inclusion criteria. On the left, you will see that it highlights those that you picked. For example here we picked what's graded out is what we selected as an inclusion criteria.
Filters [41:23]

There is always an opportunity to have associated filters. You can pick conditions. There are medications you can select, but there are lots of opportunities to drill down in that Patient Stratification tool to build who you do outreach in.

So this is just a brief look at what patient stratification can do for you and one of those in the first key step in your care management program. I am going to pass this back on and talk about what we are going to do for our second part of this discussion.
Join for the second part of this discussion

Date:  September 20th
Time:  12pm-1pm MST

Attendees will learn how analytics can enable patient intake, care coordination, patient engagement, and performance measurement of care management.

We obviously in an hour do not have the ability to talk about every step of the care management process. Today, we wanted to talk about the broad overview of what a care management program is and how important patient identification and stratification is and how the Health Catalyst tool can help you do that. Our goal in the next webinar is to take the next steps of your care management program, which is patient intake, care coordination, patient engagement, and performance measurement of care management, and expand on those components of care management and help you walk through what you need in your own program to be successful in those care management programs.

[Tyler Morgan]
That is great. And that part two of that webinar, that is going to be September 20th, after our Healthcare Analytics Summit that is going to be a week earlier on the 12th through the 14th. We do not have the link up to register for this yet but everybody that has attended today will get a special invite for part two. And that is important because, you know, at this point, we got that list. We have that list of patients. Now, what do we do with that list, how do I get into these patients intake in. And we have several questions. We are going to get to those but we promised before the questions that we would have that giveaway for the summit.
And of course, if you will go to the next slide, we do want to remind that we do have, in the interim before part two, you can take a look at these things, that whitepaper that you prepared. You see the links up there. Again, that link is in the chat pane. It is actually hyperlinked. You can click on that. And we will be sure to include this link as well as some more information. You mentioned that ‘bending the spending curve’ article. We will provide information on that in the follow-up email as well. So we want to make sure that everyone has as much information as possible around all these for the continued conversation around care management.

So let us go ahead and let us do our HAS giveaway. Shall we? You want to go ahead and click ahead to the next slide.
Some of the highlights are coming up this next year and just a smothering of some of our keynotes. So let us go ahead and launch our first poll.
Are you interested in attending the Healthcare Analytics Summit in Salt Lake City this September? (Single Registration) [44:01]

Are you interested in attending the Healthcare Analytics Summit in Salt Lake City this September? This is for the single registration. We will leave this up for a few moments to give everyone a chance to respond, and then we will do the team of three. So we are going to leave this for just a few more moments.

Alright. Let us go ahead and we are going to close that one. And let us open our team of three.
Are you interested in attending the Healthcare Analytics Summit in Salt Lake City this September? (Team of 3 Registration) [44:30]

We are really excited about the summit this year. I have had a chance. In particular, you will notice Tom Burton, our co-founder and our chief improvement officer, he has got some fun games ready. One of his keynotes is actually going to be a really fun version of Hollywood squares. Last year, we did "The Price is Right". That was a lot of fun. And he likes to use these kind of games to share very important healthcare improvement principles. That has always been very very popular.
Would you like someone from our sales organization to contact you for a product demonstration of our care management solutions? [45:06]

Aright. Now, we do have one last poll question before we move on. Our webinars are meant to be education and this would mean a lot about care management. We do have folks who ask who we are and what we do. This poll question is for those who would like someone from our sales organization to contact you for a product demonstration of our care management solutions. And I will just leave this up and let us get right into the questions.

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<th>QUESTIONS</th>
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<td>One concern my clients raise is around ROI. How do we make sure that we</td>
<td>So those are two very different questions. So I am going to start with the first one – how do we make sure that we do not waste resources on patients who are likely to get better on their own? I think, again, I will go back to the key steps in your care management program. First of all, you need to have the ability to identify which patient, you have to have the data, you have to have the analytics, you have to be able to patient-stratify, you have to be able to engage and outreach to patients, and then you have to have those core skills of care managers who can outreach to patients and do those assessments. And it is an art. It is an art to reach out to patients and to help support them.</td>
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<td>make sure that we do not waste resources on patients who are likely to</td>
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<td>get better on their own? Or how do we make patients compliant who just</td>
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When it comes to identifying ways, you have to build the program from the front to the end. So if you have a missing component of that program, it is going to be very difficult to measure your waste in your program. So that is why all the components are very important. So having a responsive data in analytics platform that helps you identify who your patients are, you are going to be able to respond much more quickly to identifying patients that respond to certain tactics or actually care managers. We had care managers that did a great job with patients who had diabetes and we had social workers who were great with working with patients who had maybe mental health disorders or had socioeconomic considerations. So, you have to have the platform to measure the waste and then you have to be able to build into that what you are trying to measure.

Sometimes people start out and you will see this in the whitepaper. Sometimes people want to solve all the problems at once. And so, what we talk about in the whitepaper is that you need to sometimes start small. We have big problems out there. We have big populations you may be trying to manage that are complex and they could be Medicare, Medicaid, and commercial payors, but if you read the whitepaper, you are going to see sometimes you need to start small to figure out what is your flow and how do you identify what the waste is in your program.

And how do you make patients compliant who just do not play along? Boy, that is a good question. Like I mentioned before, you have to meet the patients where they are at. Sometimes those are quick, episodic. Do you have everything you need and they have very good supportive networks? Sometimes it just takes a long, long time. Sometimes you are successful and sometimes you are not. I wish I knew the key answer to that, whether you cannot make patients be compliant. You can help them and support them.

So, this is a world according to Kathleen and my response is that you need to focus on, and I think health coaching is a key component to care management. I think health coaching is meeting patients, even individuals, who are trying to be healthier. Health coaching is focusing on asking patients what it is they are trying to accomplish. If you tell them what they should be doing, they are not going to follow that plan. So if you work with them and it helped them identify what it is they are trying to do, meet them where they
are at, create an appropriate plan of care, and help them achieve, even small wins, to get them to move towards more self-engagement.

Our next question kind of tease up a lot of the conversation, I think, for our next webinar as well. So first of is how are you proactively identifying at-risk, high risk patients for proactive intervention? For example, how do you identify pulmonary patient that is at risk for an asthma attack event within the next 30 days. Then once identified, how do you support the process of a provider reaching out to the patient, they are alerting the patient to contact their care provider?

So the first one, I think, and I will use the Health Catalyst tool – as an example, as we have some machine learning in our patient stratification platform, I will use diabetes. So if you want to keep an eye on diabetic patients and you have a machine learning in your platform that says you want to keep an eye on diabetic patients who either are not getting their A1c checked every six months or consistently having rising A1c levels, you want to reach out. The machine learning will help you identify those patients that you want to do outreach to. I think once you identified those patients, that process of reaching out to the provider, I have seen many different examples of that across the nation on how different organizations manage that. As I mentioned previously in the webinar, some individuals or some healthcare organizations have an agreement where the provider says if these patients meet this certain algorithm, this inclusion criteria, go ahead and outreach to them.

We have also worked with organizations where the providers are very hands on, where every week they meet, they go over this list of patients, they look at what is going on with the patient, and they come up with a plan of care or an outreach plan between the care manager and the provider.

So I would like to say it depends on the organization. That is really a workflow that your organization would have to work through and what makes sense for them.

Do you encourage organizations to allow patients or caregivers to ask for case management? And if so, how do you recommend organizations encourage patients and caregivers to know about the care or the case management programs?

Yes, that is a good question. I was in a role previously over a pretty comprehensive care coordination program. As I mentioned before, healthcare has changed over the last 10 years. We have limited resources in the ambulatory and the inpatient setting. So we have to be very conscious of what the resources are that we are trying to utilize those resources for. So I think you have to be very clear on what your care management goals and outcomes are that you are focusing on. If you are trying to reduce readmissions, yes, I would say that you encourage your patients to outreach those care management programs.

And I will go back to my previous comment at the beginning of the webinar. Care management and healthcare systems are not your only resource. There are resources in your community. You have community
health providers, you have community health workers. You do not have to do it all alone. So I think there is a way of saying yes to that question without organizations taking on the burden of all of that because you certainly do not want to turn away patients who want care management or want some help navigating this complex system, but I do not think healthcare organizations, and I do not want to call it a burden, it is probably not the right verb, but there are resources that you can wrap around utilizing your community and build the community from the ground up in that way.

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<th>There is a tool that you showed. Does that work to stratify hospital admissions or do you suggest all inpatients need active care management involvement?</th>
<th>Well I think if you are an organization that could have care management for all inpatient admissions, I would like to talk to you. That is just not the case. I do not think organizations have the resources to have care management for all inpatient admissions or even those patients that are discharged. I will talk about the Health Catalyst Patient Stratification tool. It is only as good as the data you have. So if you have a very comprehensive EMR and claims data that can feed into our platform, it can tell us a lot about your hospital admissions. We can tell length of stay, we can see with the claims data what happened prior to them being admitted. Once we have that ability to combine claims and those admission data from your EMR, that is a wealth of information for you to look at, to start looking at those hospital admissions.</th>
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<td>We have several questions around the collection of data and how we do that. So, how do you collect, for instance, social determinants of care, outpatient day-to-day data? So the collection, all the data that is needed to be able to feed into the tool.</td>
<td>Yes, that is a great segway to our next webinar too because we will talk about those next steps in the care management program. That is part of the assessments in creating that plan of care with patients. Every patient is different. Our assessments are not checked box in the sense of every patient you treat the same. Our Health Catalyst Care Management Suite has a program called Care Coordination and we do have some built-in assessment tools but we built it so that way you can put in your own assessments. So if you know of a nationally accredited assessment tool that you want to implement and put it in our care coordination platform, you can do that. If you know of your own internal built assessment tool that you want to use, we can put that in our program. So I think that is a great segway of our next webinar when we talk about all of the next steps in the care management program.</td>
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[Tyler Morgan]
Alright. Well we have reached our time. Thank you so much, Dr. Clary. I appreciate your time. Thanks everyone else for joining us today. We would like to remind everyone that shortly after the webinar, you will receive an email with links to the recording of this webinar, the presentation slides, the poll question summary results, and also the summit giveaway winners. So we had a question about how we will know who win. We will publish that in the email that we will send out to everybody. Also, look forward to a transcript notification we will send you once that is ready.

So on behalf of Dr. Kathleen Clary, as well as the rest of us here at Health Catalyst, thank you so much for joining us today. This webinar is now concluded.

[END OF TRANSCRIPT]