Physician Opinion of the U.S. Health Care System: A Systematic Review

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Abstract

This systematic review of published research on physician attitudes toward health reform begins with a brief analytical illustration of "organized medicine" as an important political influence, before moving to a structured, critical appraisal of opinion literature. The systematic review identified 15 studies, culled from 1968-2009, which met quality standards. Physicians overall tended to be dissatisfied with the system and believed that everyone should have access to care, but they have yet to achieve consensus as to the best course for reform. Primary care, hospital-based, salaried, and urban physicians were more likely to support single payer plans. Meanwhile, surgeons, specialists, AMA members, office-based, and private practice physicians appear more likely to choose retention of the current system or a non-single-payer alternative, such as tax credits or health savings accounts. Several problems dog the literature throughout and limit our ability to draw conclusions, including: question wording problems, non-response bias, limited study populations, the absence of key variables, and a limited ability to track trends.

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Preface

The seeds for this project were sown several years ago when I was working on a political campaign to advance health care reform. I could not help but wonder as we strategized about our strengths and weaknesses, where were the doctors? Why are they not driving these policy discussions? Since that time before I started medical school, and especially during this past year spent at the School of Public Health, I have been fascinated with the physician role in terms of U.S. health policy and reform.

What do physicians think about the system? Are they as dissatisfied as the general public appears to be? This is the group that, at least in my mind, remains the primary figures in the health care universe, yet politicians and other special interests seem to dominate every policy debate. If doctors could snap their fingers and craft a new health care system, what would it look like? And most importantly, what influences these opinions?

As I began to attempt to answer these questions, it became clear that two things needed to occur. First, I had to see what work had been done so far in this area, and second, I needed to consider what original survey research I would propose to fill in the gaps. This paper represents the first item, and our pilot physician survey, distributed in June 2009 to doctors at UNC, represents a beginning for the second. It is my hypothesis, or perhaps merely a hope, that physicians, if unified in both the goal and the pathway, could be the key catalysts to national-level system improvements. This clearly is far from the current reality, but we can still examine what their beliefs are and how they might shape reforms.

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Introduction: Doctors, Policy, and Opinion

The role of physicians in U.S. health policy-making has changed dramatically in the last 50 years. The period following World War II has been described as the golden age of medicine, in terms of both public esteem for the profession and its political power.[1] Fresh off a triumphant defeat of Truman's attempt to expand the foothold of Social Security to include National Health Insurance (NHI) for all, physicians were said to "dominate the health sector, if not completely control it."[2]

The purpose of this paper is to explore the intersection of health policy and physician opinion. What do physicians think about the system and efforts at reform? Does their opinion matter? We will start with background on physician role in the two most important reform attempts of the last 50 years, the successful passage of Medicare and the failed Clinton plan to reshape the system. Then we will report the results of a systematic review of the literature on physician opinion of the system and health care reform.

Physicians' financial power grew under payment conditions largely of their own making, a result of monopolistic strategies and their intimate relationship with the exploding private insurance industry.[3, 4] They had few peers as an organized political interest. "Organized medicine" commanded the trust of political elites and the general voting public, and the organization of their many societies along with geographical breadth combined to form a uniquely effective lobbying machine.[5]

Historian Paul Starr contends that starting around 1920 and continuing for most of the century, the American Medical Association (AMA) is a synonym for "organized medicine," while several other authors appear to use the terms organized medicine, physicians, and the AMA interchangeably in their analyses.[6-8] But the landscape has changed. The AMA's membership, which at its peak in the early 1960's claimed over 80% of all U.S. physicians, has plunged to less than 30% in 2002.[9]

Not surprisingly physicians' role in health policy debates has shifted as well. Their traditional role as defenders of the system's status quo, politically aligned with other conservative power bases in Washington DC, has become murkier in the wake of Medicare's passage. Their opposition to federal efforts to control costs (mostly through adjustments to Medicare payments) has strained old alliances, while their political capital has shrunk. The once untouchable reputation of the profession has been tarnished by "doubts about their professional efficacy and [by] questions about their pecuniary motives (Laugesen 292)."[3]

In spite of their history of political and economic dominance, most experts agree that doctors' authority as shapers of health policy has declined.[5, 10, 11] At present, "organized medicine" may be just another interest group, or collection of groups, in the political debates over health care. Yet through all these changes little is known about actual physician opinion. Although the attitudes of policy-making elites in the AMA and other professional organizations are clear from the sum of their lobbying maneuvers and policy briefs, do they accurately represent

the perspective of their members? How well do they approximate the opinions of unaffiliated physicians?

Medicare: The Turning Point

Medicare provides a nice pivot point to start our analysis of physician opinion. Prior to its passage, most accounts describe physician opinion as a largely homogenous force opposed to government expansion into health care, represented accurately by "organized medicine," which most historians equate with the AMA.[6, 8] The group had begun to flex its political muscle early in the century, but saw its first great victory in 1930's. At the apex of his legislative power in the middle of the New Deal revolution, President Roosevelt felt compelled to cut NHI from the original Social Security package, largely because he feared that ferocious opposition from "organized medicine" would sink the entire bill.[7]

Thus began a remarkable string of successes, whereby the AMA, assisted by a loose collection of conservative forces in Washington, was able to hold back wave upon wave of liberal attempts to finish the work of Roosevelt, to expand the social safety net to encompass health care. At the height of the Cold War, the AMA could portray any expansion efforts as an irrevocable step toward a "socialized" America, with great effect.[7] Additionally, the medical establishment had significant influence over the increasingly powerful private insurance industry, having shrewdly shaped this voluntary market via control of the governing boards oof the original Blue Cross/Blue Shield organizations and other early insurers.[8, 12]

As the 1960's approached, several developments would set the stage for Medicare's eventual passage. After the early conquest of infectious diseases in the first decades of the 20th century, no comparable breakthroughs had been achieved in the degenerative diseases and cancers that now burdened an expanding population of older Americans.[13] Hospitals in particular felt the pinch as their wards strained under the weight of lengthy elderly stays. The price of hospital care doubled during the 1950's alone.[6] While fears of Communism faded and the insistent civil rights movement advanced in the background, a broad band of constituencies – including liberal politicians, senior citizen groups, and organized labor – grew louder in their support for government health insurance.[7]

Neither President Kennedy nor President Johnson would have the votes in Congress until the Democratic landslide of 1964 put a 2-to-1 majority in the house and assured the legislative action that on July 30, 1965 would make the Medicare and Medicaid programs Titles 18 and 19 of the Social Security Amendments.[7] The AMA had suffered its first great legislative "loss," but the decades of battle resulted in a program that was extremely generous to physicians. The final product was limited in scope to the elderly and the poor, and for nearly 25 years it paid doctors what they charged, with no consideration for cost-effectiveness or clinical appropriateness.[8, 14]

In some respects, Medicare deserves to be recast as a success for physicians as an interest group. They were able to maintain what most historians characterize as their most important policy priorities: clinical autonomy

to practice medicine as they saw fit and the power to control the reimbursement structure by maintenance of fee-for-service (FFS) arrangements. But through all these changes, what do we know about the opinions of "everyday" physicians as, albeit greatly interested, citizens?

As we have noted, experts have long taken of the policy positions of politically active physician elites to be representative of the entire profession. We say "everyday" physicians to acknowledge the likelihood that doctors across the US, especially those not active in local medical societies and/or the AMA, evinced a range of attitudes about Medicare, not the united front displayed by organized medicine. Whether the opinions of this disparate group contributed to the groundswell of support resulting in Medicare is difficult to know.

Starr describes most physicians as politically inactive and content to let the AMA elites, largely wealthy Republican specialists, set the policy agenda for all.[6] Both he and Saward argue that in all likelihood many more doctors disagreed with AMA policy than the AMA leadership recognized, but not as many as pro-reform forces hoped for.[6, 13]

A physician survey from our systematic review found that while a majority did oppose Medicare before its passage, nearly two-fifths of doctors supported the measures.[15] Physicians shifted dramatically after the bill's passage to favor the reforms, according to a follow-up survey of the same population. The survey's author concluded that a strong perception that their peers opposed the program may have played a role in the silence or nominal opposition displayed by many doctors before Medicare's passage.[16]

"Everyday" physician quiescence is consistent with reports by Saward that in the wake of the political battles of the late 1940's and 1950's, the medical establishment had taken to heart the idea that further government expansion into health care amounted to communism. Any society member who expressed support for the latest reform effort could be labeled a Communist and shunned by his (or, rarely, her) local organization.[13] Is it possible that many doctors were in favor of Medicare, but did not feel comfortable expressing themselves, for fear of being blacklisted, until the law had passed? We can only hypothesize that physician support for Medicare was greater than it was perceived to be; we cannot test the hypothesis with so little quality data.

The Clinton Plan: A Promise Unfulfilled

Despite the fact that Medicare's authors envisioned the program as the first push down a steep slope to NHI, attempts to build on Medicare's foothold and further expand federal health insurance have largely failed. While many key pieces of health care legislation have been passed since, let us fast-forward to the Clinton reform attempt of 1992-94. The Clinton plan provides a nice bookend after Medicare, because unlike most other intermediate efforts, the reform attempt offers an example of comparable scope and public interest amidst both a system and a medical profession that had drastically changed in the 30 intervening years.

The seeds of reform were sown by the victory of Harris Wofford in a 1991 special election to the U.S. Congress from Pennsylvania. Wofford rode the issue of health care past his heavily favored opponent, and his election coincided

with, and contributed to, renewed public enthusiasm for system reform.[17] The next year saw the election of a young, charismatic Bill Clinton to the presidency and a Democratic majority in Congress which, combined with other factors such as a depressed health insurance market threatening businesses and the middle class, and widespread dissatisfaction with the system, stimulated a new national push for health reform. [18]

Physicians found themselves in a much different position in 1993 than they had been as they faced the prospect of Medicare three decades earlier. Increases in medical costs that well exceeded the rate of inflation had spurred the rise of managed care and attempts to limit Medicare and Medicaid spending. Both developments troubled the medical establishment, but managed care especially so, and "organized medicine" disdained it as institutionalizing unacceptable levels bureaucracy and intruding into clinical decisions. [19]

Although physicians had long been wary of the insurance industry, they had come to agree with the public view that the uninsured population was a significant problem, and they were amenable to changes that increased insurance coverage so long as they could prevent further interference from third parties (e.g. managed care) and threats to their autonomy. [19] One commentator observed at the time that "medical care providers had to work to redefine their position [on reform] in the face of lost cultural authority and intensifying economic pressure (Bronstein 22)." [20]

For a brief time it appeared that the AMA and most other physician groups might throw their support behind the Clinton plan, but it was not to be.

Hillary Clinton's health care task force included mostly academic policy experts. Few had ties to professional groups, as the administration was determined to limit interest groups to a peripheral role. Several authors point to the strategies used by the task force, such as a closed-door culture, its ivory tower makeup, and the decision to have the First Lady as its nominal head, as blunders central to the reform plan's eventual failure. [21-23]

The relationship between the AMA and the White House was sour from the start of the reform plan's development. Despite quiet negotiations in which Clinton offered the AMA several significant concessions, including malpractice reform and antitrust relief, and despite some public displays of goodwill by the AMA, the group simultaneously began to prepare both legal battle plans and advertising campaigns that attacked the idea of limits on health care spending. [24] The basis of the AMA's opposition was the reform's reliance on global budgets and managed care as its primary methods of cost control. [25]

Reporters at the time, and many analysts since, have focused on the give-and-take negotiations and backroom political drama between the Clintons and the AMA, but we must recognize that a more fundamental divide prevented the doctors' organizational voice being raised in support of proposed health reforms. Whether one believes their opposition was a noble quest to protect autonomy and the traditional doctor-patient relationship, or a selfish desire to protect their own pocketbooks, the cost-control mechanisms of the plan would prove to be an impossible pill for many physicians to swallow. Any hope of medical establishment support for the plan would vanish when, less than one

week after Clinton introduced his plan to Congress and the country, the AMA mass-mailed a scathing 15-page criticism to all the nation's doctors and medical students at a cost of nearly $700,000.[26]

Less than 12 months later, in August 1994, Senator George Mitchell (D), Senate Majority Leader, would declare significant health reform dead.[21] Most analysts credit a combination of events with its defeat, including: poor legislative timing behind budget and NAFTA battles, the aforementioned task force, and historic anti-reform campaigns from several political machines forever embodied by the iconic "Harry and Louise" ads from the Health Insurance Association of America (HIAA).[18, 22, 23, 27] For the first time in nearly a hundred years of attempted health reforms, organized medicine was not given a primary credit for the defeat.

We will never know what the outcome would have been had the Clintons been able to arrange for the full-throated support of the AMA and organized medicine. The AMA would go on to spend an additional $1.6 million on print ads painting the plan as villainous government health care.[28] But perhaps more important than any advertising activities, the AMA's wavering at the plan's introduction was one the first cracks in the armor, tarnishing the aura of inevitability; it emboldened anti-reform actors, who quickly mobilized. Who is to say the outcome would not have been drastically different if Clinton had included the AMA in the process from the start?

As with the Medicare period, the challenge of assessing how the entire body of U.S. physicians felt about the Clinton plan may be a quixotic task. Some

accounts claim that the AMA leadership abandoned its initial support in response to what it perceived as disapproval from the more conservative population of AMA members throughout the country.[27] Alternatively, several groups representing mostly primary care and minority physicians, including the American College of Physicians (second to the AMA in size), officially endorsed the Clinton reforms and fought for their passage.[29]

Our systematic review shows that in the few quality physician surveys from this era we find one theme: a lack of consensus in physician opinion as to what changes, if any, should be made to the system. Surveys showed that support varied based on physician specialty and area of the country, but we do not have enough data to draw firm conclusions. Despite this uncertainty, we must recognize several important distinctions between our two selected reform periods.

It is very likely that more U.S. physicians supported reform during the Clinton attempt than did when LBJ rammed Medicare through Congress in 1965. During the intervening 30 years the political power and public esteem of both the profession overall and the AMA in particular declined. Physician influence became decentralized as a myriad of professional groups and specialty associations flourished. Whether a unitary physician voice on the health system ever existed, by the 1990s a chorus of diverse voices could be heard.

Also, doctors no longer dominated medicine as they once had. Health care costs were now universally viewed as a problem, and managed care flourished as a result. Physicians, once kings of their domain with unquestioned

authority, had to contend with pre-authorizations for tests and procedures while they haggled with increasingly powerful insurance companies over their rates. The public began to question doctors' motives in ways that resembled their skepticism about insurance companies, and physicians' moral authority flagged.

The purpose of reviewing these two seminal moments in health policy is to illustrate the traditional views of physician attitudes toward the system. It is important to understand the narrative that has been assigned to physicians thus far, so we can appreciate if and how valid reported measures of doctors' opinions hew to or deviate from that narrative. We can also get a sense from these two reform moments of how and why both the health care system, and physicians' place in it, has changed so dramatically in the last 50 years. As we conduct our systematic review we must keep in view this changing landscape from the physician perspective, to attempt to assess how the landscape shaped physician opinions of the US health system.

For the most part, authors referenced thus far have assumed that the views of the medical establishments' policy operatives represented the general stance of the country's physicians. Is this true? What did our "everyday" doctors across America think about the system in which they practiced and the developments in Washington and other policy beehives? And most importantly, what was the significance of their opinion from a policy perspective?

Systematic Review

Introduction

Having reviewed traditional perspectives on physician opinion and doctors' role in several key moments of 20th century U.S. health policy, we can only conclude that while the importance of physician elites was without question, the attitudes of doctors in general toward the health system remain unclear. The AMA, long considered a synonym for organized medicine and the lone voice speaking for a mostly unified profession, experienced significant declines in membership and influence after the 1960s.[30] Additionally, several authors question how well the viewpoints of the AMA leadership represented those of the profession overall, even at the height of the group's power in the middle of the century.[6, 13]

To assess the state of research into physician opinion, we completed a systematic review of the literature for surveys asking doctors about national health policy or reform. The purpose of the review was to ascertain the attitudes of physicians as measured by formal surveys. We also hoped to learn about what shapes physician opinion in these areas and determine if and how opinion has changed over time.

Methods

We used the PubMed, JStor, and LexisNexis databases to complete our systematic review, with the rationale that these databases would assist us in locating the work of survey researchers in the fields of health sciences, social sciences, and print media, respectively. We also relied on "hand-searching" of

reference lists in articles identified in the database searches, as well as asking knowledgeable faculty for suggestions.

An initial search undertaken in January 2009 yielded no acceptable results.* Our final search was conducted in May – June 2009. The search terms for all databases were "Physician AND Attitude AND Health Care Reform" with the only limit being "English". The exclusion criteria can be found below in Table 1. We did not include surveys of only medical students or residents because of concern that health system opinion in these populations is unformed or in flux

Table 1. Systematic Review Exclusion Criteria

Poor quality survey[+]
Paper did not include a survey of physicians
Topic of survey not U.S. health care system or reform
Survey of medical students and/or residents only
Study population too limited (any population below state level)

Quality here refers to the apparent internal validity of the survey, graded Poor, Fair, Good, and Excellent. These are subjective ratings assigned by the first author and concurred with by the second author We considered the following survey design and execution issues when making quality assessments: source of questions (including validation process for original questions); quality of

* This first search used the terms, "physician opinion AND public policy AND public opinion" with the limits, human AND English, and yielded no surveys that met exclusion criteria. After being alerted by a colleague of the existence of the McCormick et al 2009 paper, we re-visited our search terms and worked to find a combination that would identify most of the physician surveys cited in that paper. We report the results of this second search here.

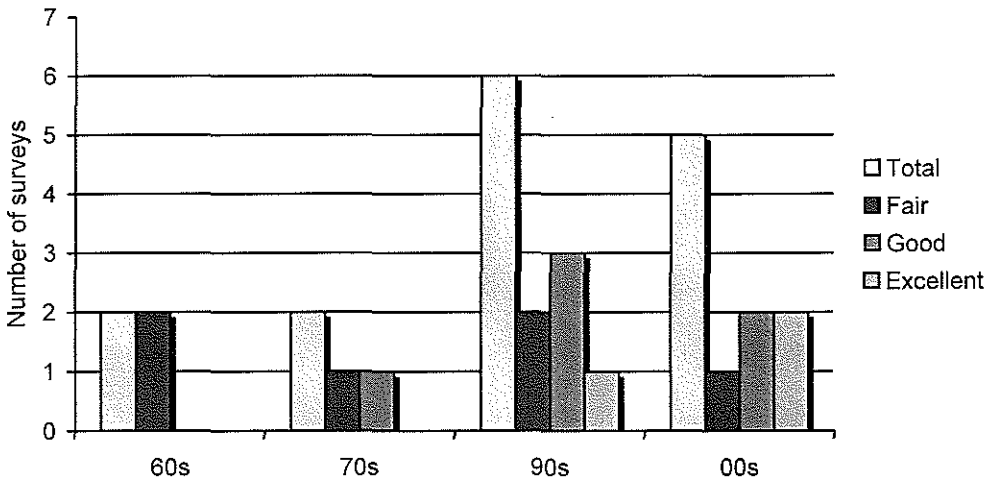
questions (clarity, appropriateness, bias/leading questions);, processes of recruiting survey respondents; response type (mail, phone, etc.); use of random sampling; response rate; and appropriateness of data analyses.

Our search resulted in an initial total of 1,427 articles/surveys from all databases. We excluded 1,377 by review of title, and an additional 35 by review of the abstract or text. The final systematic review evaluates 15 articles.

Results - Overview

See Appendix 1 for a table that provides citation information and summarizes the survey designs, survey population, survey year, recruitment method, response rate, survey form, survey length, question content, question source, survey strengths, survey weakness, and quality rating. Appendix 2 contains a table that summarizes the key findings for all surveys included in our review. Figure 1 below shows a breakdown of surveys by decade along with quality ratings. Generally, the quality of surveys improved over time.

Figure 1. Physician Surveys By Decade.



After an initial review of all selected papers, we decided to divide the surveys further into 5 different "eras" based on common content themes and the survey years. As with any survey, context is vital to an understanding of the results, and a breakdown by era allowed us to view physician opinion with a perspective for the health policy climate of that time. The 5 eras are the Medicare Era (2 surveys), "Crisis" Era (2), Clinton Era (4), Managed Care Era (2), and "What Now?" Era (5).

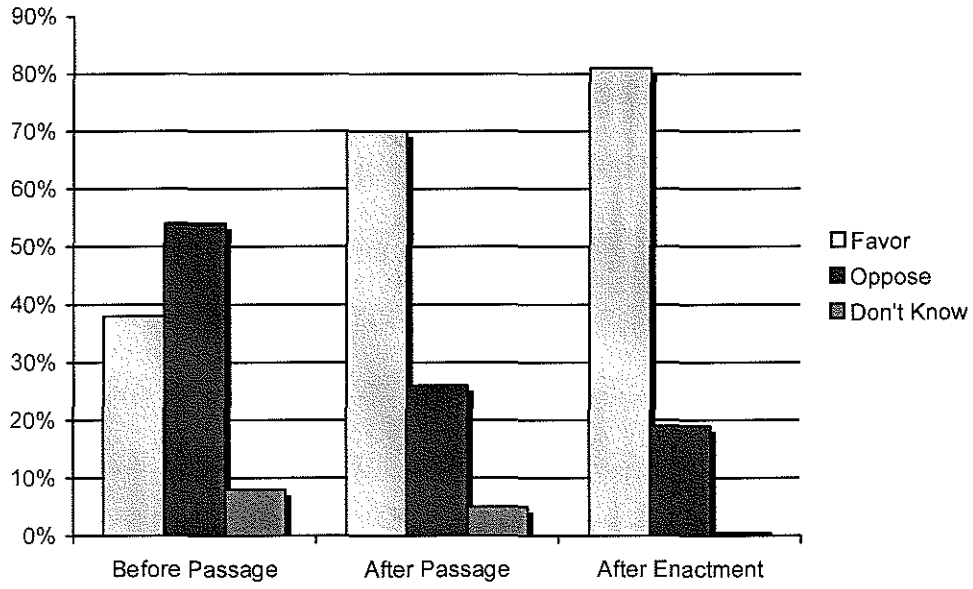
The Medicare Era: Opinion During a Health Care Revolution

For decades starting early in the 20th century, active policy elites in the medical profession, consisting mostly of the leadership structure of the AMA, fought with great success to prevent any reform legislation involving NHI.[8] As Colombotos (318), the author of both of the Medicare era surveys, summarizes, "Seldom has a law been more bitterly opposed by any group than was Medicare by the medical profession."[31] An aligning of pro-reform forces culminated by the 1964 Democratic election landslide allowed for the passage of legislation in July 1965 that established the Medicare and Medicaid programs as Titles 18 and 19 of the Social Security Amendments.[7] The early work in physician opinion attempts to understand physician views toward Medicare, both before and after its passage.

Colombotos, who is responsible for most of the initial physician opinion surveys we identified, first asked doctors in private practice in New York State before the passage of Medicare what was their "opinion about the bill that would provide for compulsory health insurance through Social Security to cover hospital

cost for those over 65."[32] Fifty four percent of respondents opposed Medicare, while 38% favored the legislation. He followed this survey with two additional surveys of the same physicians and a resulting paper that reported attitudes toward the new legislation before and after passage, as well as after the program went into effect.[31]

Figure 2. Physician Support for Medicare; Jan 1964-Mar 1965, May-Jun 1965, Jan-Apr 1967



SOURCE: From results reported by Colombotos, 1969; summarized by author

Figure 2 shows the dramatic shift in physician opinion of Medicare before and after its passage. Those in favor of the legislation jumped from 38% in January 1964-March 1965 to 70% in May-June 1965, right before the program was to start. The final survey saw an additional increase in those favoring Medicare to 81% in January-April 1967, about 6 months after its implementation.

In his first survey, Colombotos also identified several associations between reform preferences and physician demographics, some of which we will

be able to follow throughout the various survey eras. Physicians who were affiliated with the Democratic Party, politically liberal on economic-welfare issues, and located in New York City were more likely to support Medicare than were Republican identifiers, conservatives, and upstate physicians. The pre-Medicare survey found no major differences between generalists' and specialists' opinions of the legislation. Colombotos concluded that political views were the best predictor of doctors' position on Medicare. – just as decades of political science research has confirmed for the general public.

He also asked physicians before-after questions about the perceived effect of Medicare on the quality of medical care and on their own salaries. Before implementation, 14% thought the program would improve quality; 54% answered no difference; and 28% felt care would get worse. After implementation, these shifted toward a belief in improvement, with 30% saying they thought it would improve, 60% make no difference, and 8% harm care. Before implementation 35% of physicians thought Medicare would mean their salary would increase; 41% assumed there would be no change; and 12% feared a lower salary. The percentages did not change much after implementation (42%, 38%, and 11% respectively). Of most significance is that a majority of physicians did not fear Medicare's effect on patient care or their earning potential *before the actual start of their participation.*

We must note several weaknesses of the Colombotos' Medicare surveys, both of which received fair quality ratings. They were limited to private practice physicians throughout New York state, a population the surveys' author assumes

to be more liberal and pro-Medicare than U.S. doctors overall. The report does not explain how the population was recruited and does not address question validation. Finally, causality is difficult to assess, because the surveys pulled different sub-samples from the original sample for the later two iterations.

In spite of these problems, Colombotos' work is trailblazing. After decades of AMA resistance, one might have thought that the single largest expansion of the government's role in health care would have triggered further physician protest.[7] Yet despite threats from a few doctors intending to organize a physician boycott, widespread resistance never materialized and the AMA ultimately decided it could accept the results.[16] The Medicare era surveys demonstrate this immediate acceptance upon passage of the legislation.

Colombotos proposes two reasons for doctors' about-face on Medicare. First was the content of the legislation. The AMA had for so long predicted disaster with government involvement that Congress went to extraordinary lengths to guarantee that reimbursement situations would be favorable to physicians and promised quick payments.[6] The second was that public support for Medicare was clear, as a 1965 Gallup poll had two-thirds in favor of the program about 6 months before its passage.[31]

The early physician opinion work frames several important issues going forward. Will physicians quickly accept new reforms and major legislation once they have been passed? In the case of Medicare, which ultimately was a boon to physicians caring for the elderly, the answer appears to be yes. Do "everyday" physicians agree with the policy elites who directed the AMA? Both Starr and

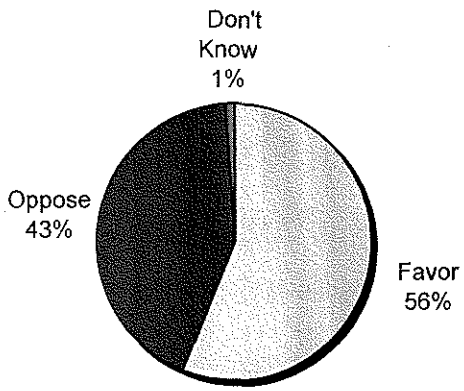
Saward put forth that in all likelihood many more doctors disagreed with AMA policy than the leadership recognized, but not as many as pro-reform forces hoped for.[6, 13] The Colombotos survey seconds this assessment as he found a weak majority (54%) opposed to the bill before passage, while nearly two-fifths (38%) were in favor.

The "Crisis" Era: The Inevitability of NHI?

In the years after President Johnson had signed Medicare and Medicaid into law, the momentum behind health care reform had slowed only slightly in the wake of the tsunami of Medicare. The word "crisis" had long been used by liberals to convince the public of the need for an even greater expansion of the government's role in health care. However, at the start of the 1970's, in the face of an explosion of Medicare and Medicaid costs, recently elected President Richard Nixon used the phrase "massive crisis" to describe the health care system during a July 1969 press conference. Several mainstream media sources followed with "crisis" stories about health care in the U.S. and once again major debates about reform and NHI ensued.[6]

Against this backdrop, Colombotos endeavored to measure physician opinion about health care again, this time focusing on their attitudes toward NHI, which many liberal proposals of the time advanced as the solution to the "crisis."[6] In 1973 he conducted the first nationally representative survey of physicians and medical students identified by our systematic review.[33] The survey, which we rated as good quality, covered attitudes toward NHI and how these attitudes vary across a wide range of secondary variables.

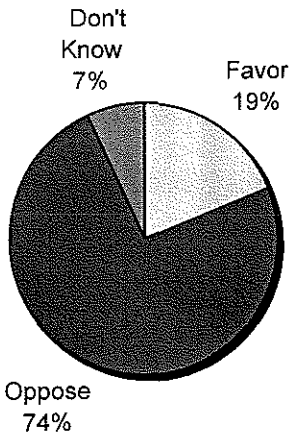
Figure 3. Physicians' Attitude Toward NHI, 1973.



SOURCE: From results reported by Colombotos et al, 1975; summarized by author

Figures 3 and 4 show physician attitudes toward NHI as compared with their perception of colleagues' attitudes. We see significant disagreement between personal opinion and what they thought was other physicians' opinions. When asked, "On the whole, what is your opinion of some form of national health insurance?" a slight majority expressed support. But in response to "Of the doctors you know personally, would you say most are [in favor/opposed to/don't know] of some form of national health insurance?"; a strong majority answered opposed. Colombotos noted that a similar inconsistency between attitudes and perceptions can be seen in his Medicare work.

Figure 4. Perception of Colleagues' Attitude, 1973.



SOURCE: From results reported by Colombotos et al, 1975; summarized by author

He found strong correlations, in both directions, between attitudes and perception of others' attitudes (e.g. those who favored NHI were more likely to perceive that other doctors favored it, and vice versa). Opponents of NHI were slightly more likely to feel strongly about their opinion than did supporters. The following tended to favor NHI compared

with their counterparts: women (62%), from Northeast (64%), under 35 years old (64%), and hospital-based (72%). Also, those doctors at lower income levels and those with a higher percentage of income as salary tended to support NHI. Interestingly, only 42% of those characterized as primary care practice favored national health insurance, continuing a trend from the Medicare Era. AMA members were largely in agreement with those identified as "AMA leaders," but non-AMA members were much more likely to endorse NHI.

Physicians in the 70s-era Colombotos survey overwhelmingly felt that NHI was inevitable (83%), with 46% answering that it was inevitable within 5 years. Belief about inevitability correlated with attitude toward NHI in both directions. As he did with Medicare, Colombotos argued that physicians continue to appreciate trends in public opinion and popular attitudes and that these may even influence their own opinions to a certain degree.

A final significant note about this survey is that it asked doctors to assess their personal knowledge of health reform. Forty four percent of respondents reported that they were "not well informed" or "not at all informed" about the various NHI proposals despite most expressing some kind of preference (45% felt "strongly" either for or against). As we will see in future survey eras, there is reason to question physicians' understanding of health reform issues despite their prominent role in the system.

This Colombotos survey was rated as good quality for nationwide sample and high response rates, but it possesses many of the same weaknesses of the earlier work in unclear recruitment, question validation, and survey administration

procedures. The inclusion of medical students and residents in the study population may have driven responses toward pro-NHI opinions, but he at least partially addressed this by offering weighted totals to adjust for sub-population sizes. The weighting process was not explained.

The other study from the Crisis Era is a survey conducted by Goldman of graduates and current students of Yale University School of Medicine.[34] The study's goal was to measure respondents' support for various reform proposals of the day, including several that could be described as NHI initiatives. The 1972 survey found that 53%, including two-thirds of physicians in office-based practice, would accept the Medicredit plan, which was the AMA's proposal at the time. The plan would provide tax credits to buy private insurance, basically a limited subsidy with no cost control component(s).[6]

Other prominent plans of the time, including the Kennedy-Griffiths Act and the Nixon Administration's proposal, both of which aimed for universality and cost control, were accepted by 10% or less of the study population. The author notes that medical school students and faculty were more likely to support radical changes, while surgeons, solo practitioners, specialists, and members of multi-specialty groups favored more conservative plans. As did Colombotos, Goldman found that general practitioners never gave majority support to any single option. Goldman also reports that relationships between political attitudes and party identification were consistent with support for various reform proposals throughout the survey.

The fair quality Goldman study has several limitations. We included the study despite its very limited study population of Yale graduates and students, because the author appropriately justifies this population as representative of physicians nationwide, but the sample still has the potential for bias. It is unclear how the survey described the various proposals/bills to respondents and how it asked doctors to rate these proposals.

Taken together, what do these surveys tell us about the "Crisis" Era? Both Goldman and Colombotos are in agreement that physicians' attitudes may not be so closely aligned with the AMA's, although they still appear to be more conservative than the public at large. The 2 surveys disagree on physicians' overall attitude toward NHI, as Goldman reports that only 20% of office-based physicians "agreed with the principle of a mandatory, federally financed health insurance sytem," while 49% of office-based practitioners in the Colombotos survey favored "some form of NHI." Part of this difference may be explained by differences in wording, not to mention other methods variances including different study populations.

The "Crisis" Era surveys do continue to support some of the other trends first identified in the Medicare Era. We begin to get a picture of the physician who supported further expansion of the federal government's role in health (i.e. NHI) in the early 1970's. The typical supporter was of liberal political beliefs and likely a Democrat; hailed from cities in the Northeast; hospital-based in internal medicine, pediatrics or psychiatry; and made less money than other physicians or was salaried. Most of these associations may be intuitive for those familiar

with health policy, but their confirmation is important. NHI-supporters had the least to lose by radical system reform. Given that many doctors had a lot at stake with further system overhaul, it should not be surprising that opinion was more intractable than the startling post-Medicare reversal might have us think.

The Clinton Era: Dissatisfaction and Disunity

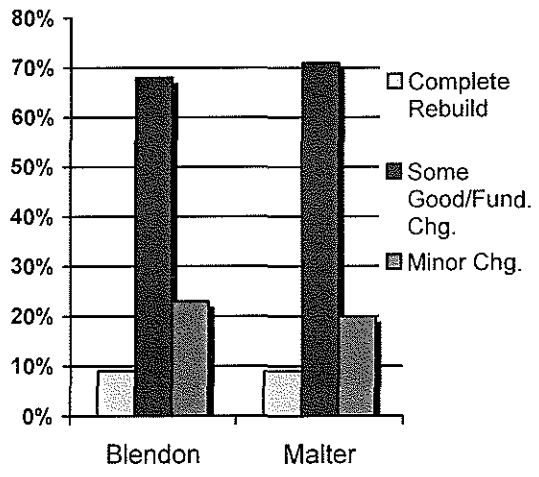
After the "Crisis" Era, we find a large gap until the next quality physician surveys appear, the pause during a period where interest in large expansive federal level health reform recessed. Starr argues that a confluence of forces, including a severe 1974-1975 recession, political stalemates amongst mixed or conservative leaning governments, and the continued explosion of Medicare costs, combined to drive the health reform discussion toward mechanisms that would increase efficiency while cutting or controlling costs. He characterizes this time as the rise of "corporate medicine."[6] We note that research interest in physician opinion during this period seems to have faded after the expansion-minded debates of Medicare and the early 1970s.

The phoenix-like health care discussions would rise again in the early 1990's, starting with Harris Wofford's miraculous come-from-behind 1991 victory in a Pennsylvania special election to the U.S. Congress. Experts and polling credited his victory to Wofford's outspoken support of and ingenious ads for health care reform.[17] With this catalyst, interest in the issue exploded and 1992 saw the election of a charismatic moderate Democratic President who envisioned a sweeping system redesign as the landmark event of his first term.[18] Strong public support for major health reform combined with the concurrent election of a

Democratic Congress to give reform what the editor of JAMA at the time called "an air of inevitability (Navarro 206)."[23] In this charged atmosphere, we find a renewal of interest in U.S. physician opinion of the health care system and the proposed Clinton changes.

Of the 4 surveys we identified from the Clinton Era, two are comparisons of U.S. physicians with doctors from other countries, and two looked at opinion in select state populations. The first study, by Blendon et al, was a good quality survey that compared opinion between U.S., German, and Canadian physicians of their own health systems.[35] We focused primarily on the nationally representative U.S. physician results for our review. The survey asked respondents to choose which of several statements best expressed their views on the U.S. health system. Sixty eight percent selected "There are some good things in our health care system, but fundamental changes are needed to make it work better"; 23% said "On the whole, the health care system works pretty well and only minor changes are necessary to make it work better"; and 9% thought "Our health care system has so much wrong with it that we need to rebuild it completely." Figure 5 shows these results compared with results when the Malter et al asked

Figure 5. Physician Attitude Toward U.S. System, 1993.



SOURCE: From results reported by Blendon, 1993, and Malter et al, 1994; summarized by author

the same question of physician in Washington state. The nearly identical results reassure us that this is an accurate snapshot of physician opinion at the time.

Blendon found that primary care physicians were more likely to favor completely rebuilding the system than were their colleagues, an important shift from earlier work that found generalists to be more wary of major reform. The survey also asked physicians to assess the seriousness of items on a list of potential system problems. A majority of U.S. physicians rated the following problems as either very serious or somewhat serious: "excessive delays or disputes in processing insurance forms or receiving payment for services rendered" (78%); "limitations on length of hospital stay" (57%); and "external review of clinical decisions for the purpose of controlling health care costs" (53%). Interestingly, these were also similar to criticisms leveled at the Clinton reforms, as the plan leaned heavily on the use of managed care and global budgets to control costs.[27]

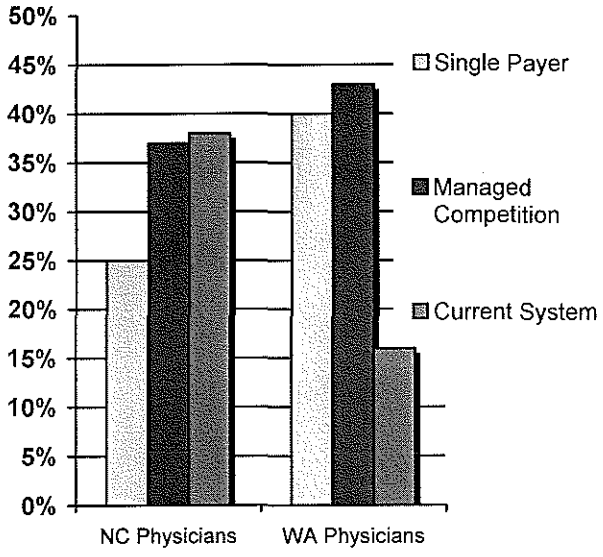
The good quality Blendon survey had a fairly pedestrian response rate of 44%, opening the possibility of non-response bias. Some of the questions may have been leading, as it appears the survey asked about the severity of several problems without allowing respondents to say that they did not think the issue was a problem. Survey strengths included its well-documented nationally representative sample and validated questions.

The other international study was a good quality survey by Scanlan et al that compared the attitudes of U.S. family physicians with their counterparts in Canada.[36] The survey showed that U.S. physicians were much more likely to

see the need for major changes to the health care system. Our family doctors were more likely to agree that there were too many controls on physicians; that litigation concerns influenced their clinical decisions, and that PCP incomes were too low while sub-specialists' incomes were too high. The study targeted family doctors, which limits the conclusions we can draw. Also, the question source or validation process was not described.

Other studies from the Clinton Era looked at physician opinion on the state level. The surveys provide a nice counterpoint to one another, because both were collected in 1993 but from states that differ greatly. The Malter et al survey was an excellent quality survey of physicians practicing in Washington State.[37] Both this survey and the good quality Millard et al study of North Carolina physicians asked what type of reform doctors preferred.[38] The nearly identical questions asked respondents to choose between a single-payer system, managed competition (a major component of the Clinton plan), and keeping the current system. Figure 6 shows the results from these questions side-by-side.

Figure 6. Physician Preference for Reform, 1993.



SOURCE: From results reported by Millard et al, 1993, and Malter et al, 1994; summarized by author

Despite evidence that physicians at the time were ready for "fundamental change," we see doctors are far from consensus. We also observe significant preference variances between the states.

Washington physicians had an interesting perspective on the Clinton plan's chances of success. When asked whether the proposal would address the shortcomings of the current system: 61% responded that it had little or no chance; 33% thought that it had some chance; and only 3% thought it had a good chance. This is in spite of the fact that a plurality (43%) thought the best offered reform option was "managed competition between several private insurance plans in which employers are required to offer employee health insurance." This skepticism toward the Clinton plan is consistent with experts' characterization of the physician response to the legislation as ranging from lukewarm to hostile.[27]

Several familiar themes appear in the Malter survey regarding associations. Procedure-oriented specialists were more likely to want to keep the current system, and primary care physicians were more in favor of a single-payer system. Salaried doctors preferred single-payer significantly as compared to their counterparts paid via FFS. Finally, the survey asked about several specific elements of reform. Only two were highly-rated, with majorities agreeing that "reduction of administrative paperwork" (68%) and "malpractice reform" (62%) would "improve the health care system."

The final Clinton Era survey (Millard) asked North Carolina primary care physicians, including general practitioners, family physicians, and pediatricians,

several similar questions about the system and reform. We find a population of physicians that appears more conflicted as to the need for reform than the Washington doctors. Sixty nine percent of respondents were either strongly or moderately dissatisfied with the current system, and 76% felt that access to care was not adequate in the state. Despite these findings, a plurality of doctors in NC preferred the status quo when asked to choose from various reform options.

The Millard survey also provides further evidence calling into question how well physicians understand issues of health reform. Even after the authors provided participants with schematic diagrams outlining the reform plans, some still felt they had insufficient information to judge the merit of a single-payer plan (29%). Slightly more doctors uncomfortable with their ability to judge the managed competition plan (34%). These numbers are fairly consistent with the Malter survey where 28% indicated they understood the Clinton plan either "a little" or "not at all."

The same association trends remained for the North Carolina physicians. Doctors currently reimbursed under FFS were more likely to choose retaining the current system compared with their salaried colleagues. Those who were satisfied with the current system or did not think access was a problem also tended to prefer the status quo, while those who were dissatisfied with the system were 8 times more likely to choose single-payer as their system of choice.

The major limitation of both the Malter and Millard surveys was that they were limited to physicians in a single state (Millard was NC primary care physicians only). This does provide an interesting juxtaposition of perspective as

Washington has traditionally leaned to the left in terms of national elections (Clinton carried the state twice) versus North Carolina which from 1980 until 2008 had gone conservative in Presidential elections (Clinton lost there twice). We should also emphasize that Millard survey questioned primary care physicians only, a population we might expect to be more likely to favor liberal health policy and a major system overhaul. It is unclear to what extent this may have been balanced by the conservative leanings of the state in general.

This review of some of the specific results from the Clinton Era surveys elucidates several themes, some old, some new. Physicians were consistently dissatisfied with the system, particularly with regard to access to care for all. They had begun to feel the administrative burden of an increasingly powerful private insurance system and the arrival of managed care. They also were unhappy with the malpractice system and have begun to clamor for tort reform.

Despite this unrest, physicians' vision for the future of the system remained unclear. They expressed a desire for change, but not nearly as much as did the general public, who when surveyed in 1991 voiced a much greater preference for complete rebuilding than physicians would a few years later (see Figure 5). A Blendon public opinion poll found that 42% favored complete rebuilding, with an additional 50% calling for fundamental change, and only 6% endorsing minor changes.[39] Physicians and the general public do, however, share a similar lack of consensus as to what that change should be.

Also as was true for the public at large, it appears that despite some initial enthusiasm, doctors were never entirely comfortable with the Clinton plan.

There are no surveys which indicated a majority support for Clinton reforms, and physicians appear fairly evenly divided between a single-payer system, the current system, and a Clinton-style compromise between the two. Researchers slyly asked physicians about the Clinton plan using proxies like "managed competition" to minimize any name-bias toward Bill and Hillary, but whether this actually worked is unclear. What is clear is that physicians did not run with open arms toward the proposal.

The Clinton Era surveys reinforce several now familiar associations. Specialists and surgeons tended to prefer the FFS private insurance system and keeping the status quo. Dissatisfaction with the current system strongly drove support for the alternatives. One important change from previous eras is that by the early 1990s we see that primary care physicians have arrived at their current position as tending to champion liberal positions on health reform and the single-payer option.

The degree to which physicians completely understand proposals and reforms asked about in surveys remains unclear. The Mallard study found that a significant minority of North Carolina physicians still felt uncomfortable judging reforms even after they had been provided explanatory information. This will become an important issue going forward as managed care grows and physician opinion toward the health system becomes increasingly conflicted and complex.

The Managed Care Era: Doctors Hate Managed Care

Only a few years after the failed Clinton attempt at a health system redesign, we find that managed care has continued the expansion that began in the 1980's. Managed care, by the mid-1990's, had wrested control of the employer insurance market from traditional fee-for-service (FFS) as it had grown to cover 85% of employees.[40] Ironically, its use as a cost and quality-control mechanism was one of the central structures, and most criticized, of the Clinton proposal.[27]

The critical backlash resulting from its more organic growth was no less fierce. Physicians decried publicly the infringements of managed care on autonomy and their relationships with patients, while grumbling about the accompanying administrative requirements and reimbursement declines.[41] The public too was convinced of managed care's evils as polls in the second half of the decade showed that American's feared managed care was more concerned with saving dollars than lives.[40]

Amidst this managed care as policy piñata atmosphere, surveys from the Managed Care Era sought once again to measure the physician opinion of the system and the new direction it had taken. The survey by Simon et al was a fair quality study of the opinion of deans, faculty, residents, and students at medical schools in the U.S.[42] Asking respondents to rate their attitudes toward various subjects on a 0 (as negative as possible) to 10 (as positive as possible) scale, Simon found that attitudes toward managed in general were negative and ranged from a low of 3.9 +/- 1.7 for residents to a high of 5.0 +/- 1.3 for deans. Primary

care doctors felt better about managed care than their specialist colleagues (4.6 versus 4.0, $p<0.001$).

The survey posed to participants the question of whether FFS or managed care was better with regard to several different aspects of medical care. Across all respondents, FFS performed better than managed in all aspects, including from strongest FFS preference to weakest: Access to care, Minimizing ethical conflicts, Doctor-patient relationship, Continuity of care, Care at the end of life, and Care of chronic illness. However, there was significant variation of opinion across the multiple categories of respondents. For the three quality of care variables, primary care physicians were more evenly divided and even occasionally of the opinion that managed care was better.

Simon also found that more than half of physicians (excluding student, residents and deans) reported that as a result of managed care their income had decreased or lot a little (55.8%); their job security had diminished (54.1%); and collegial relations had deteriorated (52.2%). When asked to choose which system was the best for the most people for a fixed amount of money, 57.1% chose a single-payer system, while the remainder was closely split between managed care (21.7%) and FFS (18.7%).

The Simon study had several quality problems. The survey was limited to those in academic medicine, and the inclusion of medical students and residents in some outputs makes the results challenging to interpret. Also some of the questions had significant flaws. Several leading questions asked about how much of a problem some effect or aspect of managed care was (e.g. "How

much has managed care decreased your time for research?"), without permitting the option of saying that something was not a problem at all. Other questions only offered limited answer choices with no intermediate options (e.g. the effect of managed care described as "A lot, a little, or not at all").

The second study from the Managed Care Era was a fair quality study by Deckard of Florida physican opinion.[43] Interestingly, Florida had, in 1992 and 1993, enacted major health care reform at the state levels, some of which mirrored those proposed by the Clintons. These reforms included new insurance regulations, the use of practice parameters, and the establishment of consumer purchasing alliances.[43] The survey also asked physicians about reform issues in a novel way, requesting that they rate the importance of several reform issues to physicians support of health care reform.

The top 5 most important issues (percentage rating as very important) were: Tort reform/malpractice immunity (81.4%), Physician autonomy (75.0%), Freedom from insurance hassle (69.0%), Consumer choice of providers (67.5%), and Incentives for quality care (56.6%). The bottom 5 were: Control cost (28.1%), Maintain private insurance (37.6%), Coordinated state/local planning (22.1%), Consumer advocate commission (11.7%), and Services under one entity (7.9%). Perhaps more interesting than the top 5, which contains no surprises, is the bottom 5. Should we call into question both physicians' concern with health care costs so long as their autonomy and salaries are protected, as well as their true interest in maintenance of the private insurance system that the AMA and other physician elites have worked for so long to preserve?

Deckard also asked Florida doctors about their knowledge of health care reform and physician input into and support of national level reform, with eye-opening results. Nearly half (48.9%) of Florida practitioners indicated that their knowledge of national reform was either poor or fair, with knowledge of state reform fairing worse at 57.3%. Strong majorities indicated that they felt physician input into national reform was either little or none (88.2%) and that they did not support national level reforms (78.1%). Additionally, Florida physicians rated all of the state's recent health care reforms negatively.

The Deckard study does have many limitations. A low response rate (19.4%) and its Florida-only population open the door to multiples biases. The paper did not describe any question validation process, the exact content and phrasing of many of the questions is unclear, and several of the questions were potentially leading (e.g. one of the aspects of reform was "Freedom from insurance *hassle*"). Also, the timing of when the survey was administered is not given.

In spite of containing only 2 surveys of fair quality, the Managed Care Era does offer a few lessons. Physicians indicated that they were generally unhappy with managed care as organizational structure for health care, but like the results from general public polling, it remains unclear how much of this dissatisfaction resulted from real functional problems as compared to the widely recognized stigma against managed care, HMO's, etc.[44] Primary care physicians appeared more ready to accept managed care than specialists and

surgeons, similar to their attitudes toward the Clinton plan only a few years earlier.

Several other trends re-appear from earlier eras. The degree of physicians' knowledge and understanding of reform issues continued to be called into question. Doctors consistently prioritized autonomy above all else. They have also begun rate highly malpractice reform and improvements that decrease administrative workload, a trend we witnessed in the Clinton Era.

The "What Now?" Era: Reform Fatigue as the Search Continues

The present decade finds the various players involved in health care reform at an impasse. The public continues to be dissatisfied with the system as medical costs eat up more of their paycheck with each passing year, but they remain divided as to the solution and wary of any reforms that expand government's role.[45] Fatigue appears also to have set in amongst health researchers. Democratic control of both the White House and Congress means the prospects for health reform are as bright as they have been since the Clinton proposal, yet several experts comment that not much has changed and familiar obstacles remain.[46, 47]

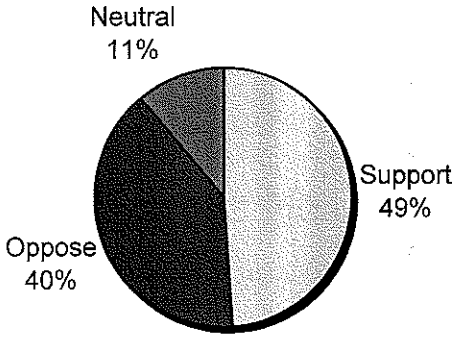
Opinion research from the "What Now?" Era indicates that physician surveys have increased in both quality and quantity, as researchers continue to search for trends and preferences that might pave the way to the next major reform effort. In recent years, doctors have found themselves at a crossroads with respect to the system and their place in it. Laugesen and Rice (2003) comment that "Physicians today are often portrayed in mythical language as

vanquished heroes within a paradise lost." They contend that physician influence has declined as their economic monopoly over reimbursement structures has crumbled and their political capital has been sapped by decades of battle over Medicare payment rates and faltering public belief in their infallibility[3].

Our first survey from the "What Now?" Era is an excellent quality study from a nationwide sample of physicians by Ackermann and Carroll that attempted to measure attitudes at this crossroads toward the financing of national health care.[48] Their most important finding was that physician opinion about NHI changed significantly depending on language about its financing. Figure 7 below shows the results from the question: "In principle, do you support or oppose governmental legislation to establish national health insurance?" Figure 8 graphs their response to "Do you support or oppose a national health insurance plan where all health care is paid for by the federal government?"

A near majority supported NHI in principle (18% strongly supported, 31% generally) with significant opposition (21% strongly, 19% generally). However, when asked about NHI that is financed by the government a clear majority was in opposition (33% strongly, 27% generally) as opposed to support (9% strongly, 17% generally). We can surmise that while doctors were divided on the idea of NHI they clearly were wary of a program that would be administered and paid for publicly. A brief nationwide follow-up survey of excellent quality completed 5 years later found increased support in principle for NHI legislation of 59% (28% strongly, 31% generally) against 32% opposed (17% strongly, 15% generally).[49] The survey did not repeat the second question about the financing of NHI.

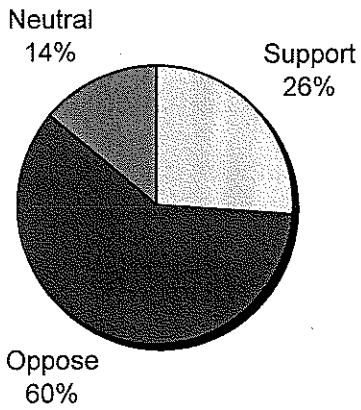
Figure 7. Physican attitude toward legislation to establish NHI, 2002.



SOURCE: From results reported by Ackermann and Carroll, 2003; summarized by author

Associations between physician characteristics and NHI attitude fell along mostly familiar lines. After adjusting for other variables in the first survey, doctors most likely to support NHI were: in primary care; had greater than 20% Medicaid patients; had greater than 10% uninsured patients; not in private practice; and located in inner cities. Those most likely to oppose NHI had less than 20% and 10% of patients in Medicaid and uninsured, respectively; were surgical subspecialists or anesthesiologists; and in rural or private practice. Both theAckerman and Carroll studies were limited in depth because of their short designs (which may, however, have helped achieve its high response rate).

Figure 8. Physician attitude toward NHI plan paid for by the federal governement, 2002.



SOURCE: From results reported by Ackermann and Carroll, 2003; summarized by author

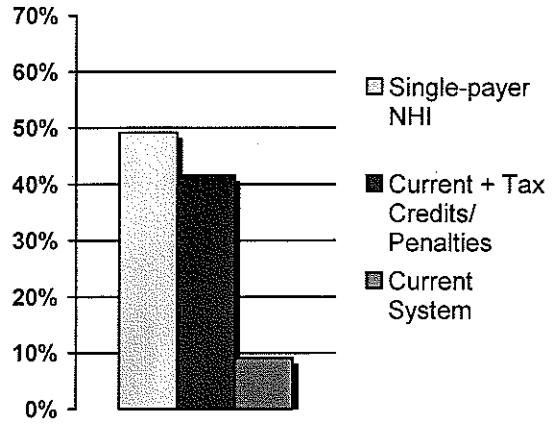
Next we looked at another set of two surveys from the "What Now?" Era completed by the same authors six years apart. The first survey by McCormick et al is a fair quality survey of physicians in Massachusetts that assesses their

preference for NHI as compared to other options.[50] Meanwhile its excellent quality follow-up asks a nationwide sample of physicians for their opinion of various options to expand health coverage.[51] Like the Ackerman study above, the 2 McCormick studies demonstrate what may be a key contradiction in physician thinking about health policy.

In 1993, the authors asked Massachusetts doctors, of single-payer, managed care, and FFS, "Which...would offer the best health care to the greatest number of people for a fixed amount of money?" Figure 9 shows that a significant majority chose single-payer, with the remainder split between the other two options. Figure 10 shows that from the follow-up 6 years later that a nationwide sample of physicians felt differently when asked to choose which option they most preferred of single-payer, the addition of a tax credit/penalty to the current system, or keeping the system at present. Single-payer support declined, while support for an alternative (in the second survey, tax reforms) increased.

While we recognize that the samples were different, that physician opinion may have shifted in those 6 years, and that tax credits may be a more attractive alternative to physicians, we also offer that question wording may help to explain the variance. The first survey asked physicians to choose from reform options given a "best for society" perspective, yet the second survey asked for simple personal preference (i.e. "best for me" perspective). Is it possible that physicians experience a conflict between supporting reforms that benefit the population as opposed to those that benefit physicians?

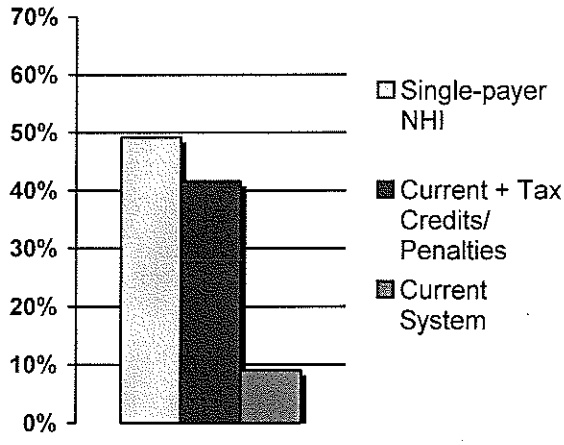
Figure 10. Physician Preference for Reform Structure, "Best for Me," 2007.



SOURCE: From results reported by McCormick et al, 2004; summarized by author

Both McCormick surveys further confirm the central correlations between physician characteristics and preferences for NHI (i.e. primary care and hospital-based physicians were most likely to support NHI; specialists/surgeons and office-based were most likely to oppose). Finally, the two studies demonstrate that physicians consistently support the notion that all should have access to medical care. Identical majorities of 89% either strongly or somewhat agreed with the statement "It is the responsibility of society, through its government, to provide everyone with good medical care, whether they can afford it or not" in 2001, and "All Americans should receive needed medical care regardless of ability to pay" in 2007

Figure 10. Physician Preference for Reform Structure, "Best for Me," 2007.



SOURCE: From results reported by McCormick et al, 2009; summarized by author

The first McCormick study in particular has the problem of a clear author bias in favor of the NHI system, which is evidenced in their paper's introduction, not to mention several potentially leading

questions. These bias concerns were largely corrected by the second survey. The 1991 survey also was limited to Massachusetts doctors who might have a different, perhaps more liberal, perspective than does the general U.S. physician population.

The last survey from the "What Now?" Era asked similar questions to those already reviewed, but put them to a sample of physicians in a different state. The good quality 2005-06 study of Minnesota physicians by Albers et al assessed opinions about various health care financing structures. Doctors preferred the single-payer option (64%), over health savings accounts (HSA) (25%), and managed care (12%), when asked which financing system would offer the best health care to the greatest number of people for a fixed amount of money.

Primary care doctors (74%), women (76%), and urban-based physicians (71%) were most likely to favor single-payer, while general surgeons were most likely to choose HSAs (55%). No groups expressed a preference for managed care. The survey also further confirmed physicians' belief in access, as nearly all (86%) respondents felt "it [was] the responsibility of society through government to ensure access to good medical care for all, regardless of ability to pay." The Albers study is limited importantly by its Minnesota-only study population.

Our final survey era finds researchers groping for a definitive decision by physicians as to their preferred health system direction. Several researchers appear to be hoping to legitimize the single-payer or NHI options, so we must

remain vigilant of potential biases. Physicians continue to disagree as to the best reform path, despite shared values regarding universal access.

The "What Now?" Era surveys also elucidate several more subtle points of physician opinion. We see that issues of perspective (for whom is something "best?") and the question of supporting a policy in general versus supporting it when it would be administered and financed by the government appear to generate internal conflicts and response shifts. Certain divisions within the profession appear clearer than ever, with primary care physicians facing off against specialists and surgeons on opposite sides of the health reform discussion.

Discussion: What Do We *Really* Know About Physician Opinion?

Although more extensive work has been done in other areas, such as physician job satisfaction and opinion on hot-button clinical issues like abortion, we identified relatively few quality studies of physician attitudes toward the U.S. health care system and reform. It would be tempting to draw sweeping conclusions from our 15 surveys or to use the results from any particular survey to enhance a particular perspective, in fact, we can be certain of little about doctors' opinions.

Survey problems that appear to be endemic to the arena of physician opinion compel reservations about their findings. The following consistently dogged the literature we reviewed and limited our ability to make definitive statements about physician opinion:

- ***Question Wording Problems***: Health policy and health reform are complex topics, and the terminology used to describe their components is key. Surveys constantly use words such as "managed care," "national health insurance," and "single-payer system," without defining them or allowing respondents to say how they define them. The meaning of responses is less clear as a result. Other problems with question wording include the consistent use of questions with a limited number of choices and forced choice (i.e. no ability to choose other and give a response that is not listed or to answer "don't know"), not to mention numerous surveys that used leading questions.
- ***Non-Response Bias***: Response rates for included surveys ranged from a low of about 20% to high of over 80%. The vast majority of reviewed surveys was mailed and had response rates in the 50-70% range. While we would consider any rate over 50% for a physician survey to be good, that does not mean we can ignore that the population who would choose to return a mailed survey on health policy may differ in important ways from one that would not.
- ***Limited Study Populations***: Many of the surveys include only physicians from a certain state, and sometimes only physicians of certain specialties. Interpretation of results from these smaller populations is challenging and we make generalizations at our own peril. One can see with every Presidential election cycle how different attitudes and beliefs of the public

can be from state-to-state, and there is little reason to doubt similar divergence among states' physician populations.

- ***Absence of Key Variables***: With the exception of the early work of Colombotos and others, physician surveys tended to collect only demographic and medical practice data to associate with attitudes toward policy and reform. In reality it is very likely that any individual doctor's opinion of the U.S. health care system will correlate with other important variables, such as party identification, scope of and interest in government, general position on the liberal-to-conservative ideological spectrum, and other political beliefs. Colombotos concluded that political ideology was the key driver of opinion about Medicare, yet since the 1970s researchers have not been asking doctors about these perspectives.
- ***Little Ability to Track Trends***: Inconsistencies in wording and vagueness of terms make trends from physician surveys difficult to identify. The other significant factor here is a common focus on "flavor of the month" health care initiatives. Instead of focusing on stable big-picture concepts in health policy, researchers tend to ask physicians about whatever is the hot reform topic of the times, be it managed care, tax credits, or HSAs. The result is era-specific snapshots of attitude, not conducive to long-view analysis.

Despite these problems, we can come to a few important conclusions about U.S. physician opinion. The following has become clear during our review of the literature:

- ***Physicians value autonomy***: If surveys of doctors have told us anything, it is that physicians treasure their authority within the clinical realm of health care. They will oppose any initiatives that they perceive will threaten their autonomy, their ability to make clinical decisions and curate physician-patient relationships as they see fit. We can see this prioritization in physician work satisfaction surveys as well.[52-54]
- ***Physicians believe that everyone should have access***: Doctors clearly believe that every American should have access to needed medical care regardless of ability to pay. Yet all access is not created equal. Physicians may agree that none should go without needed medical care, but there is no agreement as to how this should be done and how it should be paid for.
- ***Physicians are dissatisfied with the system***: Not since the Millard survey of North Carolina doctors in 1993 have even a plurality of doctors in any survey expressed interest in maintaining the health care status quo. They dislike the administrative burden caused by our patchwork network of insurers, resent that external forces pressure them to control costs and increase efficiency, and express concern about our access shortcomings.
- ***Physicians hate lawyers and insurance companies***: Not literally, but they do abhor a tort system that they feel promotes defensive medicine

and rewards frivolous lawsuits, not to mention the strain of increased malpractice premiums. They may not hate insurers, but they hate the paperwork that accompanies any payment for their services, and the increasing tendencies of payers to apply some measure of clinical oversight (see "Physicians Value Autonomy" above).

- ***Physicians have not reached a consensus on reform:*** Perhaps the most important conclusion we can draw from a systematic review of the opinion literature is that physicians, as a population, remain undecided as to the best design for our health care system. In spite of the best efforts of some researchers to shade doctors as leaning or trending toward certain initiatives, such conclusions are premature based on a review of the entire body of evidence.
- ***Practice setting does correlate with reform preference***: While we hesitate to draw overall conclusions about physicians's views of reform, certain subpopulations do appear to have more definite preferences. The following groups have since at least the Clinton Era expressed a desire for a single-payer system and/or NHI: primary care, hospital-based, salaried, and urban physicians. Meanwhile, surgeons, specialists, AMA members, office-based, and private practice physicians appear more likely to choose retention of the current system or a non-single-payer alternative, such as tax credits or HSAs.

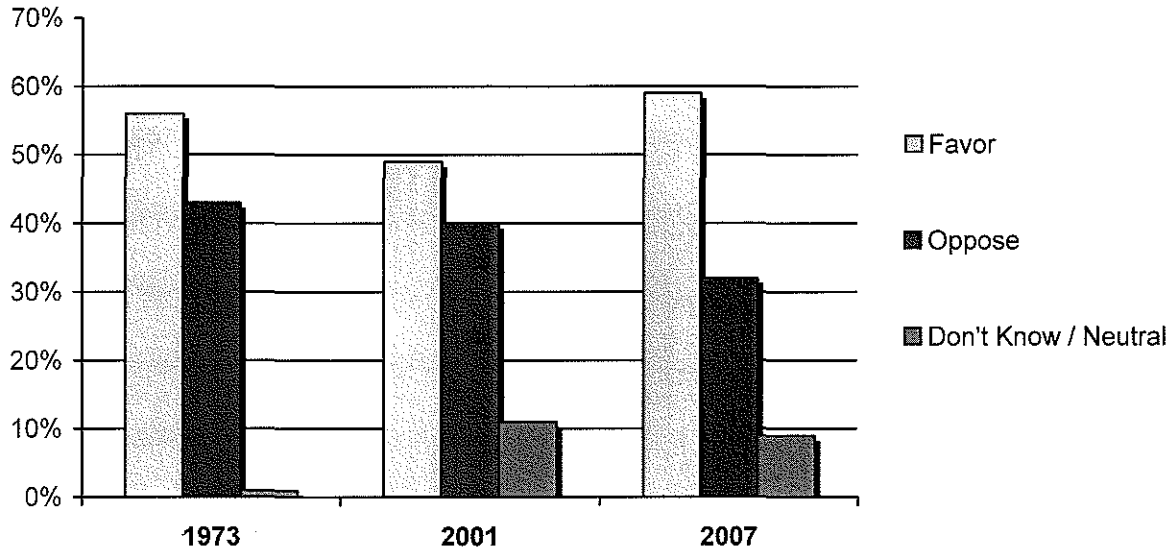
One conclusion that several of the more recent surveys have arrived at deserves additional comment. The Carroll 2008 and Albers 2007 papers indicate

that physicians' support for a single-payer system and/or NHI is growing, while others claim either majority or plurality support among doctors for these reforms (McCormick 2004, Ackermann 2003, Simon 1999). If one were to read any of these studies it would be reasonable to come to the conclusion that physicians were coming around to the idea of national health insurance or that they were beginning to lean toward a single-payer design.

About NHI, a review of surveys from different times indicates that when asked for their *general* opinion about NHI, physician support has remained relatively constant. Figure 11 below shows the results from 3 surveys completed in 1973, 2001 and 2007.[33, 48, 49] The first survey asked, "On the whole, what is your opinion of some form of national health insurance?" The latter two asked, "In principle, do you support or oppose government legislation to establish national health insurance?"

The percentage of physicians from these surveys who favor NHI ranges from 49% to 59% over a 34-year period. We find no sweeping trend in recent years either toward or away from a preference for NHI. We should also note that the questions ask about NHI in a "soft" way (i.e. with qualifying phrases such as "on the whole," "some form of," and "in principle"), do not give any specific administrative or financing mechanisms, and do not offer alternative reforms. Therefore, we should assume that the results would tend to overestimate true support for NHI, especially when posed as a real program to-be versus a more abstract idea.

Figure 11. Physician Attitudes Toward NHI Over Time.



SOURCE: From results reported by Colobotos et al, 1975, Ackermann and Carroll, 2003, and Carroll and Ackermann 2008; summarized by author

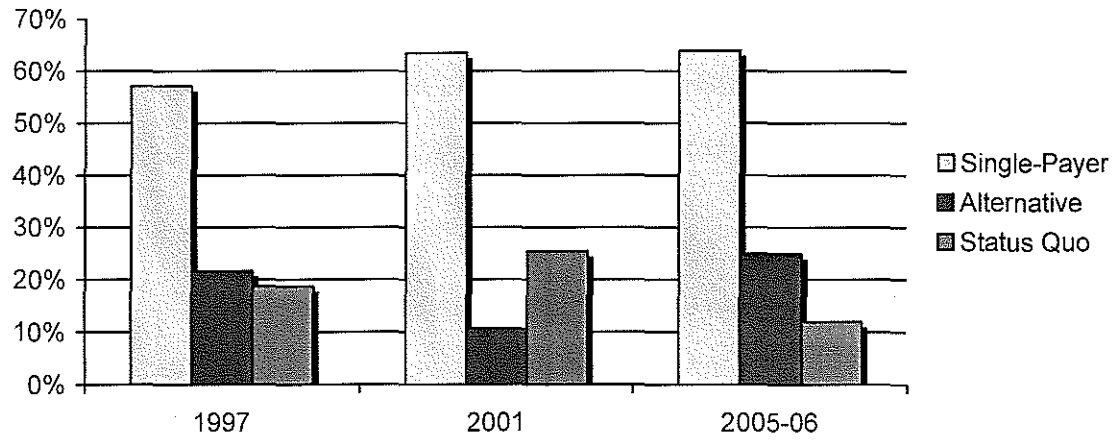
Questions that ask physicians to choose from several different reform options, including a single-payer system, seem to show that physician support is significant and/or growing for the single-payer option. But as we have previously discussed in the "What Now?" Era section, the support may have more to do with the wording of the questions and the makeup of study populations than with a shift if doctors' opinion. Figures 12 graphs the results from surveys in 1997 (academic physicians), 2001 (Massachusetts physicians), and 2005-06 (Minnesota physicians), from questions asking physicians to choose between several reform options.[42, 50, 55] The questions all used similar wording that asked doctors to choose which was the best option for the most people for a fixed amount of money (which we will refer to as "Best/Most/Fixed $").

Figure 13 uses two surveys from 1993 (North Carolina and Washington state physicians) and one from 2007 (Nationwide sample) to ask about reform

preference, but here all questions simply asked respondents to select the option they most preferred (which we will refer to as "Personal Preference").[37, 38, 51] While single-payer is preferred by 58 to 64% of doctors in the Figure 12 surveys, 25-42% of physicians in the Figure 13 surveys choose the same option. The insertion of the "Best/Most/Fixed" qualifier appears to shift opinion toward the single-payer option, indicating a possible conflict between what physicians think might be best for society versus what they consider to be best for physicians.

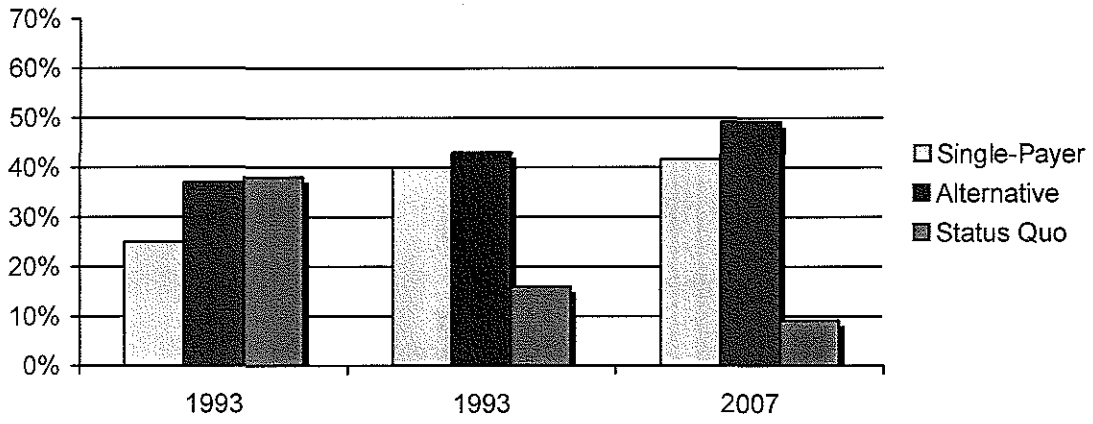
Additionally the populations for these surveys are different (all of the Figure 12 surveys would be probably be considered more "liberal" physician populations), which may also explain some of the response variance. Overall there is little evidence to substantiate claims that physician surveys show widespread enthusiasm for a single-payer system or that they demonstrate with any certainty attitudes trending toward support. We see that support may be more contingent on *how* and *to whom* we ask the question.

Figure 12. Physician Reform Preference Over Time:
"Best / Most / Fixed."



SOURCE: From results reported by Simon et al, 1999, McCormick et al, 2004, and Albers et al, 2007; summarized by author

Figure 13. Physician Reform Preference Over Time: "Personal Preference."



SOURCE: From results reported by Malter et al, 1994, Millard et al, 1993, and McCormick et al, 2009; summarized by author

Limitations

Similar to the critical lens we applied to the surveys reviewed here, we must also recognize the major limitation of this review, which is that we could have missed physician surveys that deserved to be included. The review was limited to the results of searching three databases: PubMed, a database of biomedical literature; JStor, a database of social sciences literature; and LexisNexis, a media database. Most of our included surveys came from papers identified in PubMed and JStor (or from the reference lists of those papers). It is possible that other quality surveys of U.S. physicians exist but were not captured by our search.

Specifically, we are aware that several organizations, most notably the AMA, have conducted multiple physician surveys over the years. For two reasons, one practical and the other ideological, these survey results were not included. Practically, we have limited access to methods and results from these surveys (we can only review what the organizations choose to release), and we

are unable systematically to search for them. Ideologically, organizations often commission surveys with the intent that these surveys will advance the groups' own policy agendas, which appears to be the case with many AMA surveys. Malter et al put it succinctly: "Surveys and polls of physicians' attitudes are occasionally reported in nonpeer-reviewed literature, but the results can be difficult to interpret because methods are rarely described and the possible biases of sponsoring organizations are unclear (Malter 29)."[37]

The other major limitation of the paper is the subjectivity of the quality rating of surveys in addition to our inclusion/exclusion criteria. We did our best to establish a minimum quality threshold, to ensure that any results we reported had real meaning and value. We also sought to include studies that were appropriate to our research question and those that sampled physician populations of a size large enough to contribute to our discussion of U.S. physician opinion in general. If anything, we erred on the side of inclusion for borderline studies, in order to maximize the number of available survey perspectives.

Conclusion: The Future of Physician Opinion Research

Unfortunately, quality problems and inconsistencies of question wording and methods from study to study make conclusions like the ones we drew above about physician opinion of NHI and single-payer reform tenuous at best. With the exception of some relatively sound surveys, the body of work on physician opinion of the health system is largely hypothesis generating, not hypothesis confirming. The complexity of the topic itself, with its vague terms (e.g. what is managed care?) and loaded words (e.g. "single-payer"), combined with the

general complexity of attitudes toward politics and policy, creates a perfect storm of opinion uncertainty.

To clear the storm will not be easy. We need more quality surveys of nationally representative samples of doctors, paying particular attention to the appropriate sampling of minority physician groups. We need to ask clear questions; provide definitions for all "gray area" terms (or allow respondents to define them from their own perspectives); and make our best efforts to avoid "agenda-pushing." Finally, we need time-series data from stable validated questions in order to establish trends and detect real shifts in physician attitudes.

Improvements in survey design, methods, and execution alone will not be enough. We must reconsider the content of surveys as well. Researchers need to change their approach with an eye toward several key unanswered questions about physician opinion of the U.S. health care system. They are

- ***Chicken or Egg?***: While some of the correlations already mentioned between physician practice demographics and system preferences are clear and consistent, the direction of the relationships remains a mystery. Does going into a certain type of medicine ultimately drive physician opinion about the system or do physicians choose their practice setting based on their existing policy and political views? This question is nearly impossible to answer without before-and-after surveying that tracks the opinions of the same population of students/physicians over time.
- ***Back to [Political] Basics***: Any discussion of health policy or health reform is political in nature, as anyone can see by turning on cable news

presently to see President Obama stumping for his own health care proposals. Unfortunately researchers have failed to explore physicians' political beliefs and associations since the work of Colombotos in the early 1970s. We must do a better job of evaluating the intersection between political and professional values when looking at doctor opinion.

- ***How Much Do Physicians Really Understand Health Policy?***: Considering the potential impact of policy initiatives and reform efforts on their livelihood it is reasonable to expect that physicians would be relatively knowledgeable about such initiatives and play a significant role in the processes surrounding their coming to life.[56] Experts contend that the public assumes that physicians understand the pros and cons of various reforms given their position near the top of the health care food chain, but this may not be the case.[43] Several studies we found showed that physicians self-reported understanding of various policies was less than unanimous (and self-reported results would probably underestimate any knowledge deficiencies). Future work must continue to assess physician understanding in this area, including the use of inventive question wording to clarify physician conceptions of whatever the survey is asking them about.
- ***Public Versus Physician Opinion***: Even the basic idea of studying physician opinion assumes that it diverges from public opinion in important ways, otherwise we would focus only on the health care responses in Gallup polls and the like. But what is this assumption based on? Survey

researchers should explicitly explore the general public versus physician dynamic when it comes to opinion of the health system. Where do they agree and disagree? Does one follow the other? What (if any) is the relationship between the two?

- ***Physicians' Internal Conflict – Altruism versus Survival***: We have argued here that there is some evidence of an important disconnect in physician opinion. The disconnect is based on a conflict that begins with physicians' altruistic desire to see the entire population have access to medical care. Everyone should see a doctor regularly, and those who are sick or injured should not go without medical care because they are unable to pay. This altruism can conflict with their survival instincts as highly trained professionals in a competitive field. Doctors' professional survival instincts drive them toward policies that maximize the reimbursement for their time and preserve as much of their clinical autonomy as well as control over the direction of the system as possible. The conflict may explain why physician preferences for reform appear to shift depending on how we ask the question. Future research should attempt to substantiate or disprove this hypothesis.

Stuart Altman, a longtime observer and participant in Congressional battles over health care, once wryly observed that "all of the players in health care reform—from the ideological right to the left, from the special interests to the reformers—came to the political process with strong convictions in support of

their first-choice proposal. For each of these groups, their second-favorite choice was the status quo (Kahn 40)."[57] After a systematic review, it is apparent that while this may be true of "special interest" physician policy elites, doctors at large have yet to decide on their first-choice proposal. With no clear consensus, we have yet to know what the full weight of the medical profession would mean to a reform initiative.

In many ways, despite expectations of enhanced importance, physician opinion has yet to really differentiate itself from public opinion. Yes, it may overall tend to be slightly more conservative, but one can appreciate a similar combination of dissatisfaction with the status quo and caution toward any major changes in both. Researchers will likely continue to study physician opinion of the U.S. health care system as we embark on yet another round of debates about its future. Perhaps when physician opinion begins to act *less* like public opinion, it will truly begin to factor into the endgame of these political and policy debates.

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Appendix 1 - Summary of Surveys

	Lead Author	Pub Year	Physician Population, Survey Year	Recruitment Method (Response Rate)	Survey Form/Length; Question Content and Source	Strengths	Weaknesses	Quality Rating	Notes
1	Colombotos	1968	Physicians in private practice in New York State, 1964-1965	Telephone calls to "probability sample." Total number of responses was 1,205 (reported as "80% of the eligible sample). No other details given about recruitment method.	Telephone interviews. The objectives of the study were to examine physicians' political ideologies, attitudes toward the health care system and medical practice, and career values. The survey specifically focused on the imminent passage of the Medicare legislation. Did not describe a validation process.	Among the first academic studies of physician opinion of U.S. health policy. Inclusion of several political variables to examine possible correlations. High response rate.	Source of study population unclear. Survey methods not well described, including question validation and recruitment method. Limited to New York physicians.	FAIR (maybe poor)	Survey completed before passage of Medicare. Survey asked for opinion on "the bill [to provide] compulsory health insurance through Social Security to cover hospital cost for those over 65." This is a description of precursor proposals to what would eventually become Medicare Part A.
2	Colombotos	1969	Physicians in private practice in New York State, 1964-1965, 1966, 1967	Re-interview of sub-samples from population recruited for Columbotos 1968 survey (Time 1). Participants were randomly divided into 2 sub-samples, the first one totaling 804 and the second one totaling 401. Completed Time 2 (May-June 1968) surveys totaled 676 (84%), while completed Time 3 (January-April 1967) surveys totaled 331 (83%).	Telephone interviews. The study meant to compare the results of the Columbotos 1968 survey with two additional surveys of the same population taken a year after Medicare's passage (right before implementation) and about 6 months after implementation. Authors hoped to assess effects of new law and its subsequent implementation on physicians.Did not describe a validation process.	Nice time-elapse protocol allows for before/after study of Medicare legislation and enactment. High response rate. Addition of several items related to their practice and the system under Medicare from first survey.	Same weaknesses as first survey. Difficult to assess causality because was different sub-sample of physicians from Time 2 to Time 3.	FAIR (maybe poor)	Survey was follow up to Colombotos 1968.
3	Goldman	1974	Members of Yale University School of Medicine classes from 1930 to 1976, 1972	Questionaire mailed to a random sample from each of the medical school classes with a single follow-up mailing. Sample size of 412 (1/7 of each class) with 278 total responses. No compensation noted.	Mailed questionnaires. Details of survey not described in methods.Questions asked opinion of all key aspects of health care proposals being considered by Congress at the time, including various mechanisms of financing and administering NHI, what should be covered, and several specific controversial clauses included in proposed legislation. Did not describe a question validation process.	Study looked at opinion related to 7 actual proposals and 4 hypothetical proposals for national health care reform. Authors noted that actual respondents were representative of study population by "all control variables which could be checked." High response rate.	Potential problems with biases and generalizability from use of exclusively Yale alumni, faculty and students. Unclear how various proposals/bills were described to respondents in the questionnaire. Did not explore beliefs about health policy/reform, only asked about approval of various proposals.	FAIR	None
4	Colombotos	1975	Faculty, housestaff, and medical students in a nationally representative sample of 24 medical schools, 1973	Two initial mailings of questionnaires with single telephone interview call to non-respondents. Samples size and responses by group: "senior" physicians, 2713 (75-82%, depending on type, e.g. office-based, hospital-based, etc.); housestaff, 1,303 (76%); students, 3,419 (84%). No difference in response rate between two recruitment methods. No compensation noted.	Both mailed questionnaires or telephone interviews. Details of survey not described in methods.Survey questions covered attitudes toward NHI, how these attitudes develop, and how they vary across multiple variables. Did not describe a question validation process, but noted that this study built on previous surveys of physician attitude(s) by the same authors.	First study of nationwide sample of physicians' opinions about national health policy. Thoughtful analysis of attitudes with several important correlations. High response rates. Several important historical perspectives and policy correlates discussed.	Short methods sections does not describe question validation, question/survey administration, survey length, and recruitment in adequate detail. Unclear rationale behind weighting process. Unclear purpose of surveying students and housestaff (see Notes).	GOOD	Nearly all of the paper content focused on results from "senior" physician population (n=2,713).
5	Blendon	1993	Physicians randomly selected from MEDEC file of office-based and hospital-based patient care physicians compiled by Business Mailers, Inc., 1993. Physicians in training excluded. Surveys were also sent to physicians in Germany and Canada.	Cover letter sent to physician in advance of telephone interview. Letter noted reimbursement averaging $40. Up to 5 attempts at contact made. Sample size of 1368 with 602 responses (44%).	Telephone interviews averaging 19 minutes. Questionnaire included 37 questions of which 7 had multiple parts. Questions asked about physicians' views of the health care system, their satisfaction with various aspects of medical practice, their perceptions of the quality of care delivered, their ability to obtain needed services for patients, their perceptions of the overuse and underuse of services within the system, and demographic variables. In terms of validation, authors note that "the questionnaire was reviewed by experts on the health care systems of the three countries and pretested for length and comprehensibility in each country."	Distribution of sample in terms of sex, specialty, and age group is with +/- 5% of known U.S. distributions. Use of some questions duplicated by Blendon in other surveys. Use of validated questions. Nice breakout of several specific system problems.	Potential for bias due to non-response. Did not ask about preferences for system reform or specific policy changes. Focus on comparison of U.S. system with other countries, not specifically on U.S. policy and reform. Potential for leading questions when asking about severity of various problems.	GOOD	Study was a comparison of U.S. physician opinion with their counterparts in Canada and Germany. Purpose was to assess and compare how well practicing physicians think their respective health care systems work.
6	Millard	1993	General practitioners, family physicians, and pediatricians licensed in the state of North Carolina, 1993.	Questionaire mailed to random sample of 300 physicians (200 family physicians/general practitioners and 100 pediatricians) along with cover letter from authors. Two additional mailings sent to nonrespondents. 207 usable questionnaires returned (69%).	Mailed questionnaires. 1-page length. Study intent was to measure satisfaction with current reimbursement system and to determine knowledge about and preferences regarding proposals at the time; also to assess for correlation between demographics and reform preferences. Authors sent "simplified schematic drawing and summary comparing the two major reform plans" along with questionnaire. Did not describe a question validation process.	Inclusion of managed competition concept of reform, which was a large part of Clinton plan being discussed at the time. Linked preferences for reform with views of current system and several demographic variables. Provided summary/schematic of proposals asked about in the survey. High response rate.	Limited to primary care physicians in North Carolina. Based questions about reform on only 3 possible choices (2 reforms and status quo), limiting respondents ability to express support or opposition to specific components of any plan.	GOOD	Survey collection was complete before the Clinton White house Task Force on Health Reform had officially released its recommendations, which would include concept of "managed competition."
7	Malter	1994	Physicians actively practicing in state of Washington according to Washington State Department of Health, 1993.	Questionnaire mailed to 1,000 randomly selected physicians with cover letter from authors noting that various state health care providers had endorsed the survey. A second copy was mailed to nonresponders after 3 weeks. 762 questionnaires returned (76%).	Mailed surveys were 2-pages long with 24 questions. Questions asked about general attitudes about health care reform, attitudes toward specific elements of alternative reform packages, and demographic and practice characteristics. Used a single Blendon question, all others were developed for study via well-described validation process including pilot testing, expert review, and testing for internal consistency.	Respondents closely matched characteristics of study population. Well-validated survey questions. Attention to both major plans discussed at that time and to opinion of specific elements within plans. High response rate.	Limited to physicians in Washington. Limited external validity and potential for bias because of unique health system situation in Washington state at the time (see Notes). Study mostly focused on managed competition and single payer as the only reform options.	EXCELLENT	At the time of survey the state had already enacted managed competition reform similar to the Clinton proposal. Surveys were mailed after President Clinton had delivered his proposal to Congress.

Appendix 1 - Summary of Surveys

	Lead Author	Pub Year	Physician Population, Survey Year	Recruitment Method (Response Rate)	Survey Form/Length; Question Content and Source	Strengths	Weaknesses	Quality Rating	Notes
8	Scanlan	1996	Practicing family physicians in the U.S. who are members of the American Academy of Family Physicians excluding resident physicians, 1993. Survey was also sent to Canadian family physicians.	Questionaire sent to random sample of 300 from AAFP mailing list. A single follow-up mailing was sent to nonresponders 3 months later. Total response for U.S. physicians was 182 (61%).	Mailed survey with 28 items. Questions examined work satisfaction, practice situation, attitudes toward current health care system, demographic information, and political attitudes. Validation process not described.	Novel use of factor analyses and correlations of results. Analyzed a large number of system factors. Nice international comparison group (Canadian GPs). High response rate.	Presentation of results as factor analyses as opposed to percentages with correlations where appropriate was confusing. Limited to family physicians only. Source of questions/validation process not described.	GOOD	Study meant to compare opinion in U.S. versus Canadian physicians with hope of predicting U.S. physician acceptance of Canadian-style system.
9	Deckard	1997	List of 6,000 physicians obtained from a Florida physician insurance company, survey year unclear.	Questionaire sent to random sample of 2,000 physicians from list. Two follow-up mailings sent at 6 and 10 weeks. Total response was 388 (19.4%).	Mailed survey, otherwise details not described. Questions asked about physician perceptions of health care reform at the state and national levels. Limited validation process described - only review by a panel of health care experts. Survey used 5 and 4-point Likert scales to obtain physician ratings.	Asked about both state and national level health reform developments and attitudes.	Low response rate. Unclear how representative study population was of state physician population and potential for bias based on list obtained from insurance company. Use of numerical outputs from Likert scales confusing. Concern about potential for leading questions ("Freedom from insurance hassle"); survey questions not provided.	FAIR (maybe poor)	Florida, in 1992 and 1993, had enacted major reforms at the state level, some of which mirrored those proposed in the Clinton plan. These reforms included new insurance regulations, use of practice parameters, and the establishment of consumer purchasing alliances.
10	Simon	1999	Medical students, residents, faculty, and deans at medical schools in the United States, 1997	Telephone calls to random samples from various selected populations (e.g. students, residents, etc.). Total sample size was 2,700 (2162 responses, 80.1%). Used master files of AMA and AAMC to draw stratified probability samples. No compensation noted.	Survey via confidential 20-minute telephone conversations. Validated survey questions resulting from systematic review of literature, focus groups, and 2 pilot studies. Assessed attitudes toward managed care and perception of its effects on medical practice and their professional lives.	Able to select from random samples of a nationwide population. Excellent validation process for survey questions. High response rate.	Limited to physicians and students in academic medicine and mostly asks opinions about managed care specifically. Unclear significance of distinction between faculty, residency directors, department chairs and deans. Given limited experience, the significance of medical students' attitudes toward managed care is also unclear. Concern about leading questions (e.g. How much has managed care decreased your time for research?) and limited answer choices with no intermediate options (e.g. For questions about effect of managed care: a lot, a little, and not at all) for many of the questions.	FAIR (maybe poor)	Main effect examined was primary care versus specialist attitude. Primary care defined as family medicine, general internal medicine, general pediatrics, and geriatrics. Specialty care was defined as any specialty other than those considered primary care, including those which involve a combination of primary care and a specialty.
11	Ackermann	2003	All U.S. physicians in the AMA Masterfile, 2002.	Questionaire mailed to random sample of 3,188 with $1 incentive. Nonresponders were sent up to 3 additional mailings at one month intervals. Total response was 1,650 (60%).	Mailed survey with 12 items that took approximately 3 minutes to complete. 2 items on health care financing and 10 on demographic and practice information. Validation process described in detail, but did not include pilot testing because of limited resources.	Actual survey questions provided for key questions. High response rate. Nice description of methods including oversampling rationale. Characteristics of respondents showed they were representative of study population.	While survey brevity likely contributed to a high response rate, it also resulted in a very limited depth of responses. Second question regarding financing was potentially unclear/vague for many respondents.	EXCELLENT	None
12	McCormick	2004	27,527 physicians in Massachusetts that are included in the AMA Masterfile, 2001.	Questionaire mailed to random sample of 2,000 physicians along with a cover letter. A single follow-up was sent to non-respondents. Total response was 904 (50.6%).	Mailed survey with 11 items. Survey looked at physicians' belief about the best health care system for patients, opinions on health care financing, and work satisfaction issues - all from the perspective of the potential adoption of single payer NHI. Also asked for demographic and professional information. Validation process not described.	Respondents' demographic information was comparable to both Massachusetts physicians and U.S. physicians overall. Adequate response rate.	Clear author bias toward support of single payer reform. Limited to Massachusetts physicians. Concern about potential for leading questions (see Major Findings Table for statements). Framed question about choice of reform about what is best for patient, not what respondent would or would not support.	FAIR	Authors note that Massachusetts was among the most highly managed care-penetrated states in country at the time of the survey.
13	Albers	2007	Physicians licensed in Minnesota with in-state addresses, 2005-2006	Survey information mailed to random sample of 1,061 (408 responses, 38.5%). Survey was available as paper or online version. No compensation noted.	Survey was available in paper and online versions. 16 questions long. Update of 11-question survey by McCormick 2004 (See below). Assessed opinions about various health care financing structures and gathered demographic information.	Able to select a random sample. Used mostly previously validated questions.	Limited to Minnesota physicians. Respondents limited to only 3 financing choices. No ranking or forced choice of single best mechanism.	GOOD	Minnesota is a managed care dominated state, with 4 managed care companies covering more than 90% of the state's insured population
14	Carroll	2008	All U.S. physicians in the AMA Masterfile, year of survey distribution not stated.	Questionaire mailed to random sample of 5,000 with 4,294 eligible (not returned as undeliverable or returned by physicians no longer practicing). Total response was 2,193 (51%). No information given about follow-ups or incentives.	Mailed survey with 2 questions about NHI and reform in addition to questions about demographic and practice information. Validation process not described.	Follow-up to Ackermann 2003 survey with one of two questions repeated, allows for trend view. Assume strong methodology since authors are the same although not documented in this paper. Adequate response rate. Respondents representative of study population.	Survey brevity limits depth of response. Reported as a letter in Annals so very limited with regard to description of methods, results and there is no discussion. Purpose of second regarding "incremental reforms" is unclear.	GOOD	Follow-up to 2003 Ackermann survey provides 10-years later response to support for NHI legislation.
15	McCormick	2009	All U.S. physicians in the AMA Masterfile who were engaged in direct patient care as their primary professional activity, 2007.	Questionaire mailed to random sample of 3,405 along with cover letter. A single follow-up mailing was sent to nonresponders one month later with a $1 incentive enclosed. Total response of 3,300 who received the survey was 1,675 (50.8%).	Mailed survey with 6 items about physicians' support for various options to expand health coverage. Also asked for demographic and practice information. Some questions adapted from previous surveys. Validation process was described in great detail and included multiple pilot tests.	Characteristics of respondents representative of study population. Nice description of methods and validation process. Looks at association between views on access and preferred financing options. Adequate response rate.	Author bias toward support of single-payer NHI although not as prominent as previous paper, McCormick 2003. Forced response to agree or disagree with several questions. Limited reform choices to two options.	EXCELLENT	None

Appendix 2 - Summary of Key Findings

Lead Author	Pub Year	Major Findings
Columbotos	1968	*38% of respondents favored Medicare; 54% opposed; 8% didn't know or gave no answer.
Columbotos	1968	*Physicians who were Democrats, politicaly liberal on economic-welfare issues, favor the formal organization of medical practice, located in New York City, Jewish, of older age, and accepted the idea of medical audits and reviews where more likely to support Medicare than their counterparts.
Columbotos	1968	*There were no major differences identified between generalists and specialists opinion of Medicare (surgical specialists, anesthesiologists, and radiologists were slightly less likely to support Medicare; Psychiatrists were much more likely to support Medicare).
Columbotos	1968	*Physicians' political views were the best predictor of their position on Medicare.
Columbotos	1969	*From before Medicare passage, to after passage/before implementation, to after implementation, physician opinion shifted from: 38% favor, 54% oppose; to 70% favor, 26% oppose; to 81% favor, 19% oppose.
Columbotos	1969	*Before implemenation, 14% thought Medicare will make the quality of medical care better, 54% thought there would be no difference, and 28% thought not as good. After implementation these shifted to 30% better, 60% no difference, and 8% not as good.
Columbotos	1969	*Before implementation, 35% thought that physicians would earn more money under Medicare, 41% thought there would be no difference, and 12% thought they would earn less. After implementation, these shifted, but only slightly, to 42% more, 38% no difference, 11% less.
Goldman	1974	*Of all bills included in survey, the proposal championed by AMA at the time ("Medicredit") was only one that achieved a majority of acceptance (53%). Authors described this option as involving "no changes in medical care delivery."
Goldman	1974	*The second most popular plan (Javitts) with 37% acceptance involved the extension and expansion of Social Security and measures to encourage HMOs.
Goldman	1974	*Medical students and medical school faculty were most likely to approve of radical changes to the system. Surgeons, solo practitioners, specialists and members of multispecialty groups were likely to approve of more conservative legislation. Psychiatrists, general practitioners, and interns/residents never gave majority support to any single option.
Goldman	1974	*Relationships between politcal attitudes and party identification with various reform proposals were consistent throughout
Colombotos	1975	*Physicians' opinion of some form of NHI: 56% in favor of; 43% opposed. However, respondents reported that of the doctors they know personally, 19% are in favor of some form of NHI and 74% are opposed. There were strong correlations, in both directions, between attitudes and perceptions of others' attitudes (e.g. those who strongly favored NHI were more likely to perceive that most other doctors favored it, and vice-versa).
Colombotos	1975	*Opponents of NHI were slightly more likely to feel strongly about their opinion compared with supporters. In favor of: Strongly, 21%; Somewhat, 34%. Opposed: Stongly 24%, Somewhat 20%.
Colombotos	1975	*Physicians' belief that NHI was: Inevitable, 83%; Not inevitable, 15%. 46% thought it was inevitable within 5 years. Belief that NHI was or was not inevitable correlated with attitude toward NHI in both directions.
Colombotos	1975	*44% reported that they were "not well informed" or "not at all informed" about the various NHI proposals despite most having strong preferences about NHI
Colombotos	1975	*On major features of existing NHI plans, respondents preferred: financing via private insurance (54%) over employer-employee contributions via taxes (37%); no prepaid groups/HMOs (61%, while 33% were in support); adminstration via BC, BS, and private insurers over a government agency (79% to 13%); and inclusion of a peer review mechanism (75%).

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Lead Author	Pub Year	Major Findings
Colombotos	1975	*If a compromise of various NHI bills of the time went into effect: 42% felt the quality of medical care would decline; and 27% thought they would earn less money (27% thought there would be no change).
Colombotos	1975	*Authors concluded that physician attitudes toward NHI are largely based on general political beliefs, including party identification. AMA members were largely in agreement with those identified as AMA "leaders" for most questions; however, non-AMA members were much more likely to favor NHI compared with AMA members.
Blendon	1993	*Asked which best expresses their view about the U.S. health system: 68% said some good things, but fundamental changes needed; 23% said only minor changes needed; and 9% said system needed to be completely rebuilt; primary care physicians were more likely to believe fundamental change or complete rebuilding was required than other specialties
Blendon	1993	*U.S. physicians report that the two most important problems with their health care system were a lack of access to care for indigent patients (55%) and the high cost of care (38%). Younger physicians were more likely to cite access to care as major problem (67% vs. 50%) but less likely to answer administrative burden (4% vs. 15%) than older physicians.
Blendon	1993	*U.S. physicians felt the following problems were very serious or somewhat serious: excessive delays or disputes in processing insurance forms or receiving payment for services rendered (78%); external review of clinical decisions for the purpose of controlling health care costs (53%); and limitations on length of hospital stay (57%)
Millard	1993	*69% of N.C. physicians were either stongly or moderately dissatisfied with the current (1993) insurance-based system and 76% felt that access to care was not adequate in the state. Those compensated on a FFS basis were more likely to be satisfied with the current system and to believe that access to care was adequate.
Millard	1993	*Despite being presented with schematic outlines of the plans, 29% felt they had insufficient information to judge the merit of a single-payer plan; while 34% felt they had insufficient information to judge the merit of a managed competition plan (i.e. Clinton plan)
Millard	1993	*When asked to rank their preferences for reform choices, the first choice breakdown was: retaining the current system (38%), managed competition (37%), and single-payer plan (25%). Physicians dissatisfied with the current system were eight times more likely to support a single-payer system, while salaried physicians and those practicing in urban areas were more likely to support managed competition.
Malter	1994	*Asked which best expresses their view about the U.S. health system: 71% said some good things, but fundamental changes needed; 20% said only minor changes needed; and 9% said system needed to be completely rebuilt
Malter	1994	*When asked about preferred reform options: 43% would most favor managed competition; 40% single payer system; 16% no change from current system. When asked if Clinton Plan would address shortcomings of the current system: 61% thought it had little or no chance; 33% thought it had some chance; and 3% thought it had a good chance of addressing them. A majority (72%) indicated they understood the Clinton plan some or a lot.
Malter	1994	*Procedure-oriented specialists were more likely to favor leaving current system than primary care physicians, while more PCPs supported a single payer system; managed competition had equal support in both of these groups. Salaried physicians were 1.5 times more likely to favor a single-payer system than FFS physicians.
Malter	1994	*Among specific elements of reform plans asked about in the survey, only two were rated highly: 68% felt that reduction of administrative paperwork would improve the health system; 62% for malpractice reform.
Scanlan	1996	*U.S. family physicians were significantly more likely than their Canadian counterparts to see the need for fundamental changes in the current system or the need to rebuild the system.

Appendix 2 - Summary of Key Findings

Lead Author	Pub Year	Major Findings
Scanlan	1996	*U.S. family physicians were less likely to believe that the government should play a central role in system changes, less likely to support centralized planning for distribution of services, and less likely to agree that cost containment has hurt quality of care; they were more likely to agree that there are too many controls on physicians, that litigation concerns influenced their clinical decisions, and that PCP incomes are too low while subspecialists' incomes are too high.
Deckard	1997	*48.9% of Florida physicians reported their knowledge of health care reform was either fair or poor. 88.2% of respondents reported that physician input into national level reform was either little or none. 78.1% said that they were non-supportive of reform at the national level.
Deckard	1997	*When rating the most important issues for physician support of health care reform proposals, Florida physicians top 5 choices were (% answering very important): Tort reform (81.4%), Physician autonomy (75.0%), Freedom from insurance hassle (69.0%), Consumer choice of providers (67.5%), Incentives for quality care (56.6%)
Deckard	1997	*Florida physicians rated all the components of recent state reforms included in the survey negatively: Community health purchasing alliances, regional networks of providers, and controlling costs through managed care.
Simon	1999	*57.1% of all respondents thought that a single-payer system with universal coverage was the best health care system for the most people for a fixed amount of money; 21.7% favored managed care, and 18.7% selected a fee-for-service system.
Simon	1999	*On a 0-to-10 scale (with 0 indicating an attitude as negative as possible) of respondents attitudes toward managed care, mean (+/-SD) scores ranged from 3.9 (1.7) for residents to 5.0 (1.3) for deans. Primary care respondents felt more positive about managed care as compared to specialists, with means of 4.6 and 4.0 respectively.
Simon	1999	*Across all respondents, fee-for-service was rated as better than managed care with respect to all measured aspects of care (listed from strongest to weakest preference for managed care): Access to care, Minimizing ethical conflicts, Doctor-patient relationship, Continuity of care, Care at the end of life, and Care of chronic illness.
Simon	1999	*More than half of physicians (excluding residents and deans) reported that as a result of managed care: their income had decreased a lot or a little (55.8%), their job security had diminished (54.1%), and collegial relations had deteriorated (52.2%).
Ackermann	2003	*In response to "In principle, do you support or oppose governmental legislation to establish national health insurance?": 49% support (18% stongly; 31% generally) and 40% oppose (21% strongly; 19% generally); after adjusting for other variable, physicians in primary care, those with >20% Medicaid patients, those not in private practice and those in the inner city were most likely to support NHI legislation; while physicians with <20% Medicaid patients, those with <10% uninsured patients, surgical subspecialists, anesthesiologists, those in a rural practice, and those in private practice were more likely to oppose legislation.
Ackermann	2003	*In response to "Do you support or oppose a national health insurance plan where all health care is paid for by the federal government?": 26% support (9% strongly; 17% generally) and 60% oppose (33% strongly; 27% generally)
McCormick	2004	*Massachusetts physicians strongly agreed with the statement: "It is the responsibility of society, through its government, to provide everyone with good medical care, whether they can afford it or not" (57.8% agreed strongly; 31.2% agreed somewhat); they agreed with: "I would be willing to accept a 10% reduction in my fees in return for a very substantial reduction in my paperwork" (33.5% agreed strongly; 33.6% agreed somewhat) and "I favor physician payment under a salary system if physicians' salaries were guaranteed to be within 10% of their previous incomes" (23.2% agreed strongly; 33.6% agreed somewhat); and they disagreed with "the insurance industry should continue to play a major role in the delivery of medical care" (38.2% disagreed strongly; 32.1% disagreed somewhat).

Appendix 2 - Summary of Key Findings

Lead Author	Pub Year	Major Findings
McCormick	2004	*When asked to select from 3 structures for the best health care care to the greatest number of people for a fixed amount of money: 63.5% single-payer, 25.8% FFS, and 10.7% managed care. Physicians who agreed with statements about government responsibility, 10% fee reduction for less paperwork, and salary if guaranteed within 10%, were all significantly more likely to support a single-payer system. Members of the AMA were somewhat less likely and women were somewhat more likely to select single-payer after adjusting for other variables.
Albers	2007	*Which financing system would offer the best health care to the greatest number of people for a fixed amount of money: 64% selected single-payer financing system, 25% selected HSAs, and 12% selected managed care.
Albers	2007	*Single-payer financing system was most strongly favored by primary care physicians (74%), women (76%), and urban-based physician (71%).
Albers	2007	*General surgeons were the group most likely to favor HSAs (55%). No groups expressed a strong preference for the current Minnesota managed-care based system.
Albers	2007	*Most of the respondents (86%) believed it is the responsibility of the society through government to ensure access to good medical care for all, regardless of ability to pay.
Carroll	2008	*In response to "In principle, do you support or oppose governmental legislation to establish national health insurance?": 59% support (28% stongly; 31% generally) and 32% oppose (17% strongly; 15% generally); more than 50% of respondents from every subspecialty supported NHI except surgical subspecialties, radiologists, and anesthesiologists.
Carroll	2008	*In response to "Do you support achieving universal coverage through more incremental reform?": 55% support (14% strongly; 41% generally) and 25% oppose (14% strongly; 10% generally); 14% of physicians were opposed to NHI but supported more incremental reforms.
McCormick	2009	*In response to "All Americans should receive needed medical care regardless of ability to pay"": 88.9% agreed (63.3% strongly; 25.6% somewhat); physicians who agreed with this statement were more likely to support single-payer NHI
McCormick	2009	*In response to "Currently people without health insurance have access to the medical care they need": 66.9% disagreed (34.9% strongly; 32.0% somewhat); 33.2% agreed (7.7% strongly; 25.5% somewhat); about 1/5 of physicians additionally felt that people with insurance do not have access to the care they need; physicians who felt that access was a problem, for both the uninsured and insured populations, were more likely to support single-payer NHI.
McCormick	2009	*When asked to choose the single option they most preferred: 49.2% chose the current employer-based system with the addition of either tax credits or tax penalties; 41.6% chose a single-payer NHI program that is run by the government and financed by taxpayers; and 9.1% chose preserving the status quo; those most likely to chose single-payer NHI were from the Northeast, hospital-based, primary care physicians, medical-subspecialsts, and psychiatrists; while those most likely to chose the addition of tax credits/penalties were surgeons and physicians in other specialties, those who graduated medical school less than 30 years ago, office-based, and members of the AMA.