

Assessing Organizational Readiness and Capacity for Developing an Integrated Child Health Information System

Ellen L. Wild and S. Nicole Fehrenbach

The Tool for Assessment and Planning (the Tool) assists public health teams in designing child health information integration projects from planning through early implementation. The tool is a companion to *Integration of Newborn Screening and Genetic Services Systems with Other Maternal and Child Health Systems: A Sourcebook for Planning and Development* (the Sourcebook). The Tool and the Sourcebook focus on 9 key elements considered critical to supporting information systems integration. The 9 key elements are: leadership, project governance, project management, stakeholder involvement, organizational and technical strategies, technical support and coordination, financial support and management, policy support, and evaluation. Project teams can use the Tool to assess their organizational readiness and capacity by examining the critical components and strategies required to support success based on the 9 key elements. The questions are intended to promote discussion among project team members and to identify specific action steps. The Tool includes a planning matrix to track those action steps and to identify accountable personnel. Strategically examining the critical elements and documenting next steps increases the likelihood of a successful integration project.

KEY WORDS: assessment and planning tool, child health information systems, informatics, integrated information systems

In 2002, All Kids Count published the report *Integration of Newborn Screening and Genetic Services Systems with Other Maternal & Child Health Systems: A Sourcebook for Planning and Development* (the Sourcebook) (available at <http://www.phii.org>).

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The Sourcebook, developed in partnership with the Genetic Services Branch, Maternal and Child Health Bureau, Health Resources and Services Administration (HRSA/MCHB), describes 9 key elements considered critical to the success of an information systems integration project. It describes examples of best practices of the elements as demonstrated by seven state health department integration projects.

All Kids Count and HRSA/MCHB then published a companion document to the Sourcebook, *Integration of Newborn Screening and Genetic Services Systems with Other Maternal & Child Health Systems: A Tool for Assessment and Planning* (the Tool) (available at <http://www.phii.org>). The Tool assists public health teams in designing their child health information systems integration projects, from planning through early implementation. The Tool highlights each of the 9 key elements, listing “critical components” for each element. Project teams can use the Tool to: (1) assess organizational readiness for the information systems project, (2) identify where additional strategies are required to support a successful project, and (3) document accomplishments and next steps.

● Approach

The Tool for Assessment and Planning can be integrated into a team’s project management strategy. The team should use this tool to seek input from key stakeholders

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that affect the project's planning and early implementation stages. In these early stages, the team still has an opportunity to make critical changes to the project plan. To facilitate this process, the Tool focuses on planning and accountability. Establishing an organized approach, identifying accountable decision makers, and monitoring progress are critical to a project's success.

Many of the questions in the questionnaire are intended to promote thoughtful discussion among the team members and define the most essential systems requirements. To make sure that project goals are met (or revisions to them made), the Tool should be revisited periodically (eg, every 3–6 months) throughout the project's planning and early implementation stages.

The Tool presumes that the integration project effort has a team leader who can facilitate discussion around each of the critical components, which will be progressively classified as “not started,” “in progress,” or “achieved.” Discussion around components that are not started or in progress can identify possible strategies to achieve the critical components.

● Organization

The Tool consists of a questionnaire and an integration planning worksheet. The questionnaire has 9 key elements: leadership, project governance, project management, stakeholder involvement, organizational and technical strategies, technical support and coordination, financial support and management, policy support, and evaluation. These key elements are based on information systems literature and best practices demonstrated by state and local governments. Best practices for each of these areas are documented in the Sourcebook and in an article in this supplement, “Key Elements for Successful Integrated Systems: Lessons from the States,” by Wild et al.

The Tool also includes an integration planning worksheet that is designed to assist public health teams in determining future objectives, strategies needed to reach each objective, and the people responsible for achieving the objectives. The worksheet is a sample matrix that can be used as a template or guide to building a comprehensive action plan for an integrated information system. Like the questionnaire, the project team would complete the worksheet, identifying action items, target dates for completion, strategic plans and action steps, assumptions and risks, and the “owner” of the action item or objective.

● Summary

All Kids Count distributed the *Tool for Assessment and Planning* nationally to state and local health agencies en-

gaged in planning and/or developing integrated child health information systems. A few states have reported using the Tool and have found it to be helpful in understanding the strengths and weaknesses of their organizational capacity to successfully develop an integrated child health information system. The complete layout of the Tool is available at www.phii.org and www.allkidscount.org.

● Questionnaire

A. Leadership—Critical Components for Leadership

1. **The integration project team has a high-level executive sponsor.**
2. **The executive sponsor or project champion actively supports the project by protecting or acquiring resources and funding.**
3. The executive sponsor and champion receive routine briefings on the status of the project through an established communication process.
4. The executive sponsor encourages the use of information (data) as a decision-making tool.
5. The project champion strategically educates and builds support for the project among different public health and health care audiences.
6. The project champion works with executive leadership to develop policies and procedures that support integration.

B. Project Governance—Critical Components for Project Governance

1. **The project is governed by a steering committee (or other governing body) that has representation from all key stakeholders.**
2. **Members of the executive committee have active roles that contribute to the project's goals, content, and policies.**
3. Members of the executive committee have decision-making power within an agreed-upon role structure.
4. Members of the steering committee communicate the project status to their constituencies.
5. Meetings of the steering and executive committees are held regularly.
6. External meeting facilitators have convened the steering committee and have moderated sessions to establish common ground and the airing of issues or concerns among stakeholders.

C. Project Management—Critical Components for Project Management

1. **An analysis of project value (sometimes referred to as a return on investment or business case analysis) has been conducted to establish**

those aspects of value that the integration project must achieve.

2. **The project has a clearly written plan for accomplishing its goals, objectives, and key milestones. Start and end dates are established, and responsible persons are confirmed.**
3. Roles and responsibilities of the project team members have been identified and documented in a written agreement.
4. Reporting frequencies and protocols for the project manager to report to the Executive Committee have been specified.
5. **Information users of the integrated information systems are actively involved throughout the project.**
6. The project team is actively educating health department staff.
7. The project team plans for organizational change management issues that the implementation of a new information system will bring.
8. The project team members have copies of and understand the written project management documentation.
9. The project team actively manages risk by identifying potential risks/barriers and taking steps to reduce, transfer, or eliminate them.

D. Stakeholder Involvement—Critical Components for Stakeholder Involvement

1. **The key stakeholders have been identified. Stakeholders are contributors of information, information users, and funders of the system, as well as anyone who will interact with the system or benefit from it.**
2. **A communications plan is in place that describes the methods the project team will use to communicate with the key stakeholders. The plan identifies how feedback will be received from the key stakeholders and describes the frequency of the communications.**
3. Each stakeholder has received a formal request for participation in the project. The request outlines the stakeholders' role in the project.
4. The governance structure for the integration project has been defined and explained to each stakeholder.

E. Organizational and Technical Strategies—Critical Components for Organizational and Technical Strategies

1. **The organization has articulated and documented a strategy that involves integrating information systems.**
2. The organization has examined the implications of integration on program function, staffing, data

ownership and data sharing, and reflects these considerations in its organizational strategy.

3. The organizational strategy describes the expectations and limits on data use, as negotiated by the project team, executive staff, and other stakeholders.
4. The organization has a Chief Information Officer (or similar position) who is a stakeholder and is involved in the organizational and technical strategy development.
5. **The technical strategy directly supports the identified business processes of each of the programs (eg, the technology supports the programmatic goals and objectives).**
6. The integration project has a written strategy that overtly addresses both the organizational and technical implications.
7. The technical strategy conforms to agency information technology standards, national technical standards, and other relevant norms.
8. The technical strategy details the IT infrastructure currently in use and planned for use during the lifecycle of the integration project.

F. Technical Support and Coordination—Critical Components for Technical Support and Coordination

1. **Project has adequate technical support either in-house or via a contracted agency, as discussed and reviewed by the CIO, executive committee, and/or project management team.**
2. **Technical staff has a process in place for communicating with program staff and routinely interacts with them.**
3. Project has a staff person designated as the translator between technical and programmatic staff. The business analyst often fills this role.
4. The integration project has an operational environment with service-level agreements, hours of support desk, etc.
5. The technical support staff is adequately trained in the technology that the project team plans to use.
6. A user-training program has been written into the technical strategy and has been coordinated with the IT management staff.
7. The agency has a supportive environment for technical and programmatic users that extends beyond initial training. This environment encourages ongoing training of technical and programmatic users.
8. The technology staff, required to support the new information system, has reviewed the implications of "bringing up" or "rolling out" the new system.

G. Financial Support and Management—Critical Components for Financial Support and Management

1. **The overall budget for the integration effort is realistic and inclusive of all elements critical to the project's success as defined by the project plan.**
2. **Funds are creatively sought and managed to meet the challenges of integrating information systems for categorically funded programs.**
3. Strategies for securing the funding requirements identified in the budgeting process have been written and assigned to personnel who are accountable.
4. The financial plan creates sustainability, minimized costs of financial shortages, and avoids overdependence on only a few streams of funding.
5. Budget plans are updated as financial information comes in.

H. Policy Support—Critical Components for Policy Support

1. **The policies and regulations that affect the systems being integrated or linked have been identified and reviewed.**
2. Policies and regulations that are barriers to the integration have been targeted for change with a written request or draft revisions of policies.
3. HIPAA compliance in confidentiality, privacy, and security has been determined and documented.
4. A confidentiality policy has been written that is consistent with federal and state laws and ap-

plies to everyone who has access to the system. The policy describes the use of the data and defines who has access to what information.

5. A security plan to safeguard data from unauthorized access or unwanted change or loss for the integrated system exists. The plan includes procedures such as audit trails, physical access controls, content access controls, access limitations, and disaster recovery processes.
6. Data sharing agreements between programs or agencies and all information users are up-to-date and support the integration plan.

I. Evaluation—Critical Components for Evaluation

1. **The evaluation plan includes process measures to monitor the project's performance (eg, task completion rates, timeliness of delivery) and outcome measures to assess the effect of integration of public health programs (eg, more children identified for necessary services, data quality improved).**
2. **The team member with project evaluation responsibility has been confirmed.**
3. Secure funding supports the evaluation effort, and the evaluation is funded at a level that enables the project team to learn. (Evaluation is usually 15–20% of the overall project's budget for innovative efforts.)
4. Stakeholders are involved in the identification of priority outcome measures.
5. A process is in place to share the evaluation results periodically with senior management and other key stakeholders (eg, establish a feedback loop to provide operational or tactical input and changes necessary for the project's success).

J. Integration Planning Matrix

Action items/goals	Target date for completion or next review	Strategic plans and action steps (refer to separate document, as needed)	Assumptions, risks, threats, dependencies, other notes	Owner/Stakeholder
<i>Project plan weekly update</i>	<i>Next review session: 04/15/2004</i>	<i>See attached file: project_plan_update.v2</i>	<i>See attached: Project Notes.v2</i>	<i>Kelly Jones, project manager; Joe Smith, client contact</i>

Note: Bolded components in sections A–I indicates priority.