



Supporting State Electronic Case Management and Critical Incident Management Systems Design and Development

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Brief #1: Recommendations for State Design Processes, Features, and Functionality

INTRODUCTION

Many states are sizing up potential changes to or overhauls of their electronic case management systems (eCMS) and their electronic critical incident management systems (eCIMS). There are many essential factors states should consider from quality oversight and project management structure for the vendors they hire and planning for change management to preparing for periodic updates to avoid obsolescence or for future incremental added modules. Thoughtful strategy before procuring will help states develop better eCMS and eCIMS, allowing them to do everything from bringing the right skillsets and staff members to the planning process to identification of quality and data reporting needs associated with the systems they are building.

This brief presents recommendations for states as they plan for these system changes and then delves into specific design features some states are finding useful or desirable. This information is presented as a resource for states as they plan for these system changes and initiate their procurement processes. This brief complements its sister brief [***Recommendations for State eCMS and eCIMS RFP and Contract Drafting***](#) and is intended to highlight key considerations and some provisions that are often overlooked; it does not represent a comprehensive listing of provisions to be included in states' procurement documents.

SYSTEMS PLANNING CONSIDERATIONS FOR STATES

Below are a series of overarching considerations states might ponder as they consider eCMS and eCIMS procurements.

- ✓ **1. Establish the Mission, Values, and Vision**
- It is important for states to establish and articulate the mission, values, and vision for the work they are doing to eCMS and/or eCIMS. To this end, we recommend that states:
- Decide on the global goals and objectives, outlining the problems that the eCMS and/or eCIMS changes or novel approach is trying to solve.
 - Get everyone on board with the project’s mission, values, and vision – from internal agency staff to external partners and contributors.

- ✓ **2. Create Clarity of Scope**
- States should explicitly articulate the intended scope of the eCMS and/or eCIMS work, including both the scope of what the systems will need to do and who will use them. This will help not only in developing business requirements but also in ensuring all the right people are at the table throughout the development, design, build, and implementation processes. States should:
- Delineate what the new or improved eCMS and/or eCIMS will include (as in some or all of the following functionalities: case management, critical incident management, program eligibility, needs assessment, service planning, service authorizations, provider portals, protective services, quality review, self-directed gateways, and/or mortality review).
 - In addition to the breadth and depth of the systems, detail what programs, agencies, and entities will be using the eCMS and/or eCIMS (as in some or all home and community-based services (HCBS) programs or only programs eligible for federal match [FMAP]).

- ✓ **3. Develop a Timeline**
- States should determine and spell out their timelines for completing the eCMS and/or eCIMS work, allowing sufficient time for the design, procurement, and implementation of the new system.
- Work backward, deciding where the state wants the eCMS and/or eCIMS to be by when and
 - Map out the imagined timeline to achieve the project goal and all the important milestones in between.
 - Decide whether the eCMS and/or eCIMS changes or overhaul will follow a phased approach (and, if so, what is the basis for each phase) and how to measure completion of the project’s stages.
 - Determine whether to share a mocked-up timeline with potential bidders or use the state's mocked-up timeline as a yardstick for measuring the proposed timetable submitted by those who bid.

- ✓ **4. Determine the Organizational Process and Structure**
- States should determine the organizational process for completing the eCMS and/or eCIMS work. States will benefit from taking the time to delineate the organizational process for completing the work and from investing staff time and resources in this work.



Ensure that all the right people take part in the development, design, build, and implementation processes.

- Decide whether the state will have a dedicated team working on the changes or overhaul and, if so, the team's composition, governance structure, and sphere of authority.
- Include as broad a range of internal subject matter experts that reflects the scope that will be incorporated into the eCMS and/or eCIMS project.
- Assess whether a state has enough staff or whether it needs contractors, and then plan to immediately hire staff or procure vendors.
- Ensure the state has tapped enough people with the requisite subject matter expertise to do this work right and that dedicated team members can be released from other job responsibilities to ensure they can devote the necessary time to this work.



5. Make System Access Decisions

States must understand exactly who needs exactly what access to the system(s). Knowing from the outset who will own the system and have read, write, or read+write access to the various components of the system is critical. Different user groups will need different permissions based on their roles and activities.

- Consider the access permissions for case managers and supervisors, critical incident investigators and supervisors, protective services workers, law enforcement, quality management staff, mortality review personnel, providers, Fiscal Management Service (FMS) vendors, and others.
- The state also should specifically consider who they want to exclude from access and include this in its business requirements.
- Plan ahead for future functionality needs, such as a participant/family portal or other modules that might be built onto the system later.



6. Perform a System and User Assessment

States should conduct a comprehensive assessment of systems' and users' needs. Closely related to numbers 1, 2, and 5 is the understanding of what needs the new or improved eCMS and/or eCIMS will address.

- Conduct process mapping to detail the various workflows from the perspectives of all user groups. Here we recommend that the state be sure to invest in defining the workflows and processes to inform requirements definition, making sure that requirements are comprehensively identified and very specifically detailed in the context of the workflows and processes they will enable.
- Meet with all users (including those who will use the eCMS and/or eCIMS but who would not be involved in the design and development process). Use these meetings to identify what will be needed to ensure that the final product is appropriately tailored, provides participants — including those who self-direct — the information they need to manage their services and supports, includes analytics to guide decision making and processes, has tools for clinical teams to work together and communicate, allows for monitoring and continuous quality improvement, or whatever other functionality users have been lacking.
- Identify the features and functionality that are "must-haves" versus "nice-to-haves."
- Consider whether the system will be configured differently for each operating agency and how historical information will be incorporated into or accessed by the new system(s).
- Review reporting needs to assure that the system will capture the data needed to generate the necessary reports.

7. Account for Other Information Systems

States must consider the other information systems with which the eCMS and/or eCIMS will need to interface. Knowing whether the eCMS and/or eCIMS will interface with these or other systems (Eligibility, Medicaid Management Information System (MMIS), Licensing, Protective Services, No Wrong Door, etc.) is critical to the eCMS and/or eCIMS design process.

- Plan early and thoughtfully around all of the state's systems in relation to the new eCMS and/or eCIMS.
- Ensure the eCMS and/or eCIMS can interface with or have built-in usable data transactions with the state's MMIS.
- Consider whether the system will interface with the Electronic Visit Verification (EVV) and claims systems, so that the financial reports provide up-to-the-minute precision for participants and case managers, the provider enrollment system to facilitate referrals and authorizations, etc.
- Outline the state's preference for how the eCMS and eCIMS will interface to assure that all parties can be involved in or apprised of issue resolution.

8. Conduct Build or Buy Research

States are best positioned for success if they understand the universe of currently available eCMS and eCIMS solutions and have the information needed to decide whether to build or to buy.

- Become knowledgeable about what customizable off-the-shelf (COTS) systems are available and what features and functionality they offer.
 - Ask peers in other states who they use and what features they like.
 - Invite vendors to give system demonstrations. To make those demonstrations as valuable as possible, share sample workflows and use cases and ask the vendors to demonstrate how their system could support those workflows and use cases. Extend invitations to a wide range of users, so that the experience of all users can be considered during the demonstrations.
 - Clarify which features and functionalities are off-the-shelf, and which are customized.
 - Seek to identify features and functionalities that the state had not considered during its needs assessment and add these to the list of must-haves or nice-to-have features or functionalities.
 - Identify the ease and cost of later modifications.
- Understand that successfully building a custom solution requires more in-house expertise at the state and longer lead times. The same considerations apply as listed above for COTS.
- Make a final decision of whether to build or buy.



9. Examine Vendor Subject Matter Experience

States should consider whether a potential vendor to build a custom system or tailor an off-the-shelf product has specific subject matter expertise. While it may seem obvious that a state will consider a vendor's experience, states might want to dive deeper to consider whether the vendor has specific expertise in understanding the Developmental Disabilities (DD) service system as part of its design, development, and build team.

- Require offerors to detail the breadth and depth of their intellectual disability and DD experience and expertise.

- Conduct reference check with other states an offeror has listed in their proposal and ask specific questions about their experiences and learning.

10. Build on Procurement Best Practices

States will benefit from leveraging their prior procurement experience and procurement flexibilities. State Medicaid agencies have extensive experience with information systems procurement.

- Use best practices from Medicaid information system procurements to save time and headaches in procuring new eCMS and eCIMS.
- Explore flexibilities in procurement approaches that will better enable the state to evaluate offerors and their systems, paying particular attention to how offeror demonstrations and the best and final offer process can be used.

11. Expect Mid-Design and Development Changes

States need to have the contracting authority and flexibility to make contract changes mid-stream during design and development.

- Anticipate changes because no design or development is ever executed without changes, whether they are for the better or to avoid a pitfall.
- Start early with procurement officers to make sure contracts are flexible enough to allow for design changes as necessary throughout the life of the design and development contract.
- Identify payment methodologies to address changes, earmarking a reasonable number of changes into the anticipated budget for the project.

12. Consider Mid-Operation Changes

Just like in number 11, states need to have the contracting authority and flexibility to make contract changes throughout the operation of the fully implemented eCMS and/or eCIMS.

- Expect changes — no eCMS and/or eCIMS will never need improvements or course corrections.
- Determine whether the state wants to have staff with the knowledge and capability needed to make the changes without the vendor's involvement (or can staff be trained to have this knowledge and capability) or whether the state wants to maintain its contract with the vendor longer term.
- Start early with procurement officers to make sure contracts are flexible enough to allow for changes as necessary throughout the life of the system.
- Consider whether to establish an annual budget or set-aside for future system modifications, then prioritize change requests each year.

13. Ascertain Ownership

An important element states might not have considered is whether to be the owner of the end product and the data stored in the system so that the system operations can be maintained by agency staff when the contract ends. It is important that states understand whether it will be contracting for a system that is proprietary to the vendor or whether it will belong to the state government.

- Retain ownership of the data housed within the eCMS and/or eCIMS.
- Decide whether the state wants ownership of the eCMS or eCIMS itself.
 - If yes, the state may need to train state staff to modify or update the system once the vendor's work is done.

- If no, the state may need to continue their contractual relationship with the vendor for as long as the system exists, which can be for decades.

While an OTS product can be deployed relatively quickly, it typically remains the property of the vendor, even with state-specific customizations. In contrast, a custom-built solution is more likely to be owned by the state but will require substantial time and resources to build.

✓ 14. Leverage 90-10 Match

States should structure their eCMS and/or eCIMS project so that they are able to take advantage of the 90-10 federal administrative Medicaid match for design and development and 75-25 percent match for ongoing maintenance and operations, based on CMS’s Streamlined Modular Certification process released in April 2022.¹

- Review and complete CMS requirements for the 90-10 match (and ongoing enhanced match), such as developing an advance planning document.
- Build the enhanced administrative match-related steps into your project plan.



✓ 15. Anticipate Managed Care Interaction

If states operate a Medicaid-managed care model, states must determine whether the managed care organizations (MCO) will be required to use a state's eCMS and/or eCIMS and if not, should define how the MCOs' systems must interface with eCMS or eCIMS solution.

- Clearly define MCO roles and responsibilities and then develop system requirements that support the related workflows.
- Understand what vendors currently offer and could offer in the way of interoperability with established MCO systems.

✓ 16. Think Through Security Requirements

States must account for all necessary security requirements they need vendors to meet in designing and developing the eCMS and/or eCIMS.

- Especially if the eCMS and/or eCIMS are interfacing with the Medicaid eligibility system or other critical systems, ensure the state has considered all requirements for system security in its procurement planning and clearly conveys those requirements to offerors.

✓ 17. Lean on Enterprise Systems

States will benefit from leveraging the strength, breadth, and depth of their enterprise system as they develop their eCMS and/or eCIMS.

- Treat the eCMS and/or eCIMS procurement like a Medicaid Enterprise (i.e., MMIS) procurement.
- Use all the same contract templates and procurement processes as would be used in an enterprise procurement.
- Follow planning and design processes to maximize federal match, per number 14.

¹ [smd22001.pdf \(medicaid.gov\)](#)

SELECT KEY FEATURES AND FUNCTIONALITY

Below we highlight some of the key features and functionality for states to consider including in or making accessible via their eCMS and/or eCIMS. This list is intended to aid states in their design and is not exhaustive.

- ✓ Participant Information, including demographics, communication preferences, preferred pronouns, etc.
- ✓ Participant program enrollment(s)
- ✓ Authorized representative and information
- ✓ Family member, guardian, and/or informal support information
- ✓ Application
- ✓ Intake tool
- ✓ Eligibility determination and category
- ✓ Assessments of participant needs, preferences, and goals
- ✓ Service plan
- ✓ Service plan updates
- ✓ Budget, budget status, and billing history (including recoupments)
- ✓ Service authorizations
- ✓ Provider network information, including provider capacity and capabilities
- ✓ Provider referrals/assignments, including referrals to community-based organizations to address social determinants of health
- ✓ Employer information, for employers offering supported employment
- ✓ Appointment scheduling
- ✓ Complaints and appeals information
- ✓ Service and progress notes, including those related to monthly or quarterly contacts
- ✓ Case manager dashboards including tasks to do and deadlines pending
- ✓ Capture of data related to performance, quality, and service delivery
- ✓ Resource libraries for various users, housing documents, or providing links to key materials and job aids
- ✓ Ability to send and receive or to otherwise capture and share communications among various system users, such as:
 - Messages sent between the participant and the case manager
 - Ad hoc notes from the direct support professional
 - Service plans to primary care physicians or linking to provider portals or Electronic Health Records (EHRs)
- ✓ Ability to generate reminders or ticklers that can be set by designated users (e.g., the case manager or supervisor) and that are programmed into the system
- ✓ Ability to issue alerts and policy updates to designated users (e.g., case managers) from other users (e.g., supervisors or residential or employment staff)
- ✓ Ability to generate reports and quality measurement data
- ✓ Ability for Adult Protective Services (APS), law enforcement, etc. to be able to view or also to leave notes/comments/updates/follow-up taken
- ✓ Potential for broader dashboards for other users

In addition to the items just outlined for both types of electronic systems, eCIMS solutions should also facilitate the full range of activity including incident reporting, investigation, and resolution, as well as utilization and quality review activities. States should consider fields that capture data related to:

- Issues raised
- Complainant name
- People involved
- Immediate steps to make participant/victim safe
- Investigative actions
- Findings
- Penalty or consequence under a progressive enforcement system
- Impact on licensure or placement on abuse registry, etc.

- Required corrections/follow-ups (both individual and systemic)
- Referrals and flags for mortality or quality review teams
- Completion of correction/follow-up (both individual-level and systemic)
- Re-check
- Ability for APS, law enforcement, etc. to be able to view or also to leave notes/comments/updates/follow-up taken

eCIMS should also be programmed to alert for:

- Investigator performance review tracking of the timeliness of identification, report, investigation, follow-up
- Approaching deadlines for required activities or actions
- Appropriate reporting to APS, law enforcement, and other agencies as appropriate

Both eCMS and eCIMS should allow for aggregation and analysis of all data captured in the systems and the ability to generate both fixed and ad hoc reports, including an ability for various users to design customized and on-demand reports. Reporting features should allow for case linking to inform case management and program management, such as identification of perpetrators across settings or incidents within settings, as well as trends in participant progress. Reporting features also should allow the user to select among various visualization formats (e.g., graphs, tables).

CONCLUSION

This brief outlines several critical features and functionalities that states should consider in their planning for an eCMS and eCIMS projects. This brief is not intended to provide an exhaustive or final listing of considerations for states or of system features and functionalities. In the interest of supporting the many states who are currently pursuing eCIMS and eCMS solution changes, this brief was developed based on an expedited review of materials and experiences of a limited number of states who volunteered to participate in the information collection for the brief. We hope that this brief will serve as the foundation for continuing discussion and learning among states, so that states can develop more sophisticated and effective eCMS and eCIMS procurement processes and systems.

