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# THE FOURTH INTERNATIONAL JERUSALEM CONFERENCE ON HEALTH POLICY

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## Improving Health and Healthcare

Who Is Responsible?

Who Is Accountable?

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# Preface

It is with a great sense of satisfaction that I introduce this volume, which includes the deliberations of the 4th International Jerusalem Conference on Health Policy. This is the fourth time that health scholars have convened in Jerusalem under the auspices of the Israel National Institute for Health Policy and Health Services Research.

Both as Chairman of the Board of the Institute and as Director General of the Hadassah Medical Organization, I was honored and pleased to welcome more than 700 participants from across the globe and share with them a great three-day intellectual experience. Under the Conference's title of "Improving Health and Health Care: Who is Responsible? Who is Accountable?", the delegates had the opportunity to compare, analyze, and discuss similar problems daunting health systems in many countries. Three levels of responsibility and accountability were identified and dealt with - that of the state, of the health organization, and of the individual. Special interest and attention were devoted to the real-time trials and tribulations affecting the on-going U.S. health reform.

This book summarizes the views and ideas of some of the world's leading health professionals, health scientists, and policy makers on a wide spectrum of questions concerning the challenge of providing just and effective health services. Those who are burdened with this challenge will find this book to be of great help.

Sincere thanks are due to Steve Shortell and Avi Israeli for chairing the conference and for their invaluable contribution to its success. So, too, to Bruce Rosen for his help in the meticulous editing of this publication. Special praise and gratitude should be extended to the Organizing and Scientific Committee led by Ziva Litvak and Alek Aviram for an outstanding program and beautiful ambiance. I hope to meet all of you again in Jerusalem in 2012 at the 5th Conference on Health Policy.

***Shlomo Mor-Yosef, Chairman of the Board***

***Israel National Institute for Health Policy and Health Services Research***

# Introduction

Health systems in nearly all nations face daunting challenges of growing costs while at the same time improving or maintaining access and quality of services. Greater attention is also being given to the social determinants of health with a renewed emphasis on population health. More immediately, health systems and society as a whole are caught up in the whirlwind of an unprecedented world economic crisis. The collapse of financial markets combined with globalization pose challenges never before addressed by national and international leadership. We are entering a time of danger, which is also one of opportunity.

In December 2009, over 700 policymakers, managers, and researchers from over 30 countries participated in the 4th International Jerusalem Conference on Health Policy. The conference was sponsored by the Israel National Institute for Health Policy and Health Services Research, and its overall theme was "Improving Health and Health Care: Who is Responsible? Who is Accountable?". Thus, in addition to considering programmatic and policy interventions that could improve health and health care, the conference sought to explore both the locus of the responsibility for doing so, and the place of accountability in promoting appropriate processes and outcome. These themes were discussed against the backdrop of issues and questions that are being raised in health systems around the world:

- Will the current economic chaos simply put more pressure on already financially stressed health systems–or will investment in health be seen as a spur to economic growth?
- As societies reconsider their social contracts and the relationship between government and the private sector, how will health systems be affected? What can they offer in the way of lessons after decades of struggling with issues of governance, social support, personal responsibility for health, and system accountability for health systems outcomes?
- Will health systems falter in the face of population migrations – or will they serve as a beacon to maintain solidarity because of – and not despite – immigration of citizens and health professionals?

- Will Health Ministries maintain their secondary position in the bureaucratic pecking order – or will they succeed in articulating the inter-sectoral nature of health and establish health-promoting coordination with other agencies?
- Will the new fields of evidence-based medicine and evidence-based management be confined to the characterization of technical tools and measures – or will they provide an example of nesting quality improvement within the organizational culture and social fabric of societies?

The organizers of the conference were also influenced by recent developments such as the health-care reform in the United States, the challenges facing efforts to monitor the quality of community-based services in Israel, and publication of the landmark report of the Commission on the Social Determinants of Health (SDH). The timing of the conference amidst all these events probably contributed both to the high level of conference attendance as well as to the participants' choices of topics for the papers that they submitted for the conference.

At the same time, in choosing these themes for the conference, the organizers were responding not only to recent events but also to longer standing tensions in health care systems. Questions about who should be responsible for what have always been central to health policy. Questions about who should be accountable to who, for what, and through what mechanism, had been on the agenda at least since the late 1980s. And yet, at least in recent years, few if any major international conferences have sought to bring together these disparate approaches. It is our hope that the Conference provided new knowledge and ideas that will contribute to improve the future of populations worldwide during a time of daunting challenges.

The conference was organized around four tracks, as reflected in the organization of these proceedings:

1. Governance, Stewardship, and Public Accountability;
2. Social Support;
3. Personal Responsibility; and
4. Performance Management.

Tracks 1-3 considered the roles of different actors in responsibility and accountability, with the first track focusing on the role of government, the second track looking at the role of insurers, providers, and various forms of voluntary coalitions and community organizations, and the third track looking at the role of the individual consumer/patient. Tracks 4 and 2 considered different types of mechanisms for promoting responsible behavior and accountability, with the fourth track focusing on measurable business/economic/clinical indices and the second track focusing on softer factors such as trust and solidarity. Track 2 also included a series of papers on the theme of responsibility and accountability for health care equity, which was no doubt inspired in part by the WHO's recent report on the Societal Determinants of Health. Taken together, the work of the various tracks sheds light on many different aspects of the responsibility/accountability challenge.

We want to conclude by taking this opportunity to thank some of the key organizations and individuals whose work made possible both the conference and these proceedings. First, we thank the Israel National Institute for Health Policy and Health Services Research and its leaders for supporting and arranging the conference and asking two of us (Avi and Steve) to chair the conference and organize its scientific content. Second, a very special thanks to the co-chairs and rapporteurs of the four tracks, as well as the other members of the organizing committee, for their help in putting together the conference program. Third, we wish to thank all the presenters at the conference, and especially those who took the time to turn their presentations into chapters for this book. Last but not least, we thank our language editor, Edna Oxman, for her prompt and professional work on these proceedings.

***Bruce Rosen, Avi Israeli, and Steve Shortell***
***Editors***

# Responsibility and Accountability - Talk is Cheap ...

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## *Avi Israeli*

As the one responsible and accountable for the 4th Jerusalem Health Policy Conference, I feel the need to reflect on the two big terms that figure prominently in the title of the conference: responsibility and accountability. These concepts loom large on the public agenda. Yet, I find the best way to address them is through my own personal experience, especially in the Israeli health system.

The answer to the question "*Who is accountable?*" arises from a different background in every country. It arises from a deep-rooted historical, organizational, and governmental tradition. In a country that had only a collectivist orientation towards responsibility, we now ask "Who is responsible?" "Who is accountable and for what?"

In Israel, or more accurately, from the period of pre-statehood, our early years were steeped in ideologically driven commitment and obligation. There was a strong belief in "responsibility" of the government, sick funds, and other nation-wide health organizations that existed even before the creation of the state (Doron, 2009). The succeeding decades have seen a shift away from this sentiment, with responsibility being progressively shed and passed on to the free market, to the other main players in the health care system, and ultimately to the patient (Shuval & Anson, 2000). I want to review these processes briefly in order to better understand where we have come from so we can better determine where we want to go from here.

Please permit me to wax nostalgic about the days when things seemed clearer. Then I will reflect on the crisis in responsibility and the entrance of accountability (for which, it is interesting to note, there is still no accepted word in the Hebrew language). After delving into the dilemmas of responsibility and accountability I will reflect on where we might go from here.

The formative years of the State of Israel's development were characterized by ideological and values-based leadership driven by a clear vision and a strong determination to realize solidarity-based policy goals. These characteristics were bolstered by the Israeli society's strict socialist values (also influenced and stylized in a Jewish way), mixed with Western social-democratic concepts: the welfare state, social cohesion, collective responsibility, and centralized decision-making (Shuval & Anson, 2000).

The situation in Israel at that time was not all that different from the post-Second World War situation in many western countries (Sharpe, 2000). It was characterized by a common effort to quickly create the necessary systems in order to provide services to a needy population efficiently and effectively. This is not to say that the system was serene and without conflict. After all, it was in many ways a very pluralistic society, with multiple competing institutions and major stakeholder groups; it was not all smooth sailing. There were many claims regarding politicization of the system (Shuval & Anson, 2000), and these claims had merit. But on the whole, one could argue that an atmosphere of common values and purpose prevailed.

Holding the usual cynicism aside, in those golden days it seemed that government and the sick funds were acting in an atmosphere of collective responsibility, and that they made no attempt to relieve themselves of their perceived roles and duties;

This attitude characterized all levels of the hierarchy, from central managements to the clinics in the rural areas, from the leaders of the healthcare system to the nurses and physicians in the field. The expectation was that everyone would be mission-oriented and evaluated by results and achievements. The focus was on the outcome.

It was accepted that there were significant levels of uncertainty inherent in the decision-making process, and that the essence should be on "doing" and "problem solving". Physicians were accepted as the holders of the monopoly on knowledge, and had an almost absolute professional sovereignty. The relationships between physician and patient were largely paternalistic. Most of the care-giver's time and most of his attention were devoted to the processes themselves, and not to the bureaucracy of the processes, talking about them or reporting about them. There was no need for, or talk of, accounting or accountability. Reports were conceived as secondary in their importance - what was really important was the performance itself. Leaders took upon themselves responsibility, they felt responsible, and for the most part they lived up to their responsibilities. This was the overall attitude throughout the healthcare field – in the sick funds, in the hospitals, and also among the individual physicians in the field.

In the terminology of responsibility and accountability, these were the days of responsibility, even if in some areas, certainly the financial area, the idea of acceptable fulfillment of responsibility was, shall we say, skewed.

But, with time, the internal contradictions in the system began to become large, and the ethos, or myth, of shared responsibility could no longer maintain the system on its own. More and more, policymakers, managers, and physicians failed to meet their responsibilities. Therefore, with or without a word for it, we had to move to accountability. We started hearing this word more and more frequently in the worldwide discussions about health systems, and, as in many areas, we Israelis assumed that if everybody was talking about this word, it must be good for us as well.

As we in the Israeli health care system struggled to find the language necessary to make this shift, we came across all kinds of definitions.

Leraci (2007) provided the following synonyms from *Roget's Thesaurus:* Responsibility: trustworthiness, capacity, dependability, reliability. Key concepts related to responsibility include trust, capability, judgment, and choice.

Definitions of accountability, on the other hand, are associated with answerability, blame, burden, and obligation. In Leraci's words, "Accountability therefore relates to being called to account for one's actions. Responsibility is taken on by oneself, or bestowed upon a person to use, whereas accountability involves what is rendered to another."

As a result of this, some people may say that responsibility is nice, and accountability tends to be nasty.

Given this lexicon, here are my reflections on the shift from responsibility to accountability in the Israeli health system:

The 1980s introduced change into Israel's public arena: change in political outlook, change in economic beliefs and policies, and a shift away from collectivism towards individualism. As a country, Israel became less socialist and more liberal, less ideological and more materialistic. During that period, Israel also introduced key pieces of legislation, such as the constitutional proxy "Basic Laws" (Israel Parliament, 1992), laws addressing equality and opportunity (Israel Parliament, 1988), and patient personal rights law (Israel Parliament, 1996). It is during this period of national development that the term "accountability" became pertinent to Israeli public administration. We, as a society, were beginning to, or thought we already had, move from the days of responsibility to the days of accountability.

The ensuing story has been one of balancing between competing versions of accountability: the measurable and technical on one hand, and the ethical and the sublime on the other.

To be honest, at the outset it seemed as if accountability was being marketed mostly as a type of scrutiny. Accountability was taken mostly in the sense of reportability. Fulfilling responsibilities involves "doing", while accountability could be seen as "simply reporting". The preoccupation with reporting sometimes displaces the actual doing. In some cases, you could have been better off *reporting* about a failed mission than you were in *actually taking action*, if your report on the latter did not adhere to the strict reporting rules.

Professionals and politicians could rely no longer on their ex cathedra authority and their professionalism to secure public support. Their performance began to come under scrutiny. Medical care processes meant to be coherent and integrated were broken down, mostly for purposes of measurement into elements and determinants, and the professionals were now obliged to fulfill measurable and quantitative definitions of performance. We were doing this in part to save costs, but the transaction costs created by the new bureaucratic processes were considerable, although these were not always taken into account by any of the key actors. (Bardach & Kagan, 1982).

The process has only accelerated and is having a significant impact on medical care. Some would argue that the breaking down of complex processes into measurable elements focuses the mind of providers on the hierarchy of reporting – the question becomes "who is reporting to whom", and can make one begin to lose sight of the overall goals of medical care. Scrutiny has only become even stricter and professionals are obliged to fulfill measurable and quantitative definitions of performance. As clinical outcomes are most difficult to assess, great importance is given to other measurable yardsticks such as economic measurements, performance within the budget, and the like.

Referring to the social support theme of the conference, governance, institutional structures, and provider networks could provide some cushion for this onslaught of measurement by placing the latter in an organizational context and reducing the alienation of cold measurement. But it seems that the organizational mechanisms that have evolved to date exacerbate the problem. Today's physician is torn between his commitment and loyalty to the profession and to the individual patient on one hand, and his obligation to his employer, the entire population of his patients, and the demand to restrain costs on the other. As Rudolph Klein has noted, society presents conflicting demands that the medical profession take responsibility for both the financial and professional performance of the health system (2002).

This duality leads to a system of command and control on the professionals. Physicians are asked to report to supervisors and to the central administration at the work place on the elements of performance. Not surprisingly, special attention is given to cost elements, such as use of examinations, tests, medications, hospitalization, utilization of specialized medicine and services, and so on. Reporting begins with the costly and rare items and little by little it contains more and more elements. There have been some sincere attempts to measure actual quality of care, but this is subject to more disagreements over interpretation than the above more easily measured inputs and costs.

Professional considerations are under examination by administrators, which can have a chilling effect on the physician.

One of the consequences of the concept of accountability is the idea that someone is always liable for every event, act, or omission. In medicine and healthcare, as in everything in life, there is no guarantee of 100% success, and therefore there is an inherent frustration. On one hand, it seems, from where I have been sitting in the health system, that the public expects a 100% success rate (Leraci, 2007), and on the other hand, the care givers feel that this expectation is exaggerated and can rarely be met, even when they perform reasonably and according to the best practice. As Leraci concludes: In asking health professionals to be accountable, it is also necessary to balance this with personal responsibility.

A workforce is needed that is appropriately skilled and trained for their expected output, given the resources to perform adequately, and not expected to attain perfection. A workforce that accepts appropriate challenges is prepared to make decisions openly, and to take responsibility for the outcomes of their actions. We need a community that accepts life's risks, tolerates imperfection, and re-learns to trust (Leraci, 2007).

A way out of this predicament - society demanding that the medical profession take responsibility for both the financial and professional performance of the health system - has been sought in a number of countries, by trying to shift from ex-post accountability for results to ex-ante accountability for conformance to previously set standards, or guidelines for medical practice (Chinitz, 2002; Klein, 2002).

Guidelines are actually reducing the gap between expectations and outcomes, and distributing the responsibility among the stakeholders in a more rational way. The regulators and administrators that introduce guidelines take part of the responsibility upon themselves and regulate the span of responsibility. This shift, however, is limited by the uncertainty inherent in the provision of health services. As stated in a recent movie, "The Code is not really a code, it's more like a guideline", meaning that more than occasional deviance is to be expected and even accepted.

This transformation to accountability in the sense of reportability, together with other processes, encouraged a desire to flee from the bureaucracy of the public system. It contributed to the proliferation of private medical services and supplemental health insurance, and the widening health gap across socioeconomic and geographical strata. In liberal societies, when the public sector creates a performance vacuum, the private sector steps in. We often blame the private sector for only thinking about profit, but sometimes it is the private sector that reminds us of our own responsibility and accountability, by setting standards that the public sector has to reach as well. Furthermore, the simple act of measuring can, in itself, help the professional do a better job, even if no one is checking up on him. This, in effect, may improve the quality of services and the quality of care.

No sooner had we become accustomed to measuring everything, than we came upon the challenge of law and ethics. Professional sovereignty became increasingly supplemented with other dimensions of accountability – ethical, legal, civic, and political. All of these are of course important, but how do we find our way through this forest of scattered elements of what is supposed to be a cohesive process of care? For example, the concept of patients' rights replaced absolute professional sovereignty and the paternalistic approach. Possibly as a balancing reaction to the focus on quantifiable measures of performance, social and ethical considerations, as well as legal norms, are gaining in importance in order to remind us that cost is not everything and that not all can be measured by units of effectiveness and dollars. But the problem is that all of these elements of accountability are developing separately and sporadically. This is not a planned culture or system of accountability. The quantifiable elements are the ones that seem to get the most attention, and therefore develop most rapidly.

Amazingly, despite all of this, the medical system in Israel has retained many of its classical values, some of which were updated or modernized to meet current social trends. The question facing the Israeli system is what kind of health system leaders we want to be.

Within this scattered approach, providers and policy makers appear to have been quite taken with the concept of patient's rights and personal freedom; this has been a convenient escape from the need to make a more coherent picture of accountability. One sign of this is that we are now witnessing a tendency to jump from the old paternalism to extreme autonomy by making the patient bear all the responsibility for his own health.

The focus seems now to be more on diverting responsibility and less on directing accountability, and the weakest player in the game – the individual – is left to bridge the gap between the two. The counterbalance to this is accountability of framework in which the individual makes his choices.

Is it fair to have the individual carry this burden, without taking into account (ah, there's that word again, account) his genetic inheritance, the environment, pollution, nutrition, and all the rest, much of which is out of his control? The state of the art is summed up by the points in the table below, based on an editorial in *Newsweek* (Interlandi, 2009). Quickly, it goes like this: blame the individual for his chronic health problems, no, that's not fair; ergo, the individual shares responsibility with government.

## Acccountability's Next Wave: the Personal Rresponsibility Syllogism

- To really drive (health costs) down we'll have to prevent people from getting sick in the first place.
- If more Americans could get themselves to the gym, the vegetable aisle, and the doctor's office' maybe we could dig ourselves out of this mess.
- But my behavior is only one in a host of factors
- Those of us who can afford to join a gym, see a doctor and eat healthier foods should do so.
- To prevent more cancer, try picking up the pace on toxic waste clean up. And while we're at it, why not make obtaining a high school diploma a matter of public health?
- "Health and health equity should be a marker for government performance." When it is, maybe i'll start eating salad.

This conference was aimed, in part, at trying to move beyond this logic and trying to find a better balance between individual and collective responsibility.

Responsibility is an active process – we take it (or are given it) and are then expected to act. On the other hand, accountability may discourage us from acting, but encourages us to report. What we have witnessed in the health workplace over the last couple of decades is a swing of the pendulum from one extreme to the other. Our increasingly risk-averse society, over a few decades, has moved the emphasis from one extreme of responsibility to the other extreme of accountability. Neither extreme is ideal.

A sustainable system is about balance, and achieving balance between responsibility and accountability in the health workplace is a key to professional sustainability.

We are all agreed that accountability is a “good thing”, but it may be that we can have too much of it. We should seek a model that combines the advantages of both concepts and minimizes the disadvantages

(Schmidt, 2009). In the healthcare field, we should conserve values that characterized the responsibility era. Social solidarity, aspiring to a welfare state, health insurance for everyone, is amongst these values that need to be revived and preserved. Even the free marketers recognize the essentiality of implementing these values.

In the state of Israel, some of these desired values still exist, from the formative years of the state. Others were created along with these principles over the years, for example our National Health Insurance Law, which ensures eligibility of every resident to a very broad and equal basic basket of services, and there are other principles that we have to make sure will continue and be improved, and prevent a process of erosion, at the end of which we will pay more and get less.

In the United States, as well as in many other countries around the world today, this is a central issue in the public debate, very high on the public and political agenda. We heard a great deal about this during the conference and will continue to hear about it during the coming years of implementation of whatever changes are adopted into law.

If our pursuit of accountability leads to an ever-increasing amount of measurement and monitoring, it may have perverse effects. The recommended model should combine regulation that will ensure accountability, transparency, and effective checks and balances. These regulations should encourage a desired behavior and discourage negative behavior by proper incentives. We need to make sure that in our enthusiasm for accountability we will not encourage defensive behavior.

It appears that accountability is not a panacea for the problems of health care systems, and that it can, in and of itself, be the source of new challenges that require redress. One conclusion is sure: it is easier to talk about accountability than it is to implement it successfully.

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# Meeting the Challenge of Chronic Illness: Policy and Evidence on Integrated Care

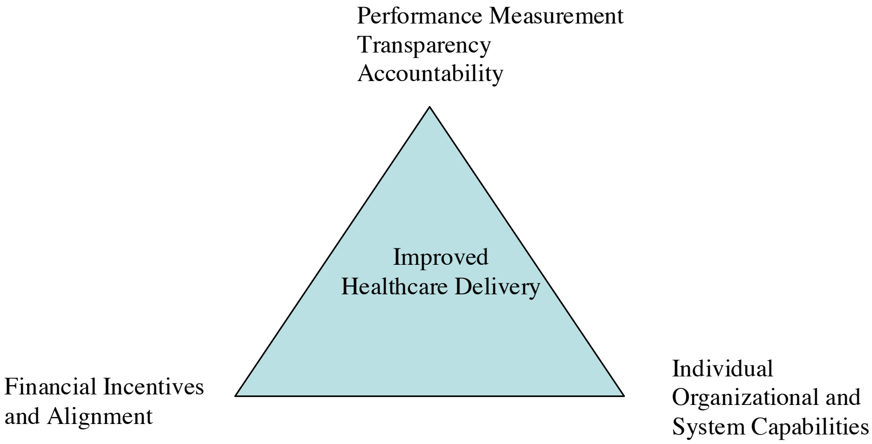
*Stephen M. Shortell*

## Introduction

All countries face common challenges involving maintaining and expanding access to care, constraining the growth in costs, and improving the quality and outcomes of care. Due to inadequate emphasis on the underlying physical and social determinants of health, an increasing burden of disease is being placed on the world's health systems. This is particularly true in regard to the global challenge of chronic illness: Who should be responsible for addressing this challenge? Who should be accountable?

Sixty percent of all deaths worldwide - twenty-five million - are now due to chronic illness. Eighty percent of these occur in low and middle income countries and are double the number of deaths occurring from infectious diseases (WHO, 2005). Forty-eight percent of disability-adjusted life years are due to chronic illness. Chronic illness will have a huge negative economic impact; for example, over the next ten years costs are estimated at $558 billion in China, $237 billion in India, and $33 billion in the United Kingdom (WHO, 2005). The growing prevalence of chronic illness has been accompanied by increased complexity of treatment regimens, expansion of medical knowledge, increased specialization of providers and fragmentation of care, and a recognition that providing care to the chronically ill also requires extensive input from patients and families. The result is the need for more integrated care that is not only coordinated across people, facilities, and time, but is tailored to patient needs and preferences. An overarching framework for improving health care delivery is shown in Figure 1. It involves the creation of aligned financial incentives among all components of the system; the ability of individuals, organizations, and systems to respond to the incentives; and the need for performance measurement transparency and accountability for the results achieved. I will focus most of my remarks on the development of the organizational and system capabilities for treating patients with chronic illness.

***Figure 1:*** *A Framework for Improvement*



## The Chronic Care Model

The Chronic Care Model, and its variations, has been the most prevalent approach to organizing care for patients with chronic illness (Wagner, Austin, & Von Dorff, 1996). Its key dimensions are community linkages, self-management support, decision support, delivery system design, and information systems. Examples of *community linkages* include formal written agreements with community service agencies to work with patients once discharged from the health system and referral systems that link to community-based programs. Examples of *self-management support* include assessing patient self-management needs and developing programs to increase the patients' self-management skills. Examples of *decision support* include integrating treatment guidelines through reminders and information systems, and the development of disease registries. Examples of *delivery system design* elements include the utilization of planned visits, group visits, nurse case managers for managing severely ill patients, and integrating specialist expertise into primary care. Examples of *information systems* include providing feedback to physicians on the care provided, use of electronic health records to help coordinate information from provider to provider and between provider and patients. While there is evidence that implementation of the chronic care model is associated with better patient outcomes (Tsai, Morton, Mangione, & Keeler, 2005), it has not been widely adopted. For example, recent research has shown that only about 4 percent of large multi-specialty United States group practices use all recommended processes associated with the Chronic Care Model for patients with diabetes, asthma, congestive heart failure, and depression (Rittenhouse et al., 2010). Use is greatest for diabetes and lowest for depression. Among the most frequently cited reasons for such low uptake are the lack of sufficient incentives, inertia, lack of time and resources, and lack of leadership (Ruson & Ham, 2008). A particular challenge is establishing the linkage with community agencies. In this respect, the United Kingdom has developed a number of policy options for better integrating health and social care. These include the need to adapt the relationship to the local context, the importance of the leadership of the primary care trust board members and the managers, the need to create integrative governance structures of both health and social care teams that are aligned with the general practitioner practices, the need to involve the acute care hospitals, and recognizing the importance of articulating the ends to be achieved but being flexible on the means of achievement (Ham, 2009).

## A Systems Perspective

From a systems perspective, there are four major components needed to achieve integrated care (see Figure 2). These include the strategic component, cultural component, technical component, and structural component. The *strategic component* emphasizes the extent to which achieving integrated care is a top priority for the organization, given competing needs and priorities and limited resources. The *cultural component* emphasizes the extent to which the organization's behavior, norms, and values reinforce the delivery of coordinated care. The *technical component* refers to the investment in human resources skill training, information systems, and related tools to implement such care. Finally, the *structural component* refers to whether forums or mechanisms exist to transfer learning from one part of the organization to another. Where the strategic component is absent, even in the presence of the other components, the result is likely to be no significant impact on anything really important. When the cultural component is missing, one may achieve small temporary effects but no lasting impact because there is no reinforcement for the achievement. When the technical component is missing the result is often great frustration and false starts on the part of caregivers, given the lack of tools to implement desired care. Finally, when the mechanisms to transfer knowledge are missing there is an inability to capture the learning and spread it throughout the organization. Only when all four of these components are present and aligned with each other can one achieve sustainable change of real impact. This is a major challenge and is one of the reasons why relatively little progress has been made in providing more coordinated care for patients with chronic illness.

***Figure 2:*** *Components Needed to Achieve System-Wide Integrated Care*

| Strategic | Cultural | Technical | Structural | = | Result |
|---|---|---|---|---|---|
| 0 | 1 | 1 | 1 | = | No significant impact on anything really important |
| 1 | 0 | 1 | 1 | = | Small, temporary effects; No lasting impact |
| 1 | 1 | 0 | 1 | = | Frustration and false starts |
| 1 | 1 | 1 | 0 | = | Inability to capture the learning and spread it throughout the organization |
| 1 | 1 | 1 | 1 | = | Sustainable change of real impact |

Bottom Line → Need all four components integrated and aligned with each other for lasting system-wide impact

## The Patient-Centered Medical Home

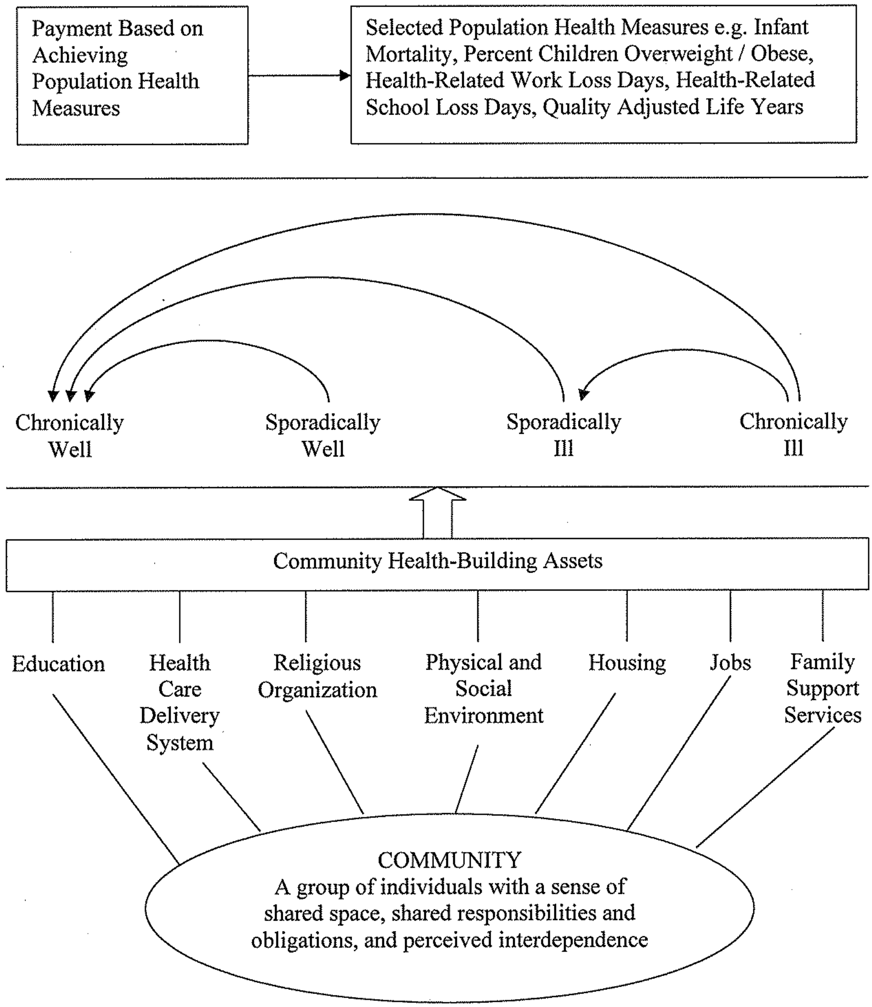
The Patient-Centered Medical Home provides a potential organizational structure for the implementation of the Chronic Care approach and related models. The Patient-Centered Medical Home provides each patient with a primary care physician who takes responsibility along with the health care team to coordinate care across all elements of the health care system on behalf of the patient. Enhanced access is provided through systems such as open access scheduling, expanded hours, and new options for communicating between patients and the practice team. Patient-Centered Medical Homes become the basic building blocks for the creation of Accountable Care Organizations. Accountable Care Organizations are defined as organizations that take responsibility for a population of patients with regard to the cost, quality, and outcomes of care and are paid for achieving results based on cost quality of outcomes of care. Examples include the primary care trusts in the United Kingdom, multi-specialty group practices and integrated delivery systems in the United States, and the Maccabi primary care services in Israel (Wilf-Micon, Kokia, & Gross, 2007). Key elements of the latter approach include the assignment of a multidisciplinary team to a panel of patients. The team serves to provide comprehensive health management with planned visits and follow-up. Performance is tracked with 25 clinical measures and infrastructure is provided though an electronic health record. Attention is also paid to the development of clinical leaders to spread best practices to their colleagues.

There is growing evidence that the Patient-Centered Medical Home model is improving care while reducing or at least not increasing costs. For example, Group Health Cooperative of Puget Sound (United States) has seen a 29% reduction in emergency room visits and an 11% reduction in ambulatory care sensitive admissions (e.g., diabetes, asthma) versus controlled sites (Reid et al., 2009). They have also had significantly higher patient experience scores and less staff burnout. All of this was achieved with no increase in overall cost. The Patient-Centered Medical Home model is now being implemented in all 26 primary care clinics throughout the system serving 380,000 patients (Reid et al., 2009). The Geisinger Health System in western Pennsylvania (United States) has achieved a statistically significant 14% reduction in hospital admissions relative to the control group and a 19% reduction in total costs after two years. The estimated $3.7 million in net savings has resulted in a return on investment of more than two to one (Paulus, Davis, & Steele, 2008). Despite evidence of the growing effectiveness of the Patient-Centered Medical Home model, many smaller practices will find it difficult to incorporate the needed elements (Rittenhouse, Casalino, Gillies, Shortell, & Lau, 2008). It is likely that in many countries, virtual networks of smaller practices will need to be developed to provide the necessary economies of scale and infrastructure to provide coordinated care.

## The Population Health Management System

As shown in Figure 3, the ultimate goal is to achieve a healthier population for all. This will require greater emphasis on a cross-sector approach that addresses the underlying physical and social determinants of health in addition to the role played by the healthcare delivery system. The assets that build community health include education, the physical and social environment, housing, jobs, family support services, and religious organizations, in addition to healthcare delivery system organizations. These assets must be aligned with each other to reduce the burden of chronic illness and move the population towards "chronic wellness". Payment to providers by government and others needs to be based on achieving population health measures such as reductions in infant mortality, childhood obesity, health related work loss days, health related school loss days, and quality adjusted life years. The emphasis in Figure 3 is on shared responsibility and accountability for health among all parties. Chronic care models that emphasize linkages to cross-sector community agencies can play a key role in fostering this development.

***Figure 3:*** *Population Health Management System*



Adapted from Shortell, Gillies, Anderson, Erickson, and Mitchell (2000, p. 264).

## Issues for Further Research

While our knowledge of what works in providing better care to people with chronic illness has grown over the past ten years, there remain a number of important questions to address. For example, it would be useful to know if some specific components of the Chronic Care Model (for example disease registries versus patient self-management programs) are more important in improving care coordination and outcomes than others. If so, this would enable practice changes that are more focused and perhaps less costly. Or, as some assert, is the “whole package” of the model needed to achieve the desired outcomes?

Another issue involves breaking down the barriers between primary care physicians and specialists and between primary care providers and hospitals in efforts to provide more coordinated care across settings. Here, one needs to examine changes in payment incentives that might be made to teams of providers in different settings to provide coordinated care. One example is the bundled payment approach, which provides a lump sum payment for a given condition to hospitals and doctors. If they can provide the care for less than the targeted rate, they can share in the savings.

Related questions include how health professionals other than physicians can be better utilized in providing coordinated chronic illness care. In similar fashion, how can small physician practices be organized to develop the capabilities to serve as “medical homes”?

Many of the above questions raise the issue of how payment incentives and delivery models can best co-evolve to achieve more coordinated care. This is likely to differ from country to country, calling out the need for more comparative research from which we can all learn and adapt to meet our own challenges. This will involve the recognition that responsibility and accountability for better health rests with all parties involved – the personal responsibility of individuals, the responsibility of those who provide and pay for care, and the responsibility of the cross-sector public and private organizations to provide the conditions for all parties to improve health. Ultimately, the ability to better address the growing challenge of chronic illness across the world will have profound effects not only on the health of our populations but also on economic growth, the quality of life, and potentially global security.

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# PUBLIC ACCOUNTABILITY: GOVERNANCE AND STEWARDSHIP

# Public Accountability: Governance and Stewardship: Section Introduction

*Richard Saltman, Gabriel I. Barbash, Jack Habib*

Accountability is a complex and amorphous concept. When applied to health care systems, it has a number of different dimensions, with payers and patients often taking a decidedly alternative perspective from producers and medical professionals. It also is a concept with multiple, sometimes inherently conflicting, characteristics: clinical versus financial accountability, legal versus professional accountability, ethical versus political accountability.

Beyond its functional role in the day-to-day running of a health system, accountability also can be seen as having a normative or “moral” dimension, conveyed by synonyms such as “governance” or “stewardship”. While these terms are normally applied to the actions (or non-actions) of governmental bodies, they can be attributed to decision-making processes and outcomes in the private sector as well. Thus, the policy objectives of “good” governance and “wise” stewardship have become central to the mission statements of many supervisory bodies throughout the health sector.

This trio of concepts - public accountability, governance, and stewardship - is now seen as crucial to the structure and operation of an effective and efficient health care system, and thus it is not surprising that they have become increasingly important in ongoing health policy debates about optimal health system design. Recognition of the importance of these concepts was initially triggered by the fall of the Soviet Union in 1990, which brought a realization of the need to re-design and strengthen systems of responsibility in the health sector not only in former Soviet bloc countries, but more generally in both tax-funded and social-health-insurance-funded systems as well. The importance of re-design was reinforced by the growing importance in many Western health care systems of the role of patients, and of changing patient expectations about the quality, timeliness, and safety of the health services they receive. These factors together served to emphasize the new role that public accountability and governance would play if health systems are to achieve their key objective of improving both patient and population health outcomes in a financially sustainable manner.

In the contributions that follow, the importance of public accountability, governance, and stewardship, as well as the conceptual complexities that they engender, are approached from a variety of directions. The first two papers – by **Richard Saltman and Ezekiel Emmanuel, and Josep Figueras** – explore the operational and practical boundaries of these three concepts, and consider the role that accountability and governance can reasonably be expected to play in public policymaking for what are complexly inter-connected service delivery systems.

Other papers in the section touch on public sector accountability related to more specific health care challenges. **Siegal Sadetzki** considers the application of the basic principles of accountability to the implementation of new technologies for prevention and diagnosis in the Israeli health system. **Richard Scheffler** reviews a series of global healthcare manpower issues and the role of the public sector in addressing them. A related paper by **Eithan Brodsky and Dina Van Dijk** focuses in on the specific issue of new and advanced nursing roles in the Israeli context. **Greg Marchildon and Wallace Lockhart** discuss the role of regulation and stewardship in the regionalization of Canada's provincial health systems, and their paper raises the broader issue of the appropriate role for government in ensuring both good governance and wise stewardship over various system sub-sectors. **Asher Elhayany and Shlomo Vinkner** review a successful program in Israel to eliminate co-payments for low-income persons and raise the issue of whether government has a responsibility to adopt such a program. **Nachman Ash's** paper examines the role of the Medical Corps of the Israel Defense Forces (which he commands) in times of emergency; it also raises the broader issue of the role of governments in meeting unexpected and/or catastrophic events such as epidemics and public health emergencies.

Overall, it is precisely the broad range and seemingly disparate nature of the topics and papers in this theme of the conference that reinforce the notion that public accountability and good governance is itself a diffuse, highly differentiated set of health policy issues. The challenge to national policymakers necessarily revolves around the need to synthesize these diverse day-to-day responsibilities into a consistent system-wide set of strategies that can help steer outcomes in a positive and health-enhancing direction.

# Context, Culture, and the Practical Limits of Health Sector Accountability

*Richard B. Saltman*

## Introduction

Accountability is a considerably more complex activity than it is often portrayed in standard managerial texts. It necessarily has a number of different dimensions, which in turn reflect multiple perspectives and also expectations about its focus and purpose. This paper seeks to abstract several key analytic markers that can help specify more precisely how the concept of accountability is utilized in real-world practice within health systems. By considering some of the major restrictions and constraints on accountability, this analysis makes it possible to more clearly focus efforts to employ accountability more realistically and, hopefully, more effectively.

## Conceptual Background

Accountability is universally seen as a good thing. Everyone is in favor of more accountability, especially when it comes to health care. The dilemmas start when we begin to define specific responsibilities and behaviors, and seek to implement and operationalize new mechanisms.

It is possible to identify three contributing problems. First, the notion of “accountability” means different things to different actors inside the health system. What a senior administrator might view as appropriate reporting, a clinic physician might consider to be bureaucratic harassment. Second, there are real-world pressures that have to be accommodated. A public hospital executive might view as unnecessary reporting back on a particular topic that its political supervisors, worried about external scrutiny by citizens and political opponents, might find absolutely essential.

Third – and most important – is the practical reality that accountability has both management and policy dimensions. One can describe a decision-making continuum in health systems that runs from macro-system-level policy assessments down to micro-institutional-level managerial and operating determinations. At each level of this process, be it classified as policy making at political levels or management at operating levels, there needs to be – and typically exists – a framework to define and evaluate individual and/or group responsibility, i.e., accountability. Thus, accountability pervades the entire continuum of decisions in the health sector, applying to everyone, which in turn means that, practically speaking, it specifies or singles out no one in particular.

This paper focuses on two types of real-world dilemmas that constrain accountability in health systems:

- the problem of theory vs. practice
- the problem of context and culture.

Although these two categories are often inextricably intertwined in the real world, they will be considered sequentially here in order to properly present the different characteristics of each. The objective is to highlight practical issues that policymakers face in applying notions of better accountability to the real-world complexity of health systems.

## Theory vs. Practice

In the world of academic theory, researchers seek to split accountability into sub-types as a way to capture key relationships and interactions inside health systems. The intention is to find the central levers that drive decision-making, and that, conversely, can be re-directed to promote or restrain those decisions.

Reviewing the structure of decision-making within health systems, Emanuel and Emanuel (1996) contend that accountability can be classified into three categories:

- *Professional accountability*, which focuses on the physician-patient relationship, with the physician required to act as the patient's agent, and with the physician making the key decisions;

- *Economic accountability,* which emphasizes the need to use scarce resources appropriately, targeting financial managers as the decision-maker; and

- *Political accountability,* which here refers to Hirschman's (1970) concept of "voice" inside an organization's formal decision-making processes, with the idea that physicians ought to be able to contribute to organizational decisions as "citizens" of, for example, the hospital or other provider organization.

Although Emanuel and Emanuel view each of these three forms of accountability as self-sufficient and independent, they conclude that an ideal form of accountability would be to combine all three forms into a "nested" model, i.e., professional within political within economic. As is apparent from how they characterize accountability, these authors view accountability from an essentially "inside the organization" or "management" perspective. Consequently, sanctions intended to protect and defend this view of accountability typically involve concrete measures taken within the provider organization, which entail loss of status or financial benefit as a result of bad performance.

Saltman (1995) took a different cut at the concept of accountability, suggesting that there were six different types of accountability within a health system:

- *Clinical accountability* refers to appropriate quality, safety, and outcomes of care (as measured in the United States, for example, by the HEDIS system). This form of accountability is clearly within the realm of clinical staff, especially physicians, and is used to hold these medical professionals to high standards of quality of care and of clinical performance.

- *Professional accountability* refers to professional organizations formed by clinical staff, for example medical associations for physicians. Measures of accountability here typically involve meeting professional standards of activity, both clinically in terms of medical practice, but also personally in terms of ethical and appropriate personal conduct.

- *Legal accountability* reflects the imposition of judicial discipline on physicians and other professional staff. Court suits for negligence and other unprofessional conduct can lead to punitive financial awards, and thus to the need for malpractice insurance – expensive in some countries (USA) while hardly noticeable in others (Sweden).

- *Financial accountability* involves holding key health sector actors responsible for the economic consequences of their decisions. This can extend from Supervisory Boards to senior institutional managers down to clinic directors when budgets have been devolved. Although techniques for calculating financial budgets can be controversial, most health sector actors recognize that adequate financial resources, and, increasingly, value for money, are essential if existing institutions are to survive.

- *Political (Democratic) accountability* concerns politicians, citizenry, and elections. Unhappiness with performance is signaled by growing political opposition and, typically, losing re-election. Although the combination of issues that surface in an election campaign in some political systems can make it difficult to determine the impact of health-related dimensions, this form of accountability is quite direct, and clearly recognized by all participants.

- *Ethical accountability* is expected to guide decision-making at all levels in the health sector – not only physicians and other medical staff but also administrators and politicians. Ethics in this sense is understood as putting the best interests of the patient first and before all others. This concern is formalized in the Hippocratic Oath that all physicians take upon entering the profession, and pervades hospital decision making in a wide variety of transplant, end-of-life, and other critical decisions. However, ethical concerns often have only vague sanctions attached, and are sometimes difficult to enforce.

While there is some overlap to the specific conceptual elements in the framework proposed by Emanuel and Emanuel, this second approach, rather differently from Emanuel and Emanuel, reflects a “societal” or “policy” approach to accountability. Nonetheless, both analytic approaches pinpoint a series of inter-relationships and complex interactions across health care systems that are difficult to harness and steer, and which often conflict with each other.

Overall, the dilemma presented by these different academic approaches to accountability is readily apparent. They involve complex categorizations that are not always conceptually distinct, and the categories they put forward do not always translate into managerially discrete and thus implementable mechanisms to assess accountability inside real-world health care organizations.

## Context and Culture

The second type of practical dilemma involves two factors that are external to health care systems, but which have a major impact on the degree and range of policy decisions that are taken within the health sector.

The first factor is what political scientists call "context" (Vrangbaek, 2007). This refers to the broader structural relationships within which health systems are situated and within which they have to operate. These context issues vary widely across different countries, and can span institutional, historical, and also population- and geographically-based constraints on social decision-making in a particular country.

Of course, the largest context issue for health systems in all countries is the state of the national economy, and the carrying ability of current income levels to pay for planned or expected levels of health service provision. The importance of economic capacity was reinforced in European health systems in the early 1990s in the countries of Central Europe that had been part of the former Soviet Union, and especially in the constituent former Soviet Republics, all of which suffered dramatic falls in their economies after the collapse of the Soviet Union in 1991, and all of which developed major health resource difficulties as a result of this collapse in the output of their domestic economies (McKee, MacLehose, & Nolte, 2004). A similar re-awakening of the role of economic growth in the capacity of health systems to provide services is likely to follow the recent 2008-2009 recession, which has reduced nominal GDP in a number of Western European countries by up to 4%, and will create difficult budget conditions for publicly funded health care systems for the next period of years.

A second critical context issue is the nature, stability, and effectiveness of the political system. Again drawing on Central and Eastern European experience in the early 1990s as an illustration, a number of newly independent countries found that their national governments lacked sufficient resources (regulatory, legislative, personnel) to adequately establish a proper environment for health sector development (Nunberg, 1999). In Italy, where the 22 regional governments are fiercely jealous of their prerogatives in making health sector decisions now that management of the delivery system has been decentralized to them, the national government has had great difficulty in trying to link national funding for health care to performance and/or outcomes at the regional level. More recently, in Greece, where the fiscal picture is exceptionally dire, questions have been raised about the political strength of the Greek government to rein in public sector expenditures including those in its health care system.

Beyond economic and political factors, other important contextual issues – depending on the country – can include the following:

- *Geographic* characteristics often influence decisions in the health sector, particularly sparsely distributed rural populations. In Norway, for example, isolated villages located on tips of fjords sometimes have small cottage hospitals since travel to another village – on the tip of the next fjord – may require a long round-about trip up one fjord then down the adjoining one. As a result, political parties in power in Oslo typically have to promise that local hospitals will not be closed, leaving the health system with a substantial number of small, inefficient, and sometimes lower quality health care providers.
- *Historical* factors can make it hard to change some aspects of the health system, in that particular groups or institutions may carry weight in the mind of the citizenry that is far greater than their current role in the delivery system. In Germany, for example, all civil servants have had indemnity insurance purchased for them by the government they work for (federal, regional, or municipal) rather than social health insurance, as the result of a royal agreement that predates the beginning of Bismarck's Social Health Insurance. In Finland, a 1000-year legacy as a colony, first of Sweden then Russia, during which time the national government was considered to be politically compromised, has left municipal governments viewed as more traditionally representative of Finnish interests, thus making it difficult for the national government to impose specific behaviors on the municipalities against their will, and making it especially difficult to force municipalities to merge (as the national government currently

would like to do) in order to create more effective health sector managing units.

- *Trained medical staff* often are not available in necessary numbers to carry out desired government policies. Many European countries – Netherlands and Norway as two examples – have had chronic shortages of nursing staff for several decades, limiting the ability of the health system to undertake desirable new services. In the United States, as the post-2006 experience of the state of Massachusetts has clearly illustrated (*Wall Street Journal*, 2010), there are too few primary care physicians (or other trained staff able to provide primary care services) to meet the need created by expansion of health insurance. Indeed, in the case of Massachusetts, it has become all but impossible for newly insured individuals to find a primary care provider who will accept them as a new patient.

Context is thus a category that covers a wide variety of external factors that limit and constrain decision-making – whether at policy or management levels – inside a health system. As such, context necessarily serves to define the space within which policymakers and managers actually – practically – have the option to act. In this sense, context plays an important role in health sector decision-making, delimiting the specific policy and operating options that can be on the table for consideration or adoption.

"Culture" is a concept that is more elusive and more controversial than context, but no less real in its ability to define the available policy and managerial space within a particular health system. Culture, of course, has many different dimensions, covering all types of social groups from national to ethnic to corporate. The term culture as it is used here refers to national culture – to a country's dominant (or, better, predominant) social norms and values that influence national policy decisions (Hofstede, 1980). In some countries, the dominant religion also may play an important role (e.g., in Catholic Ireland regarding abortion, or in Islamic Arab countries regarding male doctors seeing female patients).

Although many current-day anthropologists demur (Benhabib, 2002), most countries do in fact have a particular and broadly identifiable mix of norms and values – their own culture – that helps shape how decisions get taken within that society that affect key dimensions of health services delivery. Culture can help explain, for example, why institutions differ in different health care systems: why the Germans and Dutch keep Social Health Insurance systems, why Nordics keep tax-funded systems, as well as why the United States (despite keen disapproval among many in the international health policy world) keeps predominantly privately funded health insurance.

Callahan and Wasunna in *Medicine and the Market* (2006) re-phrased a useful term used in the European Observatory's study on social health insurance systems in Europe (Saltman et al., 2004, p. 114):

> While ... European health systems have become not simply an insurance arrangement but rather a 'way of life,' ... the fragmented market-embracing American health care system is no less a 'way of life'. ... both systems are deeply embedded, hard to change, each expressive of different ways of looking at health care and the relationship between the individual and society.

Moreover, culture not only informs health-related decisions, it does not go away and is very difficult to change. As an example, national cultural expectations will inexorably re-assert themselves over institutional or structural reforms that attempt to re-shape institutions in ways that are inconsistent with that dominant cultural force. This re-assertion process was described rather elegantly by Geert Hofstede, a Dutch anthropologist with long experience working in modern organizations, in his major study *Culture's Consequences* (1980):

> Institutions may be changed, but this does not necessarily affect the societal norms, and when these remain unchanged, the persistent influence of a majority value system patiently smoothes the new institutions until their structure and functioning is again adapted to the societal norms.

Thus, both context and culture establish an important set of barriers that shape, channel, and can serve to substantively restrict the range of action for introducing new managerial mechanisms such as accountability. In the real world where existing economic, political, and other major institutional characteristics already exist, and where cultural norms and values define the range of acceptable efforts to introduce new management models, the ability of academically designed concepts of accountability to influence day-to-day operational behavior inside health care systems is necessarily limited.

## Two Examples

The degree of practical power and influence exercised by these constraining factors – e.g., exercised by the limits of real-world practice, as well as of contextual and cultural constraints – and how they combine to generate a more complex environment for implementation of new models of accountability than many national regulators often anticipate, can be seen in two examples taken from current health reform efforts in the United States.

### Example #1 – The Democratic Party's efforts to pass a comprehensive health reform bill in 2009-2010.

Despite the domestic (and international) excitement, universal health insurance in the United States is extremely difficult to design and/or implement. A wide range of contextual and cultural factors militate strongly against the success even of a passed bill.

Most prominent among these structural constraints is the difficult fiscal condition of the country. This reflects not just the impact of the major recession in 2008-2010, but also the long-term structural status of the country's finances. March 2010 estimates from the Congressional Budget Office (an ostensibly non-partisan costing agency of the United States Congress) indicate that – without passage of the proposed comprehensive health bill – the total debt owed by the United States government will grow to $20 trillion (thousand billion) by 2020, and that annual debt service will rise to over $900 billion per year (Yoest & Boles, 2010). Since CBO figures are highly politicized, in part by its methodological approach (it accepts the core spending premises of the dominant political party whose budgets they are costing out), the real fiscal picture is dramatically worse. Moreover, none of these numbers reflect potential future emergency spending for domestic disasters (think New Orleans in 2004) or international events (think military confrontation with Iran or major involvement in Pakistan).

This picture is one of enormous and unsustainable debt, crushing new taxes, and a sluggish and unresponsive economy for a generation or more. It reflects an interpretation of John Maynard Keynes' theories about public expenditure that is little more than a national fiscal suicide pact – nothing Keynes had remotely in mind.

Most importantly, for purposes of assessing the prospects for health system reform, none of these official CBO estimates incorporate the real cost of the comprehensive health bill that may be passed by the Congress (*Wall Street Journal*, 2009). Far from "being paid for", as the president pretends in his speeches, in fact a thorough assessment of the costs by Congressman Paul Ryan (Republican of Wisconsin) has concluded that the current bill would add another $1.6 trillion in national debt over the next 10 years (Ryan, 2010). And this estimate, of course, assumes a consistent rate of health care inflation that undoubtedly will be too low in the face of inflationary pressures generated both by providing new services to 30-45 million people by a fixed infrastructure of facilities and trained medical staff (see Massachusetts' experience since its universal care reform was implemented in 2006), as well as the likely expansion of technological capabilities to treat additional illnesses and conditions.

Beyond this (and other central) context issues, there are also strong cultural constraints on the design and implementation of health system reform in the United States. An important cultural factor is the widespread distrust of the federal government, both as an actor generally as well as in the health sector specifically (Seib, 2010). In broad terms, there is a standard joke told by ordinary people all over the United States: "I'm from the federal government and I'm here to help you." While folks in Washington or Boston may not have heard it used, it's a traditional way to demonstrate lack of trust in the honesty, integrity, and, most of all, competence of federal officials in much of the country. This author heard this line used as an opening joke by the head of the Health Care Finance Administration in a 1993 speech to the Georgia State Health Reform Commission - he followed it up with "I've always wanted to say that.". The line was rewarded with a hearty laugh from all present. Similarly, the average person often disparages the capabilities of the federal government by noting that it runs "the post office and FEMA (Federal Emergency Management Agency)", both bywords for inefficiency, featherbedding, un-responsiveness, and waste of money. Indeed, opponents of the current health reform legislation regularly start their remarks by saying "Do you want the health system run by the same people who run the post office?".

This widespread attitude of disdain for the federal government's competence reflects some key context factors: the enormous size of the country, the fact that it has 310 million citizens (more than five times more than the largest of the European Union populations – Germany has 81 million citizens), a long history of political corruption in the awarding of government contracts, etc. It also runs directly contrary to the strong political support among the citizenry that Medicare (health services for the elderly) and its pensions counterpart (Social Security) have taken on (although the fact that both of these popular federal programs are rapidly running out of money – and that Social Security had all its collected funds “borrowed” by Congress from the supposed “lockbox” into which they were placed – has again reinforced public disgust with the behavior of the federal government).

Overall, however, this attitude of distrust of the federal government is now a cultural attribute of most regular Americans, and serves as a distinct barrier to the type of strongly centralized national health reform that the Obama Administration is seeking to legislate and implement. Indeed, it goes a good way toward explaining the polls that consistently show that American voters reject this reform legislation by a massive 58% to 60% against with only 35% in favor. There is broad concern across the population about inadequate funding, about lowering the existing quality of care, and about the inevitable imposition of rationing via queues and also by eliminating some services. This rejection of centralized public reforms – and the very difficult implementation that such broad public rejection would generate for efforts to implement such a vast new program now that the Democrat’s proposed legislation has become law – illustrates the power of context and culture in limiting the ability of governments to introduce new health sector initiatives generally.

### Example #2 – Mammography screening guidelines

New mammography screening guidelines that were proposed by the United States Preventive Services Task Force in November 2009 triggered a firestorm of disapproving reaction. The reaction was based, as in the previous example, on a mix of contextual and cultural factors. In this case, however, the reaction was so explosive that even the White House felt forced to disavow the new proposed guidelines within 24 hours after they were released, and the Commission’s proposals disappeared from view without a trace.

The proposed new guidelines were based on an interpretation of the scientific evidence that showed mammograms were not cost effective until women were age 50 (Kolata, 2009). This age basis also was consistent with the start of mammography coverage in many European countries. Based on this interpretation of the clinical evidence, the Presidential Commission issued recommendations (in the United States, with its diverse health system structure, there are no mandatory rules for screening activities) that called for current screening of women ages 40-49 to be discontinued. It also suggested extending the time period between mammographies for women ages 50-74 to two-year intervals rather than one year, and recommended that physicians stop teaching women to do breast self-examination.

Within 24 hours of their release, the response by women's groups across the country was deafening. Newspapers were full of letters from women who had been diagnosed with breast cancer between ages 40 and 49, and who argued they would have died under the new recommended approach. Women's advocates were publicly and loudly appalled at the call for less vigilance and fewer and longer intervals of screening for a disease that has been killing increasing numbers of women, and for which quite successful clinical treatments are available if the condition is detected early.

Context in this case involved the then-current deliberations over the proposed Democratic comprehensive health bill, which at that time was waiting for a vote in the U.S. Senate. Widespread public distrust of the federal government (see Example #1 above) combined with widespread public dislike of the strong new centralized role for the federal government that the new legislation portended. Cultural factors reflected the unwillingness of many American women - indeed of many Americans generally - to accept reductions of any medical service that might be indicated, and certainly of one which they believed could save lives - even relatively few lives.

With the release of the new recommended guidelines, opponents charged that just this type of false cost containment and inadequate clinical standards would be the inevitable result of the much larger federal government role in health care envisioned in the pending Congressional legislation. Political and also popular opponents of the pending bill seized upon the new proposed guidelines to argue that they represented exactly the denial of necessary care that could be expected if the bill passed. Prominent physicians immediately stated that they would ignore the new guidelines, and numerous private insurance companies said they would continue to pay for the previous screening regimen (i.e., starting at 40, once a year).

The Obama Administration was totally overwhelmed by the negative publicity, and by the disastrous implications for passage of its long-worked-on comprehensive health reform legislation. Trying to contain the political damage, President Obama's Press Secretary Robert Gibbs backpedaled furiously, announcing that the White House did not endorse these recommendations in any manner - directly disowning the results from a Presidential Commission's report just hours after its recommendations were released, and well before any careful assessment could be made of their content. Gibbs pleaded further that the task force's membership had been appointed by the (George W.) Bush Administration, and thus did not represent the Obama Administration's much more sophisticated and elegant thinking on the matter. Subsequently, in early December when the U.S. Senate returned from its Thanksgiving recess, the Democratic majority unanimously accepted a Republican amendment to the pending health reform bill that effectively prohibited the adoption of the new proposed guidelines by any federally funded health provider (Herszenhorn, 2009).

Once again, the example demonstrates that context and culture effectively set the parameters of acceptable decision making regarding health systems. Academic and/or legislative ideas about how best to organize and exercise accountability in the health sector necessarily find themselves subordinated to the predominant role that these two external factors can play in the overall policymaking process.

## Harnessing Context and Culture

While the above two examples demonstrate the constraints that context and culture can apply, it is valuable to recognize that both factors can also be harnessed by effective policymaking to support and reinforce a desired health sector reform. Indeed, the ability of government to embed a proposed structural reform in the existing pattern of external pressures and social norms can give greater strength and acceptability to new health sector reform initiatives. Norway's major restructuring of both its health sector and public hospital governance models in 2002 can serve as an example of the positive power of recognizing and responding to both contextual and cultural expectations (Magnussen, Vrangbaek, & Saltman, 2009).

Regarding economic context – and quite opposite from that of the United States in 2010 – Norway in 2002 (and still in 2010) has a massive positive fiscal surplus. Seeking to manage its oil funds responsibly for future generations, Norway (a country of 5 million people – smaller in numbers than the state of Massachusetts in the United States) has placed some $400 billion into a sovereign wealth fund, where the objective is to invest it for long-term returns. With regard to political context, there was a sense of exhaustion with the 20 year long "blame game" between the 19 counties (fylke) and the national government as to whether the national government was providing adequate funds to the counties to run the public hospitals (primary care and long-term and home care were managed by the municipalities). Both contextual factors – coupled with the importance of keeping the existing infrastructure operating given the spread-out rural character and difficult terrain (see geographical context point above) – supported the government in its introduction of major reform proposals.

Regarding culture, most Norwegians have an ingrained sense of trust in the national government, built from a generation of a relatively well-run welfare state. Health sector reforms that required centralizing political control over hospitals into national government hands thus did not set off the type of cultural alarm bells that were triggered by the Democratic health reform bill in the United States. Additionally, the strong Norwegian cultural expectation about equality for all citizens had been undermined by persistent problems with up to two-year queues for some elective procedures, as well as unequal outcomes depending on which county one lived in (what the British disparage as "postcode rationing"). All of these cultural parameters served to support rather than undercut new national control over the public hospital system.

Viewed from this perspective, context and culture need not be only negative factors from a government reform perspective. What is necessary , first, to have key aspects of the external environment that support the approach to health reform that the government is contemplating, and, second, to tie the actual reform measures and their implementation to those contextual and cultural supports.

## Concluding Observations

A number of observations can be drawn from the mapping exercise above about the usefulness of imposing accountability measures within the health sector. Among them, first, is that the two external factors of context and culture do in fact play a major role in steering and/or constraining the options that policymakers have in the real world. Accountability measures that may make sense academically may be of little value if they do not fit within a country's existing economic and political context, for instance, or if they contravene its dominant national cultural expectations. In effect, then, the design of accountability measures needs to be responsive to the assumptions built into the external policy environment within which those accountability measures must be introduced and enforced.

Second, and following from the role that context and culture play, the formal/official accountability structures put in place will often differ from the real arrangements that are followed within the actual institutions. Pressures to conform to the existing expectations of the citizenry will, as Hofstede counseled, be "patiently smoothed" into a more acceptable economic, political, and/or social form. Conversely, efforts to change accountability mechanisms without first accommodating the character of the external context and culture will be difficult and, ultimately, not very successful.

Third, it is likely that the actual mechanisms of accountability in place will vary with each country's current context and long-term national culture. Thus, if countries have different starting points, they will likely need to have different designs of their accountability structures if those structures are to be effective.

Lastly, and, given the above discussion, far from surprisingly, the instruments and mechanisms of accountability – like those of governance and stewardship – are ultimately as much political as they are managerial in nature. As political creatures, therefore, accountability measures need the same careful thought, and suffer from the same deficiencies, as political governance generally.

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# Difficulties in Making Accountability Practical

## *Ezekiel Emanuel*

I want to begin in a slightly different place than some of the speakers have, and I want us to think a little bit about what I would like to call "facts of human nature". I take these to actually be facts, and they reflect, I think, some deep-seated evolutionary and other trends that are built into our psychology.

I have six points here. The first is that people want power, authority, control. As individuals, and as an organization, seeking power and control obviously has some evolutionary and survival advantages. Within social systems, power, authority, and control are important for people. Concomitantly, I don't think people want to be held accountable. We don't necessarily think accountability is a good thing when it applies to ourselves. After all, accountability is fundamentally a challenge to our authority and power.

Second, we like to hold other people accountable. Right? We like to hold them accountable because this constitutes an exercise of our power and authority. And so I think this accountability issue, rather than just saying unequivocally that it's a good thing, we have to ask, who does it apply to? When we are being held accountable, we may not view it as desirable; when someone else is being held accountable, we can be much more supportive.

Third, I think a less evolutionary fact, but nonetheless a fact about human nature, is that we don't want to be held accountable for what we have no responsibility or authority to control. I think this is very important. If you look around at many organizations, you frequently find people who have accountability for something that they ultimately do not have the levers of control or authority to change.

Let me just give an example from the context of the United States and health care: I think it would be very, very difficult for a CEO to be held accountable by his or her board for their company's health care costs. The company has almost no control over their health care costs. They might have some influence, but the whole rest of the system and the market in which they operate and purchase their healthcare, is one they ultimately have very little control over. And so while the CEO may be bemoaning the fact that health care costs are going up 6, 8, 10 percent a year, it's not clear to me that it's a good use of his or her time to focus in on how to control those health care costs. I think it's a very rational approach to say, "I don't have control over health care costs, even though I am a CEO. I shouldn't be held accountable for these costs."

Fourth, I think accountability really depends upon the size of organizations, the context, the size of the country. I think accountability is very different in a country of 7 million like Israel, where the top elite know each other face-to-face, interact with each other, can hardly escape from seeing each other all the time. Accountability is much more institutional in a larger country. In a large country, accountability is going to be less face-to-face, more impersonal.

That has positives and negatives. One of the positives is obviously that when you are interacting with people face-to-face you need to do things to smooth relationships because you know that you are going to see the other person constantly. Whereas if you are interacting institutionally it can be much more cut and dried, because it's not necessarily a personal item, or it doesn't necessarily overlap with the personal.

On the other hand, interacting face-to-face makes the person who is going to be held accountable not want to fail either.

Fifth, I think human beings are fundamentally conservative. We don't like change; we resist change. We have adapted to our environment, and we have figured out how to succeed and flourish in our environment. We do a lot of things when change comes to smooth it out over time, to make it just like the old circumstance. Unless we are really forced to accept change by some circumstance, I think we generally strongly resist it.

And the last point: I think that it's impossible to get organizations and individuals to be accountable.

First, if what you are holding them accountable for is against their financial interest, it's very hard to get them to change – particularly if it's going to cost them a lot of money to do so.

Second, if there is no financial incentive to change and to be held accountable for those changes, then it's not going to happen. But (to bring up a point that I think Steve Shortell mentioned, but maybe didn't emphasize as much as he does in other contexts, which I think is fundamentally right), even with financial incentive going towards accountability for change, it's not clear that people will actually change. Providing incentives is a necessary but not sufficient condition. Steve likes to emphasize the importance of capacity and the talent that can actually use financial incentives to move in the desired direction.

With that as background, I want to talk about a couple of different circumstances and accountabilities that I have seen, the difficulties of getting health care systems to work, and some of the challenges. A few weeks ago, a CEO of a major healthcare organization in the Midwest United States was visiting several of us on the health care reform team, and was discussing his organization's experiences in trying to bring accountability for quality and, to a lesser extent, for costs, to its affiliated physician groups.

In discussing their experience, he said that when they confronted physicians and began to show them that they needed to change, to be accountable for what they're doing, the physicians' response took the shape of a five step process.

First, physicians responded by saying you can't prove the claims. You go up to a physician and say, “You know, you are off the quality mark.” The physician's first response will be, “There are no data, show me the data.” You then generate the data and show them. The second response is, “I don't believe the data, it's not true, it's wrong.”

The third response: my patients are sicker. If you tell a physician, "You are not performing as well as the next guy", the response will likely be, "My patients are sicker, I have much more difficult patients." In the United States, we have this radio show that is based in Minnesota, and it talks about Lake Wobegon where everyone's child is above average. In American medicine, it seems that you always want to claim that your patients are below average, that they are sicker.

Once you show the doctor that in fact his patients are similar to the patients of his colleagues, and that he is not performing as well as his colleagues, then we get the fourth response, what we call the attribution comment: “It's not my fault; it's the fault of the other three doctors the patients are seeing.”

Finally, when you get to the fifth level, there is the epiphany; the doctor realizes that there really is a problem here. And at this last level, you finally get to the point where the physician asks "How do I change?".

As that CEO I mentioned earlier notes, this is not a trivial question; the way to change is not immediately obvious. The doctor has adapted to his or her previous environment, is well-equipped to handle that environment, and not sure what to do to change. The physician may not have the capacity to understand the new environment or to adapt to it.

Now, that was just one experience that I had with a CEO discussing in detail his experience in trying to get to higher levels of quality and lower levels of cost in one health care system. But it's not unique. Many of you may know about the Dartmouth Group and some of their more famous studies. One of their studies, which has often been used, examines the variation in end-of-life care across different hospitals in the United States, looking at Medicare data. In their results are two hospitals whose end-of-life Medicare spending stands out as being very high, I mean just leagues greater than everyone else – NYU and Cedars-Sinai. Interestingly, if you talk to their CEOs the first thing they say is: “We have a lot of orthodox Jews.” They repeat this five step process: “Where are the data?” “Okay, so you've got some data. I don't believe the data.” “My patients are sicker. My patients are different than everyone else's. They are orthodox Jews who want everything done.” Interestingly, at least in the case of NYU, almost in the next breath the CEO said that while they were working on that, they've actually made some progress in suggesting maybe their doctors' patients aren't so much sicker, so different from their colleagues' patients. Maybe there are a lot of changes that can be accomplished. But what these examples show is that there is a strong built-in human nature to resist change, and resistance to being held accountable for performance.

When we think about changing the health care system, and bringing in more accountability and responsibility, I think we have to recognize these facts of human nature.

I would emphasize a third point from these stories, which is that you are only going to get accountability if you can measure outcomes. You cannot get accountability – certainly in the health care profession, either for quality or for costs – if you can't make measurements. You have to be able to measure outcomes, to adjust them for risk, and to attribute them (at least in part) to a physician. I'm going to get back to that at the end.

Another thing that we have discovered is that if you don't measure results and provide feedback quickly, within two to four months, if you wait a year, it has almost no impact. Doctors forget, for example, who the patient was and what was happening at that moment. The data have to be reliable, and the measure you have to use has to be relevant. The doctor has to be invested in some way in that measure. Recognize it as a very important remark, and hold them accountable for the result.

So if the goal is actual, measurable improvement, accountability may be necessary, but it's not going to be sufficient. And therefore, we need to think about ways of changing and providing assistance on a large scale.

I now want to talk about a slightly different aspect of accountability. Throughout the health care reform debates, I think one of the things about which there is universal agreement is that you repeatedly hear the phrase, at least in the United States and based on our fee-for-service system, that we have quantity over quality, we have a sick care system, not a healthcare system, we need to emphasize people getting better, not just carrying out a number of tests.

I think that it's easy to say that we want quality over quantity; we want a healthcare system that keeps people healthy, not just attend to them when they are sick. The problem certainly in the United States, as is pretty widely recognized, is that we don't pay for quality, we don't pay to keep people healthy, we don't pay for prevention, and that has a direct effect on how physicians and organizations respond. So if you go to doctors, and you talk about the nice things that Steve Shortell talked about in terms of chronic care management, or medical homes, they will immediately tell you that the reimbursement system doesn't work to permit that. That they get paid for doing things, and as long as they continue to get paid for performing interventions, they can't afford to switch to doing something else, such as counseling patients.

It's not just individual practices that are like that. If you go to Duke, they have a very nice story of how they brought all of their cardiologists together to figure out how to manage their patients with congestive heart failure better. They tracked all their congestive heart failure patients, they put guidelines and decision supports in place, they worked with the doctors and the outpatient settings, they worked with nurses and case managers, and it worked tremendously well.

It kept patients healthy, hospital admissions went down, and they lost a ton of money. After one year they abandoned the new management system for congestive heart failure. That was a success, right? They did everything they were supposed to, but the system didn't pay them to do it, so they couldn't continue. It's not unique to Duke. Virginia Mason Hospital worked with Starbucks to improve their system of back pain management, because after all, all the Starbucks employees stand on their feet 8 hours a day, so back pain is a very common problem. Typically if employees went to the emergency room for back pain, one of the first things they got was an MRI, known widely not to be effective in this context.

So Virginia Mason worked with Starbucks on doing physical therapy for their employees first, and postponing MRIs for those people who did not do better. Well? It worked tremendously well. Two-thirds of the baristas went back to work within 48 hours. Back pain was substantially reduced. But it was a financial loss for the hospital, because they can bill a lot more for an MRI than for physical therapy.

So you have to work with the insurers to solve this problem, and make sure that the change is in everyone's financial interests. And at least one area of care in which I do have some expertise, end-of-life care, is very much the same way. After all, if you are a hospital making money on hospital admissions, and you bring in patients at the end of life, you can bill for them. If you don't bring them in, and they go to hospice, you have no financial interest and you have empty beds. It's not a good place to be for hospitals.

So if we want to hold people accountable we clearly need to align the financial incentive with what we are holding them accountable for – cost and quality.

I think alignment is much harder than we believe, or than we say. And let me take a little pause here and say something parenthetically, because I'm talking about financial incentives, and I do think that's important, but I want to emphasize it. There are other things (to pick up a comment that Richard just made in the context of countries and policy accountability) I want to talk about in terms of management accountability.

Let's consider the institutions that work in the United States in terms of accountability where they have lower costs, higher quality, or at least comparable quality to everyone else. You know that this is an interesting thing. I'm just going to name a few of them for you, and those of you who are Americans will immediately see that there is a geographic component here.

The Mayo Clinic, Intermountain Health in Utah, Geisinger in Pennsylvania, Grand Junction, Gunderson Lutheran in La Crosse, Wisconsin, and you can go on to name a few others. One of the interesting things about all of those, in my opinion, is that they are rural. They are not typically in big cities.

Second, they have near-monopolies in their areas. They are not subjected to competition. Now, I believe in competition as much as the next person. It is fundamentally important for improving quality and getting costs down. But I think that we do have to recognize that many of these places have achieved decreased costs and high quality on their own, not because they have a lot of competition in their space.

And this leads to something; while financial incentives are important, one of the other important things is leadership, and a dedication to doing the right thing, no matter the environment.

I believe improving quality and reducing costs is the right thing regardless of the environment, and maybe when organizations don't have competition and some of the negative things that competition brings, it is easier to do the right thing. Obviously there are many other examples, including other rural places, where we don't have the same positive outcomes.

Let me talk about another problem in holding people accountable. If you just think about the number of people to whom physicians are accountable, you see that physicians are accountable to their patients, to their insurers, and to governments of all levels: Federal, state, and local. They are accountable to their peers, both the immediate doctors to whom they refer, but also their specialty societies. They are also frequently accountable to the hospitals where they admit patients. Physicians are also accountable to their office employees, and maybe their partners. You know, that's seven, and we haven't stretched very far.

Think about hospitals. They are accountable to the physicians who are on their staff, to the physicians with whom they contract, to the patients that come through their door, to their Board of Directors, to the bondholders who give them the money they need to expand. They are also accountable to governments at all levels, to insurers, to employers with whom they may contract directly, to the unions who represent their employees. To the non-union employees. One of the things that immediately becomes obvious is that not only do we have multiple accountabilities, but they form a very complicated web in which almost everyone has conflicting accountabilities.

Just think about a hospital CEO who has to be accountable to unions, who are demanding both higher salaries and better staff-patient ratios, to insurers that want to hold down costs, to bondholders who want to hold down costs and have high throughput. Again, aligning these accountabilities is very difficult if not impossible. If you go through every actor in the system, including the Federal government, you can see that there are multiple and conflicting accountabilities.

The fifth point I want to emphasize is that, while accountability can be important, pushing accountability can backfire, and backfire in a very negative way. As we go forward we need to be aware of this risk. There are many people who were involved in the 1993 health care reform effort under Bill Clinton, and one of the things that grew out of that failure was the rise in the United States of managed care in the 1990s. It completely failed. At least in the United States, managed care is now a four letter word. It's a word you can't utter; it's certainly not an ideal, even if most of us think some of the principles behind it actually are things we could benefit from. Why did that happen? There are multiple reasons why managed care failed, and I'm not going to go into all of them, but I do think one of them was a very rapid push to hold physicians and hospitals accountable.

Sometimes they were pushed into being accountable for things which they thought they couldn't control. So we very quickly went into capitation for doctors, when doctors didn't have the capacity to budget, didn't have the information systems that allow them to figure out where there money was going, didn't have the decision supports or the guidelines to figure out what they were supposed to do.

Holding physicians accountable at that time for cost control led to a very natural response, given what I've said about human nature and the desire not to be held accountable. Physicians rebelled. They rebelled by bad-mouthing managed care to their patients and using managed care as a very easy excuse for when they couldn't do something, or didn't want to do something, or it was difficult to do something. We have all had the experience of some managed care organizations saying no to something we wanted to do, and could then generalize it. "Your managed care organization won't let me give you this drug, order this MRI, send you to see that specialist, or admit you to the hospital."

That led to a widespread public perception about the negative quality of managed care, portraying them as there simply to deny services. This resulted in very widespread public rejection of managed care organizations. We can't be that blunt as we go forward.

Let me conclude by saying that at the moment there is some accountability in the health care system in the United States, certainly for personal resource use. Not a lot, but some. There is little accountability for quality in the system. There is no accountability for the performance of the overall system at any level, it's simply too diffuse and too fragmented.

As we move forward, there is resistance to having more accountability; there is resistance, for example, to publishing comparative quality data, or comparative data on resource utilization. There is resistance to linking financial payment to quality or effectiveness measures. Again, individual groups, individual practices, individual hospitals, and individual organizations may be different. So in that context, what might be the role of government?

First, I think it's very important to create a framework for accountability, and a very clear specific guide about what people are going to be held accountable for.

Right now, in the current system, it's not clear. I think that accountability has to apply to everyone, and one of the problems in the American system (I think much worse than the Israeli system for example), is that it doesn't apply to all the actors. The Federal government, after all, mostly has control over Medicare; to a lesser extent Medicaid; and very little control over private insurers, self-insured employers, and others.

That makes it very difficult to create a universal framework for accountability for either costs or quality. I think that we need to align the financial incentives, as well as some of the other incentives that are being put into place. Some of the other incentives are to digitize files and get electronic health records in order to communicate across other organizations, and to use the information to treat patients.

What will be necessary to achieve that on the government side? Well, I think we need to think about creating organizations and actors with a clear interest in accountability, and a clear interest in pursuing both improvement in quality, and improvements in costs. The President has strongly supported an independent Medicare commission, and I think that part of that goal is to try to create in the system an organization that is interested in accountability for both quality and costs and value in the health care system.

I think that we also need better development of quantitative measures. The ones that we have are not at the level of what we would ideally like. Some of the measures we would like to use are not easy to get electronically, and I think we need a strong push on that. Some professional societies have been better than others in trying to develop quality measures, but I think that in general we have not been as active as we should be, and here I think doctors need to take a lot of responsibility. We haven't been great at creating quantitative measures that we are willing to use regularly and live by.

Maybe that is resistance to being held accountable.

We obviously need data, and to digitize the system; and to be able to collect data in real time, and use it in real time. I think we also need to strongly consider not just tying everything to a financial incentive. One of the great things I believe about physicians is that they like to be the best students in the class. Physicians are trained from early on to get top grades, to strive to be the best at whatever they are doing. I think we can use that. Obviously if the money runs counter to that incentive there is a problem, but if we can align the financial incentives with the incentive to excel at the test, we can achieve a lot.

I think we need a more systematic way to provide consultation to physicians and organizations for change. Recently, we held a meeting with the representatives from Dartmouth, from Mayo, from Geisinger, and from Intermountain. They were trying to propose a sort of consulting arrangement by which they could easily help other organizations and physician groups with some of the best practices that they have learned. I think that consulting is going to be very, very important – whether it's professional management consultants, organizations that have succeeded, or some other configuration – in helping doctors, doctor's offices, health clinics, and hospitals on how to change. How to change is not intuitively obvious. Just because you are told you need higher quality, you may not necessarily know what precise steps to take to achieve higher quality.

Finally, let me end with something that I want to throw out as an idea. When you talk to doctors about accountability and accountability of quality and resource use, one of the first things that comes back is this issue of attribution. It's not me, it's that other guy, or these other three doctors that take care of the same patient. Yes, that may be true. One question is whether we ought to hold you responsible as a doctor for who you refer your patients to. For whom you affiliate with. For which hospitals you are working with, both in terms of their quality and resource use. In other words, are you your peer's keepers? I think at one level that might sound difficult and harsh, at another level it may in fact be what we want. It may in fact be a transition from the current system to accountable care organizations. If we begin to show providers the data about those with whom they are dealing, we could begin over time – not immediately – to invite them to change their practices.

And I think this issue of joint accountability is one that might actually be very useful, as a transition notion. To get from the current system, mainly based on service and less on accountability for quality and cost, to a new system where we are accountable as physicians and organizations and hospitals, for both quality and service utilization, joint accountability may be important.

# Common Trends in Public Stewardship of Health Care

*Gregory P. Marchildon, Wallace Lockhart*

Since the Second World War, the long-term trend in OECD countries has reflected more active involvement of the state in the funding and administration of health care. While there have been varying short-term fluctuations among countries, what is most remarkable is the consistency of the long-term trend.

Some of the explanation for this long-term trend rests with the fact that health care exhibits many of the properties of a superior good. As household and national incomes rise, progressively more of each additional unit of income is spent on health care, and the more economically developed the country, the more pronounced the effect (Scheiber & Maida, 1997). Indeed, per capita gross domestic product is the "most powerful explanatory variable for international differences in health spending" (Reinhardt, Hussey, & Anderson, 2001, p. 171).

However, such a wealth effect cannot predict what proportion of the increase in health care funding is public or private. The empirical evidence is that public health spending has been gaining ground relative to private health spending in almost all OECD countries and, despite short-term declines in a minority of countries, public health care funding as a share of the economy has increased substantially in almost all OECD states since 1960 (OECD, 2009).

At a minimum, these longer-term trends suggest that the role of public stewardship over health care has been expanding. The word "stewardship" is used to connote the steering of a series of agents of public, private, and mixed parentage as well as networks of organizations and individuals, while the word "public" refers to governmental actors ultimately accountable to the public through democratic process. In one sense, public stewardship stands above traditional organizing methods such as hierarchy (rules-based) and markets (contract-based) in that it has the capacity to "combine efficient, market-like behaviour with trust-based, ethical forms of decision-making" in order to achieve a more optimal social outcome (Saltman & Ferroussier-Davis, 2000, p. 734).

The expanding role of the state in health care is a consequence of a number of factors that vary among wealthy nations. These include a continuing commitment to solidarity and the principle of access based on need, the entrenchment of powerful interests that have benefited from state funding and subsidy of health care, and the desire of the state to exert more control in order to achieve greater cost control. While the instruments and institutions employed by the state have varied considerably across countries, they have transformed public stewardship. In effect, this expansion of the role of the state means that more is expected of the public stewards in these national health care systems.

Despite the introduction of new public management (NPM) reforms that appeared at times to limit the role of the state from the late 1970s to the present, in most OECD countries today, government cabinets and ministers of health hold more, rather than less, responsibility for ensuring the integration, coordination, and quality of their respective public healthcare systems. Those employed by the political tier of government – from ministry officials to chief executives in arm's-length public bodies established and funded by the state to manage individual health care institutions – also hold more responsibility as well as a greater accountability to citizens, generally via the political tier of government (Rhodes & Wanna, 2009). Increasingly, these senior managers are held to a higher standard in terms of consumer (patient or end-user) satisfaction, quality outcomes, continuum of care, and ability to implement process and product redesign (health reform).

Canada provides an apt case study of this process even if the managerial expansion of the state is more recent and compressed than similar expansions in most western European states. After examining the deepening involvement of the state in health care in Canada, we interpret the results of competency evaluations in order to interpret the perceived impact of this deepening involvement and the capacity of its leaders and senior managers. We then analyze the leadership and management qualities required for more actively steering health systems as well as the knowledge and skill shortages and gaps that need to be filled in order to improve system performance, achieve greater citizen satisfaction, and avoid bureaucratic overreach.

# Canada: From Passive Payment to Active Management

Canada is a federation in which the principal authority and responsibility for public healthcare rests with the ten provincial governments rather than the central government. For this and other reasons, state initiatives in introducing universal health care were mainly at the provincial level of government. Nonetheless, the federal government, using its spending power – its ability to raise revenue from an almost unlimited number of sources as well as its power to attach conditions to the transfer of funds – facilitated the establishment of universal hospital insurance in the late 1950s and early 1960s, and the implementation of universal physician care insurance a decade afterwards by all ten provinces. These tax-funded, single-payer coverage schemes essentially required provincial governments to pay hospital and physician bills on behalf of provincial residents. However, with minimal cost controls in place, health expenditures grew at rates that far outstripped public revenue growth, and governments began to examine the ways they could more directly manage the system in an effort to contain costs and extract greater value (Taylor, 1987).

By the end of the 1980s, a series of government-commissioned reports recommended that provincial governments establish arm's-length bodies responsible for administering health care for a defined population within a geographically bounded region in the province. The reports urged that these organizations be responsible for managing public healthcare services on a more coordinated and integrated basis. They were unanimous in concluding that such bodies would not only make more effective use of existing resources but would spearhead a reallocation of resources from downstream illness care to upstream wellness care, from individual medical care to community-based population health initiatives, and from higher-cost but lower-utility medical interventions to lower-cost but higher utility health programs and services through the systematic application of evidence-based assessments and evaluations (Marchildon, 2006).

In the early to mid-1990s, nine of Canada's ten provinces created regional health authorities (RHAs) to integrate or coordinate health services across a broad continuum of care in order to ensure that patients received timely and appropriate care. These newly integrated and coordinated services included specialized and basic acute care, long-term care, home care, public health, and, depending on the province, mental health and rehabilitation services (Marchildon, 2005). In many cases, these services came under the direct ownership of RHAs but in a minority of cases, RHAs would contract with independent health care organizations to provide these services. RHAs were also expected to rebalance resources from downstream medical care to more upstream illness prevention and health promotion services (Lewis & Kouri, 2004).

By establishing a health system, and then managing it so that less institutional care would be required, RHAs were expected to reduce, if not reverse, public health care expenditure growth. In the first phase of regionalization during the 1990s, provincial rates of growth in real public healthcare expenditures were brought down to zero or, in some cases, below zero, but this was more likely a result of a general retrenchment of public sector spending than any direct result of regionalization. After the 1990s, in the second phase of regionalization, public health care spending bounced back up to pre-regionalization growth rates. Although regionalization was not ultimately successful in achieving cost control, provincial governments nonetheless continued to expect regionalization to produce superior outcomes in terms of service quality (Marchildon, 2006).

The shift to regionalization involved a combination of decentralization and centralization as well as the introduction of a new managerial function. Provincial governments decentralized resource allocation by transferring the majority of their health budgets to the newly created RHAs. At the same time, provincial governments centralized management by combining hundreds of individual health care organizations and facilities under the governance, managerial direction, and, in many cases, ownership of RHAs (Axelsson, Marchildon, & Repullo-Labrador, 2007).

However, during this period both federal and provincial governments were reeling under high public debt loads that had accumulated in the 1980s and 1990s. Reductions in federal transfers, combined with growing provincial government deficits led to provincial cost reduction initiatives that included reducing the number of acute care beds through hospital closures and consolidation. At the regional level, the public managers rationed access to some, generally non-urgent, services while putting off longer-term investments in infrastructure, and advanced diagnostic and other expensive medical equipment (Tuohy, 2002). The combination of organizational restructuring and service cutbacks through the 1990s had significant negative consequences. Public satisfaction with public health care in Canada, once among the highest in the OECD, plummeted from a high of 56% in 1988 to only 20% in 1998 (Commonwealth Fund, 2001).

By the late 1990s, in response to voter dissatisfaction, as well as a more buoyant economic environment, governments at the provincial and federal levels began reinvesting in public health care. As their investments and scope of services grew, governments also assumed greater stewardship responsibility, both individually and collectively. To improve health system performance, provincial governments introduced quality councils and publicly disseminated performance indicator reports. Together, they established a number of specialized, intergovernmental organizations to improve co-ordination and force improvements in specialized areas such as blood supply, pharmaceutical evaluation, electronic health records, and patient safety (Marchildon, 2005). In some provinces, governments consolidated the number of RHAs and through greater managerial centralization, demanded even greater coordination within their respective health systems.

Given the very recent nature of these changes, it is difficult to evaluate their impact on patient satisfaction or health system performance. Based upon the large sample Canadian Community Health Survey, patient satisfaction has been very gradually improving, but based upon a rolling poll conducted by Pollara Research since 1998, the 50% or slightly more of Canadians who feel that the system requires either major repairs or a complete rebuilding has remained relatively constant over the past decade (Pollara Research, 2007).

In terms of aggregate performance, the results are more promising, though how much improvement can be attributed to an increase in the quantity and quality of health system stewardship remains an open question. To assess ongoing improvements to health care in Canada, we selected two measures. The first is avoidable (or amenable) mortality, which measures the number of deaths from certain causes that could be avoided through timely and effective health care interventions (Nolte & McKee 2008).

Between 1997 and 2003, toward the end of the first phase of regionalization and the beginning of the second phase, Canada's rate of age-standardized deaths from avoidable causes fell from 89 to 77 (per 100,000), a reduction of 14% from an already low absolute level of amenable mortality. Among OECD countries, Canada's ranking moved up to sixth place from seventh place, only slightly ahead of Nordic countries such as Norway and Sweden, but well ahead of the United Kingdom and the United States (Table 1).

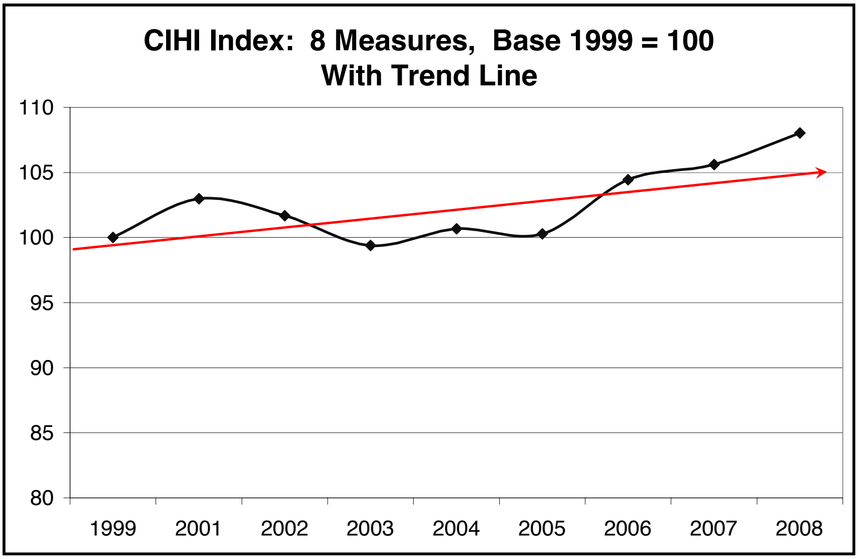
***Table 1:*** *Levels (per 100,000 population) and changes in avoidable mortality in the OECD.*

| Country | 1997-98 | 2002-03 | Rank (2002-03) | Change in Rank |
|---|---|---|---|---|
| France | 76 | 65 | 1 | 0 |
| Japan | 81 | 71 | 2 | 0 |
| Australia | 88 | 71 | 3 | +1 |
| Spain | 84 | 74 | 4 | -1 |
| Italy | 89 | 74 | 5 | +1 |
| Canada | 89 | 77 | 6 | +1 |
| Norway | 99 | 80 | 7 | +3 |
| Netherlands | 97 | 82 | 8 | 0 |
| Sweden | 88 | 82 | 9 | -4 |
| Greece | 97 | 84 | 10 | -1 |
| | | | | |
| United Kingdom | 130 | 103 | 16 | 2 |
| United States | 115 | 110 | 19 | -4 |

Source: Nolte and McKee (2008)

The second measure is a Canadian Institute for Health Information (CIHI) indexed rating of eight acute-care focused measures, including 30-day survival for AMI and stroke; readmissions for asthma, prostatectomy, and hysterectomy; hospitalization for ambulatory care sensitive conditions (ACSC); in-hospital hip fractures; and caesarean sections. We developed an index rating system with overall Canadian performance in 1999 as the baseline score of 100. The trend in the quality index from 1999 to 2006, a time period that captures the very beginning of the second phase of regionalization, is illustrated in Figure 1. Though there are fluctuations over these years, the overall trend line is one of very gradual improvement.

***Figure 1:*** *CIHI acute care quality Index, 1999-2008.*



## Health System Stewards

Who are the public stewards of this evolving health system in Canada? The most obvious stewards are the political and bureaucratic heads of the federal and provincial ministries of health in Canada's Westminster parliamentary system. However, since the organizational reforms of the early 1990s, a new steward with a critical role in the Canadian health system has emerged in the form of the chief executive officers and senior vice-presidents of the regional health authorities. These individuals are responsible for integrating and coordinating a broad range of services across the health continuum. In most provinces, their organizations purchase as well as deliver services in regions that are as large as small nations in Europe. The performance of the health system – including improvements in health service quality and patient satisfaction – now resides largely with this group of senior public administrators.

As part of a larger study of health system managers throughout Canada, senior managers – principally chief executive officers and vice-presidents of RHAs – were surveyed (Lockhart & Backman, 2009). With some adjustments, the results produced in this survey can be used as a measure of stewardship.

In its 2000 report, the World Health Organization identified stewardship as one of four core functions of all health systems. Travis, Egger, Davies, and Mechbal (2002) further developed the concept by identifying the individual qualities or competencies that constitute effective health system stewardship, including a pronounced ability to: 1) generate intelligence; 2) formulate strategic policy direction; 3) ensure tools (powers, incentives, and sanctions) for implementation; 4) build coalitions and partnerships; 5) ensure a fit between policy objectives and organizational structure and culture; and 6) ensure accountability.

In Table 2, the stewardship domains developed by Travis et al. (2002) are matched with the management competencies examined in the Canadian context. In the first domain (generation of intelligence) no specific competencies are identified for senior leaders, but in each of the other five stewardship domains, it is possible to identify stewardship competencies – and therefore also the magnitude of competency gaps as perceived by respondents.

***Table 2:*** *Stewardship domains and management competencies.*

| Stewardship Domains<br>(Travis et al., 2002) | Management Competencies<br>(Lockhart & Backman, 2009) |
|---|---|
| Formulating strategic policy direction | Strategic thinking and decision making |
| Ensuring implementation: powers, incentives, sanctions | Leadership, communications, managing human resources, and managing teams |
| Building coalitions and partnerships | Partnership and collaboration |
| Ensure fit: policy objectives; organizational structure; and culture | Process redesign, human resource management |
| Ensuring accountability | Managing quality, budget responsibility |

Those competencies that might be considered most important for the stewardship of large, complex regionalized organizations – strategic thinking, process redesign, communications, and managing quality – are the four areas in which Canadian healthcare leaders perceive the greatest deficiencies among senior managers in their organizations (Lockhart & Backman, 2009).

This phenomenon is not unique to Canada. In an examination of European healthcare regionalization, Ostergren, Boni, Danishevski, and Kaarboe (2007) observed: "It is surprising how rarely an adequate policy of investment in human resources, at the state or local level, is programmed (and therefore funded). The outcome of decentralization is highly dependent on the capacity of the managerial level to exert the appropriate knowledge and skills."

## Health System Stewards' Perception of Size and Complexity

Since the early 1990s, the size and scope of regional health authorities has increased as a consequence of the trend to fewer organizations covering ever larger geographic areas and populations. For example, the western-most province of British Columbia with a population of 4.5 million and covering an area of 944,000 $km^2$ collapsed its 52 health regions, first established in 1997, to five health regions in 2001. The province of Alberta with a population of 3.5 million and an area of 662,000 $km^2$ went through two consolidations until establishing a single health authority for the entire province in 2007. The province of Saskatchewan, covering 588,000 $km^2$, started with 32 RHAs in 1992 only to merge the 32 into 12 larger RHAs in 2002.

These changes have created the potential for bureaucratic over-reach, a challenge that is recognized by the current generation of new health system stewards. Kosseim and Roy (2005) examined the renewal of regional governance in Canada, and raised concerns about increasing complexity placing strain on healthcare systems such that "It has become virtually impossible to gain a clear view of their various facets and of the system as a whole," concluding that little of regionalization's potential has been realized to date.

There were other perceived problems with the implementation of regionalization in Canada. Neville, Barrowman, Fitzgerald, and Tomblin (2005) interviewed 35 senior managers who had been responsible for regionalization efforts between 1993 and 2001. While respondents generally felt that the goal of integration was achieved, they expressed concerns about unclear board authority and accountability and thus an inability to develop a population health focus. One CEO respondent stated "There wasn't a widely understood vision so it is difficult to say whether it was supported or not." (Neville et al., 2005).

These perceptions of difficulties with health system restructuring are reflected in the views of senior managers on the question of how well their organizations are functioning today. The results of the self-assessment survey, based on organization size (number of employees) and type of organization, are compared in Table 3. Long-term care (LTC) facilities typically have the fewest employees, whereas RHAs based in major urban centers have the greatest number – more than 10,000 employees. For all three questions, respondents from the largest RHAs perceive significantly more problems with organizational complexity, communication, and managerial span of control (Lockhart & Backman, 2009).

**Table 3:** *Health leaders survey (% agree or disagree).*

| | Number of Employees | | | |
|---|---|---|---|---|
| | < 2,000 | 2,000–5,000 | 5,000–10,000 | >10,000 |
| The complexity of our organization constrains managers' ability to do their jobs. | 27% | 45% | 60% | 73% |
| Organization structure gets in the way of communication. | 31% | 45% | 36% | 56% |
| Line managers' span of control is too broad to ensure effectiveness. | 38% | 52% | 72% | 80% |
| | Type of Organization | | | |
| | | LTC | Hospital | RHA |
| The complexity of our organization constrains managers' ability to do their jobs. | | 26% | 44% | 47% |
| Organization structure gets in the way of communication. | | 21% | 31% | 45% |
| Line managers' span of control is too broad to ensure effectiveness. | | 32% | 50% | 64% |

Source: Lockhart and Backman (2009)

These results may indicate bureaucratic over-reach. In particular, the recent consolidation efforts by provincial governments have created such large RHAs that the sheer scale and scope of these organizations may have outstripped current stewardship and managerial capacity.

## Conclusion and Implications

There is a long-term trend in OECD countries to more, rather than less, state involvement in health care. This is a result of increasing levels of public health care funding relative to private health care and the resulting need by governments to control these expenditures through more effective health spending and through more effective stewardship and management. This has occurred relatively recently in Canada, essentially replacing passive provincial government health insurance repayment schemes with regional health authorities with an expansive mandate as health system stewards.

Given the fact that most provincial governments introduced regional health authorities in the early to mid-1990s, it is too early to determine with certainty the impact on health system performance. Though patient satisfaction ratings are lower than the high levels of satisfaction enjoyed before this reform, more objective measures indicate some improvements. In particular, Canada ranks among the top six OECD countries in terms of its rate of avoidable mortality, a measure of the quality of medical care interventions. Based upon a basket of eight acute-care focused measures, there has also been gradual improvement since 1999.

However, for the new health stewards at the front line of regionalization, there are significant concerns about their own competencies in steering this new system. In particular, health system stewards working in the largest RHAs are concerned about their capacity in terms of providing effective strategic direction, redesigning health delivery processes, leading quality improvement initiatives, and communicating within their expansive organizations. The stewards in the largest organizations perceive organizational complexity to be a major impediment to working more effectively. In other words, they feel that their respective organizations, in terms of scale and scope, exceed their existing stewardship capacities.

There are a number of possible policy implications flowing from this analysis. The first is that provincial governments should collaborate in forming an organization that can, at arm's length from themselves, provide comparative analyses of the impact of regionalization in jurisdictions that have implemented similar reforms inside and outside Canada. The second is to target education and training to assist RHA stewards and their organizations to reduce the identified competency gaps. The third is to amass the evidence and analysis necessary to determine whether existing or proposed restructuring – whether it involves consolidation, decentralization, or centralization – can serve to achieve higher levels of health system performance in terms of access, quality, satisfaction, orfiscal sustainability.

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# Responsibility and Accountability in Preventive Medicine - Are We doing Too Much or Too Little?

*Siegal Sadetzki*

## The Place of Preventive Medicine on the Axis Between Health and Morbidity

The goals of medicine are to promote health, to preserve health, to restore health when it is impaired, and to minimize suffering and distress (Gledovic, 2008). While therapeutic medicine focuses mostly on the third and the fourth goals, targeting the already diseased population, preventive medicine is directed at maintaining the health of the general population (Gordis, 2000). Therefore, therapeutic and preventive medicines are applied to two distinct populations, each of which is characterized by a different health status. This raises the need for adaptation of the considerations traditionally taken in medicine when implementing health policy concerning preventive issues.

Preventive medicine includes interventions in areas of health promotion such as some "do" activities (sport, healthy diet, etc.) and some "do not" activities (do not smoke, do not consume alcohol, etc.), primary prevention such as vaccinations, and secondary prevention such as early detection programs (Gordis, 2000). These actions are ideally aimed at lowering the incidence, or less preferably, the prevalence of disease, under the assumption that if the disease is diagnosed early, it will be more treatable and will have a better prognosis. This concept of prevention was described long ago, around 1618, by Thomas Adams who wrote "He is a better physician that keeps diseases off us, than he that cures them being on us; prevention is so much better than healing because it saves the labor of being sick." (Adams, 1618).

One aspect of implementing preventive medicine is the determination of responsibility and accountability for this discipline. In this context, responsibility may be defined as the carrying out of a set of tasks or functions that are legitimately required for a certain profession (Vize, 2009). These tasks could be considered the internal professional guidelines. Accountability refers to being answerable and culpable for an outcome (ibid.). It is a mechanism by which failure to exercise responsibility may produce sanctions (including actions such as warning, disciplining, suspension, criminal prosecution, or deregistration from professional status). By this definition, accountability represents the external legal or ethical aspects of professional responsibility.

In this paper, three main questions regarding responsibility and accountability in the unique discipline of preventive medicine will be addressed using some relevant examples recently discussed in Israel.

## Is There Agreement about the Definition of Professional Responsibilities in Issues of Preventive Medicine?

In accordance with the general approach in medicine today, guidelines in preventive medicine should be evidence-based. Moreover, the professional literature contains some defined criteria that should enable a scientific objective assessment of the overall benefits and risks of implementing a preventive strategy (Centers for Disease Control 1992; U.S. Preventive Services Task Force, 2009a). Traditionally, these criteria include considerations of the disease under discussion (e.g., its incidence, prevalence, and severity; the existence of effective therapeutic measures), the available test or procedure to be used (e.g., its sensitivity and specificity, risk-benefit and cost benefit ratios), and the target population (e.g., the predictive value of the test in the population, the anticipated compliance to the test).

While this set of well-defined professional criteria should have provided the basis for a standardized responsible policy, many controversies that have arisen lately challenge this assumption. This situation raises questions about the feasibility of establishing a responsible policy in preventive medicine.

Colorectal cancer is a major cause of cancer-associated morbidity and mortality worldwide (Bresalier, 2009). More than one million individuals develop this cancer each year (Cunningham et al., 2010), and it is ranked globally as the fourth most common cancer in men and the third most common cancer in women (Center, Jemal, & Ward, 2009). In the United States, the lifetime risk of developing this disease has been estimated at 5% (American Society of Colon and Rectal Surgeons, 2009). The lengthy, stepwise natural history of colorectal cancer provides an opportunity to detect early carcinoma and remove pre-malignant polyps, making this disease an ideal candidate for early detection and primary and secondary prevention (Gordon & Nivatuongs, 1999). Several strategies have been proposed and assessed for screening for colorectal cancer, including fecal occult blood testing (FOBT), flexible sigmoidoscopy (FSIG), colonoscopy (CSPY), double-contrast barium enema (DCBE), computed tomographic colonography (CTC), and stool DNA testing. However, a considerable degree of variation exists among the recommendations issued from professional groups with respect to which tests should be performed, how often they should be conducted, and how the target population should be defined (Bresalier, 2009).

The difficulty in achieving a consensus regarding internal professional guidelines for the early detection of colorectal cancer, despite the extensive scientific knowledge available, was recently demonstrated in Israel. According to the National Health Insurance Law established in Israel in 1994, the strategy for secondary prevention of colon cancer in the average risk population (e.g., excluding those with a family history of the disease and other high risk groups) includes an annual Fecal Occult Blood Test (FOBT) starting at the age of 50 (Ministry of Health, 1994).

In 2006, the Working Group on Gastrointestinal Oncology of the Israeli Association of Gastroenterology and Liver Diseases issued a position paper, which stated that while they support the current screening recommendation, they would like to propose adding the option of undergoing colonoscopy every 10 years, starting at the age of 50 (Niv et al., 2006). The main justification for this recommendation was based on clinical considerations such as the high diagnostic value of the procedure and its ability to remove the precancerous lesions, a step that would have been required following a positive FOBT test.

Two years later, the Association of Public Health Physicians reviewed the current data and recommendations and issued a position summary that supported the annual FOBT from age 50, but did not recommend adding colonoscopy as a primary screening technology for early detection of colorectal cancer in the non-symptomatic average risk population

(Almog, Ore, Keinan-Boker, & Hagoel, 2008). This view was based mainly on an epidemiological approach that requires the fulfillment of standard criteria for early detection. The arguments supporting their decision were based on the level of scientific evidence existing to justify the use of colonoscopy for screening, complication rate, acceptance and compliance with the procedure in the general public, as well as feasibility and cost considerations.

A private bill on the same subject was presented in the Knesset in 2007 ((3112/17/פ and in 2009 ((1399/18/פ. The suggestion presented in this bill was in line with the view of the gastroenterologists, supporting the addition of colonoscopy, once every 10 years, as an option for early detection among individuals aged 50-75 at average risk, in the framework of the national health insurance law (Azulai, 2009).

The discrepancy seen between the above-mentioned professional organizations, which are highly qualified to evaluate state of the art medicine, raises doubt regarding the possibility of reaching agreement between the different medical disciplines on guidelines needed to determine responsible policy. The involvement of the political discipline in the process, as expressed by adoption of the gastroenterologists' point of view, leads us to the second question to be addressed in this paper.

## Who Should Determine the Standards for Responsibility for Preventive Medicine?

The natural and traditional players participating in this task are medical professionals, who in the context of this manuscript can be divided into clinicians and public health practitioners, each of whom has its own approach to the subject. Among the other professionals who play key roles in the determination of standards are Ministry of Health officials, economists, social scientists, legal authorities (the court of law), politicians, the media, and industry. Over time, the interest, participation, and influence of the general public on determination of health policy has increased considerably. In light of the wide variety of participants involved in this discussion, the obvious questions that arise concern the process by which the different disciplines should interact, to whom the responsibility for final decisions should be given, and whether there is a conflict of interest between all these organizations and bodies.

An example that may illustrate the complexity of these questions is the recent debate concerning implementation of the Human Papilloma Virus (HPV) vaccine in Israel.

In June 2006, the FDA licensed the first vaccine developed to prevent cervical cancer (U.S. Food and Drug Administration, 2006). The quadrivalent vaccine, Gardasil, provides protection against 4 HPV types (6, 11, 16, 18), which are responsible for about 70% of cervical cancers and 90% of genital warts. Later that month, the Advisory Committee on Immunization Practices recommended the routine use of the vaccine for girls aged 11-12, and approved its use from ages 9 to 26 (Centers for Disease Control and Prevention, 2006). This development represented a dramatic breakthrough in terms of prevention and a very promising strategy for primary prevention by immunization. Soon after, in October 2009, an additional vaccine, Cervarix, which provides protection against HPV types 16 and 18, received FDA approval for use in girls and young women aged 10-25 (GlaxoSmithKline, 2009).

However, despite the many advantages of this innovative approach to primary prevention of cervical cancer, it is agreed that with or without the vaccines, cervical cancer screening (secondary prevention) through various methods will continue to be necessary in the foreseeable future, and screening recommendations do not need to be changed at the moment (World Health Organization, 2008). It is also agreed that well-organized screening programs that achieve high coverage and include effective follow up and treatment of women with abnormal cytology have been proven to reduce cervical cancer incidence by over 80%. Therefore, a multidisciplinary discussion should be conducted to evaluate the role of each of the primary and secondary strategies in different populations.

Moreover, as is the case with all new technologies, the overall benefit of the vaccine cannot be fully evaluated at this time as important data on long-term efficacy are still missing. For example, information on the most important outcomes, such as cervical cancer incidence and death rates, is missing and issues such as the need for a booster, possible changes in oncogenic strains of HPV, possible effects on natural immunity, the need for male immunization, a possible decrease in compliance to PAP smear, and a possible decrease in safe sex due to a false sense of security that the vaccine protects against all sexual transmitted diseases, remain to be determined.

Consequently, despite the above-mentioned benefits of the HPV vaccination, acceptance and uptake of the vaccine is a process that requires some consideration regarding its implementation, including specific aspects of local considerations.

The epidemiology of cervical cancer in Israel is unique, as the burden of the disease is low compared to other western countries and has remained constant for many years, despite a clinical estimation that the rate of precancerous lesions is comparable to that of most European countries. This raises the hypothesis that specific genetic and/or environmental factors in the Israeli population modify the risk of transformation from precancerous lesion to malignancy (Menczer, Barchana, Chetrit, Lipshitz, & Sadetzki, 2009). Furthermore, updated local data on HPV types, risk factors for the disease, etc. are missing. Consequently, the question of whether the vaccine should be implemented in Israel requires local attention.

The process of implementation of the vaccine includes the involvement of several players with different responsibilities and levels of accountability. Following consideration of safety issues, the Health Ministry approved the use of the vaccine. Determination of professional recommendations has involved a multidisciplinary approach involving gynecologists, oncologists, pediatricians, primary care physicians, adolescent medicine specialists, school health professionals, epidemiologists, cancer prevention experts, infectious disease experts, virologists, experts on vaccinations and sexually transmitted diseases, and health economists. However, due to the complexity of the topic and the gaps in knowledge mentioned above, a consensus on the subject has not yet been reached and a national policy was not determined.

While the professionals have not yet established uniform responsibility guidelines, the pressure applied by other forces such as the public and media have increased the urgency of implementing the vaccine. The industry has also contributed heavily to the pressure for implementation by conducting a very broad and intensive campaign including professional conferences in which the importance of the vaccine is explained, and use of the media, through which celebrities emphasize the necessity of the vaccine.

Thus, the discussion has very quickly moved from a professional discussion focusing on evidence-based guidelines, to a public discussion influenced by various other considerations. In light of this reality, the deliberation has shifted to financial aspects. If the vaccine is not included in the National List of Health Services, cost becomes a major issue, resulting in another example of increased inequality and discrimination in Israel, whereby individuals in the higher economic strata will purchase the vaccine, while those in the lower strata will refrain from being immunized.

Another player that has introduced a new aspect of accountability to this issue in the United States was the government, raising the question of whether the vaccination should be compulsory.

In 2006, the Senate of the state of Michigan passed a bill ruling that all girls entering the sixth grade at school (11-12 years old) should be immunized; this was the first legislation of its kind in the United States. An editorial published in *The Lancet*, shortly after the legislation was passed in Michigan, expressed the opinion that all adolescents must be immunized in order to achieve effective and long-term eradication of HPV. The editorial called for the EU member states to follow the American example by making the vaccination mandatory for all girls aged 11-12 years (*The Lancet*, 2006).

The case of the HPV vaccine emphasizes the complexity and difficulties of establishing responsible and accountable preventive policy in the face of multiple legitimate players. This example raises the questions of whether the participation of so many players has moved the decision from an evidence-based academic process led by professionals to a commercial process, and where we should draw the line between creating social awareness, marketing, and science in medical decision making. Needless to say that in today's reality we believe that decision making regarding health should be based on risk-benefit assessment, which might be perceived differently by the various groups involved.

## What is the Interaction Between Responsibility and Accountability in Preventive Medicine?

As breast cancer is the leading type of cancer among women in the western world, much effort has been invested in its early detection, as there is no doubt that this strategy can save lives (U.S. Preventive Services Task Force, 2009a). As in other preventive measures, a number of approaches can be found regarding at what age and with what frequency mammography should be initiated and performed. In November 2009, the U.S. Preventive Service Task Force released updated recommendations for breast cancer screening, which stated that mammography should be eliminated as a standard test for women in their 40s (U.S. Preventive Services Task Force, 2009b). Furthermore, a noteworthy approach to preventive services was proposed as follows: "For mammography as well as for other preventive services, shared decision making between women and their health care providers is advised." While this principle seems to serve as a bridge between the responsible guidelines determined by the professionals and the acceptance of these recommendations by the public, the accountability that results from these decisions is not clearly defined.

To illustrate the complexity of this issue, following are two theoretical examples of women in their early 40s who were contemplating the need to undergo mammography. In the first case, after being informed by her physician that more than 1900 women in her age range must be screened for 10 years in order to prevent one death from BC, and that there are about 60% more false-positive results among those screened at her age (Nelson et al., 2009), she decided not to have a mammography performed. Eventually this woman developed breast cancer.

The second woman, on the other hand, felt that although benefit had not been proven at her age, the severity of cancer was too great to take any chance. Therefore, she decided to undergo mammography and developed a complication (either acute, such as sensitivity to anesthesia or wound infection, or chronic, such as radiation-associated breast cancer). The latter late effect will probably never be recognized as a sequela of the mammography due to the time discrepancy between the exposure and the outcome, and because there are currently no available markers for radiation-related tumors.

In the discussion on accountability, I would argue that, in today's atmosphere of malpractice law suits, the health providers of the woman who developed breast cancer after declining the mammography will be judged more severely, making them more vulnerable to legal accusations and sanctions.

The above example reflects in part the differences between preventive and therapeutic medicine. It seems from the examples provided in this manuscript that, in general, clinicians tend to be more aggressive in their recommendations for prevention strategies compared to public health practitioners. I believe that similar differences in risk perception and medical decisions might be found between the sick and healthy populations. The sick populations are the tip of the iceberg in whom the threat of risk became a reality, and they will usually agree to be treated, despite substantial risks, in order to recover from a serious disease. Moreover, it is anticipated that, in retrospect, this population would be willing to take great measures to prevent their disease if they could turn the clock backwards. On the other hand, for the majority of the healthy population, the evaluation of the risk to develop the disease, the willingness to invest efforts to prevent a disease that does not yet exist, and to take a risk of experiencing even minor side effects following preventive measures might be different. It is important to remember that most individuals will probably never develop the disease, and consequently, risk is perceived as only a statistic for most of them. The concept of risk is one of the most difficult ideas to convey, as both perception and communication of risk are very complex processes. It is not surprising therefore that inconsistencies in attitudes about health risk, ranging from indifference to over-concern, fear or panic, can be observed in the public.

## Conclusions

In an era when new techniques and technologies are constantly evolving, there is growing public demand for prevention and early detection of disease, along with zero tolerance for misdiagnosis. This climate is further enhanced by malpractice suits, efforts of industry to promote use of new technologies, and a tendency of the media to be overly involved in the formation of public opinion concerning health matters.

An appropriate balance of the many considerations of the various disciplines involved in determining health policy is hard to achieve. Among the important questions that must be answered are: who should be responsible and accountable for the implementation or restriction of the use of new technologies and how should this process be performed?

The above examples have demonstrated major differences between preventive and therapeutic medicine with respect to responsibility and accountability. While preventive medicine is the gold standard of the public health discipline, there are substantial difficulties in determining responsibility in this field. Furthermore, the interaction between responsibility and accountability in this area is complicated. In terms of accountability in public health, culpability will probably more often result from underdoing rather than overdoing. Whether this is the ideal path to follow, even at the price of medicalizing the public, remains to be debated.

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# The Global Shortage of Health Workers and Pay for Performance

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## Introduction

This paper on the global shortage of health workers is written in four sections. The first section outlines the problem of the global shortage of health care workers, using a WHO model based on needs, and explains some of the causes and consequences. The second section details two of our econometric models. The first part focuses on demand rather than needs, and produces slightly different estimates of the shortages and surpluses of health care workers, particularly physicians, around the world. The second part of section two estimates the need for doctors, nurses, and midwives in African countries for 2015. The third section of the paper includes a case study of physician shortages in Israel. The fourth section of the paper reviews the recent literature and conceptual issues around pay for performance, which is a new and innovative approach to improving health worker performance.

## Section I: Global Shortage of Health Care Workers

The *World Health Report 2006: Working Together for Health* is a landmark report done by the World Health Organization (WHO) that details the global shortage of health care workers. It estimated that there was a global shortage of 4.3 million health care workers, of which 2.4 million were doctors, nurses, and midwives. This landmark report stimulated global focus on health care workers. The 57 countries identified as having health care shortage, are located primarily in three regions of the world – 36 were in Africa and the rest were in Latin America and Asia (WHO, 2006a).

Africa is estimated to have 25% of the world's disease burden and almost 14% of the world's population, but only 1.3% of the world's health workforce (Commission for Africa, 2005). The health worker shortage situation in Africa is shown in Figure 1 (WHO, 2006a). The density of health workers per 1,000 population is 24.8 in the Americas and 18.9 in Europe. The global average of health workers per 1,000 population is 9.3. Following this, you can note that the Western Pacific, South-East Asia, and Eastern Mediterranean regions are below the global average, between 4 and 6. The clear problem is the health workers per 1,000 population in Africa, which is 2.3.

The question arises of how WHO defined shortages and what methodology was used to calculate its estimates of them. The WHO report uses the needs-based analysis to determine the required number of health care workers, which was based on an objective of having 80% of the live births attended by a skilled attendant. This attendant could be a doctor, nurse, or midwife.[1] The 80% was an arbitrary goal picked by consensus and professional opinion. WHO calculated that to meet this 80% goal, 2.28 health care workers per 1,000 population were required. This became the needs-based objective. This number of 2.28 per 1,000 population was then compared to the actual number of health care workers - doctors, nurses and midwives. If the ratio was less than 2.28 then there was a shortage. This then was the methodology used by WHO.

This methodology, though useful in some ways, is limited in others. It does not consider the nature of the health care system in each country, it does not consider how it is organized or financed, and it also does not consider any of the financial variables that would be relevant to looking at the shortages and surpluses. For example, it does not look at the wages paid to health care workers or the ability of the government or the private care sector to employ them. Though the WHO analysis was important, it is simply the beginning framework to look at the issue of shortages and surpluses in health care workforce.

The most recent data on the supply of health care workers by region is shown in Table 1 (WHO, 2006a, 2006b). As we can see, in 2004 there were slightly fewer than 40 million doctors, nurses, and midwives, and

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[1] This criterion was used as a benchmark because it correlated with other important outcomes and related to one of the key issues in the MDGs.

just over 60% of them were employed in the Americas and Europe. The total number of doctors globally is 7.8 million; interestingly, 2.8 million of them (36% of the total) were in fact employed in Europe and just over 20% in the Americas, whereas the Western Pacific had almost 25% of the doctors. We can see that the Western Pacific and European regions have a total of 60% of the doctors.

The data in this table point out the distributional issue by region, but this is also true by country. A significant part of the problem in dealing with the health worker shortages is the migration of doctors and other health professionals from countries that do not have the ability to pay their wages to countries that do. Thus, the supply of health care workers is inadequate to meet the health care needs as determined by WHO, and the focus of this problem is clearly the supply and distribution of health care workers, which is most severe in Africa.

## Section II: Econometric Model

Now let us take a look at the work that we did in our paper entitled, “Forecasting the global shortage of physicians: an economic - and needs-based approach” (Scheffler, Liu, Kinfu, & Dal Poz, 2008). In this paper, we take a new approach. Rather than looking at the needs-based estimate, we looked at the demand-based estimates for health care workers. Demand-based estimates use the notion of the economic ability of a country or its health care systems to pay for and employ health care workers. This estimate of demand is then compared to the relative supply and the number of health care workers available; when demand exceeds supply, there is a shortage. And of course, correspondingly, when supply exceeds demand, there is a surplus. So this then is the economic paradigm that we used in our forecasting model. The year 2015 was picked as the model of forecast for the demand of health care workers because it is the date of the Millennium Development Goals (United Nations, 2005). In September 2000, at the United Nations Millenium Summit, world leaders agreed to a set of time-bound and measurable goals. These became known as the eight MDGs: (1) eradicate extreme poverty and hunger; (2) achieve universal primary education; (3) promote gender equality and empower women; (4) reduce child mortality; (5) improve maternal health; (6) combat HIV/AIDS, malaria, and other major diseases; (7) ensure environmental sustainability; and (8) develop a global partnership for development.

The model is based on the following economic paradigm, which economists call elasticity. The elasticity relevant here is the elasticity of health care spending to changes in income. We know in the OECD countries, for example, that a 10% increase in GNP would produce on average an 11-12% increase in healthcare spending (Cooper, Getzen, & Laud, 2003; Scheffler, 2004). In less developed countries this income elasticity is somewhat lower than the income elasticity of health care spending, so a 10% increase in income by a country might lead to 6-7% increase of health care spending. In addition we know that, on average, 60% of health care spending is used to employ health care workers. So this is the paradigm used in the model to estimate the demand for health care workers and the ability of a country to pay these workers.

In our model we have the forecast of gross domestic product for 170 countries in the world and with that we estimate this demand elasticity, which is essentially, as noted above, the relationship between the growth in the gross domestic product and the resulting change in health care spending. In general, about 60% of spending is for health workers. And with that we can then estimate the wage bill necessary to pay the health care workers available in the country. This demand estimate is then compared to a projection of the supply of health care workers in each of the countries. These projections are based on a 20-year time series for doctors in each of these countries. We used the growth rate of physicians to estimate the future supply.

In another analysis (Scheffler, Mahoney, Fulton, Dal Poz, & Preker, 2009) we use need and not demand, to be consistent with the WHO methodology. To calculate the shortages, surpluses, and sum, we compare the need for health care workers to the projected supply and of course when the supply does not meet the need we come up with shortages of health care workers. These shortages of health care workers in Africa are recorded - the need for health care workers, the supply, and the shortage. We also summarized the shortage of midwives. So we come up with a doctor shortage of 240,000 in Africa and a nurses and midwives shortage of 551,000. We also estimated that the annual wage bill to support these additional health care workers is approximately $2.6 billion (2007 USD). We also note that this is way beyond the capacity of these countries to support these health care workers and that no immediate training of doctors and nurses can possibly fill this gap.

Hence, in our next analysis (Fulton & Scheffler, 2009), we looked into the substitution of community health workers for physicians. This notion is to change the mix of doctors, nurses, midwives, and community health workers. In this analysis we found there is potential in many of the low- and middle-income countries to help solve the workforce shortage in a cost-effective manner. It is clear that a team approach of using large numbers of community health workers combined with doctors and nurses is perhaps the most feasible and cost-effective way of solving the shortage of health care workers in Africa.

The model we used, which is demand generated, indicates whether a country could afford to pay for the workers that it wishes to employ. In comparison, the WHO model only estimates the needs for these workers and does not think of the accountability of a country's ability to pay for their services. Therefore these two approaches often lead to different estimates of shortages and surpluses. For key details of the workings of the model, please see Scheffler et al. (2008).

## Section III: Case Study of Shortages of Doctors in Israel

In this section, I apply the forecasting model described in the previous section for Israel using a compilation of data from the Health, Nutrition, and Population Database (World Bank, 2006), OECD Health Data (2005), WHO (2006b), and COGME Sixteenth Report (2005). These projections are made to the year 2015 and they are meant to be ballpark estimates. Recall that the key element in the forecasting methodology is the supply of health care workers and the demand for health care workers based on the economic growth of the country. The results of this analysis appear in Figure 2; starting in 2003, the red line is the projected supply of physicians. This is based on the trend in the increase in the supply of physicians in Israel during the previous 20 years. This supply estimate takes into account historical in-migration, out-migration, and graduates of medical schools as well as retirements and deaths. The model is unable to factor in the building of new medical schools and the increase in number of graduates that may have happened. The demand estimate (blue line) comes from a calculation based on a projected economic growth of Israel and the elasticity of the income growth to the growth in health care spending. As we observed, there seems to be a very good balance between the projected supply and the economic forecast of the demand for health care workers. The two dotted blue lines are the confidence intervals around the estimate to show that there is some variation in the estimates that are produced on the demand side. Thus, our model shows that approximately the supply of doctors in Israel based on historical trends and forecasted growth of the economy appear to be in balance through 2015.

However, the influx of doctors from the Former Soviet Union has ended, so the supply projections are likely to be on the high side, suggesting that a future shortage may be likely. Several recent Israeli commissions have produced somewhat different projections. They note that until recently, the Israeli physician supply relied heavily on the immigration of physicians trained in other countries – primarily from the former Soviet Union and Eastern Europe. With that source drying up, Israel is now projected to face a major shortage of physicians in less than a decade (Rosen, 2008).

## Section IV: Pay for Performance

In the final section of the paper, we look at using financial incentives to improve productivity as a way of solving the global workforce shortage. This approach is sometimes called pay for performance or results-based financing. The way the pay for performance programs work is depicted in Figure 3 (Scheffler, 2008). Basically, they work with three elements; one is how to measure the performance. These measures can be outcome measures such as improvements in health services, they can be utilization methods such as more visits to a clinic or additional drugs being prescribed, or they can target improving the productivity of the health system as measured by visits per hour, for example.

The second element is the basis of reward and here are two concepts that seem to be used in the field. One method is to set a performance target. For example, the performance target is set at 90% of women patients examined yearly receive breast cancer screening, and if a doctor meets the target, then the doctor would receive a financial reward. The second method used is to look for improvement. Using the same example, an improvement would be if 60% of the women received a breast cancer screening exam and a doctor then moves up to 70%, the doctor would be rewarded for this percentage increase. If the target approach was used, the doctor would not receive the reward because the doctor did not meet the 90% target. There is a different philosophy between paying the reward for improvements and paying the reward for meeting certain targets. Finally, the reward structure is often paid by bonuses (either for the institution or the individual), which, for example, could be 5% of a doctor's earnings.

There has been quite a bit of literature on this and pay for performance is spreading in the public and private sectors in the United States. There are literally hundreds of experiments going on in the United States, in hospitals, health maintenance organizations, and physicians groups. At the moment, the evidence is generally mixed in the sense that sometimes we find that the pay for performance incentives improve outcomes, other times there seems to be no particular change at all (Redhun & Williams, 2009; Robinson, Williams, & Yanagihara, 2009). My view is that most of this has to do with the poor designs to evaluate most of the experiments. Even public programs such as Medicare are setting up pay for performance experiments (Tanenbaum 2009; Trisolini, Aggarwal, Leung, Pope, & Kautter, 2008) and I am pretty sure that the Obama administration will be pushing this in order to improve the productivity of the Medicare program.

There have been experiments throughout the world using pay for performance. Perhaps the most noted one, "Quality and Outcomes Framework" (QOF), was in the UK in 2004, where the National Health Service paid for performance for general practitioners using over 100 quality indicators, which virtually all the doctors met (Doran et al., 2006). This experiment produced a one-year increase in their salaries of between £23,000 and £40,000. As it turned out, performance targets may have been set too low.

There have been a variety of other experiments, such as in Rwanda, Haiti, and Turkey. In Rwanda, the objective of the performance-based financing pilot program was to increase the use of health services by providing incentives such as standardized payment for each service provided and adjusting payment based on service-quality score. This is associated with an increase of 0.44 consultations per capita per year (up from 0.31 in 2002 to 0.75 in 2005); an increase of 13 percentage points in institutional deliveries (from 27% in 2002 to 40% in 2005); and an increase of 7 percentage points in immunizations (from 70% in 2002 to 77% in 2005) (Rusa & Fritsche, 2007; Soeters, Habineza, & Peerenboom, 2006).

In Haiti, the objective of the performance-based initiative program was to improve access to health services, especially maternal and child health by awarding a bonus payment of up to 10% conditional on the performance indicators in addition to the negotiated 95% budget. This was associated with an increase in immunizations by 20 percentage points, prenatal care by 15 percentage points, postnatal care by 12 percentage points, and assisted deliveries by 20 percentage points from the prior year (Eichler, Auxila, Antoine, & Desmangles, 2007).

In Turkey, the objective of the performance-based supplementary payment system program was to encourage full-time work of health workers in the public sector and improve quality of care by awarding bonus payments to health workers according to individual and institutional performance criteria. During this period, dual practice was significantly reduced, down from 89% of public workers in 2002 to 54% in 2005; and patient satisfaction increased from 41% in 2003 to 67% in 2007 (Vujicic, Sparkes, & Mollahaliloglu, 2009).

In sum, the literature on pay for performance shows that it is a promising tool for improving performance in both productivity and quality of services. However, much of the evidence is incomplete because the research designs are not of sufficient quality to enable strong conclusions.

## Conclusion

We see that there is in fact a global shortage of health care workers and there is now a revolution going on in results-based financing and pay for performance, which I expect to continue in the next 5-10 years. The current policies to produce more doctors and nurses will clearly be helpful, but in my judgment they are not enough to solve the problem in the next 10-20 years. Perhaps the best alternative is the team approach, using large numbers of community health workers. Furthermore, pay for performance incentives and experiments have proved to be useful and the experience from less developed countries is very promising. I would encourage other countries to consider pay for performance programs to improve worker productivity and reduce the shortage of health care workers.

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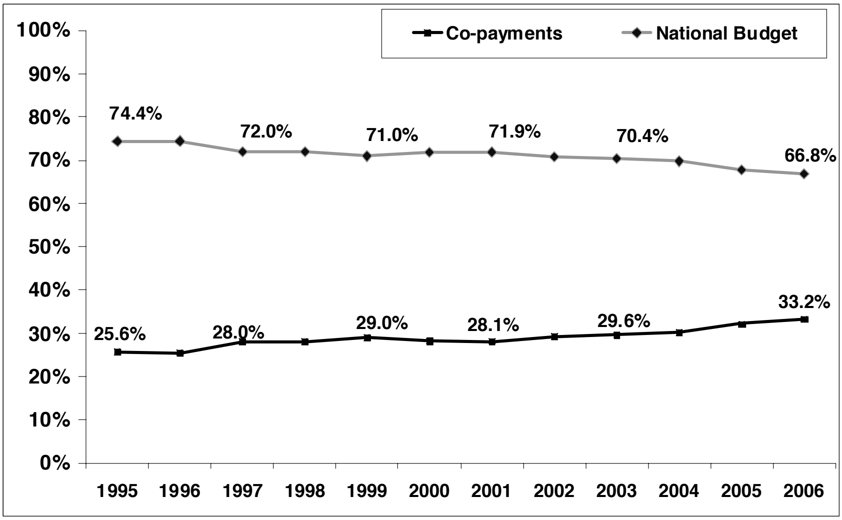
# Addressing Healthcare Inequities in Israel by Eliminating Prescription Drug Copayments

*Asher Elhayany, Shlomo Vinker*

## Introduction

Israel's 1995 National Health Insurance Law mandated that the healthcare system provide equitable, high quality health services to all citizens of Israel. Over the years since the law was enacted, total individual copayments for medical services included in the national health package have increased from 25.6% in 1995 to 33% in 2006 (Bin Nun & Kaidar, 2007, p. 45; Fig. 1).

***Figure 1:*** *Trends in national health expenditures 1994-2006 (%).*



Source: Bin Nun, & Kaidar, 2007

Healthcare costs worldwide are soaring for many reasons. According to the moral hazard theory, people behave differently when they have insurance, using more resources than they would without it (Braithwaite & Rosen, 2007; Nyman, 2004). Various programs and plans have been initiated in an attempt to contain expenditures (Hsu et al. 2006; Tamblyn et al., 2001). One such plan, cost sharing, was implemented as a means of curbing usage, and thus, expenses (Nyman, 2004). However, this has had unintended consequences, as many reports have shown that when costs go up, people purchase fewer necessary medications (Bae, Paltiel, Fuhlbrigge, Weiss, & Kuntz, 2008; Barron, Wahl, Fisher, & Plauschinat, 2008; Federman, Adams, Ross-Degnan, Soumerai, & Ayanian, 2001; Johnson, Goodman, Hornbrook, & Eldredge, 1997; Kass-Bartelmes, Bosco, & Rutherford, 2002; Roblin et al., 2005).

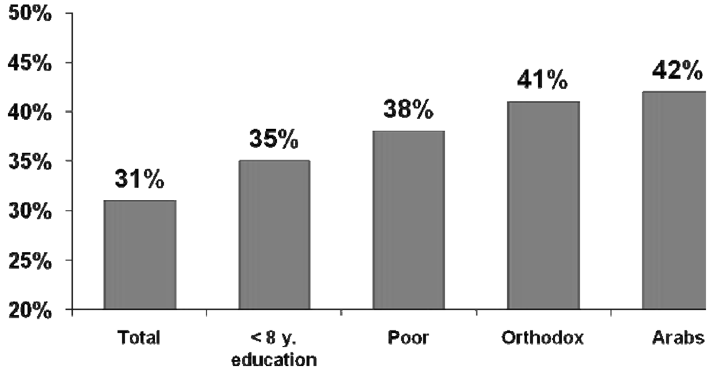
Adherence to physician recommendations is often crucial for patients' recovery from an acute illness and the well-being and longevity of those with a chronic disease depends on an ongoing, often costly regimen of care. Those who are unable to pay for their healthcare are often at greater risk for adverse outcomes (Kass-Bartelmes et al., 2002; Kephart, Skedgel, Sketris, Grootendorst, & Hoar, 2007). A study comparing mortality in 22 European countries (Machenbach et al., 2008) determined that unequal access to quality health care generated inequalities in mortality rates. In addition, inequalities in access to healthcare led to inequalities in survival of patients with chronic conditions (Machenbach et al., 2008).

The effects of copayments on medication usage have been well investigated. Among patients with chronic disease, financial limits on drug benefits have been associated with poorer adherence to drug therapy and poorer control of blood pressure, and lipid and glucose levels (Bentur, Gross, & Brammli-Greenberg, 2004; Kass-Bartelmes et al., 2002). Savings in costs from decreasing drug benefits were offset by increases in the costs of hospitalization and emergency department care (Goldman, Joyce, & Zheng, 2007; Hsu et al., 2006; Schoen et al., 2001). In a review article, Gemmill, Thomson, and Mossialos (2008) found 92 reports on copayments and medication usage, and concluded that prescription drug use was inversely related to user charges. In another study, parents reported being unable to afford the cost of antibiotics for their sick children because of high copayments (Reuveni et al., 2002). The elderly and those with lower income and inadequate or no insurance are especially at risk for decreasing their utilization of prescribed medications (Briesacher, Gurwitz & Soumerai, 2007; Federman et al., 2001; Kephart et al., 2007; Lurk, DeJong, Woods, Knell, & Carroll, 2004).

A study of patients on oral anti-diabetic medication found that treatment failure was directly related to the amount of copayment (Barron et al., 2008). Similarly, Roblin et al. (2005) measured the effects of different levels of cost-sharing increases on oral hypoglycemic use. The most significant decrease in use was found when copayments increased by more than $10; smaller or no increases did not have the same effect. Goldman et al. (2004) found that use of diabetes medications decreased about 25% when copayments were doubled. Studies that found less consistent results included older patients and those with chronic conditions who may face fewer choices in not taking needed medications (Johnson et al., 1997; Pilote, Beck, Richard, & Eisenberg, 2002).

Today, the public sector in Israel contributes about 60% of the nation's healthcare expenses, while the proportion of private funding has been steadily climbing, and is now approximately 40% of the total national healthcare expenditures. This trend toward increasing individual health care costs is having an increasingly negative impact on the equitable distribution of healthcare services; it has been felt most strongly among the lower-income segments of the population and those with a chronic illness (Gross, Brammli-Greenberg, & Waitzberg, 2008). As it becomes progressively more difficult for private individuals to meet the required copayments, their access to medical care diminishes. This phenomenon is evident in the growing number of patients who have chosen to forego healthcare services due to economic difficulties (Fig. 2; Degani & Degani, 2008).

***Figure 2:*** *Patients who avoided medical care because of costs (April 2008).*



Source: Degani, 2008

Overall, increased costs have a negative effect on patient adherence to prescribed drug regimens (Hsu et al., 2006). In an attempt to reverse these trends, we initiated a process that eliminated the direct cost of copayments for a select group of low-income patients with hyperlipidemia, hypertension, or diabetes mellitus.

Many leaders in the healthcare field in Israel believe that poor adherence of patients with a low SES is driven by their cultural backgrounds, their health beliefs, and behaviors (Epstein & Belshar, 2008). We initiated this project to challenge this paradigm and to study for the first time in the Israeli health system the effect of reducing or even eliminating copayments for patients of low SES on adherence and outcome.

## Methods

Clalit Health Services (CHS) is the largest health maintenance organization (HMO) in Israel, insuring 54% of the population. It is the second largest HMO in the world. This study was conducted in CHS primary care clinics in the cities of Ramle and Lod. These cities have a mixed Arab-Jewish population and are among the poorest in Israel, defined by the Israeli Social Security Agency as having a socioeconomic status in the lowest 10% of the population. About 20% of the residents receive social welfare assistance compared to 15% nationally. The average household wage is 25% less than that of the national average. About

60% of residents are defined as low SES, compared to 44% in the general population served by Clalit.

Patients with a low SES who were not regularly purchasing prescribed medications were identified from CHS records. The study population included adult patients ($\geq$18 years of age) with hyperlipidemia, hypertension, and diabetes. These chronic illnesses were chosen because they have easily measurable parameters of response to medication. Patients who were known substance abusers (alcohol or drugs) were excluded.

Eligible patients were invited to participate in the program by their family physician. Very few patients refused to participate. Those who agreed received a “credit card” to purchase prescribed chronic care medications at their regular pharmacy. The card was authorized to pay for predefined classes of drugs specific for these diseases. The copayment for the chronic illness medications was donated. The copayment amount was debited from a special project bank account.

All patients signed an informed consent to participate in the study. HbA1C, blood pressure, and LDL cholesterol levels were measured prior to the intervention and every three to six months thereafter. They were followed for 24 months between December 2006 and December 2008. Data on HbA1c and LDL cholesterol levels were retrieved from the computerized central laboratory repository. The data on blood pressure measurements were taken from the patients’ electronic medical records.

## Results

### Study Population

A total of 355 patients participated in the study. Of these, 195 (54.9%) were female. The average age of the study population was 64.6 years. The study included 260 (73.2%) patients who had hypertension, 323 (90.9%) with hyperlipidemia, and 210 (59.1%) diabetics.

On intention to treat analysis, within six months, HbA1C levels declined from 8.45 g% to 7.82 g% ($p = 0.005$). Systolic and diastolic blood pressures decreased significantly, from 140 mmHg to 133 mmHg ($p = 0.0002$) and from 80 mmHg to 76 mmHg ($p = 0.001$), respectively. LDL levels declined from 119 to 107 ($p = .052$; Table 1).

***Table 1:*** *Changes in health measures six months after intervention.*

| Health Measure | N | Baseline | After 6 months | P-value |
|---|---|---|---|---|
| HgA1c – for diabetes (g%) | 201 | 8.45 | 7.82 | 0.005 |
| Hypertension (mmHg) | 242 | | | |
| Systolic | | 140 | 133 | 0.002 |
| Diastolic | | 80 | 76 | 0.001 |
| Hyperlipidemia – LDL (mg/dl) | 315 | 119 | 107 | 0.052 |

One year after initiation of the subsidized copayment program, all measured levels were still significantly below those at the onset of the program. Overall outcomes after one and two years of the intervention are shown in Table 2. HbA1C decreased from 8.45 g% before the program to 7.80 g% after 2 years ($p < 0.05$). Blood pressure decreased from 140/81 to 129/75 + ($p < 0.05$) and LDL levels from 123 mg/dl to 105 mg/dl after 2 years ($p < 0.05$).

***Table 2:*** *Overall outcomes for 355 patients, 1 and 2 years after intervention.*

| Health Measure | N | Baseline | After 1 year | After 2 years | p value |
|---|---|---|---|---|---|
| HgA1c – for diabetes (g%) | 201 | 8.45 | 7.43 | 7.80 | <0.05 |
| Hypertension (mmHg) | 242 | | | | |
| Systolic | | 140 | 136 | 129 | <0.05 |
| Diastolic | | 81 | 77 | 75 | <0.05 |
| Hyperlipidemia – LDL (mg/dl) | 315 | 122.5 | 113.9 | 105.3 | <0.05 |

The cost of subsidizing co-payments for this study was about $200,000.

## Discussion

We report the results of a program developed wherein patients who were known to avoid filling prescriptions for medications used to treat their chronic health conditions because of an inability to pay the copayment fees, were able to obtain their medications discreetly at no cost, using a pre-paid credit card. Costs were funded by a private donor. As quickly as six months after initiating the intervention, significant improvements in blood pressure, LDL cholesterol, and HbA1c levels were noted. After one and two years' participation in the program, all levels except HbA1C continued to improve. Although HbA1C was lower at 2 years (7.80 g%) than at baseline (8.45 g%), it was lowest after one year, at 7.43 g%.

Few studies have reported on the results of a decrease or elimination of copayments. When low income patients in an inner-city Chicago clinic received assistance in obtaining prescription drugs free of charge, diastolic blood pressure, LDL cholesterol, and hospitalizations decreased, while drug adherence improved after six months (Schoen, DiDomenico, Connor, Dischler, & Bauman, 2001).

Although the healthcare system in Israel provides basic coverage to all residents, disparities become evident when individuals are unable to afford copayment fees for office visits, tests, and medications. In 2006, there were five times as many diabetes patients among insured low SES individuals as there were among the rest of the insured individuals. Similar differences were found in 2005 and 2004 (Porath, Rabinowitz, Segal, & Weitzman, 2007). Israeli households contribute 32.2% to national health expenditures. In 2005, this amount ranked the fifth highest in the world after the United States (54.9%), Mexico (54.5%), Switzerland (40.3%), and Australia (32.5%). It was followed by Canada, whose residents pay 29.7% (Bin Nun & Kaidar, 2007, p. 45). We demonstrated that eliminating copayments resulted in increased compliance with obtaining prescribed medications and more importantly a significant decline in HbA1C, blood pressure, and LDL cholesterol levels. In Israel, quality indicators for community healthcare showed improvements of 2.3% in blood pressure, 3.9% in HbA1C, and 1.9% in LDL among insured low SES individuals over the age of 65 years, from 2006 to 2007 (Porath et al., 2007). We measured improvements of 7.85% in blood pressure, 7.7% in HbA1C, and 14.6% in LDL for the patients in our study, indicating that the increased compliance with obtaining prescribed medications due to eliminating co-payments resulted in significant improvements in HbA1c, blood pressure, and LDL cholesterol levels.

This study had a few limitations. Patients were selectively chosen by healthcare staff and there was no randomized control group. We did not measure possible confounders such as changes in other healthcare behaviors including dietary or exercise habits that may have contributed to the improvement in outcome measures. However, the longitudinal study design allowed us to obtain measurements of the participants' blood pressure, HbA1c, and LDL values before and after implementation of the intervention. Although patients continued to be enrolled during the intervention and the data presented here are cumulative, the results were consistent. Unfortunately, the study sample was too small for us to measure the economic impact on the 500,000-member health plan.

Contrary to expectations of moral hazard theorists, a financial limit on drug benefits has not led to more efficient use of healthcare (Gladwell, 2005), but rather it has been associated with lower prescription drug use and unfavorable clinical outcomes. Kleinke (2004) suggested initiating a value-based, rather than price-based system for prescription drug costs, tying the amount of the copayment to the health value of the drug. One way to implement this would be to have a graduated scale with very low or no copayments for essential generic medications, such as those used to treat chronic diseases and higher copayments for nonessential, life enhancing drugs (Braithwaite & Rosen, 2007).

To the best of our knowledge, this is the first study to demonstrate a significant improvement in health measures among a low-income population in Israel, underscoring the harmful effects of indiscriminately implementing cost sharing for essential as well as non-essential medications. Cultural backgrounds and beliefs did not interfere with medication usage when price barriers were eliminated.

Among patients with chronic disease, financial limits on drug benefits have been associated with poorer adherence to drug therapy and poorer control of blood pressure, lipid, and glucose levels, while savings in costs from decreasing drug benefits were offset by increases in the costs of hospitalization and emergency department care (Goldman et al., 2007; Hsu et al., 2006; Schoen et al, 2001).

Although the system of coinsurance and copayments was intended to decrease excessive use of healthcare resources, over time these funds have become a source of revenue rather than solely a cost containment instrument.

> As was said long ago, “A wise person sees the results of his actions.” (Ethics of the Fathers, chapter 2, p. 10).

## Conclusions

Eliminating prescription drug copayments for low income residents with chronic diseases led to improved control of diabetes, hypertension, and hyperlipidemia. To reduce inequities in access to healthcare and to restore the original intent of the copayment system, we advocate instituting a drug benefit plan as an integral part of the healthcare system in Israel, where co-payment costs are weighted relative to the direct health value of the medication. In addition, a government-supported plan of targeting discounts to the poorer segments of society could be an effective part of a longer-term health promotion and education strategy.

### Acknowledgements

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# The Role of the IDF Medical Corps in Emergencies

## *Nachman Ash*

The declared purpose of the IDF Medical Corps (IDF-MC) is to provide the very best medical treatment to the soldiers in combat, security missions, and routine daily life; to promote soldiers' health; and to promote all aspects of Military Medicine. All of our activities are based on the universal profession of medicine and the knowledge gathered under the title of military medicine, i.e., the different aspects of medicine that are relevant for health issues of soldiers. The three main activities of the IDF-MC are dealing with medical aspects of the battlefield, supplying medical services to all soldiers in everyday life, and dealing with issues relevant to the whole nation of Israel - national health tasks. This paper will focus on the third item, but first we need to understand some aspects of the IDF-MC healthcare system.

The IDF-MC provides primary, secondary, and tertiary medical services to all soldiers. Part of these services is given by the IDF-MC personnel in its facilities and other services are purchased from civilian suppliers of health services. Primary care is given in military clinics (Zimlichman et al., 2005) except for emergency medicine that is outsourced to a private company. Secondary medicine is given by both military and civilian clinics, mainly outpatient clinics in hospitals. When Israel was established in 1948, the IDF-MC owned several military hospitals, thus supplying tertiary medicine to soldiers as well. Several years later all military hospitals were transferred to the government. Today, there are no military hospitals, so the IDF-MC has to obtain tertiary medical services from civilian public hospitals, either governmental or those owned by the Clalit Health Services HMO. This is true for peacetime and times of emergency, such as war.

The decision to transfer all hospitals from military to governmental ownership was based on the limited resources of a small country that must have an efficient medical system. The state of Israel could not afford to maintain duplicate systems - military and civilian. There are several consequences of this decision. Since the military has full responsibility for the health of its soldiers, it must ensure that soldiers get the very best medical treatment and services in the public hospitals. This is true for everyday life and even more in times of emergency. Therefore, the IDF-MC must take into account the preparedness and staffing of the public hospitals as part of its own preparedness for emergency. This fact is even more crucial and problematic because some military reserve personnel are physicians and nurses who work in these hospitals and in times of emergency leave them for their military positions.

Emergency events can be classified into those that are military oriented (i.e., involve a massive military action), such as war time, and civilian oriented events, such as an earthquake or pandemic. There are also combination events such as a mega terror attack. The role of the military and the Medical Corps in these events depends on the scenario, but it must be emphasized that in any type of event the IDF and its Medical Corps should be involved in the response of the health system.

All decisions regarding the health system in Israel in times of emergency are taken by the Supreme National Health Authority (SNHA) (Shemer, Heller, & Danon, 1991), which is headed by the director general of the Ministry of Health and co-chaired by the IDF Surgeon General and the CEO of the Clalit Health Services. This triumvirate controls the response of the Israeli health system in times of emergency and is also responsible for the preparedness of the system. The emergency department of the Ministry of Health takes the decisions of the SNHA to action together with the medical department of the home front command (HFC). The SNHA's decisions influence all medical organizations in Israel: Hospitals, HMOs, the EMS system (Magen David Adom - MDA), the central blood bank of the MDA, and the IDF-MC. The SNHA's decisions are sometimes based on the recommendations of special committees such as the Epidemic Management Team.

The medical department of the HFC is deeply involved in preparing the civilian medical system for times of emergency. Once done directly by the IDF-MC, and now by the HFC, all general hospitals in Israel are trained to react to an emergency - either conventional or WMD. The medical department of the HFC generates the doctrine of hospital responsiveness to emergency, trains the hospitals, and executes special drills (Leiba et al., 2007). The second Lebanon War in 2006 raised the issue of healthcare in the community during an emergency (Bar-Dayan, 2007). As a result of that, the medical department of the HFC is now building a similar system for preparing the healthcare system in the community (mainly the four HMOs) for emergencies.

During war the HFC is responsible for the medical aid of populations that are injured by enemy attacks, including attacks by WMD. The medical support is given by MDA troops and enforced by military medical personnel. The HFC also supports the treatment of stress reaction in the community and everyday treatment that should be given to sick people by the HMOs. The medical department of the HFC has two more special tasks in times of emergency. The first one is running the National Medical Operation Center that collects information regarding casualties at the scene and in hospitals. The second is leveling the load on hospitals by diverting casualties from the scene to less crowded hospitals (an action called primary distribution) and by transferring patients from overloaded hospitals to less occupied ones (secondary relocation).

The role of the IDF-MC in cases of emergency is the result of the above-mentioned formal tasks of the Surgeon General and the medical department of the HFC, but also the result of other advantages of the IDF-MC in cases of emergency. As a military unit the IDF-MC is well prepared and used to acting in times of emergency. The staff of the IDF-MC can move very fast and efficiently in an emergency. The IDF-MC can recruit medical personnel very quickly and send medical units to any task in minimal time. This capability is most important in rural places where the civilian medical system is usually weaker. The IDF-MC can also send medical and logistic equipment to any place in Israel very quickly.

Several branches of the IDF-MC are knowledge pivots at the national level. The first and most important is the NBC branch, which is responsible for developing the policy and doctrine of treating casualties injured by WMD. The head of the branch advises not only the Surgeon General but also the director general of the Ministry of Health and the minister of defense. The NBC branch of the IDF-MC is deeply involved in teaching and training the medical community in Israel to treat casualties of WMD. Other elements of the IDF-MC, including the trauma branch, the public health branch, and the mental health division, cooperate with the parallel civilian bodies to create a harmonized response in times of emergency.

The dependence of the IDF-MC on civilian resources, medical personnel, and facilities (mainly hospitals) makes its involvement in any emergency scenario mandatory. This is true for military-oriented disasters as well as for civilian-oriented disasters such as an earthquake. Nevertheless, the level of involvement of the IDF-MC in civilian-oriented disasters has changed during recent years. As the civilian health system becomes stronger and more trained in acting in times of emergency it takes a larger part in the response, and the need for the involvement of military forces lessens. Nowadays the weight of the civilian response to an emergency is greater and the need for military involvement has decreased. Nevertheless, in case of mega-disaster the role of the IDF becomes more important, as it can quickly recruit personnel and bring logistics to the scene of an event.

In conclusion, since Israel is a small country with limited resources, the need for cooperation and coordination between the civilian health system and the military one in an emergency is mandatory. The IDF-MC has formal duties in case of emergency, depending on the scenario, and also special expertise that is useful in such events.

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# Advanced and Specialist Nursing Practice: Attitudes of Nurses and Physicians in Israel

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*Eithan Brodsky, Dina Van Dijk*

**Background:** With the introduction of new and advanced nursing roles, the nursing profession is undergoing dynamic change. Realizing changes will be easier to accomplish if the nursing community and other healthcare professionals welcome the process. Recently the nursing staff mix in Israel has been undergoing a transformation: encouraging registered nurses to enhance their status by acquiring academic degrees and advanced professional training, and initiating the adoption of new nursing roles.

**Objective:** Our goal is to evaluate Israeli nurses' and physicians' attitudes to the introduction of new nursing roles and to expanding the scope of nursing practice.

**Methods:** Two hundred and fifteen nurses and 110 physicians from three large general hospitals and 15 community clinics filled in a questionnaire.

**Findings:** In general the majority of the nurses supported expansion of nursing practice, and such expansion did not cause significant opposition among physicians. However when the task affected patients' health, physicians were less willing to permit nurses to perform skills previously their responsibility alone. In addition, using multiple logistic regressions, support of the expansion of nursing practice was significantly higher among nurses in management or training positions, and among academically accredited nurses. Support for expanded roles was prominent among hospital physicians, graduates from Israeli schools of medicine, and less-tenured physicians.

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**Conclusions:** We suggest that confirmation by various groups of physicians and nurses of standardized definitions of the new boundaries in the scope of nursing practice roles could successfully promote development of new roles and facilitate integration of the Israeli healthcare system into the global context of change.

**Clinical Relevance:** Inter - and intra-professional collaboration, agreement, and understanding regarding advanced nursing practice roles and their introduction into the healthcare system might improve the relationship between healthcare professions and ultimately increase quality of care and patient satisfaction.

All over the world, healthcare professions are undergoing dynamic multifaceted change. One of the most significant processes is the development and expansion of non-physician clinician roles existing for decades, primarily in the US and Canada, and gaining momentum in recent years in other countries as well (Busing, 2003; Hooker, 2006). These changes have not been rejected by the nursing profession and the most obvious indication of their acceptance is the emergence of new and advanced nursing roles. And this process continues with the goal of improving the availability and accessibility of health care, improving clinical outcomes, and increasing patient satisfaction while maintaining cost effectiveness and expanding nurses' expertise and enhancing professionalism (Bryant-Lukosius, DiCenso, Browne, & Pinelli, 2004; Furlong & Smith, 2005; Hooker, 2006; O'Brien, 2003). Similar to Ball (2005) and Lloyd Jones (2005), the authors of this paper use the "umbrella" term-advanced or specialist nursing practice roles (ASNP roles) to describe new roles.

Nurses in Israel are now in the process of adopting new nursing roles. In the context of this process we examined Israeli registered nurses' and physicians' positions regarding expansion of the scope of nursing practice, introduction of ASNP roles, and the possible effect on the Israeli healthcare system. Before we discuss the empirical study we would like to offer a definition of the ASNP roles indicated in this study, and to review international experience garnered during introduction of new nursing roles in terms of cost effectiveness, quality of care, and patient satisfaction. We will then describe initiation of changes in Israeli nursing and healthcare policy.

## Defining ASNP

In many countries around the world nurses are employed in ASNP roles (Buchan & Calman, 2004). However, a distinct difference exists in how these roles are defined and labeled in various countries. The most common titles assigned to the main groups of roles are specialist nurse, nurse practitioner, clinical nurse specialist, clinical nurse midwife, nurse anesthetist, and nurse consultant (Ball, 2005; Lloyd Jones, 2005; Young, 2005). Despite differences in the level of authority of various ASNP roles, which are unique to each particular country and even to various provinces or states (Cho & Kashka, 2004; Kaplan & Brown, 2007), a common denominator is to be found in their nursing practice. The Royal College of Nursing (2004) indicates that the level of autonomy is what defines and unifies all nurses in this group.

Other authors claim that the unifying factor is the nurse's involvement in educational activities, scientific research and publishing, leadership, management, and consultation. These elements of nursing practice are combined with clinical practices such as health promotion and disease prevention, diagnosis, referral for and interpretation of diagnostic and laboratory tests, patients' referral to other health professionals, and determining treatment strategies (Ball, 2005; Mick & Ackerman, 2000; van Offenbeek & Knip, 2004). One of the role definitions designed to mediate between perspectives that are unique to the different countries is that nurses in ASNP roles be registered nurses who hold at least a master's degree, possess a high level of expertise, have complex decision-making skills, and possess the clinical knowledge and capabilities required in nursing practice (International Council of Nurses, 2002).

Introduction of ASNP roles into the healthcare system will cause changes in the definition and content of existing roles. Buchan and Calman (2004), discussed the phenomenon of “skill mix” and ASNP role creation resulting from various reasons, such as improving healthcare system efficiency in response to physician shortages versus population need-based change in terms of patient satisfaction and quality of care. The authors assert that successful establishment of new roles depends on issues of cost effectiveness, safety, and patient and healthcare provider's satisfaction (Buchan & Calman, 2004). Moreover, the introduction of change will be smoother if the process is welcomed both by nurses and other healthcare professions (Gooden & Jackson, 2004; Ketefian, Redman, Hanucharurnkul, Masterson, & Neves, 2001).

## Cost Effectiveness and Satisfaction with the Introduction of ASNP Roles

There is consensus that a decrease in expenditure and increase in productivity results from the introduction of new nursing roles (Cowan et al., 2006; Raftery, Yao, Murchie, Campbell, & Ritchie, 2005; Uppal, Hose, Banks, Mackay, & Coatsworth, 2004). However the authors of some studies believe that their study findings, e.g., Caine et al. (2002), indicate only long-term improvements, after nurses in ASNP roles have accumulated clinical experience, new work habits, and more self confidence. Various authors (Hoffman, Tasota, Zullo, Scharfenberg, & Donahoe, 2005; Horrocks, Anderson, & Salisbury, 2002; Lenz, Mundinger, Kane, Hopkins, & Lin, 2004) comment that ASNP nurses provide a level of care and achieve health outcomes at least equivalent to those attained by physicians. Moreover, results of the meta-analysis by Horrocks et al. (2002) are an indication that in the majority of the studies in which patient satisfaction, was assessed, respondents were more satisfied with service administered by ASNP nurses than by physicians.

As previously stated, successful establishment and introduction of new roles is dependent to a large extent on acceptance of these roles by healthcare professionals.

Physicians' resistance to ASNP roles was not noted in studies that examined physician attitudes in various countries, however skepticism was noted with regard to the extension of the nursing practice to specific medical competencies, and to the nurse's level of training and professional capabilities (Blackwell & O'Neill, 2004; Lauder, Sharkey, & Reel, 2003; Mackay, 2003; Norris & Melby, 2006). Registered nurses, whose attitudes toward ASNP roles were assessed in many studies, expressed concern that these new roles would override nursing and holistic medicine aspects of their profession (Easton, Griffin, Woodman, & Read, 2004; Nevin, 2005).

Although the authors of several studies have reviewed trends and changes in Israeli nursing and healthcare policy, to date no studies have been conducted in Israel where the authors have made an attempt to assess the attitudes of physicians and nurses to ASNP roles.

## Introducing ASNP Roles into the Israeli Healthcare System

Nursing staff mix in Israel is now in the process of change and is composed of 32% licensed vocational nurses and 68% (30,369) registered nurses (Ministry of Health, 2005). The process of change includes discontinuing the training process for certification of licensed vocational nurses (Ministry of Health, 2005), encouraging registered nurses to improve their status by acquiring academic degrees and advanced training in various fields of performance (Fridman, 2006; Riba, Greenberg, & Reches, 2004). According to Rassin and Silner (2007) registered nurses holding academic degrees comprise 33% of the entire group of registered nurses. In the year 2004 the number of academically accredited nurses included 9,664 nurses with a baccalaureate degree, 1,831 nurses with a master's degree and 68 with a doctorate. At the end of 2004 the number of registered nurses participating in advanced training was calculated at 14,687 (42%) of registered nurses (Ministry of Health, 2005).

Having made this skill-mix change, professional nurse's delegations are lobbying for the right to conduct procedures heretofore performed exclusively by physicians (Fridman, 2006). Riba et al. (2004) claim that the Ministry of Health Nursing Division is developing new job descriptions, parallel to regulating those delegated by other professions primarily from the medical community. Today emphasis is placed on introducing the role of "clinical nurse specialist" because of the conviction that this role is more nursing-oriented and includes less "medical practice" than does the "nurse practitioner" role (Riba et al., 2004). This trend has developed in Israel because of the high ratio of physicians per population compared to other countries (Riba, 2004).

The physician to population ratio in Israel, however, is expected to change as the population continues to grow and a decline in the number of new physicians entering the Israeli healthcare system exists (Pazi Committee, 2002).

To date no researchers have conducted a study in Israel to evaluate physician's and nurse's attitudes to ASNP roles. However, during the last few years many articles have been published which describe unequivocal attitudes and diverse opinions held by key members of the Israeli healthcare system with regard to introduction of new roles. Fridman (2006) emphasized issues such as professional image, economic effectiveness and skepticism regarding nurse's increased autonomy. In an "opinion" article, the president of the Israel Medical Association (Blachar, 2006) warned of the adverse affects that transfer of responsibility from physician to nonphysician clinician might have on the Israeli healthcare system and on patients.

This paper is our attempt to examine Israeli physicians' and nurses' attitudes to the introduction of ASNP roles and the expansion of traditional nursing roles. The results might create a suitable background for the future introduction of these professions into the Israeli healthcare system.

# Method

## Sample

A convenience sample method was used. Intermediaries selected by the researchers distributed and collected questionnaires at different departments in three large public medical centers (two university hospitals and one university-affiliated hospital) and 15 community clinics run by health maintenance organizations. The intermediaries requested that physicians and registered nurses complete the questionnaires, and the intermediaries were accessible in person or by phone to assist respondents with any questions or clarifications they might have had regarding the questionnaire. Completed questionnaires were collected from the intermediaries' department and clinics; 215 registered nurses and 110 physicians completed and returned the questionnaires. Response rate was 88% among nurses and 73% among physicians.

## Tools

The questionnaire distributed was developed on the basis of extensive review of medical and nursing journals and discussion papers and on a variety of role descriptions. The 13 questions that made up the questionnaire were directly related to information the researchers considered would be constructive in evaluating Israeli physicians' and nurses' attitudes to ASNP roles and expansion of nursing scope of practice in specific domains. The questions had many themes. The first group of questions was to examine attitudes toward the "importance" of introducing advanced nursing roles into the Israeli healthcare system.

The second group of questions was addressed to the potential influence of the ASNP roles on improving "quality of care,""patient satisfaction," and "cost effectiveness" of the healthcare system. An additional group of questions was included to examine attitudes regarding "expansion of nursing scope of practice" to domains currently the exclusive domain of physicians, such as prescribing medications and determining treatments based on standard protocols, referring patients for laboratory tests, and other diagnostic procedures (e.g., ECGs and x-rays), interpreting results, conducting medical evaluations and histories, and making diagnoses. The questions covered "competencies" most often cited in literature, which are not unique to any particular state, province, or country.

A six-degree Likert-type scale was used, and the scale ranged from 1 = disagree completely to 6 = agree completely. The scale was designed to prevent respondents from taking a neutral stand and force a choice between a positive and a negative attitude.

Before filling in the questionnaire respondents were asked to read an excerpt based on professional literature which described ASNP roles. Respondents were also asked to supply demographic details, such as profession, age, gender, years in practice, primary employer (hospital or community clinic), expertise, education, employment in management or training positions (nurses), and where they studied medicine (physicians).

A panel of experts with theoretical knowledge and practical experience in the fields being analyzed were asked to independently review the questionnaire's content and face validity. They were also asked to scrutinize each question to determine appropriateness, comprehension, and relevance to our target population. Minor changes were made based on their comments.

A pilot study (N= 20 respondents) was then conducted and respondents were asked to complete the questionnaire twice, within a 2-week interval between the first and second time. Consistency of response was noted and no problems or misunderstandings arose. Test-retest reliability was high (r= 92%). After all 325 questionnaires had been collected, Cronbach's reliability alpha was assessed to test internal consistency of the questionnaire contents and found to be high ($\alpha$= .86; 13 questions).

# Findings

## Sample Description

Two hundred and fifteen respondents (68%) were registered nurses and 110 were board-certified physicians (32%). The average age of the nurse respondents was approximately 37, and average seniority was 13 years. The majority of nurse respondents were female (86%), hospital employees (75%), involved in direct patient care (82%), and held baccalaureate degrees (54%) or higher (master's or doctorate) academic degrees (16%).

Fifty four percent of the nurses had undergone advanced training, which in our case means beyond basic professional education, initiated and supervised by the Ministry of Health and including development of clinical expertise in various fields.

The average age of physician respondents was approximately 42, with an average of 8 years seniority. A majority of physician respondents in the study were male (59%), hospital employees (70%), specialists in family/internal medicine or surgery (70%). The majority of the physician respondents were educated in Israel (49%) or in the former Soviet Union and Eastern European countries (44%). For the multivariate logistic regression test we divided physicians into two groups, those educated at Israeli schools of medicine and those educated abroad.

## Nurses' and Physicians' Attitudes

In general, significant differences between the attitudes of nurses and physicians, shown in the majority of questionnaire responses, are an indication that nurses viewed change more positively than did physicians. See Table 1, which is based on two levels of the six-degree Likert scale - agree and agree completely.

***Table 1:*** *Agreement of nurses and physicians (agree and agree completely) with questionnaire's statements and pearson chi-square coefficients for the differences between them.*

| Statement | Nurses | Physicians | $X^2$ value | df |
|---|---|---|---|---|
| Importance of ASNP introduction | 86% | 72% | 12.66* | 5 |
| Improving quality of care | 74% | 58% | 11.74* | 5 |
| Increasing patient satisfaction | 71% | 58% | 10.1 NS | 5 |
| Increasing cost-effectiveness | 58% | 53% | 12.95* | 5 |
| Expanding the nursing's scope of practice to... | | | | |
| Conducting medical evaluations and taking medical history | 67% | 65% | 3.14 NS | 5 |
| Diagnosing patients' diseases | 43% | 12% | 42.35** | 5 |
| Prescribing medications | 66% | 43% | 25.77** | 5 |
| Determining treatments | 73% | 45% | 53.84** | 5 |
| Referring/interpreting laboratory tests | 74% | 48% | 28.62** | 5 |
| Referring/interpreting diagnostic tests | 66% | 48% | 14.64* | 5 |

Note. NS = nonsignificant; *P value < .05; **P value < .01.

A relatively high level of agreement was present in both groups with regard to "importance" of introduction of ASNP roles and the influence they have on improving "quality of care" and improving "patient satisfaction" levels. More significant differences in attitude were noted between nurses and physicians with regard to their support of the expansion of the nurse's domain of responsibility, with the exception of conducting medical evaluations and taking medical history, the role changes that both nurses and physicians supported equally. The overall percentage of nurses who "agreed" or "agreed completely" with the questionnaire's assertions ranged from 43% to 86%. Agreement was not as high among physician respondents – 12% to 72% (see Table 1).

However, interesting differences were noted between various subgroups comprising the sample of nurses and physicians, which showed up in the multivariate analysis of logistic regression. The nurse's sample agreement predictors, that were significant in univariate analysis and were retested in the multivariate stepwise model, were factors related to professional position (direct patient care nurses vs. nurses in management or training positions), employer (hospital vs. community clinic), gender, and academic accreditation.

In the physicians' sample a similar process was performed for agreement predictors, such as age, seniority, employer (hospital vs. community clinic), and education (Israeli medical school or abroad). Stepwise multivariate logistic regression analysis of the nurses' sample indicated influence of professional position, academic education, and employer (see Table 2, which is based on answers divided into "agreement" or "disagreement" attitudes). Factors found to significantly influence physicians' attitudes were seniority, employer, and the country where the physician was educated (see Table 3 which is based on answers divided into "agreement or "disagreement" attitudes).

***Table 2:*** *Nurses' sample (n=215); variables aAffecting agreement (agree slightly, agree, and agree completely) with questionnaire's statements according to multivariate logistic regression models.*

| Statement | Adjusted OR | 95%CI |
|---|---|---|
| Importance of ASNP introduction | | |
| Position: management or training vs. direct care | 1.33 NS | 0.15-11.49 |
| Education: academic vs. non-academic | 1.31 NS | 0.34-4.97 |
| Employer: hospital vs. community clinic | Non computable | |
| Improving quality of care | | |
| Education: academic vs. non-academic | 4.44** | 1.58-12.55 |
| Position: management or training vs. direct care | Non computable | |
| Increasing patient satisfaction | | |
| Position: management or training vs. direct care | 4.89 NS | 0.63-38.46 |
| Education: academic vs. non-academic | 2.94** | 1.27-6.87 |

| Statement | Adjusted OR | 95%CI |
|---|---|---|
| Increasing cost-effectiveness | | |
| Education: academic vs. non-academic | 2.49* | 1.26-4.95 |
| Gender: male vs. female | 1.69 NS | 0.54-5.24 |
| Position: management or training vs. direct care | 1.62 NS | 0.56-4.61 |
| Employer: hospital vs. community clinic | 0.65 NS | 0.27-1.54 |
| Expanding the nursing's scope of practice to… | | |
| Conducting medical evaluations and taking medical history | | |
| Position: management or training vs. direct care | 8.47* | 1.12-62.51 |
| Gender: male vs. female | 6.36 NS | 0.82-47.61 |
| Diagnosing patients' diseases | | |
| Position: management or training vs. direct care | 2.45* | 1.02-5.88 |
| Gender: male vs. female | 1.65 NS | 0.67-4.08 |
| Prescribing medications | | |
| Position: management or training vs. direct care | 2.37 NS | 0.68-8.19 |
| Determining treatments | | |
| Position: management or training vs. direct care | 5.07 NS | 0.65-40.01 |
| Education: academic vs. non-academic | 2.23 NS | 0.96-5.21 |
| Referring/interpreting laboratory tests | | |
| Education: academic vs. non academic | 3.45** | 1.36-8.70 |
| Referring/interpreting diagnostic tests | | |
| Employer: hospital vs. community clinic | 4.12** | 1.72-9.85 |
| Education: academic vs. non-academic | 3.28** | 1.41-7.69 |
| Gender: male vs. female | Non computable | |

Note. NS = nonsignificant; *P value < .05; **P value < .01.

***Table 3:** Physician's sample (n=110); variables affecting agreement (agree slightly, agree, and aAgree completely) with questionnaire's statements according to multivariate logistic regression models.*

| Statement | Adjusted OR | 95% CI |
|---|---|---|
| Importance of ASNP introduction | | |
| Country of education: Israel vs. Abroad | 2.08 NS | 0.59-7.37 |
| Improving quality of care | | |
| Country of education: Israel vs. Abroad | 1.14 NS | 0.36-3.53 |
| Age: older vs. younger physicians | 1.01 NS | 0.84-1.21 |
| Seniority: more veteran vs. less veteran physicians | 0.92* | 0.88-0.98 |
| Increasing patient satisfaction | | |
| Seniority: more veteran vs. less veteran physicians | 0.94* | 0.89-0.99 |
| Country of education: Israel vs. abroad | 0.86 NS | 0.33-2.27 |
| Increasing cost-effectiveness | | |
| Employer: hospital vs. community clinic | 1.91 NS | 0.77-4.73 |
| Expanding the nursing's scope of practice to… | | |
| Conducting medical evaluations and taking medical history | | |
| No significant predictors | | |
| Diagnosing patients' diseases | | |
| No significant predictors | | |
| Prescribing medications | | |
| Country of education: Israel vs. abroad | 7.21** | 2.39-16.41 |
| Employer: hospital vs. community clinic | 2.86* | 1.07-7.62 |
| Seniority: more veteran vs. less veteran physicians | 0.97 NS | 0.92-1.02 |
| Determining treatment | | |
| Country of education: Israel vs. abroad | 3.17** | 1.35-7.39 |
| Place of employment: hospital vs. community clinic | 2.63* | 1.09-6.31 |
| Seniority: more veteran vs. less veteran physicians | 0.96 NS | 0.92-1.02 |

| Statement | Adjusted OR | 95% CI |
|---|---|---|
| Referring/interpreting laboratory tests | | |
| Country of education: Israel vs. abroad | 2.85* | 1.09-7.49 |
| Employer: hospital vs. community clinic | 1.52 NS | 0.58-3.96 |
| Seniority: more veteran vs. less veteran physicians | 0.97 NS | 0.94-1.06 |
| Referring/interpreting diagnostic tests | | |
| Employer: hospital vs. community clinic | 3.89** | 1.61-9.43 |

Note. NS = non significant; *P value < .05; **P value < .01

**Seniority** Physicians' seniority was found to have a negative influence with regard to questions for assessing opinions regarding potential contributions of ASNP nurses to improving quality of care and improving patient satisfaction. In other words, the more seniority a physician had, the more pessimistic the physician would be with regard to potential expectations from the change (see Table 3). Seniority was not found to affect nurses opinions in this manner.

**Employer** Physicians employed at a community clinic were less supportive of expansion of the scope of nursing practice roles to domains that physicians were exclusively responsible for than were their colleagues employed in hospitals (see Table 2). No systemic differences (of opinion) were found between nurses employed at community health clinics, and nurses employed in hospitals.

**Education** In general, physicians educated in Israel more consistently expressed greater support for expanding the scope of nursing practice, than did their colleagues educated overseas (see Table 3).

**Position** and Education Nurses holding academic degrees, serving in management and training positions expressed a more supportive attitude with regard to ASNP than did nurses in nonmanagerial positions who did not hold academic degrees (see Table 2).

## Discussion

This is the first reported study conducted in Israel that was designed to evaluate the attitudes of registered nurses and physicians with regard to the introduction of ASNP roles, the contribution this change can make to the Israeli healthcare system and to the potential expansion of the nurses' scope of practice to domains currently identified with the physician alone. In this study more than half of the physicians and nurses expressed their agreement that introduction of ASNP roles will improve the quality of care, patient satisfaction, and cost-effectiveness of Israeli healthcare services. This trend corresponds with the findings of Gooden & Jackson (2004) and Mackay (2003).

In this study 72% of the physician respondents perceived the introduction of these roles into the Israeli healthcare system as important. This degree of support is pronounced compared to the findings of a study conducted in New Zealand which showed that approximately 54% of physicians who took part in the study expressed support for these roles (Mackay, 2003).

Nevertheless, the support for expansion of the scope of the nursing practice is similar to the findings indicated in a British study in which physicians perceived a need for introducing the role of “Specialist Nurse” in Emergency Medicine although their support for allowing nurses to acquire experience in specific advanced skills was lower (Norris & Melby, 2006).

Although currently division of authority between healthcare professions in Israel is rigidly classic it is interesting that almost half of the physicians polled agreed completely with the expansion of the scope of nursing practice to include traditionally physicians' competencies.

This expansion would include determination of treatment, prescribing medication according to standard protocols, and referrals for and interpretation of diagnostic and laboratory tests. The findings of our study, however, seem to be an indication of an exceptionally high level of support (65%) among the physician respondents who support expansion of the scope of nursing practice to include conducting medical evaluations and medical histories, and an exceptionally low level of support (12%) for extending the scope of nursing practice to include patient diagnosis. The reason for these findings might be the profound difference in the level of knowledge and authority required for conducting a medical evaluation and a medical history, as opposed to actually making a medical-clinical diagnosis of a patient's disease. It is possible that diagnosis is perceived by physicians in Israel as the most traditional of physicians' roles, an embodiment of their profession, critically significant to treatment, and even more significant to patients' overall health.

Studies by Blackwell and O'Neill (2004) and Norris and Melby (2006), that showed lower physician support for expanding the nurses' role to include more invasive and complex procedures, provide evidence of this trend.

According to our findings almost 90% of registered nurses in Israel agree or agree completely that introduction of ASNP roles is important. This positive attitude refutes the commonly held opinion that the greatest opposition to expanding the scope of nursing practice can be found among nurses themselves (Lauder, Sharkey, & Reel, 2003). In general, the majority of nurses expressed support for expanding their scope of practice, especially with regard to responsibility for patient referral for lab tests, interpretation of results and treatment recommendations. Much the same as physicians, nurses expressed less support (43%) for expanding their scope of practice to responsibility for diagnosis of patients. Nurses, as well as physicians, might consider this responsibility an area beyond nurses' competencies, and that patient diagnosis should remain the exclusive responsibility of physicians.

## Analysis of Findings According to Demographic and Professional Data

Nurses who hold an academic degree and nurses in management and training positions expressed more positive attitudes toward expanding the scope of nursing practice. Academically accredited nurses also expressed greater optimism regarding the positive contribution introduction of expanded ASNP roles would make. These findings might arise from their aspiration to acquire additional knowledge and skills and to use these skills to upgrade their position. Also it is possible that additional education and a more progressive professional position has made them more self confident and heightened belief in their ability to handle more responsibility for upgrading the healthcare system.

Physicians with more seniority were less enthusiastic than were their less senior colleagues regarding the positive contribution that new nursing roles could make. Perhaps the more senior physicians who view these changes as the deconstruction of a system that gave physicians an omnipotent authority found it more difficult to express positive attitudes toward ASNP roles (Young, 2005). Anchoring the division of roles in the classic models also influenced the findings among the group of physicians educated in the former Soviet Union and Eastern European countries, who represent about 90% of the non-Israeli graduate respondents. The relatively low level of physician support for expanding the scope of nursing practice among physicians educated in the former Soviet Union might have been influenced by the different levels of autonomy that nurses have in these countries and how much more hierarchical and defined the work structure in these countries is compared to the Israeli healthcare system.

Significantly lower support for expansion of nurses' scope of practice was noted among physicians employed by community health clinics as opposed to physicians employed by hospitals. This disparity in support is not unique to our study. The findings of a study conducted by Griffin and Melby (2006) revealed significantly less supportive attitudes were held by Irish primary care physicians regarding development of advanced nursing practice, than were the attitudes of their colleagues who were hospital employed Emergency Room physicians. Busing (2003) claimed that some tension exists between the expectations of Canadian family doctors and the expectations of primary nurse practitioners regarding focusing on ASNP scope of practice.

Family physicians expect that a nurse practitioner will focus more on prevention and promotion and less on acute-care intervention. However the findings of a study in the US by Sciamanna, Alvarez, Miller, Gary, and Bowen (2006), indicated that primary care physicians had positive attitudes regarding the scope of expansion of nursing practice. Eighty percent of study participants confirmed the positive effect of nurse practitioner chronic disease management that included determining treatments guided by evidence-based algorithms. This might stem from a more common, previous experience by primary care physicians in the

US with ASNP roles, which according to Aquilino et al. (1999) led to more positive attitudes.

Despite the negative trend among community-clinic-employed physicians in our study, community-clinic-employed nurses in general expressed similar positive attitudes to those of hospital-employed nurses. Disparity between attitudes of community-clinic-employed physicians and nurses are greater than those between hospital-employed nurses and physicians. Apparently, despite nurses' willingness to expand their practice, physicians employed by community medical services will find it difficult to accept expansion of the nurses' scope of practice into what they consider their exclusive domain.

## Recommendations

Expanding the role of nurses was perceived by both nurses and physicians as having a positive potential contribution to the Israeli healthcare system and patient care. Future studies should indicate changing trends in medical and nursing staff mix for examining influence on the quality, availability, and accessibility of health care. Nurses without academic accreditation, as well as those employed in nonmanagement or nontraining positions, who took part in our study revealed a less enthusiastic attitude to the expansion of the scope of nursing practice. Based on conclusions in Gooden & Jackson's study (2004), garnering nurse's support for the change might be achieved through clarifying the different levels and fields of nursing practice and by taking steps to reinforce their sense of professional security.

The findings of our study are an indication of less supportive attitudes to expansion of the scope of nursing practice among physicians who graduated overseas, had more seniority, and were community-employed. Introduction of ASNP roles is a complex, dynamic process (Bryant-Lukosius et al., 2004) and familiarity with their definitions and limits might facilitate establishment of these new roles (Griffin & Melby, 2006). Therefore we recommend that before introducing these changes, the less enthusiastic groups be better informed with regard to the scope of influence that the process of introducing new roles will have on the healthcare system and physician authority.

Attempting to implement the process without agreement on a preliminary common denominator could hamper relations between the various sectors of healthcare professionals. And therefore inter - and intra-professional collaboration (Ketefian et al., 2001) agreement, and understanding regarding ASNP roles, their definitions and boundaries, and the level of nurses' autonomy and physician's supervision could promote successful establishment of new roles in Israel. We propose the creation of interdisciplinary committees whose deliberations will help to reach a compromise with regard to the interests of the different sectors in planning the introduction of ASNP roles.

## Conclusions

Analysis of the study findings shows that the concept of introducing ASNP roles into the Israeli healthcare system is welcomed by both nurses and physicians. A majority of the nurses agreed on expansion of the scope of nursing practice, and the concept did not generate significant opposition among physicians.

Nevertheless various subgroups among nurse and physician respondents indicated a relatively low level of support for the change. In addition, physicians' willingness to allow nurses to perform procedures previously physicians' exclusive responsibility decreased in direct relation to the procedure's influence on the medical process as a whole, and the implications concerning patients' health.

We propose that reaching an agreement between physicians and nurses with regard to standardized definitions of ASNP boundaries and scope of practice might promote successful development of new roles in the Israeli healthcare system and its integration into the global context of change.

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