



The Connected Point of Care Ecosystem: A Solid Foundation for Value-Based Care

Includes Suggestions for Leveraging Improved
BP Measurements to Achieve Quality Metrics





This white paper examines how new technologies are creating a fully connected point of care ecosystem in outpatient facilities to enhance the interaction between patients and caregivers. It offers suggestions for how the connected point of care ecosystem can provide a solid foundation to implement and achieve performance goals such as improved blood pressure (BP) acquisition that are tied to emerging value-based models of payment. One such model is the Merit-Based Incentive Payment System (MIPS) that is part of the Medicare Access and CHIP Reauthorization Act (MACRA).

Connected Point of Care Ecosystem

A fully connected point of care ecosystem integrates processes, equipment and caregivers to create a seamless, well-coordinated patient and caregiver experience and positively impacts clinical outcomes. It provides a platform where organizations can leverage new technologies, incorporate best practices and employ greater standardization.

The point of care ecosystem (Figure 1) encompasses everything that happens within the practice or clinic, as well as experiences occurring outside this environment (e.g., expansion of the patient-centered medical home, retail clinics). For many healthcare organizations, exam and procedure rooms are comprised of disconnected processes, devices and components that often negatively impact patient experiences and create inefficiencies, communication breakdowns and human errors.

For more information on a connected point of care ecosystem and its benefits, including greater visibility, a standardized approach, greater efficiency and enhanced patient-caregiver interaction, [see previous Midmark white papers on the topic.](#)

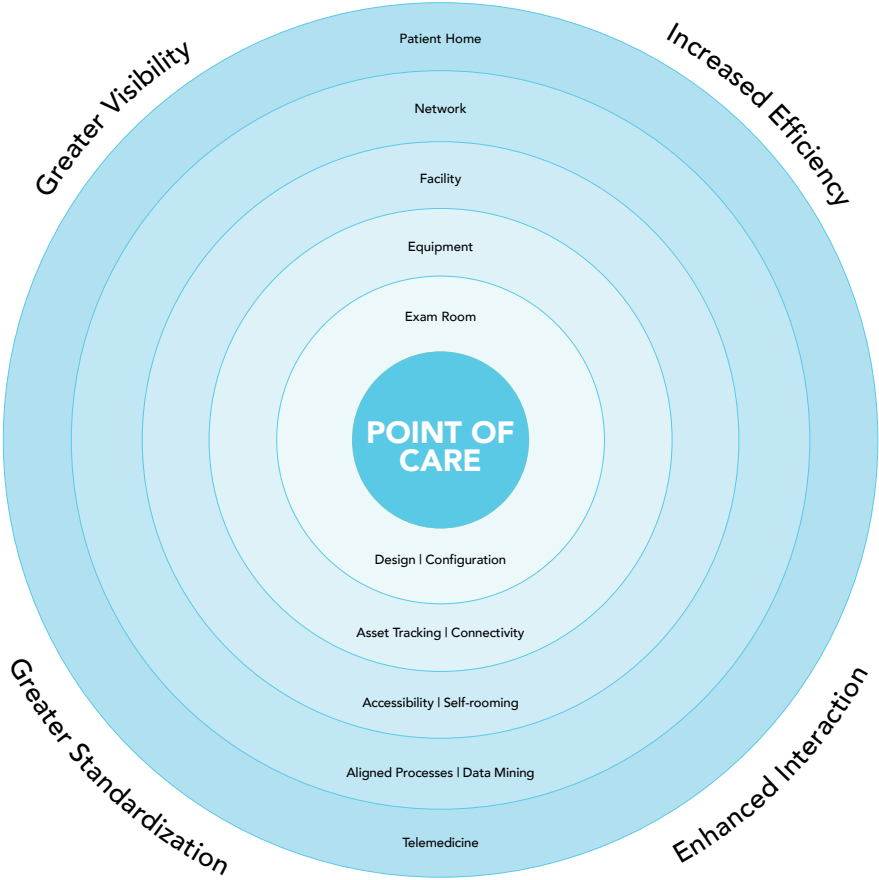


Figure 1: A connected ecosystem integrates processes, equipment and caregivers at the point of care to enhance patient and caregiver experiences and improve the quality of ambulatory care.

The Rise of Value-Based Payment Models

Since the passage of the Patient Protection and Affordable Care Act in 2010, value-based payment models have gained traction as consumer, healthcare and government groups work together to identify and track metrics that will improve the quality of care. According to a [study](#) on the growth of value-based models of payment, surveyed payers reported that 58 percent of their business shifted to value-based reimbursement. This is a 10 percent increase from the previous year.¹

MACRA, which the U.S. Congress passed in 2015 to change the way Medicare pays caregivers, is driving much of this growth. It replaced many pay-for-performance programs with a single system of incentive payments.

MACRA established two new value-based reimbursement structures: Alternative Payment Models (APMs) and MIPS. Initially, most providers and health systems will start their MACRA journey in the MIPS program since it allows them to progressively adapt to value-based incentives. Over time, as their proficiency in at-risk payments becomes more secure, many will choose to convert to an alternate payment model option within MACRA, where shared savings are more significant (but so is the financial risk).

MIPS adjusts provider payment based on a final score calculated using quality metrics in four weighted categories that will shift in importance as the program progresses:

- **Quality** – Based on the Physician Quality Reporting System (PQRS)
- **Cost** – Based on the Value-Based Payment Modifier (VBPM)
- **Advanced Care Information (ACI)** – Based on the Medicare Electronic Health Records (EHR) Incentive Program (Meaningful Use)
- **Improvement Activities (IA)** – New category that contains activities similar to the functions of a patient-centered medical home (PCMH)²



¹ McKesson Corporation. Journey to Value: The State of Value-Based Reimbursement in 2016. McKesson, 2016, p. 7.

² "MACRA Basics: Merit-Based Incentive Payment System (MIPS)." AAFP.Org. American Academy of Family Physicians. 2017. Web. 26 June 2017.

A Foundation for Value-Based Care

Forward-thinking caregivers and healthcare systems that work to create a more connected point of care ecosystem will be better prepared to succeed in the new value-based payment world. It ensures a patient-centric approach by enhancing the patient/caregiver relationship and improving the quality of ambulatory care.

A connected ecosystem in the ambulatory setting helps with the transition to a value-based reimbursement model in four key areas that align with the Quadruple Aim. (The Quintuple Aim for healthcare improvement expands on the Quadruple Aim to address the advancement of health equity.)

CLINICAL OUTCOMES

- Decreases risk incurred by human errors, which may contribute to inaccurate diagnoses
- Sets the stage for appropriate diagnoses and care planning based on consistent and accurate vital signs acquisition
- Promotes clinical standardization by facilitating adherence to best practices for vital signs acquisition, procedures and disease care
- Enhances clinical data management among care team members

PATIENT SATISFACTION

- Creates a seamless, well-coordinated, patient-centered experience
- Optimizes time spent on patient needs by the entire team
- Instills confidence in clinical data accuracy at the point of care
- Provides access to data for patient education and treatment discussion

COST OF CARE

- Establishes platform for introducing best practices to drive more efficient workflows
- Improves performance through data-driven business decisions
- Reduces transcription errors
- Automates key processes, where possible, to gain efficiency and precision

PROVIDER SATISFACTION

- Establishes consistent processes and standardization across exam rooms and networks
- Allows more quality time spent with patients
- Improves workflows that help care teams work more closely together
- Strengthens disease management through confidence in data accuracy

The Connected Ecosystem and MIPS



While a connected point of care ecosystem does not guarantee a higher MIPS score or better reimbursement, leveraging the connected ecosystem can help achieve some of the quality metrics the model uses as part of its calculation.

- **Controlling BP; Hypertension: Improvement in BP; Preventative Screening for High BP.** These three quality metrics reward providers for properly screening and managing patient hypertension. A connected ecosystem facilitates repeatable adherence to a health system's clinical guidelines for proper BP measurement techniques to achieve [more accurate, consistent and reliable BP measurements](#). The new level of connectivity protects the quality of data by virtually eliminating the risk of human errors occurring at the keyboard.
- **Patient-Specific Education; Patient-Generated Health Data.** These two metrics reward providers for using an EHR to identify patient-specific educational resources and incorporating patient-generated data into the EHR system. A connected ecosystem minimizes connectivity challenges at the point of care and enables caregivers to effortlessly and securely connect their tablet or laptop to the device upon entering the exam room. This allows caregivers to easily incorporate EHR usage into the exam and quickly access data to share with patients without negatively impacting patient-caregiver interaction.

- **Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents.** This metric gives incentives for percentage of young patients with height, weight and BMI percentile documentation. A connected ecosystem helps ensure a reliable and standardized vital signs acquisition process that requires minimal clicks for data entry, efficient workflows and accurate data transmission. Using an [exam chair with an integrated scale](#) connected to the EHR can decrease patient anxiety or stigma of being weighed in a hallway or public station and helps ensure consistent and accurate data.
- **Completion of the American Medical Association (AMA) Steps Forward Program.** This metric rewards physicians for optimizing space designs for medical facilities, implementing team-based care or improving quality with effective change management. The exam room is still the primary place where caregivers talk with patients, listen to their concerns and work with them on treatment plans and next steps. Implementing an [effective, patient-centered exam room design](#) can increase efficiency and optimize workflow to support better processes and the delivery of high quality care. (See "[Five Key Factors to an Effective Exam Room Design](#).")
- **Engagement of Patients, Family and Caregivers in Developing a Care Plan.** This metric incentivizes providers incorporating the patient and family in prioritizing goals. A connected point of care ecosystem helps create a comfortable environment that fosters group discussion around care needs of the patient. It provides a platform where more efficient workflows can be implemented to ensure adequate time for patient-caregiver interaction. For instance, with [vital signs acquisition](#) streamlined and simplified through automated data transfer, caregivers can spend less time clicking and logging in and more time listening and engaging the patient.
- **Implementation of Documentation Improvements for Practice/Process Improvements.** This metric rewards providers for tracking all clinical staff involved in an outpatient procedure. A key component of a connected ecosystem, [real-time locating systems \(RTLS\)](#) can be used in combination with patient flow software to monitor and gain insight into patient-caregiver interaction and the utilization of equipment, rooms and staff. Data gathered by the technology can be viewed historically for trending insights within a practice or to compare processes between multiple practices.
- **Implementation of Formal Quality Improvement Methods, Practice Changes or Other Practice Improvement Processes; Leadership Engagement in Regular Guidance and Commitment for Implementing Practice Improvement Changes.** These two metrics reward healthcare systems that train staff in quality improvement methods or engage all staff in identifying and testing changes. A connected point of care ecosystem provides the framework to establish both practice- and network-wide operational and clinical standards. Within this type of structured, consistent environment, it is often easier to identify opportunities to [improve workflows and processes](#) and gather data to monitor those changes for effectiveness.

Point of Care Hub: How the Exam Chair Supports MACRA/MIPS Efforts

A significant portion of the connected point of care ecosystem resides in the outpatient facility, and in nearly every exam room exists a foundational component of the ecosystem: the exam chair. This piece of equipment, often the physical center to the exam itself and the patient-caregiver interaction, serves as a tool to support value-based reimbursement efforts.

For example, consider BP measurement. [Many healthcare providers have not received retraining based on current guidelines for obtaining more accurate blood pressure measurements.](#) The result is patients may not be positioned properly for accurate measurement.

A seemingly slight variance during the assessment of BP can affect clinical decision-making. To adhere to today's guidelines, treatment for hypertension is recommended at lower BP levels, and an overestimation of BP by [as little as 5 mmHg](#) could result in unnecessary prescription of medication. The impact of overmedication can be expensive and cause complications such as dizziness, fainting, exhaustion and even patient falls. A 5 mmHg reading below the actual pressure could result in a delayed diagnosis of hypertension and a missed opportunity to reduce a patient's risk of hypertension-related complications in the future.

Costs related to an improper BP measurement can add up quickly.

1,900

Typical number of patients
for one physician.¹

\$135,000

Average annual cost of hypertension
per practicing physician.¹

\$733

Annual cost of over treatment
for hypertension per patient.²

An accurate BP reading sets the stage for fully understanding the clinical picture of a patient. It is a foundation on which many of the most critical disease management protocols are built—and to be effective, it needs to be accurate, precise and repeatable.

Curious about the actual costs related to improper BP measurement? Learn more in the Midmark [“Capturing a Better Blood Pressure Reading”](#) infographic.

¹ $\$733 \times (9.8\% \text{ of } 1,900) = \sim\$135,000$, where 1) $\$733 =$ cost of overtreatment per patient. Cost data from Agency for Healthcare Research and Quality (AHRQ). Article: “Expenditures for Hypertension Among Adults Age 18 and Older, 2010: Estimates for the U.S. Civilian Noninstitutionalized Population”. Includes cost of ambulatory visit and prescription (payer is either the patient, insurance company or ACO), 2) 9.8% = percentage of population affected by overestimation of high blood pressure errors, calculated by $30,000,000 \text{ affected by overestimation}^* / 307,000,000 \text{ the } 2009 \text{ US population count}^{**}$. Data from [*https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2911816/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2911816/) and [**Census.gov](https://www.census.gov), and 3) 1,900 = typical patient panel size per physician. Panel size sourced from Journal of the American Board of Family Medicine, July-August 2016; Vol. 29, No. 4

² Cost data from Agency for Healthcare Research and Quality (AHRQ). Article: “Expenditures for Hypertension among adults age 18 and Older, 2010: Estimates for the U.S. Civilian Noninstitutionalized Population”



The [Midmark 626 Barrier-Free® Exam Chair](#) can help standardize and simplify the BP measurement process so caregivers can take BP readings in a consistent manner following AMA and AHA guidelines. The chair's low seat height improves accessibility and allows approximately 97 percent of patients to rest their feet flat on the floor. Patient Support Rails+ supports the patient's arm at heart height, and a patient-centered design provides back support for patient comfort and positioning.

Combining the exam chair with [Midmark IQvitals® Zone™](#) technology further strengthens the BP measurement process. IQvitals Zone automates BP measurement by transmitting data directly to the EHR to eliminate manual transcription errors. When used together, the Midmark exam chair and Midmark Zone technology create a streamlined and efficient patient-caregiver interaction that ultimately can lead to higher quality care and better outcomes.

Having the right exam chair and technology in place as part of the point of care ecosystem can help healthcare organizations work toward achieving quality metrics used by MIPS, specifically the three concerning BP measurement: "Controlling BP," "Hypertension: Improvement in BP" and "Preventative Screening for High BP."



It's important that caregivers remember that MACRA/MIPS is a journey and not a destination. The ambulatory environment is the centerpiece of an effective value-based care strategy as providers transition away from fee-for-service structures and into value-based models of payment.

As the industry continues to move toward value-based payment models, a fully connected point of care ecosystem positions caregivers for success by creating an environment that drives repeatable clinical standardization, helps ensure consistent high patient satisfaction and supports better outcomes.



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