

## Strategies and Priorities for Information Technology at the Centers for Medicare and Medicaid Services

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The Centers for Medicare and Medicaid Services (CMS) is the agency in the U.S. Department of Health and Human Services responsible for providing health coverage for almost 100 million beneficiaries, including seniors, people with disabilities, and low-income children and adults. Recent legislation places CMS at the center of efforts to increase the efficiency of U.S. health care services, move toward value-based purchasing, improve health care quality, reduce health disparities, increase adoption of health information technology, and collect and analyze data to promote health and wellness. CMS's ongoing operational requirements are currently being met with a very large and complex set of hardware, software, and communications systems that vary considerably in age, capability, and sophistication. In light of these challenges, CMS asked the National Research Council (NRC) to review the centers' plans for modernizing and developing its information systems.

### Background and Motivating Factors

Recent legislation places CMS at the center of efforts to increase the efficiency of U.S. health care services, move toward value-based purchasing, improve health care quality, reduce health disparities, increase adoption of health information technology, and collect and analyze data to promote health and wellness. It also charges CMS with a number of new large-scale health care initiatives, such as testing innovative care and payment models and overseeing state insurance exchanges.

However, CMS's current IT systems, which were primarily designed for claims payment, were not developed to support the information processing capabilities needed to carry out the new mandates. These new challenges arise even as CMS must maintain its current operations; keep pace with the volume of claims from a growing "baby boom," Medicare population; and regularly modify its business processes, software code, databases, and information technology (IT) systems to respond to revised rules and regulations.

In addition, the financial resources provided to agencies like CMS generally fall short of the level needed to properly integrate information systems or achieve the efficiencies (programmatic and operational) that would result. Inconsistent year-by-year funding makes it difficult to do long-term planning of the sort possible with capital budgets in enterprises of similar scale.

### Comprehensive Strategic Technology Plan

CMS will need to both modernize and transform its IT systems to meet these challenges, and a strategic technology plan is needed to guide these efforts. CMS's Office of Information Services has produced or is developing many components of such a plan. These efforts should be consolidated and built on to incorporate organizational, cultural, and governance considerations. Creating such a coherent and effective vision for IT requires development and evolution of an agency-wide strategic plan that treats IT as a critical enabler of CMS's business activities. The resulting technology plan will provide a valuable roadmap to guide future IT initiatives and investments. To implement this plan, a sustained, predictable, and appropriate investment is needed.

## Cultural Transformation

There are several related cultural and organizational transitions needed at CMS that would have positive repercussions for nearly all of CMS's activities:

- a cultural shift from viewing IT as simply an operational necessity to embracing IT as a critical strategic element;
- a cultural shift away from viewing IT leadership as overseeing a support group, complementing but not an integral part of the leadership mainstream, and toward viewing IT leadership as playing a key role in agency decision-making;
- an organizational shift from a mission centered on transaction processing to a mission centered on data, information, and information management;
- an organizational shift from a focus on paying claims to a focus on driving a combination of payment with improvements in quality, safety, and equity of health care and outcomes for individuals and populations; and
- an organizational shift from relying on heroics from IT staff to ensuring a sustained investment in and commitment to infrastructure, resources, and staff.

## Enhanced Skillsets

The CMS IT staff's current commitment to the CMS mission and to the welfare of the public is notable. CMS staff has shown extraordinary resourcefulness in managing a massive IT operation and successfully executing a number of difficult projects under significant time pressures. The development and implementation of CMS's strategic technology plan will require introducing new, and strengthening existing, skillsets—particularly in the areas of technology management and biomedical and health informatics.

## Data-Centric Future

The demand for CMS-managed data to support research and other external analytical purposes continues to grow and evolve. Improved decision making depends on access to timely data and the capacity to transform this raw data into proactive information intelligence. Several trends in health care illustrate this broad need for a more data-centric approach. These include advances in the biomedical sciences, the diffusion of electronic health records, changes in practitioner relationships, efforts toward comparative effectiveness, monitoring for improvement of quality and reduction of disparities, and increased consumer access to and demand for health and medical information.

## Conclusion

The urgency of the challenges faced by the nation regarding the cost and quality of health care, and the central role that CMS plays in meeting these challenges, spotlight the need for a 21st-century information infrastructure at the agency. Every American has a stake in the success of CMS's efforts. Sustained funding, an embrace of IT as a critical strategic asset, and appropriate integrated governance will enable the agency to meet the demands that the nation is placing on it.

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