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RENAL DISEASE PROGRAM.

The Ohio State University, Ph.D., 1976
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INCENTIVE REIMBURSEMENT MECHANISMS TO ACHIEVE EFFICIENT
CATASTROPHIC HEALTH SERVICE DELIVERY SYSTEMS:
A STUDY OF THE END-STAGE RENAL DISEASE PROGRAM

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

BY

Thomas Charles Webster, B.A., M.A.

*****

The Ohio State University
1976

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ACKNOWLEDGMENTS

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CHAPTER I

INTRODUCTION AND METHODOLOGY

The objective of this research is to generate a framework for a policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services. This objective is met by analyzing the existing theories of incentive reimbursement. This analysis is then augmented with generalizations developed from a case study of the reimbursement mechanism for the End-Stage Renal Disease (ESRD) Program and propositions derived from the existing literature about the implementation of public policies.

The chapter begins with an explanation of the objective of the research. Next there is a statement of the importance of the research which is followed by a discussion of the importance of the End-Stage Renal Disease Program. This leads into a description of the conceptual approach of the research and the research methodology. Finally, an overview of the organization of the thesis is presented.

A. Explanation of the Objective

The objective of this research, as stated above, is to generate a framework for a policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services.
1. **Generation versus Verification**

The normal approach to scientific inquiry emphasizes the verification of hypotheses as the method for developing theory. Verification consists of applying standards of truth to proposed hypotheses in an effort to assess the validity and reliability of these statements. The heavy emphasis upon verification in the social sciences in recent years has led, in part, to an ability to test hypotheses but a failure to produce hypotheses of value to policymakers in complex decision situations. Rather than continue the emphasis upon verification, this research has emphasized the generation of theory, that is the systematic development of hypotheses and concepts from the data obtained during the course of the research. The framework for the policy-relevant theory of incentive reimbursement will provide the structure for the systematic development of the hypotheses. The empirical generalizations developed from a case study of the reimbursement mechanism for the ESRD Program and the propositions derived from the existing literature about the implementation of public policies will augment the existing theories of incentive reimbursement by suggesting additional factors which influence the development and implementation of incentive reimbursement mechanisms.

2. **Framework for a Theory**

A framework for a theory is a set of integrated ideas and assumptions around which existing and new studies and concepts can be organized and which might serve as a prelude to theory development.
The framework for a policy-relevant theory of incentive reimbursement developed in this research is intended to serve as a basic structure around which generalizations and propositions pertaining to the use of incentive reimbursement mechanisms to induce the efficient delivery of catastrophic health services can be organized. The framework represents an effort to identify the broad classes of factors which must be considered in the development of incentive reimbursement mechanisms for programs which provide public financing for catastrophic health services. No claim is made that all relevant relationships are explained or even that all relevant variables have been identified.

This research does present a number of generalizations based upon the case study of the ESRD Program and propositions derived from the existing implementation literature, but these represent only a small fraction of what are needed to fully explain complex government programs.

A framework such as the one developed in this research is needed in order to fully appreciate the complexity of the incentive reimbursement process. The existing theories of incentive reimbursement tend to ignore this real-world complexity. In addition the framework is needed to provide the basis for building an understanding about the functioning of these incentive reimbursement mechanisms. Without a framework, either the one presented in this research or another which may prove superior, it is impossible to capture the benefits to be derived from numerous research efforts. If each piece of research on complex government programs is regarded as independent, then there
can be no cumulative learning process. Without such a cumulative learning process there is little likelihood that we will ever develop an adequate understanding of the complexity of government programs because the complexity exceeds the capacity of any one individual, research organization, or academic discipline. As a result it is necessary to build upon the work of others if we are ever to understand even a small portion of the complexity.

3. Policy-Relevant Theory


A theory is a way of making sense of a disturbing situation so as to allow us most effectively to bring to bear our repertoire of habits, and even more important, to modify habits or discard them altogether, replacing them by new ones as the situation demands.3

In this light, a policy-relevant theory is a way of making sense of the complex situations which accompany the development and implementation of public programs, so that policy officials may effectively bring to bear the needed repertoire of legal and administrative actions, and even more important, to modify or discard the traditional legal and administrative actions altogether, replacing them by new ones as the situation demands.

While it is highly unlikely that we will ever fully understand the complex multi-dimensional ever changing situations which confront policy officials, this does not mean that it is impossible to provide recommendations to these individuals about ways to modify existing procedures in order to more effectively meet the demands of the
complex situations. The policy-relevant theory can offer a way to make sense out of the complex situations so as to provide these recommendations.

Unlike the definitive explanations and absolute predictions associated with the traditional explanations of scientific theories, the policy-relevant theory is concerned with explaining enough of the critical underlying processes to be able to provide recommendations to the policy officials. Like the traditional theories, however, the policy-relevant theory attempts to organize the recommendations in a systematic way. The purpose of the framework for a policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services is to provide a basic structure around which generalizations and propositions pertaining to the use of incentive reimbursement mechanisms can be organized. This framework provides a way of making sense of the complex situations which accompany the development and implementation of incentive reimbursement mechanisms, so that policy officials may effectively bring to bear the needed repertoire of legal and administrative actions, and even more important, to modify or discard the traditional legal and administrative actions altogether, replacing them by new ones as the situation demands. The ultimate test of a policy-relevant theory does not lie in its intrinsic ability to increase understanding, but in its ability to increase understanding in a way which leads to the development of better public programs.
4. **Incentive Reimbursement**

The term incentive reimbursement as used in this research refers to the use of the third party payment for medical services to influence a primary party—the patient—and secondary parties—either physicians and/or hospitals—to behave in a manner which is consistent with the objectives of the third party—either the government or private health insurer.

5. **Publicly Financed**

Publicly financed health services refers to the provision of financial resources for the purchase of health services from sources other than the individual, his immediate family, and the private medical insurance to which he is entitled. In particular this research is concerned with government programs to finance catastrophic health services.

6. **Catastrophic Health Services**

The specific area of interest for this research is the public financing of catastrophic health services, that is, the provision of health services to an individual who is being treated for a catastrophic illness. A catastrophic illness is any illness which, if left untreated, would have a severe impact on the health of the individual affected, usually death or severe disability. In addition, the treatment of a catastrophic illness requires large financial resources, usually in excess of those available to most individuals and their families from personal sources, including private insurance.4
This research will be limited to the generation of a framework for a policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services because the characteristics of the health services provided for the treatment of end-stage renal disease and other catastrophic disease may not be present in the case of more general health services. The results of this study may be useful in the development of more general incentive reimbursement mechanisms for publicly financed health services, but they should be used with caution.

B. Importance of the Research

The importance of this research is derived from the prevalence of third party reimbursement of health services, the prospect of extending public financing of health services to include catastrophic health services, and the consequent need for reimbursement mechanisms that incorporate incentives to provide acceptable care in an efficient manner. This contemporary concern must be seen in relation to the more than half century evolution of a national health insurance program for the United States. Beginning in 1912 with the American Association for Labor Legislation's model health insurance bill for the states, there has been an almost continuous effort to provide public financing of health services. These efforts, which were concerned with the provision of funding for personal health services, provided little emphasis for efficient delivery of health services. Over the next half century the effort to enact a national health insurance continued with the
first legislation to provide compulsory health insurance based upon criteria other than financial need being the Medicare legislation enacted in 1965. This 1965 legislation reflected the desire to provide financing for personal health services without interfering with the provision of those health services. The first section of the enabling act makes this explicit:

Nothing in this title shall be construed to authorize any Federal officer or employee to exercise any supervision or control over the practice of medicine or the manner in which medical services are provided, or over the selection, tenure, or compensation of any officer or employee of any agency, or person providing health services, or to exercise any supervision or control over the administration or operation of any such institution, agency, or person.

The failure to provide mechanisms to promote efficiency in the delivery of health services was a function of the perception that the greatest need was to provide financing and that any effort to affect the delivery of health services might unduly delay enactment of the law.

In the years since the passage of Medicare there has been a changing public attitude as to the need to promote the efficient delivery of health services. This attitude is reflected in most of the recent major national health insurance proposals. For example, former President Nixon, in his 1971 health message to Congress, commented: "The toughest question we face then is not how much we should spend, but how we should spend it. It must be our goal not merely to finance a more expensive medical system but to organize a more efficient one..."
The question of how to promote efficiency in the delivery of health services remains a big question. Health planners have provided numerous models of what an efficient health delivery system would look like, but have failed to specify the means for achieving these systems. The health economists have provided models for reimbursement mechanisms to promote efficiency, but these models are of limited utility to the policymaker because they are based on faulty assumptions and are concerned with small segments of the total health system. If a general or catastrophic health insurance program is enacted, it will be necessary to develop a greater understanding of the design and use of reimbursement mechanisms if such mechanisms are to promote the efficient delivery of health services.

It is likely that coverage for catastrophic illness will be a major component of any national health insurance program. In fact it may be the next step in the movement toward national health insurance. In their analysis of all of the recent national health insurance proposals, Mitchell and Schwartz found that: "all the bills reflect the view that the entire population should be provided with protection against major financial loss due to catastrophic illness." Through a systematic study of the implementation of the reimbursement mechanism of the End-Stage Renal Disease Program, this research generates a framework for a policy-relevant theory of incentive reimbursement which provides the basis for developing an understanding of how the policymaker can use the reimbursement mechanism to promote the development of efficient catastrophic health service delivery systems.
C. **End-Stage Renal Disease Program**

Public Law 92-603, "The Social Security Amendments of 1972," was signed into law on October 30, 1972. Section 2991 of this law provided that all individuals and their dependents, who are either currently or fully insured under Social Security, and medically determined to have chronic renal disease, and require hemodialysis (the artificial kidney) or renal transplantation for such disease "shall be deemed disabled and eligible for benefits under Medicare." 13, 14 Section 2991 of P.L. 92-603 will be referred to as the end-stage renal disease (ESRD) provisions throughout the remainder of this research.

In like manner the federal program established to implement these and other related provisions 15 will be referred to as the End-Stage Renal Disease (ESRD) Program.

The analysis of the reimbursement mechanism of the ESRD Program will provide much insight into the design and use of incentive reimbursement mechanisms for the delivery of catastrophic health services for several reasons. 16 First, the ESRD provisions mark the first time that the Federal Government has provided health care financing for virtually all Americans (90-95%) based solely on the presence of a disease. Secondly, these provisions mark the first time that the reimbursement mechanism of a federal health financing program has been explicitly designed to affect the organization of the health care delivery system. Furthermore, the Federal Government is looking at the ESRD Program as potentially precedent-setting for future federal health programs. Finally, end-stage renal disease is a classic example
of a catastrophic illness and many of the problems confronted in the development of an incentive reimbursement mechanism to meet the objectives of the ESRD Program will be confronted in the case of other catastrophic illnesses.

D. The Conceptual Approach

The conceptual approach which this research takes toward the generation of the framework for the policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services comes from three different sources. The first source is the incentive reimbursement literature, the second is an analysis of the ESRD Program, while the third is the implementation/innovation literature.

The basic premise underlying the conceptual approach is that in order for an incentive reimbursement mechanism to be policy-relevant it must account for the performance of the individual elements of the health delivery system and the performance of the elements in the collective interaction with each other and their environment.

The sources of the conceptual approach identified above are used in the identification of the elements of the ESRD system and in explaining their behavior. The ESRD system refers to all elements necessary to make the ESRD reimbursement mechanism work effectively. These elements include the agencies of the federal government responsible for administration of the ESRD reimbursement mechanism, providers of ESRD therapy, and the patients.
The existing incentive reimbursement literature, as presented in Chapter III, provides the initial basis for the generation of a design for an incentive reimbursement mechanism for catastrophic health services. This literature, however, does not meet the requirements for a policy-relevant theory of incentive reimbursement because of five important weaknesses. These weaknesses are the result of the failure to consider:

- the nature of the public demand
- the specification of the health product
- the method for determining if the health product is produced
- how the price is determined
- how the incentive reimbursement mechanism is implemented

The ESRD Program provides the empirical background for displaying the limits of the existing incentive reimbursement literature, and pointing out the need for augmenting that literature with analysis of the administrative dimensions of implementation. The development of the ESRD reimbursement mechanism was not based solely on knowledge of incentive reimbursement. An essential ingredient in the development of the ESRD reimbursement mechanism has been the ability to relate the reimbursement mechanism to what is known about the efficient delivery of end-stage renal disease therapy. The information on the efficient delivery of end-stage renal disease therapy permeates the discussions in Chapters IV thru VIII.

The implementation/innovation literature, as presented in Chapter VII, provides a basis for linking the existing theories of incentive
reimbursement to operational programs to provide reimbursement incentives. To operationalize a conceptual incentive reimbursement mechanism, it is necessary to provide administrative mechanisms to cope with the weaknesses presented above in the existing theories. The process of organization and development of these administrative mechanisms has considerable impact on the ultimate effectiveness of any incentive reimbursement mechanism. The implementation/innovation literature suggests an explanation of the relationship among the attributes of the incentive reimbursement mechanism, the attributes of the implementation system, the attributes of the target system, and the ability to effectively develop the administrative mechanisms needed to operationalize the incentive reimbursement mechanism.

E. Methodology

This research utilized a dynamic case study of the development and implementation of the ESAD reimbursement mechanism to develop empirical generalizations about the effectiveness of incentive reimbursement mechanisms and to demonstrate the appropriateness of propositions derived from the implementation/innovation literature. The dynamic case study provides the best research design for meeting the objective of this research to develop a framework for a policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services.

The case study is considered as pre-experimental research design and does not provide the controls necessary to guard against the
threats to internal validity required when hypotheses are tested. A pre-condition to any experimental design is the presence of a hypothesis to be tested. A study such as this provides the basis for the development of the hypotheses to be tested in future research. Since no hypothesis is being tested, the threats to internal validity associated with the case study are not relevant. In this research the empirical richness of the case study is necessary in order to identify those factors which affect the policy-relevance of an incentive reimbursement mechanism.

In addition, the analysis of an operating program, such as the ESRD Program, protects against the threats to external validity from the reactive effects of the experimental arrangements. "The reactive effects of experimental arrangements... preclude generalization about the effect of the experimental variable upon persons being exposed to it in nonexperimental settings." This would be the case in the efforts to generalize from incentive reimbursement experiments where participation is not mandatory.

The case study is dynamic in that the data collection activities actually began prior to the passage of the ESRD provisions and continued through the first two and one-half years of the program. The ability to do this was the result of a set of fortuitous events which could not have been predicted.

This research is part of a larger research project funded through a National Science Foundation grant (GI-39327) from the Research Applied to National Needs Program. The preproposal research for the larger
project, "Kidney Therapy and Public Policy: A Study of Medical Innovation" - Richard A. Rettig, Principal Investigator, began in January 1972. The initial objective being an analysis of the public policy relating to the research and development efforts by the federal government in the treatment of end-stage renal disease. As a result when the ESRD provisions were initially proposed in the Senate without advance warning on September 30, 1972, we were in the unique position of being able to begin data collection immediately. Because data for the research was collected from the beginning of the ESRD Program, it was possible to follow the evolution of the ESRD reimbursement mechanism as it progressed through January 1, 1976.

This research concentrates on the development and implementation of the ESRD reimbursement mechanism. This approach differs from that taken by most traditional studies of incentive reimbursement. In the traditional studies the emphasis is upon the impact of the incentives on the behavior of patients, physicians, and health facilities rather than concentrating on the administrative development and implementation of the reimbursement mechanism. The decision to concentrate on the development and implementation of the ESRD reimbursement mechanism was made for both pragmatic and intellectual reasons.

On the pragmatic side, it is impossible to analyze the impact of an incentive reimbursement mechanism on the behavior of patients, physicians, and health facilities if that mechanism has not been fully developed. Under the ESRD Program patients are receiving therapy and providers of ESRD services are being reimbursed, but
two and one-half years after the establishment of the ESRD Program, the reimbursement mechanism is still evolving. In addition to the evolving nature of the ESRD reimbursement mechanism, the ability to analyze the impact of the reimbursement mechanism is limited because of a lack of good quality data. The Social Security Administration has little valid data or analysis on the operating experience under the ESRD Program two and one-half years after the program began operations. In fact, the validity and reliability of the data directly available from providers of ESRD services is subject to question. For example, at one ESRD facility the doctors and nurses at the same facility could not agree on the number of patients they had and contradicted the information which they submitted to the health planning agency. The lack of good data at the ESRD facilities is partially due to the difficulties of tracing ESRD patients as they move among the various providers of ESRD therapy.

The pragmatic reasons for studying the development and implementation of the ESRD reimbursement mechanism form the basis for the intellectual reasons for studying the development and implementation of the ESRD reimbursement mechanism. The existing literature on incentive reimbursement cannot and does not attempt to explain why it should take two and one-half years to develop and implement an incentive reimbursement mechanism or why the Social Security Administration has little valid data or analysis for the management of the ESRD Program. If we are to develop effective incentive reimbursement mechanisms for programs to provide public financing for catastrophic health services,
then it is important that we attempt to understand why it has taken this
long to develop and implement the ESRD reimbursement mechanism.

Among the major sources of information for this research were the
documents developed as part of the legislative, administrative, and
judicial processes of government. Legislation both enacted and pro­
posed provided information on the legal requirements under which the
ESRD Program operates as well as indicating proposed legislative
changes resulting from the early experience under the ESRD Program.
In addition, the Congressional committee hearings and reports provided
information pertaining to the Congressional intent of the ESRD Program,
problems, and issues associated with the administration of the ESRD
Program as well as recommendations for changes in the program. Finally,
the statements by individual members of Congress in the Congressional
Record provide an indication of the sentiments of these individuals.
A related source was a report to the Congress prepared by the General
Accounting Office on the ESRD Program.22

On the administrative side, public documents provided information
on the basic reimbursement policies for the ESRD Program. These include
interim regulations, proposed regulations, and regulations as published
in the Federal Register. These were supplemented by transcripts of
speeches made by major administrative officials. These speeches provide
insight into the reasons for the policies. More important than these
public documents were the internal administrative documents which were
used in setting and explaining the policies of the ESRD Program. These
documents include more than a half-dozen letters of instructions to
Medicare intermediaries and carriers providing detailed information pertaining to reimbursement under the ESRD Program. In addition, more than two dozen issue papers, information memoranda, and decision memoranda describe the options considered under the ESRD Program, the discussion of the pros and cons associated with the various options, and the opinions of the various policy officials concerning the alternatives. Among these officials are the Assistant Secretary for Health, the Commissioner of Social Security, and the Assistant Secretary for Legislation. Through these documents it is possible to determine not only what decisions were made but why the decisions were made the way they were. Finally, no less than five drafts of the document, which eventually was published in the Federal Register as proposed rules establishing "Conditions for Coverage of Suppliers of End-Stage Renal Disease (ESRD) Services," provided insight to the changes in thinking over time.23

The judicial process generated the briefs of two lawsuits filed in conjunction with the ESRD Program. These briefs outline the major objections of providers to the ESRD reimbursement mechanism. Position papers from five organizations representing patients, physicians, social workers, and voluntary health organizations provide insight into the perceptions of the ESRD reimbursement mechanism by these groups. Finally, the research utilized articles appearing in medical journals, organization newsletters, and patient magazines to supplement the information already obtained.
In addition, information was obtained in more than fifty inter­
views with administrators of the ESRD Program, physicians, health
planners, representatives of voluntary health organizations, patients,
and others. These interviews were important to the identification and
acquisition of the documents described above. In addition, the inter­
views provided insight into the origins of the documents as well as
providing more detailed information about the operations of the ESRD
Program and its influence upon the ESRD providers and patients.

Because of the heavy reliance upon public documents and the internal
documents actually used in the establishment and administration of the
ESRD reimbursement mechanism, the information utilized in this research
should be valid. In addition, since these documents are not subject to
change over time, there would also be the expectation of a high level
of reliability in the information used. The major threats to validity
and reliability are not related to the information proper but rather to
the interpretation of it. This situation is not unique to this research.
The extensive number of interviews provided a safeguard against in­
correct interpretations as the interviews often included discussions
of the interpretations. The individuals involved in the policy process
had the opportunity to comment on the interpretations. The bibli­
ography provided at the end of this research identifies the various
documents used in the research.
It should be noted that except in only one or two isolated instances the administrators of the ESRD Program, physicians, hospital administrators, executives of voluntary health organizations, and patients were most willing to give of their time for interviews, provide documents, and openly discuss the development and implementation of the ESRD incentive reimbursement mechanism.

Having collected the information related to the ESRD reimbursement mechanism, the next step was to analyze it. The analysis followed the conceptual approach presented previously. The first step was to relate the empirical information to the existing theories of incentive reimbursement. Many of the issues associated with the development of the ESRD reimbursement mechanism could not be explained by the existing theories. The propositions developed from the implementation/innovation literature were then used to suggest how the issues neglected by the existing theories might be explained. All of the above information was then integrated into the design of the framework for a policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services.

F. Organization of the Thesis

The thesis is divided into eight chapters. Chapter II describes the nature of end-stage renal disease, the issues raised by this disease which led to the passage of the ESRD provisions, and the generic qualities of these issues as they relate to the public financing of catastrophic health services. Chapter II also provides a brief
legislative history of the ESRD provisions, an explanation of its contents, and the objectives and issues involved in the implementation of the ESRD Program.

Chapter III analyzes the existing literature on incentive reimbursement and identifies five weaknesses in this literature which limit its application to operational programs. Chapters IV, V, and VI analyze the ESRD reimbursement mechanism in terms of the incentive and support system requirements found in the ESRD legislation and regulations, the intended effect of the incentive and support systems, and the actual effect of the incentive and support systems on the ESRD therapy system. Each chapter develops a set of generalizations associated with the use of the incentive and support systems. In particular Chapter IV is concerned with patient incentives, Chapter V is concerned with provider incentives, and Chapter VI examines the efforts to develop the necessary administrative systems for an incentive reimbursement mechanism.

Chapter VII suggests how the implementation/innovation literature can be used to explain the delays in the implementation of the ESRD reimbursement mechanism through a set of propositions relating to the attributes of the incentive reimbursement mechanism, attributes of the implementation system, and attributes of the target system—i.e., the ESRD therapy system.

In conclusion Chapter VIII presents a framework for a policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services and suggests the implications of this
framework for programs to provide public financing for catastrophic health services.
Chapter I--Footnotes


5 For an account of this evolution see:


7 Ibid.


Among the assumptions which limit the utility of existing models are: the assumption that the individual demand is appropriate; the assumption that the nature of the health product is known; the assumption that the price of the health product is determined in the private market; and the assumption that the incentive reimbursement model can be implemented. These assumptions are discussed in Chapter III.


The condition referred to as chronic renal disease in P.L. 92-603, Sec. 2991 is usually referred to as end-stage renal disease, and subsequent documents issued by the Federal Government refer to end-stage renal disease. The end-stage renal disease terminology is used in this research.

In addition to the ESRD provisions, individuals are covered by Medicare for end-stage renal disease under the Medicare coverage for those over age 65 (P.L. 89-97) and the disability provisions of the 1972 Social Security Amendments (Section 201, P.L. 92-603).

The analysis of the ESRD reimbursement mechanism will include the objectives, provisions, assumptions, and performance of the reimbursement mechanism. It will also include consideration of these factors in relation to the administrative organization which must implement the ESRD reimbursement mechanism. This deviates from the
standard analysis of incentive reimbursement mechanisms in that the organization which must implement the reimbursement mechanism is not included as a factor in the standard analysis.


18 Ibid.

19 Congress has authorized various experiments with incentive reimbursement mechanisms under the Medicare program. To date these experiments have met with limited success. One reason would appear to be that participation in these experiments is voluntary. See U.S. Congress. House. Committee on Ways and Means. Subcommittee on Oversight. "Reports on Administration by the Social Security Administration of the End-Stage Renal Disease Program Established by Public Law 92-603—With Additional Views—and on The Social Security Medicare Research Studies." (Hereafter, "Report of the Oversight Subcommittee"). October 25, 1975. pp. 23-26.

20 For details see: "Kidney Therapy and Public Policy: A Study of Medical Innovation", Research Proposal submitted to the National Science Foundation Research Applied to National Needs (RANN) by The Ohio State University Research Foundation. Richard A. Rettig, Principal Investigator.

21 Although the National Science Foundation funded research effort did not begin until July 1, 1973, the preliminary groundwork began in January, 1972.


CHAPTER II
ESRD, ESRD PROVISIONS, AND DILEMMAS
IN THE PUBLIC FINANCING OF
CATASTROPHIC HEALTH SERVICES

This Chapter describes the nature of end-stage renal disease and the issues raised by this disease which led to the passage of the ESRD provisions. In addition, the chapter presents the ESRD provisions, describes how they depart from established Medicare practices, and explains the objectives and issue structure for the ESRD Program. Finally, the chapter explains how the research relates to the issues associated with public financing of catastrophic health services.

A. Nature of End-Stage Renal Disease

End-stage renal disease (ESRD) refers to that state of various diseases of the kidney where the kidneys can no longer remove the waste products of metabolism on a permanent basis in quantities sufficient to sustain life. Until 1960 the diagnosis of end-stage renal disease meant certain death. Although the artificial kidney was first successfully used by Dr. Wilhelm Kolff for the treatment of humans in 1943, its use was limited to reversible renal failure because of the limited number of sites for vascular access. It was not until 1960 that Dr. Belding Scribner, M.D. and Dr. Wayne Quinton, an engineer, developed a technique which would allow an individual to be placed on
the artificial kidney for periodic hemodialysis—i.e. the cleansing of the uremic toxins from the blood. This technique involved the use of a permanently implanted teflon-silastic cannula and shunt which allowed repeated vascular access. The shunt made it possible to treat the individual with ESRD on a permanent basis, thus providing the capability to keep an individual alive who would otherwise be dead.¹

At about the same time as the development of the techniques for chronic hemodialysis the technique of kidney transplantation developed as a therapy for the treatment of individuals suffering from ESRD. The first transplants were performed in the early 1950's but with little success due to the problem of rejection. It was not until 1962 that indications of success in controlling the rejection process were observed. Within the next few years kidney transplantation advanced as a therapeutic procedure although the problem of rejection continues as the largest single problem in transplantation.²

Neither of these therapies is ideal. Both are extremely expensive. Both are subject to complications which may preclude the return to a normal life with a normal life expectancy. Transplantation, if successful, may allow the individual to return to a nearly normal life. Many of the social issues that developed in the treatment of individuals for end-stage renal disease can be traced to the nature of the therapies.
B. Issues Leading to the Passage of the ESRD Provisions

With the development of the two therapies, hemodialysis and kidney transplantation, the process of evolution began which eventually led to the passage of the ESRD provisions. While the number of patients with treatable end-stage renal disease is relatively small, the cost of dialysis and transplantation—especially dialysis—has been expensive from the outset. In the early 1960's the financing of direct patient care was not considered an appropriate role for the federal government. With the passage of Medicare in 1965 this role began to change. In 1967 there was an explicit recommendation that the cost of treating end-stage renal disease should be financed through the Medicare program. This was finally accomplished with the passage of the ESRD provisions in 1972.

Hemodialysis and transplantation offered individuals suffering from ESRD a reprieve from otherwise certain death. While the exact number of individuals who could be saved by these therapies remains a question, the number is relatively small in relation to the total population. The statement that approximately 50,000 Americans developed end-stage renal disease each year is used extensively in the professional literature. Despite the general acceptance of this figure a recent analysis of the basis for this figure has raised a number of questions about its adequacy. Even if this figure were accurate it would not adequately reflect the number of individuals to be treated by dialysis and kidney transplantation. Not all individuals who develop ESRD are
It has been estimated that between 5,500 to 30,000 individuals are medically suitable to begin treatment for ESRD each year. The primary difference in these estimates being how the term "medically suited" has been used. There is evidence that over the last few years the criteria for medical suitability has been relaxed significantly.

The cost of treatment for each ESRD patient is generally in excess of the financial resources available to most individuals and their families from personal sources, including private insurance. Like the incidence data the cost data is of questionable validity. However, it is useful in providing an order of magnitude indication of the costs. A recent General Accounting Office (GAO) study based upon 1972 data estimated that the cost of dialysis runs from $14,000 for the first year and $7,000 for each succeeding year for home dialysis to $30,500 per patient per year for hospital-based dialysis. The Department of Health, Education, and Welfare cited costs of $14,000 for a kidney transplant from a living donor to the GAO. Included in the cost of the living donor transplant are the hospital room, board, ancillary charges, and professional fees. With these costs, which exceed the private financial resources of most individuals, it is necessary to either provide the additional funding from public sources or allow the individual to die. In this respect two questions are raised. 1) Should the public financing of catastrophic health services be regarded as a public good? 2) How much public money should be spent to keep individuals with ESRD alive?
It was immediately clear that private resources were inadequate to provide the financing needed to keep individuals suffering from ESRD alive. As a result, most individuals died simply because there were inadequate funds to finance the therapy that was needed to keep them alive. Some lived, however, through a variety of financing measures.

The nature of this problem of scarce resources was presented in a very dramatic way in news features dealing with a committee in Seattle, Washington, which made the decisions on the allocation of scarce kidney machines among the various alternative patients suffering from end-stage kidney disease. After physicians used a strict set of medical criteria to reduce the number of potential patients, the committee then had the task of determining which patients should receive treatment based upon an evaluation of the patient's social worth. In reality this committee was confronted with making the difficult decision as to "Who Shall Live and Who Shall Die?"

With the development of these therapies for the treatment of ESRD and the subsequent questions of the financing of this therapy, the question was soon raised as to the responsibility of the federal government to provide the needed financial resources. In the early 1960's financing of direct patient care was not considered an appropriate role for the federal government. The sanctioned role did include support for health research and demonstration of the feasibility of therapies developed through research. By considering hemodialysis and renal transplantation as experimental therapies, the federal
government was able to provide research and development grants and contracts to the providers of ESRD therapy to demonstrate the feasibility of the therapies and to develop the therapy providing capacity. These grants and contracts provided a mechanism for using federal resources to relieve some of the financial pressures without providing direct financing for patient care.

With the passage of Medicare in 1965 the role of the federal government in the financing of direct patient services began to change. This change was slow. The inclusion of patients with end-stage renal disease under the Medicare program was still seven years away. In 1967, with the publication of the Gottschalk Report, there was the explicit recommendation that the cost of treating end-stage renal disease should be financed through the Medicare program. Little action resulted directly from this report. This report also served to legitimate both dialysis and transplantation as accepted medical therapies. The increasing recognition of dialysis and transplantation as accepted medical therapies led to increased demands for care and a weakening of the justification for using federal research and development funds for providing support to providers. These factors led to increased recognition of the financial plight of individuals suffering from ESRD.

The financial plight of the ESRD patients was highlighted in 1971 by the appearance of Mr. Shep Glazer before the House Committee on Ways and Means. Mr. Glazer testified, while being dialyzed in the hearing room, that dialysis did in fact keep patients alive and that unless something was done to provide federal financing for individuals
like himself within the near future they would all be dead. This same theme was echoed the next year in the Senate debate on the ESRD provisions when Senator Long (D-La.) argued that it was necessary to enact the provision because individuals suffering from ESRD could not wait for Congress to debate the broader issues of national health insurance. "The individuals suffering from ESRD need help, and that need is critical because without the help these individuals will not be alive for another 2 years," he said.

C. The ESRD Provisions and Their Passage

Late in the 2nd Session of the 92nd Congress, the Senate was completing action on a complex bill, H.R. 1 the "Social Security Amendments of 1972", which included major changes in Medicare and the establishment of the Supplemental Security Income (SSI) Program. On Saturday morning, September 30, 1972, with little advance warning, Senator Vance Hartke (D-Ind.) introduced an amendment to H.R. 1 to provide coverage under Medicare for all individuals, regardless of age, who have end-stage renal disease. Without prior hearings the kidney amendment was considered immediately and passed after a brief debate on the floor of the Senate by a vote of 52 to 3. At the time of the debate the final cost estimates for the amendment had not been determined but the preliminary estimates, according to Hartke, indicated an annual cost of approximately $250 million at the end of four years with the first full year cost at about $75 million. The debate centered around the issue of whether in a country with so much affluence it was
proper to allow people to die merely because of the lack of adequate financial resources. It was argued that in this country it should not be necessary to make the decision as to who will live and who will die when there is an available treatment. During the debate only one Senator spoke in opposition to the kidney amendment.  

The ESRD provisions were not designed to provide complete financial coverage for the treatment of ESRD, rather they were to begin six months after the onset of the disease in order to guarantee that the disease is chronic and to assure an appropriate mesh with private insurance. In this way the coverage was limited to the problem of financing catastrophic expenses.  

The ESRD provisions cleared the conference committee with only minor modifications. The only one of any significance changed the time that entitlement would begin from "The sixth month after the month of onset of chronic kidney failure" to "the third month after the month in which a course of renal dialysis is initiated." This change was made due to the problem of identifying the exact month of onset of chronic renal failure. With these minor changes the ESRD provisions were signed into law on October 30, 1972, as part of the "Social Security Amendments of 1972." The full text of the ESRD provisions follows.

**CHRONIC RENAL DISEASE CONSIDERED TO CONSTITUTE DISABILITY**

Sec. 299I. Effective with respect to services provided on and after July 1, 1973, section 226 of the Social Security Act (as amended by section 201(b)(5) of this Act) is amended by redesignating subsection (e) as subsection (f), and by inserting after subsection (d) the following new subsection:
"(e) Notwithstanding the foregoing provisions of this section, every individual who--

"(1) has not attained the age of 65;

"(2) (A) is fully or currently insured (as such terms are defined in section 214 of this Act), or (B) is entitled to monthly insurance benefits under title II of this Act, or (C) is the spouse or dependent child (as defined in regulations) of an individual who is fully or currently insured, or (D) is the spouse or dependent child (as defined in regulations) of an individual entitled to monthly insurance benefits under title II of this Act; and

"(3) is medically determined to have chronic renal disease and who requires hemodialysis or renal transplantation for such disease;

shall be deemed to be disabled for purposes of coverage under parts A and B of Medicare subject to the deductible, premium, and copayment provisions of title XVIII.

"(f) Medicare eligibility on the basis of chronic kidney failure shall begin with the third month after the month in which a course of renal dialysis is initiated and would end with the twelfth month after the month in which the person has a renal transplant or such course of dialysis is terminated.

"(g) The Secretary is authorized to limit reimbursement under Medicare for kidney transplant and dialysis to kidney disease treatment centers which meet such requirements as he may be regulation prescribe; Provided, That such requirements must include at least requirements for a minimal utilization rate for covered procedures and for a medical review board to screen the appropriateness of patients for the proposed treatment procedures."

D. ESRD Departures from Established Medicare Practices

The ESRD provisions contain a number of departures from established Medicare principles which facilitate the use of reimbursement incentives.

- The first time that Medicare will have responsibility for the financing of care for virtually all persons with a particular diagnosis.

- The broadest authorization under the Medicare program for the Secretary to limit reimbursement to facilities meeting such requirements as he may prescribe.

- The requirements of minimum utilization rates and medical review as conditions of reimbursement.
A movement away from the use of "customary" and "prevailing" charges in determining the amount of reimbursement to physicians.

These departures are based upon specific authorization contained in the ESRD provisions and the related legislative history.

1. Coverage of Virtually All Persons

Probably the single most important aspect of the ESRD provisions is that they mark the first time that Medicare will have responsibility for the financing of care for virtually all persons with a particular diagnosis. Subsection (e) of the ESRD provisions, as previously given, extends Medicare coverage to every individual under 65 who is either fully or currently insured under Social Security, and to the spouse or dependent children of such individuals, provided that the individual, spouse, or dependent child is medically determined to have chronic renal disease. The requirement that the individual has not attained age 65 is present because of the fact that persons age 65 and over were already entitled to coverage under the general provisions of Medicare. The inclusion of coverage for the spouse and dependent children provides much broader coverage than is present under the "Coverage for Disability Beneficiaries" which was also included as part of the "Social Security Amendments of 1972." It is estimated that 90% of the population of the United States is now covered under Medicare for the treatment of end-stage renal disease. The major groups not covered by Medicare for ESRD are government employees who are not covered under Social Security.
The nearly total coverage of the population receiving care for ESRD under the Medicare program placed the federal government in a monopsonist position with respect to the purchase of health services for the treatment of ESRD. Under the conditions of a monopsonist the federal government has potentially much greater power to affect the market which provides treatment of ESRD.

2. Authorization for the Secretary to Limit Reimbursement

In addition to the power of monopsony the ESRD provisions granted the Secretary broad powers to limit reimbursement to those facilities which meet requirements that he prescribes. According to Social Security officials this grant of power to the Secretary to limit reimbursement is broader than any power previously granted to limit reimbursement under the Medicare program. These powers are granted in subsection (g) of the ESRD provisions as previously given.

3. Minimum Utilization Rates and Medical Review

Beyond the broad grant of powers to limit reimbursement subsection (g) of the ESRD provisions goes on to specify that the limits on reimbursement shall "include at least requirements for a minimal utilization rate for covered procedures and for a medical review board to screen the appropriateness of patients for the proposed treatment procedures." These requirements expand upon the provisions of Section 249F of P.L. 92-603, which provide for the establishment of Professional standards Review Organizations to evaluate the quality of medical services.
izations are only concerned with quality, the minimum utilization rates are concerned with both the quality of the ESRD services and the economies of scale associated with the provision of these services.

4. Movement Away From "Customary" and "Prevailing" Charges

In addition to the specific requirements contained in the ESRD provisions, the ability to use reimbursement incentives under the ESRD Program was greatly enhanced by a clear statement of congressional intent to move away from the use of "customary" and "prevailing" charges in determining the amount of reimbursement to physicians. Senator Long (D-La.), acting as floor manager, made this point when presenting the conference committee report.

With respect to the coverage of kidney dialysis and transplantation, the Secretary would have the authority to define reasonable charges in terms related to the reasonable costs of the treatment provided and comparable charges for physicians' time and skills, since obtaining customary and prevailing charges for new and complex procedures—many of which will be reimbursed in all instances by the program—would be quite difficult administratively.22

The difficulties in obtaining "customary" and "prevailing" charges, referred to by Senator Long in the statement given above, arise because the treatment of over ninety percent of the ESRD patients is financed through the ESRD Program. With the care of the vast majority of the ESRD patients being financed through the public program there is no longer a price—i.e. customary and prevailing charges—for ESRD services which is determined independently of the government program. By relating the reasonable charges to the reasonable costs of treatment, it is possible to place effective controls and limits on
"customary" and "prevailing" charges. The inability to establish such controls in the past has been a major weakness of the existing method of Medicare reimbursement. Senator Long's statement provided the justification for the requirement contained in the interim regulations for the ESRD program that "reasonable charges may be defined in terms related... to the costs and profits that are reasonable when the treatments are provided in an effective and economical manner...."

With these broad grants of power it is evident that ESRD provisions deviated from the established Medicare principle of "fiscal neutrality". In this case, given the monopsony position of the federal government as the primary purchaser of ESRD therapy, it is possible to use this purchasing power to promote the efficient delivery of ESRD therapy.

E. ESRD Program Objectives and Issue Structure

In order to implement the ESRD provisions the Department of Health, Education, and Welfare has established a set of objectives for the ESRD Program and have identified a set of issues which must be resolved if these objectives are to be met.

There are four basic objectives of the ESRD Program:

1. To provide for the total health care needs associated with the treatment of kidney disease
2. To maintain or create the necessary availability and distribution of resources, i.e. access
3. To accommodate the requirements for appropriate and efficient practice by physicians and facilities
4. To assure quality and to contain costs of covered services

The issues which must be resolved if the ESRD Program is to achieve these objectives have been divided into two major groups. The first group is concerned with the development of reimbursement
mechanisms which provide incentives to ESRD patients and the providers of ESRD therapy to meet the objectives of the ESRD system. This group of issues is referred to as the "reimbursement issues." The second group which is referred to as the "organizational issues" is concerned with the development of specifications for an ESRD therapy system capable of meeting the stated objectives.

The issues included under the heading of "reimbursement issues" relate to patients, physicians, and facilities. The patient reimbursement issues are eligibility requirements, entitlement, and patient incentives. The physician reimbursement issues center around the problems of how to pay the physicians in a way which will promote the achievement of the objectives of the ESRD system. With nearly total funding by the federal government there is no market to establish "customary" and "prevailing" charges. Thus, it is necessary to design a method to determine the amount of reimbursement and the services that will be covered under the payment. In addition to determining the amount and basis for reimbursement, there is also the issue of "assignment". For facility reimbursement there is the question of how to limit the rise in costs which have accompanied the cost based reimbursement of the Medicare program. There is also the question of how to provide incentives for the facilities to produce the needed services at a cost which would be less than an established "target rate". Underlying all of these reimbursement considerations is the question of how to provide incentives for the treatment to be provided
in the most cost effective setting whether that be transplant, home dialysis, or self-dialysis in a limited care setting.\(^{26}\)

The resolution of the organizational issues involves the development of the specification for the network to provide the ESRD services. The network specifications involve mechanisms to insure that there is cooperation and coordination among the providers, that expensive equipment and personnel are concentrated to provide efficient treatment of large numbers of patients, that a data system is developed to monitor patient care, and that provision be made for managerial direction of the professional and administrative aspects of the ESRD system. In addition, the organizational issues include the development of minimum utilization rate and population bases as well as the establishment of local medical review boards.\(^{27}\) The major problems being confronted in both the reimbursement issues and the organizational issues is how to exert control over the production of ESRD services in a way which will promote efficient production and be acceptable to the patients, the physicians, the facilities, and the public.

F. The Research and the ESRD Issue Structure

In keeping with the stated objective, this research has placed primary emphasis upon the reimbursement issues associated with the ESRD Program as the basis for the analysis. Unlike other studies of incentive reimbursement mechanism the organizational issues are not considered to be independent of the reimbursement issues, rather they are regarded as interdependent and must be considered in the analysis.
The importance of the interdependency between the reimbursement issues and the organizational issues permeates the remainder of the thesis.

G. Issues Associated with Public Financing of Catastrophic Health Services

Before concluding this chapter it is important to consider the basic issues which must be confronted as medical science develops techniques for the saving of human life which require resources beyond those available to most individuals from private sources. Among the issues suggested by the events leading to the passage of the ESRD provisions and the passage of these provisions are:

- What is the value of human life?
- Who should decide "Who Shall Live and Who Shall Die?"
- What is the responsibility of the federal government to promote efficiency in the delivery of health services?
- What is the relationship between individual freedom of choice and the efficient provision of services under programs to provide public financing for catastrophic health services?
- What mechanisms are available for promoting efficiency in the delivery of catastrophic health services?

While these issues will not be addressed directly in this research, they are introduced to emphasize the importance of resource scarcity on any decision to provide public financing for catastrophic health services.

1. What Is the Value of the Human Life?

By definition the treatment of a catastrophic illness requires large financial resources usually in excess of those available to most individuals and their families from personal sources, including private insurance. Using this definition of catastrophic illness and the
assumption that personal health services are private goods, it is consistent to argue that individuals with catastrophic illnesses should be allowed to die if they do not have sufficient private resources, have not purchased adequate insurance, or do not wish to use their resources in the treatment of the catastrophic illness.

The converse of the argument given above is that the human life is sacred and should be saved regardless of the cost or the individual's ability to pay. If the human life is considered as sacred and the individual suffering from a catastrophic illness does not have or is unwilling to spend the private resources needed to finance the care of the catastrophic illness, then it would be argued that society should provide the resources needed to treat the catastrophic illness. In return for providing the resources society would benefit in knowing that it was able to preserve the basic value that the human life should be saved regardless of cost. Because the public receives "external benefits" in addition to the benefits that the patient receives, the catastrophic health services can be regarded as a public good. A public good is a good which would not be purchased in the optimal quantity unless the individual's demand is supplemented by public resources. The public resources could be provided either through government or through private philanthropic activities. If catastrophic health services are to be provided, they must be regarded as a public good because they require large financial resources usually in excess of those available to most individuals and their families from personal sources, including private insurance.\(^2\)
The value that the public places on the human life has become an important issue in the determination of whether to provide public financing for catastrophic health services. That is, Does the public regard the provision of catastrophic health services as a public good? Richard Rettig provides an in-depth analysis of the policy debate over the value of life as it related to the provision of public financing for the care of the victims of end-stage renal disease.\textsuperscript{29} The value of the human life when viewed as a public good has been the topic of a number of recent works by scholars such as Jan Acton,\textsuperscript{30} Victor Fuchs,\textsuperscript{31} and Richard Zeckhauser.\textsuperscript{32}

If we regard the provision of the financing for catastrophic health services as a public good, it is then necessary to investigate the nature of the public demand function. The previously mentioned belief that human life is sacred and should be preserved regardless of cost implies that resources should be allocated to the saving of human lives until that point is reached where it is not possible to save any additional lives even if we would devote more resources for the purposes of saving additional lives. Zeckhauser has labeled this belief a myth because we do in fact restrict the amount of resources we allocate to the saving of human lives. This is especially true where the lives to be saved only reflect the statistical probability that the life of some unidentified individual would be saved. A value is placed on these "statistical lives" every time a decision is made to allocate funds to programs such as highway safety or emergency medical services. In
cases where the individual whose life could be saved is known, the "identified life", we have made greater efforts to preserve the myth that life should be saved regardless of cost. Examples of the efforts to preserve the myth would include the passage of the ESRD provisions or the efforts used to save miners trapped by mine cave-ins.\(^{33}\)

With the development of more of what Lewis Thomas has labeled "half-way technologies" of medicine, it is likely that explicit decisions will have to be made as to the resources to be used to save the identified life. According to Thomas a "half-way technology" is one which does not treat the underlying causes of the illness, rather it provides palliative therapy to treat symptoms of the illness. These therapies are usually characterized by high costs while "high technology" therapies such as polio vaccine which treat the underlying causes are usually low in cost.\(^{34}\) Both the artificial kidney and the kidney transplant represent half-way technologies. Among the forthcoming half-way technologies, which also have the potential of forcing the question of the value of the identified life, would be the artificial heart or the artificial pancreas.

The need to address the question of the value of the human life rests on the fact that resources are scarce. In order to supply the resources needed to provide catastrophic health services, it is necessary to forgo other goods and services. Many would argue that health is more important than other goods and services and the choice should be evident. The problem comes when it is necessary to forgo specific goods and services. Is food for undernourished children less
important than catastrophic health services needed to prolong the life of an elderly person by one year? Is this additional year of life more important than providing vaccinations which would save the lives of scores of children. The question becomes one of what marginal benefit in terms of reduced mortality and morbidity is required to justify the marginal cost of providing catastrophic health services. Rottenberg has suggested that the human body is subject to physical depreciation just like any other durable good and should be scrapped when the costs of repair exceed the value of the good? A major difficulty in doing what Rottenberg suggests is related to two factors. The first factor is the measurement problem. That is, how do we measure the benefits—e.g. changes in morbidity and mortality—that are expected. Earlier in this chapter we discussed the problems associated with determining the number of individuals who are suitable for treatment of ESRD. The measurement problem also arises when we try to measure the costs associated with the treatment of ESRD. What goods and services must we forgo in order to provide treatment for ESRD? The second factor is concerned with what standard do we use to relate the marginal benefits to the marginal costs. Since not all costs and benefits are easily expressed in monetary terms, it is necessary to cope with the problem of relating the costs to the benefits. Assuming that we are able to compare the benefits with the costs, it is then necessary to develop a public demand function which specifies the quantity of catastrophic health services to be financed through a public
financing program. In this function it would be necessary to specify when it is too expensive to preserve the identified life. In the case of ESRD the decision that the cost of treatment is too high has not been made although the issue has been raised.

2. Who Should Decide Who Shall Live and Who Shall Die?

Given the need for a public demand function for catastrophic health services, it is necessary to determine who represents the public in the decisions as to who should live and who should die. If we as a society decide that public financing of catastrophic health services is not a public function, then the individual's demand and ability-to-pay are the sole determinants of the quantity of health services received. Another alternative would be to make no publicly determined decision rules but rather allocate a given amount of resources to the providers and allow them to make the choice either directly or by delegating the responsibility to a committee such as the committee used to select patients for dialysis in Seattle. A third alternative would be to designate a national body, either Congress or a group created by Congress and/or the President which would have to make the decisions on how the health resources should be allocated. This body would have to decide which services should be provided regardless of ability to pay, which services should be available only to patients who have the ability to pay, which services should be provided only to those individuals with high social worth, and which services should be denied to all on the basis of excess costs. Regardless of the actual
decision rules or who makes the decisions, the important fact is that the decisions will be made, scarce resources will be allocated, and values will be placed on the human life.

3. What is the Responsibility of the Federal Government to Promote Efficiency in the Delivery of the Health Services?

Given the reality of resource constraints the only way to provide more and better catastrophic health services is to increase the efficiency of the production process. The expected improvements in quantity and quality of the catastrophic health services would depend upon the potential for improving the efficiency of the system. If the system was operating at or near efficiency, there would be little expectation for improvements. If, however, as it is widely held, the system for the delivery of health services in the United States deviates greatly from most standards of efficiency, there is a great potential for improving both the quantity and the quality of health services. If action is to be taken to move toward a more efficient health delivery system, it is necessary to first determine the standards for an efficient catastrophic health service delivery system. Having determined what is meant by the efficient catastrophic health service delivery system, it is then necessary to define the responsibility of the federal government to create such a system. Depending upon the evaluation of the efficiency of the existing catastrophic health service delivery system and the prevailing philosophy about the appropriate functions of government, it will be possible to define the scope of government responsibility. With the scope of responsibility
defined, it is then necessary to design mechanisms which are capable of meeting this responsibility.

As pointed out by Rettig and Webster cost control was only regarded as a secondary responsibility of the ESRD Program. The primary responsibility of the ESRD Program was to subsidize the provision of medical services. Given this order of priorities the efforts to control costs through reimbursement incentives were constrained by the first priority of ensuring that the payments were made.


Much of the recent rhetoric pertaining to national health insurance refers to the "right" of individuals to receive health care regardless of the ability to pay. Seldom is an operational meaning ever given to the concept "right" to health care. If the public demand for the treatment of catastrophic illness places a limit upon the public resources available to finance care, then it would be impossible under public programs to provide the individual patient with a right to all of the health care that he wants. It would also be impossible to grant the physician the right to use all of the resources he feels the patient needs. Because of the resource constraint the patient and physician would not be free to choose the appropriate therapy, but they must make their decision within the constraint imposed by the public's willingness to provide resources.
5. **What Can the Federal Government Do to Promote Efficiency in the Delivery of Catastrophic Health Services?**

The issues centered on the value of the human life, who should decide "who shall live and who shall die," and the responsibility of the federal government to promote efficiency in the delivery of catastrophic health services will continue to be important issues as additional high cost lifesaving therapies—like hemodialysis and kidney transplantation—are developed. As mentioned earlier, these issues will not be addressed directly in this research. This set of issues was introduced to emphasize the importance of resource scarcity on any decision to provide public financing for catastrophic health services. This research deals with the set of issues which arise after the decision to provide the therapy has been made. Given a desire by the federal government to promote efficiency in the delivery of catastrophic health services, it is then necessary to develop mechanisms to achieve this objective. By studying the ESRD reimbursement mechanism it is possible to identify generic factors which can be transferred to other programs to provide public financing of catastrophic health services. Given that any system utilizing a public demand function will limit the freedom of choice of both the patients and the physicians, it will also be possible to study how these limitations affect the performance of the ESRD reimbursement mechanism.
Chapter II—Footnotes


5"Report of the Committee on Chronic Kidney Disease, A Report to the Director of the Bureau of the Budget", September, 1967. (Hereafter, the "Gottschalk Report" after Carl W. Gottschalk, M.D., the Chairman on Chronic Kidney Disease which produced the report).

6U.S. Department of Health, Education, and Welfare. Regional Medical Programs Service. "Health Initiative: Control of the Ravages of Kidney Disease". (Hereafter, referred to as the "RMP Life Plan") February 14, 1972. p. 1. This report estimates that there are 7,000 to 10,000 patients ideally suited for treatment and an additional 10,000 to 20,000 who would benefit from such treatment.


9. Ibid. p. 44.


11. "Gottschalk Report"


15. Ibid.


20. "P.L. 92-603, Sec. 2991."


27. Ibid.


36 "Medicarelessness", (editorial) The New York Times. January 14, 1973. p. 16. This editorial raises the question whether the allocation of a billion dollars for ESRD was the highest and best use of the funds and whether the Congress knew what they were voting for.


Bridger M. Mitchell and William B. Schwartz. "The Financing of National Health Insurance". Science, Vol. 192, No. 4240. May 14, 1976, p. 627; point out that there is a broad spectrum over the meaning of health care as a right. "At the one end of the spectrum, as exemplified by the full coverage provision of the Corman-Kennedy bill, are those who feel that "health care is a right"—that access to health services should neither be limited nor rationed by price". "At the other pole, as exemplified by the provisions of the Long-Ribicoff bill, are those who see no justification for a societal decision to commit additional resources to the care of the general population, except for the treatment of catastrophic illness."
CHAPTER III
ANALYSIS OF INCENTIVE REIMBURSEMENT MECHANISMS

This chapter constitutes a critical review of the literature on incentive reimbursement. Its purposes are to (1) indicate the major propositions and assumptions contained in this literature and (2) to point out the limitation of these assumptions relative to real-world applications. As defined in Chapter I, incentive reimbursement refers to the use of the third party payment for medical services to influence a primary party—the patient—and secondary parties—either physicians and/or hospitals—to behave in a manner which is consistent with the objectives of the third party.

The existing literature on incentive reimbursement shares with health economics the tendency to perceive the health market as analogous to economic markets in general and to assume that behavior with the former corresponds to behavior within a general economic market. The literature emphasized the consumers—patients—and the firm as institutional producers—hospitals—without giving adequate attention to physicians and the total health market. Moreover, the assumptions about the performance of economic markets are frequently carried over into assumptions about health market behavior even though they may not be entirely appropriate. Among these assumptions are: the assumption that the individual demand is appropriate; the assumption that the
nature of the health product is known; the assumption that the price of the health product is determined in the private market; and the assumption that the incentive reimbursement model can be implemented.

This basic problem arises because there is yet no adequate "industrial organization" perspective on health. Scherer, in *Industrial Market Structure and Economic Performance*, explains that industrial organization is concerned with how the market process directs the activities of producers in meeting consumer demands, how these processes may break down, and how they can be adjusted—through government intervention—to make actual performance conform more closely to the ideal.\(^1\) This perspective requires an understanding of microeconomic theory to force rigorous predictive links between fundamental assumptions and their behavioral consequences, an ability to extract generalizations from data on industrial structure and performance, a willingness to place findings in broader perspective, and to extract from a tangle of institutional detail the causes of departures from the norm.

A major weakness of the existing literature on incentive reimbursement is that the behavior under real-world applications of incentive reimbursement mechanisms often deviates substantially from the behavior expected from these mechanisms as they are depicted in the literature. In this chapter we suggest that much of the departure of the actual behavior from the expected behavior is caused by the failure of most of the existing incentive reimbursement literature to consider:
• the nature of the public demand
• the specification of the health product
• the method for determining if the health product is produced
• how the price is determined
• how the incentive reimbursement mechanism is implemented

The chapter begins with an overview of the various classes of incentive reimbursement mechanisms. This is followed by an analysis of the nature of demand. This analysis presents the weaknesses of the existing theories of incentive reimbursement for programs that provide public financing for catastrophic health services. The next section examines weaknesses of the existing theories of incentive reimbursement created by the failure to adequately specify the nature of the health product. This section includes a discussion of the importance of determining if the health product is produced. This is followed by a discussion of the failure of the existing theories to consider the mechanisms needed to specify the price. The final section points out the failure of the existing incentive reimbursement literature to consider the problem of implementation. The best designed incentive reimbursement mechanisms are of little value if they cannot be implemented in actual real-world settings.

A. Classes of Incentive Reimbursement Mechanisms

The various incentive reimbursement mechanisms proposed in the literature can be divided into three basic classes. The first includes those incentive incentive reimbursement mechanisms which require
cost sharing by the patients. The second class of incentive reimbursement mechanisms are those designed to make the providers of health services share in the rewards of low production costs and the penalties of high production costs. The final class of mechanisms are those which provide incentives for the providers to operate in accordance with a set of structure and process specifications. Each of these classes and their major components are outlined in Table 1. These classes of incentive reimbursement mechanisms are used in the subsequent sections of this chapter to present the weaknesses of the existing incentive reimbursement literature.

1. Cost Sharing by Patients

A major problem associated with the use of third party payments—usually government or private health insurance carriers—of interest to this research is that of "moral hazard". Moral hazard refers to the incentive which the third party payment provides for the covered individual to act in a manner different from the actions normally taken when there is no third party coverage. For example, the presence of fire insurance may increase the probability of fire either because of carelessness or even arson. In the case of medical insurance and government programs to provide financing for health services, the cost of the medical care is not determined solely by the illness, but it depends on the patient's decision to seek care and the type of therapy received. Because the price directly charged to the patient for care is reduced, the patient seeks care more frequently and utilizes more expensive forms of therapy.
TABLE 1
CLASSIFICATION OF
INCENTIVE REIMBURSEMENT MECHANISMS

1. Cost Sharing by Patients
   a. Deductible
   b. Coinsurance
   c. Limits on Covered Services
   d. Limits on Reimbursement for Specific Services
   e. Variable Cost Insurance

2. Cost Sharing by Providers
   a. The Predetermined Rate
      i. Comprehensive Payment
      ii. Categorical Payment
      iii. Intermediate Products
      iv. Specific Services
   b. Relative Performance

3. Structure and Process Specifications
Pauly explains that the problem of moral hazard is not the result of a moral or ethical problem reflected by the failure of individuals who are or have been affected by third party payments to uphold the accepted moral qualities, rather it is the result of rational economic behavior. The effect of all medical insurance is to reduce the price directly charged to the individual for medical services, although this may increase the aggregate cost for the group of insured individuals. Unless the health consumer has no control over the quantity of health services demanded, the lowering of the price of services will increase the demand.3

From the premise that the patient overutilized health services because of the failure to consider the full cost of the care in determining the level of care demanded, a number of suggestions have been made for the design of reimbursement mechanisms which require the patients to consider the cost of the care. These suggestions which require cost sharing by the patient include deductibles, coinsurance, limits on covered services, limits on reimbursement for specific services and variable cost insurance. These cost sharing by patient incentives under programs to provide public financing for catastrophic health services are intended to induce the patient to utilize the level of health services demanded by the public. The nature of the public demand is discussed later in this chapter.

a. Deductible. The deductible has been a feature of health insurance policies predating the academic discussion of the economic basis for moral hazard and has become a standard feature under most
government health financing programs. The deductible is a require-
ment that the patient pay a certain designated cost prior to the
beginning of coverage under the insurance policy or government pro-
gram—e.g. The first fifty dollars of medical bills must be paid by
the patient before the insurance company will begin making payment.
The intended effect of the deductible is to reduce the quantity of
medical services that the patient demands by making the patient incur
the full cost of the medical services received until the designated
amount has been reached.

b. **Coinsurance.** Like the deductible the coinsurance pro-
vision has been a standard feature of insurance policies for many
years. Under a coinsurance scheme the individual is charged a positive
price for medical care, but a price less than the market price. The
price would usually be a percentage of the market price—e.g. A twenty
percent coinsurance provision would mean that the patient pays twenty
percent of the cost of the medical care. The coinsurance provision
causes a reduction in the quantity of health services used. The actual
reduction depends upon the percentage coinsurance and the elasticity of
demand. The greater the percentage coinsurance the greater the reduc-
tion. The more elastic the demand the greater the reduction. In cases
where there is a relatively inelastic demand, as has been suggested
in the case of catastrophic health services, the coinsurance provi-
sions would have little impact on utilization.

c. **Limits on Covered Services.** In addition to the use of
deductibles and coinsurance, there are usually limits placed on the
types of care that will be covered by the third party payer. The
limits are placed on the types of care to be covered in order to
prevent over utilization of those services which have a relatively
large discretionary component. Thses types of care would be more
susceptible to the problems associated with moral hazard. By not
covering these services the patient must consider the full cost of
the services in the decision to seek care. Among the services which
are often excluded from health insurance contracts are cosmetic
surgery, dental benefits, and psychiatric care.

d. Limits on Reimbursement for Specific Services. Another
method to reduce the problems of moral hazard is to place dollar limits
on the amount of the reimbursement that will be made for specific
services. The placement of the limits is designed to provide incen­
tives for the patient to choose those providers who will provide
the services for the amount of the reimbursement or consider the full
cost of the decision to utilize services and providers which exceed
the amount of the reimbursement.

e. Variable Cost Insurance. Newhouse and Taylor in a number
of articles have argued for a new type of insurance where the patient
would exercise his discretion over the type of health services demanded
in the selection of the type of insurance coverage. The patient would
choose plans which provide basic health benefits or a plan which
provides luxurious and often wasteful services. Under the plans the
patient would preselect the hospitals to provide care when needed.
The hospitals would be rated according to cost of care and the patient
would select the cost and level of care that he desired. The premium on the patient's health insurance would be adjusted according to the type of care selected. Newhouse and Taylor refer to this as "variable cost insurance". Under this type of insurance the patient would have a financial incentive to choose that level of care where the benefits would equal the costs.

2. Cost Sharing by Providers

The second set of incentive reimbursement mechanisms are those designed to make the providers of health services share in the rewards of low production costs and the penalties of high production costs. This is achieved by allowing the provider to retain a portion of the difference between the normal third party payment and the lower cost resulting from increased efficiency of production. When production costs exceed the normal, the provider would not be reimbursed for the full amount of excess production costs. The cost sharing by provider incentive reimbursement mechanisms have been divided into two groups, those which use a predetermined rate as the basis for reimbursement and those which base the reimbursement on the relative performance of the provider.

There is a dual justification for the cost sharing by provider incentive reimbursement mechanisms. The first relates to the implicit assumption that the consumer of health services is either unable to develop a demand for efficiently produced health services because of a lack of knowledge about the health product or has no incentive to
do so because of the problem of moral hazard. The second is related to the usual practice of cost or charge based reimbursement for health services which places few, if any, constraints on the availability of financing from either the consumer or the third party. As a result, there are few incentives for the providers to produce the health product efficiently.

a. The Predetermined Rate. The predetermined rate is a method of paying for health services in which 1) amounts or rates of payment are established in advance for the succeeding time period; and 2) the providers of health services are paid these amounts or rates regardless of the costs actually incurred. An example of a predetermined rate reimbursement mechanism would be the payment of a fixed amount for the care associated with a given illness regardless of the cost of providing that care. Like all incentive reimbursement mechanisms designed to make the provider share the costs of the services, the predetermined rate rewards those providers who produce the desired output at a cost less than the normal payment and penalizes those with higher than normal production costs. Within the group of reimbursement mechanisms using the predetermined rate there are four variations based upon the specification of the output.

1. Comprehensive Payment. Under this approach a provider is paid a fixed amount for providing all services needed to treat a specific category of medical needs—e.g., a fixed amount for the treatment of the end-stage renal disease patient. The predetermined comprehensive payment can be further classified according to whether
the provider provides total health services, only hospital services, or only physician services.

The first set of predetermined comprehensive payment mechanisms pay a fixed amount for the provisions of the total health services needed by the covered population regardless of the type or quality of services needed. The total services would include all physician, hospital, and ancillary services. The principal example of this group of reimbursement mechanisms is the use of the capitation payment to the health maintenance organization (HMO).

The second set of predetermined comprehensive payment mechanisms pay a fixed amount for all hospital services needed by the covered population. Under this plan all non-hospital health services—e.g. physician and ancillary care—would be financed under separate arrangements. The payment to the hospital would usually be a capitation payment based upon the number of individuals to be served.

The third set of predetermined comprehensive payment mechanisms pay a fixed amount for all physician services needed by the covered population. This plan would be a complement to the previously discussed plans for the predetermined comprehensive payment to the hospital. In this case the provider would be the physician rather than the hospital. The literature on incentive reimbursement has given little attention to the use of prepayment for physicians' services only; the prepayment to the physician is usually presented in terms of a plan where the physician or physician group is responsible for the total health services of the population. Under the current
approach the physician would only be responsible for providing the physician services.

ii. Categorical Payment. The major difference between the comprehensive payment and the categorical payment lies in the definition of the unit of output. In the comprehensive payment this was defined as all covered health services needed by the covered population. The payment was based upon the size of the covered population. In the case of the categorical payment the unit of output would be the medical services needed to treat a specific medical condition for a covered individual. In the case of end-stage renal disease the payment would be for the treatment of ESRD. If the ESRD patient should break an arm, this would have to be paid for separately.

Lave, Lave, and Lester have suggested that by basing the amount of the predetermined payment on the "case-mix complexity"—i.e. categories of medical need—it is possible to provide incentives for efficient production of health services and yet account for the heterogeneous characteristics of the patients being treated by a given provider. The problem with this approach according to Dowling is that the problem of defining the category of illness (Dowling refers to the "episode of illness") is substantial.

iii. Intermediate Products. The intermediate product would represent some aggregation of services such as the day of hospital care, month of patient care, or home dialysis training episode. The predetermined rate for intermediate products provides a fixed amount for producing the intermediate product regardless of the inputs used in the production of that product.
iv. Specific Services. The use of the predetermined rate for specific services—e.g., nursing care, laboratory tests, surgical procedures, x-rays, etc.—is most closely associated with the usual practices of cost or charge based reimbursement. The difference being that the amount to be paid for each service is determined in advance.

b. Relative Performance. In addition to the predetermined rate to make the providers share the cost of services they provide, a payment based upon relative performance of a group of providers would provide a similar result. Under a relative performance reimbursement mechanism the amount of the reimbursement is based on the average costs of all providers. Those providers with costs greater than the mean would be penalized, and those with costs less than the mean would be rewarded. For example, if the average cost of a patient day of hospital care in the community was one hundred dollars, then all hospitals would be paid the one hundred dollars regardless of their actual costs.

Feldstein presents an analysis of cost functions to demonstrate how the reimbursement on the basis of average cost will provide incentives for all providers to move to the lowest point on the long-run average cost curve for all hospitals. In his presentation he notes a number of modifications which could be made in the basic model while still providing incentives for cost reduction. Among these modifications would be adjustments for initial differences in hospitals—e.g., size, type of service, etc.—use of intermediate products.
as the basis for determining costs, payment of average short-run fixed costs while paying the actual short-run marginal costs, and payment based on the average increase in costs.\textsuperscript{11} A complete elaboration of the "average increase in costs" incentive reimbursement mechanism is presented by Waldman.\textsuperscript{12}

3. Structure and Process Specifications

The preceding cost sharing by provider incentive reimbursement mechanisms based the payment on the production of health products—e.g. comprehensive services, categorical services, intermediate products, or specific services. No effort was made to specify how the health product should be produced. The final class of incentive reimbursement mechanisms require that the health product be produced according to a set of predetermined structure and process specifications. The structural specifications set forth the resources which are to be used in the production of the health product and how these resources are to be organized—e.g. specification of the number of renal transplant centers in a given community and the relation of other providers of health services to the transplant centers. The process specifications set forth the activities of the elements of the health delivery system—e.g. training the patients for home dialysis. The structure and process specifications relate to all elements of the health delivery system—e.g. patients, physicians, hospitals, and the total health system. They also relate to all classes of health products—e.g. comprehensive health services, categorical services,
intermediate products, or specific services. The incentives provided under the structure and process incentive reimbursement mechanisms range from absolute denial of payment to providers who do not meet the specifications, to differing rewards and penalties for varying degrees of compliance with the specifications.

The development of structure and process specifications for health systems has been the traditional function of health planners. It has too often been the case that these plans have not been utilized to promote the efficient delivery of health services primarily because providers of health services had no incentives to comply with the plans. By coupling reimbursement to compliance with the process specifications for the health delivery system, the providers would have incentives to conform to the specifications. Among the proposals to force compliance with the specifications are the requirements that reimbursement for new facilities be made only if the facility has been approved prior to construction, that no new services be reimbursed without prior approval, that there be continuing review of existing facilities and services as a condition of reimbursement, that provision of additional reimbursement be made to provide incentives to add needed services and programs, and that reimbursement be made only for those services which are used appropriately.\textsuperscript{13}

A more limited approach is the development of specifications for hospital performance. Under this "industrial engineering approach", specifications are developed for the most efficient method of producing a given product and reimbursement incentives are provided
to those hospitals which adopt the efficient production methods. Of particular importance to hospitals is the observation by Bauer and Densen that the industrial engineering efforts are for the most part directed at the hotel departments of hospitals, those directly under the supervision of hospital administrators. There has been a tendency to steer clear of laboratory, x-ray, operating room, and cost centers where major decisions are made by physicians, although it is in these departments that costs are generally considered to be most out of control.

For physicians the reimbursement would be subject to certification through some form of peer review mechanism that the care was provided according to the specifications and that the charges are within established guidelines. Where the specifications are not met the reimbursement would be reduced or denied. This type of incentive for reimbursement was initially associated with the foundation approach to the practice of medicine and more recently has been the subject of controversy as it relates to the federally mandated Professional Standards Review Organizations (PSRO's). It would be expected that those physicians who are not operating within the specification would change their behavior in order to receive reimbursement for their services. The peer review mechanism does not necessarily provide a mechanism for promoting efficiency in the delivery of physician services. Given the emphasis which the medical profession places upon giving the best care that is technically possible, the only legitimate and explicitly recognized constraints are related to
the state of technical knowledge. Fuchs has referred to this emphasis as the "technical imperative". At the present time most of the efforts to use the peer review process have been concerned with ensuring that high quality care is provided and that all of the care that is provided is necessary. There has been little expressed concern by the medical profession with whether the benefits received from the use of the technical imperative exceed the costs--e.g. Is a heart transplant worth the expense?--or whether the therapy can be provided more efficiently--e.g. movement from hospital dialysis to home dialysis. While the medical profession can avoid the question of whether the benefits received from the use of the technical imperative exceed the costs, the policymaker cannot afford this luxury. In order to have an effective expression of the public demand, it is necessary to specify what is regarded as an acceptable level of quality.

This section presented the various classes of incentive reimbursement mechanisms currently being proposed and/or used. The following sections concentrate on the problems of directly using these mechanisms in programs to provide public financing for catastrophic health services. Through the discussion of the problems some of the modifications that are required to meet these problems are also suggested.

B. The Nature of the Demand

Chapter II explained why catastrophic health services can be considered a public good and thus subject to a public demand function. Like any demand function the public demand specifies the relationship
between the price of the product and the quantity of the produce demanded at the price. Only in this case the public, as represented by the government, rather than the individual would be responsible for establishing the demand. The public demand for health services reflects the level of health services that the public is willing to provide given the price of health services.

While it is important to consider the public demand in the development of incentive reimbursement mechanisms for programs to provide public financing for catastrophic health services, it is often difficult to determine exactly what that demand is. The expression of the public demand through the enactment of legislation is often imperfect. This is due to the hesitancy of the Congress to make difficult decisions which may be politically unpopular and because of the inability of Congress to consider all of the contingencies associated with a program even if they were willing to do so. The difficulty of dealing with contingencies makes it necessary to elaborate the public demand through administrative rules, regulations, and informal decisionmaking. It is necessary, therefore, to examine the statutes and related documents establishing the government programs in order to understand the nature of the public demand. In many cases there may be no clear articulation of the public demand, but without a clear public demand it is doubtful that an effective incentive reimbursement mechanism can be developed.

Most of the works on incentive reimbursement begin with a statement similar to that by Katharine Bauer.
The precipitous rise in the cost of hospital care and other health services during the 1960's created corresponding pressures for cost containment. Government officials and taxpayers confronted with runaway budgets and employers and unions confronted with runaway health insurance premiums began to demand a halt.  

This statement indicates a public demand for limitations on expenditures for health services. Samuelson cautions in the book, *Economics: An Introductory Analysis*, "what seems to be true for all may be quite false for any one individual". In the case at hand the public may demand only a limited quantity of catastrophic health services, but individuals in their private decisions to seek medical care may want a greater quantity.

In this section we analyze the demand for catastrophic health services. This analysis is divided into five parts. The first is concerned with the relation between the individual demand and the public demand. The second concentrates on the role of the individual demand within the public demand. This is followed by an analysis of the relationship between the public demand and cost sharing by provider incentives. The fourth is an examination of the public demand in relation to the structure and process specification incentive reimbursement mechanisms. Finally, there is a brief summary of the nature and implications of the public demand for programs to provide public financing of catastrophic health services.

1. **Relation of Individual Demand to the Public Demand**

As mentioned earlier in this chapter "moral hazard" refers to the incentive which the third party payment provides for the covered
individual to act in a manner different from the actions normally taken when there is no third party coverage. The cost sharing by patient incentives were originally intended to induce the patient to demand the same level of care that he would if there were no third party payment. Since catastrophic health services require resources in excess of those available from the individual's private resources, the patient simply would not purchase catastrophic health services without the public financing. Public financing of catastrophic health services, therefore, means that the individual would receive more health services than he would receive if such a program did not exist. The question then is: What additional health services is the public willing to provide to the individual? It is the public demand that specifies the level of additional health services that the individual can receive. This quantity could range from all of the health services that the individual could possible desire to only that minimum level of service required to maintain life, and in some cases the public may not be willing to provide the resources needed to maintain life.

Regardless of the level of catastrophic health services that the public demands the important fact is that the cost sharing by patient incentives must be related to this public demand rather than to the individual demand. A major weakness of the existing theories of cost sharing by patient incentives is that they are based upon the implicit assumption that the individual demand is appropriate. If the cost sharing by patient incentive reimbursement mechanisms are to be
effective under a program to provide public financing for catastrophic health services, it is necessary to relate the incentives to the public demand rather than the individual demand.

2. **Individual Demand Within the Public Demand**

While the public demand sets the upper limit on the resources the public is willing to provide for the provision of the catastrophic health services, this does not mean that the individual could not express an individual demand within the constraints imposed by the public demand. The existing literature on cost sharing by the patient can contribute to the development of the cost sharing by patient incentives, but it is important to relate these incentives to the public demand.

In addition to the need to relate the incentives to the public demand, it is also necessary to consider previously acknowledged limitations of cost sharing by patient incentives. The first is that the consumer may not have the knowledge needed to adequately express an individual demand. Because of the large gap in knowledge between the patient and the provider of health services, it is doubtful whether the patient makes the decision. In fact, it may be that the provider makes the decision for the patient. If, as Pauly has argued, the demand for catastrophic health services is perfectly inelastic—i.e. the quantity of health services demanded is invariant with respect to the price of the health services to the patient, then the cost sharing by patient incentives would not alter the amount of health services consumed. This inelasticity is due to the fact that
either the patient receives the catastrophic health services or he dies. On the other hand, Newhouse and Taylor have pointed out the patient does exercise a high degree of discretion in the choice of the type and amount of health services received for all types of illness including catastrophic. The choice would be between the basic health services required and the luxurious and wasteful services provided by some hospitals. If the demand for catastrophic health services is in fact elastic as suggested by Newhouse and Taylor, then the cost sharing by patients become more important.

3. Public Demand and Cost Sharing by Provider

The cost sharing by provider incentive reimbursement mechanisms recognize, at least implicitly, the presence of a public demand. Their major weakness for an operational incentive reimbursement mechanism is that they fail to explain how the health product that is being purchased is specified and how the price that is paid for that product would be determined under actual programs to provide public financing for catastrophic health services. These two factors are discussed in conjunction with Sections C and D of this chapter.

4. Public Demand and Structure and Process Specifications

Like the cost sharing by provider incentive reimbursement mechanisms, the structure and process specification incentives recognize the presence of a public demand. In addition, they recognize the need to specify the nature of the health product and suggest how the reimbursement can be used to provide incentives for the providers. The operational weaknesses of this class of incentive reimbursement
mechanisms rest upon the failure to consider the process of developing the structure and process specifications for the public demand, and the mechanisms required to establish the amount of the reimbursement. These two factors are considered in the next two sections of this chapter.

5. Summary

In this examination of the public demand two facts become clear. First, in order to develop patient incentives, cost sharing by provider incentives, or structure and process specification incentives, it is necessary to develop clear specifications of the nature of the health product that the public demands. If this is not done there is little point in providing incentives to induce changes in the behavior of patients, physicians, and hospitals if we do not know how we want the behavior changed. Second, in order to develop patient incentives, cost sharing by provider incentives, or structure and process specification incentives, it is necessary to be able to determine what price the public is willing to pay for the health services. As Section D of this chapter demonstrates there would be no market price under programs to provide public financing for catastrophic health services. Because of this it is necessary to develop alternative price setting mechanisms. The problems associated with the specification of the health product and determination of the price of that product are discussed in the two following sections.
C. Specification of the Health Product

Most health economists would agree with Paul Feldstein's argument of the value of using incentives which are related to the final output—i.e. the desired catastrophic health services.

Direct-output incentives base their rewards and penalties on the final output itself, i.e., on a given quality of care at minimum cost. These are similar to the incentive under which the private sector of the economy operates, where rewards are related to prices and to the costs of production of the output. Such incentives not only encourage the undertaking of desirable processes, but also encourage a greater search for applicable information and technology from other fields.25

However, as Berki points out, in the health sector the final bill of goods is unspecified and the matrix of technical coefficients is unknown.26 If what Berki suggests is true, then the only way that the incentive reimbursement mechanisms based on the use of direct output incentives will function is if specifications of health products are developed and arrangements are made to ensure that these specifications are met. Most scholars concerned with incentive reimbursement have recognized that a limitation of their models is the failure to consider the problem controlling the utilization and the quality of care. Dowling states: "It would appear that controls over quality and utilization might assume more importance as cost-containment incentives are introduced."27 Even Feldstein has recognized that "a problem common to all reimbursement systems is their effect on quality of care."28 Having recognized the problem, they then assume that it has been resolved or is unimportant rather than incorporating it in the development of their models. The problem has not been
resolved, and it cannot be assumed away in actual programs to provide public financing for catastrophic health services.

To control quality and utilization it is necessary to establish mechanisms for specifying the nature of the health produce and determining that the providers of catastrophic health services are in fact producing the desired product. While these mechanisms are needed if effective incentives are to be provided, they greatly increase the complexity of the reimbursement mechanism. It is not possible to develop the uncomplicated mechanisms which the health economists idealistically propose. The development of these complex mechanisms is fraught with a high degree of technical and political uncertainty. There has been little experience to date in specifying the nature of health products, and patients and physicians are not likely to support efforts by the government to specify the nature of the health product. Rather than assuming this complexity away—as does the existing literature on incentive reimbursement—it is necessary to devote additional energies to the development of feasible mechanisms for specifying the nature of the health product and determining if this product is being produced.

In this section we first examine how the motivation of providers of health services leads to the need to specify the nature of the health product. This is followed by a discussion of the need to establish a mechanism to specify the nature of the health product, and a discussion of the need to provide a mechanism to determine that the providers are in fact producing the desired product.
1. **Motivation of Providers**

In the health care sector, which is presumed to be nonprofit, the assumption of profit maximization may not fit exactly, but there is reason to believe that the health providers do attempt to maximize some objective function. The exact nature of this objective function is not known as is demonstrated by Berki.\(^\text{29}\) Despite what Rafferty calls the embryonic stage of the theory of nonprofit institutions, the incentive reimbursement literature has developed mechanisms which attempt to provide incentives based on some assumed theories.\(^\text{30}\) The proposed mechanisms have been primarily concerned with providing incentives which can be measured in terms of revenues and costs. The incentives would be to increase revenue and/or reduce costs. The other nonmonetary incentives are not included in the models, although they are often alluded to as possible complications to the effectiveness of the model.

a. **Increase Revenue.** Despite the incentive to either increase revenue or decrease costs the literature has tended to emphasize the cost reducing incentives while treating the incentives to increase revenue as somewhat of an anomaly. A study of the Medi-Cal system by Goldberg is clearly distinguished from the normal emphasis by the stress it places on the role of the provider in influencing demand.\(^\text{31}\) Since total revenue is the product of the unit price of the health product times the number of units sold, it is possible to increase total revenue by a percentage increase in the unit price which is greater than any expected percentage decrease in quantity. In like
manner total revenue would increase if the percentage increase in quantity is greater than any expected percentage decrease in price. The provider of health services could increase total revenue by either method outlined above or by simultaneously increasing both the unit price and the quantity sold.

The incentives for the provider to obtain higher prices is alluded to by Feldstein who notes that in the case of negotiated rates the rewards would go to those providers who bargain most effectively for the highest rate. Given that the population does not have homogeneous health needs, most scholars recognize the need to provide alternative rates of payment dependent upon the health needs of the individual. Dowling mentions that the problem of "admission selectivity"—i.e. admitting less costly case types—could be discouraged by establishing different rates for different case types. Through this process of differentiation of payment rate, providers can have an incentive to receive a greater than normal rate of payment by classifying individuals in ways which allow for the higher rates of payment.

In addition to receiving a higher rate per unit of output as a means of increasing revenue, it is also possible to increase revenue by increasing the quantity of output which is sold. Goldberg cites the marketing competition and related misrepresentations that have been used to increase the number of individuals enrolled in the various plans to provide total health services under the Medi-Cal system. Dowling notes that when the case, the day, or the specific service is
used as the unit of payment the provider would be motivated to increase the quantity of that output—both to directly increase revenue and to spread fixed costs over more units of output to reduce the average cost per unit.\textsuperscript{35}

b. Reduce Costs. The cost reduction aspects of the incentive reimbursement mechanisms requiring cost sharing by the provider have received the greatest attention in the literature. The cost savings would be achieved in two ways. First, the nature of the health product would be changed to provide the minimum acceptable level of services. Secondly, costs would be reduced by improving the production efficiency of the providers of the health services.

According to Waldman a problem that might possible arise under the percent-increase incentive plan—or, in fact, under almost any type of incentive plan—is that hospitals would attempt to effect cost savings by reducing the quality of patient care.\textsuperscript{36} Rafferty cautions that changes in the context in which decisions are made will result in other than the expected decisions. With a given level of quality, incentives to reduce costs could result in illusory gains if reductions in measured costs were achieved via real but unmeasured changes in the average product.\textsuperscript{37} Another way to change the nature of the health product is mentioned by Feldstein.\textsuperscript{38} The change would involve the shifting of the costs of the care away from provider of care. For example, the promotion of early discharge should not impose costs on the patient that are not covered by insurance for care he needs after he leaves the hospital.
Cost reduction through production efficiency is the main objective of the incentive reimbursement mechanisms. Production efficiency can be increased either through the use of lower cost input substitutes or through the use of the inputs in a more efficient manner. The lower cost input substitutes would include the use of less skilled personnel—e.g., physicians' assistants for routine medical care—and the use of generic drugs in place of the brand-name drugs. The use of inputs in a more efficient manner would include greater use of shared equipment and facilities, use of multiphasic screening, and the use of centralized medical record systems.\textsuperscript{39}

2. Need for a Product Specification Mechanism

The preceding part of this section discussed the incentives which providers of health services have under incentive reimbursement mechanisms to increase revenues and to decrease costs. In addition to the positive incentive to increase the efficiency of production of the health product, the incentive reimbursement mechanisms also provide incentives for the providers to misclassify patients and their medical requirements in order to receive a higher price for the product, to increase the quantity of the health product produced even if it is not needed, and to provide a lower quality health product than is demanded.

To control these abuses it is necessary to specify what the health product is and be able to determine if it is produced. The more precise this specification the easier it is to determine when a deviation occurs. Under operational programs to provide public
financing for catastrophic health services it is necessary to develop administrative mechanisms to develop these specifications. Since this administrative mechanism will ultimately have a great impact on the effectiveness of the incentive reimbursement mechanism, it should be considered an important variable in the theories of incentive reimbursement.

Health economists, as mentioned at the beginning of this section, have a preference for direct-output incentives rather than for structure and process incentives. By specifying only the direct-output the providers would then have incentives to find the most efficient method of producing the health product. Although conceptually correct, it is usually not possible to develop valid operational measures of the direct-output. The alternative is to use the structure and process specifications. Incentives based upon structure and process specifications can potentially provide barriers to the adoption of better production practices, and they are less flexible to changing demands. Given these strengths and weaknesses of each type of specification the administrative mechanism is responsible for developing the best mix of product specifications.

3. Determination if the Health Product is Produced

It is not enough to specify the nature of the health product. It is also necessary to be able to determine if it is produced. Under programs to provide public financing for catastrophic health services it is necessary to establish administrative mechanisms to make these determinations. Such mechanisms would impose data reporting and other
requirements on the providers of health services which may affect their behavior. Those changes in behavior which influence the effectiveness of the incentive reimbursement mechanism should be included as part of any theory of incentive reimbursement for publicly financed catastrophic health services.

**D. Determination of the Price**

It is widely acknowledged that the health market is not competitive because of factors such as barriers to entry and exit created by licensure requirements, use of price discrimination by physicians, and the not-for-profit structure of the hospital industry. In addition, under programs to provide public financing for all individuals suffering from catastrophic illnesses the normal market is effectively eliminated as the government becomes the sole purchaser of the catastrophic health services. Under such conditions there is no price established in the market. It is then necessary to determine an alternative mechanism to establish how much the government should pay the providers of catastrophic health services. The existing literature on incentive reimbursement has suggested a number of different methods for setting the price but have not related the administrative structures needed to make these work to the ultimate effectiveness of the incentive reimbursement mechanism.

The models for cost sharing by provider incentive reimbursement mechanisms use various methods to pay for the health services. These include predetermined rates, target rates, capitation rates, and mean average costs. The amount of the payment to be made under the
method selected may be set in a number of different ways. Among the ways suggested are: budget review and approval, formula, negotiation, determination of reasonable costs of specific services, bidding, and average costs in the community. The literature refers to the complications which may be associated with determining the amount of payment under the various plans, but it fails to develop mechanisms by which these complications can be resolved. Among the complications which have been noted are that under budget review and approval plans there are difficulties in accounting for the cost idiosyncrasies among hospitals. The formula methods fail to account for the cost differences among hospitals and may not fully account for changes from year to year in case-mix, facilities, and services. Negotiation depends upon the relative bargaining power of the hospitals and third party payers. Bidding and the determination of reasonable costs of specific services are limited because of the need to develop specifications for the specific services. The use of average costs in the community could provide incentives for collusive arrangements among hospitals with regard to cost increases and prices paid for inputs. The failure to discuss mechanisms for the resolution of these complications gives the impression that an assumption is made that such mechanisms exist or that these complications are not that important.

By making this assumption the models for cost sharing by providers have failed to consider an important part of any incentive reimbursement mechanism. Lave et al. have suggested that an effective reimbursement system must make the hospital industry viable--i.e. allow hospitals
to continue to serve patients in the long run and motivate the efficient provision of medical care. Bauer has noted that in process of determining a mutually acceptable rate, which maintains the viability of the hospital industry and motivates the efficient provision of care, forces the providers and third party payers to face up to the philosophical and practical issues implicit in defining both "efficiency" and the nature and extent of a hospital's "financial requirement". Among these issues are: "how to allow for innovations in medical services and technology; how to prevent padding of future cost projections; how to adjust the rate to changes in hospital occupancy or other volume measures; how to prevent the deletion or restriction of high-cost circumstances. Thus, from the point of view of both the third party and the hospitals, the methods used to arrive at the prospective rates and the review and appeals processes are extraordinarily important." Given the need to establish administrative mechanisms to determine the amount of reimbursement and the importance of these administrative mechanisms to the providers of health services and to the government program, it is necessary to include them in the consideration of incentive reimbursement mechanisms for programs to provide public financing for catastrophic health services. Whether this administrative mechanism is concerned with budget review and approval, formula development, negotiation, determination of reasonable cost of specific services, establishing specifications for bids, or determining the average cost of care in the community, it will require resources
and will influence the behavior of providers. Unless a theory of incentive reimbursement for publicly financed catastrophic health services can account for the impact of these administrative mechanisms on the ultimate effectiveness of the incentive reimbursement mechanism, it is of little value in guiding the development of actual programs to provide public financing for catastrophic health services.

E. Implementation of Incentive Reimbursement Mechanisms

The failure of the existing theories of incentive reimbursement to relate the individual demand to the public demand, to consider the complexities associated with the development of specifications of the health product, to include the mechanisms required to determine if the health product is produced, and to specify how the price is determined has limited the utility of these theories for programs that actually provide public financing for catastrophic health services. These weaknesses have not limited the conceptual development of the theories, but they place severe constraints on the ability to implement the theories in operational programs.

In the analysis of the ESRD reimbursement mechanism which follows, the importance of these weaknesses become evident. Chapter VII then explains how the developing literature on implementation can make an important contribution in the development of a policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services. The framework for such a theory is presented in Chapter VIII.
Chapter III—Footnotes


6 This definition is an adaptation of the definition of "prospective reimbursement" presented by William L. Dowling. "Prospective Reimbursement of Hospitals". Inquiry. September, 1974. p. 163.
The predetermined rate approach to incentive reimbursement is also referred to as prospective reimbursement, prospective rate-setting and prospective budgeting. In this case prospective refers to the fact that the amount is determined in advance and not retrospectively as is the case in cost or charge based reimbursement.


17. Professional Standards Review Organizations were established under the provisions of Public Law 92-603, Section 249F, "Social Security Amendments of 1972". Several articles dealing with the conflict over the Professional Standards Review Organizations are identified in Medical Care Review, Vol. 31, No. 5. May, 1974. pp. 575-590.


24. See footnote 5 of this chapter.


33 William L. Dowling. "Prospective Reimbursement of Hospitals".


40 See 78-79 of this chapter.


47 Ibid.
CHAPTER IV
PATIENT INCENTIVES
UNDER THE ESRD REIMBURSEMENT MECHANISM

This is the first of three chapters to analyze the ESRD reimbursement mechanism. The incentives provided under this mechanism are intended to induce the provision of those ESRD services which are consistent with the public demand as expressed through the ESRD provisions and related documents. Chapter IV is concerned with patient incentives. Chapter V focuses on incentives for providers, while Chapter VI is concerned with the administrative support needed for the ESRD reimbursement mechanism to function.

Each chapter analyzes the incentives and/or administrative support systems in terms of:

- The "forms" of the incentives or support systems found in the ESRD provisions and regulations.
- The intended effect of these "forms" on the ESRD therapy system.
- The actual effect of the incentives and/or administrative support systems.
- Generalizations associated with the use of the incentives and/or support systems.
- Implications for future programs to provide public financing for catastrophic health services.
A. Patient Incentives

As discussed in Chapter III, patient incentives under programs which provide public financing for catastrophic health services are intended to induce the patient to utilize the level of health services demanded by the public. As defined in the previous chapter, the public demand for health services reflects the level of health services that the public is willing to provide given the price of health services. The level of services specified by the public demand may be limited in two ways. The first is by limiting the number of individuals who can receive care financed under the public program. The second is by limiting the type of services that the individual can receive. The patient incentives must be designed to deal with both of these limits. The patient incentives must influence the patient in the choice to seek treatment and must influence the patient to choose the type of treatment which the public considers appropriate.

The ESRD provisions and related documents provide a proxy statement of the public demand for ESRD therapy. The patient incentives under the ESRD Program are provided for in these same documents. Based upon this expression of the public demand for ESRD therapy, it is possible to analyze the incentives to influence the patient's decision to seek treatment and the incentives for the patient to choose the type of treatment considered most appropriate by the public as represented through the ESRD Program.
1. Who Should Receive ESRD Services?

The public demand for ESRD therapy as expressed through the ESRD provisions places almost no limits on the number of individuals who can receive care financed under the ESRD Program. As discussed in the previous chapter, the expression of the public demand by Congress through the enactment of legislation is often imperfect. In fact the legislative history of the ESRD provisions contains no indication of any consideration of the impact of universal financing on patient selection criteria. The only requirement, other than medical need, is that the individual is either fully or currently insured under Social Security or the spouse or dependent child of someone who is. It is estimated that over ninety percent of the population of the United States needing treatment for end-stage renal disease meet this requirement.

The ESRD provisions provide only very limited constraints on the determination of medical need. According to the ESRD provisions an individual is considered to have medical need if he/she "is determined to have chronic renal disease and requires hemodialysis or renal transplantation for such disease." This does not place a finite limit on the number of individuals eligible for care under the ESRD Program. The determination of medical need has been delegated to a decision made by the individual patient and physician. The definition of medical need for hemodialysis and transplantation, as used by physicians, has been changing over time as the result of increased therapeutic capability and as a result of the removal of financial barriers.
Prior to Medicare coverage of ESRD, treatment was normally limited to socially and emotionally stable individuals less than 65 years of age with no systematic secondary disorders—e.g. cardiac disease or diabetes mellitus. Since the initiation of ESRD coverage, the selection criteria have been almost completely eliminated. Dr. John Sadler, President of the Renal Physicians Association, has stated:

some uremic patients with little self-discipline, little prospect of being productive and happy, really are not benefited by dialysis. The selection procedure has been circumvented in many areas by the availability of funding.

Cost estimates for the ESRD Program, prepared by the Department of H.E.W. in December of 1972, were based upon the assumption of an incidence of 10,000 new ESRD patients annually. This figure reflected prevailing medical opinion as to the need for ESRD therapy. Just one year later the Department of H.E.W. recognized that changes in the selection criteria could have considerable impact upon the projected number of ESRD patients. "Based on generally-accepted criteria, the annual number of new 'acceptable' patients has been about 10,000' however, depending on different criteria, the potential annual number could approach 20,000."

The absence of a precise definition of medical need in the statement of public demand for ESRD creates a situation where it is impossible to evaluate the effectiveness of the incentives for individuals to initiate treatment. The legislative history of the ESRD provisions is silent on the question of liberalizing the patient selection criterion. If the public, in fact, demands financing of ESRD services for all individuals who might benefit from hemodialysis or renal
transplantation, then increased utilization of ESRD services, through relaxation of selection criteria, due to the absence of incentives to restrict the initiation of treatment, should be interpreted as meeting the public demand.

A recent General Accounting Office Report, which can be taken as an additional proxy for articulating the public demand, recommended that areas of the country which only provide home dialysis should also provide center dialysis. This recommendation is based upon a finding that areas with only home dialysis programs are not treating as many new patients as are areas which emphasize center dialysis. This recommendation, as one articulation of the public demand, indicates a desire to remove barriers to the patient's choice to initiate therapy.

In addition, the GAO report recommended the development of uniform nationwide patient selection criteria. A similar expression of the public's demand to provide public financing for all individuals who might benefit from ESRD therapy is contained in the minority views of the Report of the Oversight Subcommittee of the House Committee on Ways and Means. The minority report specifically states the need to preserve,

to the maximum extent feasible, the autonomy of medical professionals to exercise their best medical judgement without being constrained by bureaucratic regulations that may not be in the best interest of a particular patient.

Given the decision to provide public resources for all individuals who might benefit from ESRD therapy, any increase in ESRD Program costs, resulting from the liberalization of treatment criteria, should
not be regarded as inconsistent with the public demand. If, on the other hand, there is a demand to contain program costs by limiting the number of individuals who can receive care financed under the public program, it is necessary to articulate who can receive this financing in the statement of public demand so that the appropriate incentives can be developed. For example, if the public demand for financing of ESRD therapy was only for those patients meeting standards of medical need existing at the time of passage of the ESRD provisions, then these standards should have been explicitly stated. Without this, as is the case under the ESRD Program, no incentives were developed to influence the decision to initiate care. If such incentives are desired, then it is necessary to develop explicit statements of who should receive care. If the decision of who should receive care is to be based upon medical criteria, it is necessary to develop explicit statements of these criteria, rather than delegating to the physician an open-ended power to make this determination. In order to develop these explicit criteria it is necessary to establish who should be responsible for the medical criteria to be utilized and how the medical criteria will be established. In doing this it will be necessary to address both the technical aspects of the care and the social/political aspects of the public demand.

Generalization 4-1: Incentives to influence patient decisions to initiate care under public programs to finance catastrophic health services must be based upon explicit medical standards expressed in the statement of public demand if the effectiveness of the incentives is to be evaluated.
The preceding generalization highlights a critical problem in the development of incentive reimbursement mechanisms for public programs to provide public financing for catastrophic health services. If incentives are to be used, it is necessary to state exactly what it is that the incentives are intended to do. This entails making difficult choices such as who should receive care. As is the case with the ESRD Program, Congress has refused to make this decision. Thus, no incentives can be used to limit the number of patients receiving care. In such a case increased program costs from increases in the number of patients should not be considered as inappropriate.

2. What Type of ESRD Services Should Each Patient Receive?

Having addressed the question of incentives to influence the patient's decision to seek care, we now move to the incentives which are used under the ESRD Program to influence the patient's decision about the type of ESRD services to receive. These incentives are intended to influence the patient's decision to utilize the type and amount of ESRD services which the public demands. Again, the public demand is articulated through the legislation and supporting documents.

Although, as demonstrated previously, the ESRD reimbursement mechanisms contain no incentives to influence who should receive services, it does provide incentives to influence the type of services which the patient utilized. Many of these incentives are the result of existing Medicare legislation while a number are provided for in the ESRD provisions. In a number of instances what were designed as incentives have actually proved to be disincentives to the efficient
delivery of ESRD services. In addition, there are prospects that the ESRD patient incentives will be strengthened in the near future through recently proposed legislation. Among the incentives to be discussed in this section are deductibles, coinsurance, limits on covered services, and limits on the amount of reimbursement for specific services.

a. Deductible. The ESRD Program was established as part of the existing Medicare program "subject to the deductible, premium, and copayment provision of title XVIII." The ESRD patient must pay the annual Medicare deductible of sixty dollars for medical care and the ninety-two dollar deductible for each benefit period of hospital coverage. According to Social Security officials these deductibles were never intended to discourage the ESRD patient from overutilization of covered services because the amounts are negligible in relation to other direct patient costs associated with the treatment of ESRD. For that matter it is highly questionable whether there was ever any intention for the standard Medicare deductibles to provide incentives to influence the patient's decision to seek care. It is more likely that the original Medicare deductible was established only to reduce the direct costs to the federal government for the care of the elderly, but not to influence the level of care that they received.

More important than the standard Medicare deductibles is the requirement that "(f) Medicare eligibility on the basis of chronic kidney failure shall begin with the third month after the month in which a course of renal dialysis is initiated." Although not expressed by a dollar amount the three month waiting period for
Medicare coverage was intended to function as a deductible to ensure that normal sources of financing have been utilized. As stated by Senator Long in the floor debate on the ESRD provisions, when a six month waiting period was being considered:

The Medicare coverage would become available to those with chronic kidney disease 6 months after the onset of their condition. This guarantees that the disease is chronic and also assures an appropriate mesh with private insurance coverage.16

Rather than providing the mesh with private insurance coverage, the waiting period created a number of incentives for patients to avoid choosing the least costly forms of care. A memorandum to the Deputy Assistant Secretary for Health Policy Development states:

The requirement of a three month waiting period after the onset of dialysis to establish eligibility will create problems by constraining appropriate therapy involving transplantation in that it may result in transplant candidates being held on dialysis for a longer period of time than is medically appropriate or necessary.17

The implications of this incentive were so apparent that it was deemed necessary to provide by regulation that entitlement would begin with whichever is earlier:

(i) The month in which he is hospitalized in preparation for and anticipation of kidney transplant surgery, provided that such transplant surgery occurs in that month or the following month, or (ii) the third calendar month after the month in which he begins a course of dialysis.18

This modification of the waiting period by regulation bent the law to the limit without actually breaking it.

In addition to disincentives for transplantation the three month waiting period provides disincentives for home dialysis. For a
potential home dialysis patient it is desirable to begin training as soon as possible after the patient is stabilized. Since no benefits are paid during the waiting period, there is an incentive for the patient to remain on center dialysis and defer the training in order to minimize the costs which are borne directly by the patient. Although the direct costs to the patient are minimized, this delay increases total program costs. These disincentives, which are derived from the language of the statute, exist despite the fact that the annual cost difference between center and home dialysis averages about $9,400.

The disincentives for home dialysis were one factor leading Senator Long (D-La.) to introduce in 1975 an amendment to the ESRD provisions to waive the three month waiting period for individuals beginning self-dialysis training. The House Committee on Ways and Means is also considering the introduction of similar legislation.

Two generalizations are suggested by the ESRD experience with deductibles:

Generalization 4-2: A general deductible based upon direct expenditures is more effective than a general waiting period in providing incentives for the patient to seek those therapies which minimize long-run costs.

A general deductible is independent of the type of services utilized. The general waiting period is ineffective as a general deductible because the patient seeks to minimize the cost of care over the waiting period even if this means higher total treatment costs. General deductibles based on direct expenditures remove the disincentives
associated with the general waiting period because the patient must spend the same amount regardless of the therapy chosen. There would be no incentives to seek less expensive forms of therapy in the short-run in anticipation of public financing of the greater long-run costs. On the other hand, there are no incentives for the patient to seek those forms of therapy which minimize long-run cost, as the cost to the patient is independent of the type of therapy chosen.

Generalization 4-3: Selective deductibles are more effective than general deductibles in providing incentives for the patient to select those therapies deemed most appropriate by the government.

A system of deductibles—either direct expenditure or waiting period—based upon the selective specification of those forms of treatment deemed most appropriate by the government can be more powerful in inducing the patient to choose the specified forms of therapy than would be the case under the general deductible. This is because the financial burden to the patient would be less if he selects the mode of treatment deemed most appropriate by the government. The waiting period for those ESRD therapies which are most efficient in meeting the public demand could be reduced. For example, if transplantation and home dialysis are determined to be the most efficient ways to meet the public demand, then the waiting period could be waived. Likewise, any direct expenditure required before entitlement could be reduced for patients selecting the specified therapies.

In order to use selective deductibles the government must be able to explicitly specify what modes of treatment are deemed appropriate
and be able to impose the incentives based upon these specifications on
the system for the delivery of health services. By inducing the patient
to choose a type of therapy based upon cost considerations, the type of
therapy chosen may differ from what the medical profession would
specify when cost is not a consideration. There would be a challenge
to what Victor Fuchs identifies as the "technical imperative". The "technical imperative" refers to the current philosophy of pro-
viding the highest level of care possible regardless of the cost of
providing that care. There would probably be a movement toward sub-
stituting less costly care for the more expensive care when the
marginal benefit of the more costly care is either in doubt or of such
a small magnitude that the additional cost cannot be justified.

The government, by specifying those therapies that are deemed
appropriate and developing incentives to induce the patient to select
these therapies, is attempting to superimpose a public choice over the
individual choice. In doing this the government is relating the value
of a given treatment to the cost of providing that treatment. The
government is restricting the physician's ability to practice medicine
without government interference. By providing incentives for selected
forms of therapy the physician may be pressured into providing the
specified therapies rather than those which he would otherwise
choose.

The choices which government must make if incentive reimbursement
mechanisms are to be used effectively will be difficult. But these
choices must be made or the incentives for programs to provide public financing for catastrophic health services will be reduced to a sterile existence.

b. **Coinsurance.** The ESRD provisions contain the same coinsurance requirements generally required under Medicare. The ESRD patient is required to pay twenty percent of reasonable charges under Part B of Medicare and the coinsurance for hospital care when more than sixty days of hospital care are used during any benefit period. Even though the ESRD provisions rely upon existing Medicare coinsurance mechanisms, they raise several important issues with regard to the use of coinsurance. The first pertains to the effectiveness of coinsurance financed almost exclusively by supplemental third party financing. The second pertains to general versus selective coinsurance provisions.

In general the intent of coinsurance requirements is to reduce excess demand for health services by individuals whose care is financed by some third party by requiring some cost-sharing by patients. The effect of the third party payments is to reduce the direct price of the health services to the patient. With the lower price the patient is expected to demand more health services. Under the coinsurance requirement the patient directly pays a portion of the costs of the health services. Presumably, if the patient has a direct out-of-pocket payment for any additional health services, he is less likely to demand an excessive amount of service. If the patient does not directly pay these costs, the logic of the coinsurance requirement breaks down. With the usual twenty percent coinsurance the patient would actually
pay $200 of each $1,000 worth of care received. However, if the patient has supplemental insurance which covers eighty percent of the costs not covered by Medicare then the effective coinsurance rate becomes only 4 percent (20 percent of the original 20 percent coinsurance). When this occurs the patient would only pay forty dollars out of each $1,000 worth of care received. With this small payment it is doubtful whether the coinsurance would have much influence on the patient's choice of therapies.

An important question in the analysis of the use of coinsurance requirements under the ESRD reimbursement mechanism is: Does the ESRD patient actually pay the coinsurance? With many overlapping sources of third party financing—private insurance, Medicaid, vocational rehabilitation, and state renal programs—it is questionable whether the patient actually pays the coinsurance. Although far from definitive, data on the sources of funding for new ESRD patients in Seattle, Table 2, for fiscal year 1973-74 sheds some light on the question. According to this data only one percent of the ESRD funding actually comes from patient resources. This is in spite of the fact that for most of these patients the first three months of care are not covered under Medicare.
Table 2
Sources of Funding for New ESRD Patients
Seattle FY 1973-74

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare</td>
<td>38.7%</td>
</tr>
<tr>
<td>Private Insurance</td>
<td>35.3%</td>
</tr>
<tr>
<td>State and Contributed Funds</td>
<td>25.0%</td>
</tr>
<tr>
<td>Patient Resources</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

If the patient does not pay the coinsurance, then it is necessary to reconsider the logic of including coinsurance in future programs to provide public financing of catastrophic health services.

**Generalization 4-4:** For coinsurance provisions to be effective as incentives to reduce excess demands for health services by individuals, it is necessary to restrict the availability of supplementary third party funding to cover the coinsurance.

If a decision is made to use coinsurance factors as an incentive to reduce excess demands for health services by patients, it is then necessary to develop mechanisms to ensure that the patient actually bears the costs associated with the purchase of each additional unit of health service. This would mean that measures would have to be taken to prevent the coverage of the coinsurance under supplemental forms of third party payment.

**Generalization 4-5:** If supplemental third party coverage for coinsurance cannot be eliminated, then consideration should be given to eliminating coinsurance provisions.

With supplemental coverage available coinsurance provisions would be ineffective in reducing excess demands for health services by patients.
While providing no benefits, the coinsurance provisions impose demands for scarce health resources—i.e., the administrative costs involved in enforcing the coinsurance payments. Under such conditions, the total cost of providing health services might be reduced by removing the coinsurance requirements.

The Medicare coinsurance provisions, like most such provisions, require the patient to pay a fixed percentage of the cost of medical care regardless of the type of care chosen. Even if the ESRD patient initially has no supplemental coverage, this approach forces the patient to seek supplemental coverage through mechanisms such as Medicaid, because the coinsurance costs are prohibitive. Even the lowest cost form of dialysis—i.e., home dialysis—costs over $15,000 per year. Given the twenty percent coinsurance the patient is required to pay more than $3,000 annually. After the patient is eligible for the supplemental coverage, the patient no longer has an incentive to seek the lowest cost form of therapy. If supplemental coverage is not available, the patient may simply not pay the uncovered portion of the costs.

To improve the incentives for patients to choose the lowest cost form of ESRD therapy, it is being proposed that the coinsurance requirements be eliminated for home dialysis. This would ease the burden on those individuals who choose to utilize home dialysis while continuing to make those individuals who choose the more costly forms of therapy subject to the coinsurance provisions.
Generalization 4-6: The selective elimination of coinsurance provisions for the least costly forms of therapy would increase the incentives for patients to choose these forms of therapy.

Once again, as was the case with deductibles, we are confronted with a need to specify those therapies that are deemed appropriate and develop incentives to induce the patient to select these therapies. In order to selectively eliminate the coinsurance provisions, it is necessary to determine which therapies are considered most appropriate in light of the public demand. If the public demand does not indicate which types of therapy are deemed most appropriate then it would be impossible to use selective coinsurance provisions. In addition to the need to specify which therapies are considered appropriate, it is necessary to be willing to impose these preferences on the patients, physicians, and hospitals even though these groups may prefer different although more costly alternatives.

c. Limits on Covered Services. Limits on covered services under the ESRD reimbursement mechanism are of two types. General limitations imposed under the existing Medicare program and specific limitations associated with ESRD performance specifications. The general Medicare program contains numerous limitations on covered services. These limitations have created a situation such that:

When dialysis is done in a freestanding clinic or a hospital, costs for electricity, plumbing, salary of a trained person to aid in the procedure, and supplies not necessary for the patient's well-being (such as syringes, alcohol wipes, adhesive tape, etc.) are covered under Medicare. When this same procedure is performed in the home, these items are not covered, and the patient must pay for them out of his personal funds.
According to H.E.W. "There has been a decline in the proportion of patients on home dialysis in part because payment mechanisms and reimbursement processes have made facility dialysis more attractive."  

Generalization 4-7: Limits on covered services can only be effective if the limits are related to the specifications of the health product.

Again, the critical need to relate the reimbursement incentives to the therapies which are deemed appropriate becomes clear. The failure to do so not only creates an absence of positive incentives, but may actually create disincentives to the efficient provision of catastrophic health services as is the case with the limits on covered services imposed under the existing Medicare program.

In addition to the general limitations of the Medicare program, the ESRD Program contains limitations related to ESRD performance specifications. The development of limitations related to performance specifications require an understanding of the therapy before the limitations are established. The ESRD provisions state: "Medicare eligibility on the basis of chronic kidney failure . . . would end with the twelfth month after the month in which the person has a renal transplant or such course of dialysis is terminated."  

If Medicare eligibility for individuals ceases twelve months after dialysis has stopped and if the individual has not received a transplant, then the patient will most likely be dead. This case presents no problems as the individual would no longer require any earthly resources. The requirement that eligibility terminate with the twelfth month after the month in which the patient receives a transplant has created substantial disincentives.
The potential disincentives were soon recognized—April, 1973—within H.E.W., but because they were specified in the law no action could be taken without changing the law.  

In spite of this early recognition the disincentive continues. A recent report—October 22, 1975—by the Subcommittee on Oversight states:

The subcommittee recommends amendments which would also eliminate one of the present eligibility restrictions (i.e. the requirement that eligibility terminate twelve months after a successful transplant) which has no medical basis and which may discourage patients from taking the risk of transplantation.

In addition to specific limits imposed on eligibility for post-transplant coverage, the ESRD reimbursement mechanism provides limits on the actual medical services which are eligible for reimbursement. These include limits on the number of routine office visits and limits on the number and type of laboratory procedures which can be provided without specific justification. Since these limits are intended to influence physician's behavior rather than the patient's, the analysis of this is presented in Chapter V.

d. Limits on Reimbursement for Specific Services. Under the ESRD reimbursement mechanism there has been no intent to use limits on reimbursement for specific services as incentives to change patient behavior. The ESRD reimbursement does, however, contain a number of limits on the amount of reimbursement for specific services, most of which are intended as incentives for the providers rather than patients and are analyzed in the following chapters. In most cases these limits do not act as incentives for the patient because the
providers either cannot charge the patients more than is provided for by Medicare, or if the patient can be charged more than the Medicare reimbursement, it is doubtful that it would affect the patient's behavior because of the nature of the therapy required for the treatment of ESRD. Although the existing ESRD reimbursement mechanism contains no intended incentives for patients based on limits of reimbursement for specific services, a discussion paper circulated by the Bureau of Health Insurance in the early part of 1973 did suggest the use of this approach.

When competent medical opinion prescribes home dialysis treatments for a patient and training facilities for home dialysis are available but the patient chooses facility services for reasons of convenience, after a suitable time interval, the program liability could be limited to something like the prevailing charge— or cost— for home dialysis service and the excess cost would be considered noncovered and an obligation of the patient.32

Since assignment— i.e., the requirement that the provider accept the charges determined as reasonable under Medicare— is not mandatory under the ESRD Program, providers can charge more for services that is deemed reasonable under Medicare. The patient would be directly responsible for all charges in excess of the reasonable charge. Because the patient must pay any excess charge over the reasonable charge, some would consider this to be a patient incentive based upon reimbursement limits for specific services. The patient would have an incentive to choose those providers who are willing to provide the needed services at a charge which is no more than the reasonable charge allowed under Medicare. In fact, there are no indications
that there was ever any intent to provide incentive to ESRD patients to choose providers who accept assignment or whose charges do not exceed the amount determined as reasonable. Mandatory assignment is primarily regarded as a means of controlling provider charges rather than providing incentives for the patient. Because of the nature of ESRD and the treatment requirements, the patient has little or no choice of providers. According to the statement of "Final Policies":

Requiring assignment would be desirable because patient liability would be limited by precluding excess charges. This is particularly important in the case of kidney disease treatment since patients have little choice of provider. On the other hand, mandating assignment would discourage some physicians from selecting this option, would antagonize others, would not accommodate variations in care for patients who require extreme variations in care, and may simply not be necessary since physicians have generally been more willing to voluntarily accept assignment in cases of prolonged illness, particularly when patient resources are low.33

B. Conclusions and Implications

The patient with a catastrophic illness in making his choice, to the extent that he exercises his choice, to initiate therapy and select the type of therapy to receive can influence the cost of financing catastrophic health services through a public program. The public demand specifies the level of health services that the public is willing to provide given a set of health care prices. If the public programs established to meet this demand, as it is articulated through the political process, intend to use incentives to influence the patient's choice to initiate therapy or his choice of the type of
therapy, then it is necessary for the government to specify the treatment options with enough detail so that the incentives can be related to these options. As the analysis of patient incentives under the ESRD Program demonstrated deductibles and coinsurance provisions are more effective if associated with the product specifications. Limits on covered services can only be effective if the limits relate to the product specifications. Limits on reimbursement for specific services require the development of specifications for these services and the determination of a reimbursement limit which is related to the public demand. Finally, if these incentives based upon the specifications of the health product are to be effective, the government must be willing to use them. Even if this means limiting the choices available to patients, physicians, and hospitals.
Chapter IV--Footnotes


3. In addition to individuals covered for ESRD under the provisions of P.L. 92-603, Sec. 2991, coverage is also provided to individuals covered by the disability provision, Section 201, of P.L. 92-603. Coverage is also provided for individuals age 65 and over entitled to Medicare on the basis of Old-Age Survivors Insurance or uninsured provision, as well as, to individuals covered under premium Part A payment provision as provided in Section 202 of P.L. 92-603.


5. P.L. 92-603, Sec. 2991.

6. These standards are reflected in: Ohio, Department of Health. Renal Disease Plan of the State of Ohio. "Criteria For Patient Acceptance For Reimbursement". March 26, 1973. This plan issued shortly after the passage of P.L. 92-603 reflects the medical standards at that time.


An annual incidence of 10,000 is used in the National Kidney Foundation. Position Paper: Guidelines for the Implementation of Public Law 92-603, Title II, Section 2991, Concerned with Chronic Kidney Disease. August, 1973. (Hereafter, the "NKF White Paper")


Ibid.

P.L. 92-603, Sec. 2991.

Ibid.

U.S. Congress. Senate. Senator Long speaking in support of the ESRD provisions. Congressional Record. September 30, 1972, S 16402. The stipulation of 6 months after the onset of chronic kidney disease was later changed to the third month after the month in which a course of renal dialysis is initiated by the Joint House-Senate Conference Committee because of problems in identifying the date of onset of kidney disease.


19 John Bower, Christopher Blagg, Joseph Eschbach, David Hathaway, David Ogden, Ed Rutsky, Tom Sawyer, Belding Scribner, and Arnold Siemsen. "Obstacles Which Impede the Implementation of Home Dialysis Under HR1". This unpublished paper by a number of leading nephrologists points out the problems created by the three month waiting period.


21 U.S. Congress. Senate. "A Bill to provide incentives and otherwise to encourage the utilization of home dialysis and to encourage early kidney transplantation under the renal disease program authorized under section 226 of the Social Security Act. S. 1492." 94th Cong., 1st sess.


23 Cynthia Shadle, Marie Hallam, and Christopher R. Blagg. "Patient Financing in the First Year of the End-Stage Renal Disease (ESRD) Program". Figure I. Mimeograph. November, 1974.

24 Based upon HEW figures provided to the General Accounting Office. "Treatment of Chronic Kidney Failure". p. 41. These figures indicate that the average cost for home dialysis is $100 per treatment. With three treatments per week for fifty-two weeks this amounts to $15,600. This amount is considerably higher than the costs of home dialysis cited on page 29 of Chapter II. A partial explanation of these high costs may be due to the fact that under Medicare the patient will often lease durable medical equipment such as the artificial kidney rather than direct purchase of the machine. Because of this practice over the long-run the cost of treatment may actually be higher than if the machine was purchased.

25 U.S. Congress, Senate. "A Bill to provide incentives and otherwise to encourage the utilization of home dialysis and to encourage early kidney transplantation under the renal disease program authorized under Section 226 of the Social Security Act". 94th. Cong., 1st sess. S 1492. April 22, 1975. This bill states: "(b) (1) Section 226 (g) of the Social Security Act is amended by adding at the end thereof the following new sentence: "In the case of an individual who is participating in an approved self-dialysis training program in accordance with appropriate conditions as established by the Secretary, or who is self-dialyzing at home or in an approved self-dialysis facility, payment with respect to medically necessary items, services, or supplies in connection with self-dialysis (including physician's services and those services incident to physician's services when those services are provided to self-dialysis patients) covered under part A or part B of title XVIII shall be made for 100 per centum of the reasonable cost or reasonable charge for such items, services, or supplies; and the provisions of such part A or part B relating to deductibles and co-insurance shall not apply to such items, services, or supplies nor shall the expenses therefore be taken into account in applying such provisions to other items, services, or supplies covered under part A or part B of title XVIII".

26 Among the services not covered by Medicare are: Drugs and medicines you buy yourself with or without a doctor's prescription, injections which can be self-administered, services performed by immediate relatives or members of your household, and physician examinations that are routine and tests directly related to such examinations. U.S. Department of Health, Education, and Welfare. Social Security Administration. Your Medicare Handbook. March, 1975. pp. 42-43.


28 Ibid.

29 P.L. 92-603, Sec. 2991.

30 An April 27, 1973 draft of a working paper, Kidney Disease Treatment and P.L. 92-603, (H.R. 1, Section 2991): POLICY ISSUES, from the U.S. Department of Health, Education, and Welfare, Office of Health Policy Development states: "Discrimination against transplantation patients appears to exist in Section 2991. Dialysis patients retain their coverage for life, since by definition ESRD is permanent loss of organ function. The transplanted patient without serious complications during the first twelve months following transplantation
will lose his coverage at the end of this pretermination period. However, a large proportion of all transplanted patients experience serious illness within several years as the result of immunosuppressive treatment required to stabilize the graft. This aspect represents a significant disincentive to the prescription of transplantation even though this therapy, including these later complications, will usually cost less than long term dialysis."


CHAPTER V

PROVIDER INCENTIVES UNDER THE ESRD REIMBURSEMENT MECHANISM

The ESRD provisions virtually eliminated the private market for ESRD services as the federal government through the Medicare program became almost the sole provider of financing ESRD therapy. With no private market the traditional basis for Medicare reimbursement—i.e., customary and prevailing charges as determined by the private market—were not available. As a result it was necessary to develop new mechanisms to ensure that ESRD services would be provided in an efficient manner. The ESRD provisions granted broad powers over reimbursement to the Secretary of H.E.W.: 

\[ (g) \text{The Secretary is authorized to limit reimbursement under Medicare for kidney transplant and dialysis to kidney disease treatment centers which meet such requirements as he may by regulation prescribe: \ldots} \]  

In addition the "Final Policies" for the ESRD Program amplify on the need for a redefinition of "reasonable charges".

Payment of physician services under Medicare has been traditionally based on the principle of "reasonable charge" for each unit of service. Section 1842 of the Social Security Act requires that the criteria of "customary" and "prevailing" charges for similar services be taken into consideration in making the reasonable charge determination, but does not limit the consideration to these criteria. A clear statement of Congressional guidance for additional criteria is found in Senator Long's presentation of the Conference Committee Report: "With respect to the coverage of kidney dialysis and transplantation the Secretary would have the authority to
define reasonable charges in terms related to the reasonable costs of the treatment provided and comparable charges for physicians' time and skills, since obtaining customary and prevailing charges for new and complex procedures—many of which will be reimbursed in all instances by the program—would be quite difficult administratively." (Emphasis added by H.E.W.)

These statements provided the basis for departure from the established Medicare reimbursement practices. This chapter looks at these departures and the related incentives as they pertain to both physicians and facilities. It should be remembered that the provider incentives are intended to induce the physicians and facilities to provide health services according to the objectives of the party financing those services, in this case, Medicare.

At the present time there is virtually no data available to measure the impact of the existing provider incentives on the costs associated with the delivery of ESRD services. In fact a recent Congressional report stated: "The subcommittee finds it incredible that the Social Security Administration does not have detailed data on physician payment or an ongoing program to monitor and study these methods." As a result, this analysis is concerned almost exclusively with the issues associated with the evolution of the reimbursement practices. Probably the most significant finding presented in this chapter is the failure to have the incentive reimbursement mechanisms fully developed two and one-half years after the ESRD Program became effective. Providers are being reimbursed, but the reimbursement incentives are not fully developed.
A. Physician Reimbursement

Physician reimbursement policies under the ESRD Program represent an incremental yet significant movement away from the traditional Medicare physician reimbursement practices. The movement is incremental in that renal physicians are still reimbursed by the traditional fee-for-service method for many services—e.g. transplantation, treatment of hospitalized ESRD patients, routine office visits, and laboratory procedures. On the other hand, the movement is significant in that the fee-for-service reimbursement is related to specifications of the health product, and the physician can no longer receive direct fee-for-service reimbursement for routine services provided during maintenance dialysis. Payment is either made through the dialysis facility as part of the total facility dialysis costs or charge and not as a separate fee, or through a fixed retainer to provide all physician services to the stabilized maintenance dialysis patient. Traditionally payments have been made directly to the physician rather than through an institution. In addition, payments were made for each specific service rather than a retainer of a fixed amount for the provision of all services that the patient might need.

Even though fee-for-service was adopted as the basic reimbursement mechanism, it was recognized within the Department of H.E.W. that it was inadequate as traditionally used to contain ESRD Program costs. The memorandum to the Secretary states: "However, recognizing the variation in prices and amount of professional services that exist today and in order to contain program costs, we suggest several
additions." Among these additions intended to provide incentives to physicians to contain program costs are:

- Specification of the medical product.
- Inclusion of physician services as facility overhead.
- Mandatory assignment as a condition of reimbursement.

1. **Fee-for-service**

   The basic mechanism for reimbursement under the ESRD Program is the traditional fee-for-service reimbursement based upon "reasonable costs" and "reasonable charges". This method was chosen not because it was believed to be the best mechanism for controlling cost, rather it was the most expedient given the need to have a payment mechanism available when the ESRD Program became effective on July 1, 1973. A memorandum from the Assistant Secretary for Health to the Secretary of H.E.W. setting forth the policy decisions states: "We really do not have a choice at this point in time, and hope to use this period to collect more data upon which to base subsequent changes." 6

2. **Specification of the Medical Product**

   Unless specifications are developed for the medical product the fee-for-services method of reimbursement provides an open-ended source of funding. The specifications allow reimbursement for only those medical services which are considered to be "reasonable and necessary" given medical opinion and the public demand for catastrophic health services. The ESRD provisions provide for "a medical review board to screen the appropriateness of patients for the proposed treatment
procedures." The medical review boards are intended to serve as the primary constraint on physicians' services. The professional review is to be based on Department of H.E.W. standards developed from professional guidelines, and applicable to both the kinds and amounts of professional services. When the ESRD Program became effective on July 1, 1973, the "Interim Regulations" did not establish the medical review boards. In fact, as of January 1, 1976, the medical review boards were still not in existence.

Even though the medical review boards were not in existence when the ESRD Program became effective, the "Interim Regulations" under which the ESRD Program has been operating provided that: "Rules may be developed for establishing limits on costs and services above which reimbursement shall be made only upon appropriate justifications." These rules were intended to specify the nature of the medical product to prevent the provision of services which were either unnecessary or in excess of what was demanded by the public. The first intermediary letter, which contained the operating instructions for the ESRD Program, instructed the Medicare intermediaries to require reasons for the medical necessity of laboratory tests for maintenance dialysis patients which were not explicitly provided for in the instructions or which were provided at frequencies greater than those allowed. In addition, reimbursement for physician office visits was limited to one routine office visit per month and two in-depth evaluations annually unless medical documentation was provided to establish an abnormality. Opposition to these changes from the current Medicare practices was
anticipated by H.E.W. A memorandum to the Secretary states:

These (changes) are essential in order to contain program costs. Of course, they do represent departures from existing policy and will thereby be opposed by various parties, particularly by some physicians.¹³

While opposition to changes in Medicare practice was expected, the intense concern over the method for reimbursement of physicians overwhelmed the opposition to the specification of medical practices (which is discussed in the next section). The official statements of the American Medical Association and the Physicians for Renal Replacement Therapy do not mention the limitation on the number of routine office visits.¹⁴ The Position Paper of the Physicians for Renal Replacement Therapy does mention the limitations on the number of laboratory procedures although this has not developed into a major issue.¹⁵

Although it would appear that specifications on the utilization of services are necessary to control costs under a program using the fee-for-service method of reimbursement, it is necessary to consider the statement of the Council on Medical Services of the American Medical Association.

The Council believes that, as a general rule, it would be unwise for the government, as a major financier of health care, to attempt to use its economic leverage to establish methods of choice in technical and professional questions upon which the profession itself has not yet reached a consensus. Such decision now can only act as disincentives to any further development, whether in methods of treatment or of review.¹⁶

This statement points out a dilemma which confronts most regulatory efforts. The dilemma is to specify the nature of the product to
prevent excess costs while maintaining a flexible position to allow for innovative approaches. This dilemma leads us to the first generalization of this chapter.

**Generalization 5-1:** If the specifications of the health product are inflexible in light of new approaches to the treatment of catastrophic illness, then the specification would provide disincentives to new and possibly more efficient methods of treatment.

For the ESRD Program the fee-for-service method of reimbursement was considered appropriate only where it was possible to specify the nature of the health product. When this could not be done it was necessary to search for an alternative method of reimbursement. This leads us to the second generalization of the chapter.

**Generalization 5-2:** If the services required to treat a catastrophic illness are well specified through accepted medical standards and a statement of public demand, then a fee-for-service method of reimbursement can be used without leading to the provision of questionable or unnecessary services.

In the case of physician services provided during routine maintenance dialysis, it was impossible to specify an appropriate set of services. A memorandum from the Director, Office of Health Financing Policy Development, to the Assistant Secretary for Health states:

While it is ... appropriate to reimburse for these (routine physician) services, it would seem reasonable to expect that some standards of "acceptable" medical practice could be established for these services. Development of criteria has been most difficult for the category of routine physician services during maintenance dialysis. The kinds and amount of "supervision" have varied considerably by physician and area as well as by patient, ranging from "on-call" availability to performing routine physical examinations. Consultations with numerous professionals have failed to yield a consensus on
professional standards—we cannot specify or quantify any one set of services constituting acceptable medical practice. Furthermore, the data currently available is inadequate to determine if there are any differences in morbidity or mortality based on various sets of "routine" services.\(^7\)

In this case the converse of Generalization 5-2 would hold.

**Generalization 5-3:** If the services required to treat a catastrophic illness are not well specified through accepted medical standards and a statement of public demand, then a fee-for-service method of reimbursement would lead to the provision of questionable or unnecessary services.

3. **Inclusion of Physician Services as Facility Overhead**

Given the inability to specify the services provided during maintenance dialysis, it was necessary to develop an alternative to fee-for-service reimbursement. Early indications pointed to the use of a retainer—i.e. comprehensive payment for all physician services provided during maintenance dialysis. Despite these indications the retainer was not adopted as the method of reimbursement for physician services to maintenance dialysis patients. When the ESRD Program became effective on July 1, 1973, physician services for maintenance dialysis were to be included as "overhead" and billed and reimbursed as part of the institutional cost or charge, not as a separate professional fee-for-service.

The Bureau of Health Insurance Summary of a February, 1973 conference among Social Security officials, nephrologists, and transplant surgeons states: "Although no formal consensus was reached by the group, it was felt that in place of a fee-for-service for physician involvement in dialysis, a retainer system may prove superior for patients
undergoing long-term outpatient (maintenance) dialysis." The retainer concept was seriously considered as the method of reimbursement for physician services to maintenance dialysis patients within both the Social Security Administration and the Office of the Assistant Secretary for Health. Although presented as having many advantages, the major disadvantage to the use of the retainer was its lack of acceptability to the medical community.

Opposition of the medical community to the retainer concept materialized as expected. The "opinion" of the Council on Medical Services of the American Medical Association states in part:

The Council is . . . concerned that this program (the ESRD Program) could set a precedent for other diseases. While chronic renal disease is not the only disease entity specifically mentioned as a basis for Medicare eligibility, the Council sees no reason why a capitation payment per disease, if accepted here, might not be applied elsewhere, establishing a sort of "service contract" approach to professional care for long-term chronic illness, which the Council does not feel is in the best interest of the patient.

Because of the need to have a reimbursement mechanism available by July 1, 1973, effective date of the ESRD Program, the need to control costs of the ESRD Program, and the opposition to the retainer concept, the decision was made to reimburse physicians through the institution rather than being paid a direct professional fee. Excerpts from the policy set forth in a letter to Medicare intermediaries explains the basic policy:

The performance of maintenance dialysis, is generally not considered to require a physician's personal service to a patient. . . Only a very small percentage—on the order of 5 percent—of dialysis patients require physician personal services during dialysis on a routine basis. . . . Interim conditions of
coverage require that every dialysis facility must be under the
general supervision of a physician. However, such services are
not considered to constitute a patient-care service, and reason-
able charge reimbursement will not be made for such services.
Unit supervision is considered a facility service and should be
included as a component of the cost or charge for the dialysis.23

The intended effect of this reimbursement policy was subsequently
set forth in a memorandum from the Director, Office of Health Financing
Policy Development, to the Assistant Secretary for Health:

Conceptually this policy made good sense since these physician
services are considered to be an integral part of the dialysis
episode. In addition, this policy appropriately emphasizes
limits on the total amount of reimbursement, rather than the
component charges, and thereby allows for variations. As a
consequence, facilities will have an interest in getting enough
reimbursement for "supervision" so that physicians will provide
the service, but limit it so as to keep the total charge within
the "fee screen". Furthermore, since facility reimbursement
requires "assignment", patient liability for the highly variable
and sometime suspect "customary" charges by physicians would be
limited.24

Despite the claims that the interim reimbursement policy made good
sense conceptually, it was ineffective as an incentive for the efficient
provision of maintenance dialysis services. For one thing, the interim
reimbursement policy failed to provide reimbursement—either directly
or through a facility—to physicians responsible for the patients
receiving home dialysis. Since reimbursement of physicians was pro-
vided for the management of patients in institutional settings, there
was an incentive to place patients in such settings rather than in the
lower cost home dialysis setting.25

More importantly, the interim reimbursement policy failed to gain
acceptance among physicians. The interim policies were announced on
June 29, 1973 and by July 13, 1973 a meeting was held with sixty
nephrologists from around the country in attendance to organize a response to the interim policy. This meeting organized the Physicians for Renal Replacement Therapy, later renamed the Renal Physicians Association (RPA). Along with representatives of the American Medical Association, American Society of Internal Medicine, National Association of Patients on Hemodialysis and Transplant, and the National Kidney Foundation, this group met with the Assistant Secretary for Health on September 18, 1973 to present the joint position of these organizations. Although not dealing exclusively with the reimbursement issue, reimbursement was first among the basic principles presented.

(1) **Reimbursement:** The assembled group agrees that physicians attending patients with end-stage renal disease should be reimbursed directly, on a fee-for-service basis, on adequate documentation of services rendered, with quality of care and cost containment the responsibility of peer review.26

In addition to the joint position the various groups presented individual position papers.27

Concern of the physician and other related groups over the interim reimbursement policies did not wane. Opposition to the requirement that the physician be reimbursed through the facility for the management of maintenance dialysis patients culminated in the filing of lawsuits in California and New Jersey in March 1974 seeking to enjoin the Secretary of H.E.W. from implementing the interim reimbursement policy.28 The two cases were never litigated, however, since H.E.W. modified the Interim Regulations by issuing "Final Policies" in April 1974.29 These policies, while maintaining the existing mechanism of
reimbursement of physicians through the dialysis facility, reintroduced the retainer concept as an alternative reimbursement mechanism.

The alternative mechanism provided a comprehensive payment to the physician for the provision of all nephrology services other than those provided during hospitalization over a monthly interval.\(^{30}\)

Two generalizations are suggested by the experience with the interim reimbursement policy.

Generalization 5-4: Regardless of the underlying logic, if an incentive reimbursement mechanism is not acceptable to the practicing physician community, it cannot be effective in providing incentives for the efficient delivery of catastrophic health services.

The economic logic behind the interim reimbursement policy was essentially sound, but the policy was ineffective in gaining acceptance from the physicians. Robert Alford in his recent book, Health Care Politics, observes that strategies for reform must consider the ways in which the dominant structural interests have created significant barriers to change.\(^{31}\) He identifies three major types of structural interests the professional monopoly, the corporate rationalizers, and the community population. The professional monopoly is represented by biomedical researchers, physicians in private or group practice, salaried physicians, and others seeking or holding professional privileges and status. The corporate rationalizers include medical schools, public health agencies, insurance companies, hospitals, and health planning agencies. While the community population constitutes a set of potential interest groups which are internally heterogenous with respect to their health needs and ability to pay, but they share
an interest in maximizing the responsiveness of health providers. Despite the importance of these structural interests, they have been ignored by the existing incentive reimbursement literature. If effective incentive reimbursement mechanisms are to be developed, one would postulate that the theory of incentive reimbursement must account for these non-economic as well as the economic factors.

An alternative assessment of the interim reimbursement policy is that it was effective because it created the conditions necessary to gain acceptance for the retainer method of reimbursement and for introducing two new reimbursement procedures going beyond existing Medicare practices. Although there is no indication of such intent, it would appear that the introduction and subsequent controversy surrounding the interim reimbursement policy facilitated acceptance by physicians of the retainer method of reimbursement. The more drastic step under the interim reimbursement policy created the conditions which favored the less drastic though still important step under the Final Policies. The opposition to the retainer which was voiced prior to the interim reimbursement policy was mysteriously still when the retainer was offered as an alternative in the Final Policies. One could speculate that if the retainer method of reimbursement had been introduced without the benefit of the controversy surrounding the interim reimbursement policy, the controversy would have been directed at the retainer approach.

Generalization 5-5: Acceptance by physicians of an intended incentive reimbursement mechanism may be improved if the physicians perceive the alternative mechanisms as offering greater threats.
4. Comprehensive Payment for Physician Services

As described in the previous section, the "Final Policies" established the comprehensive payment as an alternative method of physician reimbursement for all nephrology services other than those provided during hospitalization over a monthly period. The physician managing the maintenance dialysis patient in an institutional setting receives a fixed payment of between $160 and $240 per month depending upon the prevailing fees in the area. For management of the patient receiving dialysis at home the physician receives between $128 and $168 per month depending upon the prevailing fees in the region of the country.32

The comprehensive payment approach or capitation approach, as it is frequently referred to, is considered by many health economists to be one of the best reimbursement mechanisms for promoting efficiency in the delivery of health services.33 Under this approach the physician has direct incentives to refrain from the provision of services which are either unnecessary or of marginal value. Regardless of the general views of many health economists, the comprehensive payment to physicians for the management of maintenance dialysis patients has raised a number of questions. (1) What has been the impact of the comprehensive payment on the total cost of treating the maintenance dialysis patient? (2) How much should the physician be paid for the management of the maintenance dialysis patient? Both the popular press and the House Subcommittee on Oversight have charged
that the comprehensive payment essentially amounts to payments to physicians for providing few if any services. The objective of any incentive reimbursement mechanism is to reduce the cost of providing a given level of health care. Assuming no deterioration in the quality of care, an incentive reimbursement mechanism is effective if it reduces the cost of that care.

Though the physician provides only one input in the provision of health care, he controls the type and quantity of most other inputs. As such the physician is of primary importance in determining the total cost of care to the maintenance dialysis patient. Unfortunately at the present time it is impossible to determine the effectiveness of the comprehensive method of payment with any degree of certainty because the Social Security Administration does not have the necessary data available.

The criticism that the physician receives the comprehensive payment for providing few if any services appears to be based upon the previously stated question: How much should the physician be paid for the management of the maintenance dialysis patient? It would appear that the concern is based upon a lack of congruence between the amount of the comprehensive payment and perceptions of the value of the physician care provided in return for this payment. It is evident that in the development of an incentive reimbursement mechanism it is necessary to provide a mechanism capable of establishing a price based upon the public demand for care and the appropriate supply function. The supply function should be considered in light of
knowledge about the specific production function. The expressions of concern regarding the amount of reimbursement under the comprehensive payment suggests the following generalization.

**Generalization 5-6:** If the public demand or the cost of producing the services are either unknown or unspecified, then it is impossible to establish reimbursement incentives.

When either or both the public demand and the costs of production are unknown or unspecified, it should be little wonder that we seldom attain efficiency in the delivery of health services.

5. **Mandatory Assignment**

To further strengthen the incentives associated with the comprehensive method of reimbursement for maintenance dialysis a requirement of mandatory assignment was considered. Physicians receiving reimbursement under assignment agree that the total charge for covered services will not exceed the reasonable charge set by Medicare. This in effect places an upper limit on the amount of reimbursement received by the physician. Under existing Medicare policies assignment is voluntary. In place of assignment the physician has the option of charging the patient what he wants with Medicare paying only 80 percent of the reasonable charge and the patient paying the 20 percent copayment plus 100 percent of any charge which exceeds the reasonable charge. The requirement for mandatory assignment would place an upper limit upon the amount of payment to the physician for providing maintenance dialysis services under the comprehensive method of reimbursement. In effect this would place an upper limit on the patient's
liability. This may be especially important in the case of cata-
strophic illness where the patient would be willing to pay any price
for the needed care.

Despite this benefit it was decided not to include mandatory
assignment as part of the ESRD reimbursement mechanism. The decision
was made on practical grounds, not on conceptual grounds. The
practical considerations were:

• The legal—or statutory—basis for mandatory assignment was
open to question. Section 1842 of the Medicare Act requires that
assignment be voluntary with regard to reimbursement on the basis of
reasonable charge. The Office of General Council within H.E.W.
indicated that this general requirement might not apply in the ESRD
case because reasonable charge was not the basis for reimbursement.
Even so, assignment would still be voluntary because the physician
could still choose to be reimbursed through the facility. Despite this
interpretation there were still grounds for concern about the legis-
lative basis for mandatory assignment.37

• Even if mandatory assignment for ESRD was allowable under the
statute, the Assistant Secretary for Legislation argued that imposing
such a requirement would open H.E.W. to the charge of "legislating
policy." He went on to state:

While there has been considerable Congressional interest
in controlling costs of the Medicare and Medicaid programs,
this interest did not take the form of statutory language.
We believe if Congress wants to limit provider reimburse-
ment for this program they will enact appropriate legis-
lation.38
Finally there was the realization that mandatory assignment if adopted would unnecessarily antagonize the physicians. The AMA in fact indicated they intended to sue if such a policy was adopted. On the other hand, representatives of the National Kidney Foundation and Renal Physicians Association assured H.E.W. that they would urge physicians to accept assignment. Consequently, the decision was made not to require mandatory assignment. Even so, the "Final Policies" contained a statement which strongly implied that if the voluntary approach was abused it would still be possible to require mandatory assignment.

B. Facility Reimbursement

The examination of incentives for facilities under the ESRD Program focuses on two aspects of the reimbursement mechanism. The first makes reimbursement to facilities contingent upon certification that the facility is a necessary part of an efficient system for the delivery of ESRD services. The second aspect is the placement of a semi-rigid upper limit on the amount of reimbursement a facility can receive for the provision of maintenance dialysis services.

1. Facility Certification

The legislative authorization for making reimbursement contingent upon certification is contained in the previously cited passage of the ESRD provisions which grants broad powers to the Secretary of H.E.W. to limit reimbursement. For the present we will only be concerned with efforts of the Secretary to limit reimbursement to
those kidney treatment centers which form a necessary part of an efficient system for the delivery of ESRD services.

In a loose sense the limitation on reimbursement can be considered an incentive in that it provides a reward—i.e. reimbursement—to facilities which meet the public demand—i.e. function as part of an efficient ESRD delivery system. Some would argue that this is not an incentive but merely a form of health care regulation. Leaving the semantics aside the important consideration is the relation between this requirement and the development of efficient systems for the delivery of ESRD services.

In the case of both open-heart surgery and cobalt therapy historically there occurred an overexpansion of treatment capacity. Seeking to avoid this dilemma when the ESRD Program became operational, the "interim regulations" imposed a freeze upon the expansion of existing facilities or the establishment of new facilities with exceptions to be granted only where a definite need could be established.43

As the name implies the interim freeze was only intended to limit the expansion of ESRD treatment capacity until such time as capacity could be expanded in a way which would lead to the efficient provision of ESRD services. The "interim regulations" provided that ESRD facilities which were in operation on June 1, 1973 would be certified for reimbursement and that any additional facilities and substantial additions to services would be allowed reimbursement on an exceptions basis. The "interim regulations" emphasized that
just because a facility was approved during the interim period that it
would necessarily receive approval on a permanent basis.

Authority for participation by a facility on an interim
basis should not be construed to imply that it will be
approved on a permanent basis for participation in the
program. When the selection of qualifying facilities
under the final conditions is made, it is expected that
those not qualifying will be phased out with a minimum
of interruption in the continuity of service.44

In granting approval to new facilities or expansion of services
under the exception process dialysis facilities were expected to meet
the following conditions: 45

(1) The facility is expected to meet an acceptable utilization
rate and otherwise demonstrates a capacity to perform at
high quality;

(2) the facility makes a needed contribution to access of care;

(3) the facility makes a positive contribution to the total
system of care of CRD (ESRD) by working in cooperation with
other sites and modalities of care;

(4) the facility has arrangements for a patient review mechanism
to assure that all patients are screened for the appropriateness of their treatment modality—including suitability for
transplant and home dialysis;

(5) the cost (or charge) of the service offered by the facility
is in conformity with norms of costs (or charges) for
similar services; and

(6) its capital expenditures for this service have not been
disapproved by a State agency designated in accordance
with section 1122 of title XI of the Social Security Act.

Similar conditions were established under the exception process for
transplant facilities. Regulations providing a more detailed state­
ment of the criteria used in granting the exceptions was issued under
The title, "Facilities Providing Treatment for End-Stage Renal Disease: Interim Period Qualification and Exception Criteria." The publication of these "Exception Criteria" did not change the exception process but provided a formal statement of the criteria that were actually being used in determination of approval or rejection of an exception request.

The exception process was intended to allow for the controlled expansion of treatment capacity in areas of definite need resulting from the increased demand for ESRD services generated by the availability of financing through the ESRD Program. A definitive evaluation of the effectiveness of the exception process in limiting the over expansion of facilities is not possible since no one knows how many ESRD facilities there would have been if the interim freeze and exception procedure had not been established. There has been an expansion of the number of facilities in that there were only about 500 ESRD facilities approved when the ESRD Program began operations on July 1, 1973 and by May 1975 there were approximately 750 such facilities. This represents a fifty percent increase in the number of facilities over the two year period. According to Dr. Robert Van Hoek in testimony before the Oversight Subcommittee of the House Ways and Means Committee the number of patients on maintenance dialysis increased from approximately 11,000 in 1972 to approximately 20,000 in June of 1975. Although the time periods are not identical, the expansion in the treatment capacity does not appear to be excessive in light of the fact that the number of patients almost doubled between 1972 and June of 1975.
Although it appears that the overexpansion of ESRD capacity may have been prevented or at least reduced, the problems involved in limiting the expansion of capacity were described by one member of the group responsible for approval of exception requests. The problems are created by what he referred to as the "attorney's rule of thumb". That is, "It is easy to give a right, but it is hard to take it away." To deny an exception request it was necessary for the exception review group to document the absence of need. To do this it was necessary to establish specifications of what constituted need. Beyond the need to document the basis for disapproval there was the threat of a court challenge of disapprovals. This resulted in a movement toward leniency in approving cases. This was primarily because Social Security did not want to lose many of the court battles. Thus, they would only disapprove exception requests when there was clear evidence of a lack of need. As a result, when there was some question, approval was usually granted.

The major problem with the interim freeze and exception process is that it is still in existence. As of January 1, 1976 the final specifications for the ESRD treatment system have not been issued. The proposed specifications for the ESRD treatment system were published as proposed regulations on July 1, 1975, but final action is still pending. While the proposed final specifications do not significantly alter the conditions of participation from what evolved under the exception process, they do provide a higher degree
of certainty about what facilities will be allowed to provide ESRD services under the ESRD Program.

While the absolute effectiveness of the interim freeze and exception is yet to be determined, the experience under the ESRD Program suggests that the overexpansion of treatment capacity can be reduced through the utilization of a process which controls the expansion of capacity.

Generalization 5-7: If a well developed and accepted mechanism for ensuring the orderly expansion of treatment capacity according to the specifications of an efficient health delivery system is not in place prior to the expansion of public financing, there is a greater likelihood that there will be an overexpansion of treatment capacity.

2. Limitation on Facility Reimbursement

Recognizing that existing Medicare reimbursement mechanisms provide some disincentives for the efficient delivery of ESRD therapy, the officials responsible for the administration of the ESRD Program sought reimbursement methods which were consistent with established Medicare legislation and yet provided some incentives for cost containment. As previously noted, the ESRD provisions greatly expanded the powers of the Secretary of H.E.W. to control reimbursement. As was the case with facility certification, the need to have a reimbursement mechanism established for the July 1, 1973 effective date of the ESRD Program precluded the development of a finalized facility reimbursement method. In its place an interim facility reimbursement policy was adopted.

One significant aspect of the interim facility reimbursement policy was the establishment of "screen" on the amount of reimbursement
a facility could receive for maintenance dialysis.\textsuperscript{51} The "screen" provided that unless a specific exception was granted from the Bureau of Health Insurance Central Office, reimbursement for maintenance dialysis services was to be limited to $150 per treatment and $190 per self-dialysis training session, $145 and $185 respectively, when laboratory procedures were billed separately.\textsuperscript{52} As noted previously, this limitation also included the payment to the physician for the management of the maintenance dialysis patient.\textsuperscript{53}

While the "screen" was intended to act as a guide on the interpretation of reasonable cost or charge, the exact nature of this guide was not clear. Many regarded the "screen" as a "ceiling" above which reimbursement would only be made in the most extraordinary cases. Others perceived the "screen" as merely a mechanism to ensure that requests for reimbursement above the "screen" were reviewed according to a standard procedure. This procedure was intended to prevent many of the abuses which have been associated with the standard Medicare reimbursement practice. That practice allowed the intermediaries to determine the reasonableness of the costs. Even within H.E.W. there did not appear to be a clear understanding of what was meant by the "screen".\textsuperscript{54}

The "screen" provided notice to suppliers of maintenance dialysis services as to what would be used as a standard in evaluating the reasonableness of their costs and charges. In this way it provided some incentives for the suppliers of maintenance dialysis services not to exceed the "screen" because they were no longer assured that costs or
In the present time it is impossible to directly assess the effectiveness of the "screen" in limiting the cost of maintenance dialysis. The major reason for this is that few final settlements have been made with the dialysis facilities. Thus, the true costs are not known. In addition there is no comparable control group since over 90 percent of ESRD are financed through the Medicare program. Since the issuance of the initial intermediary letter describing the "screen", there has been a slight relaxation of the "screens". Most important was a waiver of the "screen" for dialysis services received by patients on an inpatient basis. In addition it should be remembered that the "screen" was never intended to be included in the final mechanism for facility reimbursement.

Although the final facility reimbursement mechanism has not been operationalized, its general form has been described in the statement of "Final Policies" which was issued in April 1974. The proposal is an effort to make the providers share the cost of the services they provide by establishing an upper limit on the amount of reimbursement to both hospitals and non-hospital units. The exact amount would be based upon a classification scheme using variables such as size, geographic locale, services provided, and mix of patients. In addition, for non-hospital
units a "target rate" would be established below which a facility will receive a variable share of the difference. This share of the difference between the target rate and the facilities costs would represent a profit for the facility. This same mechanism is still being considered as indicated in the recent information supplied by the Assistant Secretary for Health to the Oversight Subcommittee.

Two major constraints in the operationalization of the final facility reimbursement mechanism have been the need for accurate information upon which to base the reimbursement, and the need to develop a reimbursement approach which can be supported under present legislative authority. The need for accurate information upon which to base the reimbursement is discussed in the following chapter.

The constraints imposed by legislative authority have been evident in the design of these facility reimbursement policies. Policy decisions made prior to the issuance of the interim reimbursement policy indicated a desire to provide reimbursement based upon prospectively determined reasonable charge which would be the same for all providers of maintenance dialysis with allowances for regional variations. It was stated: "We believe that the most important factor upon which to base reimbursement should be the service provided, not the other kinds of services offered or the organizational nature of the facility.

Despite this desire it was not possible to operationalize the policy to provide the same payment to all facilities regardless of type. As pointed out by the Commissioner of Social Security, the existing Medicare law precludes the establishment of a minimum payment
to hospital dialysis facilities because of the existing requirement for reimbursement based upon costs. 61

G. Considerations for Provider Incentive Reimbursement Mechanisms

This chapter has depicted a general inability to develop and implement the type of incentive reimbursement mechanisms which are generally suggested in the health economics literature. The effort to utilize a capitation--i.e. retainer--approach for facility reimbursement was finally established after being successfully thwarted for over a year. Mandatory assignment was not required because of possible legal constraints and the threat of suit from physicians. The efforts to limit the development of excess capacity has been complicated by the threat of suit when certification is denied. Finally, the efforts to implement a prospective method of reimbursement which would provide incentives for the facilities to reduce costs will not be applied to hospitals because of the requirement that reimbursement must be based upon costs. The constraints listed above have effectively limited the ability to develop adequate incentives despite the fact that the ESRD provisions have greatly expanded the powers of the Secretary to limit reimbursement.

Although these limitations have precluded the actual development of effective incentive reimbursement mechanisms, the theoretical literature on incentive reimbursement offers no explanation of what has occurred. Before attempting to explain what has happened we will look
in Chapter VI at other aspects of the ESRD Program which are required if any incentive reimbursement mechanism is to function as intended.
Chapter V—Footnotes

1P.L. 92-603, Sec. 2991.


5Ibid. pp. 4-5.

6Ibid. p. 22.

7P.L. 92-603, Sec. 2991.


"Interim Regulations".


The official positions of these groups are contained in the following documents:

The "Position Paper of the Physicians for Renal Replacement Therapy" states: "It is our opinion that excessive concern for alleged opportunities for financial abuses is illustrated in the laboratory tests area and that this concern is manifested by rigid formulas and voluminous forms". p. 7.


19. The use of the retainer as the method of payment is discussed in:


20. "Kidney Disease Treatment and P.L. 92-603 (H.R. 1, Section 2991)--Policy Issues". p. 21


22. See "Action Memorandum—June 7, 1973", for the decision to utilize the interim reimbursement policy.


24. "Information Memorandum—March 8, 1974". p. 9. The "fee screen" and the question of "assignment" mentioned in the above quotation will be discussed later in this chapter.


Among the position papers presented were: "Position Paper of Physicians for Renal Replacement Therapy"; The National Association of Patients on Hemodialysis Transplantation, Inc., "Conclusion of the Committee Concerning the Implementation of Public Law 92-603, Title II, Section 2991, The Patients Point of View"; and Ad Hoc Council on Transplantation and Dialysis of the National Kidney Foundation (NKF), "Policy Statement on Public Law 92-603, Title II, Section 2991, Concerned with Chronic Kidney Disease". August 8, 1973.


"Final Policies. P.L. 92-603, Sec. 2991".

Ibid. See page 8 for a description of this alternative reimbursement mechanism.


33 See Chapter III for a discussion of this approach to incentive reimbursement.

34 For examples of these arguments see:

This concern is also expressed in the following excerpt from the "Report of the Oversight Subcommittee". p. 14.

"The Oversight Subcommittee testimony established that the physician may provide very few services during a given month for this payment. Indeed, in the case of home dialysis patients, the physician may never even see his patient during the month . . . Yet the physician will be receiving a monthly payment of between $160 and $240 a month per patient".

35 For actual incentive reimbursement mechanisms it is not sufficient to assume that there will be no change in the quality of care. Rather it is necessary to provide mechanisms to monitor the quality of care. Because of this relationship the quality monitoring system established in conjunction with the E3RD reimbursement mechanism is discussed in the following chapter.

36 The problem of lack of data was previously discussed as it pertained to the reference cited in footnote "3".

An additional element to the comprehensive reimbursement alternative could be to require assignment as a condition of receiving it. Although Section 1842 of Medicare provides that assignment be voluntary for reimbursement based on "reasonable charges", since the choice of this alternative will be voluntary to the physician, it can be argued that the choice of the assignment would still, in effect, by "voluntary", and therefore legal. The real issue, then is one of policy. Requiring assignment would be desirable, because patient liability would be limited by precluding excess charges. This is particularly important in the case of kidney disease treatment since patients have little choice of provider. On the other hand, mandating assignment would discourage some physicians from selecting this option, would antagonize others, would not accommodate variations in charges for patients who require extreme variations in care, and may simply not be necessary since physicians have generally been more willing to voluntarily accept assignment in cases of prolonged illness, particularly when patient resources are low. At this time, we will retain the voluntary approach to assignment.
The "Interim Regulations" state: "Subject to requirements described below, facilities which were in operation in the performance of CRD treatment on June 1, 1973, will be reimbursed under the program during the interim period for services which are not increased substantially; additional facilities will be qualified to participate and substantial additions to services will be allowed for reimbursement on an exception basis." p. 17210.

Although the processing of exception requests began within six months after the publication of the "interim regulations" the criteria used in granting the exemptions were not officially made public until October 1974.


"Interim Regulations". p. 17210.

Ibid.


"Report of the Oversight Subcommittee". p. 12. In addition see:

"Proposed Regulations".

This passage from the ESRD provisions is referred to by footnote "1" of this chapter.
Authorization for the imposition of the "screen" is contained in the "Interim Regulations". Part 4 provides in part that: "Rules may be developed for establishing limits on costs and services above which reimbursement shall be made only upon appropriate justification." In a similar vein Part 5 places a limit upon reasonable costs: "Definitions may be developed which describe the elements of service included within the scope of a dialysis treatment and limits may be established on charges and services above which reimbursement shall be made only upon appropriate justification." pp. 17211-17212.


See pp. 128-133 of this chapter.

In fact the "Action Memorandum--June 7, 1973" setting forth the policy decisions refers to "ceilings" rather than "screens". p. 22.

"Recommendation (1): Establish 'ceilings' for maintenance dialysis services".

The intent and use of the terms "ceilings" and "screens" was clarified in a subsequent memorandum. "Information Memorandum--March 8, 1974". p. 21.

"Recognizing that the basic problem with the reasonable cost mechanism has been its application, not its design, a "ceiling" of $150 was applied. However, this was not meant as an upper limit, but as a 'fee screen'. That is, reimbursement will only be given above this amount when the costs were determined to be 'allowable' by the Bureau of Health Insurance, not by the local intermediary as is the usual procedure. In addition, specific criteria are to be developed defining 'allowable'."


"Oversight Subcommittee Hearings--Appendix A. Response by the Assistant Secretary for Health to Question submitted by the Subcommittee". p. 85.
"While bills for renal services are being received and reimbursements are being made, most of these payments—those made by intermediaries are to facilities—are interim, not final payments. These interim payments should closely approximate the actual reasonable costs incurred. However, the true costs will only be determined after an audit when final settlement has been made on cost reports received from all providers of renal services. At the present time few final settlements have been made."


58 "Final Policies, P.L. 92-603, Section 2991". p. 9.

59 "Oversight Subcommittee Hearings—Appendix A. Response by the Assistant Secretary for Health to Questions submitted by the Subcommittee". p. 102.


CHAPTER VI

ADMINISTRATIVE SUPPORT FOR
THE ESRD REIMBURSEMENT MECHANISM

As noted in Chapter III the incentive reimbursement literature fails to consider the administrative structures and practices required to operationalize the proposed reimbursement mechanisms. That chapter discussed how the existing incentive reimbursement literature assumes that the nature of the health product is known, and the price of that product has been determined in the market. The chapter went on to explain why it is necessary to be able to specify the nature of the health product and to provide a mechanism for determination of the price. In Chapter VI we are concerned with the mechanisms developed under the ESRD Program to define and monitor the nature of the health product and to determine the appropriate price for that product. These mechanisms are examined under two major headings: "The ESRD Product--What Is It? Are We Getting It?" and "The ESRD Product--At What Price?"

A. The ESRD Product--What Is It? Are We Getting It?

Based upon the health economist's assumption that the purchaser of the health product has knowledge of both the quantity and the quality of the product and that this knowledge is obtained without cost, it is argued that when the payment is made for the final product it is not necessary to establish cumbersome administrative mechanisms with the
associated high costs and lack of flexibility which are necessary if structure and process specifications are used. 1 While it is acknowledged that administrative mechanisms may be cumbersome and often have high cost, they are necessary when there is an inability to specify and measure when the final product is produced. In fact they are probably necessary even when it is possible to specify and measure the final product. This would be true when the individual patient does not have the knowledge to evaluate the quality of care received. Rather than dismiss the need for an administrative structure as an anomaly, it is necessary to concentrate on the development of administrative structures which can specify and monitor both the quantity and the quality of the health product in an efficient manner. These structures when used in conjunction with the incentive reimbursement mechanisms provide a method for ensuring that health services are delivered effectively and efficiently. By examining the administrative support being developed for the ESRD Program, one can identify some factors which may facilitate the development of efficient catastrophic health insurance programs in the future.

In this section we shall be concerned with two aspects of the administrative support. The first relates to the need to specify the nature of the ESRD product and to ensure that it is produced. Under the ESRD Program the ESRD medical review board is to serve this function. The second provides the information needed by the ESRD medical review board. This is referred to as the ESRD medical information system.
1. **ESRD Medical Review Board**

The ESRD provisions provide that the Secretary of H.E.W. shall establish requirements by regulation "for a medical review board to screen the appropriateness of patients for the proposed treatment procedures." This medical review board would be responsible for determining if each patient receives the appropriate treatment. At this time, over two and one-half years since the ESRD Program became effective, the medical review boards have not been officially established.

Two factors have been major contributors to this delay. The first relates to the inability to specify the nature of the ESRD product. The second relates to problems encountered when it becomes necessary to operationalize concepts associated with the specification of the ESRD product.

a. **The ESRD Product.** In order for the ESRD medical review board to monitor the appropriateness of treatment it is necessary to specify those treatments which are deemed appropriate. The ESRD provisions give no indication of what is deemed appropriate other than granting power to the Secretary to establish the medical review board and minimum utilization rates. The statement of "Final Policies" for the ESRD Program provide the objectives to be met through the provision of the ESRD product:

- Provide for the total health care needs associated with the treatment of kidney disease;
- Maintain or create the necessary availability and distribution of resources, i.e. access;
Accomodate the requirement for appropriate and efficient practice by physicians and facilities;

Assure quality and contain costs of covered services.

While these objectives are conceptually interesting, they do not provide the specificity required to evaluate the care afforded to particular individuals.

For the medical review board to function it is necessary to be able to specify what constitutes appropriate treatment—i.e. the ESRD product. Three major approaches to the evaluation of the quality of health care have been identified. These have been designated as the evaluation of structure, process, and outcome or end results. Although outcomes measured as changes in the health status and satisfaction of the patient would meet the economist's desire to specify the final product, they do not provide an adequate basis to evaluate a catastrophic health insurance program. In the first place there is no explicit relation between the change in the quality of health and the cost of providing that care. In addition, it often takes a long period of time to determine the effectiveness of care of individual providers. Because of these limitations it has been necessary to develop structure and process measures in addition to the outcome measures associated with the ESRD product. The structural measures evaluate the settings and instrumentalities available and used for the provision of care. The process measures evaluate the activities of physicians and other health professionals in the management of patients.
A number of documents issued either before or concurrent with the initiation of the ESRD Program give the impression that there was a high degree of consensus among renal physicians about the appropriate structure and process of care for the ESRD patient. The conclusions of all of the documents were similar. They argued for a regional organization of therapy with a strong medical review capability. In addition they generally recommended that relatively large facilities with high utilization rates were necessary to control both the quality of care and the cost of services. Renal transplantation was presented as the treatment of choice with home dialysis serving as the second choice for those patients where a transplant was not feasible or donor organs not available. With this apparent consensus it initially appeared that there would be little difficulty in developing specifications for the ESRD product and the systems required to provide the therapy. Shortly after the passage of the legislation it became evident that the consensus was more illusory than real. The illusion of consensus was broken partially because of changes in medical opinion and partially because the views presented in the documents were not representative of all renal physicians. Regardless of the reasons for the failure of the renal physicians to maintain a consensus, in order for them to evaluate the quality of care that is provided, they must first agree upon a standard for care. In a complex medical environment composed of many different physicians, trained at many different institutions, and practicing in many different settings it is difficult to develop an agreeable consensus as to what constitutes appropriate therapy.
Without any consensus the efforts to develop standards and monitor the quality of care become almost impossible.

1. Changes in Medical Opinion. The changes in medical opinion were brought about partially by new data pertaining to the efficacy of the various treatments and partially by changes in the patient population after the establishment of the ESRD Program. The preference for transplants as the treatment of choice began to be questioned as the mortality and morbidity data associated with cadaveric transplants began to indicate that the probability of the recipient of a cadaveric kidney having a functioning graft at the end of one year was less than fifty percent. In addition, the liberalization of the criteria for ESRD therapy accompanying the ESRD Program has contributed to changes in medical opinion about the most appropriate forms of therapy. Patients newly eligible for treatment under the liberalized medical criteria were older and had additional secondary medical complications. Because of these factors the newly eligible patients could not be treated in the same way as their younger counterparts who had few secondary complications. Because of the advanced age of these newly eligible patients, living-related donor transplants are usually not feasible as there are no qualified donors. With shortage of cadaveric kidneys these individuals are usually not considered as priority recipients. In addition, these individuals often require greater care during the course of dialysis and are often incapable of managing the dialysis machine in the home. Because of
these changing medical conditions the previous criteria for determining the appropriateness of treatment were no longer considered adequate. 10

In light of the relationship between changing medical opinion and the development of effective incentive reimbursement mechanisms, it is necessary to consider the following generalization when developing incentive reimbursement mechanisms.

**Generalization 6-1:** If an incentive reimbursement mechanism for catastrophic health insurance program is to be effective, it must have the capability to redefine the nature of the health product in light of changing medical opinion.

Although an incentive reimbursement mechanism must have the capability to redefine the nature of the health product in light of changing medical opinion, this does not mean that such a change is always justified. It is necessary to consider the change in light of the public demand. Just as the medical criteria for treatment of ESRD liberalized with the availability of funding under the ESRD Program, other programs to provide public financing of catastrophic health services could be met with similar changes in medical opinion leading to liberalized selection criteria. Unless the changes in medical opinion are consistent with the public demand, such changes should not necessarily lead to changes in the reimbursement mechanism. It may be that the public does not demand the level of services associated with the changes in the medical opinion.

**Generalization 6-2:** If an incentive reimbursement mechanism for a catastrophic health insurance program is to be effective, any changes in the reimbursement mechanism resulting from changes in medical opinion must be consistent with the public demand.
ii. Nonrepresentative Consensus. Although the various documents suggested a consensus of medical opinion relating to the treatment of ESRD, this was not the case. The renal experts involved in the preparation of the documents were not representative of all renal physicians. Although the committees preparing the documents were not identical, many of the same individuals did serve on the various committees.

Almost to the person the renal experts involved in the preparation of the documents were on the faculty of medical schools. These same individuals were participants in the Chronic Renal Disease Conference—February 8-9, 1973—sponsored by the Bureau of Health Insurance of the Social Security Administration. The purpose of this conference was "to facilitate the discussion of the issues involved in implementing section 299I of P.L. 92-603..." Because of their positions it is not surprising that these individuals would propose a system where the major medical schools or major medical centers—e.g. Mayo Clinic and Cleveland Clinic—would serve as the leaders in the delivery of ESRD therapy. In this capacity they would have a major voice in the medical review function.

It is not surprising that renal physicians not associated with the major medical schools held different beliefs as to the most effective methods of treatment. Many of these physicians are associated with the major not-for-profit hospitals in the community. The need for a structure for the delivery of care which places the medical school in a position to control both the organization of the care and the
review of the quality of the care appeared threatening. In many cases the not-for-profit hospitals were in competition with the medical schools as the providers of sophisticated care within the community. In many cases where there are only the two providers of ESRD therapy—i.e. the medical school and the major not-for-profit hospitals, it would not be possible to get an unbiased review of the appropriateness of the ESRD therapy. The failure to acquire a representative consensus in terms of the specifications for the ESRD treatment system was partially due to exclusive reliance upon the representatives of medical school and major medical centers for advice. Although these representatives are necessary in the design of any health delivery system, it is also necessary to ensure that other members of the medical community who would be affected by the specifications are given the opportunity to provide their input.

Generalization 6-3: If standards of medical practice are to be established, it is necessary to get input from all affected physicians rather than just the representatives of the medical schools and major medical centers.

To build the consensus necessary to specify and monitor the production of the ESRD product large areas in terms of both population and geography have been proposed as "ESRD Networks". For instance, "ESRD Network No. 22" includes all of Ohio, except the southwestern corner, and the western half of the State of Pennsylvania. According to the proposed final regulations for the ESRD Program:

The broad array of professional skills and facilities involved in the treatment of persons with end-stage renal disease indicated the need for a system to promote effective coordination. Accordingly, the proposed regulations require ESRD
treatment facilities to join together into groups called "networks". 16

Within each network an "ESRD Network Coordinating Committee" is to be established to coordinate the delivery of care and an "ESRD Medical Review Board" is to be established to ensure that the ESRD product is produced, i.e., the patient is receiving the appropriate form of therapy. With large areas it is anticipated that there will be enough providers to avoid dominance by a single provider. Because of the larger number of providers in the large areas it is anticipated that unbiased review will be possible and that patients will have a greater choice of providers.

b. Problems in Making Concepts Operational. Although there was no specific agreement on the details of the ESRD delivery system, there was a general consensus on the broad outlines of a system necessary to determine, provide, and monitor the ESRD product. Most physicians agreed on the need for an organized system of facilities and referral arrangements for the delivery of medical care with a medical review board to monitor the quality of that care. They did not necessarily agree as to the exact form of the organized system or the function of the medical review board. As the efforts to operationalize the ESRD system and the medical review boards surfaced, a number of issues of contention surfaced. A major set of issues had to be resolved within H.E.W. itself. The Assistant Secretary for Health has no direct line authority over the Bureau of Health Insurance, which is within the Social Security Administration. There was not complete agreement
between those offices directly under the Assistant Secretary for Health, especially the Bureau of Quality Assurance and the Bureau of Health Insurance. The disagreements centered on the responsibility for the establishment of reimbursement policy, the specification of the characteristics of the organization for the ESRD delivery system, the establishment of medical standards for reimbursement, and the funding of the medical review boards. Many of these disagreements were gradually worked out over time as evidenced by a memorandum which allocated responsibilities for the ESRD Program between the Bureau of Health Insurance (BHI) and Bureau of Quality Assurance (BQA). It took almost a year after the ESRD Program began operations for this allocation of responsibilities to occur—April 1974.

An instance of the problems arising from administrative conflict is found in the question of the allocation of the responsibility for the funding of the medical review boards. Although the legislation which established the ESRD Program mandated the establishment of medical review boards, it provided no funds for accomplishing this task. By the spring of 1975 the question of how to finance the ESRD medical review boards had not been resolved. The major issue was whether the medical review function should be funded through the Medicare program as a reasonable cost of providing the care, or whether the Bureau of Quality Assurance should provide direct funding to the ESRD networks from general appropriations for the operation of the medical review boards. It is also unclear as to how the ESRD medical review boards will relate to the Professional Standards Review Organization (PSRO)
which were also mandated under the Social Security Amendments of 1972.\textsuperscript{18} What is clear from this experience is that unless there is agreement within the federal government, it is doubtful that agreement can be reached outside of the government. Also, the process of developing agreement is a long and time-consuming effort.

\textbf{Generalization 6-4:} If the federal government is to effectively intervene in the specification of the health product in terms of structure, process, and outcome, it is necessary to establish a clear allocation of responsibilities among the relevant government agencies.

The disagreement over the operational specifications for the ESRD product was not limited to H.E.W. While most parties associated with the treatment of ESRD agreed on the need to have an organized system for the delivery of care and a medical review board to monitor the quality of care, they did not agree when the specific proposals for the organization of the system and the medical review process were presented. The specific proposals centered around the concept of the ESRD network. As explained in a memorandum to the regional health administrators:

\begin{quote}
The concept of a network is an affiliation of facilities which by their type and location and the local medical referral patterns share the responsibility for care of ESRD patients in a particular area. A network operates through a Local Medical Review Board whose function is to make recommendations to the facilities forming the network. Each facility in a network will, as a condition of participation in the ESRD Program, be required to agree to work to ensure that the care of each ESRD patient is fully coordinated between appropriate facilities, and that the basic functions of the network are fulfilled.\textsuperscript{19}
\end{quote}

To operationalize the network concept it was necessary to establish the network boundaries. A major problem was to make the
proposed ESRD networks correspond to the boundaries of other existing systems. Among the existing systems which had to be considered were the ten federal regions, the states, counties, existing and proposed Comprehensive Health Planning/Health Service Agency areas, standard metropolitan statistical areas (SMSA's), and finally existing medical catchment areas and referral networks. These areas are not coterminous. Thus, the ESRD network could not be designed in such a way that it was simultaneously congruent with all regions. In addition to the question of boundaries there were questions of the geographic size of the network, the population base for the network, the number of facilities to be included in the network, the type of facilities to be included, and the structure and function of the medical review boards. Given these many factors it is not unexpected that there has not been uniform satisfaction with the proposed ESRD networks. For example, the ESRD officials in the State of Illinois were unhappy because that State was made part of three different networks. The dissatisfaction in Illinois was due primarily to the fact that the State had a well established ESRD Program prior to the passage of the ESRD provisions, and the division of the State among three different networks would make it difficult to administer the State program.

A major issue in the establishment of the medical review boards was the question of who should do the reviewing. Some argued that the ESRD network and related medical review function should be at the most local level to allow for difference in treatment practices in different parts of the country. The counter argument was that the networks should
encompass relatively large regions. The reasons for the larger networks included economies of scale in operations, greater guarantee of impartial review, freedom from local political influence, and greater assurance of quality care by removing the possibility of partial review within a given facility. As mentioned earlier in this chapter the ESRD networks which have been proposed are large in terms of both population and geographic area.

Without commenting on the merits of the individual arguments it is important to realize that any effort to operationalize the concepts necessary to establish a system for the delivery of catastrophic health services is going to be subject to numerous disagreements. This suggests the following generalization.

Generalization 6-5: Any program to provide financing for catastrophic health services should expect and provide mechanisms for the resolution of disagreements which arise during the effort.

2. ESRD Medical Information System

For the ESRD medical review board to effectively evaluate the quality of care provided, good data is required on the quality of care. For this, it is necessary to provide for a medical information system. This need was recognized early in the efforts to provide treatment for ESRD. The "RMP Life Plan" states:

An efficient communications system containing records of all chronic renal disease patients must be an integral part of the kidney initiative. The system would first list a particular patient whenever a diagnosis of irreversible chronic renal disease is established. Data in the system would help in the general planning for allocation of end-stage resources as well as in the selection of the most compatible recipient for each kidney appearing in the transplant system.
The statement of "Final Policies" provides that "a data system will be developed for monitoring patient care and participation by each facility in a prospective patient transplant registry and a dialysis and transplant outcome registry will be required."  

Like so many other aspects of the ESRD Program, the ESRD medical information system is not fully operational two and one-half years after the ESRD Program began operations. While a medical information system is needed for the medical review board to function effectively, no provision was made for funding its development or operation. It was not until April of 1975 that requests for proposals for the development of the information system were solicited. The funding was to come primarily from unexpended funds, from other areas such as health maintenance organizations (HMO's), and evaluation of health programs. From this experience it is evident that:

**Generalization 6-6**: If the product of programs to finance catastrophic health services are to be effectively monitored, it is necessary to provide the resources needed for the information and monitoring activities.

**B. The ESRD Product--At What Price?**

A major limitation on the effective use of incentive reimbursement mechanisms under the ESRD Program was an inability to determine the appropriate amount of payment. The traditional basis for Medicare reimbursement, customary and prevailing charges, was no longer available as the basis for reimbursement since virtually the entire ESRD patient population was being financed under the ESRD Program. In addition, in the case of reimbursement for management of the
maintenance dialysis, there was little agreement among physicians prior to the passage of the ESRD Program as to the appropriate level of care or the amount of reimbursement. The problems associated with determining the amount of reimbursement can be traced to (1) inadequacy of existing cost information when the ESRD Program began operations and (2) an inability to acquire and process the needed information subsequent to the initiation of the ESRD Program.

1. Little Existing Data

When the ESRD provisions were enacted, there was little information which could be used in setting the amount of reimbursement for ESRD services. This problem was compounded by the short start-up time allowed to begin the ESRD Program--October 30, 1972 to July 1, 1973--and the resultant limited opportunity to acquire the needed information.

There were no established customary or prevailing charges for the treatment of ESRD during the pre-ESRD Program period. The General Accounting Office in a review of dialysis charges in 81 hospitals for the year 1972 found a variation of from $111 to $315 per treatment. Similarly they report that in 1973 the transplant charges in a sample of twenty-four transplant facilities ranged from $5,500 to $20,500. This variation in charges may be partially attributable to the various sources of funding which were tapped in the pre-ESRD Program period. Some states--e.g. Illinois--had independent state sponsored programs to provide financing for the ESRD patients. In other states--e.g. Minnesota--vocational rehabilitation served as a primary source of funding for the treatment of ESRD. In still other states patients
were financed through philanthropic efforts. The result was that the market for ESRD services was not the same in all areas of the country. One result was that charges developed in relation to available resources, and there was no uniformity across the country.

Prior to the passage of the ESRD provisions, Medicare did provide financing for ESRD treatment for those patients over 65 already entitled to Medicare benefits.\textsuperscript{26} Because of restrictive age-based patient selection criteria and limited knowledge of the benefits, there were not enough cases which could be used to establish any reliable measure of the amount of reimbursement.

Despite the above mentioned limits, a limited amount of cost data was developed by the Kidney Disease Control Program which operated in one form or another within H.E.W. from 1965 through 1972.\textsuperscript{27} This program provided some preliminary cost figures to Social Security,\textsuperscript{28} based upon studies of self-dialysis training, home dialysis, and limited care dialysis. While valuable, those cost figures were only of limited utility as they had been derived from analysis of costs of demonstration projects and the external validity of this data for a large scale program with near-universal financing was subject to question.

Citing the concern within H.E.W./SSA that adequate costs reports are not available to rationally set reimbursement figures for different modes of maintenance dialysis therapy, an official of the Kidney Disease Control Program suggested in 1973 that consideration should be given to supporting a Cost Reporting Data Collection System. Such a
system had been established in conjunction with California's Committee on Regional Medical Programs and would be capable of providing cost data to SSA earlier than they (BHI) could establish a new system. This recommendation was made because like all Regional Medical Program (RMP) activities the renal activities including support for the development of this cost information system were being phased-out at the end of 1973.\(^{29}\) The result of the phase-out of RMP was that a major source of expertise in the federal government was being eliminated when it was needed most.\(^{30}\)

2. **Inability To Acquire and Process Data**

Not only are historical cost data related to the treatment of ESRD not available, but little data are available about the costs of the ESRD Program even though it has been operating for two and one-half years. The preliminary intermediary letter setting forth the conditions for reimbursement under the ESRD Program states:

> The capture and identification of costs related to renal dialysis treatments is necessary in controlling costs and for program evaluation purposes. In order to meet these requirements, those facilities which furnish dialysis services as of July 1, 1973, will be required to account for such costs by establishing a separate ancillary service cost center for renal dialysis services...\(^{31}\)

Even with this provision the actual costs for the first year of operation of the ESRD Program were not available by the end of the second year.\(^{32}\) Although the amount of interim payments made over the period was available, these would change as a result of the audits of the cost reports. Few of these audits had been completed at the end of the second year.
In an effort to acquire more complete data with regard to the cost of providing renal dialysis the Social Security Administration developed a "Renal Dialysis Questionnaire". The purpose of this questionnaire issued in December 1973 was:

(1) to provide the intermediary with sufficient reliable data on which to base a valid evaluation of the facility's charge or average cost per dialysis, and

(2) to provide reliable statistics, cost data, and other relevant information for Medicare program reimbursement evaluation purposes.33

Few facilities provided this information. A second letter sent to the Medicare intermediaries requesting that provider and nonprovider facilities complete the questionnaire noted that by November 1974 only about half of the 600 dialysis facilities had completed the questionnaires.34 A major reason for the failure to complete the questionnaire was that ESRD Program officials did not have the power to compel facilities reimbursed on the basis of reasonable charges to provide the cost information. Primary among ESRD facilities not reporting the information were the proprietary limited care dialysis centers. This situation suggests the following generalization.

**Generalization 6-7:** If an incentive reimbursement mechanism for a catastrophic health insurance program is to be effective, it is necessary to provide a mechanism for determining the appropriate amount of reimbursement.

The ability to acquire data was not the only limitation confronting the ESRD Program. Another major factor has been the inability to obtain any analysis of the data. Even though the type of analysis required had been determined in 1973, by the end of February 1976 this
analysis had still not been completed. A major reason for this delay was that the analytical capabilities within SSA had been completely overwhelmed by the requirements imposed by the many aspects of the provisions of the "Social Security Amendments of 1972". Title III of this Act provided for the establishment of the Supplemental Security Income (SSI) for the Aged, Blind, and Disabled. To get the SSI program operating to the point where payments could be made by its effective date, it was necessary to utilize all available resources within Social Security. The shortage of the needed analytical capability suggests:

**Generalization 6-8:** If an incentive reimbursement mechanism for a catastrophic health insurance program is to be effective, it is necessary to provide the resources necessary to analyze the expenditures being made under the program.

In this chapter we have demonstrated that a major barrier to the effective implementation of the incentive reimbursement mechanism for the ESRD Program was an inability to specify the nature of the ESRD product, an inability to determine if that product has been provided, and an inability to determine an appropriate price for that product. While these do not pose a problem for the conceptual discussion of incentive reimbursement mechanisms, they are critical problems for the utilization of incentive reimbursement mechanism in operating catastrophic health insurance programs.
Chapter VI--Footnotes

1. See Chapter III, pp. 78-79.

2. P.L. 92-603, Sec. 2991.


4. P.L. 92-603, Sec. 2991.


7. Among these documents are:
   "Report of the Committee on Chronic Kidney Disease, A Report to the Director of the Bureau of the Budget", September, 1967. (Hereafter, the "Gottschalk Report" after Carl W. Gottschalk, M.D., the Chairman of the Committee on Chronic Kidney Disease which produced the report.)


See Chapter IV, pp. 96-97 for a discussion of the changes in the medical criteria.


In fact every member of "The Ad Hoc Committee to Establish Criteria for the Optimal Facilities Necessary for Diagnosis and Management of Patients with End-Stage Renal Disease" were on medical school faculties. See Appendix II. "Optimal Facilities" for the members of the Committee.

A list of the consultants is given in the "Oversight Subcommittee Hearings", p. 95.


"Proposed Regulations". pp. 27792-27793.

Ibid. p. 27793.
16 Ibid. p. 27782.


18 P.L. 92-603, Section 249F. "Professional Standards Review". The "Proposed Regulations state that the ultimate objective is to integrate the ESRD medical review boards with the professional standards review organizations."


20 See the "Proposed Regulations" pp. 27792-27793 for the boundaries of these networks.

21 Letter to Regional Health Administrator, Region IV from John D. Bower, Director, Artificial Kidney Program, The University of Mississippi Medical Center. December 14, 1974.


23 "Final Policies, P.L. 92-603, Sec. 299I". p. 4.

24 See Chapter V, footnote 15.

The kidney disease activities began in July, 1963 when a grant was made by the Division of Chronic Disease under the Community Health Services and Facilities Act of 1961 (75 Stat. 824) to the Seattle Artificial Kidney Center, Seattle, Washington, to demonstrate the feasibility of in-center dialysis on a maintenance basis. Since that time this activity has been located in the National Center for Chronic Disease Control, National Center for Health Services Research and Development, and the Regional Medical Programs. This activity ceased with the demise of Regional Medical Programs Service in 1973.


The Nixon Administration let the Regional Medical Programs die with the expiration of the legislative authority on June 30, 1973.


"Oversight Subcommittee Hearings". p. 92.


35 Letter to Thomas C. Webster from the Assistant Director for Program Statistics, Division of Health Insurance Studies, Office of Research and Statistics, Social Security Administration. February 23, 1976.

36 A good description of the effort required to get the SSI program operating is contained in: "SSA Pays 6-Million Recipients with Aid of Real-Time Network". The Data Communication User. May, 1975.
CHAPTER VII
IMPLEMENTATION, INCENTIVE REIMBURSEMENT, AND ESRD

The three preceding chapters have provided little evidence to suggest that the ESRD reimbursement mechanism has been effective in promoting the efficient delivery of ESRD services. Patients have been receiving treatment and providers of the ESRD therapies have been reimbursed during the first two and one-half years of the ESRD Program, but many of the incentive aspects of the ESRD reimbursement mechanism have either not been implemented or were implemented only after long delays. The costs of the first full year of operation of the ESRD Program are not known as few final settlements have been made. In addition, there have been long delays in the analysis of the type and cost of treatment provided under the ESRD Program.

There has been much criticism of the delays in the implementation of the ESRD Program. On November 30, 1973, Senator Henry M. Jackson (D-Wash.) in a speech before the senate stated:

Obviously, there is a big bureaucratic snafu in HEW regarding these [ESRD] regulations. Probably there is no one Senator who has not received complaints about late program guidelines and regulations. I do not know just why the program is slowed down, but I do hope that the Chairman of the Finance Committee will raise the appropriate questions and prod the agencies to get moving.¹

Senator Vance Hartke (D-Ind.), the sponsor of the ESRD provisions, in a March 5, 1974, Senate speech entitled "Kidney Disease Program in Chaos", 183
called "upon the Social Security Administration and the Department of Health, Education, and Welfare to act immediately to put the kidney disease program in order." During the National Health Insurance Hearings on May 22, 1974, Senator Russell B. Long (D-La.), Chairman of the Senate Finance Committee, commented:

> It is discouraging for those of us who would like to see coverage of all catastrophic illnesses, to see that this administration seems to be unable to administer even a program for renal disease. It makes me wonder what it will take for them to be able to administer a broader program if they cannot handle even the most limited program for renal disease.

Many of the specific problems created by the delays in the implementation of the ESRD Program are identified in the responses to questions which Senator Hartke submitted to hospital associations throughout the country. These responses were printed in the *Congressional Record* in six separate installments during August, 1974. Additional concern over the implementation of the ESRD Program was expressed at the National Health Insurance Hearings by Dr. James C. Hunt, President, National Kidney Foundation and by Shep Glazer, President, Association of Kidney Patients. At these hearings Dr. George Shreiner, past President of the National Kidney Foundation, provided a clear statement of the need to concentrate on the implementation of legislation, as well as its passage.

> We are somewhat frustrated to see that a lot of the actuarial experience [with the ESRD Program] has not been good, but I think that this tells us is that in planning future legislation it isn't enough to pass a law, but one has to anticipate all of the problems in the administration of that [law].
The existing literature on incentive reimbursement provides little basis for anticipating these administrative problems. There are scattered observations in several of the works on incentive reimbursement concerning the problem of implementing incentive reimbursement mechanisms, but these observations are not presented in any systematic fashion and make no attempt to consider the problem of implementation in the design of the incentive reimbursement mechanism. Unless we augment the incentive reimbursement literature with an understanding of the administrative problems associated with the implementation of incentive reimbursement mechanisms, it is questionable whether our theories of incentive reimbursement will have much operational validity. By understanding the implementation process it may be possible to develop strategies which facilitate implementation, and it will provide a basis for the development of realistic expectations about the time required to implement a proposed incentive reimbursement mechanism. It may well be that given the nature of the ESRD Program and the ESRD incentive reimbursement mechanism, the administrative delays were inevitable. If this is true, one could argue that the criticisms of the ESRD Program are based upon unrealistic expectations of the time required for implementation, rather than that there has been negligence in the administration of the program.

In this chapter we suggest how an existing body of literature may be useful in interpreting the delays in the implementation of the ESRD incentive reimbursement mechanism. This literature is referred to as
the implementation/innovation literature. The remainder of the chapter is divided into four parts.

1) A description of the approach taken by the implementation/innovation literature.

2) Propositions relating the attributes of the incentive reimbursement mechanism to the implementation of that mechanism.

3) Propositions relating the attributes of the implementing system to the implementation of the incentive reimbursement mechanism.

4) Propositions relating the attributes of the ESRD therapy system to the implementation of the incentive reimbursement mechanism.

A. The Innovation/Implementation Approach

The implementation/innovation (I/I) literature provides a preliminary basis for understanding the relations between innovative policies—e.g. incentive reimbursement mechanisms—and the organizations and individuals which they affect. The relevant organizations and individuals are the ESRD patients, renal physicians, ESRD treatment facilities, and the administrators of the ESRD Program. The organizations may range in size and complexity from single element organizations to complex multi-element organizations. The I/I literature is composed of two closely related sets of writings. The innovation literature is concerned with the total innovation process which includes development, communication, decision to adopt, and the initial adoption of an innovation. An innovation would be any idea, practice, or material artifact perceived to be new by the relevant unit of adoption. In our case of ESRD incentive reimbursement mechanism would be the innovation. The implementation literature emphasizes the last part of the innovation
process in that it is concerned with the change process that occurs when the innovative policy—i.e., ESRD incentive reimbursement mechanism—impinges upon an organization.10

This literature posits the relationship between certain attributes of the innovation, the mediating elements, and the target system which affect the rate of effective implementation. The mediating elements are involved in the implementation process although they are not the elements toward which the innovative policy is directed. For the ESRD incentive reimbursement mechanism, the mediating elements include the Social Security Administration, the Medicare intermediaries, and the Comprehensive Health Planning Agencies. The target system refers to the "group, organization, community, or society toward which the innovation—i.e., incentive reimbursement mechanism—is directed."11 The elements of the target system for the ESRD reimbursement mechanism include renal physicians, ESRD treatment facilities, and the ESRD patients. The rate of effective implementation refers to the relative speed with which the innovative policy brings about the desired change in the organization. The rate of effective implementation for an incentive reimbursement mechanism would be the time required to transform a policy decision to provide reimbursement incentives into actual changes in the behavior of patients and providers. Regardless of the rate, effective implementation is only achieved when the reimbursement incentives actually influence the behavior of patients and providers in the desired manner. If the incentive reimbursement mechanism is not effectively implemented, the rate of implementation makes little
difference. For the ESRD Program implementation began with the passage of the ESRD provisions and has not ended as the incentives required for bringing about the desired changes in behavior have not been fully operationalized.

The implementation/innovation literature has much to offer although it is still in the early stages of development. Because of this many of the propositions are of a suggestive nature and have not been thoroughly tested. In addition, there have been few direct applications of the implementation/innovation approach to problems of implementation of public policy.

The literature concerned with the specific problem of implementation of public programs is limited as documented in the recent book, Implementation, by Pressman and Wildavsky. In their survey of the literature Pressman and Wildavsky found numerous references to the importance of implementation but few works treating the topic in a systematic way. A significant omission in their review was the innovation literature. This literature provides a conceptual basis for the advancement of the study of the implementation of public programs.

Among the recent works which deal directly with the problem of implementation of public programs is Thomas Smith's study of the problems associated with the implementation of public programs in the third world countries, most of which is appropriate for the advanced western countries. Two additional works have attempted to conceptualize the policy implementation process. Paul Berman and Milbrey McLaughlin
in "Federal Programs Supporting Educational Change," attempt to develop a model of the process of implementation of educational change. The work by Donald Van Meter and Carl Van Horn is more concerned with a generic model of the implementation process. The innovation literature provides the basis for the 1971 work by Gross, Giacquinta, and Bernstein, *Implementing Organizational Innovations.* This work is a study of the implementation of an educational innovation, "the catalytic role model of education." This work is important because it is concerned with the implementation of what Rogers and Shoemaker later designated as authority innovation-decisions—a decision forced upon an individual or organization by someone in a superordinate power position. The Gross et al. study is concerned with the implementation of a new teaching technique which is forced upon the teachers by the school administration. In this research we are concerned with an incentive reimbursement mechanism which the federal government is trying to impose on the ESRD therapy system. A number of general works concerned with the innovation process are of value in the development of propositions to explain the rate of effective implementation of the incentive reimbursement mechanisms. Several of these major works are presented to give a representative idea of how they relate to the implementation process. The previously mentioned work by Rogers and Shoemaker is a substantially revised version of Roger's pioneering work, *Diffusion of Innovations.* In the more recent work Rogers and Shoemaker develop
an extensive set of generalizations about innovations. For each of
the more than one hundred generalizations they have presented the
empirical evidence which either supports or refutes the specific
generalization.

A recent work of Jack Rothman has surveyed the literature on
innovations, identified the variables which have been suggested as
affecting the innovation process, and presented these variables along
with "action guidelines". The action guidelines are presented to
facilitate the use of the sometimes abstract concepts in practice
settings.

Zaltman, Duncan, and Holbek have approached the question of innova-
tion as it relates to the ability of an organization to utilize innova-
tions to reduce the problems created by a "performance gap". A
performance gap exists when there is a discrepancy between what the
organization is doing and what its decision-makers believe it ought
to be doing. In their work Zaltman et al. develop sets of attrib-
utes relating to the innovation and the organization which will im-
plement the innovation, which explain the ability to develop and im-
plement the innovation within the organization. In addition to pre-
senting their own model of the innovation process Zaltman, Duncan, and
Holbek have reviewed the major existing theories of innovation in
organizations. This work is important to this research because
incentive reimbursement mechanisms are usually proposed in response to
perceived performance gaps in the health delivery system. The incentive
reimbursement mechanism is the innovation, and its function is to
develop an efficient system for the delivery of catastrophic health services. The purpose of this discussion of the implementation/innovation literature was to demonstrate that there is a body of literature from which to develop propositions for use in explaining the implementation of incentive reimbursement mechanisms.

The next three parts of this chapter draw on the previously cited literature to identify those attributes which affect the implementation process. These attributes are classified as the attributes of the incentive reimbursement mechanism, the attributes of the implementation system, and the attributes of the target system. The implementation system refers to that system which is responsible for transforming the innovative policy into an operational program. The target system refers to the "group, organization, community, or society toward which the innovation is directed".23

B. Attributes of the Incentive Reimbursement Mechanism

The first set of propositions is concerned with the attributes of the incentive reimbursement mechanism and their relation to the rate of effective implementation. The attributes of an incentive reimbursement mechanism, as an innovative policy, might include requirements for cost sharing by patients, cost sharing by providers, and medical review.

Most models of the implementation process refer to the importance of the attributes of the object being implemented. The object of the implementation process in this research is the ESRD incentive reimbursement mechanism. In the literature there is no common designation of
the object being implemented. Van Meter and Van Horn refer to "policy standards and objectives"). Smith refers to the "idealized policy", while Berman and McLaughlin refer to the "project characteristics". Rogers and Shoemaker use the "perceived attributes of innovations", while Zaltman et al. refer only to the "attributes of innovation".

Five propositions have been extracted from this literature pertaining to the implementation of the E3RD reimbursement mechanism. The five propositions are summarized in Table 3.

Proposition 7-1: The rate of effective implementation is directly related to the relative advantage of the incentive reimbursement mechanism.

This proposition is derived from the generalizations developed by Rogers and Rothman which maintain that there is a positive relation between the relative advantage of an innovation and the rate of adoption. These generalizations are based upon surveys of numerous articles concerned with the identification of factors which contribute to the adoption of innovations. The relative advantage of an innovative policy refers to the degree that the innovative policy is perceived as being better than the policy which it supersedes. There may be many different perceptions of the relative advantage depending upon the individual's role. Patients may have one perspective, physicians another, and administrators of the program yet another. The advantages would be those perceived in personal or psychological terms rather than in some absolute material sense. They are usually calculated according to economic profit, but may have other referents, depending on the target system's goals or values.
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<th>Proposition</th>
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<td>7-1.</td>
<td>The rate of effective implementation is directly related to the relative advantage of the incentive reimbursement mechanism.</td>
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<td>7-2.</td>
<td>The rate of effective implementation is directly related to the degree of compatibility between the incentive reimbursement mechanism and existing values and practices of both the target system and the implementing organization.</td>
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<td>7-3.</td>
<td>The rate of effective implementation is related to the &quot;gateway capacity&quot; of the incentive reimbursement mechanism.</td>
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<td>7-4.</td>
<td>The rate of effective implementation is directly related to the ease of communication of the incentive reimbursement mechanism within the implementation system.</td>
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<td>7-5.</td>
<td>The rate of effective implementation is inversely related to the complexity of the incentive reimbursement mechanism.</td>
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The relative advantage is closely related to much of the existing theory of incentive reimbursement. In Chapter III it was assumed that the patient's behavior reflects choices made to maximize a preference function. Likewise, it was assumed that providers act to maximize some objective function. In both cases the choices would be made on the basis of the relative advantage of the alternatives. The major difference between the implementation/innovation literature's use of relative advantage and the incentive reimbursement literature's use of the term rests upon the range of alternatives available to the patient and provider for maximizing their own best interest. In the case of the incentive reimbursement literature, the incentive reimbursement mechanism is taken as a given and the patients and providers are assumed to be incapable of influencing its implementation. In the case of the implementation literature the patients, the providers, and other actors can influence the implementation of a proposed incentive reimbursement mechanism. In this way they seek to facilitate the implementation of those incentive reimbursement mechanisms which have the greatest relative advantage to them.

The relative advantage of any reimbursement policy is not an undimensional variable rather it is a multidimensional variable with each element of the target system measuring the relative advantage along several dimensions of the various provisions of the incentive reimbursement mechanism. Because of the multiple dimensions of the relative advantage, there is no single direct measure. It is necessary to develop
multiple measures reflecting the various provisions of the mechanism and the various affected elements.

The ESRD Program initially had a great relative advantage for the ESRD patients and providers. Since little reimbursement was available prior to the ESRD Program, any reimbursement, even a reimbursement mechanism based upon incentives, was regarded as a great improvement. Once the financing was assured, the objective of cost containment provided little relative advantage for patients and providers. From the perspective of the patient or provider an incentive reimbursement mechanism would seem to have little relative advantage when most existing reimbursement mechanisms do not place constraints on reimbursement. It is not surprising that both ESRD patients and providers have not supported many of the incentive aspects of the reimbursement mechanisms. The physicians have felt a loss of professional autonomy in the efforts to include physician services as part of facility overhead and to use the economic leverage of the ESRD Program to establish methods of choice in technical and professional questions. The hospitals felt threatened with a loss of status if they were not certified as ESRD facilities. Patients felt that the efforts to control costs might limit their ability to receive the highest quality of care.

In many ways the relative advantage is an all encompassing measure of the attributes affecting the rate of effective implementation. However, there are a number of attributes which have been treated separately because of the identifiable relation between them and the rate of effective implementation.
Proposition 7-2: The rate of effective implementation is directly related to the degree of compatibility between the incentive reimbursement mechanism and existing values and practices of both the target system and the implementing organization.

The compatibility of an incentive reimbursement mechanism refers to the extent that the proposed mechanism is perceived to deviate from existing values and practices. Rogers and Rothman each cite numerous studies which have shown a positive relationship between the compatibility of the innovation and the rate of adoption.\textsuperscript{32,33} Zaltman, in his discussion of the "radicalness" of innovations, refers to a negative relation between the radicalness and the rate of adoption. Radicalness refers to the extent of deviation from the existing alternative.\textsuperscript{34} Using a somewhat different approach Van Meter and Van Horn have used the literature on "incrementalism" to argue that there is an inverse relation between the amount of change and the problems to be confronted in the implementation of a policy.\textsuperscript{35} Berman and McLaughlin have drawn on the education literature to show the relationship between "centrality" and the ability to implement a project. Centrality refers to the degree of displacement of central and routinized behavior that might accompany incorporation of an innovative project. Centrality is discussed in terms of "mainline" and "ancillary" innovative strategies. A mainline strategy reflects major changes in the routine while ancillary strategies require only minor changes. Because of the major changes accompanying the mainline strategy, there is the expectation of greater implementation problems.\textsuperscript{36}
The ESRD Program is the first effort by the federal government to provide financing for personal health services based almost exclusively on medical need. The reimbursement mechanism required for this program was in many respects not compatible with the existing methods of reimbursement. The private market for ESRD services was virtually eliminated. Existing Medicare reimbursement mechanisms based on reasonable costs and charges were no longer appropriate. Reimbursement of physicians on a basis other than fee-for-services was regarded as a serious breach of existing practices and values. The placement of screens on facility reimbursement was deviation from the traditional cost-based reimbursement. Efforts to promote transplantation and home dialysis were perceived as interference in the physician's fight to practice medicine as he sees fit. The requirement that facilities become part of an organized system for the delivery of care was foreign to the providers of health services. In these respects and others the ESRD Program was not compatible with existing methods of reimbursement. As a result it would be expected that there would be resistance in the implementation of such a mechanism.

Proposition 7-3: The rate of effective implementation is related to the "gateway capacity" of the incentive reimbursement mechanism.

The concept of the "gateway capacity" of an innovative policy was introduced by Zaltman. The gateway capacity refers to the extent that the adoption of an innovation is perceived to open the avenues for the adoption of other innovations. Although this concept is introduced by Zaltman et al., they do not discuss the direction of the relationship
between the gateway capacity and the rate of effective implementation. It seems plausible to suggest that the rate of effective implementation of an incentive reimbursement mechanism with high gateway capacity is directly related to the perceived relative advantage of the incentive reimbursement mechanisms which are to follow. If the subsequent incentive reimbursement mechanisms are perceived to have a positive relative advantage, then the rate of effective implementation would be accelerated. If, however, the subsequent incentive reimbursement mechanisms are perceived as having a relative disadvantage, then the rate of effective implementation would be retarded.

The fact that the ESRD reimbursement mechanism would serve as a precedent for future programs to provide federal financing for health services based solely upon medical need was acknowledged by the Congress, the Administration, and the medical community. In fact, as noted previously, the American Medical Association expressed concern that the use of a capitation payment under the ESRD Program might set a precedent which would not be "in the best interest of the patient". The ESRD reimbursement mechanism was perceived by many elements of the medical community as opening the gateway for future federal intervention in the practice of medicine. As a result, it was not unexpected that there would be efforts to retard or prevent the effective implementation of the incentive aspects of the ESRD reimbursement mechanism.

Proposition 7-4: The rate of effective implementation is directly related to the ease of communication of the incentive reimbursement mechanism within the implementation system.
Communication refers to the ease of conveying the requirements and implications of the incentive reimbursement mechanism to the elements of the implementation system. This system includes the personnel at the local Social Security offices, physicians, facilities providing ESRD services, and the ESRD patients. The implementation/innovation literature argues that innovations which can be explained or demonstrated with ease will have a higher adoption rate than those which are difficult to explain or demonstrate. The communicability of an incentive reimbursement mechanism is related to the complexity of the policy, the trialability of the policy, and the degree to which the results of the policy are visible to the implementation system—i.e. observability. The relation of trialability and observability to the rate of effective implementation are discussed in relation to this proposition. The relation of the complexity of the incentive reimbursement mechanism to the rate of effective implementation is discussed separately as proposition 7-5.

According to Rogers the trialability of an innovation, as perceived by members of a social system, is positively related to the degree of adoption. This same theme is echoed by Rothman under the heading of "partialization". The trialability of an incentive reimbursement mechanism refers to the degree to which the reimbursement mechanism may be experimented with on a limited basis. It is felt that the ability to try the reimbursement mechanism on a limited basis reduces the perceived risk to the adopter. In trying the reimbursement mechanism the adopter becomes more knowledgeable of that
reimbursement mechanism as the information conveyed through the trial is probably the most credible information that a potential adopter can acquire.

Although the ESRD reimbursement mechanism cannot be tried on a partial basis, it does represent a trial of approaches to incentive reimbursement which may be part of more comprehensive programs to provide federal financing for catastrophic health services. This would suggest that the implementation of the ESRD incentive reimbursement mechanism may be slow because it cannot be tried on a partial basis, but the trial under the ESRD Program may facilitate the implementation of similar mechanisms under more comprehensive programs.

Related to trialability is the property of observability. Observability refers to the degree to which the results of an incentive reimbursement mechanism are observable to others. It is argued by Rogers that the easier it is to see the results of an innovation the greater its rate of adoption. In this argument he states that the difference in the observability of material and nonmaterial innovations has relevance in explaining their rate of adoption. This property of observability as a facilitator in the communication of the aspects of the innovation may be important for the implementation of incentive reimbursement mechanisms.

Although the ESRD reimbursement mechanism could not be observed in operation prior to its implementation, it does provide a mechanism for increasing the rate of effective implementation of future incentive reimbursement mechanisms. Through observation of the ESRD incentive
reimbursement mechanism, government officials, providers of health services, and the general public can evaluate the relative advantage of the incentive reimbursement mechanism based upon experience rather than relying solely upon speculation. Through this process of observation, it will be easier to communicate exactly what it is that the incentive reimbursement mechanism is expected to do.

Proposition 7-5: The rate of effective implementation is inversely related to the complexity of the ideas contained in the incentive reimbursement mechanism.

Complexity refers to the degree that the incentive reimbursement mechanism contains ideas which are difficult to understand and to implement. Zaltman has suggested two dimensions of the complexity issue—"complexity of ideas" and "complexity of implementation". The discussion of this proposition is primarily concerned with the complexity of the ideas. The complexity of the implementation is discussed in proposition 7-8 of the next section. That section is concerned with the attributes of the implementation system. Regardless of the nature of the complexity Rogers has suggested that the "complexity of an innovation as perceived by members of a social system, is negatively related to its rate of adoption".

The complexity of the idea of an incentive reimbursement mechanism is directly related to the ease of conveying the aspects of the reimbursement policy to the elements of the implementation system. Factors which contribute to the complexity of the idea of the reimbursement mechanism would include the presence of multiple objectives, the use of multiple abstract relations to relate the objectives to the
performance required for implementation, and the need to have an implementation system with multiple elements.

By any criteria the ESRD incentive reimbursement mechanism contains many complex relations. In the first place there is a multifaceted set of objectives which include provision of an adequate quantity and distribution of resources while containing costs. There is the objective of assuring quality while providing for the efficient practice by physicians and facilities. The ESRD reimbursement mechanism contains many abstract relations. These include the limitations on covered services, the inclusion of payment to physicians as part of facility "overhead", the retainer method of payments, the use of "screens" and "ceilings" for facility reimbursement, the medical information system, and the ESRD network.

Finally, there are the complex relations among the elements of the system for the ESRD implementation reimbursement mechanism. This includes the Office of the Assistant Secretary for Health, the Bureau of Quality Assurance, the Social Security Administration, the ten regional offices of HEW, the Medicare carriers and intermediaries, the local Social Security offices, the treatment facilities, physicians, and patients. In addition, there is the need to coordinate with the Professional Standards Review Organizations (PSRO), the Health Systems Agencies, the state governments, and others. With this high level of complexity associated with the ESRD reimbursement mechanism it would be expected that the implementation rate would be relatively slow.
C. Attributes of the Implementation System

The second set of propositions is concerned with attributes of the implementation system which affect the rate of effective implementation. The implementation system refers to that set of elements which is responsible for transforming the incentive reimbursement plan into an operational program. The implementation system is composed of two subsets. The first subset contains the initiating and controlling elements while the second subset contains elements of the target system which interact with the mediating elements to transform the incentive reimbursement plan. The mediating elements are involved in the implementation process although they are not the elements toward which the innovative policy is directed. For the ESRD incentive reimbursement mechanism the mediating elements include the Social Security Administration, the Medicare intermediaries and the Comprehensive Health Planning Agencies. The target system refers to the "group, organization, community, or society toward which the innovation [incentive reimbursement mechanism] is directed". The elements of the target system for the ESRD reimbursement mechanism include physicians, ESRD facilities, and patients. In the process of implementation the elements of the target system may interact in the development of the implementation plans. The nature and degree of this interaction must be included in any discussion of the implementation system.

The relationship between the implementation system and the rate of effective implementation of the innovative policy is discussed by a
number of different scholars who refer to the implementation system by a variety of different names. Van Meter and Van Horn discuss the characteristics of the "implementing agencies" and the "interorganizational communication and enforcement activities" as they relate to the implementation of policies. Smith cites three characteristics of the "implementing organization" which affect the implementation process: the structure and personnel of the organization; the administrative leadership; and the implementing program and capacity. The innovation literature adds to the understanding of the relationship between the actions of the implementation systems and the rate of effective implementation. Rothman has presented a number of generalizations of value under the heading "Attributes of the Diffusion and Adoption Process". Based upon the innovation literature nine propositions relating the attributes of the implementation system to the rate of effective implementation have been developed. Each proposition is discussed as it relates to the ESRD incentive reimbursement mechanism. The propositions are summarized in Table 4.

Proposition 7-6: The rate of effective implementation is directly related to the capacity of the implementation system.

Capacity refers to the availability of the resources needed by the implementation system to effectively implement the innovative policy. Smith has discussed the problem of capacity as they relate to third world nations but has assumed that this problem does not exist in Western countries. That the problem of capacity is not peculiar to the third world is shown by Gross who found that two of the basic
TABLE 4
PROPOSITIONS PERTAINING TO THE
ATTRIBUTES OF THE IMPLEMENTATION SYSTEM

7-6. The rate of effective implementation is directly related to the capacity of the implementation system.

7-7. The rate of effective implementation is inversely related to the legal and technical difficulties.

7-8. The rate of effective implementation is inversely related to the complexity of the implementation system.

7-9. The rate of effective implementation is directly related to the degree of compatibility with the existing implementation system.

7-10. The rate of effective implementation is directly related to the clarity and precision of the information about the incentive reimbursement mechanism that is communicated to the target system.

7-11. The rate of effective implementation is directly related to the quality of the feedback.

7-12. The target system's acceptance of an innovative policy is positively related to the degree of participation in the decision-making process.

7-13. The rate of implementation is faster by the authoritative approach than by the participative approach.

7-14. Policies implemented using the authoritative approach are more likely to be discontinued than those implemented using the participative approach.
obstacles to the implementation of the catalytic role model of education were lack of required instructional materials and the lack of the kinds of skills and knowledge required to implement the catalytic role model. Pressman and Wildavsky comment that even when there is agreement on what needs to be done, it is often difficult to achieve the desired results because of the lack of resources. Van Meter and Van Horn have suggested that among the characteristics which impinge on an organization's capacity to implement policy are:

(a) "the competence and size of an agency's staff;
(b) the degree of hierarchical control of subunit decisions and processes within the implementing agencies;
(c) an agency's political resources (e.g. support among legislators and executives);
(d) the vitality of an organization;
(e) the degree of "open" communications (i.e. networks of communication with free horizontal and vertical communication, and a relatively high degree of freedom in communications);
(f) the agency's formal and informal linkages with the 'policymaking' or 'policy-enforcing' body."

These observations suggest a number of factors relating to the ability to effectively implement incentive reimbursement mechanisms under the ESRD Program. One factor which limited the ability to implement the ESRD reimbursement mechanism was a lack of financial resources for the establishment of the ESRD medical review boards and the ESRD medical information system. A second factor was a lack of knowledge about the delivery of ESRD therapy and the cost of providing that therapy. Thirdly, was a lack of established linkages between the Social Security Administration and the agencies under the authority of the Assistant Secretary for Health. These linkages were necessary to
provide the needed program coordination. An additional factor was the shortage of technical support required to analyze the data pertaining to the operations of the ESRD Program. Finally, the capacity of the ESRD Program to implement the ESRD incentive reimbursement mechanism was partially limited by a lack of statutory authority. For example, there was the question over the authority to require mandatory assignment of payments to physicians.

Proposition 7-7: The rate of effective implementation is inversely related to the legal and technical difficulties.

Schneider in his study of urban mass transport notes the constraints which legal and technical constraints place upon the effective implementation. He cites a citizen's suit which blocked the start of construction of a transit line for months.54 Pressman and Wildavsky in their study of the Economic Development Administration in Oakland refer to the legal and procedural differences which impede the implementation of the minority employment program. Among the legal and procedural problems were disagreement with the Port of Oakland over the quality of the land, disagreement with the Navy over potential hazards to planes, and conflict with the U.S. General Accounting Office over the legality of expenditures.55

These cases emphasize the importance of the relation of legal and technical difficulties to the rate of effective implementation. Such difficulties have been encountered in the implementation of the ESRD reimbursement mechanism. The existing Medicare legislation has limited the ability to implement the desired incentives. For example,
it is not possible under existing Medicare legislation to allow hospitals to share in the savings from providing services at reduced cost.\textsuperscript{56} Laws of the various states have further hampered the ability to implement the ESRD reimbursement mechanism. For example, Texas prohibits the kind of contractual relationship between physicians and facilities required under the interim reimbursement policy.\textsuperscript{57} Other factors impeding the effective implementation of the ESRD incentive reimbursement mechanism were legal actions and the threat of legal action. The New Jersey and California suits influenced the decision to offer the alternative method of physician reimbursement.\textsuperscript{58} The threat of legal action influenced the granting of certification to facilities under the exception process.\textsuperscript{59}

Proposition 7-8: The rate of effective implementation is inversely related to the complexity of the implementation system.

Proposition 7-6 in the discussion of the attributes of the incentive reimbursement mechanism was concerned with the relationship between the complexity of the ideas of the reimbursement policy and the rate of effective implementation. The current proposition is concerned with the relationship between the complexity of the implementation process of the incentive reimbursement mechanism and the rate of effective implementation. The complexity of the implementation process relates to the number of interdependent actions required to effectively implement the incentive reimbursement mechanism. Each of these interdependent actions represents a decision point where the incentive reimbursement mechanism could be vetoed. Pressman and
Wildavsky have postulated that there is an inverse relation between the number of decision points in the implementation process and the probability of achieving the policy objectives. This postulate is based on the ideas that by increasing the number of decision points with veto power over the innovative policy the likelihood that this power will be exercised is increased. A correlate to this postulate is when any individual whose action is required to implement the policy lacks a sense of urgency, the rate of effective implementation will be reduced. Another barrier to effective implementation is when there is disagreement over the allocation of authority and responsibility for the management of the implementation process.

In the case of the implementation of the ESRD incentive reimbursement mechanism there have been numerous decision points. Among those in HEW were the Office of the Assistant Secretary for Health, the Office of Health Policy Development, the Bureau of Health Insurance, the Bureau of Quality Assurance, the Office of the General Counsel, the Office of the Assistant Secretary for Legislation, the Office of the Assistant Secretary for Planning, and finally the Secretary. In addition, various types of approval were required by the regional offices of HEW, the Medicare carriers and intermediaries, local Social Security Offices, the health planning agencies, and the states. Finally, there were the informal approval channels including the renal physicians--i.e. transplant surgeons and nephrologists--renal patients, the Congress, and others. Since all of these decisionmakers did not have the same set of objectives for the ESRD reimbursement mechanism,
it is not unexpected that there have been impediments to the effective implementation.

Proposition 7-9: The rate of effective implementation is directly related to the degree of compatibility with the existing implementation system.

The relationship between the compatibility of the incentive reimbursement mechanism and the rate of effective implementation was presented as the second proposition in the discussion of the attributes of the incentive reimbursement mechanisms. The current proposition differs in that it is concerned with the compatibility of the implementation system for the incentive reimbursement mechanism with the established implementation system rather than being concerned with the compatibility of the incentive reimbursement mechanism with the values of the target system. This proposition is suggested by Rothman's Generalization 9.13: "The rate of adoption of an innovation is directly related to the extent to which it is diffused in a manner compatible with the target system's norms, values, and customs." The implementation system may be likened to the process used to diffuse an innovation. The implementation of any innovative policy, such as an incentive reimbursement mechanism, impinges upon existing systems. The new tasks or functions to be implemented must either be integrated into existing systems, or new systems must be developed for the purpose of performing the task. In either case the existing implementation systems are altered. When the new function is integrated into existing systems new internal functions and relations are established. When a new system is formed to provide the implementation
function, the external relations of the existing system may be altered. Any effort which alters the established implementation systems increases the risk of violating the norms, values, and customs of both the existing implementation system and the target system. A dilemma is confronted, however, when the existing implementation system does not have the capacity to implement the incentive reimbursement mechanism and yet it is known that any change in the implementation system will likely create tensions which will prolong the rate of effective implementation.

Such a dilemma was confronted in the efforts to implement the ESRD incentive reimbursement mechanism. The existing administrative systems of the federal government did not have the capacity to develop product specifications or to set the rate for reimbursement, yet there was a need to alter the system to meet these needs. To do this a number of existing organizations changed. Among the new organizations proposed are the ESRD networks, the ESRD medical review boards, and the ESRD medical information system. The changes occurred as the result of the need to specify the nature of the ESRD product. Historically, the Medicare program has not attempted to specify the nature of the health product. On the other hand, the agencies under the Assistant Secretary for Health had no direct involvement in establishing criteria for reimbursement under major health financing programs. The need to establish specifications for the ESRD product which would relate to Medicare reimbursement created a need which was not compatible with the existing functions. The result was the need to establish a new
mechanism to meet this need. The establishment of this relationship did not occur easily. It evolved over time.\textsuperscript{64} In cases such as this where extensive changes are needed in the implementation system, according to proposition 7-9, there should be the expectation of a slower rate of implementation.

Proposition 7-10: The rate of effective implementation is directly related to the clarity and precision of the information about the incentive reimbursement mechanism that is communicated to the target system.

The ability of any target system to effectively implement an incentive reimbursement mechanism is dependent upon the information which the target system has about the objectives, functions, performance criteria and standards of the new mechanism. Proposition 7-4 on the attributes of incentive reimbursement mechanism discussed the properties of the reimbursement mechanism which aid in the communication process. In addition, it is necessary to understand those properties of the implementation system which affect the ability to provide clear and unambiguous messages to the target system about the innovative policies. Gross cites the teacher's lack of clarity about the expectations of the catalytic role model as one of the basic obstacles to implementation.\textsuperscript{65} Van Meter and Van Horn stress the importance that the message which is transmitted be accurate and that it be consistent when communicated by the various sources of information.\textsuperscript{66}

A major problem in the implementation of the ESRD reimbursement mechanism has been the failure to adequately inform patients, physicians,
facilities, intermediaries, and the SSA local offices about the objectives, operations, performance criteria, and standards of the reimbursement mechanism. Many of these problems are discussed in the responses to the questionnaire circulated by Senator Hartke. A major reason for this failure to communicate the nature of the incentive reimbursement mechanism with clarity and precision was that in many cases no clear and precise policy existed as is evidenced by the failure to have final regulations issued after two and one-half years. Another contributing factor to the failure of many elements of the implementation system to understand the nature of the ESRD Program is that the ESRD patients represent only .000625 (six ten-thousandths) percent of the total number of Medicare patients and .0048 percent of the benefit payments. Because of the many claims for the attention of the elements of the implementation system and because ESRD patients represent such a small percentage of these claims, the elements of the implementation often had few incentives to become fully informed about the ESRD reimbursement mechanism.

Proposition 7-11: The rate of effective implementation is directly related to the quality of the feedback.

Not only is the rate of effective implementation related to the clarity and precision of the communication to the target system, but it is also related to the quality of the communication from the target system to the implementation system. According to Gross a fundamental failure in the implementation strategy used with the catalytic role model of education was the failure to establish a feedback mechanism
to uncover barriers that arose during the period of attempted implementation. An interesting hypothesis developed by Zaltman et al. is that:

the more solution radical the innovation, the more likely problems will emerge in the process of implementation. Accordingly, the more solution radical the innovation the more important it is to create feedback mechanisms that can identify and deal effectively with these emerging problems.

Although the ESRD reimbursement mechanism is a significant deviation from previous methods of reimbursement under the Medicare program, it has been plagued by a lack of adequate feedback. As noted previously, there has been little analysis of the operating data from the ESRD Program because of the analytical capabilities within Social Security have been overwhelmed. In addition, the ESRD medical information system which has not functioned to date because of the lack of adequate funding is now getting up and running.

Proposition 7-12: The target system’s acceptance of an innovative policy is positively related to the degree of participation in the decisionmaking process.

Numerous authors have commented on the relation between the degree of participation of the target system in the implementation of an innovative policy and the long term effectiveness of that policy. Gross presents a number of theories which suggest the basis for this relation.

(a) "Participation leads to higher staff morale and high staff morale is necessary for successful implementation.
(b) Participation leads to greater commitment and a higher commitment is required for effecting change.
(c) Participation leads to a greater clarity for the innovation and clarity is needed for implementation.
(d) Beginning with the postulate that there is a basic resistance to change the argument is that participation will reduce this resistance and thereby facilitate implementation.
(e) Subordinates will tend to resist innovations that they are expected to implement if it is initiated solely by their superiors. 73

Van Meter discusses the possibility that increased participation will lead to a greater degree of consensus of goals and objectives. 74 Zaltman et al. speculates that participation will enhance the information gathering and processing capabilities of the organization. 75 Through this enhancement there would be improvements in both the communication (proposition 7-10) and feedback (proposition 7-11) aspects of the implementation process. While participation may increase the target system's acceptance of an innovative policy, a cost for this acceptance may be incurred. In order to gain the consensus of the various interests represented in the target system, it may be necessary to alter the innovative policy away from the initial objectives in order to gain the acceptance of the target system.

Participation in the implementation of an incentive reimbursement mechanism would be measured in terms of the extent of interactions, in terms of both quality and quantity, between the elements of the target system and the mediating elements of the implementation system. Participation in the implementation of the E3RD incentive reimbursement mechanism has been relatively extensive. This proposition would suggest that because of this participation the E3RD incentive reimbursement mechanism when fully implemented will be better received than it would have been otherwise. Although in final form the acceptance of the incentive reimbursement mechanism may be better, but the proposition does not suggest that participation will improve the rate of implementation.
Proposition 7-13: The rate of implementation is faster by the authoritative approach than by the participative approach.

As discussed in the previous proposition the participative approach to implementation is expected to increase the acceptance of the incentive reimbursement mechanism by the target system. The benefits of the participative approach may be offset by the increases in the time required to implement the innovative policy. Under the authoritative approach, where decisions are made without participation by the target system, the length of the decision process is reduced by the time required to get the input from the target system.\(^7\) The delays created by the participative approach would explain Pressman and Wildavsky’s previously mentioned postulate of the inverse relation between the number of decision points in the implementation process and the probability of achieving the policy objectives.\(^7\) As the degree of participation increased so would the number of decision points.

For the E3RD incentive reimbursement mechanism this proposition would suggest that participation of the type used in conjunction with the E3RD reimbursement mechanism would lengthen the period of implementation. The question then becomes one of comparing the relative advantage of increased participation to the disadvantages associated with extending the time required for implementation.

Proposition 7-14: Policies implemented using the authoritative approach are more likely to be discontinued than those implemented using the participative approach.

According to proposition 7-12 the acceptance of the incentive reimbursement mechanism is directly related to the participation by the
target system in the implementation system. On the other hand, proposition 7-13 stated that the rate of implementation is faster by the authoritative approach. Proposition 7-14 points to the relationship between the two previous propositions. Even though an incentive reimbursement mechanism can be implemented quickly using the authoritative approach, resistance to the policy by the target system may lead to either its change or discontinuance. The resistance to the incentive reimbursement mechanisms can come from any of the heterogenous subsystems within a given target system. For instance, within a given target system there would be a physician subsystem, a facility subsystem, a patient subsystem, and many other subsystems. In addition, the various elements within a given subsystem tend to be heterogenous—each having different goals and objectives. Few physicians are ever in complete agreement about the best method of providing care. All of these elements, subsystems, and the target system are potential sources of resistance to the policy. If a policy must be changed or discontinued because of the continued resistance of the target system or any of its subsystems, then the conclusion must be drawn that the policy was not effectively implemented over the long-run. Under these conditions a policy may be implemented rapidly in the short-run using the authoritative approach, but there would be the risk of long-run failure. This was precisely the situation which occurred with the interim reimbursement policy. The requirement that physicians be reimbursed as part of facility overhead was implemented without
receiving input from the various providers of ESRD therapy. The result was that this policy was modified after strong protests from the renal physicians. 79

Using Van Meter and Van Horn's typology of public policies, it may be that "major change/low consensus" policies require a long period of implementation using the participative approach, while "minor change/high consensus" policies could be implemented in a short period of time using the authoritative approach. 80 With the "major change/low consensus" policies there would be the expectation of a difficult implementation process and efforts could be taken to facilitate the implementation process. These efforts might include expansion of the capacity of the implementation system, reduction of legal and technical barriers, simplification of the implementation system, use of compatible implementation systems, use of clear and precise statements of the innovative policy, and establishment of effective feedback mechanisms.

A major need, given the relations between the type of policy and the problems of implementation, is the ability to predict the range of possible reactions to an incentive reimbursement mechanism prior to the beginning of the implementation process. The attributes of the incentive reimbursement mechanism discussed in the previous section should aid in this classification process. An incentive reimbursement mechanism, such as the ESRD reimbursement mechanism, which provides a different relative advantage to each element of the health delivery system, which is not compatible with existing values and practices, which has a high "gateway capacity" for future policies,
and which is highly complex would be classified as a "major change/low consensus" policy. Given this classification there would be the expectation of an extended period of implementation.

D. Attributes of the Target System

The two preceding sections discussed attributes of the incentive reimbursement mechanism and the implementation system which affect the rate of effective implementation. This section is concerned with those attributes which explain why the same incentive reimbursement mechanism with the same implementation system is implemented at different rates in different target systems. The target system for the ESRD reimbursement mechanism is composed of ESRD patients, ESRD treatment facilities, and renal physicians, social workers, nurses, and renal technicians. A number of researchers have suggested attributes which explain the behavior of the different target systems. This class of attributes has been referred to by a number of different names. Rothman refers to the "target system variables," while Rogers refers to the "characteristics of the adopter categories." Smith used the "target group," while Van Meter and Van Horn use the designation "implementors." Berman and McLaughlin prefer the term "institutional characteristics." 

Drawing upon these works and others, four propositions are discussed which may be useful in explaining the rate of effective implementation of incentive reimbursement mechanisms in different target systems. These attributes are summarized in Table 5.
<table>
<thead>
<tr>
<th>Proposition</th>
<th>Description</th>
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<tbody>
<tr>
<td>7-15</td>
<td>The rate of effective implementation of an incentive reimbursement mechanism is directly related to the extent to which the target system adheres to traditional norms.</td>
</tr>
<tr>
<td>7-16</td>
<td>The rate of effective implementation is directly related to the level of participation by representatives of the target system in relevant organizations.</td>
</tr>
<tr>
<td>7-17</td>
<td>The rate of effective implementation is directly related to previous experience with successful innovative policies and inversely related to previous negative experiences.</td>
</tr>
<tr>
<td>7-18</td>
<td>The rate of effective implementation is directly related to the extent that the target system has an incentive to implement the incentive reimbursement mechanism.</td>
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</tbody>
</table>
At the present time it is not possible to measure the differences in the rate of implementation of the ESRD incentive reimbursement mechanism in different target systems. In the first place the final form of the ESRD incentive reimbursement mechanism has not been fully developed. 86 Secondly, the appropriate unit of analysis, the target system, would be the ESRD network, but these have not been established. 87 Finally, there is almost no data available which can be used for such a comparison of the rate of effective implementation of the ESRD Program. 88 Because of these limitations the following discussion is limited to suggesting how these propositions might be useful.

Proposition 7-15: The rate of effective implementation of an incentive reimbursement mechanism is directly related to the extent to which the target system adheres to traditional norms.

The innovation literature contains many references to the relationship between the rate of adoption and the extent to which the target system adheres to traditional norms. 89 These works and most of the works which they refer to are concerned with the traditional norms of the community. In the case of incentive reimbursement mechanisms it would seem that the norms of the medical community would be more important than the general community norms in explaining the rate of effective implementation. Among the measures which may indicate traditional norms of the medical community would be the proportion of physicians in solo fee-for-service practice, the percentage of physicians holding membership in the American Medical Association, the extent of use of physician's assistants, and the percentage of the population receiving health services from a health maintenance organization (HMO).
Proposition 7-16: The rate of effective implementation is directly related to the level of participation by representatives of the target system in relevant organizations.

Like the previous proposition the innovation literature contains numerous references to the relationship between social participation and the rate of adoption of innovations. Social participation is important because much of the information about innovative policies occurs at meetings of formal organizations and through informal discussions about the innovative policy. Coleman notes the importance of medical conventions and meetings as an important source of information about innovations. In the case of the ESRD incentive reimbursement mechanism it would be expected that participation in national organizations where most of the participants are affected by the reimbursement mechanism would be an important factor in explaining the rate of effective implementation in the target system. Among these organizations are the National Kidney Foundation, Renal Physicians Association, National Association of Patients on Hemodialysis and Transplantation, Association of Nephrology Social Workers, American Society for Artificial Internal Organs, and the American Society of Nephrology. In addition, participation would include membership on advisory groups planning the implementation of the ESRD Program. Two of these would be the "Ad Hoc Consultant Groups" established by the Regional Health Administrators to develop recommendations for the ESRD networks and the conferees invited to attend the February 8 and 9, 1973 Chronic Renal Disease Conference sponsored by the Social Security Administration.
Proposition 7-17: The rate of effective implementation is directly related to previous experience with successful innovative policies and inversely related to previous negative experience.

In a study of the diffusion of poor laws in England and Wales, Overton notes that the pattern of diffusion of previous related but different innovations can affect the whole pattern of spread of a later innovation. This finding supports Smith's contention that the prior policy experience of the target group affects the response to new policies. As in the two previous propositions this proposition is also suggested in the general innovation literature as cited by Rothman.

In the case of an innovative incentive reimbursement mechanism the rate of effective implementation would depend upon the previous experience of the target system with procedures which are included as part of the reimbursement mechanism. For example, a community such as Seattle which has had a long history of maintaining patients on home dialysis would be much more likely to respond to incentives to place patients on home dialysis than would a community where patients are seldom placed on home dialysis because of previous negative experiences in that community with home dialysis.

In the case of an innovative incentive reimbursement mechanism the rate of effective implementation would depend upon previous experience of the target system with previous innovative policies such as other forms of incentive reimbursement, quality review systems, systems setting performance standards, and shared services.
Proposition 7-18: The rate of effective implementation is directly related to the extent that the target system has an incentive to implement the incentive reimbursement mechanism.

The suggestion for this proposition comes from Rothman who makes the generalization that "the innovativeness of a target system is directly related to the extent to which it feels a need for change". This final proposition is also closely related to the first proposition of this chapter, namely the importance of the relative advantage of the incentive reimbursement mechanism. That discussion presented the idea that the perception of relative advantage varied among the different elements of the various target systems. In those target systems where the need for the incentive reimbursement mechanism is perceived as great, the reimbursement mechanism would have a greater relative advantage than it would have where need was not perceived as great. In those target systems where the relative advantage is perceived as great, there would be the expectation of a faster rate of effective implementation than would be the case in target systems where the relative advantage was not perceived to be great.

In the case of incentive reimbursement mechanisms we may be confronted with the "Fallacy of Division"—i.e., an argument that what is true of the whole must also be true of its parts. That is, while the need to utilize incentive reimbursement mechanisms to constrain the cost of health services may be desired on the national level, such a constraint may not be deemed appropriate when it impacts on the specific local target system. It is at this local level where the behavior of individual patients, physicians, and facilities are
constrained. There may be incentives for patients to seek lower cost although less appealing forms of care, for physicians to provide something other than the most technically advanced form of care, and for hospitals to refrain from providing sophisticated services which would enhance the prestige of the hospitals. The "Fallacy of Division" also applies to the administration of programs to provide public financing for catastrophic health services. While most agency officials would express the need for efficiency in the administration of the program, they would not support changes which would threaten the power and prestige of their agency. If this "Fallacy of Division" does exist, as I believe it does, then we must expect to have difficulties in implementing incentive reimbursement mechanisms at all levels even though it is perceived to have a high relative advantage from a national perspective.
Chapter VII—Footnotes


6. Ibid. p. 2424.

An innovative policy refers to any policy which is perceived to be new by the relevant unit of adoption. For this research the innovative policy is the ESRD reimbursement mechanism.


Paul Berman and Milbrey McLaughlin. *Federal Program Supporting Educational Change*.


22 Gerald Zaltman, Robert Duncan, and Jonny Holbek. *Innovations and Organizations*, p. 167 for list of theories.


29 In "Generalization 4-1" Everett M. Rogers and F. Floyd Shoemaker *Communication of Innovations*, p. 142 state: "The relative advantage of a new idea, as perceived by members of a social system, is positively related to its rate of adoption."

Jack Rothman, *Planning and Organizing for Social Change*, p. 437 states in "Generalization 9.7": "The rate of adoption of an innovation is related to people's perception of its advantages relative to other innovations or the status-quo. More advantageous innovations will have a higher adoption rate than less advantageous ones."

31 See Chapter V pp. 128-133 for a discussion of the problems of physician reimbursement.


34 Gerald Zaltman, Robert Duncan, and Jonny Holbek. *Innovations and Organizations.* p. 23.


37 Gerald Zaltman, Robert Duncan, and Jonny Holbek. *Innovations and Organizations.* p. 45.

38 See Chapter V, footnote 19.


41 Everett M. Rogers and F. Floyd Shoemaker. *Communication of Innovations.* Generalization 4-5. p. 156.

42 Gerald Zaltman, Robert Duncan, and Jonny Holbek. *Innovations and Organizations.* p. 38.


See Chapter V pp. 136-138 for a discussion of mandatory assignment.

Jeffrey L. Pressman and Aaron B. Wildavsky. *Implementation.* p. 100.

See Chapter V, p. 146.


See Chapter V, p. 115 in reference to footnote 28.

See Chapter V, pp. 138-143 for a discussion of the certification process.


Ibid. p. 100.

Ibid.


See Chapter VI, p. 168 in reference to footnote 17.


See footnote 4 of this chapter.
Information provided by Nationwide Insurance Company, Columbus, Ohio based upon beneficiaries in Ohio and West Virginia as of April 1, 1975.


Gerald Zaltman, Robert Duncan, and Jonny Holbek. Innovations and Organizations. p. 78.

See Chapter VI, p. 177 in reference to footnotes 35 and 36.

See Chapter VI, pp. 171-175.


Gerald Zaltman, Robert Duncan, and Jonny Holbek. Innovations and Organizations. p. 81.

Everett M. Rogers and F. Floyd Shoemaker. The Communication of Innovations. pp. 312-314 discuss the relation between the authoritative approach, the participative approach, and the rate of adoption.


This proposition is based on Generalization 10-6: "Changes brought about by the authoritative approach are more likely to be discontinued than those brought about by the participative approach;" from Everett M. Rogers and F. Floyd Shoemaker. The Communication of Innovations. p. 514.

See Chapter V, pp. 128-133.


86. See Chapter V, pp. 145-146.

87. See Chapter VI, footnote 3.

88. See Chapter VI, pp. 175-177.


CHAPTER VIII
TOWARD A POLICY-RELEVANT THEORY
OF INCENTIVE REIMBURSEMENT

The objective of this research has been to generate a framework for a policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services. In meeting this objective the conceptual weaknesses of the existing theories of incentive reimbursement were explained. The examination of the incentive reimbursement mechanism for the End-Stage Renal Disease Program demonstrated that two and one-half years after the program became effective providers of the ESRD therapies were being reimbursed, but the incentives to promote the efficient provision of these therapies had not been fully implemented. The existing theories of incentive reimbursement provide no explanation of this delay. It was then shown that the implementation/innovation approach offers the basis for an explanation.

This chapter draws on these findings to present the framework for a policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services and to demonstrate how this framework can be used by policy officials. This framework and demonstration of its use are presented following a brief recounting of the inadequacies of the existing theories of incentive reimbursement and a summary of the experience with the ESRD reimbursement mechanism.
A. Inadequacy of Existing Incentive Reimbursement Theories

The analysis of the existing theories of incentive reimbursement in Chapter III suggested five weaknesses which limit the validity of these theories for operational programs to provide public financing for catastrophic health services. These weaknesses are the result of the failure to consider:

- the nature of the public demand
- the specification of the health product
- the method for determining if the health product is produced
- how the price is determined
- how the incentive reimbursement mechanism is implemented

1. Nature of the Public Demand

By definition catastrophic health services require financing in excess of what is available from the individual's private resources. As demonstrated in Chapter III, when the additional financing comes from government sources, it is necessary to specify the nature of the public demand. Like any expression of demand, the public demand specifies the relationship between the price of the product and the quantity of the product demanded at that price. Even if one assumes that the purchaser--i.e., the public program to finance catastrophic health services--has knowledge of the nature of the product--i.e., the health product and the price of that product--the existing theories of incentive reimbursement are still inadequate. By concentrating on individual demands the existing theory has ignored the complexities associated with the specification of the public demand. It is precisely
these complexities which determine the ultimate effectiveness of an incentive reimbursement mechanism.

2. Specification of the Health Product

In the discussion above, it was assumed that the purchaser—i.e. the public program to finance catastrophic health services—has knowledge of both the nature of the health product and its price. When the assumption that the nature of the health product is known is relaxed, another major weakness in the existing theories of incentive reimbursement becomes evident. As pointed out previously, the nature of the health product is often not known. To specify the nature of the health product it is necessary to establish an appropriate mechanism. The establishment of such a mechanism is a complex procedure which is ignored by existing theories of incentive reimbursement. The result is that the validity of these theories is subject to question.

3. Determination if the Health Product is Produced

The ability to specify the nature of the health product is not sufficient for operational programs to provide public financing for catastrophic health services. Because of the complex nature of health services, it is not directly apparent if the health product has in fact been produced. As a result it is necessary to establish mechanisms to determine when the health product has been produced. As stated in the discussion of the two previous weaknesses, the existing theories of incentive reimbursement do not consider the complexities associated with the establishment of such mechanisms. The result is a weakening of the value of the theories.
4. Determination of the Price

When the assumption that the price of the produce is known is relaxed, a further limitation of the existing theories of incentive reimbursement becomes evident. The existing theories are based on the assumption that the price of the health product is determined in the private health market. When a program to provide public financing for catastrophic health services based solely on the criterion of medical need is established, the private market no longer exists as the government becomes the sole purchaser of these services. The result is that there is no privately determined market price. It is then necessary to develop mechanisms for setting a price based upon the cost of producing the health product in an efficient manner. The establishment of such a mechanism creates complexities which are not accounted for by the existing theories of incentive reimbursement.

5. Implementation of the Incentive Reimbursement Mechanism

The four weaknesses pointed out above suggest that there is a general problem with the existing theories of incentive reimbursement. The problem is that they fail to consider the difficulties, largely administrative, of implementation. Until the theories of incentive reimbursement incorporate an explanation of these implementation problems, they are of limited utility for operational programs to provide public financing for catastrophic health services.
B. ESRD Incentive Reimbursement Experience

The analysis of the effort to provide an incentive reimbursement mechanism for the ESRD Program demonstrated the critical nature of the weaknesses in the existing theories of incentive reimbursement. After two and one-half years of operation the providers of ESRD services are being reimbursed, but the incentives to promote the efficient provision of these services have not been fully implemented. Much of the delay can be attributed to the complexities associated with the articulation of the demand for the ESRD product, the specification of the ESRD product, the monitoring of the production of the ESRD product, the determination of the price of the ESRD product, and the implementation of the ESRD incentive reimbursement mechanism.

1. Demand for the ESRD Product

The articulation of the public demand for the ESRD product included a desire to have the patient receive those forms of ESRD therapy which provide an acceptable level of care at a reasonable cost. The two primary efforts in this direction were to provide incentives for the patient to choose renal transplantation rather than the more costly hemodialysis and to provide incentives for the dialysis patient to select home dialysis. The efforts to do this have been complicated by legislative restrictions, the presence of private supplemental coverage, and an inability to adequately define the nature of the ESRD product.

2. Specification of the ESRD Product

A major problem in the development of the ESRD incentive reimbursement mechanism was the difficulty in defining the nature of the
product being purchased. The controversy over the method of reimbursement to physicians for maintenance dialysis services was the result of the inability to determine the nature of the services required.\(^7\) Without the ability to establish and monitor the nature of the final product, it was necessary to establish structure and process specifications.\(^8\) The development of the ESRD networks and the ESRD medical review boards, which are to establish and monitor the structure and process specifications, has not been completed at the end of the first two and one-half years of operation of the ESRD Program.\(^9\)

3. Monitoring the Production of the ESRD Product

The function of the ESRD medical review boards is to develop specifications for the ESRD product and to determine if this product has in fact been produced. As noted above the ESRD medical review boards have not been fully developed. In order for the ESRD medical review boards to function, it was necessary to establish an ESRD medical information system to provide the information needed about the production of the ESRD product. Because of the lack of funding the development of this information system has been delayed.

4. Price of the ESRD Product

The ability to determine the price of the ESRD services has been a major problem for the ESRD Program. Even after the decision was made to offer to pay a "retainer" to physicians for services provided to maintenance dialysis patients, there was still the question of the size of the retainer. There has been concern that the amount
of the retainer is too large in relation to the services actually provided. In addition Social Security had little basis for setting the price for reimbursement to facilities providing ESRD services. The efforts to collect this information have been hampered by the refusal of the facilities to provide the necessary information. In addition there have been serious delays in the analysis of the operating experience of the ESRD Program. Finally the existing Medicare legislation has restricted the implementation of various measures which would provide greater incentives—e.g. mandatory assignment and allowing the facilities to share in the savings resulting from more efficient operations.

5. Implementation of the ESRD Incentive Reimbursement Mechanism

Although the existing theories of incentive reimbursement are unable to explain the delays in the implementation of the incentive reimbursement mechanism for the ESRD Program, Chapter VII demonstrated how the literature on implementation/innovation could be used as the basis for such an explanation. This explanation is based on the attributes of the incentive reimbursement mechanism, the attributes of the implementing system, and the attributes of the target system. Based upon the existing theories of incentive reimbursement, the experience with the ESRD incentive reimbursement mechanism, and the contributions of the implementation/innovation literature, it is now possible to synthesize these into a policy-relevant theory of incentive reimbursement for public programs to finance catastrophic health services.
C. The Framework

As presented in Chapter I the purpose of the framework for a policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services is to provide a basic structure around which generalizations and propositions pertaining to the use of incentive reimbursement mechanisms can be organized. This framework provides a way of making sense of the complex situations which accompany the development and implementation of incentive reimbursement mechanisms, so that policy officials may effectively bring to bear the needed repertoire of legal and administrative actions, and even more important, to modify or discard the traditional legal and administrative actions altogether, replacing them by new ones as the situation demands.

The framework is composed of three major components operating within an implementation environment. The three components are the incentive reimbursement plan, the product specification mechanism, and the price determination mechanism. Together these components form the incentive reimbursement mechanism. This incentive reimbursement mechanism must then operate within an implementation environment. The implementation environment includes those factors which affect the rate of effective implementation of the incentive reimbursement mechanism but which are not an integral part of that mechanism. The implementation environment is based upon the attributes of the incentive reimbursement mechanism, the attributes of the implementation system, and the attributes of the target system. The relationship between the
various elements of the framework for the policy-relevant theory of incentive reimbursement is depicted in Figure 1.

1. Incentive Reimbursement Mechanism

The first of the three components of the policy-relevant theory of incentive reimbursement is the incentive reimbursement plan. This component is concerned with the method by which the payment is made for the desired services. This component has been the major concern of the existing theories of incentive reimbursement. The incentive reimbursement plan is of little value, however, without the other two components—the price determination mechanism and the product specification mechanism. The existing theories of incentive reimbursement have ignored these two important components. An operational incentive reimbursement mechanism must include all three components. The product specification mechanism is the method used to specify and monitor the nature of the catastrophic health services purchased under programs to provide public financing. The price determination mechanism represents the method for establishing the price when it is no longer reasonable to assume that there is a price determined by the private market. The generalizations developed from the analysis of the ESRD reimbursement mechanism demonstrate the importance of these two additional components for a policy-relevant theory of incentive reimbursement.

a. Incentive Reimbursement Plan. Earlier in this chapter we noted that the existing theories of incentive reimbursement have a number of basic weaknesses which preclude them from adequately explaining
IMPLEMENTATION ENVIRONMENT

IMPLEMENTATION SYSTEM ATTRIBUTES

Price Determination Mechanism

Incentive Reimbursement Plan

Product Specification Mechanism

FIGURE 1
FRAMEWORK FOR A POLICY-RELEVANT THEORY OF INCENTIVE REIMBURSEMENT
how the incentive reimbursement mechanism can be used to induce patients and providers to behave in a manner which is consistent with the objectives of the program to provide public financing for catastrophic health services. As a result the existing theories cannot be applied directly to operational programs such as the ESRD Program. The existing theories of incentive reimbursement do, however, provide the basis for the policy-relevant theory of incentive reimbursement. These theories suggest the expected results from the use of various methods of reimbursement including capitation payments, prospective reimbursement, and the use of deductibles and coinsurance.

In accordance with the existing theories Generalization 4-2 suggests that a general deductible based upon direct expenditures is more effective than waiting periods. On the other hand, the analysis of the ESRD incentive reimbursement mechanism identified several modifications which would augment the existing theories of incentive reimbursement. Generalizations 4-4 and 4-5 suggest that the presence of supplementary funding to cover services, deductibles, and coinsurance not covered under the basic program to provide public financing for catastrophic health services limit the effectiveness of these incentives. On the other hand, Generalizations 4-3, 4-6, and 4-7 propose that more effective incentives would result from the use of selective deductibles, coinsurance provisions, and limits on covered services than from the use of general deductibles, coinsurance provisions, and limits on covered services. Finally, Generalization 5-2 suggests that the fee-for-service method of reimbursement could function as an effective
part of an incentive reimbursement mechanism if the services required to treat a catastrophic illness are well specified.

b. **Product Specification Mechanism.** The analysis of the ESRD reimbursement mechanism has shown, as discussed in relation to Generalization 4-1, that the method of payment is of little value without an ability to specify the nature of the product that is demanded under a program to provide public financing for catastrophic health services. In addition, the analysis of the ESRD reimbursement mechanism demonstrated the need for a mechanism for determining if the product was in fact produced. This suggests that any effort to provide reimbursement incentives must include the capability to specify the nature of the catastrophic health product and to be able to monitor the production of that product. If a theory of incentive reimbursement is to be policy-relevant, it must be able to explain the relationship between the product specification mechanism and the effectiveness of the incentives.

The experience under the ESRD Program as proposed by Generalization 5-7 has shown that it is important to have the specifications for the catastrophic health product established prior to the introduction of the financing. When this is not done, there is a tendency for treatment capacity to expand in ways which may not be consistent with the specifications as finally determined. When this expansion has occurred, it is then difficult to either reduce or alter this previously developed treatment capacity. However, Generalizations 5-1 and 6-1 state that it is important to have a product specification mechanism which is
flexible enough to respond to changes in medical opinion and treatment methods. If this flexibility is not present disincentives for the adoption of new and possibly more efficient treatment practices are created. As Generalization 6-2 cautions, the changes in the specification of the product should not be determined solely by changes in medical opinion but should be determined through an evaluation of the changes in medical opinion in light of the public demand. A newly developed method of treating ESRD, although more effective than dialysis, may not be covered or would only be covered up to the cost of providing the existing therapies if the new therapy was more expensive than the previous therapies.

This research has demonstrated that a product specification mechanism is an important part of any incentive reimbursement program. A challenge in the development of policy-relevant theories of incentive reimbursement is to expand our understanding of the characteristics of efficient product specification mechanisms.

c. **Price Determination Mechanism.** An important factor recognized in the development of the ESRD reimbursement mechanism was that when virtually the entire population receives health services financed through a public program, there is no longer a price determined in the private market, as there is no private market. As stated by Generalizations 5-6 and 6-7, in the absence of a price determined by the private market it is necessary to develop an alternative method for determining prices. This results, as stated by Generalizations 5-5 and 6-7, in the need to develop a mechanism for establishing the
amount of the reimbursement. An important part of any price determination mechanism, as suggested by Generalization 6-8, is the ability to analyze the expenditures being made under the program to provide public financing for catastrophic health services. In conjunction with the product specification mechanism, a policy-relevant theory of incentive reimbursement must include an explanation of the relation between the price determination mechanism and the effectiveness of the incentive reimbursement mechanism. The three components—the incentive reimbursement plan, the product specification mechanism, and the price determination mechanism—determine the attributes of the incentive reimbursement mechanism.

2. The Implementation Environment

The analysis of the ESRD reimbursement mechanism demonstrated that for a policy-relevant theory of incentive reimbursement it is necessary to consider the relationship among the incentive reimbursement plan, the product specification mechanism, and the price determination mechanism; and the implementation environment in which they are to operate. As previously defined, the implementation environment includes those factors which affect the rate of effective implementation of the incentive reimbursement mechanism but which are not an integral part of that mechanism.

Generalization 5-4 suggests that regardless of the underlying logic an incentive reimbursement mechanism cannot be effective if it is not acceptable to the practicing physician community. In addition to the physician community the incentive reimbursement mechanisms must
ultimately be accepted by other elements of the implementation environment. The implementation environment includes both the parties who are responsible for the administration of the incentive reimbursement mechanism and those who are the objects of the incentives—patients and providers of health services. Generalization 6-4 identified that an important part of the implementation process is the ability to clearly define within the administrative agencies the allocation of responsibilities. In addition the analysis of the ESRD incentive reimbursement mechanism, as discussed in conjunction with Generalizations 5-5 and 6-3, demonstrates the importance of including the physicians in the design and implementation of the incentive reimbursement process.

As demonstrated in Chapter VII the implementation/innovation literature provides the basis for understanding the relationship between the characteristics of the incentive reimbursement mechanism and the rate of effective implementation. As such it is important to include the issue of implementation in any policy-relevant theory of incentive reimbursement. The existing literature on implementation/innovation suggested a number of propositions related to the rate of effective implementation. These propositions have been categorized into three groups—the attributes of the incentive reimbursement mechanism, the attributes of the implementation system, and the attributes of the target system. Together these attributes begin to explain the implementation environment.

a. Attributes of the Incentive Reimbursement Mechanism. The attributes of the incentive reimbursement mechanism which affect the
rate of effective implementation include: the relative advantage of the incentive reimbursement mechanism; the compatibility of that mechanism with the existing values and practices; the "gateway capacity" of the reimbursement mechanism; the ease of communication of the mechanism within the implementing system; and the complexity of the mechanism.

b. Attributes of the Implementation System. Among the attributes of the implementation system—the set of elements responsible for transforming the incentive reimbursement plan into an operation program—which affect the rate of implementation are: the capacity of the implementation system; the legal and technical constraints; the complexity of the system; the compatibility of the proposed system with the existing system; the quality of the communications within the system; and the level of participation of affected individuals in the decision-making process.

c. Attributes of the Target System. The attributes of the target system—physicians, treatment facilities, and patients whose behavior is to be influenced by the incentives—which affect the rate of effective implementation include: the norms of the target system; the level of participation by members of the target system; previous experiences of the target system; and the need for the incentive reimbursement mechanism as perceived by the target system.

3. The Total System Perspective

The framework for the policy-relevant theory of incentive reimbursement considers the three major components of the incentive
reimbursement mechanism—the incentive reimbursement plan, the product specification mechanism, and the price determination mechanism—as part of a total incentive reimbursement system. In addition to the three components this system includes those attributes of the implementation environment which affect the rate of effective implementation of the incentive reimbursement mechanism. This total system perspective represents a major departure from the existing theories of incentive reimbursement. Rather than assuming that the incentive reimbursement plan can be directly transformed into an effective incentive reimbursement mechanism, as do the existing theories, the conceptual framework explicitly recognized the interdependencies among the incentive reimbursement plan, the product specification mechanism, the price determination mechanism, and the attributes of the implementation environment.

D. Implications for the Public Financing of Catastrophic Health Services

The framework for the policy-relevant theory of incentive reimbursement indicates that a product specification mechanism and a price determination mechanism are necessary parts of an effective incentive reimbursement mechanism for programs which provide public financing for catastrophic health services. In addition, the framework indicates the need to consider the implementation environment when developing incentive reimbursement mechanism.

While much of the existing incentive reimbursement literature argues that the major advantage of incentive reimbursement mechanisms
is that they do not require expensive administrative structures, this research has demonstrated that administrative structures to specify the nature of the health product and to determine the price of that product are necessary parts of any incentive reimbursement mechanism. The need for these administrative structures is especially important in light of the recent emphasis upon the development of Health Maintenance Organizations (HMO's). Many of the proponents of HMO's claim as does Paul Ellwood in a recent Institute of Medicine publication Controls on Health Care that: "If HMO's succeed, the need and desire for expanded regulation of the health industry will diminish." This prediction is based upon three conditions:

1. If new HMO's form in sufficient numbers,

2. If new HMO's perform like existing prototypes, and

3. If the competition the new HMO's egender has a favorable effect on the performance of all providers,

then, the need for greater government planning and regulatory intervention will be minimal and political pressure for more controls will cease.15

In this research we have argued that HMO's like all other providers of health service have incentives to increase their revenue through increasing the number of patients and the price per patient and to decrease their costs through reductions in the level of services provided and increased efficiency in the provision of services. If what we have argued is true, then Ellwood's condition three is violated and the need for greater government planning and regulatory intervention will not be minimal. It will still be necessary to have mechanisms to
specify the nature of the health product and to determine the price for that product.

1. Incentive Reimbursement Mechanisms and Regulation

Traditionally we have considered incentive reimbursement mechanisms and health care regulation to be mutually exclusive alternatives. The ESRD Program developed along these traditional lines referring to the "Reimbursement Issues" and the "Conditions of Participation" as if they are two independent policies. In fact, as depicted in the framework for the policy-relevant theory, reimbursement is inextricably connected to the mechanisms for specification of the health product and determination of the price of that product. The mechanism for the specification of the health product is concerned with what is normally included in the discussion of regulation of professional performance and institutional quality. The mechanism for the determination of price is related to what is normally considered with respect to cost and price regulation. If we are to develop effective incentive reimbursement mechanisms for programs to provide public financing for catastrophic health services, then we must be willing to integrate what we know about incentive reimbursement with what we know about health care regulation. To continue to fantasize that the two are independent is only going to delay the development of effective incentive reimbursement mechanisms. Assuming that the product specification mechanism and the price determination mechanism are necessary parts of any effective incentive reimbursement mechanism, it is then necessary to consider whether policy officials can in fact develop these needed mechanisms. For without
product specification and price determination mechanisms one must conclude that all efforts to utilize incentive reimbursement mechanisms will be subject to failure. That is, they will not provide incentives for the efficient delivery of health services although they will probably be able to provide reimbursement to providers.

a. **Product Specification Mechanism.** The framework for the policy-relevant theory of incentive reimbursement suggests that any effort to provide reimbursement incentives must include the capability to specify the nature of the catastrophic health product and an ability to monitor the production of that product. In recent years we have witnessed the beginnings of public support for the development of product specification mechanisms. The Professional Standards Review Organizations (PSRO's), which are created under Section 249F of the "Social Security Amendments of 1972", the ESRD Program was established under Section 2991 of this legislation, is an effort to have physicians establish standards for the quality of health services and to monitor the provision of these services to ensure that the standards are met. While the PSRO's represent a step toward the development of specifications of the health product, they do not have as their objective the provision of the health services in the most efficient manner. Despite the limited scope of their specification and monitoring activities, the development of the PSRO's has been just as turbulent and probably more turbulent than the development of the ESRD Program.

Other efforts toward the development of specifications for the health product include the establishment of the Health Systems Agencies
(HSA's), the 1122 Review Program, and the certificate of need legislation. The HSA's were created under the "National Health Planning and Resources Development Act", P.L. 93-641. The HSA's are responsible for preparing and implementing plans designed to improve the health of residents of their health areas, increasing accessibility and continuity, and quality of health care and restraining increases in costs of care. The 1122 Review Program was created by Section 221 of the "Social Security Amendments of 1972" to require the approval by a state-designated agency of all capital expenditures in excess of $100,000. Without this approval the facility would not be eligible for reimbursement of the expenses under Medicare and Medicaid. Finally, the certificate of need laws are state laws which regulate the building, expansion, and modernization of health facilities to varying degrees.

The efforts to specify the nature of the health product cited above, when considered in conjunction with the efforts to establish ESRD medical review boards and ESRD network coordinating committees, represent considerable activity toward the development of mechanisms to specify the nature of the health product. Whether these activities will be effective is yet to be determined. A major possibility is that these product specification mechanisms will merely become the tools of the physicians, hospitals, and other structural interests in the health care system. If so, they are not likely to specify the health product in accordance with the public demand.
Given the uncertainty concerning the ability to develop effective product specification mechanisms, what are the prospects for incentive reimbursement under programs to provide public financing for catastrophic health services? While the current efforts to specify the nature of the health product may be only marginally effective or possibly totally ineffective, the current experience should facilitate the development of more effective mechanisms in the future. If we are to provide public financing for catastrophic health services, then we must develop such product specifications. To do otherwise would send us along a road to ever increasing health care costs. Without a specification of the health product the quantity of health care services to be provided is unconstrained. As a result, the total cost of health care would be unconstrained. I am confident that it is feasible to develop such mechanisms, but this development will not be forthcoming without an active effort. We cannot ignore the product specification mechanism as economists concerned with incentive reimbursement have done in the past. It is imperative to seek an understanding of the complex relationship between reimbursement incentives and the product specification mechanism if we are to develop systems for the efficient provision of catastrophic health services.

Before concluding this discussion of the product specification mechanisms, two considerations in the development of the product specification mechanisms must be emphasized. First, the mechanisms must have resources in order to perform their function. The resources would include the financial resources to staff and operate the organization
and the informed personnel so that the specifications can be based upon knowledge rather than the unsupported claims of the groups which will be affected by the specifications. Second, there must be a public demand for specifications which promote the efficient provision of catastrophic health services. Without the public demand the efforts to specify the health product will be limited. The need for a public demand for the efficient provision of catastrophic health services is discussed immediately following the discussion of the price determination mechanism.

b. Price Determination Mechanism. Like the product specification mechanism the framework for the policy-relevant theory of incentive reimbursement suggests that any effort to provide reimbursement incentives must include the capability to determine the price of the health product. Again, as was the case with the product specification mechanism, there have been a number of recent efforts to establish mechanisms to determine the price of health products.21 The Economic Stabilization Program (ESP) which ended on April 30, 1974 was the most visible effort to regulate the amount of reimbursement to both institutional and non-institutional providers. A number of states have established hospital cost commissions which review or set the rates which can be charged by health care institutions. As is the case with the ESRD Program, both Medicare and Medicaid have begun to place restrictions upon the allowable costs of health care institutions and upon the charges of physicians.
Again, like the mechanisms for the specification of the health product, the mechanisms for determination of the price of the health product can be developed, but they must have resources to carry out their functions and there must be a public demand for placing restraints upon the amount of reimbursement under these mechanisms. Regardless of the effectiveness of the existing mechanisms for specifying the nature of the health product and determining the price of the health product, these mechanisms are important to the development of effective incentive reimbursement mechanisms for programs that provide public financing of catastrophic health services. The existing mechanisms will provide information about procedures which work and those which don't work. In addition, as these mechanisms become an incorporated part of the prevailing health system, it will then be possible to modify them to correct any observed deficiencies.

2. The Public Demand and the Implementation Environment

As indicated in the framework for the policy-relevant theory of incentive reimbursement for publicly financed catastrophic health services, all incentive reimbursement mechanisms must operate in an implementation environment. In Chapter VII various propositions pertaining to this environment were presented. However, it is important to emphasize that unless this environment is supportive of an effective incentive reimbursement mechanism the development of such a mechanism will be limited.

The public demand should be regarded as an important indication of the support that the implementation environment will provide for an
incentive reimbursement mechanism. In Chapter VII we introduced the concept of the "Fallacy of Division"—i.e. an argument that what is true of the whole must also be true of its parts.\textsuperscript{22} This argument is crucial to the effectiveness of any incentive reimbursement mechanism for publicly financed catastrophic health services. While the members of the public may claim to demand effective incentive reimbursement mechanisms, unless these same members of the public are willing to support the reimbursement mechanism when it constrains the behavior of specific patients, physicians, and health care facilities, this expression of the public demand may in fact be a pseudo-demand. The public may claim to demand efficiency in the delivery of catastrophic health services, but may be unwilling to provide the incentives needed to induce the patient to seek the most efficient form of therapy. The public may demand efficiency in the delivery of catastrophic health services, but may be unwilling to support reimbursement mechanisms which would limit the growth of their hospital.

The final point to be made in this research is that incentive reimbursement mechanisms to induce the efficient delivery of catastrophic health services under programs to provide public financing for catastrophic health services can be developed. But, they can only be effective if the public wants them to be.
Chapter VIII--Footnotes

1. See Chapter I, pp. 6-7.


4. Ibid., pp. 84-85.

5. Ibid., pp. 85-88.


7. See Chapter V, footnote 15.


10. See Chapter V, footnote 34.

11. See Chapter VI, p. 176.

12. See Chapter VI, pp. 176-177.


See the discussion of motivation of providers in Chapter III beginning on p. 80.


For a discussion of these efforts see: Patrick O'Donoghue, *Evidence About the Effects of Health Care Regulation*: p. 47.

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