



Prescription Drug Monitoring Program Training and Technical Assistance Center

Technical Assistance Guide

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PDMP Data Management Solutions

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For Social Policy and Management

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Introduction

During this time of a slow and struggling economy, public agencies are asked to do more with less. As state funds shrink, many Prescription Drug Monitoring Programs (PDMPs) are trying to find ways to hold down costs while, at the same time, enhance their programs. One of the more important and costly components of any PDMP is data management: the collecting, storing, and disseminating of data. When it comes to data management, PDMPs currently have several solutions to choose from and as to which solution is best for a PDMP depends on many factors, all of which need careful consideration by PDMP Administrators.

In an effort to provide guidance and assistance to PDMPs, the Bureau of Justice Assistance (BJA) PDMP Training and Technical Assistance Center (TTAC) at Brandeis University has compiled information on the various PDMP data management business solutions utilized by PDMPs. This guide is designed to inform PDMP Administrators of the different business models currently being employed by states and assist them in determining which model meets their needs for implementing, enhancing and operating a successful PDMP.

Four business solutions are currently being used by PDMPs:

- Solution 1 – State-Hosted System
- Solution 2 – State-Hosted “Commercial Off the Shelf” (COTS) System
- Solution 3 – Vendor-Hosted System
- Solution 4 – Hybrid System (Combination of State and Vendor System)

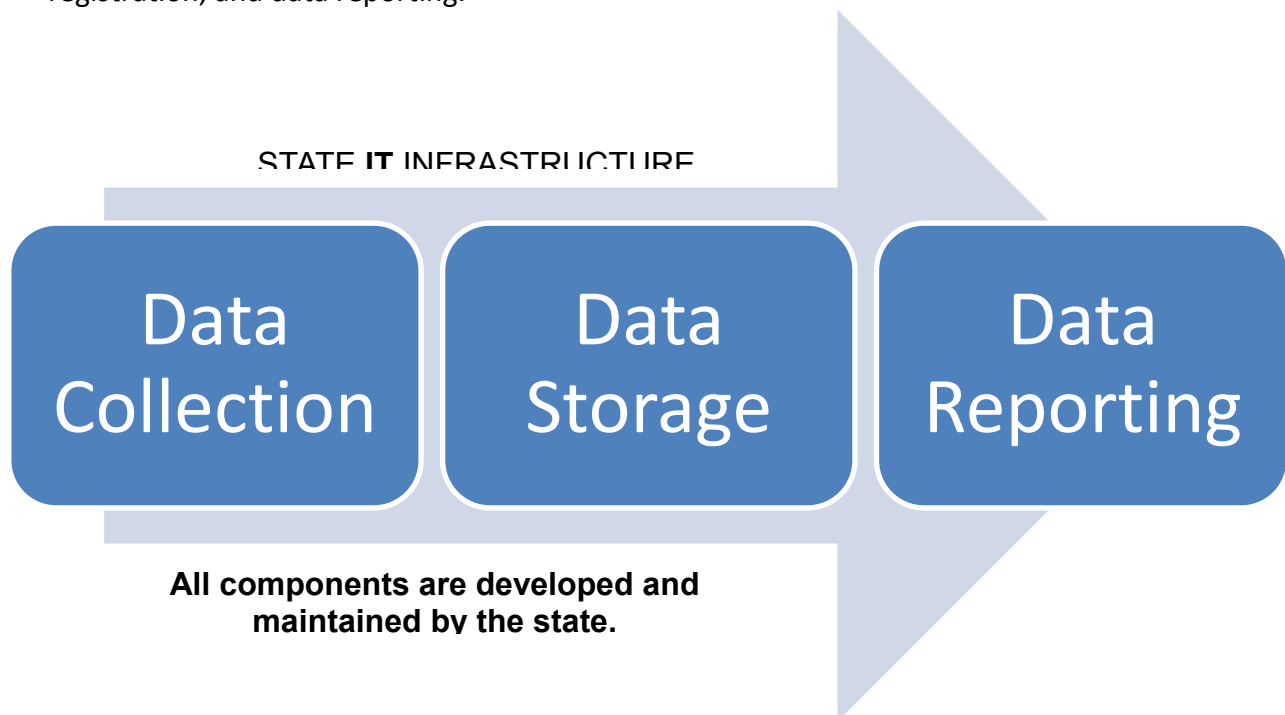
This guide provides a description of each solution along with other information to assist a PDMP Administrator in determining which solution may best serve the needs of a PDMP. Each solution examines the three PDMP system components of data collection, data storage, and data reporting.

This guide also identifies which states are utilizing each solution and provides contact information for those states should a PDMP Administrator wish to obtain more information from another PDMP about a particular solution.

The TTAC is also available to assist PDMP Administrators in facilitating communications among PDMPs and obtain answers to technical and policy issues around the different solutions.

Solution 1 – State-Hosted System

A state-hosted system has all three data management components completely built and maintained by a state; including help desk staff to assist in data collection, compliance, registration, and data reporting.



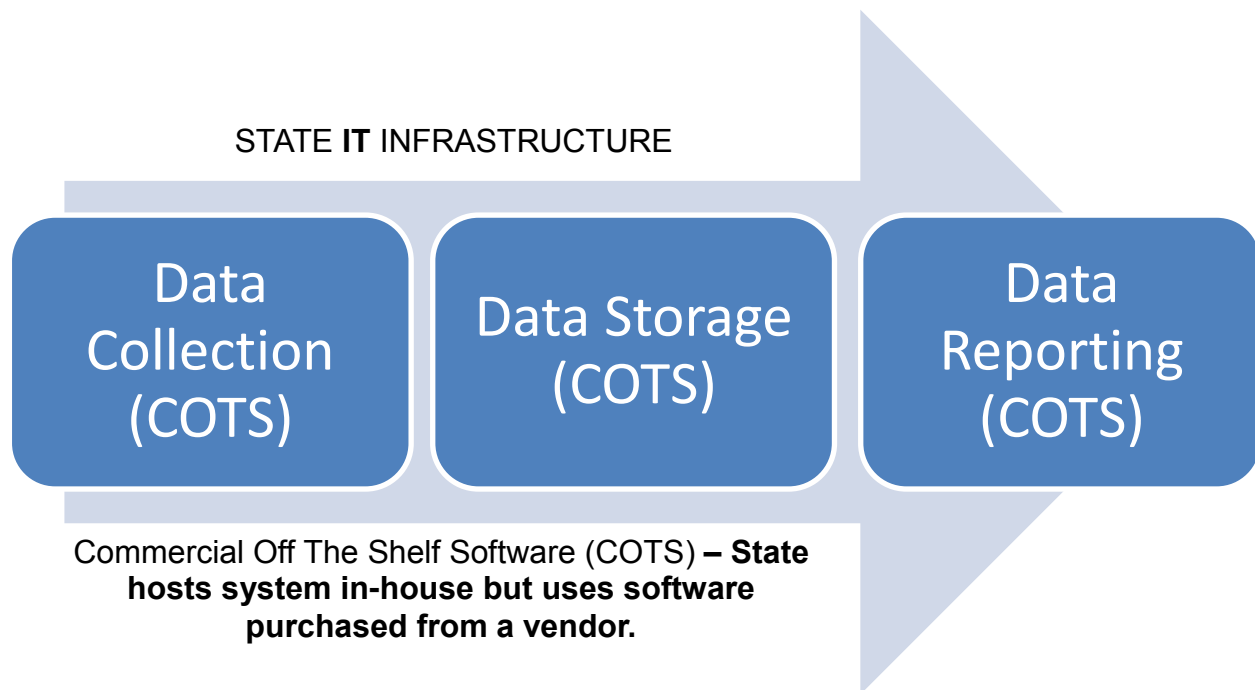
If the PDMP or state information technology (IT) agency has experience building similar systems and the capacity and infrastructure to take on new projects, this solution may be one to consider. Having the system built in-house may initially have a higher implementation cost and a longer implementation schedule, but the system may be less expensive to maintain in the long term. Also, the PDMP has more control over when system enhancements are completed and the ability to respond to system maintenance needs, error messaging, or instances where the system is non-responsive.

A state hosted or in-house system requires IT staff to be available to cover data submission, compliance, error reporting, and problems that dispensers may be experiencing in submitting the data. IT staff must also keep current with all the reference files needed to operate the system (i.e., Drug Enforcement Administration Numbers, National Drug Code Numbers, professional licensing files). The PDMP will also need to have a help desk to assist and respond to typical user needs like forgotten passwords, log-in problems, registration problems, registration processing, etc.

States currently using this solution are Idaho, Michigan, New Mexico, New York, Oklahoma, Rhode Island, and Utah. Contact information is available for all PDMPs at <http://www.pdmpassist.org/content/stateterritorydistrict-contacts>.

Solution 2 – State-Hosted “Commercial Off the Shelf” (COTS) System

A state hosted COTS system is one in which a PDMP purchases software from an outside vendor and hosts it on a state’s IT infrastructure. This solution has all three data management components still housed by the state, but operating on software purchased from an outside vendor.



A PDMP or state IT agency that does not have the time, funding, or experience to build an in-house system but has a good core of IT staff who can maintain a system may find this solution to be a good option. By purchasing proven software, a PDMP can reduce its implementation time and, by hosting it in-house, a PDMP still has control over the system to address maintenance and operational issues.

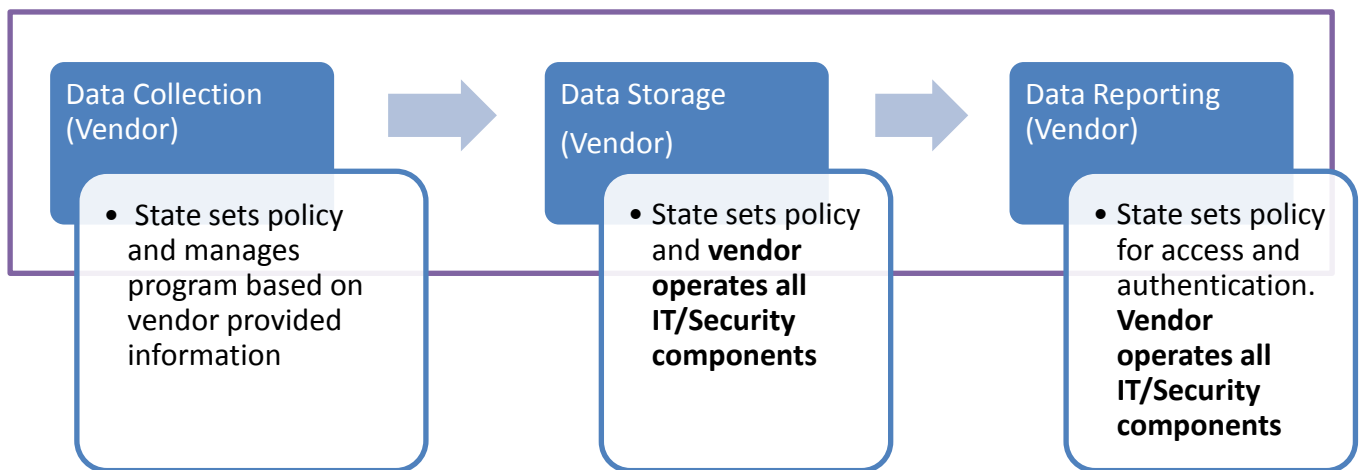
A PDMP Administrator wanting to add enhancements to the software may need to request the vendor to do work at an additional cost to the PDMP. Even minor changes may not be possible without the vendor’s involvement. The PDMP may have to continue maintaining key reference files such as the Drug Enforcement Administration Numbers, National Drug Code Numbers, and other reference files. The PDMP will need its IT staff to cover data submission, compliance, error reporting, and other issues dispensers may be having in submitting the data. Program staff will still be necessary for assisting and responding to common user needs such as forgotten passwords, log-in problems, registration problems, registration processing, etc.

Some states currently using this solution are Ohio and Nevada. Contact information is available for all PDMPs at <http://www.pdmpassist.org/content/stateterritorydistrict-contacts>.

Solution 3 – Vendor-Hosted System

A vendor hosted solution is that in which a PDMP contracts with an outside vendor and the vendor is responsible for all three of the major data management components of the PDMP system. The PDMP still needs a small staff to work on data submission, compliance, and be involved with user registration. The size of the staff is dependent on the size of the PDMP and the number of prescribers and dispensers located in the state. Most vendors do provide a help desk to assist users with forgotten passwords, log-in problems, registering, etc.

VENDOR IT INFRASTRUCTURE



(ASP) – Application Service Provider. **State outsources the entire system to a vendor who specializes in protected health information security.**

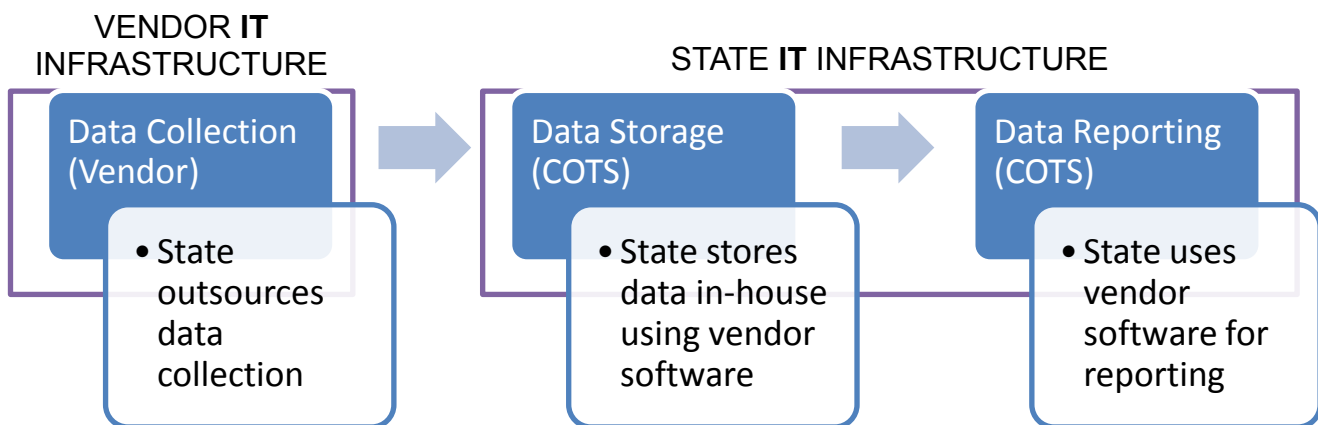
This solution should be considered when the PDMP or state IT agency does not have the resources for an in-house or COTS solution and/or has a very short timeline to get the system implemented. When contracting with an outside vendor, a PDMP may need to consider a vendor’s experience and expertise with such systems and what other PDMPs’ experience has been with a vendor. Outsourcing the entire system to a vendor who is already providing these services to other PDMPs may prove to be beneficial in the long term, because such a vendor can simply customize their existing system to the particular needs of a PDMP, rather than building a, entirely new system. This greatly reduces implementation time, cost to the PDMP, and staff time dedicated to the program. Some vendors provide the services of a help desk to cover data submission, user registration, and data request issues allowing PDMP staff to focus on data submission, compliance, and user registration work. Although a hosted system may be less costly to develop, it may become more costly to operate as the PDMP begins moving forward with enhancements and expanding its base of authorized users.

Some other considerations include not having direct control over when new enhancements are scheduled and completed as well as the potential for additional costs for adding enhancements. There is also the possibility of additional charges by a vendor for ad hoc reports not specified in the original contract.

States currently using this solution are Alabama, Arizona, Connecticut, Kansas, Louisiana, Maine, Minnesota, Mississippi, New Jersey, North Carolina, North Dakota, South Carolina, and Vermont. Contact information is available for all PDMPs at <http://www.pdmpassist.org/content/stateterritorydistrict-contacts>.

Solution 4 - Hybrid System (Combination of State and Vendor Solutions)

A hybrid system is that in which a PDMP does some of the three data management components in-house and outsources the others to a vendor. The most common hybrid model, being used by several PDMPs, is outsourcing data collection and using an in-house or COTS solution to handle data storage and data reporting.



State uses software purchased from a vendor or a system they built.

A hybrid solution allows a PDMP to utilize a vendor to handle the more time consuming and labor intensive data management components such as data collection. A hybrid solution allows the PDMP to maintain control over most of the system, facilitating a PDMP's ability to make future enhancements and respond immediately to system maintenance needs.

PDMP staff is still needed to handle help desk functions for registration and data requests. Also, there will be a need for staff time to handle the components the state has not outsourced.

States currently using this solution are California, Illinois, Iowa, Kentucky, Massachusetts, Texas, Virginia, and Wyoming. Contact information is available for all PDMPs at <http://www.pdmpassist.org/content/stateterritorydistrict-contacts>.

Appendix A – Data Management Solution Summary Chart

| * Comparison of Solutions | | Solution 1 State-Hosted System | Solution 2 State-Hosted 'COTS' System | Solution 3 Vendor-Hosted System | ** Solution 4 Hybrid System |
|---|-------------------------------|--------------------------------------|---|---------------------------------------|-----------------------------------|
| COSTS | Enhancements Costs | Low | High | High | Medium |
| | Implementation Costs | High | Low | Low | Medium |
| | Operation/Maintenance Costs | Low | Low | High | High |
| | Data Reference Files | High | High | Low | High |
| COMPONENTS | Data Collection | State | State | Vendor | Vendor |
| | Data Storage | State | State | Vendor | State |
| | Data Reporting | State | State | Vendor | State |
| TIMEFRAMES | Enhancements Duration | Short | Long | Long | Short |
| | Implementation Duration | Long | Short | Short | Long |
| STAFFING | Help Desk - Data Collection | State | State | Vendor | Vendor |
| | Help Desk - PDMP Registration | State | State | State and Vendor | State |
| | Information Technology | State | State and Vendor | Vendor | State and Vendor |
| | PDMP Program | State | State | State and Vendor | State |
| <p>* This chart is a summary based on general assumptions. Costs and timeframes may vary depending upon a state's particular circumstances. ** Values reflect one possible scenario. Costs, timeframes, and staffing may vary dependent upon which entity is responsible for each component.</p> | | | | | |

Appendix B - Considerations

The following is a set of questions and considerations that a PDMP should examine as it plans to implement or enhance its program.

- **Issue:** What is the total amount required to fund the PDMP? Is the funding source sustainable over time? What portion of the funding is allocated to the system?

Considerations: Knowing what funding has been made available allows the PDMP to make better decisions when choosing a solution. If the funding source is not stable, it may be easier to contract with a vendor than to hire new staff that may have to be let go if funding is not sustained.

- Issue: Does the PDMP system have to be implemented quickly due to legislative mandates or other constraints?

Considerations: Talk to IT staff to determine the amount of time and resources able to be devoted to the PDMP and compare it to that of a vendor hosted solution.

- Issue: Does a PDMP or a state IT agency have the staffing capacity to operate a PDMP?

Considerations: If a state does not have the IT staff to implement the PDMP, but is able to operate the program, there may be a need to explore the COTS solution. If a state does have IT staff to implement and operate the PDMP, a PDMP Administrator may want to explore the implementation and ongoing operational costs compared to a vendor hosted COTS, or hybrid solution.

- Issue: Does the PDMP currently have the program staff necessary to handle the daily operational work of data submission, compliance, user registrations, and providing assistance to data submitters and requestors?

Considerations: If a PDMP has staffing in place or the funding to do so, that may provide the opportunity to consider an in-house, COTS, or the hybrid solution. If the PDMP does not have that capacity, it may need to more closely consider a vendor hosted solution.

- Issue: What if a PDMP is offered a free or drastically reduced cost vendor hosted solution?

Considerations: The PDMP Administrator may want to verify what services are included and for how long. If the free or discounted solution has a limited duration, then it would be necessary to know what the operational costs will be, as compared to current or estimated costs of a different model. Ensure the PDMP agency does not have policy restrictions that would prevent it from contracting with a specific vendor; it may be necessary to verify from where or from whom the vendor is acquiring the funding. Review existing policies and seek advice from an agency's legal office.

- Issue: What are the anticipated operational costs of each solution for my state?

Considerations: While some models may be less expensive to implement, they may have a more expensive life-cycle cost. If a PDMP can make up for the difference in implementation costs over a few years, that should be weighed carefully. You should get implementation and operational cost details from other states for comparison.

- Issue: Does the PDMP IT staff or IT agency have the infrastructure to support an in-house system (bandwidth, servers, storage, backup facilities, etc.)?

Considerations: Having an infrastructure in place that has the room to take on another system could assist with costs considerably. If the infrastructure is not already in place or does not have the capacity for adding another system, the opposite could be true.

Appendix C - What to Ask a Vendor

The following are questions you should ask a vendor as part of your request for proposals or other solicitation processes.

- Ask for a clear, itemized description of costs for implementing the system including staff, hardware, software, reference files, etc.
- Ask for a clear, itemized description of all operational costs including software maintenance, hardware maintenance, help desk, reference files, etc.
- Ask if the vendor is HIPAA compliant and if they conduct internal and independent security audits. A PDMP should consider requiring them before a contract is signed and periodically after the contract is awarded.
- Make sure the request for proposals clearly specifies all requirements for your system. Ask for quotes for additional enhancements a PDMP may want to consider later, such as interstate data sharing, increased frequency of data collection, and unsolicited report creation and dissemination, so you can know what future costs for implementing and operating those features may be.
- Ensure the vendor has a help desk that can provide the coverage you want your end users to have. For example, Monday – Friday, 8 to 5 PM (during your time zone hours).
- Ask how much the vendor would charge to run ad -hoc reports. A PDMP may encounter situations where it needs other data resulting in additional cost. Consider adding the cost for a certain number of ad -hoc reports per month to your contract.
- Make sure the vendor can accommodate a transition plan in case there is ever a need to move the data in-house or to another vendor.
- Make sure the vendor has a disaster recovery and business continuity plan. It is important to know if they can recover and keep the site up if their main location goes down for some reason. Do they have remote back-up sites?
- Ask a vendor for a list of other PDMPs it has under contract. Contact other states to discuss what their experiences have been.
- Obtain other PDMPs' request for proposal documents including system requirements.
- Ask for demonstrations of a vendor's system.

- Ask the vendor to detail their experiences with connecting to interstate data sharing or health information exchanges.
- Is the vendor Prescription Monitoring Information Exchange (PMIX) National Architecture certified to provide interstate data sharing services?¹
- Ask the vendor for specific details on how they handle change requests and error resolution.
- Ask for specific options they offer such as support for user help, system availability times, system recovery, data backups, etc.
- Obtain detailed information on how the vendor handles security regarding their software, hardware, personnel, and off-site backups.
- Ask for information on how they capture audit trails and how these are accessed to review appropriate system usage. Ask if there are features that help detect inappropriate access or requests.

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¹The PMIX National Architecture is a formal set of technical requirements that existing and future data hubs should comply with to enable interoperability among interstate data sharing solutions. The PMIX National Architecture empowers a state to choose any hub which meets the particular needs of that state while providing that state with the confidence and assurance that whichever hub it has chosen, it will be capable of sharing data with another state that has chosen a different hub. Additional information about the PMIX National Architecture can be found at <http://www.pdmpassist.org/content/prescription-drug-monitoring-information-architecture-pmix>.