Abstract

The United States healthcare landscape has changed significantly over the past few hundred years. Just two short lifetimes ago, it was still common practice to pay for medical services using goods instead of currency. Even though we’ve come a long way since then, excelling in medical research, education, and infrastructure, rising costs and inefficient payment models continue to plague our healthcare model. Since 1975, the US health expenditures have consistently outpaced our annual GDP growth at a rate that is simply unsustainable. This trend has prompted both legislative bodies and other healthcare ecosystem participants to explore alternatives, a search which ultimately lead to the concept of Value Based Care.

At its core, value based care seeks to establish a balance between quality of care and cost of care. Though simple in theory, value based care and value based payments have proven to be difficult to implement across the healthcare ecosystem. Understanding how payment models have evolved over time as well as the different options that are available is critical to navigating the path ahead.
Issues with Traditional Models

Traditional payment models, like fee-for-service, are fairly intuitive in their implementation but lack in their ability to align objectives between providers, payers, and patients. There is little incentive for patient outreach programs because reimbursement is based on volume of services and procedures. Additionally, there is no emphasis on the outcome of those procedures. A physician who refers a patient for 10 specialized services for an incorrect diagnosis receives a higher reimbursement, based purely on volume, than a physician who refers a patient for two specialized services for a correct diagnosis.

Payers and providers both operate independently, primarily due to lack of interoperable systems and established best practices for sharing information, which further exacerbates the problem. If a patient sees multiple providers, no single provider has a holistic view of that patient’s overall health. This not only has a detrimental impact on patient health plan but also adds time and cost elements to an already overburdened system.

However, fee-for-services does get one thing right. It encourages providers to be thorough in their search for a diagnosis, and it encourages payers to be cost-efficient in providing those services because they are aware of expected high volume of procedure requests. However, it shouldn’t stop there. The payment model should also reward physicians for getting to the right answer, and, perhaps more importantly, getting there faster. This is the balance between effectiveness and efficiency that is so often sought through the implementation of Value Based Care models.

Next Generation of Payments: Value Based Care

There is need for a fundamental change in our health care delivery system to make it focused towards addressing the future economic risks of excess medical cost growth and make the switch to value based care as our nation ages. Within value based care is a regulatory shift towards new models of payments that reward providers who deliver quality care that is evidenced for costs, outcomes and improvement. However, showcasing the relationship between cost and quality isn’t easy, which is why a key factor in value based care is the need for detailed and critical analysis of data to bring systematic improvements including:
the precise workflows, systems, inefficiencies, variances and challenges faced by those purchasing the health care services and care delivery

- outcomes for all dimensions of the delivery system including safety, effectiveness, efficiency, equity, and focus on the patient

- costs to value

Through the above, value based care becomes a mechanism to build an efficient, holistic, person-centric, improved and sustainable healthcare delivery and payment system.

However, this should come as no surprise. After all, data has been at the heart of myriad advancements recently across virtually every industry. Healthcare is no different. Data is the core foundation that will allow continuous ongoing measurement of populations, cohorts, measures, utilization of services, variances, evidence-based practices, outcomes and health statuses as we shift from a provider focused episode based care delivery system to a longitudinal person-centric, preventative, innovative, costs and quality outcomes based care delivery system.

Furthermore, innovation in value based care will develop new approaches to ease the burdens placed on providers, reduce inefficiencies in record keeping, enhance analytics, provide real time reporting of insights and evaluate disparate payment models and programs, to ensure the delivery of health care services at a cost and quality that holds value.

**Novel Patient-Provider-Payer Relationship**

So what does a value-based patient-provider-payer relationship look like? The truth is, it can actually take on many forms, depending on the level of integration and shared risk between stakeholders. On the lower end of the spectrum, there is patient centered medical home, pay for performance, and episode of care payment models. With increasing accountability, there will be a subsequent rise in models that incorporate shared savings, shared risk (i.e. Accountable Care Organizations – ACOs), and full risk capitation. A final potential implementation of value based care goes as far as provider sponsored health plans, though this is often cited as impractical and is usually used as a theoretical example.

However, regardless of what value based model is implemented, the need for real time longitudinal health record information across the care delivery team, to include administrative claims, electronic and digital health, biometrics, genomics and other data sources will be critical in
addressing important behavioral and life style drivers of value. These, in turn, will highlight opportunities for improvement in cost, quality and outcomes.

The Way Forward

In short, though the need for value-based care has been triggered by the unsustainable cost trend, the benefits will be felt throughout the healthcare ecosystem. Additionally, at the core of this philosophy lies a very basic requirement, sharing of information. Payers are sitting on mountains of data that would be beneficial to providers, and providers are capable of providing invaluable insights that would not only improve patient outcomes but significantly impact overall population health. Leveraging this information and transforming it into actionable insights will not only improve the effectiveness of care (i.e. quality) but also the efficiency of care (i.e. cost), a process that will bring back into focus the most important part of the healthcare equation - the patient.
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Healthcare Analytics

Awards & Recognition

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**HealthCare OPTiX Eco-system Architecture**

1. Will be able to support ingestion of data from health plans, providers and PBMs using traditional file or FHIR standards
   - Social Data and Sensor streams
2. The data will be stored in a proprietary data model, accessible through our insights layer
3. Allows for 3rd party applications to access data available for workflows and reporting
4. Adheres to Industry privacy and security standards
5. Measurement Dashboard:
   - Preconfigured calculations based on industry standard benchmarks, such as HEDIS, Medicare Stars, and MIPS

**Key Features & Functionality**

- Out of the box analytics for descriptive, predictive and prescriptive analytical models
- Actionable insights using intuitive user interface and reports
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- Measurement Dashboard:
  - Customizable measure/KPIs
  - Clinical Dashboard:
    - Ability to slice and dice Population Health data for clinical consideration (i.e. Product, geography, condition, age, gender, etc.)
  - Financial Dashboard:
    - Calculates the shared savings related to Value Based Care to ensure providers are maximizing their earnings
  - Descriptive, Predictive and Prescription Models
    - Preconfigured and customized options available

**Data Sources**

- Medical Imaging (MRI, X-Rays...)
- Population Health Statistics Data
- Social & Sensor Data
- Genomics
- Insurance / Financial Data Sources

**Mobile – IoT Wellness Component**

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**In Summary**

- Out of the Box - Ready to go
- IoT, EMR and wearable devices readily connects to patients
- Built based on standards including HIPAA, HL7 and FHIR
- Continuous improvement through TCS investments in Research, Innovation & Products
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TCS HealthCare Analytics

*Powered by OPTiX™*

The most configurable Big Data solution for Value Base Care so you can hit the ground running

**Benefits**

- Identify gaps in care
- Improved patient experience
- Better health outcomes
- Improved staff experience
- Lower cost of care
- Better payer/provider collaboration

**How It Works:**

- Combines information from multiple sources to generate actionable insights
- Uses machine learning and cognitive computing to create predictive and prescriptive analytics
- Helps healthcare providers optimize quality of care to reduce risk, increase patient engagement, and manage disease through true preventive medicine, reducing the total cost for better outcomes
- Reduces burden on providers and payers by enhancing visibility into a patient’s complete health history
- Works across platforms to give insights that transcend traditional data silos
- Built from the ground up to be the customized solution you’re looking for

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