Original Article

What should accountable care organizations learn from the failure of health maintenance organizations? A theory based systematic review of the literature

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Accepted for publication: 11 Dec 2017

Abstract

Background: Health Maintenance Organization (HMO), were once viewed as the most cost-effective model for achieving such efficient high-quality health care. A decade after the decline of HMOs a similar idea evolves and continues to proliferate under the rubric of Accountable Care Organizations (ACOs). This study aimed to find out the reasons for the decline of the HMO model in general by dissecting the interactions between social, economic, political, and legal factors as contributing factors.

Methods: We performed a systematic review according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses to identify the reasons for the decline of HMOs, with the ultimate goal of extrapolating findings from HMOs experiences onto ACOs. We searched PubMed, Web of Science, and EMBASE to select original research and reports related to the decline of HMOs in the U.S. Using organizational evolving theory, the contents of selected studies were analyzed and categorized according to common characteristics.

Results: Although the decline of HMOs varies somewhat from case to case, it follows a fairly consistent pattern with similar causes. These factors were related to wrong ethos, mismanagement, failing to control costs, resistance from provider groups, increased competition, and inadequate IT infrastructure leading to patient dissatisfaction. Patient dissatisfaction in turn led to a managed care backlash, which stimulated the enactment of new restrictive legislation. Restrictive legislation not only negatively impacted the continued growth of HMOs but also accelerated the speed of their decline.

Conclusion: ACOs should set realistic goals, align the incentives for physicians and hospitals via shared savings, use non-physician providers such as nurse practitioners, invest on health information technology, practice patient centered approach, make provider and patients accountable, use efficient management methods and improve care coordination.

Keywords: Accountable Care Organization; Health Care Reform; Health Maintenance Organization; Managed Care Program; Organization Theory, Systematic Review

Cite this article as: Alishahi Tabriz A, Nouri E, T Vu H, T. Nghiem H, Bettilyon B, Gholamhoseyni P, Kiapour N. What should accountable care organizations learn from the failure of health maintenance organizations? A theory based systematic review of the literature. SDH. 2017;3(4):195-220. DOI: http://dx.doi.org/10.22037/sdh.v3i4.20919

Introduction

For decades, American policymakers and policy analysts have embraced healthcare reforms to control escalating health care costs, and simultaneously to improve the coordination and quality of medical care (1). Health Maintenance Organization (HMO), were once viewed as the most cost-effective model for achieving such efficient high-quality health care (2).

An HMO is an insurance and delivery arrangement that provides health coverage and care to a voluntarily enrolled population for a fixed prepayment. In return for the fixed premium, HMO enrollees receive medically necessary services (3). The term Health Maintenance Organization was coined in 1970, but historically the concept of "prepaid" care was established in the 1800s when railroads, lumber, mining, and textile firms hired "company doctors" to treat their injured employees (4). Although early HMO-like entities (all not-for-profit) were a significant presence in a few communities before the 1970s, such as in the Seattle area and parts of California, these entities played only a modest role in the financing and delivering of health care. This quickly changed when President Nixon secured the passage of the HMO Act of 1973. That act authorized start-up funding and guaranteed access for HMOs to the employer-based health insurance market. From then until the early to late-1990s, HMOs doubled in size, due to health care cost escalation and the re-emergence of health insurance reform efforts (5). HMOs witnessed a swift expansion and increase in market share with enrollment increasing from 15.1 million in 1984 to 63 million in 1994 and 104.6 million in 1999 (5) or about 12% per year. However, beginning in the early to mid-1990s, some HMOs began to exit the market through mergers and acquisitions and bankruptcies after sustaining significant losses. This resulted in a decline in the number of enrollees from 78.5 million enrollees in 2004 to about 76 million currently (6, 7).

After more than a decade of HMO's decline (4,7), Accountable Care Organizations (ACOs) were created by sec. 2706 of the Patient Protection and Affordable Care Act (ACA) to address long-standing problems confronting U.S. health care: soaring costs, uneven quality, and fragmented care (8). Although ACOs and HMOs share several similarities, there are some significant differences between them. Unlike an HMO an ACO is not an insurance model and delivery model, but rather just a delivery system. That is, an ACO is usually a network of primary care physicians, specialists, hospitals or other providers, sharing responsibility for providing coordinated care to patients to improve quality, coordinate care services, increase patient satisfaction, and lower costs (9). In the ACO model, patients may not know that they are receiving care in an ACO and only become aware of that when they are asked for authorization to allow Centers for Medicare and Medicaid Services (CMS) to share their claims data with the ACO for shared savings determination. Besides, ACOs usually do not rely on full capitation instead they adopt alternative payment methods, such as bundled payments and shared savings (Table 1) (10). In spite of all these differences, many experts believe that the differences between the HMO and ACO models are actually superficial and that ACOs are really a new, delivery system version of HMOs, created with similar goals (10–12). Both HMO and ACO models create a care continuum and involve horizontal consolidation of hospitals and

Table 1. HMO vs. ACO comparison

Characteristics	ACO	HMO
Goal	Improve quality of care and reduce costs.	Improve quality of care and reduce costs.
Structure	Provider-led organization.	Insurance-led organization.
Physician role	Primary care physician as a member of the team.	Primary care physician often serves as gatekeeper.
Access	Patients are free to choose provider outside the network.	If patients choose provider outside the network HMOs did not pay for that care normally.
Quality	Includes quality measures that determine pay rates.	Although some HMOs did evaluate patient health outcomes, usually provider members are not held directly responsible for the health of their patients and are not evaluated on their overall effectiveness.
Contracts	Usually single integrated.	Usually fragmented agreement.
Size	Usually small and local.	Large organizations.
Payment	A variety of payment mechanisms, including capitation, fee for service component, combined with shared savings.	Capitation, salary and fee for service.
Incentives	Mainly derived from shared savings against a pre-determined target.	Mainly by improving the health of members without reaping the long-term benefit.[1]
Patient Requirement	The patient is not required to actively enrolled	The patient is required to actively enrolled
Physician Participation	Usually participate in one ACO	May participate in different HMOs

In theory incentives are set to improve health but in real world incentives set to contain spending.

vertical integration of hospitals, physicians, and providers of post-acute care.

Both models in their initial phase had support from local and federal legislation to improve quality of care and reduced cost (Table 1).

While there is great hope that this time the ACO model will work, the ultimate success of the model remains open to question (10,11,13). It is reasonable to believe that by understanding the reasons for the decline of the HMO model, the ACO model might have a better chance of succeeding.

Numerous studies have examined the reasons for the relative decline of HMOs in the U.S. They generally attribute this We employ the ecological approach (15) to find out the reasons for the decline of the decline to HMO organizations and leaders losing sight of the original mission of integration of coverage and care, and ignoring the complexity of the "human element" in the organization and delivery of services (14). However, the scope, setting, and perspective of these studies have been limited to specific organizations, regions, and times. In addition, these studies often compare different types of HMOs—staff/group vs. network, not-for-profit vs. for-profit etc.— without considering the interactions between social, economic, political, and legal factors as significant determinants of the success or failure of any specific HMO.

HMO model in general by dissecting the interactions between social, economic, political, and legal factors as contributing factors.

The purpose of this systematic literature review is to identify the reasons for the decline of HMOs in the U.S., with the ultimate goal of extrapolating findings to ACOs. Using organization evolving theory (16) we identified, classified, critically evaluated and integrated the key findings of relevant studies to determine what factors have been responsible for HMOs decline and how those factors may have interacted which each other.

Theoretical framework

For this paper, we use the population ecology approach because it emphasizes the importance of the interaction of organizational form and environment as a determinant of organizational survival (17). Based on organizations evolving theory, organizational evolution results from the operation of four generic processes: variation, selection, retention, and competition (16,18).

Organizations evolving theory defines variation as any departure from routine or tradition, which could be intentional or blind. Blind variations happen independently of conscious planning. They result from accidents, conflict, malfeasance, member reactions to unexpected environmental 'jolts' (19) membership turnover, labor strikes, financial crises, legal scandals, external pressure, etc. (20,21). Intentional variations happen when organizations actively try to make alternatives and find solutions to problems. Intentional variations result from conscious responses to different situations, planning sessions, advice from outside consultants, etc. (22).

The second evolutionary process defined by organizations evolving theory is selection. Selection results from forces such as competitive pressures, the operation of market forces, conformity to institutionalized norms, logic of internal organizational structuring, etc. Organizations evolving theory explains how the self-reinforcing process helps organizational stability; however, in the meantime, it could lead to competency traps that prevent the adoption of potentially adaptive alternatives (23).

The third organization evolutionary process includes the operation of a retention mechanism for the maintenance of selected variations. Retention happens when variations are preserved, duplicated, or reproduced so that the positively selected activities are repeated on future occasions or the selected structures appear again in future generations (22).

Table 2. Details of the studies included in the review (N=31)

Study characteristic	Included studies, N (%)
Type of study	
Quantitative	13 (42)
Qualitative	4 (12.9)
Descriptive	13 (41.9)
Mixed method	1 (3.2)
Publication year	
1976-1986	3 (9.7)
1987-1997	11 (35.5)
1998-2008	16 (51.6)
2009-2016	1 (3.2)

As the key constraint on organizational formation and persistence, the state's role appears in many ways including educational systems, political stability and ideological legitimation, national economic planning, improvements in transportation and communication networks, and other state investments. These forces influence the conditions on which resources are made available to organizations. The fourth evolutionary process defined by organizations evolving theory is competition. Competition occurs when diverse strategic initiatives struggle to acquire limited resources necessary to grow. When a specific type of organization proliferates, a challenge over limited resources and opportunities arises, fueling the selection process between the new organizations and established ones. As populations grow or resources become scarce, competition over limited resources increases failure rates and lowers founding rates.

We employ the theory of organizational ecology because it helps us to compare founding and failure rates across organizational populations, or across time, as the institutional arena of the particular population changes in terms of its political turbulence, government regulations, or institutional embeddedness. The evolutionary theory helps us to understand how specific forms of organizations come to exist, evolve and become extinct in particular kinds of environments. Finally, we should notice that variation, selection, retention, and competition occur simultaneously rather than sequentially. Although the processes may be separated into discrete phases, in the real world they are linked in continuous feedback loops and cycles.

Methods

Overview

We designed and reported this systematic literature review according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (24).

Data Sources and Searches

We searched PubMed, Web of Science, and EMBASE because these databases contain a wide range of both health (medical) and social science literature. We used Medical Subject Headings (MeSH) search codes where possible, with the following terms: ("cost effective" OR "cost effectiveness" OR “success” OR “successful” OR “rise” OR “fall” OR “fail” OR “failure” OR “decline” OR “demise” OR “bankrupt” OR “bankruptcy” OR “closure” OR “market share”) AND (“HMO” OR “hmo” OR “HMOs” OR “hmos” OR "Health maintenance organization" OR "Health maintenance organizations").

For databases that did not use MeSH, we used a similar keyword structure.

Inclusion Criteria

Only manuscripts met all of the following inclusion criteria were included:

Type of study: We include original research, editorials, reports, and discussions related to the decline of HMOs in the United States that published in peer-reviewed journals.

Exclusion criteria: books, book chapters, publications that did not encompass a full report, publications that did not provide reason for failure of HMOs, and publications that only covered other types of managed care organizations such as preferred provider organizations (PPOs) or independent practice associations (IPAs).

Language and location: Only studies in English were considered. Articles were eligible for inclusion if they were conducted in the United States.

Year of publication: Only studies that were published between December 29, 1973 (the day the HMO Act was enacted) through October 1, 2017 were retrieved.

Data Extraction and Analysis

As shown in figure 1, we identified potentially relevant papers in four steps. First, two authors (AA, EN) independently reviewed all the titles and abstracts for studies that retrieved from databases search (each paper reviewed by both authors).

We met at the beginning, midpoint, and final stages of the titles and abstracts review process to discuss any challenges or uncertainties related to study selection and to go back and refine the search strategy if needed. This helped to alleviate potential ambiguity due to such a broad research question and to ensure that abstracts selected were relevant for full article review. In the second step, we examined the full text of the remaining articles (n=189) to decide on eligibility. We conducted the dual full-text review with the goal of confirming that the articles that we included in the title/abstract review should be included in the data extraction step. When reviewers disagreed on eligibility, citations were returned for adjudication by reviewers until they reached an agreement and, when necessary, consultation and consensus with the entire team of reviewers. In this step, we also manually reviewed the reference lists of selected articles, and so acquired more potentially relevant studies if they had not already been identified through the initial search strategy. Third, we examined each study (n=63) for its methodological quality using a quality assessment tool (Appendix A) to remove low-quality studies from our final analysis. The tool we used included 10 criteria that can be used to assess three study aspects: design, sampling, and statistical analysis. Because we include different type of studies in our review, we adapted this tool from NIH quality assessment tool (25) for different types of studies and an instrument developed by Cummings and her colleagues (26). Forth**,** two reviewers independently reviewed the full text of each included article to identify the year, type, and setting of the studies and extract data, with discrepancies resolved by discussion among team members. Finally, using organizations evolving theory we identify themes from the articles and all extracted data was tabulated by year of publication, setting, type of article, and key findings.

Data Analysis

Inter-rater reliability for both the abstract selection (Cohen's kappa=0.93), and the decision to include the article in the review (Cohen's kappa=0.85) were excellent.

Results

Study selection

Using the four search steps outlined above, we identified 2135 records through PubMed database searches, 3482 through other sources, and five articles through manual searching (Figure 1). After eliminating duplicates 2,210 studies remained. A further 2,021 studies were excluded based on a reading of their titles and abstracts, leaving 189 studies. Using the inclusion criteria, 63 of these studies were identified for full-text retrieval and in-depth study. We then applied the quality assessment tool (Appendix A) to the remaining 63 studies, and another 32 were excluded because they were rated as low quality. This selection process thus resulted in 31 studies for the data extraction and final review.

Study characteristics

The majority of studies were descriptive studies (n=13) and quantitative (n=13) and conducted between 1991 and 2003 (n=24). Details of the studies included in the review can be found in table 2.

The main reasons for the decline of HMOs

Organizational evolution includes complex interactions between ecological and historical processes. It usually begins with the differential proliferation of variations within specific populations, which ultimately leads to the formation of organizations, followed by the establishing and expanding process, and ends with the extinction of that member of the population that could not adapt to the new environment (27). The results that emerge from our literature reviews show that the reasons for HMO movement founding, expanding and extinction could be explained by organizational evolving theory. Using the ecological approach, we categorized the reasons for the decline of HMOs in ten

Table 3. Summary of general characteristics and key findings from the full text review of the studies (most of the articles could be classified in more than one category).

Reference	Design	Setting	Key findings
Wrong ethos			
Udow (2002)	Descriptive study	Nationwide	• Limited options for patients • The Managed Care Backlash • Failure to control costs • Wrong ethos • Looked similar to the fee-for-service counterparts • Customers felt they received low quality care • Inability to attract physicians • Using ineffective techniques to manage ambulatory care
Naurt (2002)	Descriptive study	Nationwide	• Lack of partnership with government and other organizations • Employer and consumer dissatisfaction • Wrong ethos • Lack of environmental assessment of market • Lack of solid financial analysis • Poor program design and infrastructure formation • Neglected the importance of geographic expansion • Poor management tactics • Neglected the importance of quality of care
Mismanagement			
Strumpf et al (1976)	Descriptive study	Nationwide	• Insufficient management expertise • Inappropriate motives and goals • Legal and financial difficulties • Inability in partnering with physicians • Low community receptivity and participation
Christianson et al (1991)	Quantitative study	Nationwide	• Major changes in public policy with respect to HMOs • Poor management • High hospital utilization rates and costs

			• Physician dissatisfaction • Growing competition • Investors' withdrawal • Strict regulations • Nationally unaffiliated HMOs, HMOs in markets with low population density, low physician-to-population ratio, more children, more elderly, more females, more immigrant and more non-white are at higher risk for failure
MacStravic (1997)	Descriptive study	Nationwide	• Focusing on managing demand • Implementing the wrong construct • Poor management tactics
Tisdale et al (2002)	Descriptive study	Hawaii	• Overly aggressive expansion strategies • Poor management tactics • Lack of equilibrium between pricing and medical cost inflation • Weak capital basis • Employer and consumer dissatisfaction • Lack of solid financial analysis
Inability to control costs			
Reece (2000)	Descriptive study	Nationwide	• High out-of-control costs • High prescription drug expense • Negative media reports • Limited access to specialists • Bad physician relations • Patient’s rights legislation • Dropping HMO stock prices • Ripple effect of the Harvard Pilgrim bankruptcy • Threat of massive litigation against HMOs • Orthodox managed care’s flawed market model • Lack of understanding of physician culture and emerging consumer trends

Marmor et al (2012)	Descriptive study	Nationwide	• Neglected the importance of geographic marketing • Neglected the importance of current and new policies • Failed to control costs • The Managed Care Backlash • Neglected the importance of quality of care • Set unrealistic expectations • Neglected the importance of limited generalizability of a particular successful HMO/ACO
Leutz et al (1990)	Quantitative study	Four Social HMOs (SHMOs)	• Slow enrollment in SHMOs • High marketing costs in SHMOs • High administrative costs in SHMOs
Increased competition			
Christianson et al (1991)	Quantitative study	Nationwide	• Increased state and federal regulation • Lack of financial management • Complaints and dissatisfaction from contract providers • High competition
Bushick (1995)	Descriptive study	Minneapolis/St. Paul	• Consumer dissatisfaction • Neglect the importance of current and new policies • High burden of administrative costs • Lack of accountability regarding health care quality • General skepticism regarding “intermediaries” • Growing competition • Financial and management inefficiencies • Limited ability to focus on resources and innovative efforts
Glavin et al (2002)	Quantitative study	Nationwide	• Small size of the HMOs • Competitive market • Financial performance factors
Resistance from provider groups			

Gitterman et al (2003)	Qualitative study	North Carolina	• Regulatory uncertainty • The politics of SHPs[c] structures and operations • Resistance from provider groups • Ignored of the importance of understanding local marketing conditions • National corporate constraints • Inexperienced regional management • Divergence from core competence
Morrisey et al (1982)	Quantitative study	MSA[a]	• Physicians opposition • HMOs in markets with higher proportion of women, more elderly are at higher risk for failure
Mechanic (2004)	Descriptive study	Nationwide	• Consumer dissatisfaction • Rationing of services by HMOs • Inability to improve quality of care and reduce cost • The Managed care backlash • Resistance from physicians
Inadequate IT infrastructure			
Enthoven (1993)	Qualitative study	Nationwide	• Employers' unwilling to consider HMOs due to poor geographic access, high administrative costs and low quality of care • Growth in cost of some services resulted from regulations • Lack of reliable information on comparative quality of care offered by different HMOs and hospitals
Steiner et al (2002)	Quantitative study	Denver	• Lack of state's central registry system • Inefficient care coordination across institutions • Increasing costs particularly pharmacy costs • Competitive pressures • Utilization of subspecialty clinics and emergency services, despite the availability of primary care sites
Consumer dissatisfaction			

Mechanic et al (1983)	Quantitative study	MSA	• Consumer dissatisfaction • Limited access to specialists
Gamble et al (2000)	Quantitative study	Alabama and Georgia	• Consumer dissatisfaction • Limited patients autonomy to choose providers
Montoya et al (2000)	Descriptive study	Nationwide	• Consumer dissatisfaction • Unsuccessful use of marketing tool (Report Card)
Rutledge et al (1996)	Qualitative study	Nationwide	• Patient dissatisfaction on quality • Limited accessibility of care • Poor provider attitude
The managed care backlash			
Blendon et al (1998)	Mixed method study	Nationwide	• Dissatisfaction with HMO plans compared with fee-for-service plans • Consumers' negative impression about HMOs • The managed care backlash
Dwore et al (2001)	Descriptive study	Nationwide	• The managed care backlash • Consumer dissatisfaction
Greene (2003)	Descriptive study	North Carolina	• Barriers in implementing disease management programs • Difficulties in managing utilization through insurance programs • Loss of negotiating power against large groups of providers • Obstacles in sharing information among provider communities • Consumer dissatisfaction • The Managed Care Backlash
Legislative restrictions			
Balla (1999)	Quantitative Study	Nation wide	• Lack of recognizing the importance of consumer and market characteristics • Lack of recognizing the importance of provider characteristics • Regulatory and legislative restrictions
Hurley et al (2002)	Quantitative study	Nationwide	• Regulatory and legislative restrictions
Morrisey et al (2003)	Quantitative study	MSA	• Legislative restrictions • Limits in market growth

Other factors			
Feldman et al (1995)	Descriptive study	Nationwide	• Delayed reaction in highly competitive environment increased the risk of failure • HMOs older than 4 years old are at lower risk for failure • The HMO failure rate clearly falls as size increases • Federally qualified HMOs are at lower risk for failure • Nonprofit HMOs are at lower risk for failure • Nationally affiliated HMOs are at lower risk for failure • HMOs with open-ended products are at lower risk for failure • HMOs in markets with high Medicare spending are at higher risk for failure • HMOs with low-profit margin, low premium per member month, low percent of net worth change and high expenses per member month, high receivable turnover and high administrative expense are at higher risk for failure
Long et al (1988)	Quantitative study	Minneapolis - Saint Paul	• Increased premiums led to disenrollment growth • High number of choices among health plans increase the pressure on market • Increased number of health plans led to higher rates of disenrollment • Plan dummy variables (staffing pattern, location, hours of operation) influence disenrollment
McCurren (1991)	Qualitative study	Nationwide	• Excessive utilization of services by some consumers • Inability of physicians to control abusive, and over demanding patients • Excessive paperwork
Clement (1995)	Quantitative study	Nationwide	• Neglected the importance of the operational size of HMO based on the regional model type and profit status

a. Metropolitan Statistical Area
b. Point of service
c. State health plan

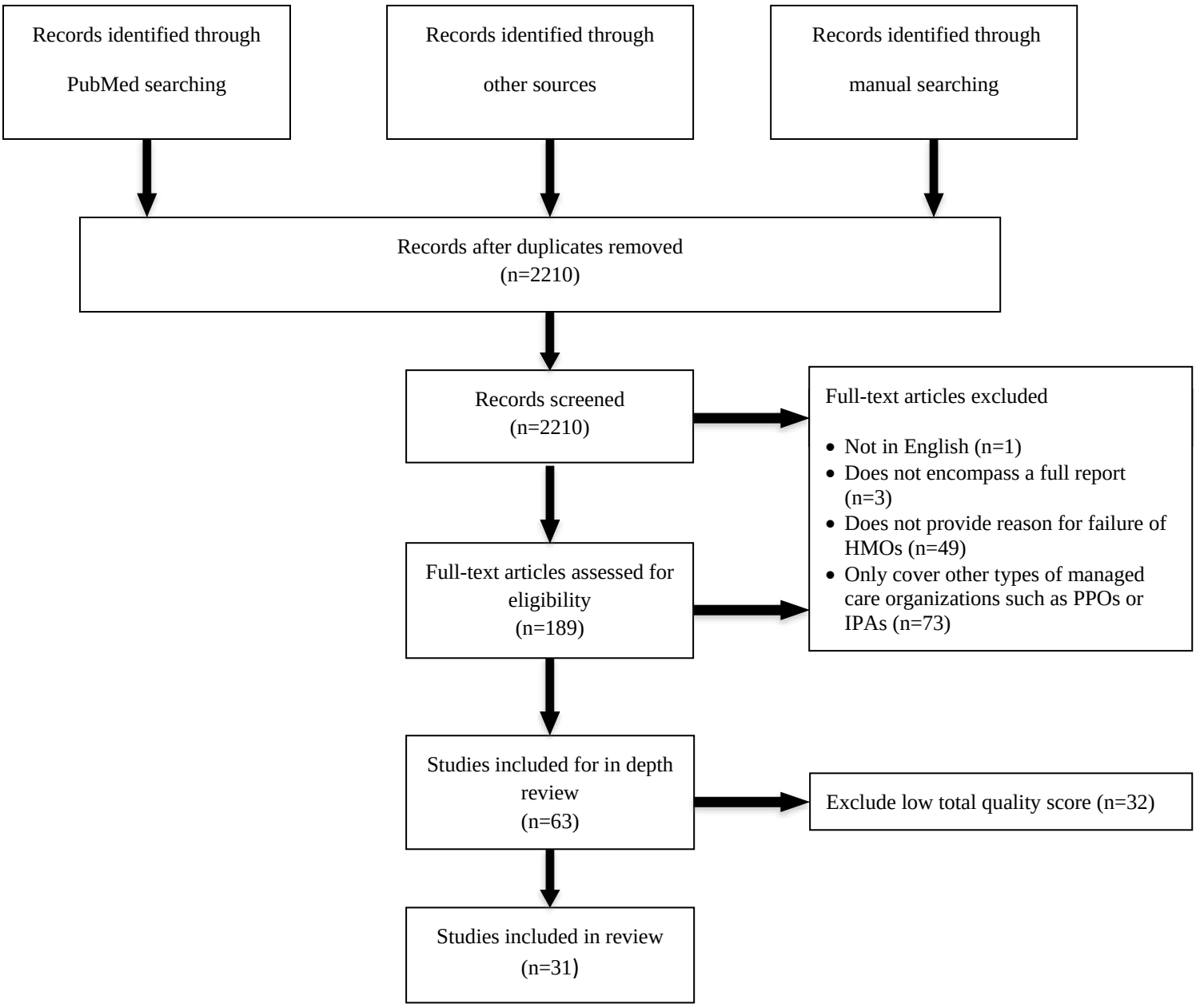

Figure 1. Flow diagram of literature search results

varied and often overlapping, categories as described in Table 3.

Wrong ethos

There was a perception that some HMOs put money ahead of patient care, and focused disproportionately on cost control and profit. This philosophy was felt by some to be the antithesis of the tradition of medical practice, which is service in the best interests of patients. These competing ideologies were seen to be irreconcilable and a constant source of conflict between patients and HMOs owners with clear

disadvantages for patients (28), resulting in patient dissatisfaction. This was exacerbated by ongoing examples of spectacular wealth derived by entrepreneurs when they converted the HMO to a publicly traded entity or sold out to their HMOs to the public or to a larger company. In addition, the public and media perception of HMOs using explicit "rationing" by introducing a "third party" into the medical decision-making process by requiring prospective review for certain procedures or expenditures weakened trust in HMOs. Patients lost confidence that their health plans were looking out for their health care needs ahead of cost containment and profit (28, 29).

In line with variation process of organizations evolving theory, we find out some HMOs were viewed as using the wrong paradigm for dealing with consumers because the terminology of "managed" care employed the wrong basic construct and inappropriate tactics. "Management" is not a concept that fits well with consumers and physicians, because the concept could imply that physicians were being told what they can and cannot do for patients. This was seen as particularly ill-suited to the challenge of influencing consumer behavior while expecting to achieve their satisfaction and loyalty (30). Finally, some HMOs actions seemed to be predicated on presumed patient ignorance or medical illiteracy. Such ignorance eliminated true market competition since such competition can only occur if the user of the service, namely the patient, understands its value and has the freedom to seek it or avoid it (28).

Mismanagement

As Daft explains when organizations become older, inefficient and bureaucratized they lose their ability to adapt to the new environment (31). This usually happens after a period of success as an organization takes success for granted and fails to adapt to changes in the environment. Daft specified some warning signs for organizational atrophy, such as outdated organizational structure, excess administrative staff, troublesome administrative procedures and lack of effective communication and coordination. Similar to what Daft mentioned as signs of organizational atrophy, we find out some HMOs, particularly those whose growth outstripped their ability to properly manage (32), delegated clinical decision-making authority to individuals who lacked adequate training or experience, and were not supported by the comprehensive algorithms that aid in decision making which are common today (6). Some rapidly growing for-profit health plans employing HMO "products" became increasingly bureaucratic and distant from their members and providers, causing them to be seen as cold and heartless, and errors and delays in payment as intentional. Overly aggressive expansion strategies not supported by adequate pricing or capitalization (33) and lack of understanding of local markets (34) are other examples of poor management practices among HMOs. Studying the rise and fall of Kaiser Permanente (KP) in North Carolina (NC), Gitterman and colleagues explain the importance of understanding local markets. They described how KP's leaders inability to find the right balance between giving the branch offices the autonomy they needed to respond to local market conditions and following KP's corporate goals and keeping corporate policies, caused KP expansion in NC to fail (34).

Some HMOs did not have a premium strategy that considered future costs specific to individual markets. In some HMOs, managers moved into senior level positions in the prepaid or insurance business without sufficient pricing experience (35). Some HMOs failed to estimate accurately the amount of outstanding physician or hospital claims, while others failed to recognize and take heed of the rapid changes in the health care benefits power bases. Other HMOs have

failed to identify and act on the need to upgrade their internal operations. This led to critically inadequate claims management problems (36). In response to these problems, HMOs did a poor job of self-correcting and lost the confidence of large segments of the public.

Inability to control costs

The later 1990s witnessed a steep rise in HMO costs. This occurred partly due to the general increase in national health care spending (37), to the introduction of new medical technologies and drugs, to aggressive direct-to-consumer advertising of pharmaceuticals and new medical services, to growing public awareness of newly treatable conditions and the resultant perception of the value of medical care services(38). However, the failure to manage costs occurred mainly because HMOs did a poor job of reducing management costs and corporate overhead, and developing more efficient ways of utilizing available resources instead of managing internal costs (39). Some HMOs chose to increase premiums and put financial pressure on the consumers (40). In addition, some other important factors decreased HMOs' incentives to cut costs, including employer coverage practices, the tax code (the deductibility of employee health care insurance costs), and the number of standardized coverage options per purchasing group (41). Inefficient utilization management, poor quality assurance, and inadequate capitalization, which were more common among HMOs not owned by a large insurance company, exacerbated this problem (36). These problems led HMOs to financial trouble and ultimately, insolvency. It is worth mentioning that the inability to manage costs cannot solely explain the decline of a plan type, as PPOs never consistently contained costs and they soared in popularity (42).

Increased competition

Based on theory in organizational ecology, the intensity of competition between organizations in a certain population is primarily a function of the similarity in resources they need to survive. The more similar the resource they need, the greater the potential for competition (17,43). The density dependence theory states that the intensity of competition depends on the number of organizations in a population. High density prevents organizations from moving from organizing to full-scale operation by limiting resources. High density also results in tight niche packing, forcing new organizations, which cannot compete directly with established organizations to use marginal resources (44). The entry of new players into the managed care market caused increased competition that drove some of the weaker HMOs (particularly poorly capitalized not-for-profit HMOs) out of business (36). Being located in a highly competitive environment was one of the main reasons for the decline of some HMOs because price competition led to much lower premium income than projected (45). Many HMOs were operating in a highly competitive environment characterized by rising costs, consolidation, and price sensitivity. By the mid-1990s, competition from big, network-based managed care organizations was making it difficult for some HMOs to thrive. In addition, the large, well-capitalized organizations gain market share by temporarily lowering premiums, the practice that smaller HMOs couldn't easily compete with. Finally and most importantly, some competitors offered patients more choices, but without health centers to staff and operate, they ran leaner and were more effective.

Resistance from provider groups

Providers have sometimes been resistant to HMOs because of a perception that HMOs are insensitive, and do not understand how physicians think, feel, behave, or even how they relate to patients (46). Physicians often rejected the principle of third party payers questioning their clinical decisions (47). One of the most important factors to physicians in contracting and remaining

with HMOs is satisfaction with payment (45); however, even when HMOs (especially staff model HMOs) offered lucrative contracts to the physicians these plans were not always attractive to them because many physicians also preferred to work as independent practitioners rather than in an employment relationship. Asking permission to provide services may be viewed as an affront to physician autonomy and sense of professionalism (48). They particularly object to how these controls affect the traditional relationship between doctors and patients (49). There has also been resentment about the manner in which managed care companies have used their relative power to bargain down reimbursement and capitation rates (48). Besides, in most cases, market power began to be concentrated in a limited number of HMOs. Therefore, provider organizations such as small clinics were unable to negotiate effectively with large HMOs partly due to their own internal financial limitations as well as the power of those plans (50). In response, physician organizations found ways to restrict the entry and growth of HMOs. Strategies included promoting to their patients and to the media the view of the HMO as the embodiment of the physicians' dissatisfaction with modern medical practice. In opposition to HMO-led managed care, some physician groups established alternative organizational rivals to HMOs, such as IPAs (51), while publicly characterizing HMOs as dispensing low-quality medicine (52). HMOs, in turn, often did not adequately anticipate the magnitude of this resistance, and so were slow to counter it.

Inadequate information technology infrastructure

Based on absorptive capacity theory, technological innovation could influence organizations because it can change the relative importance of diverse resources, disrupt markets, challenge organizational learning capabilities, and change the nature of competition (53). Despite the rapid growth of HMOs, infrastructure development was not adequate, chiefly with regard to information technology (IT). Prompt and accurate claims and authorization systems are necessary for effective management of the services for which a plan is liable (54). The marketplace had become more complex, fast moving, and nonlinear such that traditional HMO information systems were not able to manage or plan for all the permutations, combinations, circumstances, and relationships of the market or transactions among patients, hospitals, physicians, and suppliers (46). Most of the HMOs also had difficulty recruiting well-trained personnel for processing of claims (50). Small HMOs often lacked sufficient revenue to support the necessary costs of upgrading their technology (55). This unbalanced development raised many problems and discontent, such as errors in paperwork for claims processing in smaller HMOs.

Consumer dissatisfaction

Vital to the success of HMOs was the need to maintain quality and enhance patient satisfaction. Survival depended upon HMOs focusing on factors related to consumer satisfaction. Consumer satisfaction is driven by multiple factors, including fairness of pricing, convenience of care, adequate availability of providers, autonomy to choose providers (34,48), provider quality, access to specialists (56), access to out of network providers (57), customer service, and disease prevention/health promotion programs (58). HMOs that failed to address these issues experienced declines in member satisfaction and were plagued with unacceptably low member retention rates (59). High member retention rates are critical to long-term success of HMOs, since the cost associated with losing customers is high, and the cost of attracting new customers away from rivals is formidable (59). Consumers expressed dissatisfaction with exhaustive administrative control, cumbersome

service access, unwarranted denials of care and restrictions on choice of providers.

It was alleged that some HMOs routinely and intentionally denied or delayed payment for certain types of claims, relenting only when the member appealed (60). Finally, the treatment by some HMOs of patients as passive, ill-informed, and overzealous users of the health system resulted in great dissatisfaction among consumers (46) and was amplified by a critical media.

The managed care backlash

Institutional theorists emphasize that an organization has a higher chance of survive if it could obtain legitimacy, social support, and approval from actors in the surrounding environment (61). The legitimation improves the organization's status in the community, facilitates resource absorption, and allows the organization to establish its conformity to institutionalized norms and expectations. Losing social support and managed care backlash was mentioned as one of the key factors in HMOs failure. In the late 1990s, anti-managed care and anti-HMO sentiment became a significant force in the health industry (6,62). Analysis of 637 HMO newspaper and internet stories over a 21-month period indicated that 87 percent of these stories contained negative news (46). Central to the backlash was the repudiation by the middle class of the idea of explicit rationing, as adopted by some HMOs (48). According to Blendon and his colleagues (63), two important factors influenced the public backlash against managed care. First, less patient satisfaction compared with fee-for-service model and open-ended traditional insurance plans, especially about limited access to specialists, tests, and long waiting times. Second, public backlash was being driven by rare and unfortunate HMO-patient experiences that seemed threatening and dramatic but actually were experienced by a few patients personally. In the face of increased public concern about HMOs, employers and employers groups began to replace HMO options with point-of-service (POS) variants, and preferred provider organization (PPO) alternatives (64). In their defense, HMOs insisted that management decisions only concerned insurance coverage and not medical care, but that is a distinction without a practical difference to the public (49). The managed care industry did not respond well to the backlash, which resulted in the introduction of consumer protection bills into the legislature in nearly every state, as described below.

Legislative restrictions

Theory in organizational ecology sees government regulations as influential constraints on organizing and resource acquisition that impact organizational diversity (17). Criticisms of managed care led to the introduction both in Congress and in state legislatures of more than a thousand bills with the intention of protecting consumers from what some perceived to be unscrupulous practices of health plans and HMOs. The legislation also led to the establishment of a presidential commission to examine the need for future guidelines in this rapidly growing industry (65). For example, Congress and state legislatures enacted some laws to limit the role of HMO medical directors, mandate payment for some services, provide for independent review of denied claims, and provide direct access to certain providers (63). Tight regulations by the federal and state government on HMO-led managed care led to many undesirable impacts on HMOs ability to manage care including restrictions on wellness programs and disease management programs. These increased costs to the HMOs which were then passed along to members in the form of higher premiums or fewer benefits (66).

Other factors

In line with what Clegg et al. (16) provide as a retrospective overview of organization studies, a number of other factors, some not discussed in detail here, contributed to HMO decline, including: diverging from core competence (34), organizational constraints and failure to adapt (67), small

size (68), lack of federal qualification (69), neglecting the importance of quality of care (70), setting exaggerated expectations (1), locating in rural, low income and low density population areas (51), organizational inflexibility and insufficient understanding of the physician culture and emerging consumer trends (46), inappropriate marketing practices, inadequate identification, assessment, and management of key stakeholders, and health market characteristics (71), such as the low physician-to-population ratio, low proportion of physicians who are specialists and high hospitals expenditures (72).

Discussion

The results of this study show that although the decline of HMOs varies somewhat from case to case, it follows a fairly consistent pattern with similar causes. These factors were related to wrong ethos, mismanagement, failing to control costs, resistance from provider groups, increased competition, and inadequate IT infrastructure leading to patient dissatisfaction. Patient dissatisfaction, in turn, led to a managed care backlash, which stimulated the enactment of new restrictive legislation. Restrictive legislation not only negatively impacted the continued growth of HMOs but also accelerated the speed of their decline.

ACOs are evolved in response to the shortcomings of HMOs rather than as a copy of them. Although recent studies (73,74) showed that ACOs did a good job in terms of quality improvements and cost reductions, that doesn't mean they are guaranteed to be long-term successes. Based on organizational evolving theory, when environments change, replication of selected variations is the key to continuity in organizational existence. Those ACOs that could better adapt to environmental changes have greater chances to survive. To help ACOs to have sustainably improved care coordination and lowered cost we try to translate the lessons from HMOs' failures into a set of recommendations for the success of ACOs.

Patient-centered ethos

Patients must be and must be seen to be at the center of the ACO model. ACOs are designed to ensure that patients receive the right care at the right time while avoiding unnecessary services. A recent study (75) shows that a patient centered approach in ACOs is associated with a considerable reduction in rates of hospitalizations, nonemergency emergency department visits, and Medicare spending.

ACOs should resist the temptation to put money before patients and deprive patients of necessary care services. ACOs should avoid taking on a more typically "corporate" set of objectives with an ultimate goal of membership growth and focus on managing demand rather than a focus on changing the delivery structure of health care. The hope is that because most ACOs are physician-led, physician professional ethical responsibility to patients will serve to further this goal.

Accountable management

ACOs should not repeat the same managerial mistakes that lead to the failure of some HMOs, such as overly aggressive expansion strategies not supported by adequate revenue or capitalization; a lack of equilibrium between pricing and medical cost inflation (76); inadequate premium strategy; neglecting the importance of geography-specific marketing; and inadequate selection and training of managers. ACOs should mainly emphasize care coordination across service settings, alignment and engagement of providers across the spectrum of clinical, technical, cultural and financial coordination, the use of clinical decision support systems, constant learning to improve care processes, ongoing evaluation and use of measurement and feedback to improve organizational performance, management of out-of-network utilization, increased patient engagement, understand of the environmental context, establishment of robust governance structures, identification

of inefficiencies and waste "flexibility to change as quickly as the health care industry change (11,77).

Control of costs

The failure of some HMOs can be attributed to failure to achieve market-specific behaviors and thereby control costs (78). The demand curves for medical care is price-inelastic (41). In traditional non-HMO insurance model, because of price-inelastic demand, competition among health care providers was minimal because the payment system did not provide them with effective incentives to cut cost and price, nor to manage the appropriateness of services. Although, many ACOs are at an early stage of development and still pay providers based on fee-for-service (76), in Medicare ACO models CMS has created an incentive by offering bonuses when ACOs keep costs down by ridding their systems of waste, focusing on prevention and carefully managing patients with chronic diseases and by meeting specific quality benchmarks. Therefore, to reduce costs, ACOs need to implement evidence-based protocols to determine optimal treatment, reduce waste and avoid readmissions and complications. Currently, ACOs use two main strategies to avoid this risk of economic loss: 1) horizontal mergers with other hospitals to become dominant in its market forcing private insurers to pay higher rates, and 2) aligning physicians' incentives with those of the hospital (79). ACOs will also have to find ways to move some care to lower-cost sites of service, control total medical expenditures, including hospitalizations and other cost-drivers by reviewing payer claims-based data, reducing out of network services, maximizing pay-for-performance reimbursement by proper screening of and managing the primary health needs of the patient population, reducing durable medical equipment expense by utilizing lower-cost suppliers, implementing disease management models and other tools to predict and efficiently provide individual patient health needs, especially for high-cost patients (77).

Close collaboration with provider groups

In the past four decades, health organization leaders, following the advice of some economists have tried to shape physician behaviors by using primarily financial incentives. The best provider organizations, however, recognize the importance of non-economic financial incentives such as local, institutional and culture-specific peer-based incentives. Opposition by involved physicians will decrease the probability that an ACO can be successful over time (80). Independent doctors, many in small or solo private practices, are accustomed to more individualistic—and far less integrated—methods of delivering care. Under the ACO model, they could feel a loss of autonomy and authority. In addition, some physicians object to compensation arrangements based on capitation because they may perceive that such arrangements place physicians in the uncomfortable position of "rationing" care. Physicians who believe ACOs violate professional norms resist their formation as they have been traditionally quite hostile to prepaid group practice (34).

Health care providers, particularly physicians, always have a strong hand in the successful implementation of any health care reform. The ACO model is no exception. ACOs should anticipate the magnitude of the possible resistance and so will be ready to counter it. This even applies to ACOs that are physician-created and physician-led. ACO leaders must respect a reasonable measure of physician autonomy and clinical authority. At the same time, practicing physicians especially young ones, need to recognize that collaborating with ACOs can benefit them because ACOs have greater experience in negotiating with third-party payers and governmental agencies and they have greater access to capital than many physicians (81).

Prepare to compete

By spending approximately $3 trillion a year, the U.S health care system is one of largest industries in the U.S. The ability to

successfully compete in a free marketplace will determine the winners and losers.

Fierce competition in the health care industry generated by the growth of new ACOs and other competitors is one of the major risks of ACOs failure. Since the initiation of the ACO model, the size of the ACO market has steadily increased, not only in total number of ACOs but also in the number of patients receiving care from them. By the end of January 2016, there were 838 active ACOs across the country caring for about 28.3 million people. The total number of ACO's has increased by 94 organizations over the past year, an increase of 12.6 percent (82). Based on organization theory, established organizations use a variety of tools in their arsenal, such as aggressive pricing techniques or attracting customers by offering them bonus deals to counter the threat of a newcomer, reducing competition. The presence of new players in the "managed care" market has already driven some of the weaker ACOs out of business (76). ACOs compete directly with some indemnity insurance companies Blue Cross, self-funded employer plans, and other organized provider groups and indirectly with non-ACO physicians and hospitals for price and service. Cost competition among plans could put ACOs under increased pressure to generate continuing savings and to limit premium growth. One suggestion to survive in this brutal market is that competing ACOs deliver high-margin services to each other's assigned patients, collecting payment while having the cost assigned to their competitors (83).

Adequate IT infrastructure

As organization theory depicts, older organizations are usually susceptible to new technologies, which can lower their ability to survive in the market. Therefore, it is crucial for ACOs to effectively use data from electronic health records (EHRs), claims, pharmacy and revenue cycle data and input from patients, such as satisfaction information. Most ACOs should have health information exchange capabilities that make it possible to merge and use data across multiple sites. The ACO's success will depend on how effectively they employ EHRs, computerized provider order entry (CPOE), and e-prescribing. These capabilities and data will provide the longitudinal history a clinician needs to effectively manage care transitions, develop care plans, manage chronic diseases and keep patients healthy. Appropriate IT infrastructure capacity also allows ACOs to react to market shocks in real time and rapidly evolve their organization toward best practice management and outcomes. Efficient IT infrastructure is necessary for ACOs because it provides decision support, engages patients in their own care, and enables providers to communicate through the common use of the EHR (84). It is important to know that without proper implementation and use of clinical decision support system it is unlikely that any major improvements in the quality of care and cost from the use of health information technology happen. Implementing EHRs need to make a series of simultaneous changes to benefit the records and avoid undesired consequences. EHRs should be blended into the organizational culture and workflow. To achieve this there should be a heavy emphasis on the implementation of parallel interventions to change physicians culture and work processes (11).

Patient satisfaction

Gaining and maintaining patient satisfaction is vital to the success of any health care organization, including ACOs. It can be complex because patient satisfaction measures rely both on patients' perception of the quality of care as well as the quality of service. Service in health care organizations is about all the little things providers do to improve the patient experience. That can range from how providers quickly, accurately and politely communicate and respond to patients concerns, to the kinds of amenities patients

are provided with. Quality of service is, therefore, a subjective element.

Patient perception is all about "how" they receive care, not "what" care they receive. ACOs need to provide not only best care but also excellent service to keep patients loyal.

Although some providers object to the term "customers" when applied to their patients because the business aphorism that "the customer is always right" can be awkward in the medical setting (think of patients with addictive-drug seeking behavior) (85), long-term success of ACOs depends on the ACOs ability to establish effective partnerships between patients and providers. In truth, patients are easier to serve if they feel their reasonable needs are being met, and patient satisfaction can be shown to be associated with improved patient health outcomes (86).

Active and clear communication with patients, information transparency, the ability to acknowledge mistakes and apologize when something goes wrong, minimizing waiting time in the doctor's office, setting realistic expectations, involving patients as active participants in their own care and facilitating open access to specialists all combine to improve patient satisfaction.

Make patients accountable

Patients are not accountable participants in ACOs at the present time. Poor outcomes and excessive costs due to hospital readmissions and ED visits, often caused by poor lifestyle or lack of adherence to medication or physicians' orders can make an ACO fail to meet its cost and quality targets (87). By law, under Medicare ACO models, patients are free to choose providers outside an ACO, which creates financial, administrative and care coordination problems for ACOs, because these ACOs cannot control where the patient goes for care even though they are accountable for the cost and quality of that care (77).

By helping patients to provide as much quality care for themselves as they can, by using decision support tools and shared decision-making methods, by using a patient attestation method for attributing/assigning patients to the ACO, by increasing health literacy in patients and their families and by creating incentives for ACO patients to use low-cost and high-quality providers outside the system, ACOs can better engage patients in their treatments and make them more accountable (88).

Be prepared; change is coming

The ecological theory emphasizes that by disrupting social alignments and relations between organizations and resources, political turbulence could increase organizational failure. Some feel that the future of ACOs is now in doubt as the new administration intends to repeal the ACA Although Medicare ACOs were created by the ACA, many experts do not believe that the ACO concept as a whole is in any real danger of repeal (89), including Medicare ACOs. However, we should anticipate that the new administration would scrutinize Medicare ACO performance to determine whether they are saving money and improving quality as promised. If that proves not to be the case over time there could be a shift away from ACOs as a major driver of controlling health expenditures toward other forms of cost control, such as reduction in provider reimbursements, bundled payments or administrative price controls in Medicare.

Even if ACOs remain intact, they should prepare for likely changes ahead in the ACA provisions, especially the Medicaid expansion. Because of uncertainty about legal and regulatory issues surrounding ACOs, the legal and organizational structures of ACOs should be designed and promulgated publicly so as to advocate for the value of the ACO model.

We should note some of the limitations of our review. First, in order to accurately assess the performance of HMOs, one must distinguish some of the basic types of HMOs from each other, and delineate the general and specific structural incentives

and disincentives that affected individual model HMO performance (90).

For example, HMOs in Medicaid and Medicare have a substantially different history and are considerably different plans than those offered in the commercial market. Furthermore, describing and comparing different types of HMOs was out of scope of this study because these models changed so much during the time frame of the analysis and the differences between different forms of health care organizations have narrowed to the point where now it is very difficult to label a company a classic HMO (4,6). Second, the generalizability of the results of this study may be limited due to the sample upon which the study was based. This review included studies related to HMOs and not other types of managed care products such as PPOs or delivery system models such as IPAs. It worth mentioning that long before ACO, PPO has emerged as an alternative approach in responses to HMO or more accurately, responses to anti-HMO sentiment. Actually, PPOs have represented the first significant variations in the HMO model. Because many experts believe that any decline in HMOs has, at the same time, been an increase in other forms of managed care such as PPOs, future research could be focused on how PPOs and IPAs were established as organizational rivals to HMOs, and how these new types of organizations affect U.S. healthcare system. Finally, HMOs and ACOS are often discussed as if they were simple, homogeneous organizations, easily replicated and well understood. In reality, each ACO and HMO is a highly complex combination of delivery system formulation, external and internal payment processes, economic incentives, clinical and management structures, and personalities. To interpret the research for policy purposes, we have generalized from the relatively small number of carefully studied cases to the broader population of HMOs, an approach that is inherently limited.

Our study highlights primary causes, which are either internal or external, leading to the failure of HMOs. Some of the key virtues of the ACOs are the corrections from the HMOs' failures. First, unlike HMOs, ACOs are only provider organizations (although some ACOs may assume some financial risk). Second, unlike HMOs, Medicare patients are not required to see healthcare providers within an ACO and they could seek care from any health care provider outside the ACO without a penalty. Third, in the managed care continuum, ACOs are located on an intermediate point between the full insurer and full payer financial risk. They used a mix of fee-for-service payments with shared savings; and shared risk; or partial capitation. Finally, while HMOs mainly focused on cost control, ACOs simultaneously work on both spending and quality as they are paid, in part, based on achieving quality targets (Table 1).

In spite of all this, some still believe that ACOs are simply an updated version of the HMO delivery system model that will fail for the reasons that many HMOs failed (81,91). But this time, if the ACO concept fails, the result is unlikely to be a return to the status quo, especially in terms of the flow of payments to health care providers. To prevent that, we suggest ACOs should set realistic goals, focus on disease management programs, align the incentives for physicians and hospitals via shared savings, use non-physician providers such as nurse practitioners, invest heavily on health information technology, practice patient centered approach, make provider and patients accountable, use efficient management methods and improve care coordination.

However, we believe that the real challenges ACOs face is not about knowing what to do, but is about how to do it. ACOs face many implementation challenges. First, they lack capabilities to implement efficient interventions to affect quality and cost. Second, even if they possess those capabilities, there is no guarantee that they

could use them properly to affect quality and cost. Third, effective implementation requires an organized approach where the organizational capabilities are combined, articulated, and developed simultaneously across the delivery system. One possible response to this issue could be hiring new types of staff such as information technology staff, care coordinators, nurse practitioners and other personnel who can provide care in collaboration with physicians. Finally, the ACOs need to make sure that all implemented interventions are internally congruent. For example, all changes in ACOs' infrastructure should be consistent with each other and congruent by changes in organizational culture.

Now, as we likely know what could go wrong, further research should be focused on factors associated with successful implantation of evidence-based interventions in the health care organizations.

Conflict of interest

Van T. Nghiem is supported by the Predoctoral Fellowship from the Cancer Education and Career Development Program - National Cancer Institute/NIH Grant R25 CA57712 and by research funding from the Center for Health Promotion and Prevention Research, both at The University of Texas School of Public Health. Disclaimer: The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Cancer Institute or the National Institutes of Health."

Acknowledgements

Our genuine gratitude goes to Dr. Bruce Fried, associate professor of health policy and management, Dr. Morris Weinberger, distinguished professor of health policy and management, Dr. Sarah Birken, research assistant professor of health policy and management, Dr. Jonathan Oberlander, professor and chair of department of social medicine and Dr. Byron J. Powell, assistant professor of health policy and management all at UNC Gillings School of Global Public Health, who provided insight and expertise that greatly assisted the research.

We would also like to sincerely thank Dr. Francis Jay Crosson, the Chairman of the Congressional Medicare Advisory Commission, at Kaiser Permanente and Dr. Thomas Rice, Professor of Health Policy and Management at UCLA Fielding School of Public Health for comments that greatly improved the manuscript.

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