

## The Virginia Health Outcomes Project: A Unique Approach to Lowering Medicaid Costs and Improving Health Outcomes

John W. Hawks; Richard Levy, PhD; and Steven L. Hass, PhD

### Abstract

The Virginia Health Outcomes Partnership Project (VHOP) is an educational program to improve the clinical communication and monitoring skills of healthcare providers and to increase their use of clinical practice guidelines. This program is expected to reduce costs for Medicaid patients while improving treatment outcomes. VHOP was developed to address problems associated with the mandatory prior-authorization process. The program focuses on overall disease management, emphasizing provider education designed to improve communication, voluntary adherence to clinical treatment guidelines, and self-authorization. Key program goals include identifying diseases for targeting by interventions, designing workshops to teach communication skills and the use of disease-specific treatment guidelines, comparing the program's process and outcomes with those of a traditional mandatory prior authorization prescription program, and improving patient adherence to treatment regimens. Asthma was chosen as the target disease for a pilot trial of the VHOP program's effectiveness. The VHOP program will be incorporated into the Virginia Medicaid managed care program. In the first year of its incorporation, 800 Medicaid recipients will be selected from seven intervention counties and will be compared with a control group of 2,400 Medicaid recipients from seven similar counties. In year 2, the project will be implemented statewide and will encompass additional diseases. Managed care providers may find the results of the pilot program valuable, especially as more Medicaid patients are shifted into managed care programs.

The Virginia Health Outcomes Partnership Project (VHOP) is a unique educational program for healthcare providers. Because it was designed to improve clinical communication and monitoring skills and to increase the use of clinical practice guidelines, VHOP is expected to reduce costs for

Medicaid patients while improving treatment outcomes. An additional anticipated benefit of this research project is that healthcare providers who use these skills will be able to treat patients more efficiently, thereby leading to a decrease in costs.

VHOP is a partnership of Virginia Medicaid (Department of Medical Assistance Services [DMAS] of the Commonwealth of Virginia); the Schools of Medicine, Pharmacy, and Nursing of the Medical College of Virginia/Virginia Commonwealth University Williamson Institute for Health Studies; and the National Pharmaceutical Council. It was developed as an innovative, clinically based alternative to mandatory prior authorization (PA), a process requiring providers to seek authorization from centrally located Medicaid staff before prescribing outside the designated formulary.

PA, which is in use in 41 states, is a conceptually appealing response to perceived inappropriate prescribing behavior. However, it suffers from several limitations. First, it requires both coordinated staffing and communication capabilities. If either of these components is inadequate, frustrated Medicaid providers may withdraw their participation. Second, the PA staff who authorize medications do not know the patients, nor do they have all relevant information. This inherent flaw may reduce the effectiveness of a centralized approach relative to that of an individualized one. Third, the success of PA is measured in prescriptions prevented rather than in percentage of patients receiving appropriate care or patient health status. In fact, studies show that targeting one component of the system (sometimes called "component management") does not necessarily produce large or long-lasting savings.<sup>1</sup> Some researchers have argued that component management actually may be counterproductive because it does not recognize interrelationships among components and subsequent cost-shifting.<sup>2</sup>

### Key Goals of VHOP

In an entirely different approach, VHOP focuses on overall disease management. It emphasizes provider

From COMSORT, Baltimore, MD (J.W.H.), the National Pharmaceutical Council, Reston, VA (R.L.), and The Upjohn Company, Kalamazoo, MI (S.L.H.).

Address correspondence to: John W. Hawks, President, COMSORT, 2300 North Charles Street, Baltimore, MD 21218.

education aimed at improving patient-provider communication, voluntary adherence to clinical treatment guidelines, and self-authorization. Medicaid prescribers participating in the program have two options: (1) adhering to recommended guidelines; or (2) when medically necessary, prescribing outside the guidelines. Prescribers note their use of "self-authorization" by handwriting a code on the prescription indicating that they have consulted the guidelines but believe that self-authorization best meets the needs of the patient. The provider community has pledged its support to cooperate with this effort.

The key goals of the VHOP program are to:

- Develop a protocol for selecting and using Medicaid demographic and claims data that would identify which diseases most appropriately should be targeted by interventions.
- Improve patient-provider communication and prescribing patterns by configuring skills in a "hub-and-spoke" formation, with basic communication skills as the hub of the formation and disease-specific communication skills and treatment guidelines as its spokes.
- Rigorously evaluate program outcomes as well as recommendations for program expansion.
- Evaluate the process of care and health outcomes of VHOP relative to a traditional mandatory PA prescription program.
- Improve patient adherence to treatment regimens.

In embracing this comprehensive approach to medical treatment planning, and focusing on the patient and the disease rather than on the discrete components of care, Virginia has emerged as a visionary among the state governments.

### The VHOP Pilot Program

A single target disease—asthma—was selected for an initial trial of the effectiveness of the VHOP program. Criteria for its selection included prevalence of

the disease in the Medicaid population, importance of appropriate prescribing and patient adherence to treatment regimens, the severity of the economic and clinical consequences of treatment failure, and the high rate of emergency department admissions. Ideally, even patients with severe asthma should require no or only a minimum number of emergency room admissions for treatment of acute exacerbations of asthma symptoms.<sup>1</sup> Within the communities targeted for evaluation, however, 19% to 25% of asthma patients have at least one emergency room visit within a 6-month period (Table).<sup>1</sup> Researchers in asthma care contend that these admission rates can be used as a measure of both the appropriateness of asthma treatment and patient adherence to treatment.<sup>3</sup>

During the first phase of the project, which lasted 6 months, a program was developed to respond to the potential causes of asthma treatment failure. Development of the treatment protocol included identifying currently available treatment algorithms and training materials, evaluating the materials, and obtaining provider consensus on a process of care that was appropriate for treating members of the Virginia Medicaid population who had asthma.

Implementation of the asthma treatment guidelines pilot study will begin in October 1995. The VHOP program will be incorporated into the Virginia Medicaid managed care program, called "Medallion." (The Medallion program was implemented in 1992 under a waiver granted by the Health Care Financing Administration.)

Approximately 250 Medallion providers have begun training sessions, accredited by Virginia Commonwealth University, that focus on pairing communication skills with the effective use of clinical treatment guidelines and will begin to implement training skills in the practices immediately. In the first year of VHOP, 800 Medicaid recipients will be selected from seven Virginia intervention counties and

**Table.** Emergency Claims During a 6-Month Period for Medallion Recipients with Asthma, Intervention and Comparison Counties

	Total Medallion Recipients with Asthma	Recipients with Asthma-Related ER Claims	Number of Asthma-Related Claims	Asthma-Related Claims Per Recipient*	Percentage of Asthmatic Recipients with Asthma-Related ER Claims
Intervention Counties	1,016	190	235	1.24	19 (SD = 0.038)
Comparison Counties	2,649	663	826	1.25	25 (SD = 0.038)

ER = emergency room; SD = standard deviation.

\*Among recipients with at least one claim during the 6-month period

Source: Penberthy L, Rossiter L, Whitehurst-Cook M, et al.<sup>1</sup>

will be compared with a control group of 2,400 Medicaid recipients from seven geographically distant, but demographically similar, counties. The targeted Medicaid population consists primarily of young women and children.

Project investigators expect that VHOP's strategy, with its patient-centered emphasis, will result in reduced emergency hospitalizations and emergency department visits, improved patient outcomes, and lower total costs. Gradually, other diseases will be added to the program. Among the diseases targeted for inclusion are otitis media, epilepsy, and diabetes. In the second year of the project, VHOP will be implemented statewide and will include additional diseases.

### Launching the Project (Provider Training)

A trained group of peer experts will launch the project by holding workshops with family practitioners on general communication, or "hub," skills that emphasize patient-centered care. The practitioners will learn to educate the patient about the condition and its treatment, respond to the patient's feelings and concerns, negotiate the treatment plan, and motivate the patient to adhere to the plan.

**Figure.** Anticipated Benefits of VHOP's Educational Interventions

The educational interventions used in the VHOP project optimize the cost-effectiveness of treatment regimens and health outcomes in the following manner:

- Educational interventions will improve the cost-effectiveness and precision of prescribing and dispensing by establishing voluntary guidelines for use in prescribing certain categories of drugs.
- Educational interventions with providers that stress psychosocial skills have been shown to improve clinical outcomes and increase provider and patient satisfaction. In addition, improved provider-patient communication enables the provider to coordinate a treatment regimen that is more likely to be followed by the patient.
- Educational interventions with pharmacists create "patient-oriented" dispensing behaviors, helping pharmacists to detect and address problems with drug regimens, and to improve the quality of the patient consultation.
- Educational interventions encourage providers to establish a team approach to care, resulting in improved efficiency and cost-effectiveness.

During this phase of the training, providers will learn techniques for incorporating patient input into treatment decisions and for encouraging the involvement of the patient's family and friends in the treatment process. Research shows that patients who are informed about their illness and are involved in treatment decisions are more likely than other patients to adhere to treatment regimens and, therefore, to have better outcomes.<sup>4</sup> Improved communication between providers and patients can result in higher patient satisfaction, increased adherence to treatment, improved outcomes, and, ultimately, reduced overall healthcare costs.<sup>5</sup>

The second phase of training will focus on disease-specific communication, or "spoke," skills, as well as on the effective application of clinical practice guidelines. The materials will be adapted from readily available national guidelines modified to meet local practice standards by Virginia providers, thereby reducing costs and delays from duplication of efforts. These sources will include patient-treatment guidelines developed by governmental or professional groups, and materials produced by the pharmaceutical industry to foster provider education and appropriate use of its products. Healthcare providers attending the workshops also will receive patient-education material developed by the pharmaceutical industry and evaluated by Virginia providers; they will be encouraged to share these materials with their patients.

Although VHOP encourages the use of guidelines, many providers complain that relying on them creates a "cookie cutter" approach to medicine. To address this concern, all training materials encourage providers to select the best course of action for the individual needs of their patients. According to the VHOP model, family practitioners who attend the workshops should be encouraged to take a more patient-centered approach to both communication and prescribing patterns. The figure outlines the anticipated benefits of VHOP's educational interventions.

### Monitoring the Program

Providers will receive feedback sheets on a quarterly basis, which will enable them to monitor their own adherence to clinical guidelines and the service-utilization patterns of their Medicaid patients. This ongoing feedback will serve as a built-in continuous quality improvement mechanism for the program. In addition, participating providers will continue to attend annual training sessions that will reinforce basic program concepts and will provide training in newly added disease states.

A research team directed by staff of the Medical College of Virginia's Williamson Institute for Health Studies will evaluate the results of the pilot study. As part of the evaluation, the team will compare asthma-related emergency department visits, emergency hospitalizations, and associated patient-care costs in the intervention sites and the control sites. It also will conduct cross-site comparisons of preintervention and postintervention health status and of results of quality-of-life surveys. Data on outcomes and costs will be compared with reported results from traditional mandatory PA programs in other states.

### Conclusion

Previous research supports VHOP's hypothesis that educating healthcare providers and their patients can result in behavior changes that lead to improved clinical outcomes as well as to more cost-effective use of healthcare resources. An article published in the *Journal of the American Medical Association* in 1994 states that "regulation is not the best solution for controlling prescribing habits. . . .physicians' education may be a viable alternative, using targeted, personalized approaches."<sup>6</sup> Virginia is the only state experimenting with the combination of provider education and a voluntary PA program as a means of reducing overall costs of specific diseases. Other states have expressed interest in this unique research program and in the results of the project. If it is successful in Virginia, VHOP will be developed into a turnkey program for replication by other states.

---

*Virginia Commonwealth University coordinates the education and research component of VHOP. COMSORT, a Baltimore-*

*based company specializing in the development of educational programs that focus on patient-provider relationships and quality of care, has assisted in the development of the educational intervention strategy. Another major consultant, The Degge Group, Ltd, a drug safety and research firm in Arlington, Virginia, is responsible for developing the project's needs assessment and preparing case studies of program implementation. VHOP is sponsored by member companies of NPC, an education and research organization of the research-based pharmaceutical industry*

### Investigators for the Project

Investigators for the VHOP are at the Medical College of Virginia Campus, Virginia Commonwealth University, Richmond, Virginia: Michelle Y. Whitehurst-Cook, MD, Associate Professor of Family Practice, School of Medicine; Ralph E. Small, PharmD, Professor of Pharmacy and Pharmaceutics, School of Pharmacy, and Professor of Medicine, School of Medicine; Louis F. Rossiter, PhD, Professor of Health Administration, Williamson Institute; JoAnne K. Henry, PhD, Associate Professor Maternal-Child Nursing, School of Nursing.

---

### ... REFERENCES ...

1. Penberthy L, Rossiter L, Whitehurst-Cook M, et al. *Research Design Report*. Richmond, VA: Virginia Health Outcomes Partnership Project; December 22, 1994.
2. Colligen BH. *Perspective on Restrictive Drug Formularies*. Reston, VA: National Pharmaceutical Council; 1994.
3. Vollmer WM, Osborne ML, Buist AS. Temporal trends in hospital-based episodes of asthma care in health maintenance organizations. *Am Rev Respir Dis* 1993;147:347-353.
4. Roter DL, Hall JA. *Doctors Talking with Patients/Patients Talking with Doctors*. Westport, CT: Auburn House; 1992:13.
5. Bellet PS, Maloney MJ. The importance of empathy as an interviewing skill in medicine. *JAMA* 1991;266:1831-1832.
6. Kane RL, Garrard J. Changing physician prescribing practices: Regulation vs. education. *JAMA* 1994;271:393-394.