*Harvard Project Expected to Change Mechanisms for Payment of Physician Fees*

# Nuclear Medicine Physicians Chosen as Consultants in Relative Value Scale Study

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A new mechanism for reimbursing physicians in the United States who treat Medicare patients will probably involve a "resource-based relative value scale (RVS)," meaning that physicians performing various procedures and services will be paid fixed fees based on the complexity of those procedures as well as the time, training, and administrative costs required to perform them.

A 30-month national study, conducted by the Harvard School of Public Health, is scheduled to issue a report on RVS by July 1, 1988, to the Health Care Financing Administration (HCFA), which controls Medicare reimbursement policies. HCFA has provided Harvard with a $2-million grant for the study, which will cover 150 services and procedures in 13 specialty areas.

[HCFA also funded the study conducted several years ago at Yale University which eventually led to the prospective payment system (PPS), a mechanism for reimbursing hospital fees through Medicare according to diagnosis-related groups (DRGs).]

William C. Hsiao, PhD, a professor of economics and health policy who has published a methodology for determining RVS figures (*1*), will direct the study. His group, including coinvestigator Peter Braun, MD, professor of public health, plans to obtain data through a telephone survey of 1,200–1,500 physicians, and has subcontracted part of the study to the American Medical Association.

"Physician payment levels bear an uneven relationship to the resource input costs," Dr. Hsiao told *Newsline*. "Some procedures and services, including a large number of technical services and imaging procedures, are much better compensated relative to the work involved."

The RVS study would provide a neutral incentive system for physicians in selecting the services and procedures they will perform, explained Dr. Hsiao. "The continuation of the current distorted fee system would not serve the interests of patients or physicians because the distorted incentives influence health care costs and the quality of patient care. Eventually, they may invite more drastic external regulatory controls," he added.

### Technical Consultant Groups

For each specialty, a group of physicians will serve as technical consultants. Technical Consultant Group #9 (covering nuclear medicine, radiology, and radiation therapy), consists of eight physicians. After considering nominations from The Society of Nuclear Medicine (SNM), the American College of Nuclear Physicians (ACNP), and the American College of Radiology (ACR), the Harvard group selected three nuclear medicine physicians to serve on the panel: Philip O. Alderson, MD, director of the Department of Nuclear Medicine at the Columbia-Presbyterian Medical Center; Larry L. Heck, MD, of the Division of Nuclear Medicine at the Methodist Hospital of Indiana; and Oscar M. (Jay) Powell, Jr., MD, of the Division of Nuclear Medicine at the Allegheny General Hospital in Pittsburgh.

[Three other members of this technical consultant group are also SNM members: Barbara E. Chick, MD, and Robert A. Songe, MD, representing radiology; and Carl R. Bogardus, MD, representing radiation therapy.]

The technical consultant groups, which began work in early July, will review the scope and method of the study, advise on the selection of medical procedures, critique data, and assess the reasonableness of the relative values that are developed.

The Harvard group plans to obtain

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national information on the complexity and time necessary for performing certain preselected high-volume and high-cost procedures. In addition, information will be collected on the costs of training (including actual expenditures as well as estimated lost income from delayed entry into the workforce) and practice costs.

Once this information has been gathered, it will be applied to most other surgical and medical procedures by extrapolation to groups of procedures identified by cluster analysis or charge data and CPT-4 (Current Procedural Terminology, 4th edition) codes.

### Complexity

Relative complexity refers to the relative degree of difficulty of the procedure per unit of time. It will be used as a method of ranking different procedures within and among specialties. By measuring the complexity per a standardized unit of time, the RVS survey investigators hope to remove the impact of time on the measure of complexity.

The physicians surveyed will be asked to consider the levels of concentration, technical skill, physical and mental effort, and emotional stress required to perform a procedure. To allow for cross-specialty comparisons, the questionnaire will include an identical or closely related procedure performed in another specialty.

When the various procedures in each specialty have been ranked by complexity, a common weighting measure will be assigned that will produce a measure of complexity that can be compared across all specialties.

In past studies, Dr. Hsiao has used two definitions of relative complexity: complexity per unit of time; and complexity in terms of "global effort," or the product of complexity per unit of time and the time required. He will decide which definition is most appropriate for the current RVS study after consultation with the technical consultant groups.

### Time

The investigators will gather objective and subjective estimates of time required to perform the targeted procedures, with a preference toward objective time. This section will also include information on aggregate billing on a specialty-by-specialty basis.

### Specialty Training

The income foregone during a physician's training will be calculated using the principles of human capital theory in which the opportunity cost of training is calculated and amortized over the working lifetime of a physician. The study assumes that each specialty should earn the same rate of return on its investment in training.

The investigators propose to collect data on the length of residency requirements, the working lifetime of each type of specialist from the time of graduation to retirement, and any available data on the peak earning years of each specialty.

Salaries of residents and interns will be factored into the data, recognizing that various specialties have different career lengths. [A 1975 Canadian study, for example, found that a career in cardiovascular surgery lasts an average of 27 years, compared to 37 years for ophthalmology (*2*).]

### Physician Practice Costs

The investigators will recognize variations in practice costs in different specialties. These expenses include office payroll and space, malpractice premiums, drugs and medical supplies, and depreciation on medical equipment. Overhead expenses will be assumed equal for all services and procedures.

To check the reliability and validity of survey data, the investigators will also utilize information collected in the Physicians' Practice Cost and Income Survey of 1983 (*3*), supplemented with information from the US Internal Revenue Service (IRS) and *Medical Economics* magazine.

Malpractice insurance costs will represent an important variable in determining RVS, and the investigators will obtain information from the insurance departments of all 50 states and the District of Columbia.

### Computation of RVS

After the data are collected, the investigators will calculate the frequency distributions for time and complexity of procedures and the standard deviations and coefficients of variation. The study group proposes to use a multiplicative model that calculates the resource-based RVS for each procedure or service as: Complexity × Time × Relative Value of Practice × Amortized Value for Specialty Training.

This formula is essentially the same as that used in the 1984 resource-based RVS study undertaken by Dr. Hsiao for the Massachusetts Rate Setting Commission. It has the advantages of simplicity and linearity.

Since it also tends to result in data with a high level of variability, however, the study group has decided to postpone a final decision on which formula to use until the technical consultant groups review the study.

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### References

*1.* Hsiao WC, Stason WB: Toward developing a relative value scale for medical and surgical services. *Health Care Financing Review* pp. 23-38, Fall 1979

*2.* Korcok M: Medical dollars and data; collection, recollection, Part IV. Fee schedules and income disparities. *Can Med Assoc J* 112:995-996, 1975

*3.* This study was conducted for HCFA by the National Opinion Research Co., Chicago, IL. The final report (#PB86204302/AS) is available from the National Technical Information Service (NTIS), Springfield, VA (307)487-4650