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Discussion Summary

Delivering Value-Based Care:

Episodes of Care Analytics for Health Care Providers, Payers and ACOs

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Interview Featuring:

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Introduction

Episodes of care (EOC) is redefining the way health care organizations manage patient care and connect outcomes and value to payment. By leveraging insights from EOC, both providers and payers can clearly understand the quality and total cost of care and make adjustments to optimize resources, drive towards better health outcomes, reduce costs, and generate higher patient satisfaction. IIA spoke with Peter Chingos, a Senior Industry Consultant with the Health Analytics Practice, Health & Life Sciences at SAS Institute Inc. to discuss the various benefits and opportunities EOC analytics provides, as well as some of the challenges associated with implementation.

Q: What are "episodes of care" and why are they important?

Episodes of care (EOC) offer a critical way to measure and manage within the context of value-based payment for medical services. An EOC is a group of clinically related services delivered to a patient over a period of time. Examples might be the term of a pregnancy culminating in the delivery, a knee replacement and rehab, management of a chronic condition such as diabetes or hypertension for a specific period, or treatment of an acute condition such as a stroke or heart attack. EOCs represent why patients interact with the health care system. They are the ultimate product upon which to measure value and organize resources to deliver that value.

Under fee-for-service, health care providers measure and manage around the individual services they provide. The focus is on volume, revenue, cost, and efficiency of delivery – in essence, a factory mentality. Service quality and customer satisfaction are important for a host of market and regulatory reasons. However, until recent value-based payment approaches were introduced, quality didn't hit the bottom line. In fact, under fee-for-service, additional services needed to compensate for poor quality, including readmissions, just create more revenue.

The individual service or interaction is not the right way to measure value. EOC – which looks at complete sequences of services and their outcome – is the right way. EOC covers the intersection of care over time. If you really want to make changes and have a great health care system, you can't look at patients, diseases, and services piecemeal. EOC is a much better way to detail and analyze at how care is managed.

Q: How is the shift to value-based payment driving the use of EOC?

As the name suggests, with value-based payment (VBP) models the payer reimburses the provider based on patient outcomes and value delivered, not on the services and resources expended. The shift is in direct response to market demand for lower health care costs, which have been on an unsustainable upward trajectory, while at the same time quality of care is still compromised by unnecessary variation, medical error, and readmissions. Quality care at reasonable cost is a major issue for the U.S. government, employers, and individual patients.

Private and government insurers are responding by increasing the proportion of payment tied to quality, and while the cost of production is still important, the focus shifts to total cost of care and bending the cost curve for the population served. There are different approaches emerging for connecting payment to value:

- Bundled payment, where there is a flat fee for a given outcome (e.g., a hip replacement).
- Shared savings, where the payer and provider share the savings when a quality outcome is produced below estimated cost.
- Fully capitated accountable care, where the provider is paid for providing medical services to populations of patients.

In all three cases, you need EOC to measure and analyze the quality and cost of outcomes. If a provider wants to assess its readiness for bundled payment or shared savings contracts, or determine how to price them, it needs EOC as the foundation of analysis. If a provider is managing an ACO population and wants to drive out unwarranted waste, it needs the clinically actionable insights from EOC analysis that take you beyond the baseline performance measures that everyone uses.

Q: How much momentum is there behind the shift to value-based payments?

Many progressive providers have VBP pilots around specific treatments such as oncology care. In 2015, 20 major health systems and payers pledged to convert 75 percent of their business to value-based arrangements by 2020. Over 700 public and private Accountable Care Organizations (ACO) have been created since 2011 covering an estimated 23.5 million people, 7.8 million via Medicare. Those ACOs have saved Medicare $417 million and distributed shared savings payments to providers of $460 million. There are over 6,900 participants in the voluntary Bundled Payments for Care Improvement (BPCI) program, and CMS estimates that its proposed mandatory Comprehensive Care for Joint Replacement (CCJR) program will save $153 million over five years and impact 800 hospitals. We're getting close to critical mass.

Medicare is helping drive the change in other ways as well. For example, the Kaiser Family Foundation estimates that CMS's Hospital Readmission Reduction Program will reduce payments by $428 million nationwide in 2015 on just five clinical conditions. As a result, all hospitals are measuring their quality in terms of readmission rates and are mobilizing resources to manage readmission risk so they don't get penalized financially. EOCs can help them do that.

Q: What specific kinds of insights are derived from EOC analysis?

EOCs provide a better understanding and accounting for the products of the health care. Once you have EOC as a standard for analyzing care, you gain deeper insight into both cost and quality:

- How much variation is there in episode cost? What component and utilization costs drive the variation? Are there opportunities to shift patients to a better price point?
- How much variation is there in quality and outcomes? What care processes produce the best results? What are the opportunities to improve patient care pathways?

- With more actionable clinical information, providers can better engage clinicians and support staff in performance improvement activities. It's a lot easier to engage a clinician on quality than cost.

EOCs also give providers a new lens for looking across a population of patients and understanding which clinical conditions are driving costs. As they manage and optimize the delivery of episodes, providers tend to standardize resources, reduce variation, and have more predictable operations. With greater stability and predictability, they can plan with greater confidence, whether for budgeting, facilities, resources, contract negotiations, or partnerships.

Meanwhile, payers have the opportunity to gain insight into how care is being delivered across providers. Which providers have better cost and quality? Payers can share the feedback with providers and can reward providers based on comparative results.

Q: What are some specific use cases?

Here are three examples:

- Analysis reveals that post-acute care is being delivered in inpatient rehabilitation facilities at a much higher rate than regional benchmarks and driving up cost. By implementing care pathways and protocols, providers can appropriately redirect patients requiring less intensive services to less expensive skilled nursing facilities.
- Another example is how EOC provides a standard for assessing variation and determining what amount of any particular service is warranted. Less variation in testing, imaging, doctor visits, inpatient stays, and so on will ultimately lead to less spending and a more stable process. When providers reduce unnecessary testing and treatment that also improves the experience and satisfaction of patients.
- Health care providers have scarce resources and must prioritize which clinical and operational projects to invest in. Opportunities identified by EOC analytics can help providers select projects with the greatest return.

Q: How is EOC enabling more predictive analytics?

Once you have data within the context of EOC, you can look ahead in a variety of ways, for example:

- Risk scoring can be enhanced by assessing episode as well as patient risk. If you can identify a patient's likelihood of incurring adverse events and high costs across the entire episode, you can take preventive measures.
- Risk adjustment models can better predict patient cost given their unique conditions, severity of illness, and comorbidities.
- Aggregate forecasting can become more accurate: What's likely to happen with the population being managed?
- Treatment plans can be optimized: What would be the best course of action given various care options and patient condition and preferences?

Q: What are some of the implementation challenges?

While payers are pushing for value-based payment, many providers are holding back for two main reasons. One, even among sophisticated providers, managing patients across the care continuum is still new. There is a significant amount of enabling organizational and administrative infrastructure required. For example, bundled payments look like a simplification, but in the short term they can complicate the transaction flow between provider and payer. Two, and perhaps most importantly, health systems run on narrow margins, and many prefer to take their chances under the status quo rather than risk losing money under new payment methods.

That said, analyzing your clinical product line with EOC would be the first step to understanding exposure to financial risk – and finding ways to increase market share and margins while

avoiding risk. So providers should be using EOC both to make direct improvements to cost and care, and to prepare for and make the transition to value-based payment.

What then are the challenges in implementing EOC? Lack of data and analytic infrastructure. If clinical and operational data are fragmented, you can't pull together the end-to-end view of EOC. And if you don't have the analytical tools and skills, you can't put the data to work.

Q: How should organizations go about putting EOC analytics capability in place?

For starters, there are several key capabilities to consider:

- **Episode definitions.** What event triggers an episode? What services and diagnoses are included? What cost categories are used? What concludes an episode? You can use existing definitions (e.g., CMS BPCI, PROMETHEUS ECR) or create your own, but you'll want to maintain the flexibility to modify rules for defining an episode.
- **Attribution rules.** How will you assign ownership of the episode? What provider specifically will be held accountable for the case?
- **Concurrent episodes.** A patient may have multiple concurrent episodes (e.g., comes in for a hip replacement and develops gastric problems). You need to account for what's included in each episode.
- **Output detail.** EOC analysis can generate a lot of questions. It's helpful to have as much detail as possible to drill down into.
- **Risk adjustment.** EOC provides a more complete view of clinical activity, but it can't tell the whole story. For example, the severity of a patient's illness may impact cost and quality. Consider ways of risk adjusting your data and output.

Then you need to understand the key steps for adopting EOC:

- Form an EOC analytics planning team aligned with key stakeholders.
- Define the scope of what you need to measure – population, episodes, providers, time periods – together with the data sources and analytic requirements.

- Plan the data and analytic infrastructure to implement EOC, with special attention to scalability – you'll need computing power and an analytic solution that can grow with your business needs.
- Detail your implementation plan and roadmap. Then start piloting. You might begin with procedures or conditions in stronger clinically integrated programs (e.g., cardiology, orthopedics or oncology) where there's an opportunity to learn and improve, and where much of the needed data is available.

Q: What are the top things that provider organizations really need to know about EOC?

First, the measures that you're currently using don't adequately capture how your clinical enterprise works. You really need to understand what's driving costs from a clinical perspective, and then use that information to engage providers, align resources, increase efficiencies, and optimize care. You need EOC to develop that capability – it's a better unit of measure and analysis.

Second, you need EOC to succeed in a market with value-based payments. You need the insight into your clinical costs and quality. Third-parties may aggregate a lot of useful comparative data for you, but you still need the means to learn and improve your operations, as well as to price services and negotiate contracts.

Third, adopting EOC is a strategic business decision. Whether it's to support bundled payment, manage an ACO, or identify improvement opportunities, you're leveraging EOC to change how you measure and manage.

Q: What do analysts working on EOC applications need to know?

Analysts need to appreciate the complexity. They are going to need to work very closely with their business partners as they work through the definitions of episodes and the analytics based on them. There are many decision points and clinical considerations. The analysts can't think of this as a one-time modeling project; it's an ongoing team effort with the business.

Q: Finally, what do payers need to keep in mind?

Payers are pushing for value-based payment because that transfers financial risk to the providers. But they're not always making it easy for the providers. Some are partnering, while others are perceived to be using bundled payment as another way to drive down payment. Payers should recognize that they are sitting on an enormous amount of data that their provider partners have not seen before or have had limited access to. There is a real opportunity for payers to reach out to provide partners in support of care delivery as well as encouraging value-based payment.

Additional Information

To learn more about this topic, please visit **sas.com/episodeanalytics.**

About the Interviewee

J. Peter Chingos has over 25 years of experience in health care management, consulting and business analytics. Throughout his career, Peter has focused on large-scale, strategic initiatives to improve quality and efficiency in health care delivery. Prior to working at SAS, Peter managed an analytic consulting group at Health Dialog focused on provider opportunities under payment reform. He also managed a business intelligence team at Maine Medical Center responsible for clinical quality measurement. Peter has implemented decision support/cost accounting systems in hospitals nationwide and started his career at Massachusetts General Hospital coordinating clinical operations and managing performance improvement teams. Peter holds a BA from McGill University and an MBA in Health Care Management from Boston University.