State of Oklahoma
2011 NASCIO Recognition Awards Nomination

Prescription Monitoring Program
Building a National Model

Oklahoma Bureau of Narcotics

Nominating Category:
Digital Government – Government to Business (G to B)
B. EXECUTIVE SUMMARY

The Oklahoma Bureau of Narcotics (OBN) successfully deployed a new version of a statewide Prescription Monitoring Program (PMP) designed to track the prescribing practices and use of scheduled narcotics. The planning, design and implementation of the system required the development of new approaches in building a long lasting government to business partnership. Both the approach and the system design are recognized as national models that are being implemented by states nationwide.

The Bureau of Narcotics is tasked with investigating and controlling the use of all legal and illegal drugs in Oklahoma. Part of that responsibility includes protecting against the diversion, fraud or other inappropriate use of prescription drugs. Recognizing a growing trend in prescription drug abuse, the Bureau developed the first electronic PMP system in the country.

The PMP system is a mission critical application and must be available twenty-four hours a day, seven days a week. Access is restricted as defined by state law. Activity is closely monitored. Registrant fees fund the program and are supplemented by federal grants. The Bureau maintains its own datacenter, directly collects incoming prescription data, and developed and maintains the current software application. An advisory panel consisting of vendors, regulatory boards, state agencies, medical professionals, trade organizations, law enforcement personnel and retail chain stores provide input and direction on application design, regulations and formatting standards.

Fully implemented, the new PMP application provides a number of advantages over its previous version. Those groups external to the Bureau of Narcotics now have direct access to policy and decision makers. A permanent advisory committee is in place and remains actively involved in the process of improving the PMP. Supporting network and software systems have been updated. Secure communications systems are in place. Disaster recovery standards, monitoring applications and secure appliances insure continued service to all users of the system.

The new PMP system has surpassed all expectations, not only for its many technology accomplishments, but for building a highly regarded relationship between those who use the system and those who administer the program. A direct quote from a medical professional best sums up this effort:

“The Prescription Monitoring Program is one of the best tools to become available to doctors in decades.”
C. DESCRIPTION OF THE BUSINESS PROBLEM AND SOLUTION

Problem Statement

The previous Prescription Monitoring Program, in place since 2006, relied on a third party application for the collection and distribution of prescription data. Programming bugs, infrequent software updates and limited support from the vendor were causing performance issues. OBN ran that program and its supporting applications on hardware systems that would reach their end of life by late 2009. Hardware failures were increasing rapidly. In addition, prescription data was only collected every thirty days, resulting in a substantial number of end users expressing frustration with the existing system.

Other than limited contact with the various stakeholders to resolve problems with sending and receiving prescription data, OBN had not developed a formal avenue for open communication with PMP users. This resulted in a substantial amount of distrust and a misunderstanding of the business and regulatory goals of the Bureau. While the problem was not unique to Oklahoma, the building of a model to drastically improve communications between OBN and the business it regulates was critically important to its continuing success.

Funding for the Prescription Monitoring Program was provided primarily by federal competitive grants. However, in 2008 the grant authority notified Oklahoma that subsequent grant request could not include funds for paying employee salaries and benefits. Loss of funding for personnel would effectively end the PMP program.

Barriers and Challenges

For the Prescription Monitoring Program to continue, several barriers would have to be overcome. Foremost, a funding source would have to be identified which would require both legislative and stakeholder acceptance. New grant opportunities needed to be explored and long term costs reduced. Communication with all stakeholders’ required significant improvement to overcome institutional boundaries before planning a new system could advance. Finally, new equipment was needed that required funding that did not yet exist.

All of these barriers had to be overcome during a period of funding limitations caused by an overall reduction in agency budgets statewide.

To solve these issues, OBN relied on the extensive experience of its personnel in building bridges and identifying opportunities, even in situations where none seemed to exist.
Assessment and Decision Making Process

Members of the IT Division charged with running the PMP and led by the CIO met to create a plan of action. The goal was to not only solve the existing issues, but to aggressively advance the benefits of Prescription Monitoring Programs using the latest technologies. Specific individuals were identified to address each of the problem areas. The CIO would present solutions to the administrative staff, some of which were directly involved in developing and advancing the solutions. The resulting plan was implemented in late 2008. The target date for the new PMP system to go into production was set for April 5, 2010.

Solution

To deliver a new PMP system to stakeholders required multiple solutions to overcome the existing issues. Those solutions ranged from legislations to application development and hardware improvements.

The primary problem to overcome focused on financing the system. The solution that was put into motion was two pronged. The first introduced a legislative change that would allow OBN to increase its registration fees for those who prescribe or dispense controlled drugs and thus the most likely to use the PMP. Those fees would finance the personnel who were designated to program, deploy and manage the new system. The second focused on identifying and applying for federal grants. Two specific grant authorities were targeted. Estimated costs to rebuild the PMP network backbone and write the software program was about $300,000. Personnel cost were estimated at about $250,000. OBN was successful at securing financing from both sources.

In keeping with the goals of both solving the existing issues and improving the overall system, OBN elected to assemble an advisory board made up of all stakeholders to allow direct input on system designs and outcomes. Target members included representatives from other state systems with PMP’s, retail chain stores, trade organizations, medical community members, law enforcement and regulatory boards. The advisory board would provide direct input into the design, standards and procedures used for the new system. In addition, flyers and targeted e-mails would be used to inform users of the PMP on critical changes, procedures, standards and implementation dates. The advisory board's first meeting was in January 2009.

Improving the PMP application itself required multiple solutions. Legislative changes were introduced to shorten the reporting period and update reporting standards. Reporting cycles would be shortened and end users would have greater control over their accounts. An instruction manual was planned to explain those standards and made publically available. OBN personnel began working directly with the national standards committee to meet Oklahoma's need. A programmer was assigned the task of writing the application while other members worked on support systems, including network design, grant management, system analysis, backup systems and hardware
implementation. E-mail encryption, storage area networks and a hot site were implemented to insure the system remained secure and stable. To improve customer support and user continuity, password recovery, sub-account management and registration were added or simplified.

Cost would be reduced by phasing out older hardware and through the elimination of support contracts required to maintain the previous system. Password recovery and sub-account management built into the new PMP system would lower support costs and reduce the need for hiring new personnel. The analytical reporting systems would be updated and use existing business intelligence software. Anticipated annual savings were about $140,000 per year.

Online education modules, user manuals, webinars and onsite training would be developed to help users migrate to the new system and standards requirements.

D. SIGNIFICANCE

Beneficiaries

As the plan was put into action, it became clear how important many of the initiatives were to both Oklahoma stakeholders and other states that were either operating or planning to implement a prescription monitoring program.

From a government to business perspective, the PMP upgrade directly involved a large number of diverse organizations in the decision making process for the first time. In continuing its leadership role, OBN met both its statutory requirements and mission statement for reducing drug abuse and fraud. OBN and its stakeholders created a business partnership designed around open communications and trust.

For other states, the impact was even more immediate. Oklahoma and the Bureau of Narcotics had provided a model that existing state PMP programs and those wishing to implement them could use as an example. In addition, it spawned new initiatives by those states to clarify and improve their programs.

Those stakeholders impacted by an OBN’s Upgraded PMP:

- Regulatory boards
  - Pharmacy, Medical, Dentistry, Osteopathic and Veterinarian
- States With Prescription Monitoring Programs (Direct Impact)
  - Texas, Kansas, Colorado, Nevada, Massachusetts, Kentucky, Illinois, Indiana, South Dakota, Florida, Ohio, Connecticut and New York
- American Society of Automation in Pharmacies (ASAP)
- Office of Justice Assistance, Department of Justice
• Drug Enforcement Agency
• Oklahoma Department of Public Safety
• Oklahoma Attorney General’s Office
• Oklahoma Law Enforcement at all levels
• Oklahoma Pharmacy Association
• Oklahoma Health, Mental Health and Heath Care Authorities
• Emergency Rooms and Critical Care Facilities
• More than 12,000 medical professionals
• More than 1,000 retail stores who dispense controlled substances
• Pharmacy software vendors
• Pharmacy and medical trade organizations
• 1.5 million Oklahoman’s who get prescription drugs every year.

E. BENEFIT OF THE PROJECT

Impact
The Oklahoma Bureau of Narcotics PMP system now provides doctors and other medical professionals with an immediate snapshot of a patient’s prescription drug history within 24 hours of its distribution. This has a major impact on emergency room and critical care physicians who are often targeted by those seeking prescription drugs for non-medical purposes or those who are treating patients in a life or death situation.

The PMP advisory board is the first panel of its kind in the United States and its effectiveness has not gone unnoticed. Colorado has taken Oklahoma’s lead. Due to the success of the new system, Texas has agreed in principal to allow Oklahoma to host its Web based PMP using OBN’s front end application and network infrastructure. In addition, PMP personnel have published articles about the program’s success and have spoken at several major conferences.

Oklahoma’s PMP application is the first to leverage .NET 3.5 technologies, including the use of AJAX, SOAP and XML standards. The new PMP system also provided the first Web Service interface for reporting prescription drugs, laying the ground work for point of sale reporting in 2012. About thirty-three percent of state pharmacies are already reporting at point of sale. A fact that retail chain stores and other states believed was impossible only a few years ago.
The Bureau of Narcotics principal of customer service first was instrumental in building the relationships necessary for making this new approach work.

Outcomes

The Web Portal for the PMP application upgrade went online on April 5, 2010, and the program began providing outcomes during its entire development cycle. From a strategic point of view, the program provided extensive exposure for OBN, the State of Oklahoma and PMP’s in general. This helped all state PMP’s better meet the needs of their citizens, regardless of what type of agency the PMP’s were operated under.

On a qualitative level, the major standard organizations were encouraged to support new technology standards, reporting requirements and innovations they had previously ignored. For the first time, the National Council for Prescription Drug Programs (NCPDP), and ANSI standards member, built PMP reporting elements into their standard that is used by every pharmacy in the country for processing insurance claims. OBN’s PMP upgrade was the primary emphasis for the inclusion.

OBN’s PMP remains highly regarded as it continues to enhance the PMP system. Research groups, universities, advisory groups, private corporations and health care organizations like the Center for Disease and Control (CDC) regularly seek information and statistical data from Oklahoma’s system.

Medical doctors are so supportive of the program that they agreed to fee increases by calling their legislatures to demand that the program remain funded.

Registered users of the system run more than 30,000 patient drug history reports every month. Operational costs were slashed by about $140,000 per year. As the Texas PMP is migrated into the system, revenue from the hosting fees will further reduce operating costs for users in Oklahoma.

Additional Benefits

The integration of secure mail and password recovery helped offset concerns about HIPAA violations and security concerns over access, especially after Virginia’s PMP was breached. The implementation and use of a newsletter, communication manuals, training material and Web based entry screens provided information directly to the end users which had not been available before. This included announcements about system changes, alerts and outages.

Moving the application development in-house provided the opportunity to respond to system problems quickly, manage change controls effectively and have full control over the development lifecycle. In addition, it allowed flexibility in responding to customer requests for improvements and enhancements to the PMP program. Errors are now corrected in days instead of months.