Value-Based Care Maturity Model: Models of Care

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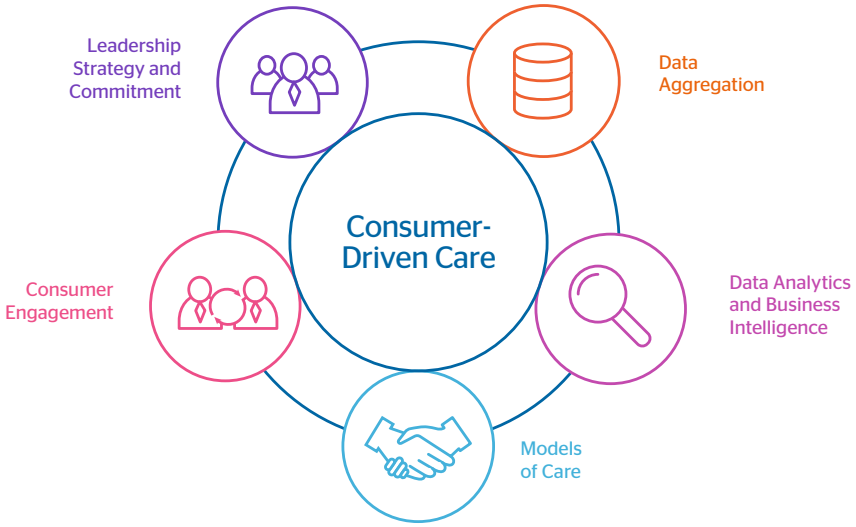
Atos has developed a maturity model to assist organizations in understanding their progress through the challenges of population health management and value-based care. The model is represented by five domains.

Organizations that progress through each domain in a thoughtful and aligned manner will gain the capabilities to leverage digital technologies and data to succeed in value-based care.

The value-based care domains establish a critical foundation to assess progress. Organizations can then begin to evaluate their maturity within each domain. This strategic view often results in new operating models and elucidates new ideas, innovative approaches, and ultimately better outcomes for consumers – inside and outside of the healthcare system.



Models of care

A "model of care" broadly defines the way health services are delivered. The investment in electronic health record, revenue cycle and financial systems provides organizations with an abundance of data from which to understand the impact of different care delivery approaches on care quality, clinical outcomes, cost and consumer satisfaction. Data can inform evidence-based medicine based on disease diagnosis as well as incorporate the impact of social determinants of health (SDOH) on a consumer's health status and wellbeing.

Organizations can now develop care delivery models based on collaboration and communication, leveraging digital technologies as appropriate, among all the healthcare providers, payers, consumers, and community resources that contribute to an individual's health and wellbeing. These models of care could include traditional provider-patient interfaces. However, digital opportunities to leverage virtual care, remote patient monitoring, telehealth/telemedicine and other evolving approaches abound.

As organizations take on greater amounts of financial risk in managing care quality and costs, they will be required to fully understand their data to develop models of care that leverage technology, as appropriate, and evaluate the impact of care on quality and cost.

Defining care quality

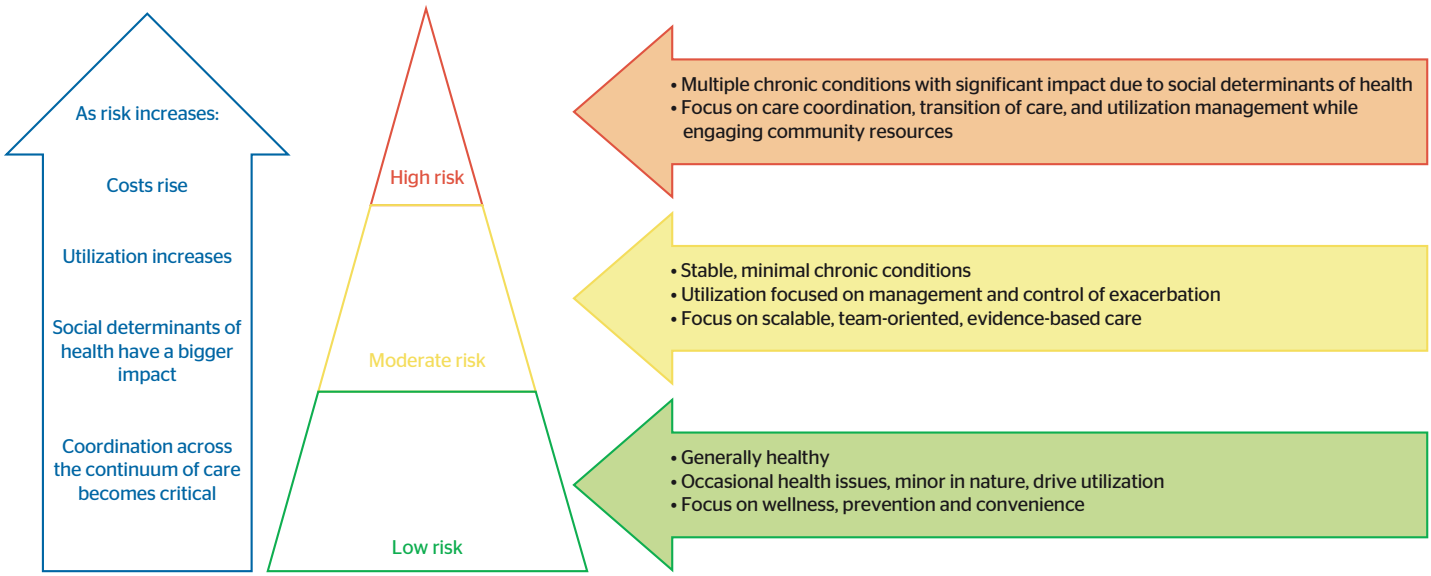
Quality care is defined by the Institute of Medicine[1] as being:

- Safe: Avoiding harm to patients from the care that is intended to help them
- Timely: Reducing waits and sometimes harmful delays for both those who receive and those who give care
- Effective: Providing services based on scientific knowledge to all who could benefit and refraining from providing services to those not likely to benefit (avoiding underuse and misuse, respectively)
- Efficient: Avoiding waste, including waste of equipment, supplies, ideas and energy
- Equitable: Providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location and socioeconomic status
- Patient-centered: Providing care that is respectful of and responsive to individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions

With available data and analytics capabilities, organizations can develop care approaches based on a patient's level of risk. We are seeing an evolution in the types of roles and interactions between providers, care managers, advanced practitioners, care coordinators and even community resources. We are seeing innovative uses of technology such as remote patient monitoring and telemedicine in the home and/or underserved communities. We are seeing data-driven, evidence-based protocols for high-risk, critically ill patients.

Defining risk

Successfully managing the health of a population begins with understanding different levels of risk and responding accordingly in the development of care plans and approaches. The following diagram describes a framework for risk identification and the associated characteristics of each population. Through the aggregation of medical, clinical and social data, an organization can apply any number of available risk algorithms to categorize consumers and patients and then apply the appropriate level of care intervention.



Understanding social determinants of health

While there is no specific medical definition of social determinants of health (SDOH), it is widely accepted that there are economic and social conditions that influence an individual's health. Characteristics such income, level of education, marital status, and smoking and drug use can all affect health status. In addition, physical environment characteristics such as access to transportation, recreational facilities, and healthy food have an impact on overall health and wellbeing. Healthcare organizations have the data needed to incorporate these characteristics into their models of care. Simply knowing the ZIP code will inform an organization of many attributes of a population.

Another approach to consider is reflected in the following example. Two elderly females each have a family history of congestive heart failure, multiple co-morbidities, smoking and multiple medications. One is married, from an affluent community, with supportive members nearby to support social interaction, prepare meals and provide transportation. The other lives alone in an underserved community, is socially isolated, and uses only public transportation.

Both women need medical management to prevent unnecessary emergent and acute care episodes, as well as to address the risks associated with smoking and polypharmacy. Considering different models of care, an organization may place Bluetooth devices in the home of the first, with access to telehealth services. This approach, however, will prove to be ineffective for the woman living on her own; she might require regular RN home visits to check vital signs, medication compliance, smoking status, and availability of food, and even provide much needed social interaction.

Medically these women present similarly; however, considering their SDOH, the plan of care to achieve the same outcomes may differ greatly.

	Patient A	Patient B
Common medical histories	Congestive heart failure Multiple co-morbidities Smoking Multiple medications	
Common medical requirements	Proactive medical management to: • Prevent unnecessary acute care episodes • Address the risks of smoking and polypharmacy	
Contrasting social determinants	**Patient A**	**Patient B**
Family at home	Spouse	None
Community	Affluent	Underserved
Family	Supportive, nearby	Unsupportive, distant
Social interactions	Frequent	Infrequent
Meals provided by	Family	Self, charity
Transportation provided by	Family	City/public
Contrasting models of care	Bluetooth devices in the home with access to telehealth services	Regular RN home visits to: • Check vital signs, medication compliance, smoking status, availability of food • Provide social interaction

Evolving roles in value-based care

As organizations take on greater risk as part of their value-based care strategies, the roles associated with care delivery across the continuum of care continue to evolve. Emerging roles include care manager, care coordinator, care navigator, health coach, and even specialty roles focused, for example, on behavioral health. These roles, supported by the use of technology, allow organizations to provide the right level of caregiver to patients in a manner that promotes quality while reducing costs.

The challenge organizations face is to clearly understand the abundance of roles and skillsets of the entire care team so they can equip team members with the appropriate data and tools to most effectively do their jobs and operate "at the top of their licenses."

Staffing and skill mix data is readily available to organizations through their human resources and supporting systems. Analytics technologies are available to create financial models associated with care utilization patterns or understand the impact of different staffing models on clinical outcomes and quality. Through the dimensions of data aggregation and data analytics discussed in previous white papers, organizational leaders have the opportunity to develop use cases that help inform the best staffing models to achieve optimal clinical outcomes and quality at a controlled cost.

Leveraging technology in care

Tremendous advances have taken place in tools for medical diagnosis and treatment such as robotics, implants, and other advancing technologies. Likewise, technology is being leveraged in evolving care models such as virtual care, telehealth/telemedicine and remote patient monitoring to improve care coordination and optimize outcomes. We have an opportunity to incorporate social and physical determinants of health into medical and clinical protocols from diagnosis through treatment. What's more, organizations can also incorporate data from Internet of Things (IoT)-connected patient devices, genomics research, and studies of outcomes from advanced diagnosis and treatment approaches.

Roles are emerging and evolving for care management, care coordination, care navigators, health coaches and social workers to address chronic disease management, transitions of care, and care coordination. Organizational leaders must think differently and apply data to understand which care approaches yield the best outcomes. Providers must also engage at state and national levels to expand access to care by influencing practice laws such as regulations related to telemedicine and telehealth.

Value-based contracts place provider organizations at greater levels of risk for the overall health and wellbeing of their consumer and patient populations, requiring leaders to think differently about how they develop and execute plans of care.

Questions to ask

- How are the social determinants associated with the health of the populations considered as part of available models of care?
- How are innovative models of care (telehealth, service lines, evolving technologies) being deployed to improve care quality and drive evidence-based medicine?
- How is IoT utilization being incorporated into the care process?
- How does your organization apply consumer data to develop, deploy and measure models of care?

Maturity progression for models of care

Models of care are based on collaboration and communication among all the healthcare providers, payers, consumers, and community resources that contribute to an individual's health and wellbeing, leveraging digital technologies as appropriate. As healthcare delivery models continue to evolve and be redesigned to deliver care in a fundamentally different way, institutions need a well-articulated plan to move from volume to value and achieve triple-aim objectives (improving the health of the population, improving the experience and outcomes of the patient, and reducing the cost of care). The most difficult aspect of models of care is the collaboration and communication within and between organizations. Within this dimension there are six levels of progression.

Level 1:

- Episodic, location or service-line specific care plans in place
- Some evidence-based care standards in place

Level 2:

- Basic care model definition and coordination for high-risk, high-cost or high-priority populations
- Advancing use of evidence and standards of care to measure and monitor clinical performance and results

Level 3:

- Utilization of care management tools across continuum of care with consolidated patient view, managing gaps in care and critical plan of care milestones
- Leveraging digital technologies such as remote patient monitoring and patient-generated data to manage care

Level 4:

- Plans of care integrated across the continuum of care based on best practice or evidence-based standards as well as social, physical and behavioral data to achieve optimal outcomes

Level 5:

- Models of care are personalized, potentially even based on genomic and artificial intelligence data

Level 6:

- Integrating innovative technologies, business partners, community and patient into care plan approaches

What can Atos do to promote strategy and execution of this dimension?

The Atos Digital Health Solutions Consulting team can help your organization with data analytics and business intelligence around value-based care and population health management priorities. The lack of interoperability in an organization makes meaningful data analytics difficult and challenging. Atos' proven clinical transformation methodology includes performing a physician practice transformation and analytic that is focused on:

- Performance measure improvement
- Education and understanding of value-based care
- Interoperability and compilation of disparate data
- Ability to use data analytics for informed decisions
- Selection of models of care
- Connection and engagement between the organization and consumers

Atos will help your organization move toward level-six of the models-of-care domain by focusing on the following key items:

- Care management and coordination planning and implementation
- Readmission reduction and transitions-of-care strategy
- Chronic disease management strategy
- Service-line performance and development
- Technology-enabled care program planning and implementation

About the author

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Mary Lawrence Sirois is responsible for developing and delivering Atos consulting practices related to value-based care, population health, strategic programs and project management. In this capacity, she helps organizations improve care quality and reduce care costs.

She has more than 25 years of healthcare experience in operational and strategic planning for healthcare delivery systems and innovative care environments. Her expertise and leadership span organizational governance and change management, regulatory compliance readiness, and strategic and operational planning to transform and improve quality across the continuum of care.

Talk to Atos about your journey to value-based care. Contact us at **info.na@atos.net**

About Atos

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The purpose of Atos is to help design the future of the information technology space. Its expertise and services support the development of knowledge, education as well as multicultural and pluralistic approaches to research that contribute to scientific and technological excellence. Across the world, the group enables its customers, employees and collaborators, and members of societies at large to live, work and develop sustainably and confidently in the information technology space.

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