JDC-Brookdale Institute

Data Use in Major Governmental Decisions Related to National Health Insurance

Bruce Rosen ◆ Robert Schwartz ◆ Moshe Sicron
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This project is being funded in part by the Connie and Bert Rabinowitz Fund for Creative Breakthrough Research at the JDC-Brookdale Institute and by a grant from the Israel National Institute for Health Policy and Health Services Research.

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Related JDC-Brookdale Institute Publications

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Gross, R.; Brammli-Greenberg, S. 2001. ***Israel's Health System as Perceived by the Public - 1995, 1997 and 1999***. RR-362-01

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Abstract

In implementing the National Health Insurance (NHI) law, government policymakers have had to make many major decisions that affect the way health care is delivered to Israel's six million residents. While data and research alone can never determine governmental policy, they can play a very important role in improving decisionmaking.

This report was prepared within the context of a multi-year study of the role of data in governmental decisionmaking related to Israeli national health insurance. The study has two major components:

- A "macro" overview of the role of data in NHI decisionmaking
- "Micro" in-depth examinations of four case studies: two case studies that use specific NHI-related decisions as their starting point, and two case studies that use NHI-related datasets as their starting point.

This report presents the findings of the macro component of the study.

The Macro Study: Objectives, Methods, and Limitations

The "macro" study had three main objectives. First, it sought to establish a written, factual base regarding how data contributed to decisionmaking related to NHI between 1995 and 1999. Second, it analyzed the factors that influenced the extent to which data contributed to decisionmaking. Third, it considered how, in light of the findings, the relationship between data and decisionmaking in the Israeli health care system might be improved.

The macro study analyzed the use of data in 10 key policy decisions. In selecting them, the project team sought to include the most significant decisions related to the implementation of NHI that were considered by the government in 1995-1999. Significance could relate to either the potential impact on health, the budgetary implications, or the extent of organizational change required. The following are the 10 policy decisions:

- Setting the level of government funding of the national health insurance system
- Adding new medications, technologies, or services to the basket of services
- Determining the capitation formula
- Setting hospital per-diem rates and revenue caps
- Establishing co-payments
- Limiting competition and marketing
- Determining whether to transfer responsibility for in-patient long-term care services to the health plans
- Determining whether to transfer responsibility for mental health services to the health plans
- Determining whether to transfer to the health plans responsibility for Family Health Centers (which, until recently, had functioned solely as pre-natal and well baby clinics and remain known to most Israelis as "tipat halav" stations)
- Regulating supplemental insurance.

The primary source of data was in-depth interviews with health system leaders, including key government officials, heads of health plans, and senior researchers. The information from these interviews was supplemented by prior knowledge regarding the decisionmaking processes, and the study of written documents. A preliminary summary of the findings was presented to the project steering committee, which played an important role in validating and commenting on the findings, and aided in their interpretation; this final report reflects substantial input from the steering committee.

With regard to each of the 10 decisions listed above, this paper reviews the nature of the policy issue, the information that could have played a role in the decisionmaking process, the actual role of information in the decisionmaking process, and possible reasons for the gap between the potential and actual use of data in the process.

The study primarily seeks to document and analyze the *use* of data in policy development, as opposed to its influence and impact on the decisions. Except in certain unique situations, it is almost impossible to know whether specific data changed the ultimate policy decision from what might have been in its absence. Instead, the project team concentrated on assessing whether relevant data were available, whether they were known to policymakers, and whether they became part of the policy discourse.

Findings Regarding Specific Decisions

The study found that the use of data as part of the policy development process varied greatly from one policy decision to another.

- There were four decisions with regard to which the project team found extensive use of data (although important data were missing in all of the cases): the decision about which technologies, medications and services to add to the benefits package; the setting of the capitation formula; decisions related to the regulation of supplemental insurance; and the decision about whether to transfer long-term care services to the health plans.
- In four of the 10 decisions, there was an intermediate level of data use. They were: the setting of the level of government NHI funding; the setting of hospital per diem rates and revenue caps; the setting of co-payments; and determining whether to transfer responsibility for mental health services to the health plans.
- Data played little or no role in the policymaking process for two of the 10 decisions studied. They were: the decisions regarding whether to transfer responsibility for Family Health Centers to the health plans, and the decision whether to limit health plan advertising and marketing activities.

The study also generated findings that transcended specific decisions. Some of these related to features that were common to all or most of the decisionmaking processes analyzed, and as such could be said to characterize the use of data in Israeli health care during the 1995-1999 period. Other findings related to key differences among the decisionmaking processes and to the factors that account for the differences.

Commonalities and General Features of the Role of Data in Health Care Policymaking in the 1995-1999 Period

The effective use of data appears to be substantial and is on the rise in the Israeli health care system.

Overall, the study findings indicate substantial use of data in the major policy decisions with which the health system grappled in the 1995-1999 period. Moreover, compared with 10 years ago, there are more policymakers and staff people who are interested in making informed decisions and know how to use available data and assess their limitations. The growth of analytic support staffs is particularly important, as these are the people who, on the one hand, can translate upcoming policy decisions into data needs and, on the other hand, take the available data and render them into a form useful for the policymakers. There has also been an increase in the number of government officials capable of proactively defining their future data needs, though the number of such officials remains small. In addition, there has been an increase in the amount of policy-relevant research in Israeli health care.

Nonetheless, in all of the policy decisions that were analyzed, decisionmakers had to make decisions without complete information.

For each of the decisions we considered, we mapped out the key pieces of information needed for a fully-informed, rational decision, and then found that only a small portion of these information needs were met. This was true even for decisions that were "data rich," such as those concerning which new technologies should be added to the benefits package. Indeed, the decisionmakers interviewed for this study saw the need to make decisions under conditions of uncertainty as being an integral part of their jobs

The need to make decisions without complete data is not unique to Israel or to health care, and should not necessarily be considered a failing of either the policy community or the research/data community. The number of different types of data that could potentially inform any given policy decisions is usually quite large. Thus, even when extensive data systems are in place, the data are thoroughly analyzed, and the findings from these analyses are brought into the decisionmaking process, there will remain unanswered empirical questions that are relevant to the decision. The gold standard should not be "meeting all information needs all the time," but rather "meeting the most important information needs on the most important issues." As we have seen, this gold standard was met in some, but not all, of the key decisions studied.

Only in rare instances do policymakers methodically analyze, in advance, which data would be useful for the policy decisions that will confront them in the foreseeable future.

In discussions with our interviewees, as well as with the project steering committee, it consistently emerged that policymakers rarely take the time to identify the data that could help them with upcoming decisions. However, when presented with the structured analyses of data needs carried out by the project team, they validated the accuracy and relevance of the analyses. They also expressed the view that such analyses could, and should, be made at an early stage in the policy development process.

Data are, of course, not the only factor in decisionmaking processes. This point is emphasized in the international literature on policymaking, and also was quite apparent in the 10 health policy decisions in Israel that were studied.

Values, personal experience, the interests of specific parties, and pressure groups also have a major impact, even in those decisions where the data are taken seriously. The important question is not whether data comprise the *sole* input in decisionmaking (they rarely/never do), but whether they comprise a *significant* input. Data were a significant input in some, but not all, of the key decisions studied.

The study generated mixed findings regarding the extent to which the Ministry of Health (MOH) has invested in expanding its information resources over time.

On a positive note, the study found that the MOH has, in recent years, successfully created several ongoing national administrative databases that are playing a critical role in the policymaking process. Examples include the system for tracking hospital utilization and the system for monitoring health plan finances. Not only were useful new information systems put in place, but they also continue to grow, improve and change in response to changing needs. On the other hand, a stable funding base for a periodic national health survey has yet to be established, despite the fact that such surveys exist in most Western countries, and despite widespread recognition that Israel could benefit greatly from such a survey. The study team is exploring why it is that the health system has been able to mobilize and create certain needed data sets while other systems have not.

A number of important policy issues were debated for years, with interested parties putting forward conflicting factual claims. Nonetheless, no one took advantage of opportunities to collect the data that could clarify the facts on the ground.

We found a striking example of this with regard to the debate on whether responsibility for maternal and child health services should be transferred from the government to the health plans. The debate spanned over 20 years, yet as far as we can tell, no one took a serious empirical look at the strengths and weaknesses of the competing models. The study team identified several possible explanations for the failure of the research community to mobilize to meet the information needs of policymakers for this issue.

In general, the Israeli health system is characterized by effective linkage between the findings of major research centers and governmental decisionmaking processes.

This linkage is probably more effective than in many other countries. There could be several factors that account for this finding, including: Israel is a small country and, as such, most leading researchers and policymakers know each other and interact regularly; some of the leading research centers invest substantial energy in the dissemination of findings; and many health policymakers are interested in making use of data in the decisionmaking process.

Nonetheless, important data sometimes existed (e.g., in administrative databases or in articles from academic studies) but were not brought into the policymaking process.

Our work suggests several reasons. One of the most significant factors was the lack of analytic staff in the ministries and the Knesset who know how to make the link between data and policy discussions. At other times, decisions were made so quickly that there was insufficient time for serious staff work. Another factor was the lack of investment on the part of some university-based researchers in the dissemination of their findings to Israeli policymakers.

In contrast to the American health system, where demonstration projects and social experimentation abound, the Israeli health system does not have a tradition of field testing new policies.

As a result, disagreements about the probable impact of proposed policies often lead to policy gridlock. A fascinating example of this phenomenon can be found in the mental health field, where there has been a wide consensus in Israel that responsibility for the services should be transferred from the government to the health plans. However, the transfer has been delayed for years due to conflicting projections of the financial cost to the health plans. Similar problems in the U.S. health system (and in some other areas of Israeli domestic policy) are often resolved through demonstration projects, but this avenue was not even considered in the Israeli debates on mental health care. A demonstration project could have provided valuable information on costs, and on other organizational and regulatory issues.

Decisionmakers are interested in forecasts.

In order to choose wisely among competing policy options, they must make judgments about the likely impact of the options. Researchers and analysts can help policymakers with this task by providing projections about the future that are grounded in facts regarding both the past and present. In order to choose wisely among competing policy options, decisionmakers need to assess their likely impact. However, the data typically presented by analysts relate to the past, not the future. In its interviews, the project team repeatedly heard pleas for analytically-based projections, as well as better methodologies for translating data about what was and what is, into forecasts of what could be.

Key Differences among the Decisionmaking Processes, and Factors that Account for the Differences

The study team was able to identify several characteristics of *the decisions* that appeared to promote the use of data. Data seemed most likely to play a role in decisions that were made periodically, that were second-tier as opposed to fundamental decisions, and that were of a quantitative rather than qualitative nature.

It was also able to identify several characteristics of the *decisionmaking processes* that appeared to promote the use of data. Data seemed most likely to play a role in decisionmaking processes that were structured, well organized and well staffed, and/or involved one or more decisionmakers who approached the process with an open mind. The involvement of interministerial committees and public commissions also contributed to data use. Many of these factors came into play, for example, in the decisions about which new technologies to add to the benefits package.

Personalities, leadership styles and negotiating styles had a major impact on the extent to which data played a role in the decisionmaking process. The source of the data also made a difference in the likelihood of data use. Organizations tended to make the most thorough use of data that came from their own databases. However, they also made extensive use of data from external *objective* sources, while tending to treat data from external *interested* parties with suspicion.

A number of factors were found to have a tendency to limit the role of data in decisionmaking. Of particular note were situations in which there were no objective, up to date and readily available data sources.

Contributions

The project has made several important methodological contributions to the evolving international literature on data and decisionmaking. To date, empirical studies in this field have tended to examine the actual use of data in a particular decision without carefully considering which particular data potentially contributed to the decision. The project team prepared such an analysis of data needs for 10 different major policy decisions. This study demonstrates that important additional insights, as well as additional practical conclusions, can be generated when serious attention is given to "what might have been," and not just to "what actually happened." The differences between the two can be particularly illuminating.

Another important innovation of this project is that it will bring together two different types of case studies. One type of case study takes as its starting point a particular body of data (e.g., the Central Bureau of Statistics health survey) and analyzes how it was used in one or more policy decisions. Another, more common, type of case study takes as its starting point a particular policy decision (e.g., the decision to transfer responsibility for mental health services to the health plans) and analyzes how a variety of bodies of data were used. Each approach generates important, but different and complementary, insights. Yet almost all studies to date in the field of data and decisionmaking have used only one of these two approaches. It is hoped that our project will demonstrate the added value of the two-pronged approach; this is a topic to which we will return after all four case studies have been completed and integrated*.

The findings from this study have been presented in a variety of academic, governmental and health plan forums. In addition, preliminary drafts of this paper have been widely circulated in Israel and abroad by way of the Internet. As a result, the project has already contributed to the Israeli health system at several levels.

First, it has brought attention to the interaction between researchers and policymakers regarding several of the 10 policy issues that were analyzed. Many of these issues continue to be debated, and the study has highlighted ways in which data could play a greater and more constructive role in these debates.

The study has also illustrated important contributions that data have made to the policymaking process, thus strengthening the case for investing in the effort needed to make data available to policymakers. This can be done via a variety of mechanisms, including the development of databases and applied research.

In addition, the study has identified various mechanisms for strengthening the linkage between policymakers and the research community, such as the availability of analytic staff within the ministries and ensuring sufficient time for making the linkages.

Finally, the study underscores the importance of thinking through data needs in advance of decisionmaking. Generally speaking, it found that in the 1995-1999 period, policymakers did not think through data needs in advance. It also illustrated a structured process for analyzing decisions and the related data needs. The accuracy and relevance of these structured analyses were validated when they were presented at various conferences and to the project steering committee. Moreover, many participants indicated that such structured analyses can and should be made at an early stage of the policymaking process. There are indications that the study has already encouraged Israeli researchers and policymakers to think more systematically and proactively about the links between data and policymaking.

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* As noted above, in addition to the "macro" analysis presented here, the project also involves four in-depth case studies. The research team is currently finalizing publications on two of the case studies. One addresses the use of data in the mental health reform effort. The other addresses the use of data from the National Health Survey. The project team is also working on case studies on the use of data from the Witkowsky financial reporting system, and on the use of data by a government-appointed blue ribbon panel on the status of physicians.

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The study also received financial support from the Israel National Institute for Health Policy and Health Services Research. Special thanks to the National Institute's scientific committee and the two anonymous reviewers for their valuable input.

The authors thank the members of the project steering committee for their critical contribution to the study design, the choice of case studies, and the validation, supplementation and interpretation of the findings. The names of the steering committee members are listed in Appendix A.

The authors wish to thank all of the persons interviewed for this study. Their names are listed in Appendix B.

Study findings were presented at various forums within the Brookdale Institute. The authors are most grateful for the input received from Institute staff and from the health program's International Advisory Committee.

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1. Background

This report was prepared within the context of a multi-year study of the role of data in decisionmaking on key issues related to NHI. The study explores whether, and to what extent, data have played an important role in health policy processes in recent years. It also seeks to explore such issues as whether existing data have been used appropriately, which data have been felt to be missing for policymaking purposes, etc. Moreover, the study seeks to go beyond description to questions of interpretation, such as:

- Why are relevant data unavailable?
- What accounts for the fact that data are used extensively in some areas, but not at all in others?
- Why are available data not used?

The full project plan, along with a review of the relevant literature, is available on the project website: www.jdc.org.il/brooksites/ddm.

The project involves two major components:

- A "macro" overview of the role of data in NHI decisionmaking;
- "Micro" in-depth examinations of four case studies: two of the case studies use as their starting point specific NHI-related decisions, and the other two use as their starting point NHI-related datasets.

The "macro" component of the project was designed to provide findings insights at three levels:

- *Specific decisions:* For each of the 10 decisions considered, the project team sought to document the nature of the decision, the extent of data use, and the reasons for use/non-use of data.
- *Commonalities:* The project team looked for themes that cut across the 10 decisions in order to provide a general characterization of the interface between data and decisionmaking in Israeli health care in the latter half of the 1990s.
- *Variance:* The project team tried to analyze and understand why data played more of a role in some of the decisions than in others.

The document begins with a summary of the key findings from the literature and proceeds to state the study objectives and the study methodology. These are followed by a listing of the policy decisions considered in the study and a summary of what the project team has learned about each with regard to:

- The policy issue under consideration
- The role that data could have played in the policy process
- The role that data actually played in the policy process
- The possible explanations for the role of the data in each decision.

The paper concludes with a summary table integrating the findings regarding the decisions, and a summary section that discusses the generic findings and lessons.

2. Key Findings from the Literature Review

A detailed literature review of the subject of data and decisionmaking has been prepared as part of this project and is available on the project website: www.jdc.org.il/brooksites/ddm. Here we present only the key findings related to the following issues:

- Do data contribute to governmental decisionmaking?
- Which factors influence the likelihood and magnitude of the contribution?
- At which stages of the policy cycle do data contribute?

The consensus in the literature is that while governmental decisions are clearly not determined solely, or even primarily, by data, data do make an important contribution to the decisionmaking process. This was not always the consensus view. There were times when the prevailing view was that political considerations are so dominant that they leave little, if any, room for data in the process. In contrast, most modern writers take the position that data sometimes play a major role, while at other times they play only a minor role, and at still other times they play no role at all. Indeed, a major focus of recent writing on the subject, both conceptual and empirical, is the attempt to identify those factors that influence the extent to which data contribute to the decisionmaking process.

The main factors identified include:

- *The Decision* Data play a greater role in decisions that are operational and technical than in decisions with substantial ideological components.
- *The Decision Makers* The age, managerial style and educational background of decisionmakers are believed to have an impact on the use of data in decisionmaking.
- *The Decisionmaking Process* When decisionmaking processes involve public committees and professional staffs that do not operate under extreme time pressure, there are more opportunities to bring data to bear on the decisionmaking processes.
- *The Data Themselves* Data are more likely to be incorporated into policy discussions if they are consistent, relevant and presented in a way that clearly and simply spells out their relationship to the policy issues at hand.
- *The Producers and Conveyors of the Data* To the extent that the conveyors of the data are perceived to be objective and professional, the likelihood that the data will be taken seriously increases.
- *The Political Context* The broader political context in which the decision is being made has important implications for the extent of data use.

The literature also suggests that data can contribute to public policy at several stages of the policy cycle, including:

- Identification of a problem and its placement on the public agenda
- Characterization of the scope and nature of a problem
- Identification and characterization of possible interventions
- Monitoring of the impact of interventions.

While this study considers all four items on the list above, the emphasis is on the last two: identification and characterization of possible interventions, and monitoring of the impact of those interventions that are implemented.

3. Study Objectives, Methodology and Limitations

Objectives

The macro component of the study has three objectives. First, at the level of documentation, the study seeks to establish a written, factual base regarding how data contributed to decisionmaking related to NHI during the 1995-1999 period. Second, at the level of analysis, the study explores the factors that influenced the extent to which data contributed to decisionmaking. Third, at the level of recommendations, the study considers how, in light of the findings, the data-decision making interface in Israeli health care might be improved.

Methodology

The macro component of the study sought to provide a "bird's eye" view of NHI-related decisionmaking in Israeli health care in the 1995-1999 period through the consideration of 10 key decisions. The primary source of information was in-depth interviews of leading figures in the Israeli health system. The information from these interviews was supplemented by the investigators' prior knowledge regarding the decisionmaking processes[1] A preliminary summary of the findings was presented to the project steering committee, which played an important role in validating and correcting the findings, as well as in aiding in their interpretation. The steering committee also played a vital role in the selection of the decisions and interviewees. The membership of the steering committee appears in Appendix A.

In selecting decisions for the study, the project team sought to include the most significant and controversial decisions considered by the government in the 1995-1999 period and which were somehow related to the implementation of NHI. (By government, we mean any branch of the national government – The Ministry of Finance (MOF), the Ministry of health (MOH), the government as a whole, the Knesset, etc.) Significance could relate either to the potential impact on health, the budgetary implications, or the extent of the organizational change required. The project team included decisions that were considered, even if no firm and final decision was made, let alone implemented. It sought to include a mix of decisions with an economic/organizational focus and decisions with a programmatic focus.

In selecting interviewees, the project team sought to include top managers and policymakers who were involved in many, if not all, of the decisions on our list. It also sought to include representation from all the key actors: the MOH, the MOF, the health plans, the hospitals, academia, etc. Finally, it

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[1] Several of the investigators were involved, as researchers, in some of the key decisions considered in this study.

sought to include those who were prominent actors in the early years of the period under study, as well as those who came to positions of influence in the latter part of the period. In all, 16 persons were interviewed; the list of interviewees appears in Appendix B.

The interviews lasted an hour to an hour and a half. In the first part, the interviewer presented the background to the study and its objectives. Next, the interviewee was asked to characterize, in general, the role of data in the development of health policy in recent years, and to identify the factors that promoted and/or hindered the use of data. Third, with regard to each of the 10 decisions included in the study, the interviewees were asked to answer the following questions:

- How were you involved in the decisionmaking process?
- What data were particularly useful?
- What data were identified as lacking?
- What is your overall assessment of the role of data in this decision?

In analyzing the use of data in each particular decision, the investigators employed the following steps:

- Specification of the substance and nature of the decision (or issue) on the table
- Explication of the organizational and political context
- Summary of the arguments made for and against the various options
- Analysis of the types of data that could have contributed to the discussion
- Documentation of the role of data in practice
- Consideration of possible explanations of the gaps between the potential use of data and their use in practice.

The methodology is innovative. To date, empirical studies in this field have tended to examine the actual use of data in a particular decision, without carefully considering what data might have potentially contributed to the decision. In contrast, our study used a structured conceptual framework to carefully analyze the decisions, the considerations that could affect the decisions, and the way that data could shed light on those considerations.

Limitations

The key study limitations of the macro component are as follows:

- The component relies on interviews as its primary data source, and the interviews were not supplemented by the review of relevant documentation. This stands in contrast to the case studies being carried out as part of the project, where the review of documents plays a major role. In lieu of such a review, the macro study relies on triangulation (over 15 respondents addressed the same questions), and on validation on the part of the steering committee, in order to enhance the accuracy and completeness of the write-ups.
- The study team did not succeed in interviewing all those it had hoped to interview. For example, it was unable to schedule interviews with a number of former MOH directors-general and some of the current directors-general of the health plans, which probably detracted from the

completeness of the write-ups. Still, the set of interviewees probably contains sufficient representation from the major sectors (government, health plans, hospitals and academia) to provide a proper level of balance. The major exception is the total lack of interviewees from the Knesset.

- The study focuses on major government policy decisions related to NHI, which may limit the ability to generalize the findings. In using the term "major" we refer to decisions that could have a major impact on health, health care financing, health care spending, and the organization of health care services. In addition, we deliberately chose decisions that were the subject of public controversy; we do not know whether the use of data has been more or less intensive in decisions that were not the subject of public controversy. Similarly, we do not know whether the role of data differed between those major government decisions that were related to NHI and those that were not (and there were several such decisions in the period studied).

The study primarily seeks to document and analyze the **use** of data in policy development, as opposed to the influence and impact of the data on the decisions. Except in certain unique situations, it is almost impossible to know whether a particular piece of data changed the ultimate policy decision. Instead, the project team concentrated on assessing whether relevant data were available, whether they were known to policymakers, and whether they became part of the policy discourse.

4. Findings at the Level of the Specific Decision

The following policy decisions were analyzed as part of the study:

- Setting the level of government funding of the national health insurance system (i.e., the basket of services)
- Adding new medications, technologies and services to the basket of services
- Determining the capitation formula
- Setting hospital per-diem rates and revenue caps
- Establishing co-payments
- Limiting competition and marketing
- Determining whether to transfer responsibility for mental health services to the health plans
- Determining whether to transfer responsibility for inpatient long-term care services to the health plans
- Determining whether to transfer responsibility for Family Health Centers to the health plans
- Regulating supplemental insurance.

This chapter summarizes the key findings for each of these decisions, while the chapter that follows analyzes their commonalities and differences.

4.1 Setting the Level of Government Funding of the National Health Insurance System

The policy issue

NHI stipulates that, each year, the government (through the Minister of Health and the Minister of Finance) is to determine the cost of the benefits package and ensure that sufficient government funds are available to finance it. The government must make up from general revenues any differences between the "cost of the benefits package" and revenues from the health tax. The language of the law makes it sound as if determining the cost of the benefits package could and should be technical in nature – to determine how much it *should* cost to provide the services. In practice, this is technically impossible, as much depends on the levels of quality and accessibility that are desired and the level of efficiency that is demanded. Accordingly, determining the cost of the benefits package is a major policy decision and one of the most important recurring policy decisions in the health system. The figure for the previous year serves as the base and is increased by an automatic adjustment to reflect price changes, and discretionary adjustments to reflect population growth, aging and the adoption of new technology. Each year, there is a struggle between the MOF, on the one hand, and the MOH, the health plans and hospitals, on the other hand, regarding the magnitude of the discretionary adjustments.

Information that could be expected to play a role in the decisionmaking process

Types of information that one might expect to influence these decisions include:

- Health plan financial information (revenues, expenses, deficits, etc.)
- Financial comparisons across health plans
- Information on health system performance (quality of care, service levels, member satisfaction, etc.)
- Information on the extent and nature of health system inefficiencies
- Information on the extent of economies of scale in health care
- Information on key macroeconomic and budgetary parameters.

The actual role of information in the decisionmaking process to date

Interviewees indicated that at the time of the initial determination of the "cost of the basket," use was made of expenditure data from health plan financial reports, although at the time it was difficult to compare and integrate them. This has improved substantially as a result of Witkovsky and Nevo's efforts, and since 1998, a document is produced each year that integrates financial information from the various health plans.

A former MOF official noted a lack of proper information on **why** the health plans spend what they do. An MOH official noted that the update decisions are influenced to some extent by the latest health plan financial data (which he considers to be quite adequate), and by information on changes in satisfaction and service levels. He also noted, however, that trend data on quality of care are not available and are needed.

Many respondents indicated that this decision was among the most political on our list, and as such data, *per se*, play only a minor role. At the same time it should be noted that many of the key players invest substantial energies in marshalling numbers and PowerPoint presentations to push their views regarding desired funding levels. These findings raise the question of why top managers in the health system invest significant resources in trying to bring data to bear on this issue if, in the end, data have little impact (or at least are perceived to have little impact) on the outcome. A possible explanation for this conundrum was provided by the project steering committee, which suggested that data may serve to place upper and lower bounds on the funding level, while within these bounds, politics rather than data are the determinative factor.

One of the key arguments brought forward by the MOH in making the case for more funding was that spending levels in Israel have declined while increasing in other countries. The ministry also brought to the discussion information on the public's suffering (particularly, the scarcity of child development services and LTC services for the elderly), as well as information on the level of funding for new technology in other countries. Information on trends in medical quality would have been helpful, but no such data were available.

One health plan respondent was asked whether his data-rich presentations arguing for higher funding levels are directed primarily at the MOF or at the general public. He responded that the MOF is the main target, although the general public is also important, as the issue is both public and political in nature. However, he indicated that he is hesitant to make a public pitch that service levels are declining, as this could backfire on him and others in the health system. He also noted that information for the public must be very simple and clear.

A former MOF official noted that, short of disastrous declines, data on service levels would not have affected the Treasury's stand on funding levels, as the Treasury believes that funding for the health system as a whole should be a function of macro-economic considerations rather than issues specific to the health care system.

Several respondents noted that they favor basing health system funding on an agreed-upon formula. If this view is adopted, the role of data in setting funding levels will increase substantially. Even at this stage it should be noted that data on price increases for selected items play a role in the process, but there is a great deal of dispute as to whether the price index should be modified.

Reasons for the gaps between potential and actual data use

Overall, it can be said that a great deal of data were brought to bear in public discussions on this issue, while questions remain about the extent to which the data influenced the ultimate decisions (and, as noted above, the present study was not designed to measure the ultimate impact of data on decisions). This is to be expected in a highly political, big money decision.

The main type of potentially useful information that was lacking was time series data on quality of care. This type of data cannot be collected independently of the health plans; hence, it is not surprising that such data did not exist in the public sphere in the years immediately following the introduction of NHI. At the same time, it is encouraging that a research team based at Ben-Gurion University has been developing, in cooperation with all four health plans, an Israeli adaptation of the U.S. HEDIS system that may, in the coming years, produce national time series data on quality of care.

4.2 Adding New Medications, Technologies and Services to the Basket of Services

The policy issue

In recent years, Israel has established a groundbreaking process for prioritizing funding for new technologies. Each year, the government decides how much it is willing to increase health system funding specifically for the purpose of expanding the benefits package to include new technologies. The MOH solicits suggestions from health care organizations, professional societies and the general public, and its professional staff prepares background information on the costs and benefits of the various proposals. A special commission consisting of representatives of the MOH, the health plans and the general public then prioritizes the proposals, taking into account both the information from the professional staff as well as additional considerations. The final decision is in the hands of the Minister of Health, although it should be noted that, to date, he has fully adopted the recommendations of the public commission.

The public commission does not determine how much money will be available to fund new technologies. Its primary role is to prioritize the funding, whose level is decided by the cabinet. However, in recent years it has also indicated priorities for funding beyond the budget level established by the cabinet, and as such plays a role in creating public pressure for upward revision of the budget for new technologies.

In assessing the potential health benefits of proposed new medications, the professional staff makes extensive use of clinical trials and other studies carried out abroad, and seeks to adapt their findings to the Israeli situation.

Information that could have played a role in the decisionmaking process

Types of information that one might expect to influence these decisions (for each proposed new medication or technology) include:

- The number of patients expected to be treated each year (and not just for the first year the medication or technology is introduced)
- The expected cost per patient year; the expected benefit
- Existing alternatives
- Savings in other health expenditures.

The actual role of information in the decisionmaking process to date

Most interviewees indicated that the process of deciding on new medications or technologies is among the most data-informed in the health care system. This was attributed to the possibility of allocating additional monies, the recurring nature of the decision, the existence of a public advisory panel, and the existence of staff support. Several respondents noted that in the first round of the process, several years ago, the decisions were influenced almost exclusively by interest group pressure; since then, however, the process has become increasingly professional and data-driven.

At the same time, all interviewees indicated a need for further improvement and expansion of the analytic input. Some lamented the lack of proper unit cost projections for the proposed medications, indicating that pharmaceutical companies have an incentive to under-project. Another concern was that estimates of the number of patients to be treated could be too low if the time horizon is not long enough, as it takes time for new medications to reach their full market potential. Other respondents noted that information on the benefits of the proposed medications were not sufficiently quantified and were difficult to compare; for example, it was noted that there is much more data on the impact on longevity than on the impact on quality of life, and that this has influenced committee decisions to give relatively little weight to quality of life issues. Also noted was the lack of information on consumer preferences and priorities.

Several respondents noted that we should maintain reasonable expectations concerning data that can be made available at reasonable levels. First of all, for many of the technologies involved, Israel is often among the first countries to adopt them, meaning that only limited data are available from other countries on the prevalence of use and prices. In addition, full-blown technology assessments are very expensive and difficult to mount; even large countries seldom carry out more than 15 such analyses each year. Finally, much of the required data is in the possession of interested parties (pharmaceutical companies, health plans, etc.), and the extent to which they can be relied upon to provide full and accurate information is unclear due to their commercial interest in non-disclosure.

Some respondents raised the question of which follow-up data should be collected after a new medication has been added to the basket, and how this information should be used.

In order to estimate the future use of a proposed medication, it is not enough to know the prevalence of the disease it is meant to address. In addition, the standard disease prevalence data that usually interest epidemiologists are insufficient because, in many cases, only a subset of those with a disease are candidates for a particular medication (e.g., Herceptin is relevant to only a subset of persons with breast cancer, depending on the specific type of breast cancer as well as the patient's demographic characteristics). In addition, not all those who are candidates for a medication will use it; this is because the physician will not always prescribe it, and even if prescribed, patient compliance is less than 100%.

As a result, the health plans often have better information on which to base estimates of future use than the MOH. This includes:

- Detailed information on disease prevalence
- The extent of use of existing medications for which the proposed medication is a full or partial substitute
- The extent to which the proposed medication is already being used prior to its inclusion in the basket of services.

There is no requirement for the health plans to share this information with the MOH or the public commission on a systematic basis. Instead, the health plans selectively cite those pieces of data that advance their interests. In practice, the MOH comes up with its estimate of projected use based on data from abroad and general epidemiological data, and the health plans then bring data to bear on those projections to which they object.

In light of the uncertainties regarding the utilization projections and their importance to the process, several mechanisms have been developed to handle the situation. These mechanisms fall into two major groups: risk-sharing and uncertainty reduction.

In terms of risk-sharing, the commission sometimes decides that if actual utilization exceeds projection, additional funds will be allocated several years down the road (from that year's technology budget) to more fully cover the true costs to the health plans. (Note that, to date, the health plans have not come forward with any such post-marketing utilization data.)

To reduce uncertainty, the MOH is trying over time to convince the health plans to voluntarily share more data, although it is also exploring legal options to force their hand. Another technique has been the sponsoring of consensus conferences (e.g., Fosolan), which have been very effective in reducing the range of estimates.

Beyond decisions regarding additional funding for approved medications, follow-up data on their utilization are also important for assessing whether (and how) the methodology for projecting the future consumption of proposed medications needs to be changed. This would affect the assessment of hundreds of medications for inclusion in the basket.

This last point is an example of a broader issue brought to our attention within the framework of the project steering committee. One of the committee members noted that there are two types of decisions that must be made regarding additions to the basket:

- What should be added to the basket in any given year?
- How can the process itself be improved?

The project team's analysis initially focused only on the first type of decisions. However, as the advisory committee member pointed out, different kinds of information are needed for the second type of decision – how to improve the process – and would relate to the following:

- Retrospective studies of the accuracy of the staff's projections of costs and benefits, and analyses of the reasons for gaps between what was projected and what evolved in practice
- Retrospective studies of the extent to which the findings of scientific studies on inclusion decisions have withstood the test of time
- Analyses of the types of technology that tend to be adopted, and of those that tend to be rejected
- Analyses of the role of pharmaceutical companies and other interest groups in the decisionmaking process.
- The problem of deducting from the basket (not only adding) "obsolete" or other medications and technologies.

Reasons for the gaps between potential and actual data use

Overall, this decision was characterized by a high degree of data use. The main factors that contributed to this were: the ability to allocate additional monies, the recurring nature of the decision, the existence of a public advisory panel, the existence of support staff, and the existence of interested pharmaceutical companies that supply data.

Nonetheless, two major factors limited data use in this process. First, much of the important information is proprietary health plan information, and the government has not yet succeeded in accessing it. Second, the imbalance between the number of proposals that need to be reviewed each year and the size of the analytic staff limits the depth of analysis of each proposal.

4.3 Determining the Capitation Formula

The policy issue

NHI monies are distributed among the health plans on the basis of a capitation formula. The formula takes into account the number of members of each health plan and their age mix. Persons aged 75 and over are given a valuation that is approximately four times as high as that for persons aged 25-34. The weights are supposed to reflect differences among age groups in health care needs, and hence in costs to the health plans. In recent years, Clalit Health Services (CHS) has argued (based on its internal utilization data) that the current weights should be revised to provide more compensation for the elderly; the other health plans disagree. Other disputed issues include whether additional parameters (e.g., health status, geographic location and socio-economic status) should be taken into account in distributing monies among the health plans.

Information that could have played a role in the decisionmaking process

The types of information that could be useful in this area concern: the extent of cream skimming and other adverse effects of the current setup; the links between health expenditures, on the one hand and age, health status, socio-economic status and geographic location, on the other hand. Possible data sources include national surveys and administrative data from the health plans.

The actual role of information in the decisionmaking process to date

Respondents focused on the second of the two issues noted above (i.e., the links between various personal characteristics and health expenditures), and many indicated a need for better data on the relationship among utilization, age and other socio-demographic variables. Several respondents also indicated the need for more up-to-date information on the age-expenditure relationship, which would allow more timely updates to be made to the age weights. However, one respondent voiced the view that the updates are being delayed by political considerations (i.e., not wanting to introduce shocks into an already fragile health system), and not by data availability.

The subject of access to data arose several times in the course of the interviews. Some health plan respondents charged that several years ago they were not given access to the calculations the government used to set the capitation formula. The same respondents acknowledged, however, that this is no longer a problem.

A related issue is whose data should be used to set the formula. Health plan respondents stated that their own internal data on the relationship between personal characteristics and utilization are more detailed and accurate than the publicly available data sources that are currently used. They also contend that health plan data would lead to a somewhat (though not very) different set of age weights. On the other hand, the MOH is reluctant to base the allocation of billions of shekels on data from the health plans, which might be subject to manipulation or the appearance thereof.

This raises the broader issue of data credibility and the need for quality assurance mechanisms. Note that various analysts and academics have carried out studies of how the addition of various parameters to the formula would influence the distribution of funds across health plans. Several years ago, a joint Brookdale-Hebrew University study explored the potential use of survey data for adding a health status parameter and recommended adding additional health status questions and more detailed health service utilization questions to the Central Bureau of Statistics/MOH health survey. These recommendations were adopted and incorporated in the year 2000 survey.

Several years ago, the chairman of the Knesset's Labor and Social Affairs Committee asked the JDC-Brookdale Institute to help the committee evaluate calls for revisions to the capitation formula by the various interested parties. This provided an important opportunity to bring information from other countries, as well as ideas from the literature, into the policy process.

As part of that process, CHS hired a team of academics who argued that CHS members must have greater needs because they use more services. The Brookdale team countered that differences in service utilization could also be due, at least in part, to differences in efficiency levels.

Another important learning opportunity was a workshop on capitation sponsored by the Israel National Institute for Health Policy and Health Services Research, which featured leading experts from the U.K., the U.S. and the Netherlands. The workshop helped the Israeli health policy community deepen its understanding of the various objectives of capitation formulas, and of the objectives' implications for the variables to be included in the formula, the weights to be assigned to the variables, and the types of data that can be used to calculate and implement the formula.

Reasons for the gaps between potential and actual data use

Overall, the decision on the capitation formula was characterized by a high degree of data use. This can be attributed primarily to the fact that decisions of this type require a quantitative formula rather than a qualitative decision about whether to proceed with a complex organizational reform.

At the same time, information on the relationship between health expenditures, on the one hand, and health status, socio-economic status and geographic location, on the other hand, has not been incorporated into the formula. This is due to the belief that upsetting the health system equilibrium and making the formula more complicated would outweigh any benefits incurred by including these factors, and to limitations of the publicly available data. In this regard, it is noteworthy that the policymakers invested substantial energies in improving the key data sources (the most significant being the Central Bureau of Statistics/MOH health survey), making it possible to reconsider the inclusion of additional parameters in the years ahead.

4.4 Setting Hospital Per-diem Rates and Revenue Caps

The policy issue

The official hospital per diem rate is set by an inter-ministerial committee consisting of representatives of the MOH and the MOF. Neither the health plans nor the hospitals are represented on the committee (although the health plans argue that the MOH – as an owner of hospitals – looks out for the hospitals' interests). The per diem rate is supposed to reflect average operating costs in general hospitals. Until 1995 the per diem rose much more quickly than inflation (i.e., the CPI); since then there has been greater parity. The committee that sets the rate has come to recognize that, as the sponsor of NHI, the government will ultimately have to increase payments to the health plans in order to fund any increases in the per diem.

The hospital revenue caps were instituted in 1995; they were intended to contain health plan spending for hospital services and to reduce the incentives of the hospitals to expand volume. During the first two years that they were in place, health plans were exempted from any payment for hospital services beyond the cap. Since 1997 they have been given a 50% discount beyond the cap (i.e., on use of services beyond the cap, they pay 50% of what they would pay if there were no cap). In recent years, the overall national cap has been set at approximately 1% above its level in the prior year (beyond inflation-related adjustments). The setting of the cap for each health plan-hospital combination is a complicated procedure that takes into account the changes in the health plan's membership as well as its cap overruns during the previous year.

Information that could have played a role in the decision-making process

Types of information that could be useful here include:

- The extent to which hospital costs are variable (ideally, by type of service)
- The extent to which hospitals and health plans can influence utilization levels
- The impact of the caps on hospital revenues, expenditures, and quality of care (both overall and by hospital)
- The extent to which various changes in financial figures are due to inflation (i.e., real v. nominal effects)
- The impact of the caps on hospital use rates
- The impact of the caps on health plan expenses (both overall and by health plan)
- The experience of other countries with caps and contracting
- The extent to which the cap favors various hospitals or health plans.

The actual role of information in the decisionmaking process to date

Respondents tended to focus on the availability and use of financial data. Within this category, data on "discounts" were emphasized much more than those on revenues, expenditures and utilization. Financial data were available and used both at aggregate, system-wide levels, as well as at the level of specific hospitals and health plans. Most of the respondents involved in the topic judged the availability and use of data to be adequate to good.

Our assessment is somewhat different: Data are lacking for many of the important parameters; causality is explained too easily (i.e., not all of the important and concurrent changes in trends are due to the introduction of the caps); analyses of trends often neglect to take into account population growth; etc. It may be that institutional interests and professional conceptual frames limited the perceptions of some of the interviewees. While bias of these types may have affected many, if not all, of the issues covered in this interim report, it appears to have been relatively strong in this case, in part because the future of the cap is now under intensive discussion.

Several respondents noted that the breadth and accuracy of the data sources available to the government have improved considerably since the initial setting of the caps. There continue to be questions about how much each health plan knows and should know about utilization levels and cap overruns in other health plans. Respondents also noted the lack of information on the impact of the policy change on health and other measures of hospital system performance. We were also struck by the fact that, although "contracting" constitutes the main alternative to the current system, no systematic analysis of its impact in other countries has been brought into policy discussions to date. For example, no efforts were undertaken to summarize the experience with contracting in the U.S. and the U.K., and its relevance to Israel.

A JDC-Brookdale study explored the changes in hospital utilization and expenditures in the post-cap period. A key finding was that the cap was successful in constraining the growth of hospital utilization. As a result of publication delays, the findings were almost overlooked in the decisionmaking process. However, the study director was included in an informal group established to advise the MOH director-general on the future of the cap, providing a pre-publication opportunity to feed the findings into the policy deliberations.

Reasons for the gaps between potential and actual data use

This decision was characterized by moderate data use. Substantial use was made of data relating to health plan payments to hospitals for a given volume of care. Much less use was made of data relating to whether the cap influenced the volume of care.

One possible explanation for this phenomenon is that it is far more difficult to measure the effect of reimbursement changes on volume than it is to measure the size of the discounts. Another explanation is that most of the government and health plan managers involved in the issue viewed it more as an issue of accounting than economics. This may be due partly to the nature of their professional training, but also to the major financial implications of the accounting issues involved.

4.5 Establishing Co-payments

The policy issue

As part of the 1998 budget arrangements law, the Knesset authorized the health plans to collect co-payments from their members for visits to physicians, and to increase existing co-payment levels for medications. This decision was preceded by intensive debate between the MOF and the MOH, with various health plans and consumer groups trying to influence the decision. Key issues in the debates included the likely effect of the co-payments on health care costs, access to services, the financial burden for low-income groups and the chronically ill, and the level of health plan revenues.

Public debate did not end with the passage of the budget arrangements law. Before implementing co-payments, each health plan was required to spell out the level and nature of the co-payments it planned to charge, and to have its plan approved by the Minister of Health and the Knesset Labor and Social Affairs Committee. Efforts are currently underway to modify the co-payment legislation and regulations, the issue re-surfacing on the policy agenda in the wake of the change in government.

Information that could have played a role in the decisionmaking process

The decisionmaking process could have benefited from information on the extent to which existing co-payments for medications impose a financial burden on various population groups. Such information could have been extracted from recent Family Expenditure Surveys. In addition, information on the impact on utilization of co-payments for various services (medications, ER visits, Family Health Center visits, physician visits at Maccabi Healthcare Services, etc.) would have been useful. Studies of the impact of physician visit co-payments in the U.S. and Europe also could have been helpful, as would simple tables of information on the level of co-payments in various countries.

The actual role of information in the decisionmaking process to date

According to respondents, prior to the 1998 decisions, attention was paid to available data from abroad and from Maccabi regarding impacts on utilization, access and equity. In addition, various simulations were carried out to project the impacts of various co-payment formulations and levels on health plan revenues. Some respondents lamented the lack of a clear verdict from the international studies.

Several respondents differentiated between the fundamental (Knesset) policy decision to allow co-payments (1998) and subsequent second-tier decisions about the level of the co-payment and for which services to charge. With regard to the fundamental decision, most respondents indicated that it was not data driven; this is because the issue is very ideological, but also because the revenue enhancement objective predominated (while the utilization reduction objective played only a secondary role), and even without sophisticated data it was clear that this objective could be advanced via co-payments. The MOF professional noted that Israel's doctor-patient contact rates are very high by international standards, and that this encouraged them in the belief that co-payments could reduce the number of unnecessary visits. In any case, at this stage the debate was primarily between the MOH and the MOF. Officials from the health plans contended that they were not substantially involved[2], and that the rapidity of the decisionmaking process precluded them from assembling relevant data to try to influence it, a claim that needs to be checked with other sources.

With regard to the second-tier decisions, the health plans carried out extensive simulations, some of which were shared with the MOH. One health plan respondent noted that the health plans' assumptions regarding the number of patients who would refuse to pay were mistakenly high.
The MOH decided that it would only approve plans if they were projected to bring in less money in total than a certain ceiling. However, it did not have the capacity to forecast how much revenue a given proposal would generate.

Regarding the monitoring of the Israeli policy change, some respondents noted that there was still a lack of proper information concerning the impact on utilization. While several researchers and research groups in Israel are studying this issue, none of our respondents referred, on their own initiative, to these studies. When the interviewer(s) mentioned them, it was clear in most cases that their existence was "news" to the interviewees[3] – despite the fact that several years ago, MOH officials designated co-payment studies a high priority for research in priority-setting meetings with the National Institute for Health Policy and Health Services Research.

On the other hand, several respondents noted that due to the Vitkovsky reports, proper data are available on the impact of co-payments on health plan revenues. Indeed, the financial data have

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[2] This may have served the health plans' interests in that they were given an additional revenue source without having to publicly come out in favor of imposing additional payments on households.

[3] This raises an interesting issue for the study: when is it important that policymakers be aware of studies in progress that are relevant to pressing policy issues.

improved over the course of the study period, going from no public information on co-payment revenues, to an interim period where net pharmaceutical co-payment revenues were reported, and finally to a situation where both gross and net revenues are being reported.

Several respondents cited the influence of Brookdale survey findings regarding the prevalence of services foregone due to economic barriers, and the high percentage of consumers who are unaware of co-payment exemptions and ceilings.

Several years ago, the MOH failed to predict the public uproar over CHS's shift from the per unit approach to the percentage approach to co-payments for medications. As a result, the ministry perceived a need for additional information on co-payments at the micro level. It now has a system that tracks the price and co-payment level for thousands of specific medications, by health plan; this has proven to be very helpful in forecasting the impact of proposed changes in co-payment percentages and a proposed shift from the percentage approach to the per unit approach, and in evaluating the public outcry over Maccabi's policy of charging 50% for certain medications that had quality, low-cost substitutes. A major limitation of the system, at present, is that it includes information only on prices, and not on utilization rates and total spending. There are plans to publish comparative data on medication prices and co-payment levels on the Internet so that consumers can make use of this information when choosing health plans.

The NHI ombudsman's citizen complaints information system has been an important source of information. For example, it has highlighted the impact that the "partial per unit" system has had on consumers.

One respondent voiced the view that ideological opposition to co-payments within the MOH may have led to insufficient focus on implementation issues, and hence insufficient investment of time, money and energy in the development of monitoring systems and other data collection efforts.

Reasons for the gaps between potential and actual data use

This decision was characterized by a moderate use of data, which contributed both to the fundamental decision to impose co-payments, and to the operational decisions regarding their levels. The question of whether to impose co-payments was debated for several years, providing sufficient time for bringing into the discussion the lessons learned from the Maccabi experience, and from international experience.

One important type of data that was not sufficiently utilized prior to the changes instituted in 1998 was information from the Family Expenditure Survey regarding the financial burden of expenditures on medications (including co-payments) on households at various income levels. This may have been because, at the time, interest in the equity issue was limited. Alternatively, it may be that those closest to the decisionmaking process were unaware of the potential contribution of this data source.

It will be interesting and important to see whether data from this source play a more substantial role in the ongoing policy discussions of this issue in the years ahead.

4.6 Limiting Competition and Marketing

The policy issue

During the early years of NHI, health plans engaged in aggressive and expensive marketing efforts. Policymakers became increasingly concerned that consumers were being pressured and misled regarding transfers among health plans. In addition, they were unhappy with the level of spending on advertising, given the health system's shortage of funds.

In the 1998 budget arrangements law, several major changes were put into place in this regard. First, health plan advertising expenditures (radio, TV and print media) were limited to a set annual amount for each health plan. Second, instead of allowing health plans to directly sign-up new members, requests to transfer health plan membership would henceforth have to be made at the postal offices (postal banks). Third, the MOH was called upon to reduce the number of health plans operating clinics in small localities (to one or two, depending on the size of the locality). Fourth, health plan capital expenditures (primarily, on new facilities and equipment, and the upgrading of existing facilities) were limited, both as a means to constrain the development of duplicative services and to limit the risk that health plans would incur serious debts and deficits.

In our interviews the project team focused on the first and third items, and did not explore items two and four.

Information that could have played a role in the decisionmaking process (as related to the advertising outlays issue)

Regarding advertising limits, the types of information that might have been helpful include:

- The level of advertising outlays
- Consumer information needs (e.g., about the range of services offered)
- The extent to which the advertising conveyed useful content to consumers.

The actual role of information in the decisionmaking process to date (as related to the advertising outlays issue)

The project team received mixed reports on whether there were hard data from the health plans on expenditure levels. According to some respondents, such data were not critical as just by looking at newspapers and listening to radio advertisements one could tell that there was "too much." None of the respondents mentioned the informational content level of the advertising and the project team did not probe, so it is difficult to conclude whether this issue was considered and whether any systematic data or review played a role.

Information that could have played a role in the decisionmaking process (as related to the number of competitors issue)

Regarding the issue of the number of competitors in small localities, the types of information that might have played a role include:

- The extent to which multiple plans operated in small localities
- The extent to which residents of small localities felt that their choice of health plan was limited and the extent to which this bothered them
- The impact of duplication on costs
- The impact of competition on service levels.

With regard to the above, it would have been helpful to distinguish (and compare) at least three different situations:

- One plan only in the locality
- Two plans in the locality
- Three or more plans in the locality.

This is because it may be that the main benefits of competition are already realized at the level of two plans in the locality.

Another key issue is how to define locality in these measures. Should it be the legal definitions or is it more important to examine the number of insurers operating in the vicinity as determined by travel times?

The actual role of information in the decisionmaking process to date (as related to the number of competitors issue)

It appears that there was an abundance of anecdotes on these issues, but little in the way of systematic information, as the rapidity of the decisionmaking process limits the extent of data collection and analysis[4]

Reasons for the gaps between potential and actual data use

These decisions were characterized by limited use of data. The main reason appears to be that the decisions were made very rapidly. Apparently, the urgent need to reduce expenditures precluded a more comprehensive consideration of the potential impacts of the measures on reducing advertising and competition.

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[4] Since the interviews, the MOH has assembled systematic information on one of the three issues – the extent to which multiple plans operate in small localities.

4.7 Determining Whether to Transfer Responsibility for Mental Health Services to the Health Plans

The policy issue

The original NHI law, passed in 1994 and implemented in January, 1995, called for transferring responsibility for the provision of psychiatric services from the government to the health plans within three years. This has not yet taken place. It has been held up by two concerns. The first is that the level and accessibility of psychiatric services will suffer, as the health plans have an incentive to reduce expenditures and, moreover, the internal allocation of resources would favor general health services over mental health services. The second concern is that the government would not compensate the health plans sufficiently for taking on this additional responsibility (*inter alia*, the treasury would fund the services at their current level of utilization despite the widespread belief that creating an entitlement to mental health services would lead to an increase in utilization levels). As a result, the health plans have not been eager to take upon themselves this problematic domain.

This issue is the topic of one of the project's in-depth case studies and will be analyzed extensively in a separate report.

This process had a number of stages, including the deliberations preceding the passage of NHI (which called for the transfer of this service to the health plans) and the subsequent negotiations among the MOH, the MOF and the health plans. The first stage dealt with the fundamental issue of whether a transfer should be implemented, while the second focused on the amount of money that the health plans would be given for accepting this responsibility.

Information that could have played a role in the decisionmaking process

Types of information that could have been helpful included:

- The total current cost of the provision of psychiatric services
- The extent of queues and unmet needs in the current setup, and the reasons for the unmet needs
- The expected decline in psychiatric hospitalizations and the extent to which this would free up funds for community-based services
- The extent to which the transfer of the services to the health plans was likely to increase the demand for services, and the resultant cost
- The quality of care benefits to be gained (or lost) from greater linkage between mental health services and general medical services.

The actual role of information in the decisionmaking process to date

The fundamental decision to transfer the service to the health plans was not data-driven in the narrow sense, but was influenced by conceptual thinking and knowledge about developments in other countries.

In the second phase, many respondents cited a "Shani effect." In those years where Professor Mordecai Shani led the process, large amounts of data were generated and distributed; this practice stopped after Professor Shani bowed out of the picture. Interestingly, even with regard to the "Shani phases," the health plans contend that they were not given full access to MOH data on the costs of running the current services. MOH personnel claim they shared what they had and that they truly lacked the additional data the health plans wanted (most prominently, information on outlays for rehabilitation). The health plans also noted that they did not have adequate information on the distribution of the mentally ill among the health plans, a crucial piece of information for them, if not for the government.

Almost all of the respondents agreed that there was no reliable way to predict how an entitlement would influence utilization levels, costs and quality of care. One MOH interviewee contended that the system had reliable projections on the cost and utility implications of a transfer. There was little talk of setting up a demonstration project to learn more about the costs and benefits of a full-scale transfer. The director-general of one of the health plans apparently raised this idea at a certain stage, but it did not become the focus of serious discussion.

Reasons for the gaps between potential and actual data use

This decision was characterized by an intermediate level of data use.

One of the major factors that precluded more extensive data use was the lack of trust among key participants in the process. Another was that the health plans were brought into the process at a relatively late stage. A third factor was the very ambitious target dates set for the transfer, which limited the types of data that could be collected. Fourth, the MOF's insistence on no new funding reduced the interest in developing quantitative predictions of the likely impact of the new entitlement on utilization levels.

4.8 Determining Whether to Transfer Responsibility for Inpatient Long-term Care Services to the Health Plans

The policy issue

Long-term care services are provided in a fragmented manner and through a complicated bureaucratic procedure: The MOH controls and supervises the hospitals for the chronically ill; the Ministry of Labor and Social Affairs is responsible for supervising institutions for the frail and the mentally frail; the health plans cover hospital care and community-based medical care; the National Insurance Institute (NII) covers homemaker and personal care services in the community; and the families cover the cost of institutional long-term care services, with the Ministry of Health and the Ministry of Labor and Social Affairs providing assistance for those with inadequate financial means.

Legislated in 1994, NHI called for the transfer of long-term care services to the health plans within three years. However, following its passage, the MOH, the Finance Ministry and the NII conducted a long series of negotiations concerning the transfer, with little progress. In addition, problems concerning the fragmentation of care and long waiting times continued.

In 1999, a committee of experts (headed by Prof. Yohanan Shtessman, director of the NII) was set up by the Minister of Health to study the transfer and organization of these services, and to issue recommendations. The committee ultimately came out against the services' transfer, the main reasons being increased costs and a possible deterioration in the quality of the services, and the possibility that some older people who receive their care at home or in a private institution would be forced to apply for admission to a public institution.

Information that could have played a role in the decisionmaking process

Relevant data include:

- The extent to which the current setup results in unmet needs (the volume of services provided by the various bodies, the projected needs of the older population)
- Waiting times and the reasons for long waits
- The cost-implications of granting an entitlement (who will finance the services: MOH, NII, private households)

The actual role of information in the decisionmaking process to date

The interviewees stated that a great deal of data existed concerning the extent of available and needed services, budgets, costs, prices and waiting times for admission to an institution. These data served as the basis for various projections. Decisionmaking delays apparently were not due to a lack of raw data, although there were substantial differences of opinion regarding the quality of the projections.

The data were obtained mainly from administrative sources: the MOH (Division for Long-term Care), the NII and government hospitals, and from various Brookdale studies.

Basic data were available and used in the negotiations. However, some interviewees claimed that the interpretation of the data was sometimes twisted and manipulated. As noted above, the quality of projections was disputed. Data on waiting times were presented without analyzing the reasons for the wait (e.g., the applicant preferred a specific institution, there was a lack of hospital beds financed by the MOH, etc.) and without information on the number of individuals in the various stages of the bureaucratic procedure. The MOF charged that the MOH tended to focus attention on **queue length**, which is misleading, as the real issue is **waiting time**, for which little data were available.

Reasons for the gaps between potential and actual data use

One limitation in actual data use was the inherent difficulty in making projections, particularly as the granting of an entitlement could have an impact on the demand for services.

4.9 Determining Whether to Transfer Responsibility for Family Health Centers to the Health Plans

The policy issue

NHI called for the transfer of responsibility for Family Health Centers from the MOH to the health plans by the end of 1998. This component of NHI provoked strong opposition on the part of a variety of consumer and professional groups that argued, *inter alia*, that the government-run Family Health Centers were doing a superb job: "If it ain't broke – don't fix it." They further argued that the achievements of the Family Health Centers in the field of prevention would not be matched by the health plans, with their curative focus. Another concern was that while the health plans might invest energy in providing good service in middle- to upper-income areas, they might neglect lower-income areas, where outreach activities are particularly important.

In 1998, the Knesset decided to amend NHI and leave the Family Health Centers in the hands of the MOH. In the coming months, the issue is likely to return to the public agenda as the MOF tries to reverse that decision. This issue also may be the topic of one of the project's in-depth case studies. If so, it would explore what information was available to decisionmakers and how it was used regarding both the performance level of government-run Family Health Centers, *per se*, and the comparative strengths and weaknesses of the two competing models. A key question here is why, in the years prior to NHI, no full-scale studies were carried out comparing health plan and governmental provision of family health services, despite the fact that the issue had been on the agenda of policymakers and researchers for over a decade.

Information that could have played a role in the decisionmaking process

The types of information that could have played a role here include:

- The impacts of the alternative models on costs and service levels
- The experience in Israel to date
- How the services are provided in other countries and to what effect
- Who currently provides the services in each locality
- Whether the MOH has the infrastructure-building capacity to replace the health plans in the various localities.

The actual role of information in the decisionmaking process to date

Respondents report that information from other countries was heavily dominated by information from the U.S. (though, to a certain extent, the British experience was also brought to bear). Little was done to learn from variation (over time and space) in Israel. Regarding government services, *per se*, there was good, systematic information on immunization levels, but on little else. On other dimensions of performance, most of the information was anecdotal.

Our steering committee pointed out that if the health plans had been given responsibility for the service it is very likely that they would have developed a new model. (In those areas where they have been providing the service to date, the MOH has required them to work according to the traditional ministry model.) As such, it may be that only a field experiment could have yielded useful comparisons.

Respondents noted that there were no serious professional discussions of the policy options at the time that the intended transfer to the health plans was cancelled. In part, this may be due to the fact that the issue was Knesset-driven rather than ministry-driven. In addition, it was a "life and death" issue for public health nurses, while no one on the other side had anywhere near as strong an interest. This may have been a factor in explaining why no serious public policy debate took place, and when there is no serious debate, data tend not be brought to bear.

Several health plan respondents argued that they did not have sufficient access to MOH data on the cost of the traditional ministry model. Interestingly, several high-ranking officials at the MOH stated that even they lacked sufficient data on this from their own public health division.

An MOH respondent indicated that until recently there was no mapping on who currently provides the services in each locality. Mapping of this type was conducted only in the past year in response to health plan threats to close down the Family Health Centers if the government does not compensate them for the care provided. The mapping was crucial, as it helped demonstrate that the MOH does not have the infrastructure-building capacity to replace the health plans in all of the localities in which they currently maintain a presence.

Several respondents indicated that the cost/benefit calculation is changing over time. For example, it was recently determined that the MOH must pay municipal taxes on its Family Health Center facilities, while the health plans do not. Similarly, with the development of improved vaccines (i.e., those with fewer side-effects) for certain illnesses it has become clear that the health plans have more flexibility than the government to collect co-payments for "deluxe" vaccines. In addition, the health plan information systems have improved markedly, placing them in a better position to track immunization status than they previously were.

Reasons for the gaps between potential and actual data use

This decision was characterized by inadequate (and relatively little) use of data. The key analytic question was stable and known for over two decades: How would the two competing models differ in terms of cost and quality of care? There were important learning opportunities within Israel, where examples of both models existed. However, these learning opportunities were not utilized.

Several factors probably played a role. First, public health professionals and the bureaucracies were not interested in an objective comparison of the models and did not facilitate attempts to carry out such comparisons. Second, at the time, most Israeli researchers in the maternal and child health and preventive health fields were more interested in clinical, epidemiological and health behavioral issues than in organizational issues.

4.10 Regulating Supplemental Insurance

The policy issue

For several years following the introduction of NHI, there were heated policy debates regarding whether to allow the health plans to continue to sell supplemental insurance coverage. There were two public policy concerns: 1) the health plans would favor those persons and population groups that purchase supplemental insurance, and would do so even with regard to the basic benefits package; and 2) the health plans would not maintain adequate financial reserves in keeping with the actuarial risks involved. At the same time, commercial insurers sought to obtain exclusive control of this market for themselves.

The main arguments in favor of continued health plan involvement in the supplemental insurance market were to make the coverage accessible and affordable to the general population and to provide additional revenues for the health plans. Ultimately, a compromise was struck whereby the health plans could offer supplemental insurance, but in the case of long-term care insurance, they could do so only in conjunction with a commercial insurer. The MOH now also regulates the content and marketing of the supplemental insurance packages.

Several decisions and types of decision can be distinguished here. Key fundamental decisions included whether to allow the health plans to be involved in the provision of supplemental insurance at all, and whether to allow them to be involved in the provision of long-term care insurance in particular. There were also numerous second-tier decisions, including which services could be covered and at what price, whether "exclusions" would be allowed, which information insurers would be required to provide to consumers and how it would be provided, etc. There was also a need to decide whether to approve the specific policies submitted by the individual health plans.

Information that could have played a role in the decisionmaking process

Types of information that could have been helpful include:

- Coverage rates for the entire population and for population sub-groups
- Barriers to fuller coverage for the population as a whole and for key sub-groups
- Health plan marketing strategies (e.g., the prevalence of deliberate cream-skimming)
- Prices and coverage
- Revenues, expenses and profits from supplemental insurance
- The extent to which supplemental insurance profits have been used to finance basic NHI benefits, or vice versa (NHI revenues used to finance supplemental insurance benefits)
- Problems faced by consumers in understanding policies, making decisions, submitting claims, etc.
- Outlays by type of service, etc.

It would have been helpful to provide this information separately in order to compare health plan supplemental insurance and commercial insurance, and to provide it for a series of years in order to track changes over time.

The actual role of information in the decisionmaking process to date

Several respondents indicated that the fundamental decisions were not data-driven. Some attributed this to the fact that the issue is highly ideological, others to the fact that the main issue (particularly regarding long-term care) is one of health plan actuarial and managerial capability, something that is not easily measurable.

With regard to the second-tier decisions, most respondents indicated that data played an important role – both in internal health plan analyses and in the discussions between the health plans and the government. Among the types of information that figured prominently were the actual policies of the various insurers and Brookdale survey data on the prevalence and use of supplemental insurance. One respondent took the view that information was able to play a significant role in this issue because there was sufficient time and an administrative mechanism for an orderly decision-making process.

Of particular note is the gradual development of reporting requirements for the health plans. At first, they were required only to report net profits from supplemental insurance; at a later stage, they also had to report gross revenues, as well as expenditures by type of service. The MOH is working with the Gertner Center on an effort to move beyond reporting that is strictly financial in nature. The additional information will delve into such issues as whether supplemental insurance has led to preferential treatment in the basic basket of services, whether purchasers of supplemental insurance are "getting their money's worth," and whether health plans are indirectly engaging in the selective marketing of supplemental insurance.

Another area that has received substantial attention is the extent to which health plan members understand their rights and responsibilities under the terms of the insurance policies. Data on complaints forwarded to the NHI ombudsman are being used to analyze this issue. The MOH is also exploring the possibility of working with the Gertner Center to use focus groups to explore the issue further.

Brookdale's biannual NHI Impact Survey (Gross and Brammli, 2001) provides periodic information on coverage rates by population group, as well as information on the reasons for purchase and non-purchase of insurance. It also provides information on problems faced by consumers in understanding policies, making decisions, submitting claims, etc. (though the last issue may be limited by the number of interviewees who submitted claims).

Data from the survey played an important role in the public debate about whether the existence of supplemental insurance was increasing or decreasing health system equity. Policymakers also used the data to assess the impact of new regulations requiring supplemental insurers to accept all applicants, irrespective of health status.

Factors that contributed to the study's visibility in policy circles include the wide media attention given to the study and the fact that Brookdale staff prepared policy analysis papers that explicated the relationship between the findings and the policy decisions at hand. In addition, a recent Brookdale study of how supplemental insurance is organized in European countries has received a lot of attention in policy circles, although the study team does not have information on whether or how it has affected the policymaking process.

Reasons for the gaps between potential and actual data use

This decision was characterized by an intermediate-to-high level of data use. Data played only a limited role in the fundamental decision, but figured substantially in the second tier decisions. Its minor role in the fundamental decision was influenced by the fact that this is a highly ideological issue and because the key substantive issues involved were not amenable to standard measurements. The second tier decisions were able to benefit from the available data in part because there was sufficient time and there existed an administrative mechanism for an orderly decisionmaking process.

4.11 Summary of the Findings Regarding Specific Decisions

The findings regarding the use of data in the 10 decisions that we analyzed are summarized in the table at the end of this section. As the table indicates, the use of data in the policy development process varied greatly from one policy decision to another.

- There were four decisions with regard to which the project team found extensive use of data: the decision about which technologies to add to the benefits package; the setting of the capitation formula (although important data were missing in both of these cases); decisions related to the regulation of supplemental insurance; and the decision about whether to transfer long-term care services to the health plans.

- In four of the 10 decisions, there was an intermediate level of data use. They were: setting the level of government NHI funding, setting the hospital per diem rates and revenue caps, co-payments, and determining whether to transfer responsibility for mental health services to the health plans.

- Data played little or no role in the policymaking process in two of the 10 decisions studied. These were the decisions regarding whether to transfer responsibility for Family Health Centers to the health plans, and whether to limit health plan advertising and marketing activities.

Data Use Levels and Key Features of the Decisions

Decision	Data Use Level	Key Feature(s)
(4.1) Funding Level	intermediate	- very political - periodic
(4.2) New Medications, Technologies and Services	extensive	- new funds - periodic - structured process
(4.3) Capitation Formula	extensive	technical and quantitative
(4.4) Revenue Caps	intermediate	- mix of economic and accounting issues
(4.5) Co-Payments	intermediate	- values played major role
(4.6) Limits on Competition and Marketing	minimal	- rapid process
(4.7) Responsibility for Long-Term Care	intermediate-extensive	- inter-ministerial committee
(4.8) Responsibility for Mental Health Care	intermediate	lack of trust - urgent deadlines
(4.9) Responsibility for Family Health Centers	minimal	- long-standing issues
(4.10) Supplemental Insurance	intermediate-extensive	- slow process

5. Findings and Insights Regarding the 10 Decisions as a Group: Commonalities and Variance

The study generated numerous findings that transcended specific decisions. Some of these related to features that were common to all or most of the decisionmaking processes analyzed, and as such could be said to characterize the use of data in Israeli health care during the 1995-1999 period. Other findings related to key differences among the decisionmaking processes and among the factors that account for these differences.

The summary findings presented below were derived from what our interviewees told us about the 10 specific decisions we studied, and from their reflections on health care decisionmaking in general; during the 1995-1999 period.

Some of the summary findings presented below appear to be unique to the Israeli health system. Others probably reflect more universal issues in the relationship between data and policy development, and, indeed, many have already been noted in the professional literature on the subject.

Commonalities and General Features of the Role of Data in Health Care Policymaking in the 1995-1999 Period

The effective use of data appears to be substantial and is on the rise in the Israeli health care system

Overall, the study findings indicate substantial use of data in the major policy decisions with which the health system grappled in the 1995-1999 period. Moreover, compared with 10 years ago, there are more policymakers and staff people who are interested in making informed decisions and know how to use available data and assess their limitations. The growth of analytic support staffs is particularly important, as these are the people who, on the one hand, can translate upcoming policy decisions into data needs and, on the other hand, take the available data and render them into a form useful for the policymakers. There has also been an increase in the number of government officials capable of proactively defining their future data needs, though the number of such officials remains small. In addition, there has been an increase in the amount of policy-relevant research in Israeli health care.

Nonetheless, in all of the policy decisions that were analyzed, decisionmakers had to make decisions without complete information

For each of the decisions we considered, we mapped out the key pieces of information needed for a fully-informed, rational decision, and then found that only a small portion of these information needs were met. This was true even for decisions which were "data rich", such as those concerning which new technologies should be added to the benefits package. Indeed, the decisionmakers interviewed for this study saw the need to make decisions under conditions of uncertainty as being an integral part of their jobs

The need to make decisions without complete data is not unique to Israel or to health care, and should not necessarily be considered a failing of either the policy community or the research/data community. The number of different types of data which could potentially inform any given policy decisions is usually quite large. Thus, even when extensive data systems are in place, the data are thoroughly analyzed, and the findings from these analyses are brought into the decisionmaking process, still there will be unanswered empirical questions which are relevant to the decision. The gold standard should not be "meeting all information needs all the time," but rather "meeting the most important information needs on the most important issues." As we have seen, this gold standard was met in some, but not all, of the key decisions studied.

Policymakers rarely methodically analyze, in advance, what data would be useful for the policy decisions that will confront them in the foreseeable future

In discussions with our interviewees, as well as with the project steering committee, it consistently emerged that policymakers rarely take the time to identify the data that could help them with upcoming decisions. However, when presented with the structured analyses of data needs carried out by the project team, they validated the accuracy and relevance of those analyes. They also expressed the view that such analyses could, and should, be made at an early stage in the policy development process.

Data are, of course, not the only factor in decisionmaking processes. This point is emphasized in the international literature on policymaking, and also was quite apparent in the 10 health policy decisions in Israel that were studied

Values, personal experience, the interests of specific parties, and pressure groups also have a major impact, even in those decisions where the data are taken seriously. The important question is not whether data comprise the *sole* input in decisionmaking (they rarely/never do), but whether they comprise a *significant* input. Data were a significant input into some, but not all, of the key decisions studied.

The study generated mixed findings regarding the extent to which the Ministry of Health has invested in expanding its information resources over time.

On a positive note, the study found that the MOH has, in recent years, successfully created several ongoing national administrative databases that are playing a critical role in the policymaking process. Examples include the system for tracking hospital utilization and the system for monitoring health plan finances. Not only were useful new information systems put in place, but they also continue to grow, improve and change in response to changing needs. On the other hand, a stable funding base for a periodic national health survey has yet to be established, despite the fact that such surveys exist in most Western countries, and despite widespread recognition that Israel could benefit greatly from such a survey. The study team is exploring why it is that the health system has been able to mobilize and create certain needed data sets while other systems have not.

Some important policy issues were debated for years, with interested parties putting forward conflicting factual claims. Nonetheless, no one took advantage of opportunities to collect the data that could clarify the facts on the ground

We found a striking example of this with regard to the debate on whether responsibility for maternal and child health services should be transferred from the government to the health plans. The debate spanned over 20 years, yet as far as we can tell, no one took a serious empirical look at the strengths and weaknesses of the competing models. The study team identified several possible explanations for the failure of the research community to mobilize to meet the information needs of policymakers for this issue.

In general, the Israeli health system is characterized by quite effective linkages between the findings of studies in the major research centers and governmental decision-making processes. This linkage is probably more effective than in many other countries. There could be several factors which account for this finding, including: Israel is a small country and, as such, most leading researchers and policymakers know each other and interact regularly; some of the leading research centers invest substantial energies in dissemination of findings; and many health policymakers are interested in making use of data in the decisionmaking process.

Nonetheless, sometimes important data existed (e.g., in administrative databases or in articles from academic studies) but were not brought into the policymaking process
Our work suggests several reasons. One of the most significant factors was the lack of analytic staff in the ministries and the Knesset who know how to make the link between data and policy discussions. At other times, decisions were made so quickly that there was insufficient time for serious staff work. Another factor was the lack of investment on the part of some university-based researchers in the dissemination of their findings to Israeli policymakers.

In contrast to the American health system, where demonstration projects and social experimentation abound, the Israeli health system does not have a tradition of field testing new policies
As a result, disagreements about the probable impact of proposed policies often lead to policy gridlock. A fascinating example of this phenomenon can be found in the mental health field, where there has been a wide consensus in Israel that responsibility for the services should be transferred from the government to the health plans. However, the transfer has been delayed for years due to conflicting projections of the financial cost to the health plans. Similar problems in the U.S. health system (and in some other areas of Israeli domestic policy) are often resolved through demonstration projects, but this avenue was not even considered in the Israeli debates on mental health care. A demonstration project could have provided valuable information on costs, and on other organizational and regulatory issues.

Decisionmakers are interested in forecasts
In order to choose wisely among competing policy options, they must make judgments about the likely impact of these options. Researchers and analysts can help policymakers with this task by providing projections about the future that are grounded in facts about the past and the present. In order to choose wisely among competing policy options, decisionmakers need to assess their likely impact. However, the data typically presented by analysts relate to the past, not the future. In its interviews, the project team repeatedly heard pleas for analytically based projections as well as better methodologies for translating data about what was and what is into forecasts of what could be.

Key Differences among the Decisionmaking Processes and among the Factors that Account for These Differences

The study highlighted encouraging examples where data have played a major role in influencing policy

One very positive example is the serious staff work that went into decisions about which new medical technologies will be priorities for funding under NHI. Another positive example is in the area of long-term care, where Brookdale data have played a vital role in informing a series of major policy decisions. A third example is the use of data from the Central Bureau of Statistics/MOH health survey and from the MOH's hospitalization files to set the capitation formula.

We were able to identify several characteristics of the* decisions *that seemed to promote the use of data

Data seemed most likely to play a role in decisions that were made periodically, were second-tier as opposed to fundamental decisions, and/or were decisions of a "how much" rather than "yes/no" nature.

We were also able to identify several characteristics of the* decisionmaking processes *that seemed to promote the use of data

Data seemed most likely to play a role in those decisionmaking processes that were structured, well-organized, well-staffed, and/or involving one or more decisionmakers who approached the process with an open mind.

Personalities, leadership styles and negotiating styles had a major influence on the extent to which data played a role in the decisionmaking process

When the MOH was led by a director-general who was prepared to seek compromises with the MOF, inter-ministerial teams often used data to develop creative compromise solutions. However, when the post was assigned to a less-compromising, more ideological manager, data use decreased significantly.

The nature of the data and their source also made a difference

Organizations tended to make the most thorough use of data that came from their own databases, and also to make extensive use of data from external, objective sources. Data from other organizations or interested parties tended to be treated with suspicion. Decisionmakers also tended to insist on very recent data, even in those cases where there was little reason to think that important changes had taken place. Finally, decisionmakers tended to use those data whose relevance to the decision at hand was clearly articulated by its advocates.

We found a number of factors that tended to limit the role of data in decisionmaking

Of particular note were situations where there were no objective, readily available data sources. If the relevant data could only be obtained from the interested parties, its access, credibility and impact could have been limited.

6. Study Contributions

The project has made several important methodological contributions to the evolving international literature on data and decisionmaking. To date, empirical studies in this field have tended to examine the actual use of data in a particular decision, without carefully considering what data might have potentially contributed to the decision. The project team prepared such an analysis of data needs for ten different major policy decisions. This study demonstrates that important additional insights, as well as additional practical conclusions, can be generated when serious attention is given to "what might have been", and not just to "what actually happened". The differences between the two can be particularly illuminating.

Another important innovation of this project is that it will bring together two different types of case studies. One type of case study takes as its starting point a particular body of data (e.g., the CBS health survey), and analyzes how that body of data was used in one or more policy decisions. Another, more common type of case study, takes as its starting point a particular policy decision (e.g., the decision to transfer responsibility for mental health services to the health plans) and analyzes how a variety of bodies of data were used in that policy decision. Each approach generates important, but different and complementary, insights. Yet almost all studies to date in the field of data and decisionmaking have used only one of these two approaches. It is hoped that our project will demonstrate the value-added of the two-pronged approach; this is a topic to which we will return after all four case studies have been completed and integrated[5].

The findings from this study have been presented in a variety of academic, governmental and health plan forums. In addition, preliminary drafts of this paper have been widely circulated in Israel and abroad by way of the Internet. As a result, the project has already contributed to the Israeli health system at several levels:

First, it has focused the interaction between researchers and policymakers regarding several of the ten policy issues that were analyzed. Many of these issues continue to be debated, and the study has highlighted ways in which data could play a greater, and more constructive, role in these debates.

The study has also illustrated important contributions that data have made to the policymaking process, thus strengthened the case for investing in the effort needed to make data available to policymakers. This can be done via a variety of mechanisms, including the development of databases and applied research.

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[5] As noted above, in addition to the "macro" analysis presented here, the project also involves four in-depth case studies. The research team is currently finalizing publications on two of the case studies. One deals with the use of data in the mental health reform effort. The other deals with the use of data from the National Health Survey. Tthe project team is also working on case studies on the use of data from the Witkowsky financial reporting system, and on the use of data by a government-appointed blue ribbon panel on the status of physicians.

The study has identified various mechanisms for strengthening the linkage between policymakers and the research community, such as the availability of analytic staff within the Ministries, and ensuring sufficient time for making the linkages.

Finally, the study underscores the importance of thinking through data needs in advance of decisionmaking. The study found that, generally speaking, in the 1995-1999 period, policymakers did not think through data needs in advance. The study illustrated a structured process for analyzing decisions and related data needs. The accuracy and relevance of these structured analyses were validated when they were presented at various conferences and to the project steering committee. Moreover, many participants indicated that such structured analyses can and should be done at an early stage of the policymaking process. There are indications that the study has already encouraged Israeli researchers and policymakers to think more systematically and proactively about the links between data and policymaking.

Appendix A: Members of the Steering Committee

Gabi Bin Nun	Ministry of Health
David Chinitz	The Hebrew University in Jerusalem
Rami Ditzian	Clalit Health Services
Leon Epstein	The Hebrew University in Jerusalem
Jack Habib	The JDC-Brookdale Institute
Ziona Haklai	Ministry of Health
Naftali Halberstadt	Ashalim
Charles Kaiman	Central Bureau of Statistics
Rachelle Kaye	Maccabi Healthcare Services
Malka Korazim	The JDC-Brookdale Institute
Boaz Lev	Ministry of Health
Gur Ofer	Israel National Institute for Health Policy and Health Services Research
Orli Ouri	Leumit Health Plan
Nira Shamai	Independent consultant
Arie Shirom	Tel Aviv University

Appendix B: Persons Interviewed for the Study

Michal Abadi	Ministry of Health
Efi Arbel	Ministry of Finance
Itzik Bachar	Clalit Health Services
Naoz Bar-Nir	Clalit Health Services
Gabi Bin Nun	Ministry of Health
Rami Dycian	Clalit Health Services
Leon Epstein	The Hebrew University in Jerusalem
Jack Habib	The JDC-Brookdale Institute
Ziona Haklai	Ministry of Health
Rachel Kaye	Maccabi Healthcare Services
Boaz Lev	Ministry of Health
Mia Mohilever	Ministry of Health
Gur Ofer	Israel National Institute for Health Policy and Health Services Research
Yitzhak Peterburg	Clalit Health Services
Mordecai Shani	Sheba Medical Center (former MOH DG)
Yehoshua Shemer	Maccabi Healthcare Services (former MOH DG)
Meir Oren	Hillel Yaffe Medical Center (former MOH DG)