The Evolving Role of AI & Data in Value-Based Care Delivery

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Today's Agenda

1 About Equality Health

2 What is VBC?

3 Understanding Data in VBC

4 Challenges of VBC Data

5 Supporting Technology

8 AI Today

9 AI in Healthcare

10 Benefits & Challenges of AI

11 AI for VBC, What we're doing

12 Summary & Conclusion

EQUALITY HEALTH®

Expertly grounded in Medicaid and driven to improve the health of diverse and historically underserved communities, Equality Health fuses patient engagement, clinically-proven practice operations, and technology to accelerate adoption of value-based care.

What is VBC?

Value-Based Care (VBC) is a broader philosophy or approach to healthcare delivery that emphasizes patient-centered care, preventative measures, and coordinating care to achieve better health outcomes by controlling costs.

By definition, **Value-Based Care** is designed to focus on 5 key goals:

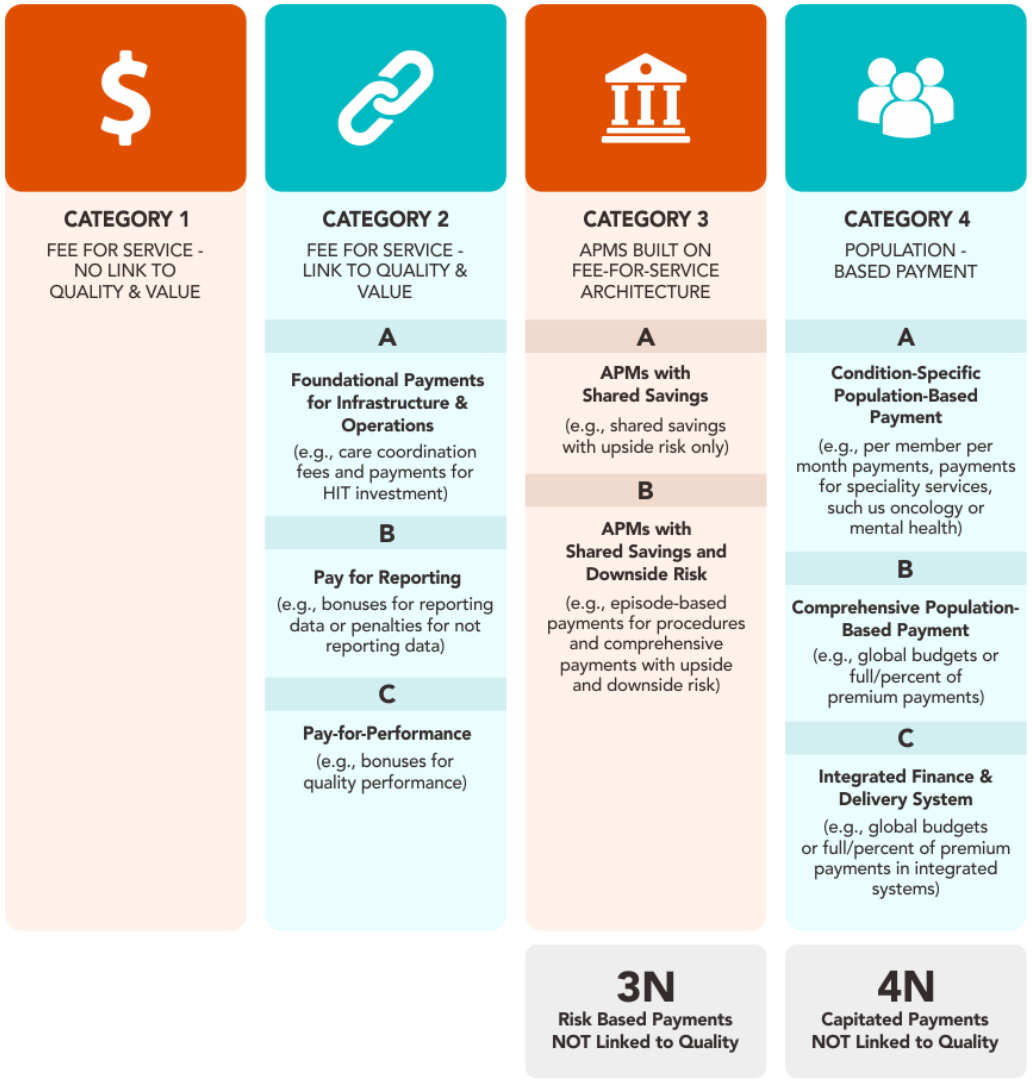
- Provide the best patient experience;
- Advance health equity;
- Improve patients' health outcomes;
- Deliver health care services at a reasonable cost;
- Support the well-being of the health care workforce.

*NOTE: CMS and Payers utilize **Alternative Payment Models (APM's),** such as **Shared Savings and Bundle Payment Programs,** as reimbursement mechanisms in their **VBC** solutions with providers and VBC organizations (e.g. ACO's).*

What is value based medical care | American Medical Association

HealthCare Payment Learning & Action Network (HCP-LAN)

Alternative Payment Models Framework (APM)



Alternative Payment Models (APM's) are the different ***Value Based Care*** program payment structures, like Shared Savings and Bundle Payment programs, used to reward providers based on quality and efficiency.

APM Framework 3 - Health Care Payment Learning & Action Network

Types of Data in VBC

Value-Based Care Data generally refers to the collection of patient health information used to measure and evaluate the quality of care delivered in a VBC model.

Some of the **most common types of VBC data** are as follows:

Attribution: Patient attribution is a method of identifying a patient-provider health care relationship. It is a foundational component of **Population-Based Payment (PBP) models**, which are based on a simple concept: providers accepting accountability for managing the full continuum of care for their patients.

Clinical Data: Medical History, Diagnoses, Medications, Lab Results, Imaging Reports, and Procedure Details.
Patient Reported Outcomes (PROs): Patient surveys capturing their perceived health status, satisfaction with care, and functional ability.

Cost Data: Healthcare cost and utilization information like inpatient stays, outpatient visits, and prescription drug costs.

Quality Metrics: Measures of clinical performance (e.g., Healthcare Effectiveness Data and Information Set/HEDIS measures such as Annual Well Child Visits), Hospital Readmission Rates, and Medication Adherence.

Social Determinants of Health (SDoH): Information about patients' socioeconomic status, housing, and access to food, which can impact health outcomes.

Why Data is Important in VBC

Data Integration & Management

- Clinical data integration
- Financial/admin data integration
- Data warehousing
- Real-time data exploration
- Clinical data standardization

Clinical Analytics

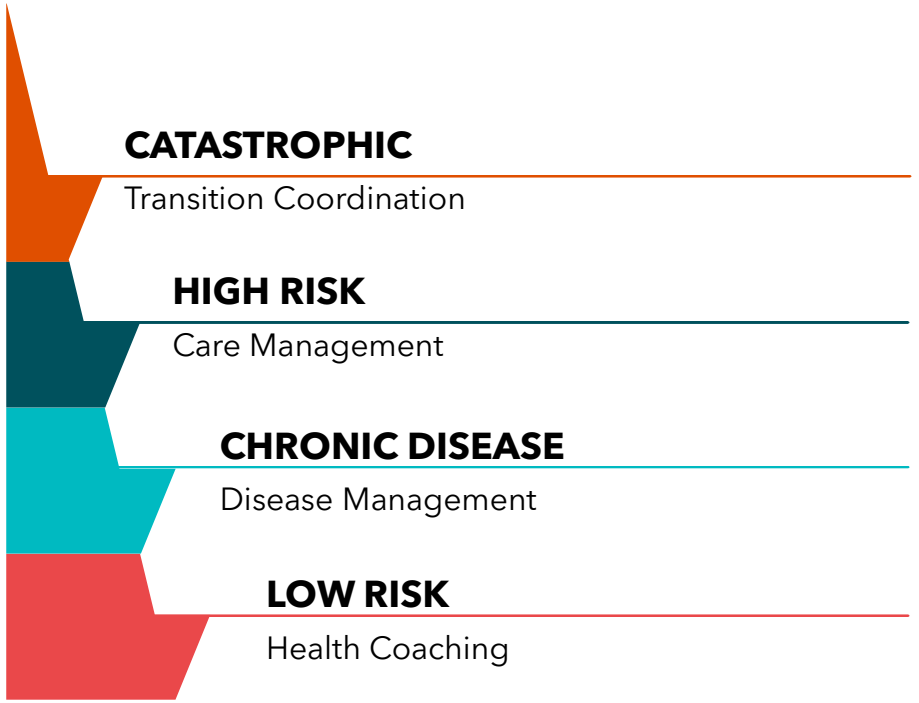
- Registries
- Reporting
- Attribution
- Stratification
- Gaps in care & predictive analytics
- Point of care decision support

Patient Engagement

- Multi-modal communication
- Treatment plans
- Educational content
- Closing gaps in care
- Tele-/remote monitoring

Care Coordination

- Care management workflow automation
- Care team coordination
- Real-time alerting
- Clinical reporting



Population Health Management | Understanding the Implications of HIMSS16

Value-Based Care Analytics: Guide to Data Driven Value Based Care - Vim

Integrated Case Management, Population Health | Jackson Health Network

How to Use VBC Data

Using Data to Drive Success

Success in VBC arrangements depends on a provider's ability to adequately **track appropriate data and know how to utilize it**.

Collaboration with VBC Partners: Work closely with your payers or other VBC partners to fully understand the goals and expectations of the VBC program and the data available to you that drive success in the program.

Tracking Quality Metrics: Monitor HEDIS targets, chronic disease patients, hospital readmissions, and patient satisfaction scores.

Cost Analysis: Identify high-cost patients, analyze spending trends, and pinpoint areas of cost reduction and/or greater efficiency.

Operational Efficiency Evaluation: Examine care coordination effectiveness, appointment wait times, and streamline workflows.

Quantifying Patient Engagement: Measure portal usage, survey feedback, and other indicators of patient engagement.

Financial Outcome Assessment: Track VBC contract performance, understand Risk Adjustment (RA), and analyze Share Savings outcomes.

Continuously Monitor and Improve: Continuously monitor performance metrics and make necessary adjustments to improve outcomes.

Value-Based Care Analytics: Guide to Data Driven Value Based Care - Vim

Webinar: Population Health Management Resource Guide - NCQA

Challenges of VBC data

Data Aggregation and Integration: Seamless, real-time access to clinical, financial, and operational data is essential for informed decision-making and performance tracking.

Attribution/Panel Data: There are multiple attribution techniques used by payers, each of which poses challenges in any VBC arrangement. The challenge of attribution data stems from multiple factors, including lack of a designated PCP; obtaining care from multiple physicians in multiple networks; and the variation in the quality of and access to the data sources (e.g., the broader picture from claims vs. the deeper picture from EHR data) that define patients' interaction with the healthcare system.

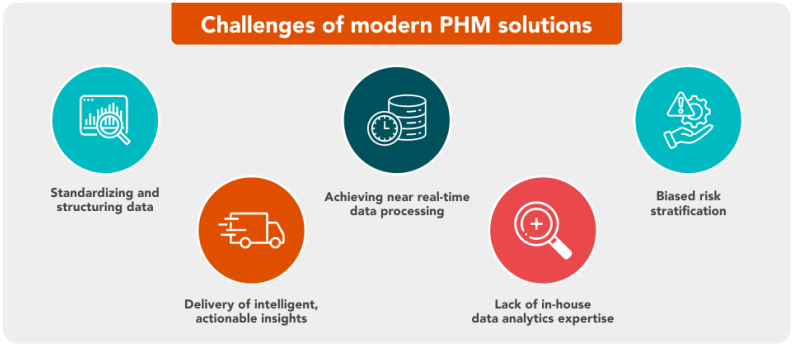
Incompatible Data Systems: Technology and data systems are often not designed to serve every VBC participants' needs. What is timely and actionable for one, may be difficult for another to integrate into existing clinical workflows or analytics.

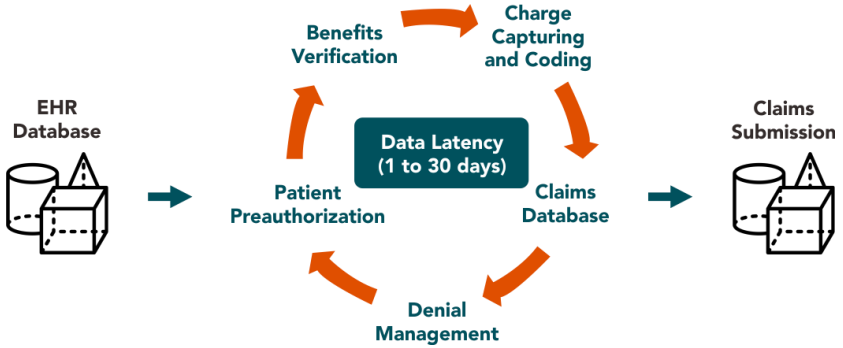
Accurate and Actionable Data: Making data accurate and actionable means presenting relevant insights in a way that can be easily leveraged to help make decisions.

Timely Data: "Timely Data" in healthcare refers to patient information that is readily available and up-to-date, meaning it is collected and accessed at the right time to enable informed clinical decisions and optimal patient care, preventing delays caused by outdated or missing information which could potentially compromise patient safety.

Multiple Payer VBC Programs and Associated Data Requirements: There is not a "one-side-fits-all" solution to the level of information participating practices find helpful when participating in VBC.

Cost of Technology: EPIC reports that the average first year cost of an EMR system for Medium Sized practices (6-20 providers) = $20,000 - $50,000 per provider.





The Role of Data Analytics in Population Health Management | GreenM
Voluntary Best Practices to Advance Data Sharing Playbook | AMA
Navigating Value-Based Care in 2025: Three Challenges Ahead
Modernizing Medical Attribution - PMC

Technology in VBC

Technology in the world if VBC is always changing and moving towards more sophisticated solutions, including **Artificial Intelligence (AI)**.

EMR/EHR Systems: Sophisticated digital medical record systems (e.g. EPIC, eClinicalWorks, etc.)

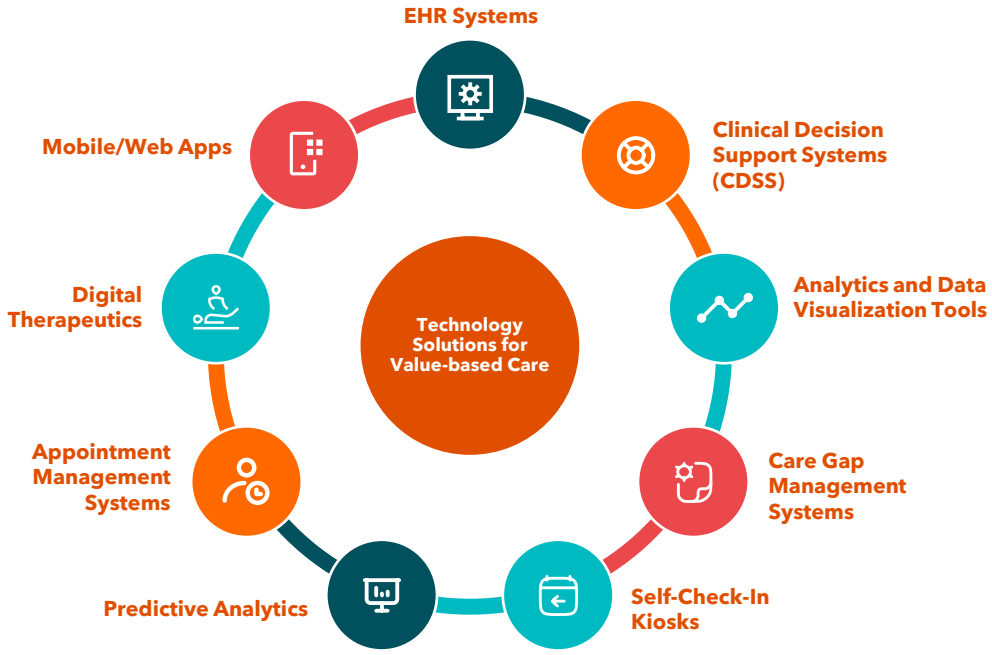
Data Warehouses: Secure platforms to consolidate data from EMR/EHRs, claims, patient portals, etc. for comprehensive analysis.

Analytics Engines: Algorithms and models used for risk stratification, population health analysis, predictive modeling, and financial projections.

Visualizations and Dashboards: Presenting complex data in clear, intuitive formats to uncover trends and drive action (e.g. Power BI tools)

Patient Engagement Tools: Patient portals, educational resources, and communication platforms to foster active patient participation (e.g. MyChart).

Natural Language Processing (NLP): Type of Ai that deals with the interaction between computers and humans through natural language. NLP aims to enable computers to comprehend, interpret, and derive meaningful insights from human languages in a way that is valuable and beneficial. (e.g., Interpretation and analysis of medical records)



Value-Based Care Analytics: Guide to Data Driven Value Based Care - Vim

Winning Value-based Health Care with Technology | KANINI

What is AI?

Definitions

"It is the science and engineering of making intelligent machines, especially intelligent computer programs. **It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable**." – John McCarthy (Stanford University Computer Science Department, who coined the phrase "Artificial Intelligence")
Source: whatisai.pdf

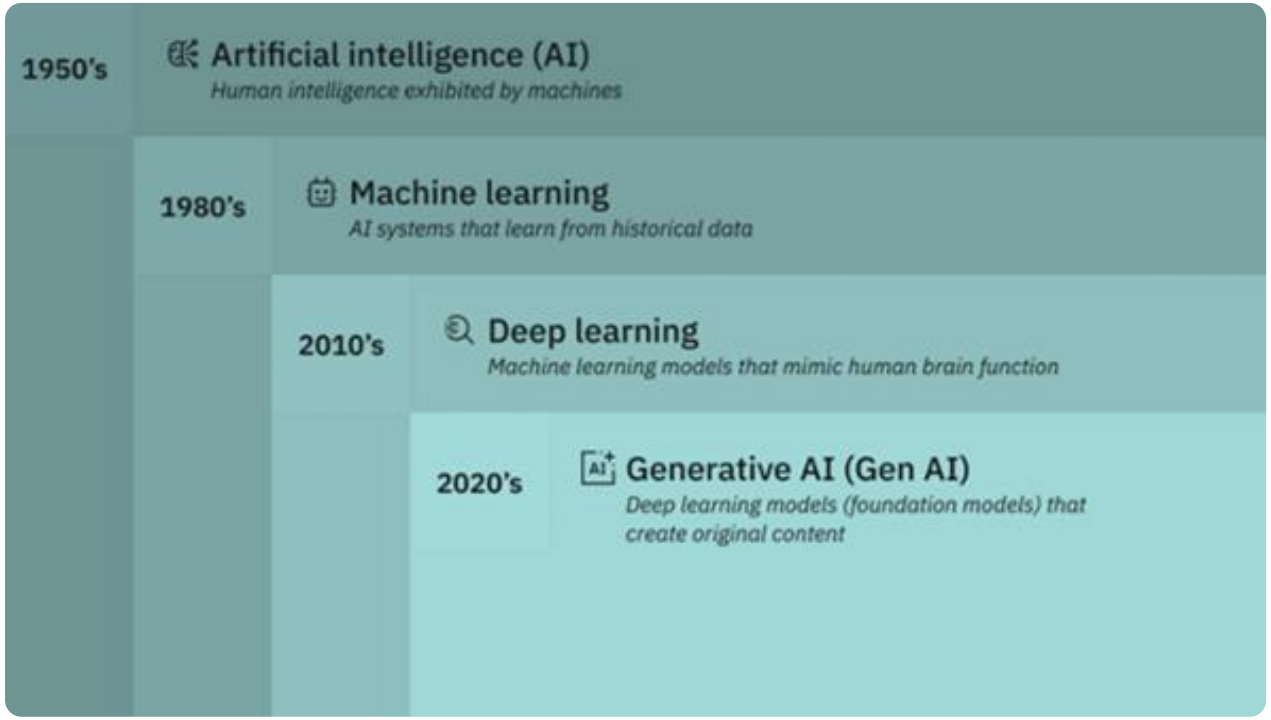
"**Artificial Intelligence (AI) is technology that enables computers and machines to simulate human learning, comprehension, problem solving, decision making, creativity, and autonomy**."
Source: What Is Artificial Intelligence (AI)? | IBM

"**Artificial Intelligence (AI) makes it possible for machines to learn from experience, adjust to new inputs and perform human-like tasks**. Most AI examples you hear about today – from chess-playing computers to self-driving cars – rely heavily on deep learning and natural language processing. Using these technologies, computers can be trained to accomplish specific tasks by processing large amounts of data and recognizing patterns in the data."
Source: Artificial Intelligence (AI): What it is and why it matters | SAS

Most Common Types of AI

Generative AI is what give us so much hope and anxiety.

More than 80% of organizations will have deployed generative AI applications or used generative AI application programming interfaces (APIs) by 2026.



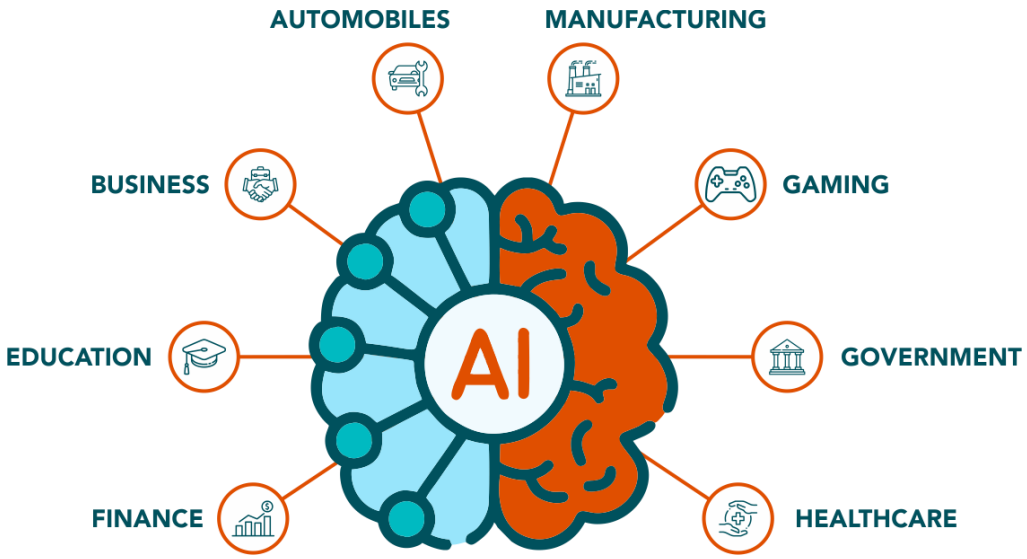
Generative Ai (Gen Ai) refers to deep learning models that can **create complex, original content,** such as long-form text, high quality images, realistic video or audio and more in response to a user's prompt or request.

Source: What Is Artificial Intelligence (AI)? | IBM Artificial Intelligence (AI): What it is and why it matters | SAS Source: What Is Artificial Intelligence (AI)? | IBM

AI In Your Everyday Life

It's more prevalent that you may think.

Most of us encounter Artificial Intelligence in some way or another almost daily. *From the moment you wake up to check your smartphone to watching another Netflix-recommended movie, AI has quickly made its way into our everyday lives.*



- **Customer Service**: Chatbots and virtual assistants enable always-on support, provide faster answers to FAQs, free human agents to focus on higher-level tasks, and give faster, more consistent service.
- **Fraud Detection**: Machine learning and deep learning algorithms can analyze transaction patterns and flag anomalies, such as unusual spending or login locations.
- **Personalized Marketing**: Retailers, banks and other customer-facing companies use Ai to create personalized customer experiences and marketing campaigns.
- **Predictive Maintenance**: Machine learning models can analyze data from sensors, Internet of Things (IoT) devices and operational technology to forecast when maintenance will be required.

Source: What Is Artificial Intelligence (AI)? | IBM

Artificial Intelligence: The Future and Its Applications | European School of Data Science and Technology

Real Stories of AI in Healthcare today

- AI is analyzing medical images, such as X-Rays, CT scans, and MRIs, to help **identify abnormalities and conditions**. Ai can also analyze blood samples to detect infections.
- AI is using data to **predict future outcomes, such as disease outbreaks**, patient deterioration, and therapy outcomes.
- AI scans patient data to help **predict and improve medication adherence**.
- AI is providing solutions for personalized medicine and x-ray readings
- Personal healthcare assistants powered by AI can **act as life coaches, talk therapists or fitness coaches**
- AI is **helping physicians with completing clinical notes more quickly**
- Devices are being built with AI applications that can **detect diseases and identify cancer cells**.

> For many of these diseases, by the time they manifest clinically, and the individual goes to the doctor because of an ailment or visible observation, that is far down the line from when the disease process began.
>
> [AI] can pick up signatures in an individual that are highly predictive of developing diseases like Alzheimer's, chronic obstructive pulmonary disease, kidney disease and many others.

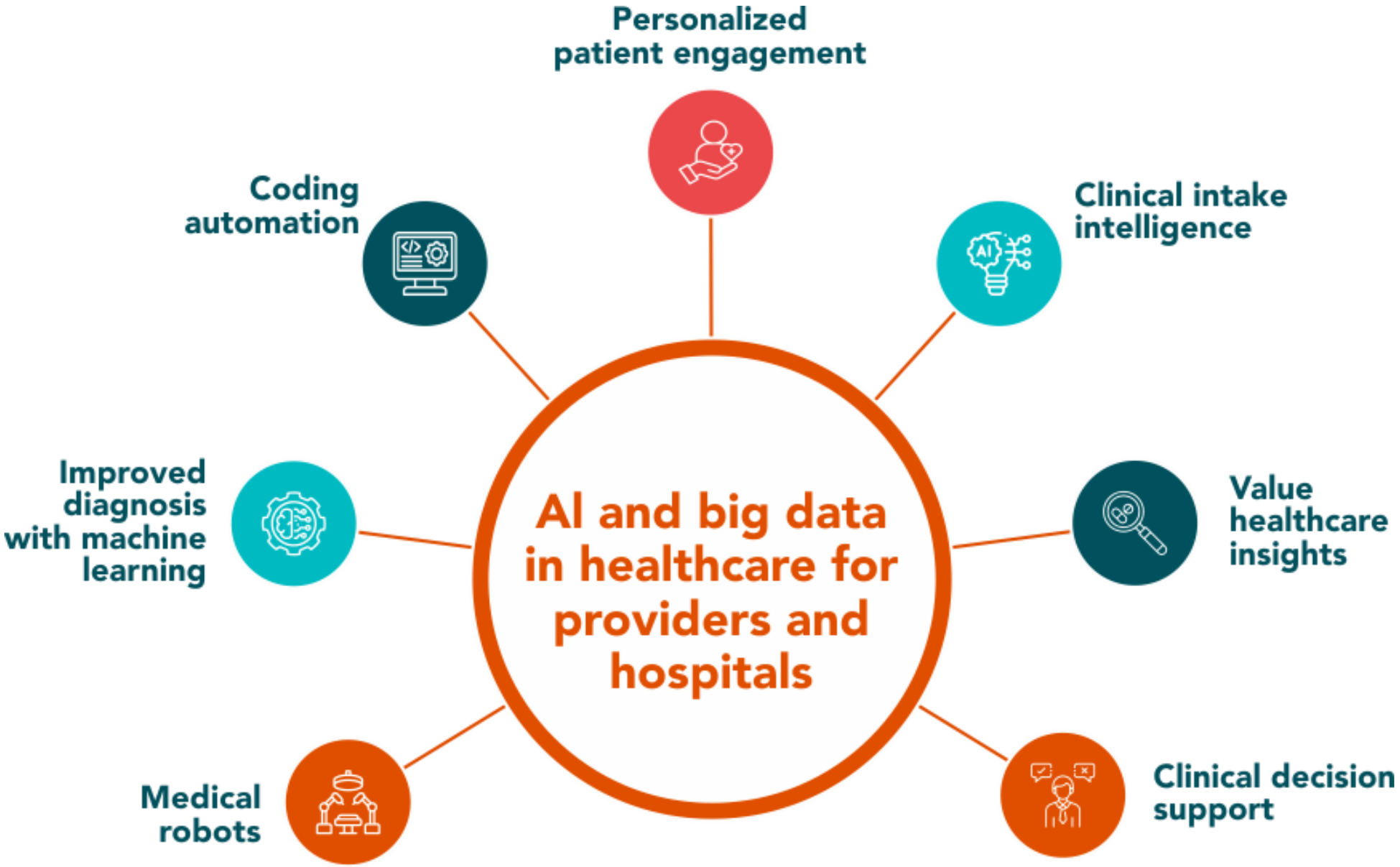
A new AI machine learning model can detect the presence of certain diseases before the patient is even aware of any symptoms, according to its maker AstraZeneca.

In an era filled with unprecedented data, Artificial Intelligence serves as our cognitive extension, helping us make sense of complexity that would otherwise overwhelm human capabilities. It helps us know today and navigate tomorrow. -
Benefits of artificial intelligence (AI) | Thomson Reuters

Benefits	Challenges
Automation of Repetitive Tasks AI automates routine tasks like data collection and physical tasks, reducing manual effort.	**Data Collection Concerns** AI's effectiveness depends on data quality. Vulnerable to data poisoning, tampering, bias, and cyberattacks.
Enhanced Decision-Making AI provides faster, more accurate predictions and data-driven decisions.	**AI Model Risks** Susceptible to theft, reverse engineering, and unauthorized manipulation.
Fewer Human Errors AI reduces errors by guiding processes, flagging potential mistakes, and automating tasks.	**Algorithm Development & Social Bias** Overfitting can lead to inaccurate predictions. Bias in algorithms can cause disparities in patient care.
24x7 Availability AI operates around the clock, delivering consistent performance.	**Privacy Risks** Compliance with HIPAA is crucial. Health records are prime targets for hackers, raising serious privacy concerns.
Personalized Treatment AI can analyze patient data to tailor treatments to individual needs.	**Clinical Implementation Concerns** AI must integrate seamlessly into existing procedures without confusing clinicians or slowing down processes.
Predictive Analytics AI can predict disease outbreaks and patient deterioration, enabling proactive care.	**Trust & Acceptance** Gaining trust from healthcare professionals and patients in AI-driven decisions.

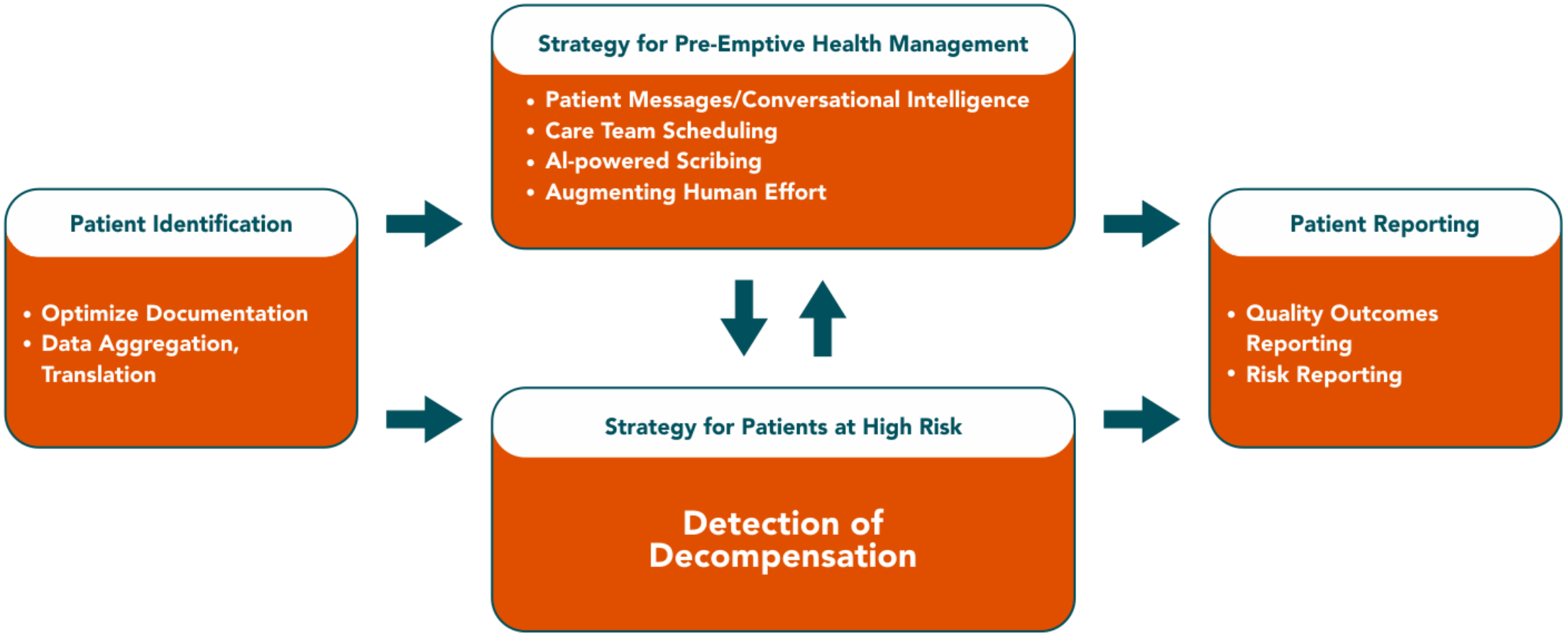
Source: What Is Artificial Intelligence (AI)? | IBM

The Benefits Of AI. By demistifai-com 16 September 2023 | by DemistifAI | Medium


Personalized patient engagement
Coding automation
Clinical intake intelligence
AI
Improved diagnosis with machine learning
AI and big data in healthcare for providers and hospitals
Value healthcare insights
Medical robots
Clinical decision support

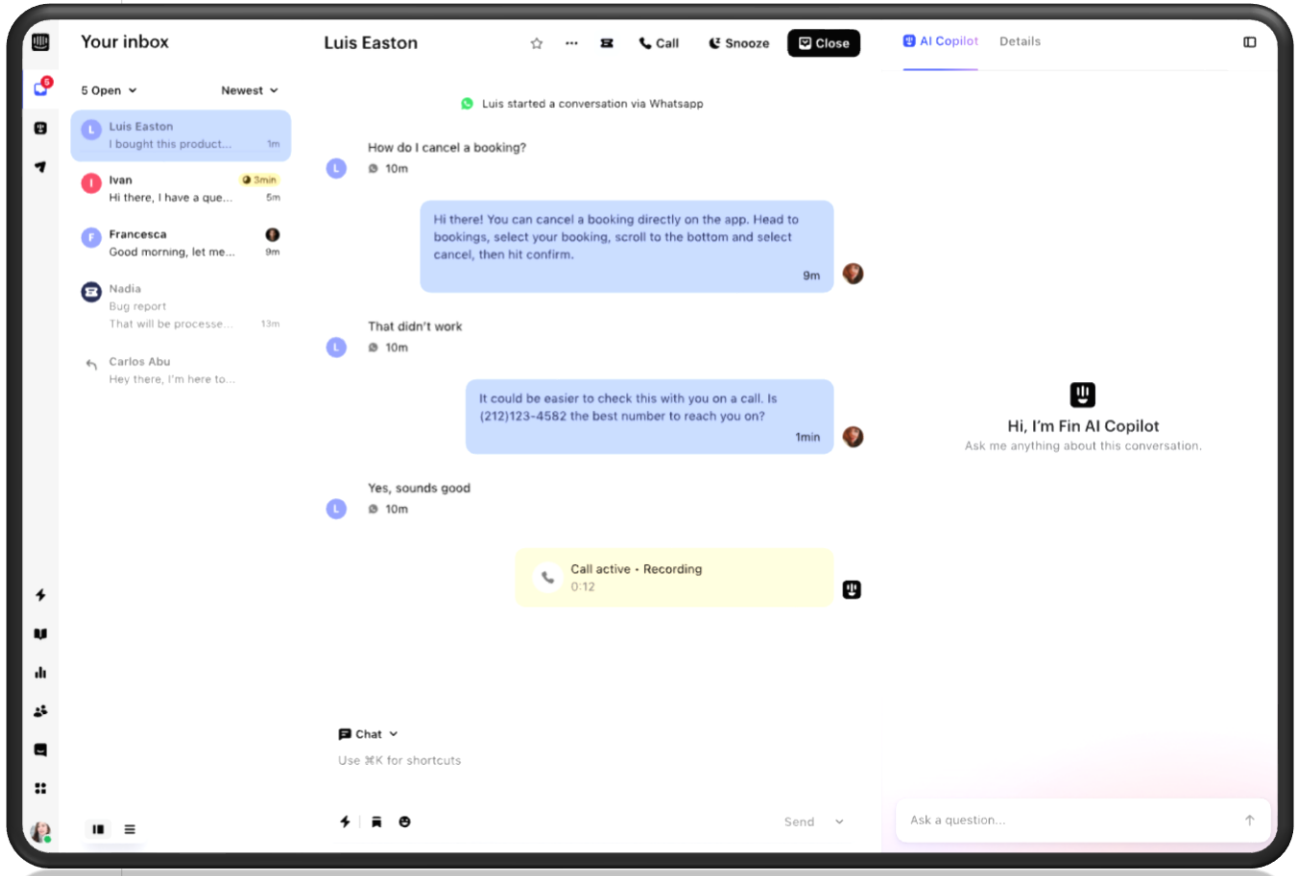
So, what about AI for Value-Based Care?

Multiple opportunities for process & data improvement



What We're Trying at Equality Health

Focusing on Improving Service Delivery + Data Consistency



Improving Service Delivery with AI for Clinical Specialists

- Utilizing 3rd Party agents to identify patient needs by examining CareEmpower records.
- Suggesting 3P services that address SDOH needs
- Deploy recommendations and patient data into visualization (internal) dashboards to making Clinical Outreach Easier
- Suggesting prioritization of patient outreach to improve population QS or MLR
- Testing AI Automated Agents for Telephonic Outreach

It’s time to embrace AI in VBC

Find everyday ways to improve your VBC delivery

It’s time to embrace the future, because AI is here to stay.

More than 80% of organizations will have deployed generative AI applications or used generative AI application programming interfaces (APIs) by 2026.

For Providers:

- ***Stay Informed***: *Keep up with the latest AI advancements and how they can enhance patient care.*
- ***Focus on improving the lives of your patients.*** *AI should help, not hinder, normal practice operations and approaches*
- *Remember to KISS: Keep it Simple, Stupid*
- *Data consistency will enable better results -* ***considering partnering with a VBC enabler*** *that can help create better data cohesion, reporting and improve service operation*

For Plans:

- ***Evaluate AI Solutions***: *Assess AI technologies for their potential to improve efficiency and patient outcomes.*
- ***Data Security***: *Prioritize data security and privacy when implementing AI systems.*
- ***Cost-Benefit Analysis***: *Conduct thorough cost-benefit analyses to ensure AI investments are financially viable.*
- ***Transparency***: *Maintain transparency with patients and providers about how AI is used in decision-making processes.*

For Patients:

- ***Educate Yourself***: *Learn about AI applications in healthcare and how they can benefit your care.*
- ***Ask Questions***: *Don’t hesitate to ask your healthcare provider how AI is being used in your treatment.*
- ***Privacy Awareness***: *Be aware of your data privacy rights and how your information is being used.*
- ***Stay Engaged***: *Actively participate in your healthcare decisions, leveraging AI tools to stay informed and involved.*

EQUALITY HEALTH

Thank You & Questions

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