Accountable Care Transformation Framework
Webinar – June 4, 2014

[Dr. David Burton]
Thank you, Tyler. It's a pleasure to be here today and to discuss with you this important topic.
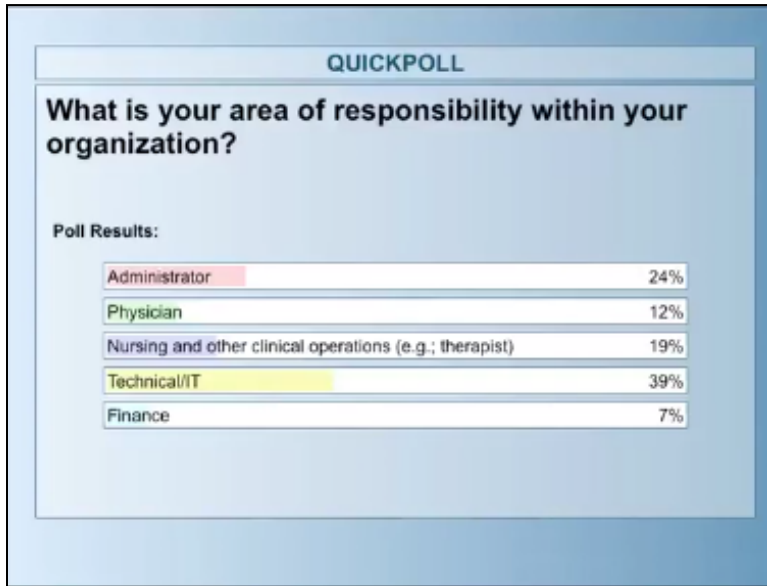

Poll Question
What is your area of responsibility within your organization?
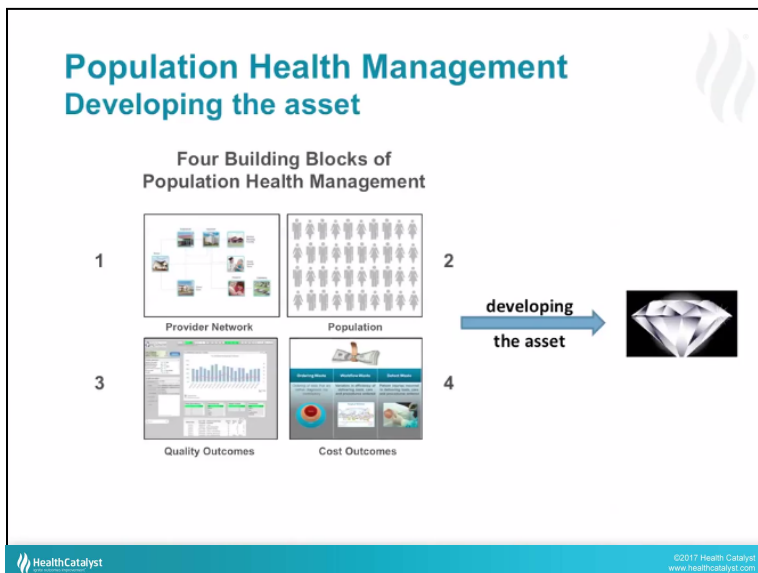
Poll Results

[Dr. David Burton]
And here are the results of the poll.

[Tyler Morgan]
It looks like we have 24% listed administrator, 12% is physician, 19% in nursing, 39% in technical IT, and 7% is finance.

[Dr. David Burton]
That's great. Thank you, Tyler.

Population Health Management Developing the Asset

So my goal today in this webinar is to try to simplify a subject that is in itself complex and frankly somewhat confused in our marketplace. I tried to describe it in terms of four building blocks that make up Population Health Management.

The first of those is a provider network with emphasis on the fact that the provider network can't just be an inpatient facility but needs to take into account the continuum of care.

The second is a population. This may be a population that is imputed to you as in a Medicare ACO population or it may be a population for which you negotiate and enroll with a commercial third-party payer as an example.

The third aspect is the ability to demonstrate quantitatively and objectively your outcomes in terms of quality or clinical measures including patient safety.

And the fourth is to understand and be able to measure your cost structure both from the standpoint of demonstrating your cost effectiveness but also making sure that the price you agree could cover the population and leaves some margin after your true cost.

Those four building blocks are really the basis of developing the asset, and here in a metaphor, we characterize that asset as a diamond.
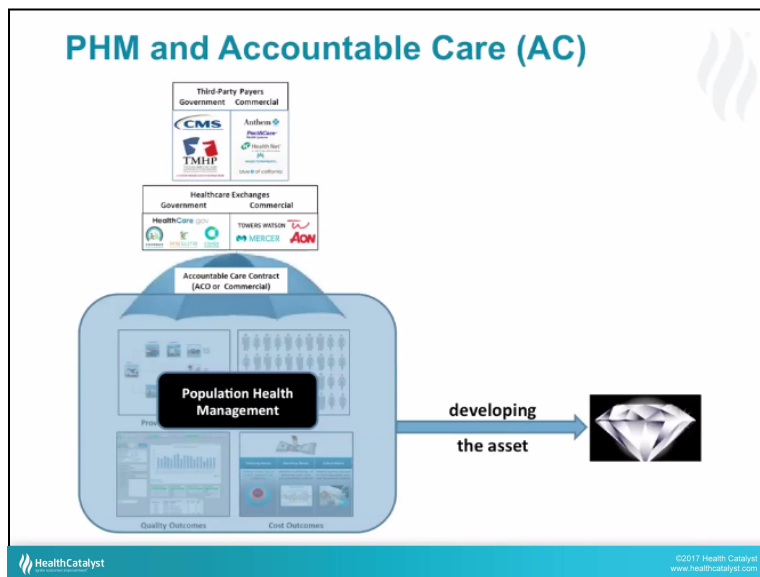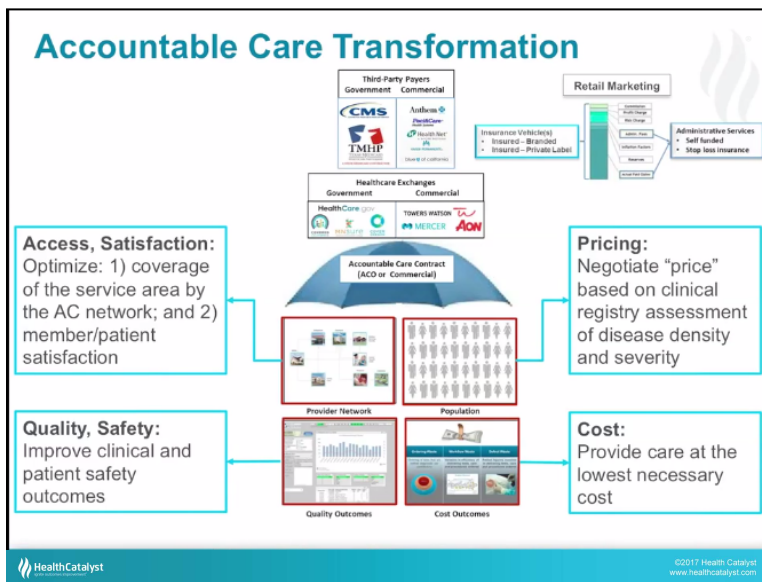

PHM and Accountable Care (AC)
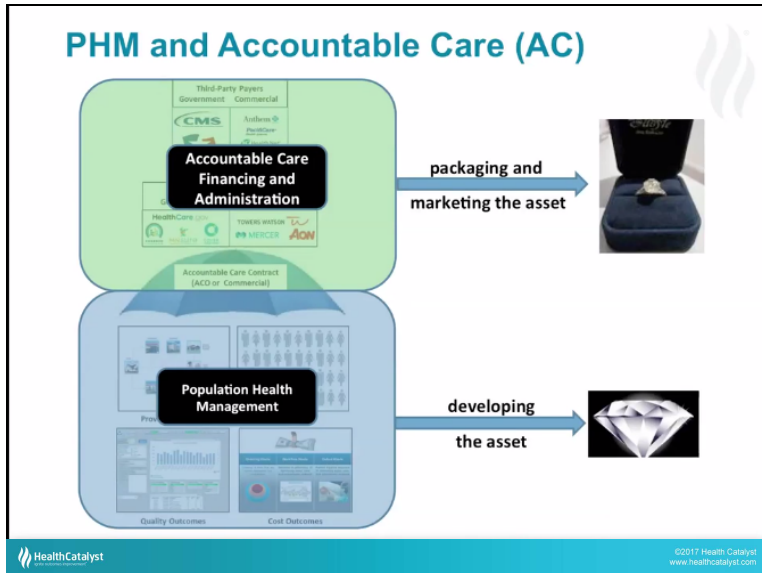
PHM and Accountable Care (AC)

So that is the Population Health Management aspect of this. That then is linked to an Accountable Care contract, whether that's an ACO public contract or a commercial equivalent to financing and administration. That, we think of metaphorically as packaging and marketing the asset. So putting it into a nice setting and an attractive velvet box.
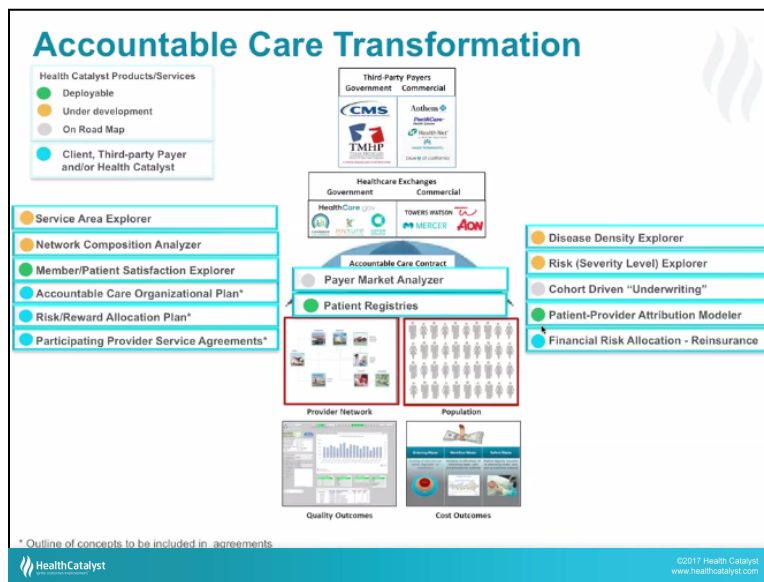

Accountable Care Transformation

If we then look at that in the context of the payment environment, there really are four things that a provider sponsor of an Accountable Care solution must think about. In the first provider network, we're really looking at access for the members and patients that belong to the population and this will have a great deal to do with satisfaction. The goal of this quadrant is to

optimize the coverage of the service area by the Accountable Care Network and thereby to enhance or improve or optimize member and patient satisfaction.

In the second area, this is about pricing and intelligent pricing that is based on an assessment of the density of disease and the severity of the disease that is represented in the claims analysis of the population, what price will I offer my network to that third-party payer.

Then I need to be able to demonstrate objectively my proficiency in quality and safety. And finally I need to do that within an envelope of cost that allows me to be successful and sustainable.

Accountable Care Transformation

We'll now look at peeling off a layer of the onion and look at how you might get the competencies that will be necessary to succeed in those four quadrants. In the upper left there, we will show you some of the products that we either have that are ready to deploy, that are underdeveloped and that are on the roadmap. But some of the things that you will need will need to come from yourselves, from a third party payer and perhaps in the future also from us.

If I look at the provider network quadrant, the first aspect of that is be able to define with objective criteria, your service area. Then overlay that service area that you have defined, the geographic area that you're attempting to cover with your network to see how good the coverage is. That will lead to the tracking of member and patient satisfaction with questions that have to do with access to the network and the perception of quality in the network.

Then there needs to be an Accountable Care Organizational Plan, what will the governments look like, who will be included, what are their rights, what is the risk and reward allocation

within that organization and all of that needs to be memorialized in participating provider services agreements that make up the accountable care network.

If we then look at the opportunity, we need to know who the third party payers are in the marketplace that we would like to serve, and they come in various forms. Some of those are going to be traditional third-party payers. So on the government side, that would include CMS, Medicare, it would include Medicaid plans that contract in a traditional way, it would include whatever is in your marketplace with regard to traditional third party payers. It also more recently now includes federal and state examples of government exchanges and lesser known but larger and potentially more important the commercial exchanges. And so, what we want, if you will, is a pie chart that says here is the Pareto analysis within my marketplace of who the third-party payers are for most various categories, and that would include self-funded offerings where one of these entities is providing administrative services but not taking the risks.

The next item of infrastructure is patient registries, and we'll discuss that in some detail. They become the "Intel chip" inside of our Accountable Care Solution.

If we then move to population, we use those patient registries to look at a claims file from one of these third-party payers to determine what by disease condition is the density of disease within that population – is this a relatively healthy population or is this an old or sicker population? And then for those diseases, such as diabetes, how severe is the diabetes, is this a diabetic that has renal failure or is this a diabetic that's well controlled. The costs of those patients are going to be different. These elements lead us to what I'm calling cohort-driven underwriting, a more sophisticated approach that I was able to do when I was running the health plan at Intermountain.

Then we are going to want to look at an attribution model. And so, if we look at the population and say how many of those patients are already being cared for in our network, that is how many of them will in fact seek their care within our contracted network over here versus how many are likely to leak outside the network. That's an important metric.

And then finally we need to figure out how we will deal with the idea of financial risk allocation, who's going to be responsible for statistical outliers.
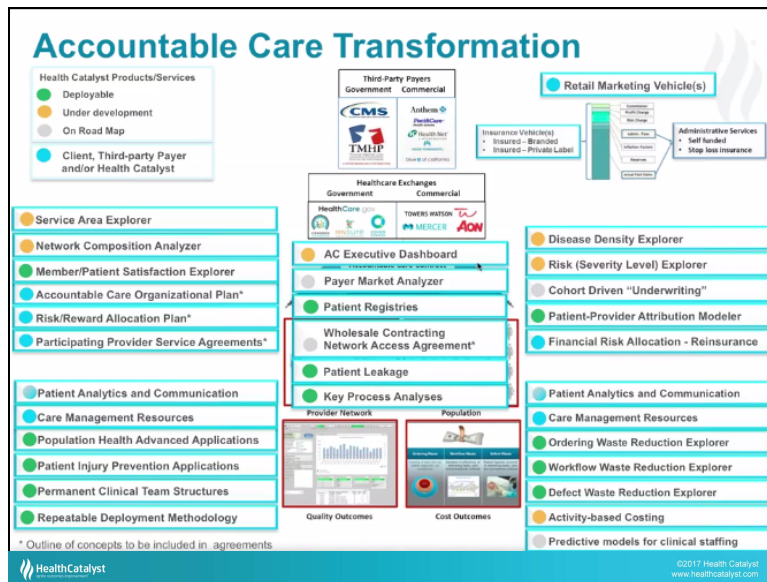
Accountable Care Transformation

We then take that information and it populates the attachments of the wholesale contracting network access agreement. The purpose of that network access agreement is to lease this network over here under terms and conditions that are fair to both parties in terms of the pricing.

We will want to be able to track what we estimated using the attribution model, or as far as patient leakage is concerned.

Then we will want to be able to do key process analysis which will inform the lower two quadrants. So this central area are items of infrastructure competency that we need to have.

If we then move to the quality aspect, both in the quality and the cost, your patient analytics and communication, so your patient portal and what you receive through and what you put back out through it becomes important. Likewise, care management resources are critical to improving quality and managing the cost.

Then we have various types of applications. Population health advanced applications deal with things like how do I manage diabetics, how do I manage heart failure patients, patients who are pregnant. Patient injury prevention applications are just what they sound like. Then we need a way to diffuse the improvement initiatives across our enterprise of the Accountable Care Network from that clinical team structures and we need a repeatable deployment methodology that allows us to roll out the multiple registries that we will need to be good at across our network.

Finally, we move to the cost at area and there we will look at three forms of waste, waste that comes through ordering care that is not adding value, workflow waste, so the efficiency or inefficiency with which the care that was ordered is delivered, and then defect waste, how

many mistakes do I make in terms of patient injury, healthcare associated conditions occur, and finally we need a better way to know what their true costs are and to use those and to build predictive models for clinical staffing.

In addition, some of you may be raving out to decide to go into competition with your third-party payers with whom you were contracting on a wholesale basis for your network and actually move out into the market and begin to provide administrative services and/or begin to assume risks at an insurance company or managed care company level

Finally, when we get this in place, we are going to want an Accountable Care Executive Dashboard that tracks important high level metrics that are early warning signals that something is not going well that we need to give attention to.

Access, Satisfaction
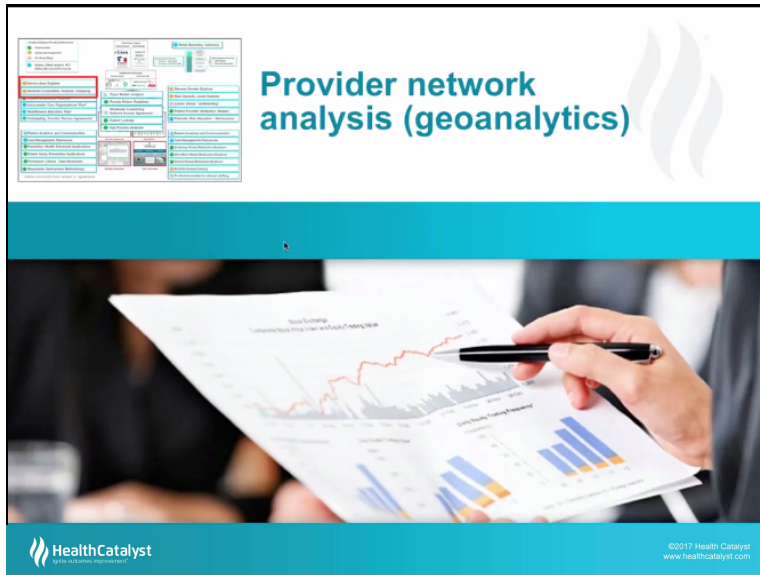
Provider Network Analysis (geoanalytics)

If we then look at the upper outer quadrant, the access and satisfaction, let's look at the provider network analysis. And this gets us in to the science of geoanalytics.

Service Area Explorer

In mapping programs, the idea is to take various layers that you can integrate into a mapping system that provide useful information as they overlay various pieces of this. So I've just listed out, I won't go through them in detail, some possible layers that could be integrated with the mapping program.
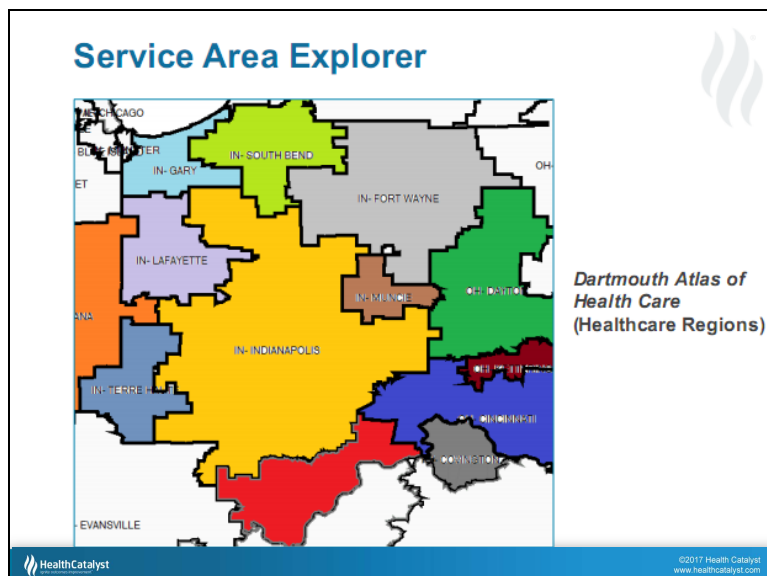
Service Area Explorer
Dartmouth Atlas of Health Care (Healthcare Regions)

We've taken the first of those, the geographic medical region layers or healthcare regions from the appendix of the Dartmouth Atlas and we've just imposed those here over a particular area here in Indiana and you can see these medical regions are defined and some of them around counties, some them around larger geographic areas.
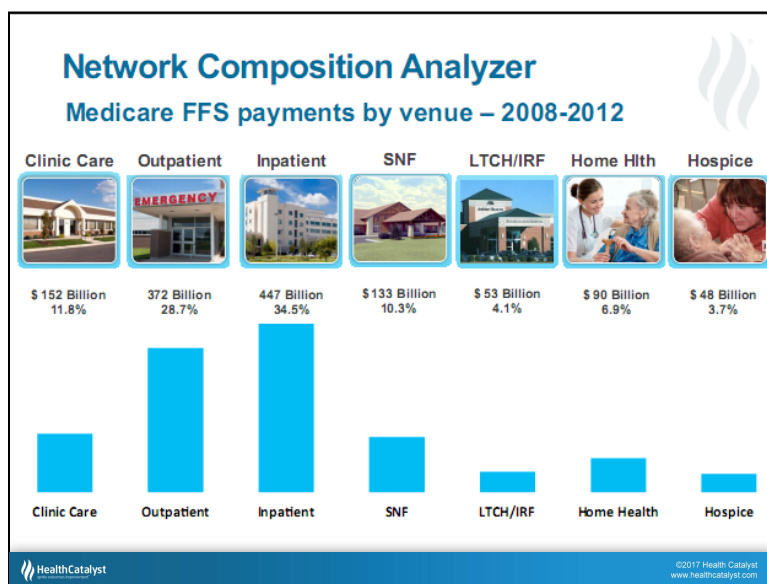
Network Composition Analyzer
Medicare FSS payments by venue – 2008-2012

Now, we need to be sure, as we begin to build the network to provide service within one of those or one or more of those geographic service areas, we need to remember that we are

going to have to cover in the near term at least the near end of the continuum of care. So these are data from 5 years from the innovation project of CMS and Medicare, Dr. Jack Wennberg, who is the author of the Dartmouth Atlas, has done studies to show that as those Medicare sub-rolls commercial, and so these apply even though they are Medicare data. And you can see that if you take these three venues of care, you are accounting for about three-quarters of care. But if you only take inpatient, which you've traditionally done because that's where the data has been available, you see all that you're neglecting here with regard to outpatient and clinic care.
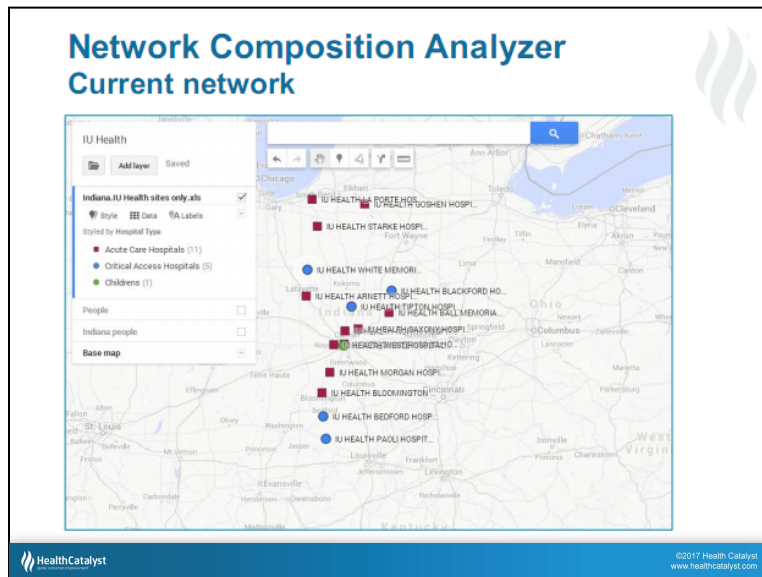
Network Composition Analyzer
Current Network

So here is a health services network of facilities. Some of them are acute care hospitals, some of the clinical access, and one of them is a children's hospital.
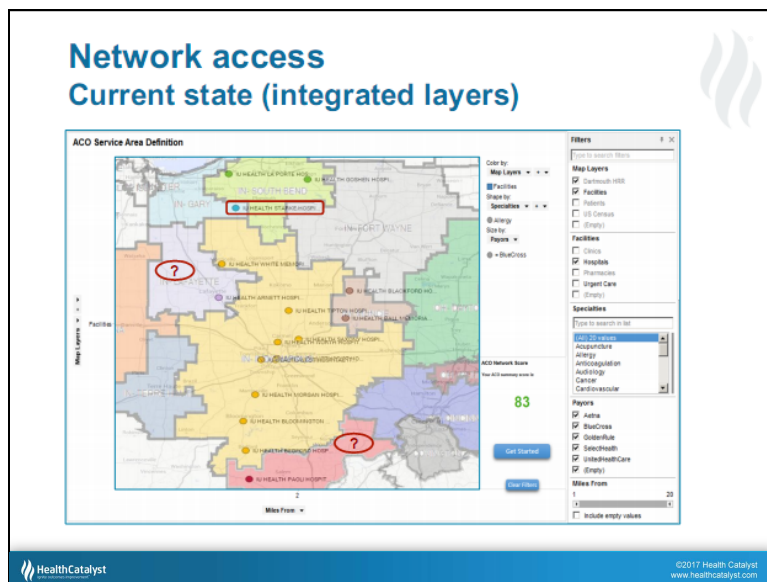
Network Access
Current State (Integrated layers)

If I then take that take that network and overlay it with our one layer input, here's the kind of integrated look that you'd get. And you can see we're well covered in the yellow area of the Indianapolis Healthcare region. Likewise here, we have coverage in one aspect of this. Now, I would like to bring in the population, the census to your data, to see whether this is all farmland or whether there are people there. If there are people there, I'm not covering that area all out well. Similarly, the analysis here. Now, here I've got somebody in the corner of an area that I know is populous. That's something of an orphan, if you will. And so, this kind of geoanalytics analysis, as we're building this application, we're trying to score it and say, on a scale of 1 to 100, how well are you covering the geographic service area that the payer is looking to sell healthcare coverage and health benefit programs in.

Poll Question
How well do you feel your current network of physicians and facilities covers the geographic service area of the third-party payers with whom you want to establish a shared-accountability contract? (five-point scale)

So poll question, how well do you feel your current network of physicians and facilities covers the geographic service area of the third-party payers with whom you want to contract?
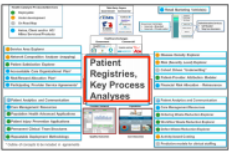
[Tyler Morgan]
Alright, we've got that poll question up. I will leave this up for just a few seconds to give everyone a chance to answer it. I will leave this up for just another 5 to 10 seconds.

Okay, we're going to go ahead and close this poll right now and share the results.

[Dr. David Burton]
So a nice bell-shaped curve and not surprising. This is a difficult area but it's an extremely important area. When we did this study at Intermountain, it began to inform and guide our strategic decision-making. So, an important area for us all to take account of.

Patient Registries, Key Process Analyses

Patient Registries

Registries – "the Intel chip"

If we then move to patient registries, these are extremely important. The ability to develop precise patient registries will have a lot to do with your success and a lot to do with eliminating noise as you measure things. They become the "Intel chip" inside a Population Health Management Accountable Care because they form the basis of what we call essentials layer application. So these are basic internal reporting metrics that you need to do. And by having good registries, you can transform your analyst from hunters and gatherers into the data analyst and it will free up resources that you need to address other quadrants.

Second, as we mentioned, becomes the basis of population evaluation. Third, they are the basis with some clinical refinement to the rules, measuring your quality and patient safety outcomes and they are also the basis of adjusting your opportunity estimates as far as your costs are concerned.
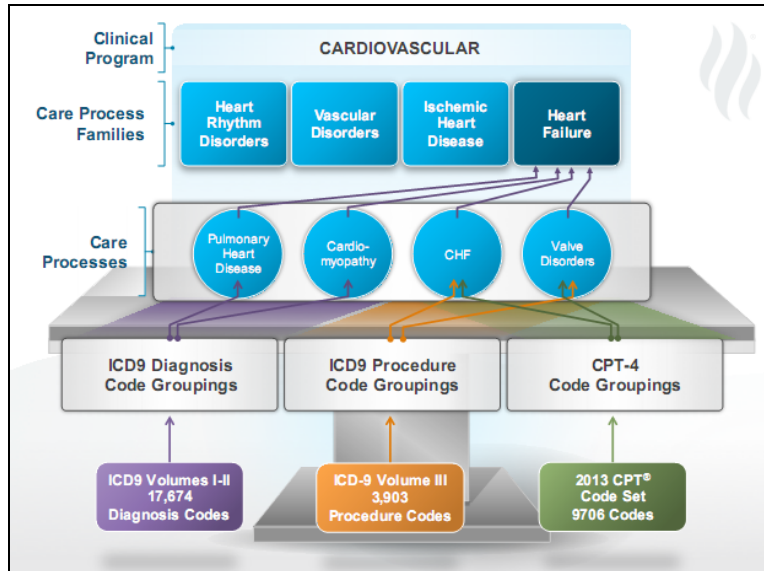
Cardiovascular

Historically, we used mappings from DRGs and APR-DRGs in order to estimate opportunities and size and to try to prioritize work processes. The problem with that, we'll see in a minute, is that it focuses on the inpatient world which while important and still the largest piece of the pie neglects some important things that reside in the outpatient in the clinic care space. And so, we have spent the last couple of years mapping the granular level of the ICD9 diagnoses codes for which they are just under 18,000, the procedure codes, smaller number, and we're partway through the CPT codes and we're mapping those into what we call care processes. One of the fundamental principles of quality improvement theory is to identify your key processes and then focus your development efforts and your organizational efforts around those key processes. Those key processes can be further mapped up into what we call care process families and then the siblings within that level mapped up into what we call clinical programs, many of you will call them service lines. Domain areas.

Mapping ICD9 Dx to Clinical Hierarchy

That process looks like this in terms of the working level. Here are ICD9 codes. These are the descriptors. They have been mapped to a clinical program, a care process family, and a care process. You can see that there are dollar amounts out here for each of these codes, which was the primary diagnosis code on the bill, if you will, and that allows us to do a materiality test. The blessing of the ICD system is that it's encyclopedic. The problem with the ICD system is that it's encyclopedic, and without some pragmatic index to help us figure out what is going to be a material, we end up mapping all of the processes and not recognizing what the relative value of those is. And so, that's the purpose of this exercise.
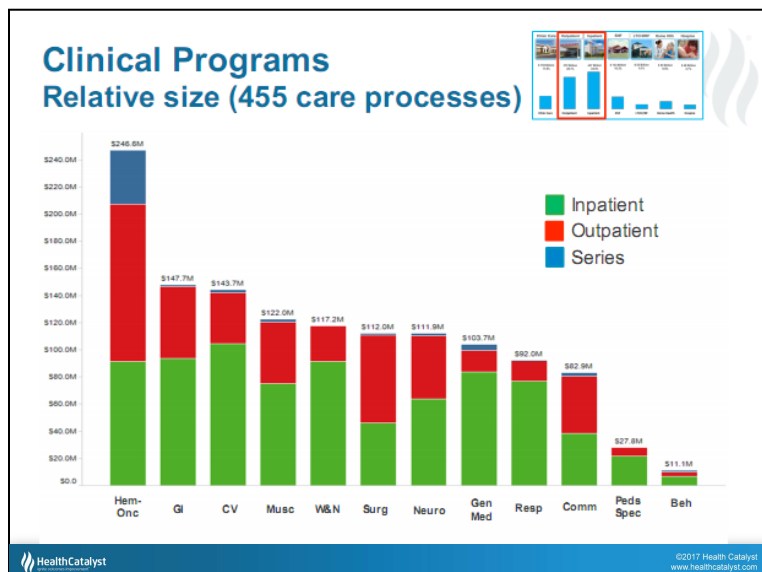
Clinical Programs
**Relative size (455 care processes)**

Now, what do we learn from that? So as we map all of those thousands of codes, we're then able to look at the relative size and importance in the inpatient, outpatient and what I'm calling here series domains. And so, the outpatient will tend to be a one visit, like the inpatient is a one admission. These are patients who are recurring or coming back for multiple treatments in a series. So, the prototype here would be infusion therapy for oncology or radiation therapy where there is a ==slight== of treatment, if you will.

Now, notice that if we were to prioritize only on the green part of these stock bar charts, we would make different decisions than if we added the outpatient in. You see that the outpatient causes hematology-oncology to move to #1 where it would have been #3 or #4. And so, bringing that outpatient aspect in is very important as we try to do population health management. We are working right now on bringing the clinic care data in so that we have all 75% that we talked about earlier.
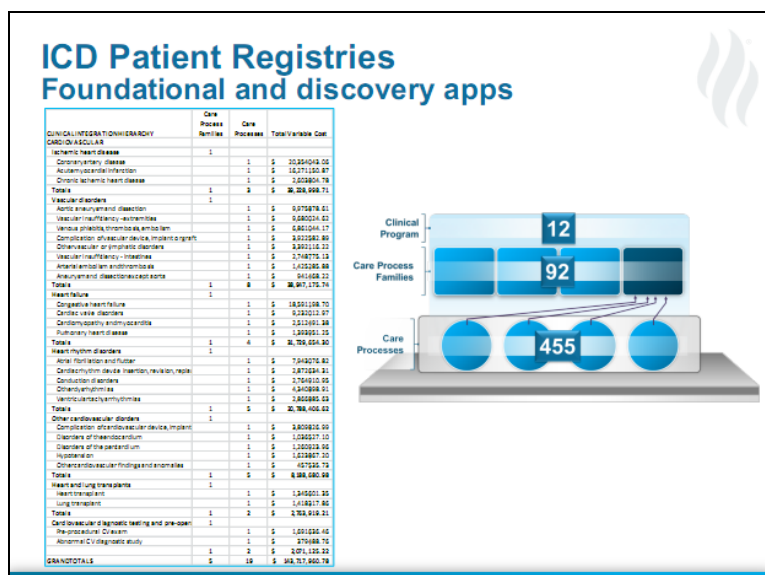
ICD Patient Registries
Foundational and discovery apps

If we then say, so what comes out of all that and we use this cardiovascular example, here is the clinical program level, here are the various care process families all the way down, and here are the care processes within each of those care process families. If we sum all of those across all domains, there are 12 clinical programs, 92 of the care process family at the ischemic heart disease level and 455 of the most granular elements in the hierarchy.
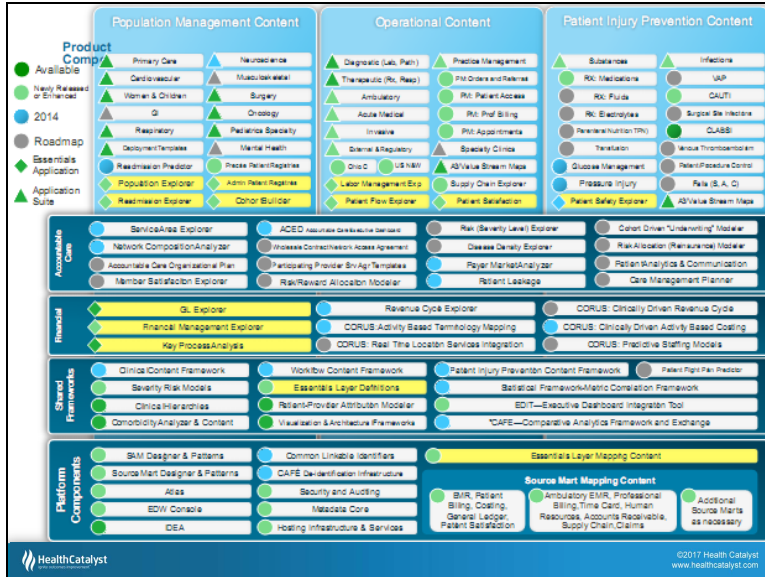
Once we have those registries defined by those mappings, we get almost for free because of the architecture in our systems multiple reports with standard metrics, like length of stay and cost per case and those kinds of things, across these various applications. So that turns this and frees up your analysts who have been spending two-thirds of their time hunting and gathering data to analyzing the data or helping implement these advanced applications.

Key Process (Pareto) Analyses

If we then say, so we have that universe of the hierarchy, how will we know what we should focus on, and that was one of the questions that was submitted in advance, is which of these processes should we work on.
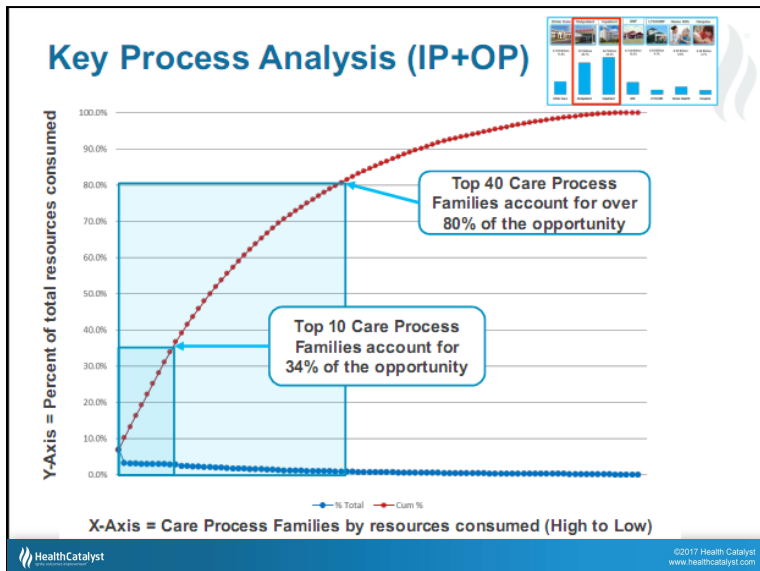
Key Process Analysis (IP+OP)

And fortunately and I tell you, by the name of Vilfredo Pareto comes to our rescue. He is more famously known as the 80/20 rule. And here is an analysis in which each of those processes and their contribution in terms of dollars is represented by these blue dots along this axis. And then this first blue dot is added to the second one to get us this cumulative Pareto analysis. The important message here is that 10 of those care process families account for just over a third of our opportunity and 40 of them account for 80%. So I don't have to be good at all of these things. I do need to be good at more and more of these things.
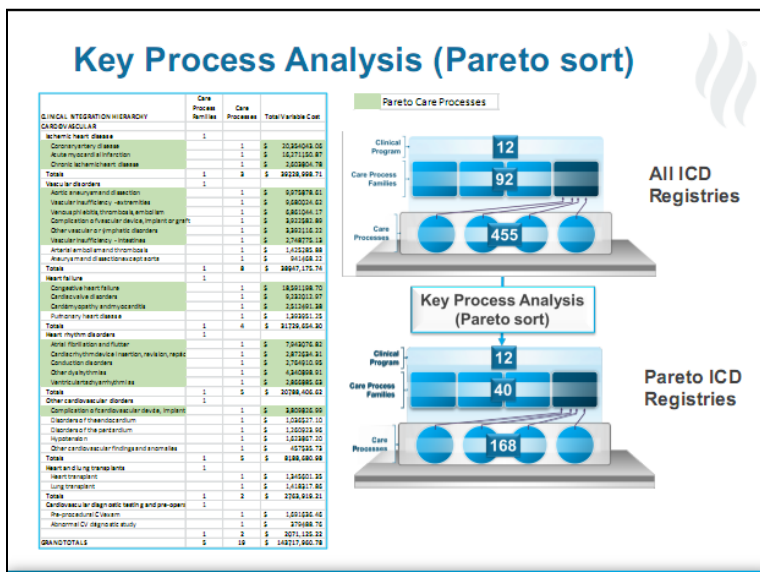
Key Process Analysis (Pareto Sort)

If I look at that graphically here with our cardiovascular example, I've now shaded in green the care processes that made the cut in that Pareto analysis in each of those care process families. Notice that I have care process families down here that don't make the cut that I would not want to focus on if I'm trying to get maximum ROI. And you could see we go from 12, 92 and 455 to 12, 40 and 168, more manageable.
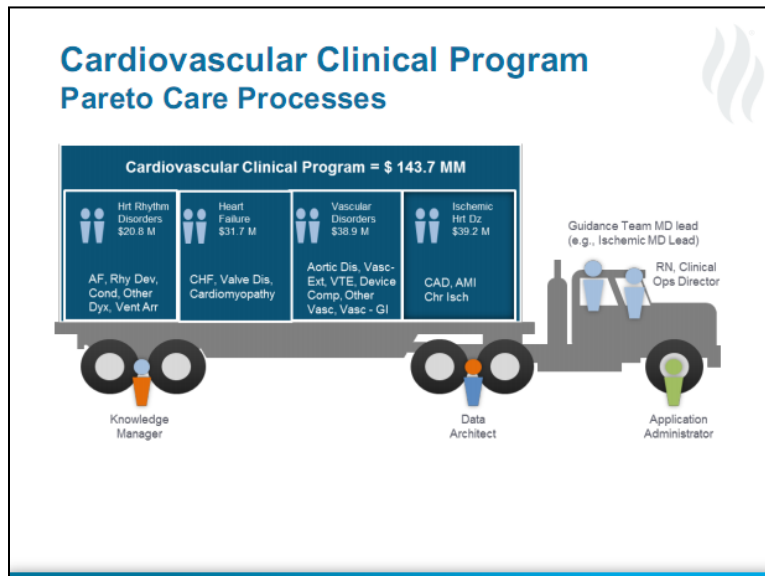
Cardiovascular Clinical Program
Pareto Care Processes

If I look at that in our metaphor of our truck bed, here I have integrated clinical and technical teams working together on improvement projects and working on them within these packets on the truck that are our care process families and then choosing in that team whether we'll work on coronary artery disease, acute MI, chronic ischemic heart disease, and so on, with the other big 4 of vascular, heart failure, and heart rhythm disorders.

Poll Question:
How well prepared do you feel your organization is to use patient registries and key process analysis as important elements in prioritization of improvement initiatives? (five-point scale)

How well prepared do you feel your organization is to use patient registries and something like a key process analysis as important elements in your prioritization of your improvement initiatives?

[Tyler Morgan]
Alright. We've opened up this poll. Please take a few moments to answer the poll. While you're answering that, I would like to know we have had quite a few individuals asked us if the slides will be available. Now, I'd like to remind everyone that we will be providing a recording to this webinar, as well as a link to the presentation slides following the webinar. And we're going to go ahead and close this poll now and let's share the results.
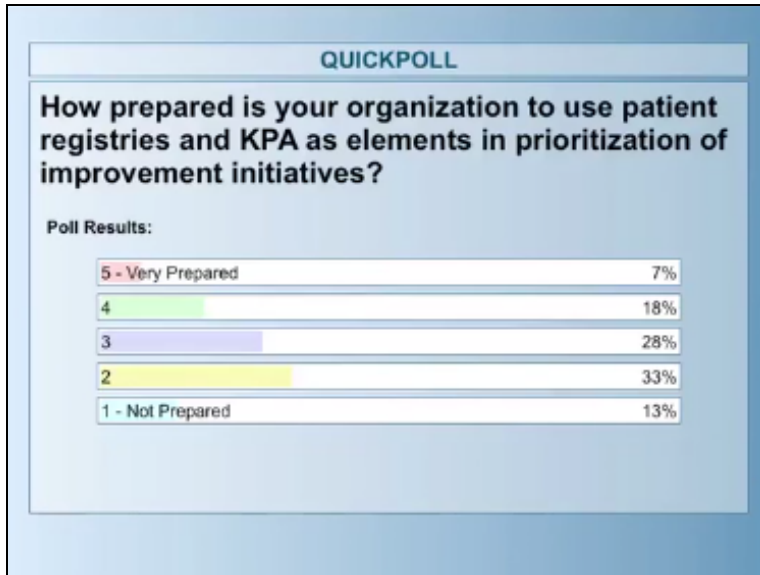
Poll Results

[Dr. David Burton]
Similar to our last one. So good for you. This is an enlightened audience.

Pricing based on disease density and severity of illness

Let's move in to the second quadrant and see how we might use those disease registries to do a more sophisticated analysis than my actuary was able to do in Select Health at Intermountain using traditional actuarial methods.

Disease Density and Severity Level Explorer

Disease Density Analysis

So if we look at disease density and severity level explorer applications, what we're going to do is use those ICD patient registry groupings to analyze third-party payer populations from claims files to try to determine the density of disease but we are going to determine it not in the traditional actuarial slices to the pie. We're going to look at it in Clinical Programs, Care Process Families and Care Processes. The reason for that is that if we are going to improve those areas, we will do it with clinically related teams. And so, knowing where our density is will allow us to move to the second ==boat== which is how ready are we in heart failure to address the care improvement opportunities that are there that are highlighted by the registry grouping analysis. And then we're going to use of this disease density analysis to move to the next level, which is a severity stratification.

Risk (severity level) analysis

In this step, we will apply risk stratification framework. And right now, the ones that we have under evaluation that seem the most promising because they are ICD-based are the Charlson-Deyo comorbidity index and the CMS-HCC, which CMS uses to determine the payment level and if you will set the bar that you must achieve in order to have something left over as a reward. And then the advantage that we have is because (27:53) made the common things most common, we will likely have good samples of the big disease buckets from those registries. And so, we can go in to our provider base side and look at a statistical sample of historical data and say, on average what is it costing us to take care of these patients. We can also become more sophisticated and say, well what if we exclude the stochastic outliers and just look at the inliers so that we trim out the noise and that will allow us to say we think that this price would be a fair price for taking care of that population for the next year.

Financial Risk Allocation

Focus on "inlier" management
Approach: "Tighten the Curve and Shift it to the Left"

That brings us to the question of what are we going to do with regard to financial risk allocation between us and the payer with whom we're proposing the contract to a network access agreement. And here, the principle that I'd like to convey is the focus on inlier management. And what we should be doing as healthcare systems is tightening the curve and shifting it to the left. And so, what we're going to do is to try to bring the cases about the mean down to the mean and that will result in a tighter, more favorable curve like this. And so, our strategy is to use content and analytics to develop value-based guidelines and protocols that will reduce the inlier variation and then we will work with clinicians through a deployment system to use those value-based guidelines and protocols to bring those cases down to the mean.

Financial Risk Allocation

That leads us then to what will we do if we say we don't want initially, while we're still in our adolescence here learning our way, we don't want to take responsibility for the outlier risk and our clinicians work hard and full on the (29:55) then all of a sudden, one stochastic outlier comes and blows us out of the water for all the work we did.

And so, one alternative in writing our network access agreement is to agree with the third-party payer that they will assume risk for the outliers as a part of our agreement with them. And they use to doing that, they have a big book of business that spans usually across the country and are able to pull that outlier risk. Or there are more creative alternatives. Perhaps your GPO which may provide your medical malpractice insurance would like to get into this as a new line of business, or could you work with one of your third-party payers, such as Aetna, to get them to assume risk across various third-party payers, or would you want to seek out a traditional reinsurer, like Employers Re, and ask them to provide you a quote on what the coverage would cost.

Network Access Contracting

Network Access Agreements
Wholesale Contracting

If we then look at what are we going to do with the outputs of all of those lapses in that quadrant, that's where we get into the network access agreement and what we're basically doing is leasing our provider network on a wholesale basis to a third-party payer. That network access agreement is going to define how we are going to share risks, are we going about this on a bundle per case basis, is it going to be population-specific capitation, where we think we're really good at taking care of diabetics and joint replacements and those kinds of things, and so, here are four things that we are willing to go risk for or are we going to be so bold just to say, we will take global capitation. And then it also specifies the nature of this financial risk allocation such as outlier trim points and whether there's some kind of a reinsurance treaty.

Network Access Agreements
Contracting Strategy

When you think about your contracting strategy, I would suggest these three major elements that you have to consider in deciding at what price you will contract with third-party payers.

The first is how large is the payer and that goes back to our market analysis of the payer market. How much volume do they have that they could bring to your network?

Second, how directable is that volume? So if you have a BPO that only has a 5% differential between in-network and out-of-network coverage, that is not going to be a very strong incentive for them to use your network and therefore you are not going to want to give them a steeper discount. On the other hand, if they have an HMO with a lot of volume in it, that's going to be a typically 100% penalty if they go outside, and so has strong directability.

And third, how aligned is the payer with your network? So what proportion of the network offered to members of the payer's plan does your Accountable Care provider network represent? That is how exclusive is the contract with your network?

Poll Question
How well prepared do you feel your organization is to evaluate the risk of sharing financial responsibility for managing defined populations of members/patients? (five-point scale)

So then the next question is, how well prepared do you feel you are to evaluate the risk of sharing financial responsibility for managing defined populations?

[Tyler Morgan]
Alright. We've got our poll up. The opportunity to take that. I would also like to remind you that you can ask questions by typing in questions and comments into the questions pane of your control panel. We will address those in the questions and answers portion of this webinar and any questions that we're not able to get to during that time, we will answer after the webinar. We'll go ahead and close the poll now and let's share the results.

[Dr. David Burton]
A little shift to the right and not surprising. This is an area that isn't right in the wheelhouse of provider organizations.

Quality, Safety
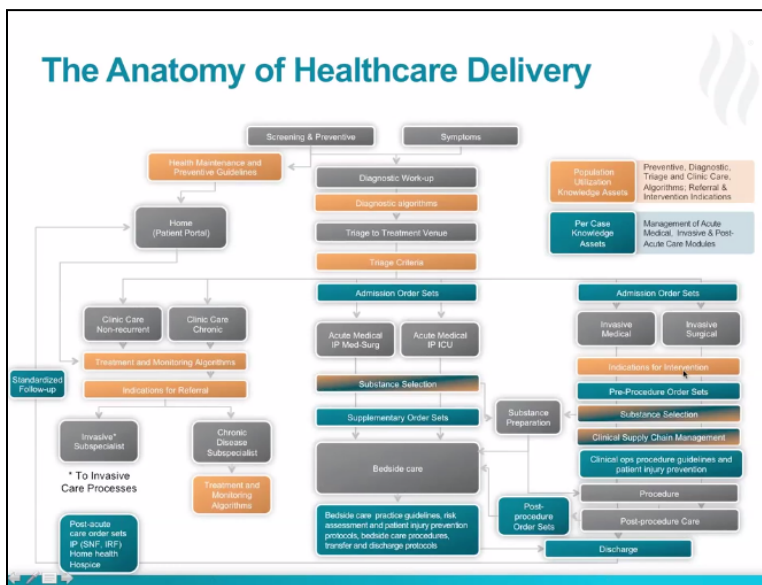
The Anatomy of Healthcare Delivery

If we now move to the aspect of quality and safety, we found that this diagram, which Frank had been working on for about 20 years now, is helpful in thinking about quality, safety and cost. And this is the anatomy of healthcare. And so, there is a flow of patients through this schema, either entering the system because of something abnormal on a screening exam or the development of symptoms. That leads to a diagnostic workup based on the provisional diagnosis that comes out of that. There is a triage step to a treatment venue that could be in the ambulatory clinic care space over here, it could be in the acute medical ICU med-surg area, it could be in the invasive, either interventional, medical or traditional surgery area.

If we then look at what happens at each of those steps, there are some orange boxes which have to do with population utilization knowledge assets. These are preventative diagnostic triage criteria, algorithms, referral and intervention indications. And so, deciding, for example, who should be screened for what, who gets a colonoscopy, who should have mammography, those are decisions with regard to the ordering of care that adds value or does not add value and is therefore wasteful. How often should patients with diabetes be seen in the clinic, if they are in control, if they are not in control? At what point do you say we move them through the treatment cascade and we're still not at target? And so, there are indications then for referral to a chronic disease subspecialist or let's take the case of (36:04) otitis media perhaps to the Ear, Nose, and Throat specialist. And then there are treatment and monitoring algorithms and frequencies that are different in the chronic disease subspecialty clinic, such as the endocrine clinic than from what we would do routinely in the primary care clinic.

So we've got one over here. When we send someone to either a medical interventionist or a surgeon, we don't expect that all of the people we send are going to get a procedure. There are indications for intervention – will the procedure add value or will it be wasteful?

If we then move to the next consideration after we decided something is appropriate to do, we're into per case knowledge assets and that has to do at the physician level with order sets, admission order sets. It has to do with supplementary order sets in the acute medical area. It has to do with pre-procedure order sets once the indications for intervention are met. And then there are some hybrid steps here. There are choices between substances. There are indications for blood utilization, and there are choices among various supplies that could be used, such as joint prosthesis and stents and those sorts of things. All of those impact the quality and the cost outcomes. And then there are the transitions from ordering things to implementing things, in the OR or in the interventional medical suite, in the bedside care and the discharge criteria and post acute care area.

So, this diagram becomes helpful in developing the content and the metrics that we embed in, first of all, population health.

**Quality: Population Health Advanced Applications**


Focus on the "Golden Few"

**Population Health
Advanced Applications**

So here is our old friend, the Pareto Analysis. Now, we're going to take that mapping that we did in those 455 registries. We've looked at that through the lands of the Pareto analysis. And now we're going to take that smaller set and take, in this case, heart failure as a care process family. We'll develop a care process model. We will then decide what part of that we're going to work on and we will augment this ICD registry with some clinical things. For example, we will take medications that are specific to that particular condition. We will look at diagnostic tests, whether that would be lab values like a BMP or whether it be imaging studies like an echocardiogram that help us to capture all of the people that should be subjected to the treatment and monitoring algorithms that have that condition. And then we will begin to develop AIM statements – so goals and implementation methodologies together with their metrics that will lead to intervention strategies and the visualization of the results of those strategies.
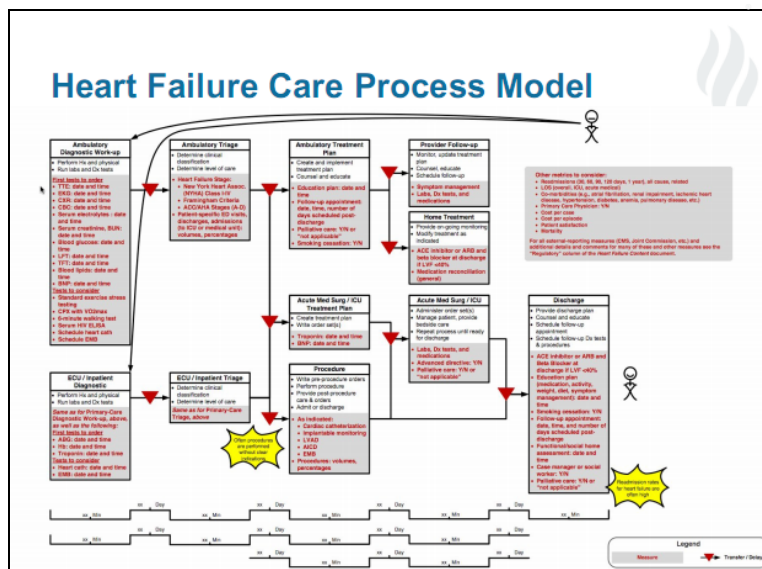
Heart failure Care Process Model

So this is a sample that you can set in more detail when you get the slides of the heart failure care path process manual model. It's an ingenious combination of a scientific flow with a workflow. The red texts are the metrics that are driven off of the black text, which is the content, the scientific flow.
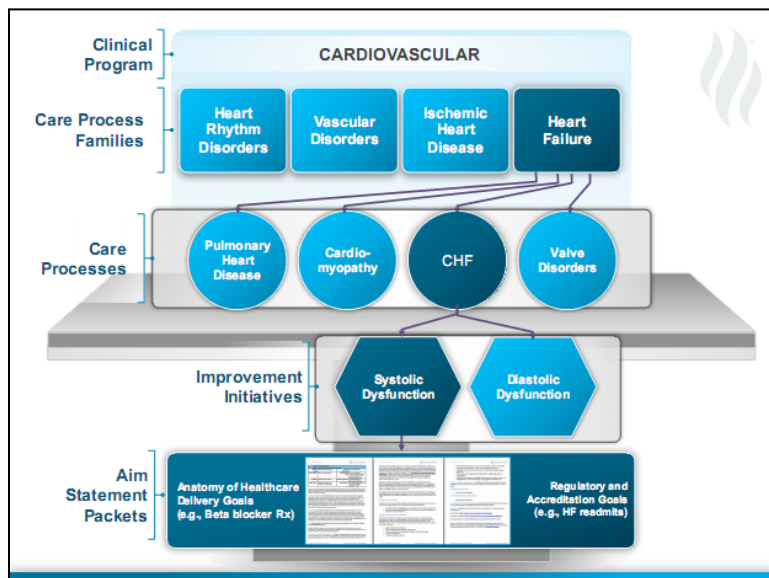
Cardiovascular

And so, what we've done now is we've reversed our diagram. We said we're going to work on cardiovascular. Within cardiovascular, we've chosen heart failure at the care process level. We're working on medical heart failure. Within that, we've said we're going to look at systolic dysfunction, those who have an ejection fraction of (40:05) number less than 45, less than 40.

And then we're going to build out aim statement packets, so goals and implementation tools. And in that aim statement packet, I am going to include two things. I'm going to include knowledge assets from the anatomy of healthcare such as what is my compliance with beta-blocker therapy, what's not contraindicated. But I'm also going to take responsibility for regulatory and accreditation goals. So in the readmission reduction program from CMS, we're going to look at building systems to reduce heart failure readmits.
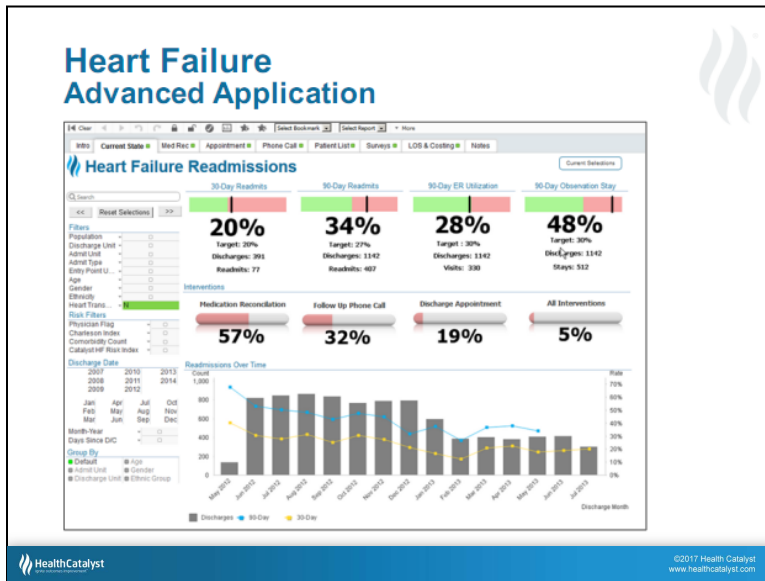
Heart Failure Advanced Application

And here is a visualization for those readmissions. Looking at the various parameters which have been found through research to make a difference in terms of reducing those, here, we're looking at 30-day, 90-day and so on readmits and here's our trend over time.

Safety: Patient Injury Prevention Applications
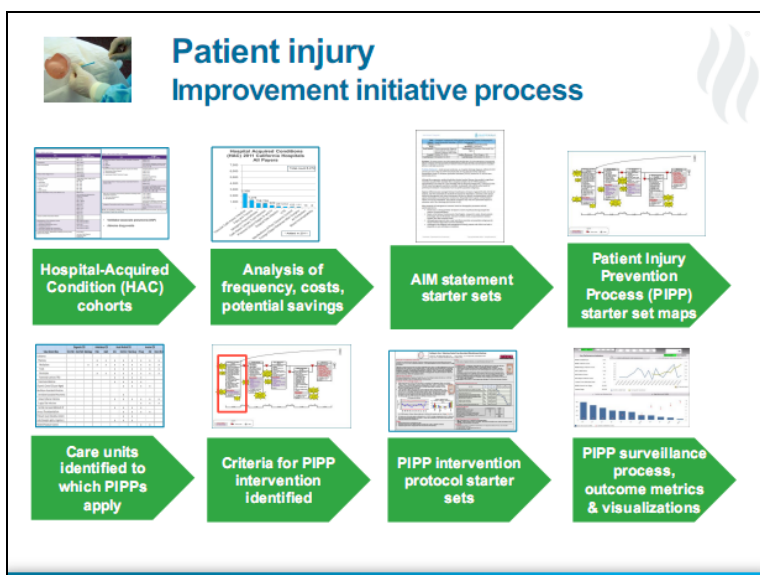
Patient injury
Improvement initiative process

If we look at the other part of this quadrant, which is patient safety, there's a similar schema here. I will hit the tops of the waves as we're running a little short on time. Here are the CMS criteria. We've done some analysis to say what's the relative importance of the various patient injury categories. Aim statements again. A little different flowchart for this kind of analysis of which units it supplies to, then what are the criteria for deciding whether we intervene, how do we re-design our process, and what are the metrics in terms of tracking the outcomes.

Patient injury – CMS HAC registries

Estimated cost of defects
2011 OSHPD data

Here is straight off the Medicare website the inclusion criteria. This is an analysis of the California OSHPD data that shows an interesting thing, and that is that vascular disorder-associated cath infections, or CLABSI, represents over 50% in this large data set of the healthcare-associated conditions. So it would be important to focus on that early. And the other reason for that is that that as you'll see in a moment becomes part of the 65% category II.

Approach to patient injury prevention

What's our approach – well first of all we need to figure out what is the cohort that should be screened because they may be at risk. What is the tool, such as the Braden scale for pressure injuries. For those who are at risk, I have to set my scores at 14 or 16. And then what is the protocol, special (42:54) the patient frequently avoiding caustic substances. And then a tracking system. And this sort of an approach allows us to regard patient injury as a process failure to be subjected to root cause analysis rather than an incident to be reported, which is a lot more engaging with your clinicians.
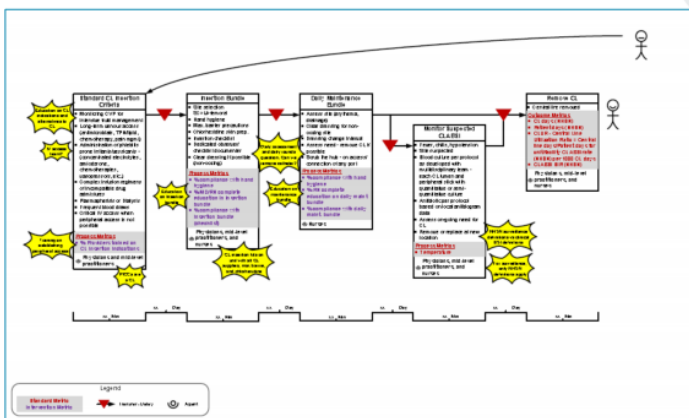
CLABSI prevention

This is a sample flowchart to implement Central Line-Associated Blood Stream Infections.

CLABSI prevention
"A3" for process redesign

This is the A3 process improvement to get after the redesign.

CLABSI prevention – tracking

And this is the tracking visualization with regard to that.

Poll Question
How well prepared do you feel your organization is to demonstrate with dashboards and outcomes reports your proficiency in quality and safety to third-party payers? (five-point scale)

So, how well prepared do you feel you are to demonstrate with dashboards and outcomes reports like these, your proficiency in quality and safety to your third-party payer contracting candidates?

[Tyler Morgan]
Alright. We've got that poll up, Dr. Burton. We'll leave that up for just a few seconds while we allow folks to answer that.

Alright. We're going to go ahead and close that poll and let's share the results.
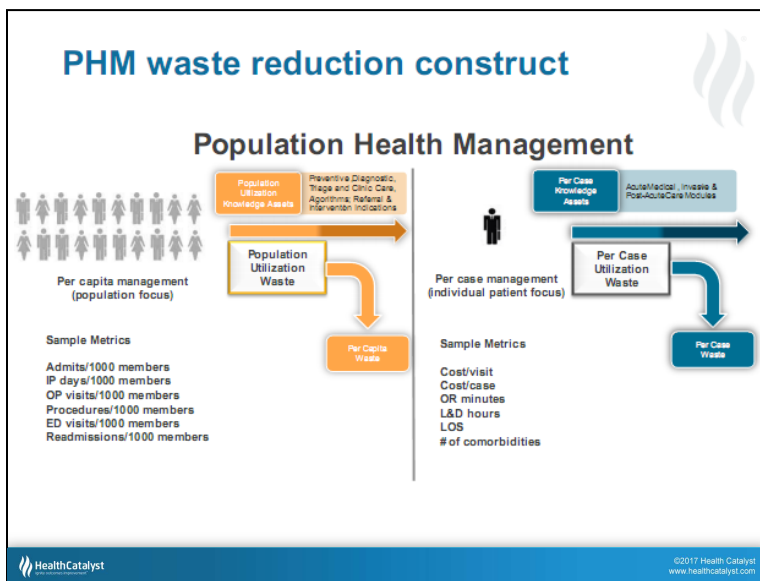
[Dr. David Burton]
Good. There's kind of a dumbbell phenomenon going on here. So some improvement possibilities in some people that it looks like others could learn from. Thanks, Tyler.

Cost (Waste Reduction)
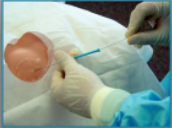
PHM Waste Reduction Construct

So let's move to our final area which is waste reduction and our cost structure. To do that, this is just a construct that is helpful for me in thinking about this. There really are two forms of utilization management or waste reduction at a high level. One has to do with population, and this really asks the question of do we order some form of care and there are different levels as we peel it off. Notice down here on the left that these metrics, these are the traditional metrics that we use in an insurance company. They tend to be per 1000 or per 100,000 members, such as admits, inpatient days, outpatient visits, procedures, etc. And so, that's a population focus, a per capita management focus.

Once we decide that something is appropriate to do, we shift from a population to the individual who is going to receive that treatment. And now, we're in a per case utilization and that should be a cost per visit or a cost per case, it could be OR minutes, L&D hours, length of stay, number of comorbidities, that sort of thing.

Three Forms of Waste

If we look then at how do we make this actionable, we need to divide it into three forms of waste. We can analyze ordering waste, did we order tests or care or substances or supplies but did not add value. Once we ordered something, how efficiently was it delivered? And in the process of that delivery, how many times had we experienced a defect or a patient injury?

Population Ordering Waste Reduction
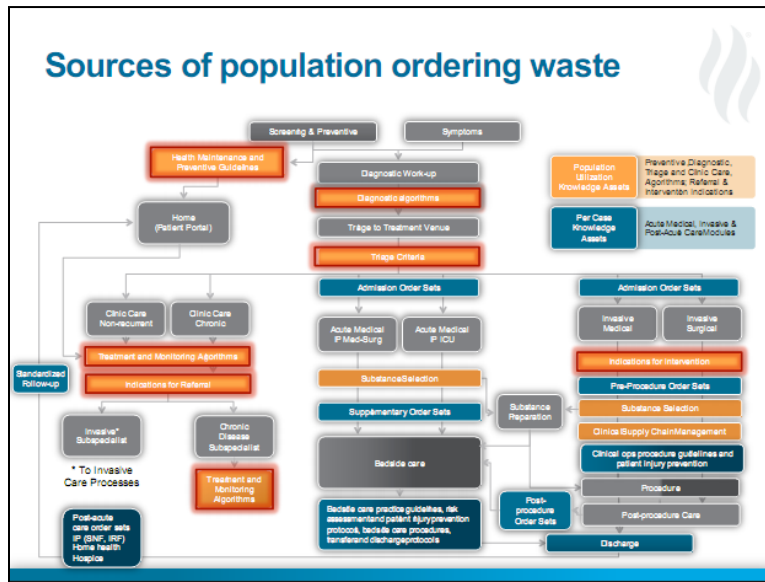
Sources of Population Ordering Waste

If we look at the ordering aspect of that, now we're looking at those orange boxes, and those are the opportunities for improvement.
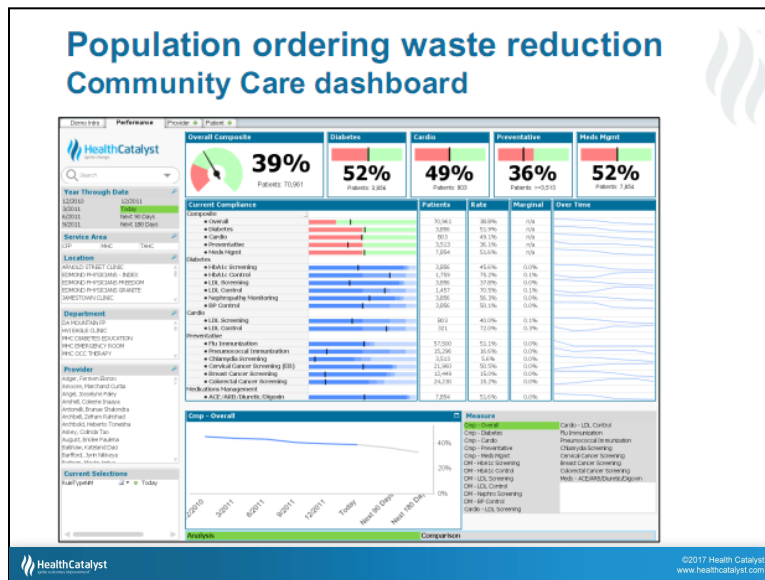
Population Ordering Waste Reduction Community Care Dashboard

And we track things like that, here's a community care aspect, looking at various cardiovascular, diabetes, and so on metrics and the key indicators. Looking at how well we comply and what our outcomes are for each of those disease entities and for each of those key indicators.

Population ordering waste reduction
NTSV-C rate with no induction attempt

Or here is an inpatient example where we know that it is not appropriate and it is wasteful to induce patients who are pregnant before 39 weeks. It increases NICU admits, it prolongs labor. And so we're looking here at a graph of actual data where these folks received a C-section without a trial of Pitocin to see if labor could be augmented.

Per Case Ordering Waste Reduction
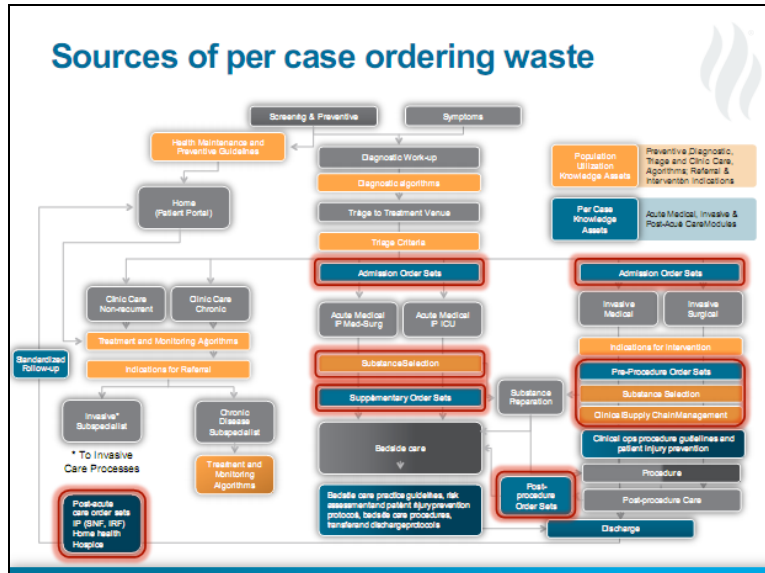
Sources of Per Case Ordering Waste

If we look at per case, now we're looking at these blue boxes.
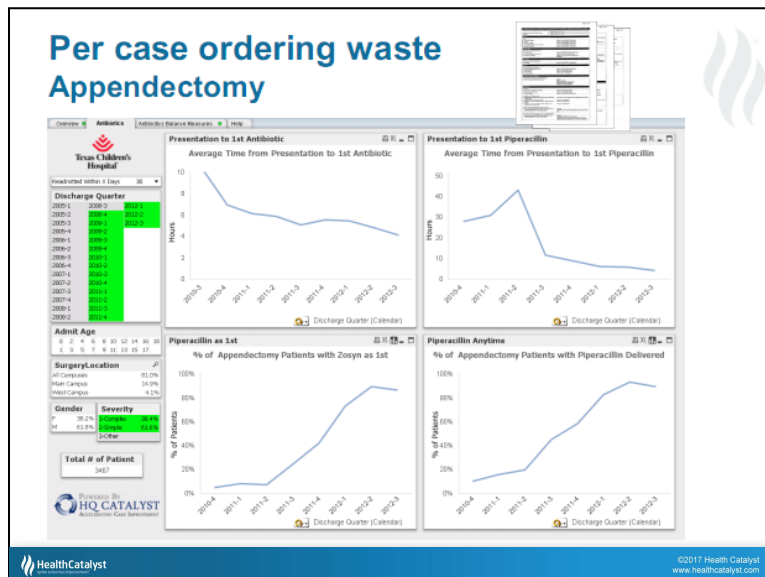
Per Case Ordering Waste
Appendectomy

And here's an example again from a client where you can see the improvement in the appropriate ordering of the right antibiotic preoperatively for appendectomy, Piperacillin and with decrease in the length of time from the time the diagnosis was made until the antibiotic has gotten on board, length of stay, and so on.

Per Case Workflow Waste Reduction
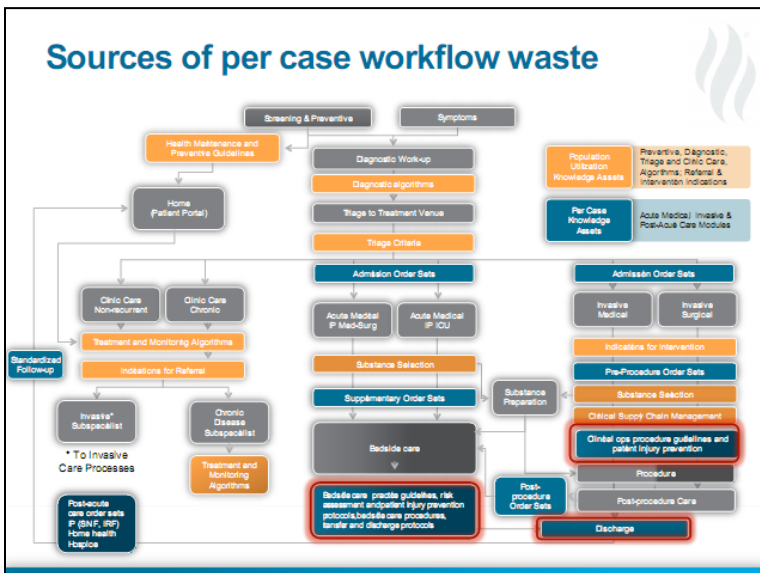
Sources of Per Case Workflow Waste

If we look at per case workflow, now we're looking at these little boxes, the implementation of the orders.
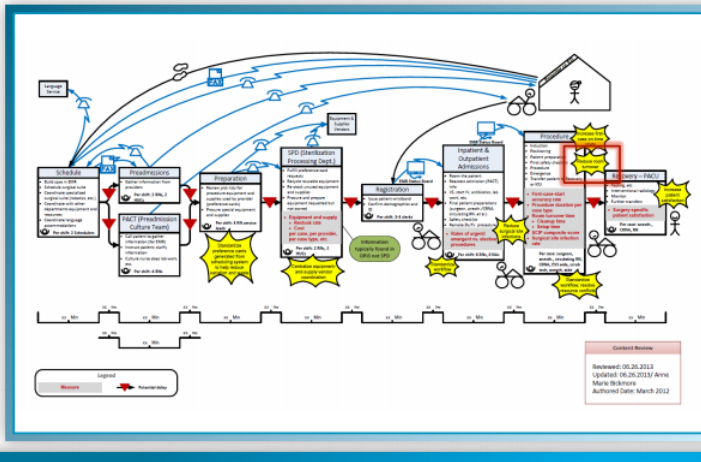
Workflow Waste – Surgical Services

And here we shift to a different tool. Now, we're looking at a traditional value stream map and the storm clouds represent the intuitive opinions of the people who help put this together as to where the opportunities lay. And we're going to focus in on this particular aspect, cycle times and the time the case was finished until the next case was brought in to the room.
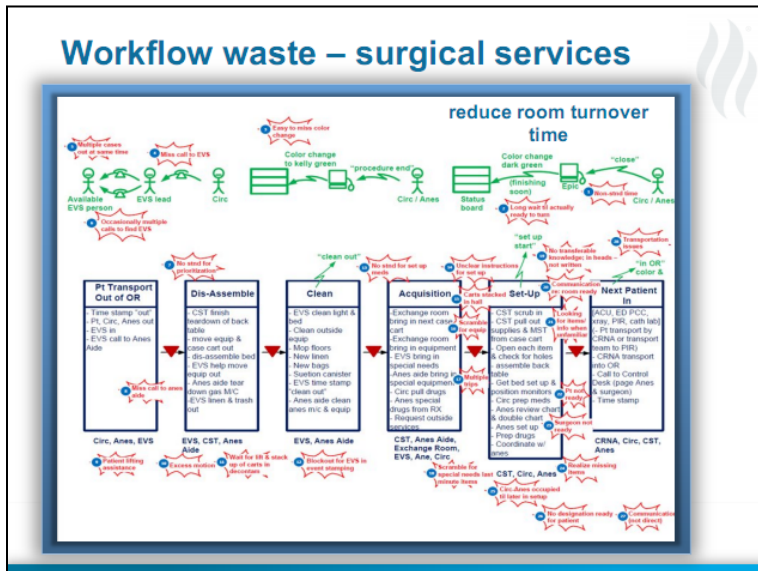
Workflow Waste – Surgical Services

This is a similar value stream map now drilled down and we found that the problem in fact was the notification of the cleaning crew that the room was ready to be cleaned.
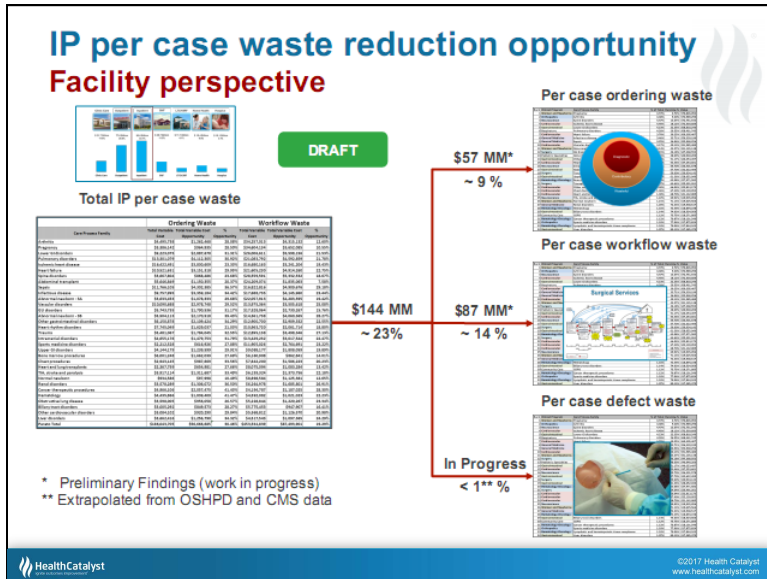
IP Per Case Waste Reduction Opportunity
Facility Perspective

If I then look at the relative contribution in the per case area, this is very preliminary but it looks like about 40% of the opportunity is in standardizing, reducing the variation in what was ordered within the case, so ancillary tests, medications, etc., versus 60% of it in the efficiency of the workflow that delivered the care after it was ordered and a very small amount in the area of defect waste in terms of dollars, not to say that isn't important because the arrow of safety is very important to you, but it's not where you're going to make most of your savings.

Defect Waste Reduction

Defect Waste Reduction

If we look at defect waste, reduction-wise it's important. While we look at CLABSI and Central Line and Catheter-Associated Infections are going to make up 65% of the penalties, if you will, all these other things that we thought where people value are going to be weighted 35%. If we went back to that California data, we would find that it may not have chosen the right thing there, that (449:50) would have been a better second choice there, but it is what it is.
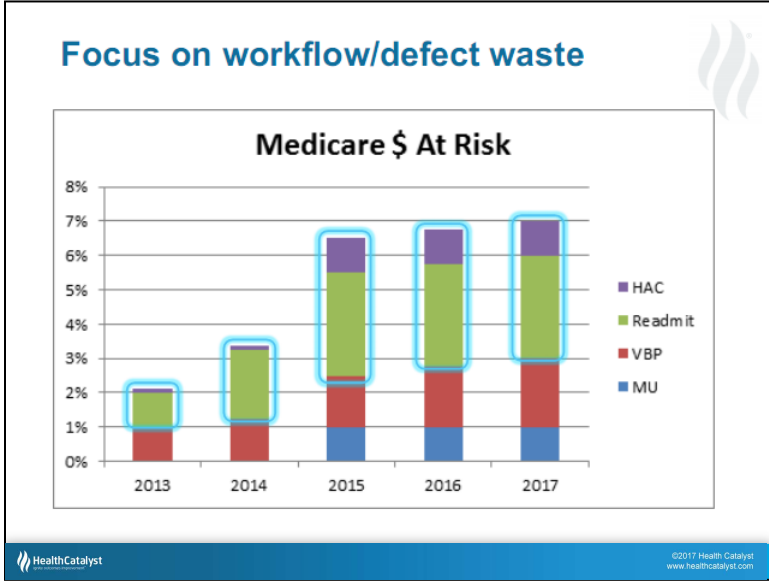
Focus on Workflow/Defect Waste

And here's what's at risk. So here we are in 2014 and you can see the penalties in those areas that we're talking about in terms of workflow and patient injury.

POLL QUESTION

So how well prepared do you feel you are to improve your cost structure by reducing the three forms of waste so that you are financially viable?
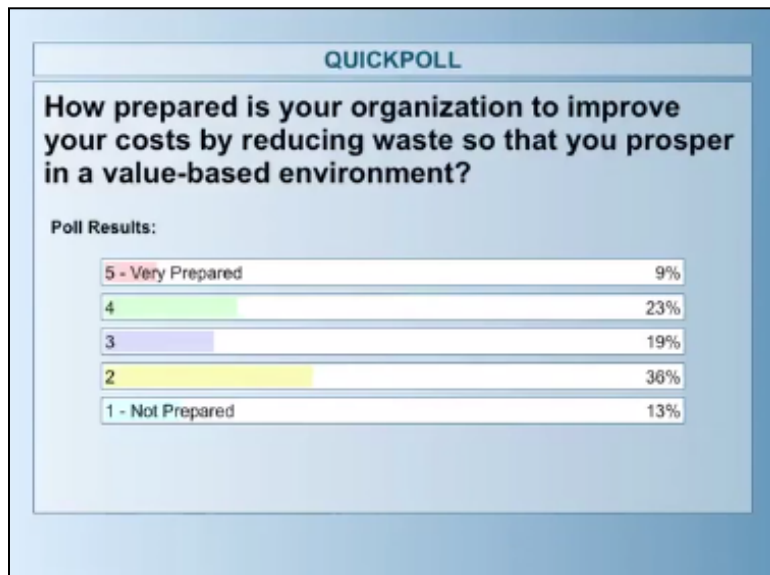
Poll Results

[Tyler Morgan]
I apologize. I don't have this poll question prepared at this time but we will provide this in the survey afterwards.

[Dr. David Burton]
Okay.

Summary

Accountable Care Transformation

So by summary, we need competencies in four areas. We need to be sure that we have good access and therefore member satisfaction. We need to be able to establish a fair price for which we assume shared risks. We need to be able to demonstrate our proficiency in quality and safety. We need to be able to demonstrate our cost effectiveness and also our internal evaluation to make sure that price minus cost leads something over to keep our system in business.

Thank you very much.

Transforming Healthcare Through Analytics

[Tyler Morgan]

Alright. Well before we jump into questions, Dr. Burton, we do have two passes to give away to The Healthcare Analytics Summit we'll be holding on September 24th and 25th. The first is a pass for single registration and the second is a pass for a team of 3. And before we do this, I would like to mention that registrations so far have exceeded our most optimistic expectations, coming in at three times our best case scenario, so much so that we're now scrambling to find extra space because at this rate we would run out of passes by the end of July or early August, which is two months ahead of time. So we do have these passes to give away. We're still going to offer these two passes too but we would simply ask that you enter this drawing if you're confident that you could travel to Salt Lake City on those dates just so we maximize the chances the winner can in fact come.

So the approach is simple. I'm putting a poll right now. If you'd like to be entered in the giveaway for the single ticket pass, please respond to the affirmative, again, if you are confident that you can attend the summit on those dates. We will announce the winner from this random drawing in the followup email. We'll leave this open for just a few more seconds.

Alright. We're going to go ahead and close that. And now, I'll show you the results. It looks like we do have quite a few who know their schedules well enough that they believe they can attend. That's exciting.

Quick Poll
Are you interested in attending the Healthcare Analytics Summit in Salt Lake City as a team? (team ticket)

Now, the same process for our team ticket. If you are confident that you can attend and would like to enter the chance to win a team pass, this is up to 3 registrations, respond with affirmative. We'll leave this open for just a few more seconds and we're right on to our questions and answers.

Alright. I'm going to go ahead and close that. And let's go on over to our questions and answers.

QUESTIONS AND ANSWERS

QUESTIONS	ANSWERS
Are you seeing health systems at least educating their employee positions about their role in the healthcare reimbursement environment? Because I travel around the country, I'm not seeing this level of innovation happening. I know Kaiser has done a lot of training with their physicians, how important do you think this piece is for health systems who actually manage populations?	It's a great question. There is an allusion and it's been around for at least my 40 years in healthcare that there is a magic bullet somewhere out there and it's a technical bullet and if you just implement the software, everything is going to go well. The implementation of the software is actually probably the easiest of the three essential elements. So we think in terms of three systems. One is the measurement system, which is critical because it helps get engagement and helps you be objective about what you're doing. The second system is content. You have to know what you believe value-based care is. The third system and the hardest system is deployment. How do you organize improvement teams, make them permanent, and develop a scalable process that you can use over and over again to implement the number of improvement initiatives that you will need to. Physician engagement is absolutely critical to the ordering of care. So all of those orange boxes and the blue box order sets, the scientific flow of the reduced variation and orders, the physicians are the ones that are going to do that. And so if they're not engaged and if they're not educated, if they're not on board and frankly if they don't have some skin in the game in your systems, you're probably not going to be wildly successful. The other group not to overlook is your nurses and the other clinical operations personnel, like your therapist, because they are critical in the workflow on the patient injury aspects of this. And so it takes integrated teams and your administrators are also critical because they are the ones that can bring down the barriers as far as human resources, etc.
What is your expectation for premium changes in year 2? Is this balanced by initial highly acute enrolment offset by moderate enrolment thereafter?	I'm assuming we're talking about year 2 of the Affordable Care Act. I think that we will see continued increases, possibly double the interest as we go forward. The timing of that is going to be a bit dependent on what happens with the things that have been delayed, like the employer mandate. The thing that in my judgment is coming the words out the most is the mandated minimum benefits. They stifle commercial healthcare exchanges and they are going to postpone the desirable

	shift from defined benefit to defined contribution, which is the right way to bring the member or patient into the equation as a proven purchase or we can maybe dilate on that a little bit. That may not be as much general interest.
What impact was expected on Medicare Advantage Plans?	This is a very strange situation. The impact is negative. There is a specific aspect of the ACA that reduces payment to Medicare Advantage Plans. It's the exact opposite of what public policymaker should be doing. It should be creating incentives, (57:01) some penalties if affordable care is the goal. Now, if the rule objective is a single-payer system through a backdoor, then reducing payments to these folks that have been more effective in enrolling Medicare members is understandable.

[Tyler Morgan]
Dr. Burton, we have time for two more questions. We'd like to remind everybody that if we do not get to your questions at this time, that we will respond to you directly and answer your questions after the event.

QUESTIONS	ANSWERS
Do you feel that the ICD10 will have a positive, negative, or neutral impact?	I think it's going to be positive. I actually used the ICD10 framework as the construct for doing the mapping that you saw the results of and frankly there are a lot more codes. A lot of the codes are not going to be particularly impactful because they talk about left and right and things like that but I haven't found anything that doesn't help clarify things that were ambiguous in working pretty extensively with the ICD10. I'm glad that we had a delay over a year. I think it will allow us to do a more responsible transition. I think they're going to be positive.
What are your recommendations for building Population Health Management into specialty practices? Some low value disease require subspecialty disease management, but if managed through these specialties, do not benefit from the infrastructure and manning have been built into medical homes.	I think my response to that would be that if we build the infrastructure right, which we hope we have done in the way we build our architecture, the same infrastructure will support a patient-centered medical home as well as a referral care practice, and the principles really should be the same. Registries are the key to both aspects of this. Same inlier and outlier principles apply to specialty as they do the primary patient care sent homes. So if we do it right, Population Health Management should work across the continuum, whether it's in primary care or specialty care within the clinic care space.

Poll Question
How interested are you in a demonstration of Health Catalyst's solutions?

[Tyler Morgan]
Well thank you, Dr. Burton. Before we close the webinar, we do in fact have one last poll question. We have had many individuals asked to learn more about Health Catalyst, and in previous webinars, we've asked for your interest in learning more in the post webinar survey. We received feedback that this is causing confusion. So in the vein of responding to feedback, we are asking this question separate from the post webinar survey.

So how interested are you in a demonstration of Health Catalyst's solutions? Very interested, somewhat, not sure, or not interested. We'll leave this up for just a few seconds. And while this is up, I would just like to let you know that shortly after this webinar you will receive an email with links to the recording of this webinar. The presentation slides will give you the poll question results and also the names of the winners of the summit ticket giveaways.

Now, we're going to close the poll question now.

And on behalf of Dr. Burton, as well as the folks at Health Catalyst, thank you for joining us today. This webinar is now concluded.

[END OF TRANSCRIPT]