

# Final Report

**Cost Effectiveness of  
Physician Assistants in a  
Maximum-Substitution Model**

Phase II of a  
Two-Phase Study

PA  
HX

*Carla Vandebuilt*

# Final Report

## Cost Effectiveness of Physician Assistants in a Maximum-Substitution Model

Phase II of a  
Two-Phase Study

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## NOTE

The Cost Effectiveness of Physician's Assistants is a two-phase study. Phase I focuses on the way in which PAs are presently used in a large HMO - - The Kaiser-Permanente program in metropolitan Portland, Oregon. Phase II inquires into the maximum level of PA substitution for physicians.

Each of the two approaches estimates the optimal or least-cost combination of PAs and M.D.s to deliver adult outpatient care, the cost savings which would result from full utilization of PAs, and the degree to which the potential cost savings would be frustrated by legal constraints or physician preferences. The Phase I report also estimates the cost savings which the system achieves from the present employment of five PAs in the Medical Department.

The final reports of the two Phases are published as Volumes I and II.



## PHASE II

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Research Center, 1975-76)

For whatever merit this Project may have, the credit belongs  
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frailties, the final responsibility is exclusively mine.

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(Senior Economist at the Research Center)



LIST OF PAPERS FROM STUDIES OF  
NEW HEALTH PROFESSIONALS

Kaiser Foundation Health Services Research Center

Publications and Presentations to Professional Societies

1. Record, J. C., and H. R. Cohen. "The Introduction of Midwifery in a Prepaid Group Practice." Presented to the annual meeting of the American Public Health Association, Minneapolis, October, 1971. American Journal of Public Health, LXII, No. 3 (March, 1972), 354-360.
2. Lairson, P. D., J. C. Record, and J. C. James. "Physician Assistants at Kaiser: Distinctive Patterns of Practice." Presented to the annual meeting of the American Public Health Association, Atlantic City, November, 1972. Inquiry, XI, No. 3 (September, 1974) 207-19.
3. Record, J. C., and P. D. Lairson. "Physician Assistants at Kaiser: The Question of Substitutability." Presented to the annual meeting of the American Public Health Association, Atlantic City, November, 1972. Materials included in Monograph 2, below.
4. Record, J. C., and M. R. Greenlick. "New Health Professionals and Physician Role: An Hypothesis From Kaiser Experience." Presented to the annual meeting of the American Sociological Association. New York, August, 1973. Public Health Reports, 90, No. 3 (May-June, 1975), 241-47. Reprinted in Journal of Nurse-Midwifery, XXI, No. 3 (Fall, 1976), 6-13.
5. Record, J. C. "Alternative Measures of Output in Medical Care Systems." Presented to the Canadian Conference on "Disease Costing: An Advanced Method for Measuring and Evaluating Resource Utilization in the Treatment of Patients' Problems." University of Ottawa, February, 1974. Proceedings. (Processed.)
- \*6. Record, J. C., J. E. O'Bannon, P. D. Lairson, and J. P. Mullooly. "Cost Effectiveness of Physician Assistants: The Kaiser Experience." Presented to the Health Economics Research Organization, annual meeting of the American Economics Association, Dallas, December, 1975. In Monograph 2, below.

- \*7. Record, J. C., J.E. O'Bannon, R.H. Blomquist, and B.D. Berger, "Evolution of a PA Program in the Oregon Kaiser-Permanente System: Policies, Practice Patterns, and Quality of Care." Presented to the Fourth Annual Conference on New Health Professionals, Atlanta, April, 1976. This long paper was broken into the next three articles.
- \*8. Record, J. C., R.H. Blomquist, B.D. Berger, and J.E. O'Bannon. "Physician Supervision of PAs: How Much Is Enough? And What Does It Cost?" Forthcoming in Bliss, A.A. and E.D. Cohen (ed.). The New Health Professionals, Germantown: Aspen, 1977.
- \*9. Record, J. C., A.V. Hurtado, and J.E. O'Bannon. "The Quality of PA Performance: Some Data From An HMO." Forthcoming in The New Health Professionals, above.
- \*10. Record, J. C., J.E. O'Bannon, R.H. Blomquist, and B.D. Berger. "Evolving PA Practices, from Innovation to Maturity, in a West-Coast HMO." Submitted for publication in a journal.
- \*11. Record, J. C. "PAs in Research: Levels of Involvement and Responsibility." The P.A. Journal, 6, No. 3 (Fall, 1976), 138-141.
- \*12. O'Bannon, J.E., J.P. Mullooly, and M.A. McCabe. "Determinants of Lengths of Outpatient Visits in a Prepaid Group Practice Setting." Forthcoming in Medical Care.
- \*13. Record, J. C., R.H. Blomquist, J.E. O'Bannon, M.R. Greenlick, and P.D. Lairson. "What PAs Can Do: Probing For the Outer Limits of Substitution." Presented to the American Public Health Association, Miami Beach, October, 1976.
- \*14. Record, J. C. "Cost Savings from Maximum PA Substitution: Projection of an HMO Experience." Presented to the American Public Health Association, Miami Beach, October 17-21, 1976.
- \*\*15. Chapman, M.W. and J.C. Record, "Defensibility of PAs at Law." To be presented to the Fifth Annual Conference on New Health Professionals, Houston, April, 1977.
- \*\*16. Record, J. C. and M.W. Chapman, "The New Health Professional: Turfs, Interest Groups, and Legal Identities." Abstract submitted to New Professionals Section selection committee, APHA annual meeting, 1977.

- \*17. Record, J. C. and M. A. McCabe, "Access, Quality, and Cost Trade-offs in Substituting PAs for MDs: Some Empirical Evidence from an HMO." Abstract submitted to Medical Care Section selection committee, APHA annual meeting, 1977.

#### Monographs

1. O'Bannon, J. E., and J. C. Record. Medical Manpower and Patient Services in an HMO Setting: Some Preliminary Data and Analyses. Report, Regional Medical Program Services Contract No. HSM 110-RMP-50 (2). A Research Center monograph.
- \* 2. Record, J. C., J. E. O'Bannon, and J. P. Mullooly. Cost Effectiveness of Physician's Assistants in a Large HMO. Final 346 pages. Forthcoming as an NTIS monograph.
- \* 3. Record, J. C., et al. Cost Effectiveness of Physician's Assistants in a Maximum-Substitution Model. Final Report of Phase II of the PA cost studies. Forthcoming as an NTIS monograph.

#### Reports to Other Groups (Partial List)

- \* 1. "Cost Effectiveness of New Health Professionals in HMOs: Research Issues and Experiences in a Kaiser-Permanente System." Conference on Primary Health Care in the HMO/Prepaid Group Practice, Sponsored by Group Health Foundation, American Nurses Association, and American Academy of Physician's Assistants, San Antonio, February, 1976.
- \* 2. "New Health Professionals and Cost Control." Annual Conference of the Group Health Association of America, Denver, June, 1976.
- \* 3. "New Health Care Providers in Ambulatory Care: Issues Concerning Cost Effectiveness." Ambulatory Care Conference of the Veterans Administration, Midwest Region, St. Louis, July, 1976.
- \* 4. "Cost Effective Health Care." Plenary Session, Fifth Annual Conference on the New Health Professional, Houston, April, 1977.

\*Developed directly from the Phase I and Phase II Projects.

\*\*Developed indirectly from the two Projects.

- \* 4. "Cost Effective Health Care." Plenary Session, Fifth Annual Conference on the New Health Professions, Houston, April, 1977.
- \* 5. "Health Manpower Research: Substitution, Productivity, Quality and Efficiency." Association of American Medical Colleges, Washington, D.C., November, 1977.

\*Developed directly from the Phase I and Phase II Projects.

\*\*Developed indirectly from the Two Projects.

PHASE I  
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### F. "Determinants of Lengths of Outpatient Visits in a Prepaid Group Practice Setting"

## IV. SCOPE OF WORK FOR PHASE II CONTRACT

## PREFACE

The Final Report for Phase II of the PA studies has four sections. Section 1 presents the Maximum-Substitution Model and describes the way in which it was developed by a multidisciplinary Panel. Section 2 discusses the problems entailed in adapting the Model to the categories and entities of the Center's basic data systems so that the Model could be tested in 1972 data from the Kaiser-Permanente clinical experience. Section 3 uses the resulting empirical information to estimate the cost effectiveness of PAs under the Model. Section 4 evaluates the findings.

Preliminary findings from Sections 1 and 3 were presented to the American Public Health Association meeting in 1976. Additional findings from Sections 2 and 3 have been submitted in abstract form for the APHA paper competition in 1977. The names which appear at the top of each section indicate the persons who have contributed most to the development of that section. Those persons are the authors of papers based in the respective sections.

Phase I of this study, titled Cost Effectiveness of Physician's Assistants in a Large HMO, was completed in April, 1976. It described the way in which the Kaiser-Permanente system at Portland presently uses medical PAs and estimated the cost savings achieved

and achievable from PA employment. A table of contents for Phase I is presented at page 11. A copy of the Phase I Final Report may be obtained from the Research Center or from the Project Officer at the Division of Medicine, Bureau of Health Manpower (see address on page 1).

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