



THE HEALTH PASSPORT PROJECT: ASSESSMENT AND RECOMMENDATIONS

EXECUTIVE SUMMARY

December 2001

Nancy Pindus
Robin Koralek
Jenny Bernstein

Barbara Selter
Cheryl Owens

The Urban Institute
2100 M Street, NW
Washington, DC 20037

MAXIMUS
Intelligent Technologies Division
3204 Tower Oaks Boulevard
Rockville, MD 20852

This report was prepared for the Western Governors' Association with federal and private funding. The views expressed are those of the authors and should not be attributed to the Western Governors' Association, the funders of this project, MAXIMUS, or to the Urban Institute, its trustees, or its funders.



Acknowledgments

We wish to thank the staff and clients at all of the partner programs in the three demonstration sites. They were most generous with their time, participating in interviews, surveys, and focus groups. Their forthright responses form the backbone of this study.

The Health Passport site managers—Roberta Bishop (Bismarck), Asima Mazhar (Cheyenne), and the former site managers—Ginger Paulsen (Reno), and Marty Brown (Reno)—kept us informed of the progress of the demonstration, scheduled interviews with partner staff, and assisted in data collection. In addition, Louise Jones-Ports of Reno was an ongoing source of information and assistance throughout the study. The support of these individuals was critical to the evaluation.

We also wish to thank Terry Williams, whose vision and perseverance made everything happen. Western Governors' Association Project Officers Chris McKinnon and Tom Singer (who has since left the association) provided valuable project guidance. U.S. General Services Administration Project Officers Larry Carnes and David Temoshok guided the technical evaluation.

In addition to the authors of this report, Edgar Lee, Amy-Ellen Duke, Toby Douglas, and Alan Moore assisted in site visits. Edgar Lee, Britta Iwen, and Shinta Herwantoro contributed to the data analysis.

EXECUTIVE SUMMARY

The Health Passport Project (HPP) is an initiative sponsored by the Western Governors' Association (WGA) and conducted in Bismarck, North Dakota; Cheyenne, Wyoming; and Reno, Nevada. HPP provides a versatile, multipurpose electronic card to streamline access to and delivery of a variety of public and private services and benefits. Participating programs serve a common population and share a common goal: improving the health of individuals and their families. HPP is intended to demonstrate how a secure health card can facilitate information-sharing and improve administrative efficiency among public and private health care providers, nutrition programs, and Head Start educators while placing individuals firmly in control of the information on the card.

Health Passport Evaluation

The evaluation of the HPP demonstration is intended to provide information that decisionmakers in the three participating states need before the states invest in statewide implementation, and to provide critical information to other states considering implementing HPP or related smart card technology. This report represents the culmination of more than three years of work. Researchers at the Urban Institute and MAXIMUS followed the development and implementation of the HPP demonstration from the outset, with the Urban Institute focusing on the programmatic aspects of the demonstration (its effect on service provision by HPP partner programs), while MAXIMUS addressed the technical aspects of the demonstration (system design and operation of the hardware and software supporting HPP).

Throughout the demonstration, the program and technical evaluators coordinated their activities and preliminary findings. The technical evaluation asks, "Does the system work the way it was designed?" The answers to that question are critical to understanding how HPP affects efficiency, quality, empowerment, and client/user satisfaction. For example, the technical evaluation addresses issues such as length of time for equipment repairs, amount of time needed to replace equipment, quality of help desk answers, and percentage of time the system is down. This information is critical to understanding the qualitative information provided by staff and clients about their satisfaction with HPP.

Data collection conducted at each of the three demonstration sites consisted of interviewing administrators and staff of partner programs (including retailers in the Cheyenne and Reno sites), collecting program caseload and management information, and conducting focus groups with clients of partner programs. Baseline data collection was conducted in March 1998 and updated for Bismarck and Cheyenne in May 1999. Early implementation data collection took place in November 1999 (Bismarck), June 1999 (Cheyenne), and November 2000 (Reno). Each site was visited again in April–May 2001. Client satisfaction surveys were conducted in June 2000 and April 2001 in Bismarck; in November 2000 and May 2001 in Cheyenne; and in March–April 2001 in Reno.

Evaluating an ambitious demonstration like the Health Passport project has its challenges. The study design and data collection were adapted to the many unplanned and unforeseeable delays and changes over the course of Health Passport implementation. As a result, the evaluation is not

consistently able to provide rigorous data or definitive findings about the impacts of this innovative and promising technology. But much has been learned along the way. The feasibility of public-private cooperation has been explored, as have the difficulties and rewards inherent in cross-program collaboration. This historic project has provided invaluable lessons for the implementation of a multiapplication card platform.

Overview of the Health Passport System

The Health Passport system is a health information management and benefit delivery system that enables health care providers to share client information and allows retailers to provide food benefits to clients electronically. The Health Passport system consists of a Health Passport card, special card readers attached to the health providers' personal computer (PC) applications or retailers' in-lane checkout systems, servers to maintain back-up databases, kiosks, and a network. The Health Passport card contains demographic, medical, and benefit information (for the pilot sites with Women, Infants and Children (WIC) electronic benefits transfer (EBT) for clients participating in the project. HPP is composed of the following applications:

- **HPP Application.** The HPP application provides users with functions for reading and writing data to a smart card. Both stand-alone and integrated HPP applications are available. The stand-alone application runs alone on a computer in a provider's office and is not integrated with any existing applications. The integrated application allows the user to read data from or write to the Health Passport card through an existing (legacy) information system (thus avoiding double data entry for staff). Data from the legacy system and the card are compared to determine the most accurate and up-to-date information.
- **WIC Electronic Benefits Transfer Application.** The WIC EBT application allows WIC food prescriptions to be written to and read from the HPP card. At the WIC clinic, benefits are authorized and sent to the WIC EBT server. From the WIC EBT server, the benefits are downloaded to three cardholder-selected retail stores to be used to purchase WIC foods. (Once benefits are downloaded, the client can shop at any participating store).
- **Kiosk Application.** The kiosk application operates on freestanding kiosk machines placed in the community. This application allows the card to be read and the cardholder to view benefits, appointments, health information, and other program information through a touch screen. It also allows reports, such as an immunization certificate, to be printed in hard copy.
- **HPP Application Programming Interface (API).** The HPP API is software that allows data to be read from or written to the card through an existing (legacy) system.

The HPP API also performs other card and user management functions, containing commands that can be used to interact with the smart card.

Description of the Demonstration

The vision for HPP arose from a successful Wyoming demonstration using smart cards to deliver WIC benefits. Recognizing the potential of the smart cards, not only for delivering WIC benefits more efficiently but for storing important health data as well, the western governors asked the WGA to conduct a feasibility study of using the technology for this purpose. Based on the conclusions of the feasibility study, the governors of Wyoming, North Dakota, and Nevada stepped forward to serve as lead governors and pilot states for a demonstration effort. HPP objectives are to:

- lower administrative barriers to care by reducing the paperwork associated with a patient/client visit;
- improve quality of care and resource utilization by providing timely and accurate clinical information;
- promote personal responsibility for health care by placing individuals in control of the information on the card;
- make the delivery of nutritional benefits more efficient and less stigmatized by replacing paper vouchers with a Personal Identification Number (PIN)–secured card;
- enhance the tracking of health care outcomes and medical decisionmaking by increasing the availability and accuracy of health statistics; and
- create model public-private partnerships for the development of health information systems.

Project Organization and Management

System development and implementation of HPP was a lengthy and complex process, resulting in a demonstration that added partners and functions over an extended period of time. Overall project organization and management included many partners, and each demonstration site differed in its service delivery environment and operational HPP features.

The HPP organization includes participants in both the public and private sectors. In addition to the program participants (clients), the local partner programs at each site, and the two evaluation contractors (Urban Institute and MAXIMUS), the principal groups of participants represented are federal and state partners, private partners, system development contractors, and Western Governors' Association project staff.

Federal partners, who provided funding and technical assistance on the project, were the Public Health Service, Centers for Medicare and Medicaid Services, Maternal and Child Health Bureau, Head Start Bureau, Centers for Disease Control and Prevention, National Library of Medicine, U.S. Department of Agriculture Food and Nutrition Service/WIC program, and General Services Administration (GSA).

State partners in North Dakota were Medicaid of North Dakota, the North Dakota WIC program, the Optimal Pregnancy Outcome Program, and the North Dakota Immunization Program. State partners in Wyoming were Wyoming Maternal and Child Health Services (MCH); the Wyoming Medicaid program; the Wyoming WIC program, the Wyoming Food Stamp program, and the Wyoming immunization program. State partners in Nevada were the Nevada immunization program and the Nevada WIC program. The Inter-Tribal Council of Nevada (ITCN) WIC program and Community Services Agency (CSA) Head Start were also partners.

In addition, many private partners contributed both financial and in-kind resources to the project at each of the three demonstration sites. These partners included a major immunization manufacturer, an insurance carrier, and health care providers.

Siemens Business Communications, Inc., was awarded the contract to provide the services needed to design and operate HPP. Siemens became the primary contractor for delivery of services and initiated a number of subcontracts for the delivery of specialty areas of service within the scope of the overall contract requirements.

WGA served as the umbrella agency for the project—WGA signed the contract for the system and represented the states' interests. WGA provided an overall project manager and a site manager for each of the three sites, as well as some additional part-time staff support for the Cheyenne demonstration.

Demonstration Sites and HPP Implementation

Implementation of HPP began in June 1999 in Bismarck, followed by the implementation of two partner programs in Cheyenne in June 1999, the launch of programs in Reno in June 2000, and the addition of WIC in Cheyenne in March 2001. Different programs, services, providers, and applications of HPP technology are included in each site, so that the demonstration tests a range of HPP system capabilities. While each site's demonstration is unique, all are based on common card technology and a common base software platform.

Bismarck, North Dakota, was the first site to launch the HPP demonstration, and it was the only site that had a single site manager from the very beginning of the project. EBT was not part of the demonstration in Bismarck, but the demonstration did include encoding of Medicaid identification information on the magnetic stripe of the HPP card. Partner programs in Bismarck were the county WIC program, the city-county public health nursing service (which oversees a state-funded program to improve pregnancy outcomes, an immunization program, and Medicaid's Early Periodic Screening, Diagnosis, and Treatment (EPSDT) program, known as Health Tracks in North Dakota), a small private family practice, and Head Start. Several partner programs operate on a part-time basis, and many participating staff are part-time employees.

Cheyenne, Wyoming, started with a very limited implementation of HPP, and programs were added slowly, with the WIC launch occurring shortly before the end of the demonstration evaluation period. Wyoming has had WIC and Food Stamps EBT since Spring 1995, using smart card technology. In participating programs in the Cheyenne demonstration, HPP replaced the

PayWest card.¹ WGA provided staff to assist in the implementation of HPP in Cheyenne. The Cheyenne demonstration partners were the county WIC program, the City-County Health Department (services participating in the demonstration included a clinic that provides care for children under age 6, an immunization clinic, a referral and prenatal education program, and coordination of EPSDT screening), a private pediatrics clinic, Head Start, and retail grocers.

Reno, Nevada, is by far the largest demonstration site in terms of total population and number of cards issued. However, Reno has the fewest partner programs and is focused primarily on WIC EBT. During the evaluation period, Reno experienced significant staff turnover, including new site managers, a new WIC director, and a new local immunization program director, as well as staff changes at ITCN WIC. Because the Reno implementation was delayed, the period of the demonstration evaluation was shorter than in the other two sites. Partners in the Reno demonstration are the county WIC program, the county immunization program, the ITCN WIC Program, Head Start, and retail grocers.

Conclusions

The HPP demonstration has succeeded in bringing a concept to life. The HPP system is up and running successfully in all three pilot sites. As of May 31, 2001, there were 2,348 cards issued in Bismarck, 991 in Cheyenne, and 8,459 in Reno.²

However, the period for this demonstration was very short. Although planned for 18 months, because of the lengthy start-up period and choices made about a phased implementation, most programs and applications (except in Bismarck) were operational for less than a year. This was barely enough time to smooth out the technical wrinkles, a prerequisite to obtaining active provider and client utilization of the system. At the time of our last site visits in May 2001, HPP was just beginning to take hold in some programs; in others HPP clearly had not taken hold; and in still others it was just too soon to tell. What the demonstration does offer is a wealth of information that suggests future directions and enhancements that can be applied to HPP to make it more valuable to both providers and clients, and that can be applied to other innovative information technologies in service delivery.

Health Passport's underlying hypothesis is that electronic health cards can streamline service delivery by improving information-sharing and administrative efficiency among public and private health care providers, nutrition programs, and early childhood education providers. The four overarching questions addressed in this evaluation and our brief answers are as follows:

- ***Did HPP save time and money (or could savings be expected under full deployment)?***
Savings are not apparent yet because of start-up costs and the short time that providers

¹ PayWest is a smart card for WIC and Food Stamps EBT that was first piloted in Laramie County, Wyoming, and is now in use statewide.

² Source: Health Passport server. http://www.hpp.dhs.org/hppserver/reports/Transaction_Log_Summary_Crosstab_Query.asp. (Accessed June 2001.) The total number of cards issued is greater than the total number of enrolled clients at any given time because of client turnover. The number of cards issued in Cheyenne includes PayWest cards to which HPP was added.

have had to reengineer their business processes. However, the evaluation did find several promising opportunities for cost savings using HPP.

- ***Did HPP improve the quality of care (e.g., by providing timely and accurate clinical information)?*** It is too soon to tell. The phased implementation and limited participation by medical providers reduced the opportunities for cross-program information-sharing.
- ***Did HPP improve parental capacity to manage family health?*** Yes, it appears that clients used the EBT, appointment information, and immunization information functions of the card. Clients used kiosks to access information, but much more can be done to enhance this feature.
- ***Did HPP result in enhanced customer (providers, retailers, and clients) satisfaction?*** Yes. The majority of respondents expressed satisfaction with the HPP system. Staff found the system easy to learn and use. Retailers generally like the accuracy and convenience of the WIC EBT application. The majority of clients were satisfied with HPP and indicated that it helped with obtaining and keeping track of health information.

In the next section, we highlight key findings of the demonstration, based on interviews with program staff, administrators, and retailers; on-site observations; staff, retailer, and client surveys; and HPP server transaction data.

Key Findings of the Evaluation

- **This demonstration showed that the concept of a multiple-function, user-controlled smart card can be implemented in a clinic setting and used by clients across programs.** However, the limited range of functions and providers included in the pilot and the relatively short demonstration period lead to the conclusion that this demonstration did not test the full capability of the HPP system.
- **A key benefit of the demonstration project, voiced by both project staff and managers, has been the interaction among multiple partners and the ability to work together.** Working together to implement a project as complex as HPP required program staff to really begin to understand each other's systems and goals. While the challenges of coordination and cooperation were difficult at times, program managers felt that they came away with a new appreciation of their partners.
- **Overall, providers liked the HPP concept.** Despite numerous initial technical difficulties and more limited scope than anticipated, providers remained positive in their outlook about the concept of HPP and its potential applications at their local sites.
- **Clients were positive about the card.** Privacy/confidentiality concerns were limited, and most clients looked forward to the acceptance of the card by other providers/settings.
- **The demonstration did not sufficiently develop the business case to engage and retain private medical providers.** Only two private medical practices were included in the three sites, and their participation was minimal throughout the demonstration. A broader population base is needed to make participation in HPP attractive to private providers, whose participation is key to broader acceptance and utilization of HPP.

- **The value of HPP is not in having any *one* application (such as WIC EBT or appointment scheduling) work successfully, but in having *multiple* applications available through a single card-based system.** Other, less expensive technologies are available for specific functions, but HPP enables a client to access a variety of services with a single card. In the case of HPP, the whole is more than the sum of its parts.
- **Kiosks have enormous potential for client learning and empowerment, and for expansion of the HPP system.** But the early technical problems with this aspect of the demonstration limited the experience with kiosks. Now that kiosks appear to be operating more dependably, some kiosks should be relocated for optimum access. More attention should be focused on the use of kiosks (for checking appointments, printing immunization records, obtaining nutrition education, etc.) by educating providers and patients on the benefits of using them and expanding the information available on the kiosks to include more general health information and community service announcements.

Lessons Learned: Project Management and Oversight

- **Following a disciplined system development life cycle (SDLC) methodology is critical to ensure ongoing progress in development, timely documentation, successful integration across myriad contractors and developers, and faithful adherence to user requirements.** Too little attention to up-front design caused significant problems at later stages in the project, affecting the implementation schedule as well as the fulfillment of user requirements. The HPP project would have benefited from greater emphasis on the design and integration of functions and from user sign-off at each stage of the SDLC.
- **Phased implementation is highly beneficial, allowing one site to learn from the technical problems encountered by other sites.** The technical implementation improved over time, as “fixes” added to the software to resolve problems found in one site made the software more stable for the next site. For example, issues with the reader response time in Bismarck were resolved before the software was rolled out in Cheyenne. Interview respondents overwhelmingly approved of a staggered launch, arguing that starting small and adding sites slowly reduces the potential problems associated with staffing and training, and enables sites to adopt best practices identified along the way. In future demonstrations, the timeline should be adjusted to accommodate a phased implementation so that a longer period of full operations can be evaluated.
- **Formalized agreements should be developed among stakeholders.** Interagency agreements must be put in place that clearly specify reporting relationships, spans of control, and participant roles and responsibilities. While interagency agreements did exist between some partners in the HPP project, they were not a project requirement. Agreements must also be established between management and the multiple contractors participating in the project, so that a clear control structure is delineated and responsibilities for problem resolution are defined.

- **Administrative guidelines and common business processes should be developed across programs.** These guidelines should address common business practices for card issuance, establishment of data access rights, maintenance of data security and privacy, backup of data, reporting, and other operational concerns to support interoperability. While this was successfully accomplished for some programs, comprehensive guidelines and procedures will become increasingly important as HPP moves forward and adds new partners.
- **Use of existing management and communication structures should be improved.** Although several mechanisms were put in place to ensure communication and coordination among participants, they have not been optimally utilized. The HPP Council should be reactivated and possibly reorganized to make it more effective. Task forces might be formed to address specific issues, such as data definition questions and legacy applications, project operating policies and procedures, regional interoperability issues, and requirements for future enhancements to the HPP application.

Lessons Learned: Program/Partner Management

- **Support from top management is critical.** As with any change introduced in an organization, support from top management is a key ingredient for staff acceptance. In the case of the HPP demonstration, “top management” refers to directors of each local program, as well as state or corporate officials for programs that are part of a larger organization. For example, support on the part of the local WIC director was critical, and because WIC is administered by the state health department, state support is important as well.
- **Participation in HPP is an excellent opportunity for improving coordination across programs.** Involvement in a common project led to increased communications between programs about their organizational settings and operating procedures. HPP also offered new opportunities for community networking as partners educated others about the project. The formation of cross-program user groups to share reengineering ideas and answers to common questions would build on this improved coordination and help to optimize use of the system.
- **Effective technology alone is not enough; it must be accompanied by a critical mass of participation and thoughtful use of the technology to achieve success.** Although staff of the participating programs generally liked the smart card technology and found their clients to be surprisingly comfortable with it, staff encouragement is critical to successful client adoption of the technology. Even in a pilot setting, the duplication of duties, especially the additional data entry required for updating the card, affected user satisfaction. When partners did not fully participate in card use, the value of the card to other partners declined. The HPP card must be fully integrated into the clinic setting—becoming the standard way of doing business—if programs are to realize its full potential. Clinic staff will have to experiment to find the best ways to incorporate the HPP card into the patient flow so that it actually delivers the added value it has the potential to offer.

- **All staff must understand the HPP concept and feel they are a part of the demonstration.** Both staff and clients must rethink some of their old ways, finding creative and flexible uses of the card's capabilities to streamline rather than complicate their business processes. All levels of staff can contribute ideas, but first they need to understand the HPP concept and how it can enhance and facilitate their jobs. In the pressure to implement the demonstration and minimize the disruption for clinic staff, responsibility for HPP implementation tended to fall on a few individuals at each site. However well-intentioned, this approach left other staff with little understanding of the potential offered by this new technology and limited their sense of ownership in the system.

Recommendations for Statewide Rollout

Looking ahead and building on what was learned during the demonstration experience, we recommend proceeding with caution. Despite a complex organizational structure, technical challenges, staff turnover, and long delays, HPP did begin to operate as intended, and many providers and clients are responding positively to it. However, most of the effort has been placed on issuing cards and putting information on the cards. As a result, there has not been enough time for staff and clients to really work with the card information. The numbers are small, and the extent of cross-program use appears to be quite limited so far.

A key question to be addressed by policymakers and funders is "What can this technology do that a cheaper technology or paper system cannot do?" This demonstration has offered a small glimpse of what is possible and has addressed key issues, such as privacy, security, and client convenience and access. But to build a strong case for HPP, use of the multifunction capability of HPP must increase. This can be accomplished by:

- improving the integration of HPP in the existing partner sites;
- increasing the number of users by expanding the number of partners, while carefully considering client service use patterns in selecting partners; and
- increasing the motivation for providers and clients to use the card by adding functions.

There is much to be done. For this reason, we believe full statewide rollout is premature. Expansion beyond the existing demonstration site boundaries, and in some cases statewide expansion, may be appropriate for some programs or functions as a way to quickly increase the critical mass needed for the card to catch on. The circumstances differ in each state and in the various partner programs. Our recommendations for each site are presented below.

Bismarck

A key ingredient missing from the Bismarck demonstration is WIC EBT, yet the state does not anticipate implementation of WIC EBT for almost three years. Sustaining HPP until it can be used for WIC EBT will be a serious challenge, especially because many current WIC families will have aged out of the program before WIC EBT is implemented. We see many opportunities

for improving the utility of the card, though, and if these are pursued aggressively, their success will provide a better foundation for the WIC EBT application. In the case of Bismarck, we recommend that the focus for adding partners remain at the local level, including:

- **Aggressive recruitment of private health clinics.** Providers should include not merely individual clinics but health systems, including their hospitals and outpatient clinics. The Medicaid eligibility feature on Bismarck's HPP is a selling point, and the level of contact should not be individual clinic administrators but rather the physicians and chief executive officers who own and operate the local health systems.
- **Intensive hands-on work with all partner staff about how HPP can facilitate their work and empower clients.** Staff seemed to have mastered the mechanics of the system, but they saw little purpose in what they were doing. Staff need to feel a sense of ownership of the technology, and clients need to be trained and encouraged to take advantage of all features of HPP that are available to them.
- **Keeping abreast of the changing technological environment in Bismarck.** A number of new systems and upgrades that potentially complement or duplicate functions of HPP are being explored by organizations in Bismarck. HPP supporters need to be at the table as these various systems and plans are being considered. For example: the state is researching a new computer program for the Bismarck public schools that will include children's immunizations and health information and will be accessible to parents; MedCenter One, the private practice participating in the HPP demonstration, is in the process of converting to an electronic medical record with its parent hospital; the state is about to Web-enable its immunization registry, which will include an algorithm that analyzes the immunization record and recommends the immunizations needed. Each of these examples provides either an opportunity or a challenge to HPP, depending on timing, creativity, and organizational relationships.

Cheyenne

In our opinion, HPP is farthest along in Cheyenne, and this site offers the most potential for expansion in the near term. Cheyenne has the advantage of prior experience with WIC EBT as well as strong top-level state support of the pilot. This has shortened the learning curve and improved staff attitudes immeasurably. Programs are starting to think about how to make better use of HPP by integrating the technology into program operations. However, the number of HPP users in Cheyenne is very small. One reason is late implementation of HPP at WIC (March 2001), but another is that in Cheyenne, as in Bismarck, the size of the target population (e.g., families participating in WIC, public health programs, and Head Start) is small. Because Cheyenne has both WIC and Food Stamp EBT functions on the card, and a clientele and retailers who are accustomed to these features, this site is well positioned to expand its population base. Suggestions include:

- **Continue efforts to include Medicaid eligibility on the card** as an additional selling point for aggressive recruitment of private clinics. Other features that private providers said would be helpful on the card are fields that indicate the responsible party for treatment of a child, and historical information about health screening.

- **If the planned changes in Head Start (e.g., using HPP on laptops at home visits with families) are successful, consider expanding the program statewide for Head Start families.** This would also require reconsidering which data elements would be most useful to Head Start and preparing educational materials that are better suited to these families (e.g., families with lower literacy levels and limited familiarity with computers).
- **Building on the Food Stamp EBT function, expand use of the card to clients of the Department of Family Services.** Work with this agency to determine other uses the card may have for these families (e.g., acceptance by Medicaid providers, applications at one-stop career centers, informational materials that can be added to kiosks).
- **At the same time, broaden the population base and the image of the card** by expanding beyond the low-income population (e.g., to families of school-age children).

Reno

WIC benefits were well received in Reno and were considered an important upgrade for clients as well as for WIC staff. Unfortunately, the card has been used for little else in Reno. Thus, the advantages of the more expensive multifunction smart card are not apparent in Reno at this time. Because the Reno demonstration has been in place only since June 2000, this is an early finding, and it may simply be a matter of time before staff and clients can begin to look beyond resolving the technical issues associated with implementation.

Of all the sites, Reno theoretically offers the most potential for success because of its larger population base. However, the Reno site was adversely affected by delays, staff turnover, and lack of leadership at critical points in the demonstration. The site was at a disadvantage in the evaluation because HPP was implemented one year later than in the other sites, and thus the evaluation period was shorter. We recommend that Reno continue the demonstration before a statewide rollout is considered, but only after rethinking and restructuring the existing pilot.

- **Current partners, such as Immunizations at the Washoe County Health Department, CSA Head Start, and ITCN, need to be reeducated about HPP and the opportunities it offers for both staff and clients.** Providers need to participate in planning how HPP will be used in their programs, and they must take ownership of the system for it to work. Staffing issues are a concern in Reno, and consideration should be given to providing extra staff support in a way that relieves some of the burden on busy staff but does not set HPP apart from mainstream clinic operations.
- **Partnerships with private providers and with other public providers need to be pursued.** This demonstration did not include private partners, but, as noted in the recommendations for Bismarck and Cheyenne, such participation is critical to the acceptance and increased utility of HPP. The identification and recruitment of private and public providers must consider the service utilization patterns of the participating clients. For example, most ITCN WIC clients do not attend the Head Start program that participates in HPP.
- **HPP materials, outreach, and kiosks need to be better adapted for the large Spanish-speaking population in Reno.** Respondents noted that this may require

translation services by individuals well versed in health care applications who have worked with the target population.

Cross-Site Recommendations

At the same time that expanded and enhanced HPP operations are being investigated in the three pilot sites, the evaluators recommend a review of technological options for the expansion of the HPP system. By considering new technologies, HPP may provide additional incentives for private provider participation and identify more cost-effective solutions for WIC EBT. Currently, WGA is negotiating with federal and state partners to identify additional pilots that test the same concepts as HPP but use different technologies. Working with the General Services Administration, the state of California, and local medical providers, WGA is discussing a pilot to test an online version of WIC and the use of the Internet for secure exchange of medical information. In this pilot, both card- and network-based data-sharing will be studied, focusing on the use of the smart card for identity authentication and for limited emergency medical information. The results of this pilot could have a significant impact on how HPP moves forward. Therefore, the evaluators suggest that the results of these planned pilots be considered before any wide-scale deployment of the HPP system is undertaken. Enhancements from this next phase of piloting should be incorporated into HPP to help build the case for statewide rollout.

From a technical perspective, the HPP project is at a crossroads. To provide added value to participants and encourage user acceptance, HPP needs improved integration with existing systems, widespread participation, and new card functionality. As the pilots come to an end in each of the sites, this is the appropriate time to consider how advancing technology could better support the increased integration, expanded scope, and added card functionality that is critical to achieving greater use of the card platform. Both card- and network-based sharing of data should be explored, as should the viability of both online and offline WIC EBT. The following points should guide future cross-site expansion of HPP:

- The sharing of health and EBT applications across jurisdictions offers the potential to save time and resources.
- As card management and customer service capabilities are shared across an increasing number of programs, individual programs can achieve significant administrative savings.
- Governments should consider partnerships with the commercial sector to reduce the cost of the card platform.
- The benefit delivery platform must be flexible and open to ever-changing technology.
- Leaders at the highest levels of state and federal government should champion the HPP platform.
- The costs of implementing the card platform are not necessarily borne by the same entities that are realizing the benefits.
- With HPP, top executives will gain access to strategic information, improving program management and funding decisions.

Factors Affecting the Long-Term Evolution of Health Passport

The initial phase of the HPP pilot explored the concept of card-based data-sharing across public and private health care providers with reasonable success. Phase I of HPP examined the use of a proprietary smart card platform to share demographic, health, and program information among multiple public and private health providers. The card platform was also used to deliver WIC EBT food benefits to participants in two of the three pilot sites and Medicaid service authorization in the third. Since the HPP pilot was initiated, however, numerous changes in technology and government policy have occurred that may affect the eventual direction of HPP:

- Emergence of Internet, wireless communications, data warehousing, telemedicine applications, and other technologies that can be leveraged to redefine how the card will be used.
- Amplified importance of identity authentication and nonrepudiation of transactions.
- Greater public demand for convenience through electronic forms submission and service delivery.
- Development of a business case for private sector participation, building on increased interest in commercial platforms for multiapplication cards.
- Reduced resources, necessitating the streamlining of government processes and the improvement of reporting capabilities and project management (but with federal funding available for technology innovation).
- Enhanced opportunities to share infrastructure, data, and system costs across multiple government programs and states/jurisdictions.
- Increased need for consistent public policies and standards to support electronic service delivery.

Many recent developments in both the technology and policy arenas have occurred that will profoundly influence how governments at all levels will provide services to their citizens now and in the future. Changes in the government's policy and approach to service, as well as methods of systems acquisition, that have occurred since the original pilot was conceived will have a profound impact on the continuing operation of HPP. Over the past five years, the federal government and many state governments have vigorously pursued the migration of payment delivery from paper to electronics. Over the next five years, the emergence of digital technology will help everyone move to electronic information delivery.

The new frontier that has the potential for revolutionizing information-sharing across governments is the emergence of Internet and Web-based Internet access tools. The widespread deployment of the Internet has provided the driver and enabler for information-sharing and dissemination using a public, commercially available network. While governments recognize the urgent need for greater electronic access to benefits and services, the current delivery mechanisms are too often paper-based and tend to be manually intensive. Many of these mechanisms involve completing standard forms and accessing general information, processes that for the most part should not require extensive interaction between a citizen and a

government employee. If these processes can be accessed electronically, information and service can be immediate and convenient to the citizen, and governments can save on paper, mail, telephone, and labor expenses. Consequently, social service agencies are increasingly exploring the feasibility of online eligibility applications. Because of these developments, the emphasis in technology has shifted from purely card-based to the card as the vehicle for network-based data-sharing. Furthermore, the growing awareness that health and benefit systems must enable interoperability, not only across states but also across multiple government programs, contributes to a rapidly evolving context within which the HPP system will be expanded.

In addition to the changes in technology, other significant factors have influenced the delivery of medical services in the years since HPP was first conceived. In 1996, the Health Insurance Portability and Accountability Act (HIPAA) was passed, requiring the security and confidentiality of medical information. Medical institutions—public and private, large and small—understand the enormous impact that the HIPAA regulations will have on the exchange of medical information in the future. Because of HIPAA, a key issue in moving forward with the HPP pilot is the ability to ensure the privacy and confidentiality of medical information in conformance with the HIPAA implementing regulations. To meet this challenge, HPP must evolve from a card-based data carrier to a platform that supports both card- and network-based data-sharing. To remain viable in the future, HPP will require an efficient, scalable mechanism for enabling convenient electronic exchange of medical data, as well as a means for providing authentication, access control, and information security and privacy that can be used to ensure HIPAA compliance.

Throughout federal and state agencies, opportunities exist for the use of both network-based and card-based data-sharing to reengineer the delivery of government services. By providing the mechanism for identity authentication, the HPP card can be the key, controlling citizen access to a vast array of electronic government services delivered through Web-based applications. Information gathered by the HPP Phase I pilot in the short term may support the transition to electronic government and the acceptance of public-private partnerships in the longer term.

To meet these challenges, WGA should join with federal- and state-based public and private partners to demonstrate a future smart card (electronic service platform) that operates in concert with Web-based services. To keep pace with the evolving technology and government direction, the HPP card may undergo a metamorphosis into an identification and authentication vehicle, an access vehicle to Internet-based services, a personal and portable repository of critical information, and a tool to help manage various health and benefit programs. This “card of the future” concept will take the Phase I integration global by integrating it with the Web.

While the future vision of the HPP card platform may look very different from today’s, the conceptual foundation proven in Phase I—the viability of interagency cooperation and the secure sharing of critical client information across multiple programs—will remain the guiding force in any expansion. Its future direction will be molded by the determination and energy of the local partners, as well as the strength of their coalition.