

REVIEW

A field guide to U.S. healthcare reform: The evolution to value-based healthcare

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Email: wharrill@carolinaearnosethroat.com**Abstract**

Objective: A consolidated state-of-the-art review of U.S. healthcare reform efforts that documents the evolution towards value-based healthcare (VBH) is lacking in peer-review literature. This field guide attempts to clarify working definitions and conceptual boundaries within the lexicon of U.S. healthcare reform efforts that predated and have common thematic perspectives within the evolving VBH reform paradigm.

Data Sources: Pubmed/MEDLINE/Google search.

Review Methods: Pubmed/MEDLINE/Google search was performed during August 1, 2020-January14, 2021 for U.S. healthcare reform terms, legislative and government agency publications. Those citing relevant legislative, regulatory, philosophical and technological advancements integral to the development and function of VBH were catalogued according to the targeted stakeholders and evolving reform strategy or technology.

Conclusions: Eight healthcare reform paradigms were identified as influential precursors to VBH: Patient-Centered Care Model, Patient-Centered Medical Home, Population Health, Personalized Medicine, P4 Medicine, Precision Medicine, Managed Care, and Accountable Care. Several of these models have similar nomenclature and, confusingly, many have multiple interpretations of the terms used to describe these models. However, consistent stakeholders identified within these paradigms are key to VBH; notably the patient, the physician and the payer (the “Big 3”). Demonstrable healthcare spending reductions have been best achieved when the Big 3 stakeholder interests are aligned within healthcare reform legislation. The definition of “Value” within each reform model was found to be based upon the perspective of the targeted stakeholder. Within VBH, the perspectives of the Big 3 stakeholders form a

Abbreviations: ACA, Affordable Care Act; ACO, Accountable Care Organization; APM, alternative payment model; BCBS, Blue Cross and Blue Shield; CHIP, Children's Health Insurance Program; CMS, Centers for Medicare and Medicaid; CPT, current procedural terminology; EHR, electronic health record; FHIR, fast healthcare interoperability resources; GDP, gross domestic product; HDHP, high deductible health plan; HGP, Human Genome Project; HIT, Health Information Technology; HMO, Health Maintenance Organization; HSA, health service area; IPA, independent practice association; MACRA, Medicare Access and CHIP Reauthorization Act; MCBR, modified capitated bidirectional risk; MCO, managed care organization; MSSP, medicare shared savings program; P4P, pay-for-performance; PBP, population based payment; PCCM, patient-centered care model; PCMH, patient-centered medical home; PHM, population health management; PM, precision medicine; POS, point-of-service; PPO, preferred provider organization; PROM, patient reported outcome measure; VBH, value-based healthcare.

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multidimensional meaning of “Value” that can be represented by the equation $Value = Patient\ Experience\ Management^3$.

KEYWORDS

accountable care, ACO, alternative payment model, Health Maintenance Organizations, HMO, managed care, value-based healthcare, P4 medicine, patient-centered care model, patient-centered medical home, personalized medicine, population health, precision medicine

1 | INTRODUCTION

In the United States (U.S.) between 1960 and 2019, healthcare spending as a percentage of U.S. Gross Domestic Product (GDP) grew from 5% to 17.7%, reaching \$3.8 trillion dollars in 2019 (Figure 1).¹ Payment reform models have emerged to both control this growing expense and realign how quality, as a return on investment of the healthcare dollar spent, is measured. Many of these paradigms have similar names, overlapping concepts and evolving meanings creating inconsistency in working definitions and conceptual boundaries reported in peer-reviewed literature. Today, Value-Based Healthcare (VBH) is the main driver of current healthcare reform through the use of pay-for-performance (P4P) and alternative payment models (APM).

An analysis of healthcare reform paradigms instrumental in the development of VBH has not been previously reported in a state-of-the-art review. This consolidated field guide provides a historical review of healthcare reform efforts in the U.S. and explores similarities and differences among these reform models that predate and are integral to the development of VBH. Understanding the discrete meaning and evolution of these concepts is important for the

study and advancement of healthcare reform. This manuscript reviews each model and identifies the key stakeholders engaged and impacted.

2 | METHODS

A Pubmed/MEDLINE/GOOGLE key-word search was performed during August 1, 2020-January 14, 2021 for U.S. healthcare reform terms, legislation and government agency publications between 1967 and 2021. Eight healthcare reform paradigms were identified as influential precursors for VBH and were used for key-word search: “Patient-Centered Care,” “Patient-Centered Medical Home,” “Population Health,” “Personalized Medicine,” “P4 Medicine,” “Precision Medicine,” “Managed Care,” and “Accountable Care.” Inclusion criteria included: Full-text, English language original publications from authoritative governmental and non-governmental health care review and policy formation agencies and key subject matter experts. Publications were subjectively included for foundational legislative, regulatory, philosophical and technological advancements integral to the development and function of VBH. A Healthcare Reform Relative

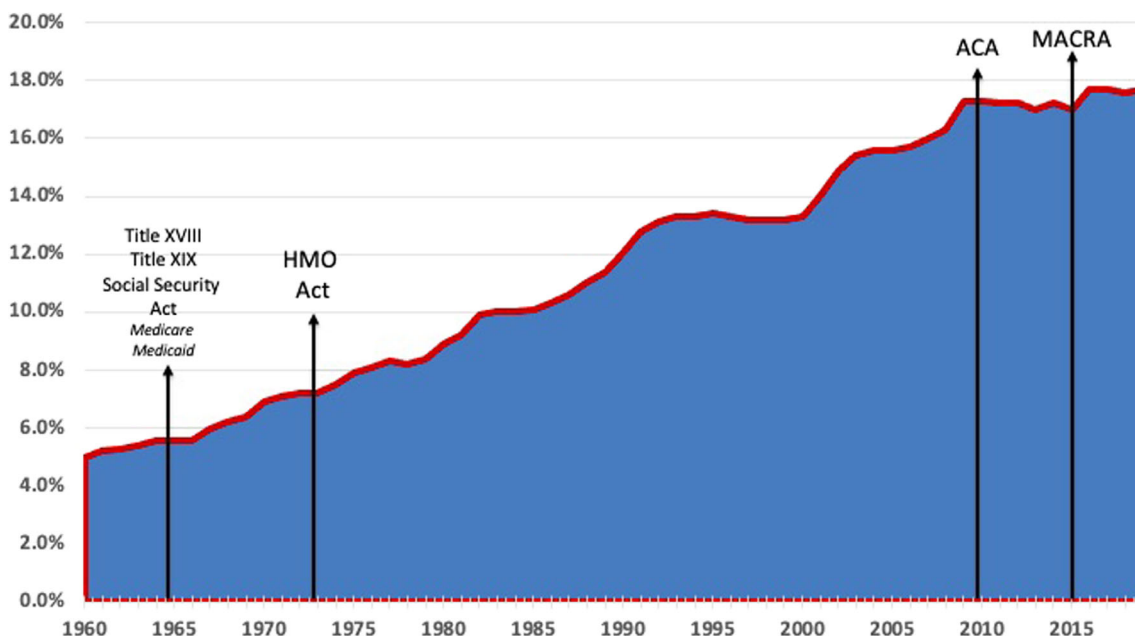


FIGURE 1 U.S. healthcare spending as a percentage of GDP¹

	Patient Centered Care Model (PCCM)	Patient Centered Medical Home (PCMH)	Population Health (PMH)	Personalized Medicine/Precision Medicine/P4	Healthcare management Organizations (HMOs)	Accountable Care Organizations (ACOs)	Value Based Healthcare (VBH)
Healthcare Cost Reduction							
Alternative Payment Model							
Big Data Integration							
Meaningful Quality Measures							
“Big 3” Alignment Patient/Physician/Payer							
Coordination of Care							
Patient Focused							
Expand Healthcare Access							
Social Health Determinants							
Contemporary Origins	1990s	1960s	1990’s	1970s	1970s	Mid 2000s	Mid/Late 2010s
Peak Interest	1995-2005	1995-2010	Current	2000-2010	1980s-2000s	Current	Current
Defining Feature(s)	Purely philosophical construct based on equality of the physician/provider and patient stakeholder relationship	Patients are engaged in a direct relationship with a chosen provider who coordinates a team of healthcare professionals, takes collective responsibility, advocates and arranges appropriate care with other qualified providers and community resources as needed.	An interdisciplinary, customizable approach that allows health departments to connect practice to policy for change to happen locally. This approach utilizes non-traditional partnerships among different sectors of the community – public health, industry, academia, health care, local government entities, etc. – to achieve positive health outcomes.	The patient stakeholder is empowered through knowledge of their personal genetic data to take more responsibility and control over their lifestyle and healthcare decisions. The era of genetic identification and predetermination of patient-specific disease risk.	A medical insurance group that provides health services for a fixed annual fee. It is an organization that provides or arranges managed care for health insurance, self-funded health care benefit plans, individuals, and other entities, acting as a liaison with health care providers (hospitals, doctors, etc.) on a prepaid basis.	ACOs expand on the concept of a PCCM and PHM through the broader goal of coordinating care beyond that of just individual physicians/providers and their patients to include hospitals, specialists and other healthcare providers caring for a panel of patients within a defined geographic region. Payers engage and partner directly with physician/provider stakeholders and/or hospitals to create shared financial risk-reward pools based on predefined quality measures and continuity of care metrics.	A healthcare delivery model in which providers, including hospitals and physicians, are paid based on patient health outcomes. Under value-based care agreements, providers are rewarded for helping patients improve their health, reduce the effects and incidence of chronic disease, and live healthier lives in an evidence-based way. It is achieved by active management of the cost, patient experience and patient outcomes.

Relative Comparability Index	High Goal Achievement	Medium Goal Achievement	Low Achievement or Not a Goal
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FIGURE 2 U.S. Healthcare Reform Relative Comparability Index

Comparability Index was developed to capture major themes and impacts within U.S. healthcare reforms (Figure 2).

3 | DISCUSSION

3.1 | Patient-Centered Care Model and Patient-Centered Medical Home

3.1.1 | “The Doctor can see you now”... Recognizing the Patient Stakeholder

The Patient-Centered Care Model (PCCM) has been defined by the Institute of Medicine as healthcare that is “responsive to the patient’s preferences, needs and values.”² This core principle establishes the patient as an equal stakeholder in a horizontally oriented physician-patient relationship rather than the traditional subordinated participant in a vertically oriented physician-directed approach.³ The eight principles within PCCM include: (a) respect for the patient’s preferences, (b) coordination and integration of care, (c) information and education, (d) physical comfort, (e) emotional support, (f) involvement

of family and friends, (g) continuity and transition, and (h) access to care.^{4,5} These principles recognize the patient’s perception of value shaped through engagement, treatment and outcomes of their medical care.^{3,6,7} In this conceptual model, there are no third-party certification requirements, no contractual payer stakeholder relationship, nor compensation for physician participation. PCCM represents a purely philosophical construct based on equality of the physician and patient stakeholder relationship which elevates the role of the patient stakeholder within their own healthcare journey.

Patient-Centered Medical Home (PCMH) encompasses a more actively managed traditional vertical physician-patient relationship structured around a physician led, team-based engagement model of chronic disease management. The PCMH was first conceptualized in 1967 by the American Academy of Pediatrics and refined by Wagner in 1996.^{8,9} In this model, physician evidence-based decision-making is coordinated through a defined medical support team via a collaborative approach with the patient to improve compliance and thus clinical outcomes.^{10,11} In 2007, a consensus statement from the American Academy of Family Physicians, American Academy of Pediatrics, and American Osteopathic Association established the core principles within a PCMH model to include: (a) physician-stakeholder providing

initial contact, continuous and comprehensive care within the physician-patient relationship, (b) a physician-directed medical care team, (c) a whole person orientation of care through all stages of the patient's health cycle from preventative care to acute and chronic care and finally, end of life care, (d) coordination across all elements of the patient's care plans, (e) incorporation of quality and safety metrics within patient reported outcomes, evidence-based medicine, continuous quality improvement, healthcare information technology data and communication, and professional recognition standards, (f) enhanced patient access strategies for care availability, and (g) payment reform that recognizes the added value to the patient rather than the volume of services consumed.¹² Unlike PCCM, the PCMH model requires formal third-party certification within a healthcare network for physician participation.¹² Today, PCMH has been simplified into five core concepts with the previously described physician-directed components now described succinctly as "patient-centered care."¹¹

3.2 | Population Health

3.2.1 | "Welcome to the neighborhood"... Integrating community, patient and physician stakeholders

Developed in the Canadian and United Kingdom health systems, the term "population health" highlights the fluid and evolving use of healthcare terminology.¹³⁻¹⁶ In this model, "population" is defined as groups of individuals within economically, socially, or politically distinct boundaries known as a health service area (HSA). Population Health Management (PHM) merges healthcare reform with social reform. Dominant themes of PHM are the dependent (health outcomes) and independent variables (the multiple health determinants) impacting healthcare outcomes and integrating the influence of public health policy on these variables.^{13,15,17} Examples of dependent variables include mortality rates, disease prevalence and recidivism, and patient-reported outcome measures (PROMs). Independent variables include social determinants such as lifestyle, socio-economic variables (income, employment, education and living standards) as well as the availability and accessibility of community resources within an HSA. The primary goal of PMH, or "Triple Aim," is to coordinate modification of dependent and independent risk variables with preventative care strategies within an HSA to improve overall public health and lower costs.^{16,18}

3.3 | Personalized Medicine, P4 and Precision Medicine

3.3.1 | "You Got Data" ... The integration of big data in healthcare

The original use of the term "Personalized Medicine" can be traced to an article by W.M. Gibson in 1971, which addressed the growing

concern at the time that scientific advances were having a depersonalizing effect on healthcare.¹⁹ In this period of explosive therapeutic advancement, the patient stakeholder was increasingly seen as the secondary host of a treatable disease rather than as an individual afflicted by disease. The concern was that disease itself was replacing the patient as the targeted stakeholder. This philosophical reform model acknowledged the risk of advances in science lending a detrimental impact on the physician's traditional role of treating the patient's total personal wellbeing. Personalized Medicine aimed to realign the physician-patient relationship to both treat the disease, to heal the patient as well as the secondary impact of the disease on the total well-being of the patient. Heal the disease/treatment burden on the patient as well as treat the disease itself.

Ironically, with the completion of the Human Genome Project (HGP) in 2003, the era of Big Data, the aggregation of massive amounts of deidentified patient data for the purpose of medical/healthcare analytics, reduced the patient stakeholder to the level of their genetic code, allowing for potentially infinite "personalized" medicine options based on a patient's specific DNA.²⁰⁻²² The expanded disease surveillance modeling and prevention strategies resulting from the HGP ushered in a new era of genetically based possibilities, threatening a reversal in the point of reference of Personalized Medicine. In 2004, Hood proposed refining personalized medicine into a what he coined the "P4" model.^{23,24} In this approach, the genomic data of the patient was incorporated into the medical decision-making guided by the four P's (Predictive, Personalized, Preventative and Participatory) of healthcare delivery. Designed to be a proactive systems-based approach rather than a reactive evidenced-based approach, Personalized Medicine moved towards a holistic model of integrating genetic data within a shared physician and patient decision-making relationship. In this model, the patient stakeholder is empowered through knowledge of their personal genetic data to take more responsibility and control over their lifestyle and healthcare decisions.

Overtime, the terms P4 and Personalized Medicine have become interchangeable, referring to the era of genetic identification and pre-determination of patient-specific disease risk. However, the implication that genetically determined customized treatments could be created for each individual patient to choose based on their genetic data was not realistic. This underscored the need to emphasize community-based treatments, not bespoke treatments for the individual based on their genetic factors, social determinants, and personal choice.²⁵

In 2011, the National Research Council crafted the term Precision Medicine (PM) to clarify the point that genomic data does not specifically allow for the personalized creation of treatments for patients within a community.²⁶ Rather, Precision Medicine integrates professional interpretation and shared decision-making, utilizing the patient's genomic data, clinical data, and social data with the available treatments in an HSA.²⁷ Thus, with Precision Medicine, the data is interpreted and processed by the physician stakeholder who discloses the genetic risks to the patient and prescribes the recommended treatment and social modifications. The patient stakeholder becomes

accountable to adhere to the professional recommendations after understanding the treatments and risks. Following the 2015 Precision Medicine Initiative, there was a dramatic shift in the use of Pubmed search terms away from Personalized and P4 Medicine towards that of Precision Medicine^{25,27,28} Today, Precision Medicine has become the dominant term used for these overlapping concepts.

3.4 | Health Maintenance Organizations

3.4.1 | “The managers have arrived” ... Payer stakeholder takes center stage

An era of managed care was born following the passage of the Health Maintenance Organization (HMO) Act of 1973.²⁹ This act expanded private healthcare coverage through federal legislation pre-empting state laws which restricted pre-paid health plans and broadened private insurance coverage options. Prior to this law, HMOs were only in 14 states with 43% of all HMO's operating in California, the largest of which was Kaiser Permanente.³⁰ Comparatively, Blue Cross and Blue Shield (BCBS) and commercial indemnity plans were in existence nationwide, but neither had HMO models.³¹ The “Blues” model consisted of a physician owned network (Blue Cross) and a hospital owned network (Blue Shield).³² Blue Cross utilized a pre-paid, negotiated fee-for-service insurance network comprised of private practice physicians utilizing a pricing system that became the precursor to the Current Procedural Terminology (CPT) fee-based system in use today. Blue Shield operated under a negotiated itemized price list for services that today represents the hospital “chargemaster” currently used in hospital fee-for-service billing. The Blue plans were under the control of physicians and hospitals until the 1970s when most transitioned to a mutual insurance model whose governance was elected by the policyholders, ultimately converting to a network of non-profit corporations known as the BCBS Association today.

As a result of the HMO Act, Managed Care Organizations (MCO) offered a variety of HMO health plans.^{30,33,34} MCOs evolved to include not just traditional HMO health plans, but also BCBS companies, private insurance companies, as well as Medicaid and Medicare offering hybrid fee-for-service products. These MCOs developed four basic models of managed care plans: (a) the HMO (either a group model or independent practice association [IPA] model), (b) the preferred provider organization (PPO), (c) point-of-service plans (POS), and (d) high deductible health plans (HDHP) with or without health savings accounts.³⁵

In the HMO group model, physicians are exclusively employed, or groups of physicians exclusively contracted with an MCO. A physician, typically the primary care provider, is the decision-making stakeholder (gatekeeper) who coordinates care within a network and assumes bidirectional financial risk through a fixed payment or capitated payment model.³⁶ Originally in the HMO model, the capitation cost containment strategy paid the gatekeeper and contracted specialists a monthly upfront fixed payment to manage patients covered within the plan rather than through a volume based fee-for-service

model. The capitation payments had no direct links to quality measures or outcomes. This fixed payment model significantly restructured relationship risk between the physician and patient stakeholders. The physician had risk of not being paid for services nor compensated for expenses after the capitation limits had been reached and the patient carried perceived risk for being denied access to care based solely on utilization driven costs without consideration to quality or outcomes.

In the IPA model, independent physicians or groups are non-exclusively contracted within HMO networks.³¹ A gatekeeper model is used within the IPA, and physician compensation is either through a discounted fee-for-service agreement or capitation model for those patients within the network. The patient stakeholder usually has no out-of-network benefits.

The PPO model eliminated the gatekeeper role, allowing the patient to become the decision-making stakeholder for coordination of their care through a network of preferred physicians and hospitals without a referral requirement. Out-of-Network physicians and hospitals are usually covered, but with greater costs to the patient. PPO's can have discounted fee-for-service or capitated payment models.

The POS model is a hybrid of the HMO and PPO models and contains no capitation. Physician compensation is based on a discounted fee-for-service payment structure. Similar to an HMO, a gatekeeper is required in the POS model, but out-of-network benefits for the patient are similar to the PPO model.

The HDHP model empowers the patient stakeholder with the most options by removing the gatekeeper but shifts significant cost burden to the patient as a means of controlling healthcare utilization. There is no capitation and payment to physicians/providers is based on the discounted fee-for-service structure. Health Savings Accounts were created in 2003 as tax deferred option for patients to fund HDHP plans.³⁷

The HMO model grew rapidly in the 1980s and most not-for-profit systems converted to for-profit corporations to access capital markets and fund growth.³⁰ This led to intense competition and underpricing of HMO contracts and premiums. Subsequent financial losses resulting from market price wars led to significant premium hikes and a rise in employer and patient costs. Cost containment strategies initiated by MCOs to stem financial losses included reduction in plan benefits, an increased use of medical necessity denials, prior authorization requirements for requested care, and narrower networks through the involuntary removal of physicians/providers from HSA provider panels.^{30,38}

These growing restrictions began to alienate the patient and physician stakeholders which led to political opposition resulting in over 900 legislative actions and tort reforms to curb HMO plan restrictions as well as physician led class action lawsuits in the late 1990s.^{39,40} Entering into the 2000s, the physician-patient stakeholders were firmly aligned in opposition to the HMOs utilization of cost control strategies containing minimal focus on stakeholder value or quality-of-care delivered. Not surprisingly, the popularity of HMO plans achieved an all-time low by 2010 as insurance and out-of-pocket costs continued to rise despite the unpopular stakeholder

restrictions.⁴¹ The HMO healthcare reform model was ultimately unsuccessful because it failed to unite the key stakeholders politically and had most certainly failed to control the rise in healthcare costs. This occurred for two major reasons: (a) most HMO networks developed tended to be too narrow and challenging to accurately price and (b) the providers in the network did not have the ability to effectively control costs and keep care within the network. Kaiser Permanente, in contradistinction, has enjoyed success as it is structured as “staff” HMO model and therefore has more structure to control the providers, cost and quality.

3.5 | Accountable Care Organizations

3.5.1 | “Maybe some accountability could help” ... Physician and payer stakeholders share risk

ACOs emerged in the post-HMO era in an effort to repair the relationship between the payer and physician stakeholders by allowing physicians/providers to partner in financial risk and cost savings with payers. The origins of ACOs came from the Centers for Medicare and Medicaid (CMS) engagement of physician groups during 2005-2010 through the Medicare Physician Group Practice Demonstration.³⁸ The 2010 Patient Protection and Affordable Care Act (ACA) established P4P incentives for alternative payment model (APM) design within the Medicare Shared Savings Program (MSSP).⁴² The MSSP is a physician driven ACO that initially only carried upside risk sharing, introducing a Modified Capitated Bidirectional Risk (MCBR) model with the integration of loss sharing in 2019.⁴³ Variations of this model developed contemporaneously in the private insurance market and continue to evolve within CMS to involve both hospitals and physicians.³⁸

ACOs expand on the concept of a PCCM and PHM through the broader goal of coordinating care for a panel of patients within a defined geographic HSA based on physician stakeholder ACO participation.^{44,45} ACOs incentivize the Triple Aim of PHM within an HSA through shared financial risk-reward APMs combining fee-for-service payments with a P4P MCBR payment linked to quality metrics within a Population-Based Payment (PBP) model.^{38,43-48} Use of APMs to create risk sharing between the payer and the physician stakeholders realigned the traditional relationship in a fee-for-service structure which relied on a more hierarchical volume driven transactional payment relationship which, at times, could be adversarial.

Clinically, the ACO P4P model would not have been achievable without the federally funded expansion of Electronic Health Records (EHR) mandated through the 2009 American Recovery and Reinvestment Act.⁴⁹ EHRs allow for the aggregation of large amounts of population based healthcare data (Big Data). Big Data drives healthcare risk and performance analytics and when combined with claims data (Practice Management Software) to form population-based episodes-of-care analysis at the individual patient level. However, unlike practice management claims software, EHR software functionally lacks necessary enforced interoperability standards resulting in data blocking between proprietary Health Information Technology (HIT)

application interfaces within the myriad of HIT EHR vendors.^{22,50,51} This lack of HIT interoperability creates high entrance barriers and costs for ACO integration outside of large health systems or large medical group practices, thus preventing ACO engagement for many independent physicians. Recent CMS guidelines on HIT data exchange and data blocking are address these limitations and enhance the value of EHR Big Data in expanding ACO development.⁵² As well, the Health Level Seven International (HL7) non-profit, which sets the interface standards for EHR internationally, has adopted the Fast Healthcare Interoperability Resources (FHIR) standard that is designed to facilitate core information sharing and expand the interoperability of EHR Big Data.⁵³ The result of these expanded interoperability efforts will be cost effective expansion in the size and scope of EHR Big Data within ACOs and broaden the reach of ACO engagement outside of the hospital system/large physician group model to engage smaller independent physician groups.

3.6 | Value-Based Healthcare

3.6.1 | “Is there value in any of this?” ... Physician, patient, and payer stakeholders interests align

The term Value-Based Healthcare (VBH) was first introduced by Porter in 2007 as a response to the third-party cost shifting, and fee-for-service cost containment strategies utilized by HMOs that were undermining the ability of physicians to spend adequate time caring for their patients.⁵⁴ The evolving concept of VBH as a reform model is a coalescence of the multiple patient-centric reform efforts described above and progressive healthcare legislation (Figure 3). In 2015, the

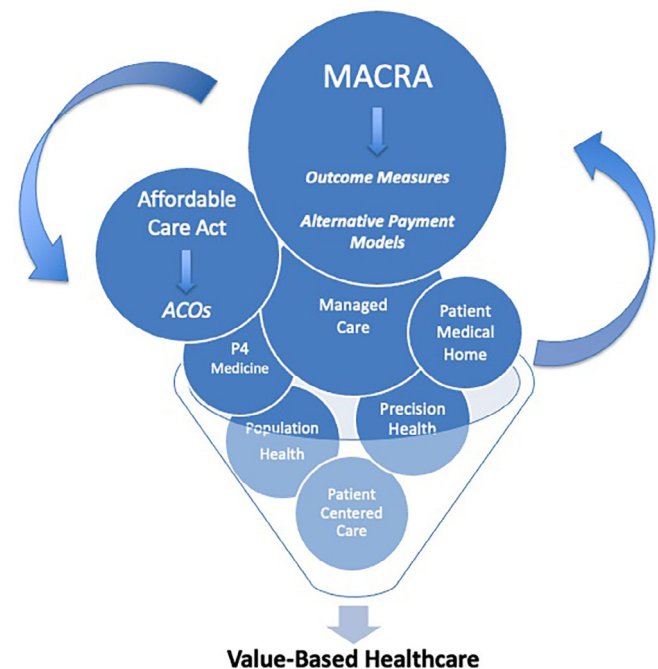


FIGURE 3 The evolution of value-based healthcare

VBH reform concept was codified into law within CMS through the Medicare Access and CHIP (Children's Health Insurance Program) Reauthorization Act (MACRA).^{55,56}

Within healthcare reform, "value" has been determined by the perspective of the individual stakeholder within the underlying components of quality, service, patient experience, access, outcomes and cost. Prior to MACRA, the payer stakeholder perspective had a dominant, fairly one-dimensional definition of "value", being actuarially defined as health quality achieved per dollar spent (ie, Value = Quality/Cost) based on claims data.

Government regulatory mandated changes under MACRA, expanded the dimensions of value by acknowledging the patient as a target stakeholder from which healthcare value is measured through the patient's clinical care journey and experience.^{57,58} When

considering the patient stakeholder, it will be increasingly important to recognize the patient as a "consumer" given the dramatic rise in out-of-pocket expenses relative to their earnings and inflation (Figure 4).⁵⁹⁻⁶¹ For decades, data has consistently shown that patients make economic decisions relating to their consumption of healthcare based on cost; the higher the cost, the more discerning the patient consumer becomes (Figure 5).⁶² Shifting healthcare expenditures have driven consumerism of the healthcare experience giving the patient stakeholder a greater voice for their perspective to be reflected in the healthcare value equation. In ACO and VBH models, the patient stakeholder will need to be viewed as a partner in the process that defines future value in healthcare. In VBH, a more patient-centered measure of value will be required that reflects this increasing cost burden by the patient.

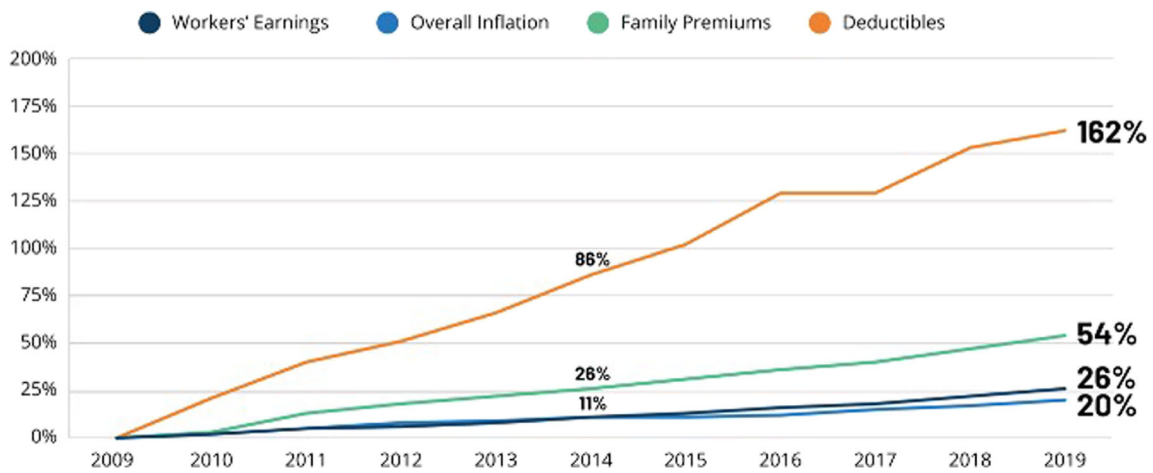


FIGURE 4 Patient healthcare premiums and deductibles vs wages and inflation (2009-2019)^{60,61}

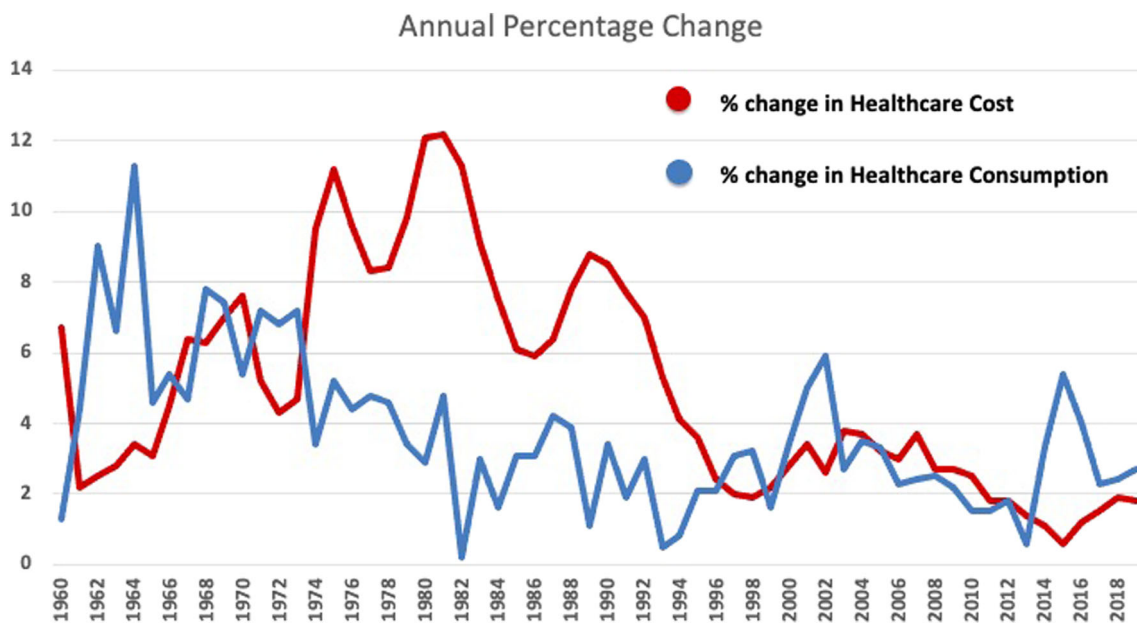


FIGURE 5 Percentage of change in healthcare cost vs consumption (1960-2019)⁶²

Value=EM³

Patient Experience Management: M³

- Management of the **Patient's Experience**
 - PATIENT JOURNEY MAPPING
 - COORDINATION OF CARE
 - PERCEPTION OF CARE REPORTING (Patient Reviews)
- Management of the **Cost** of that Experience
 - CLAIMS-BASED QUALITY MEASURES
 - EPISODE-OF-CARE
 - DISEASE SEVERITY MEDICAL COST VARIANCE
 - DISEASE SEVERITY SITE-OF-SERVICE MANAGEMENT
 - ALTERNATIVE PAYMENT MODELS (APM)
- Management of the **Clinical Outcomes** of that Experience
 - PATIENT REPORTED OUTCOME MEASURES
 - DIAGNOSTIC REPORTED MEASURES
 - Integration of BIG DATA

FIGURE 6 Value-Based Healthcare: a three-dimensional model

MACRA also recognized the role of the physician stakeholder within the coordination and management of the clinical outcomes within both population disease-severity-cost-of-care and episode-of-care management.⁶³⁻⁶⁵ Moving from volume-to-value within the ACO model, CMS continues to shift away from fee-for-service arrangements toward more value-based P4P MCBR models ranging from the hybrid PBP model (both fee-for-service and value-based capitation) to the fully capitated value-based All-Inclusive Population-Based Payment models.^{47,66} At the episode-of-care level, CMS expanded APMs with the Bundled Payments for Care Initiative, integrating an episode-of-care capitated risk model linked to quality that is backed by a newly evolving third party re-insurance market to mitigate shared financial risk.⁶⁷⁻⁶⁹

CMS is also engaging efforts to facilitate more value-based engagements between physician stakeholders. In 2021, CMS modified regulatory barriers for physicians by allowing safe-harbor exemptions for value-based arrangements within the physician self-referral law, also known as the STARK law.⁷⁰ The “patients over paperwork” initiative sought to improve quality-of-care and lower costs by improving disease severity site-of-service coordination-of-care within physician driven value-based competition.⁷¹

For the physician stakeholder, the challenges and risks within value-based healthcare are best described by Porter: “If physicians fail to lead these changes, they will inevitably face ever-increasing administrative control of medicine. Improving health and healthcare value for patients is the only real solution.”⁵⁴ The clinician's role within the physician-patient relationship is the key point of reference from which coordination-of-care and patient engagement is measured. Within VBH, coordination-of-care between these two stakeholders integrates the concepts of the PCCM and is realized through the Integrated Practice Unit for chronic disease management.^{72,73} For that relationship to yield greater measurable clinical value, the physician will need to play an increased role coordinating the development of value-based models.

Capturing, measuring and actively managing these evolving multi-dimensional perspectives of “value” from these three stakeholders (the “Big 3”) within VBH can be best represented as *Value = Patient Experience Management*³ (Figure 6).

4 | IMPLICATIONS FOR PRACTICE

An understanding of the evolution of healthcare reform requires a historical perspective of prior reform initiatives, familiarity with the ever-changing terminology, and a recognition of primary stakeholder interests. A key theme in the journey of U.S. healthcare reform has been elevating the patient stakeholder interests and coordination-of-care relationships in healthcare delivery models. As a percentage of GDP, sustainable reductions in healthcare expenditures have been demonstrably achievable when the Big 3 stakeholder interests have been aligned within healthcare reform legislation (Figure 1).¹ To successfully shift from a volume-based reimbursement system to one based on value, these Big 3 stakeholder interests must be aligned, only then can reform goals of reducing healthcare cost, improving health quality and enhancing the patient experience be realized. Evolving “best practice” within developing practice guidelines, site-of-service utilization, and patient experience expectations will determine future measures of value. Understanding the working definitions and conceptual boundaries driving VBH reform will empower physicians to have a greater role within The Big 3 stakeholders in the transition from “volume to value” within future alternative payment model design and implementation.

CONFLICT OF INTEREST

The authors have no conflicts of interest related to this review.

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How to cite this article: Harrill WC, Melon DE. A field guide to U.S. healthcare reform: The evolution to value-based healthcare. *Laryngoscope Investigative Otolaryngology*. 2021;6: 590-599. <https://doi.org/10.1002/lio2.575>