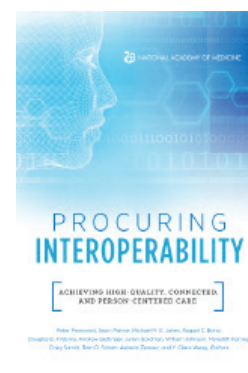


Procuring Interoperability

Achieving High-Quality, Connected,
and Person-Centered Care

A Special Publication of the National Academy of Medicine



The need to optimize technology procurement in health care

Realizing the promise of digital technology will depend on the ability to share information across time and space from multiple devices, sources, systems, and organizations. The major barrier to progress is not technical; rather, it is in the failure of organizational demand and purchasing requirements. In contrast to many other industries, the purchasers of health care technologies have not marshaled their purchasing power to drive interoperability as a key requirement. Careful procurement practices, supported by compatible interoperability platforms and architecture, will allow for safer and better patient outcomes; reduced administrative workload for clinicians; protection from cybersecurity attacks; and significant financial savings across multiple markets.

With funding support from the Gordon & Betty Moore Foundation, this NAM Special Publication represents a multi-stakeholder exploration of the path toward achieving large-scale interoperability through strategic acquisition of health IT solutions and devices. In this publication, data exchanges over three environments are identified as critical to achieving interoperability: facility-to-facility (macro-tier); intra-facility (meso-tier); and at point-of-care (micro-tier). The publication further identifies the key characteristics of information exchange involved in health and health care, the nature of the requirements for functional interoperability in care processes, the mapping of those requirements into prevailing contracting practices, the specification of the steps necessary to achieve system-wide interoperability, and the proposal of a roadmap for using procurement specifications to engage those steps. The publication concludes with a series of checklists for health care organizations and other stakeholders to use to accelerate progress in achieving system-wide interoperability.

Five action priorities for health care system leaders

Commit. Declare interoperability a primary priority and form an organization-wide interoperability steering group or related capacity to champion the IT acquisition strategy.

Identify. Charge this group with identifying the set of interoperability goals, requirements, and model use cases for the procurement process to support organizational priorities and patient outcome goals.

Collaborate. Create a sector-wide strategy and partner with other stakeholders to align on common contracting requirements and specifications to move toward the next generation of interoperable health IT.

Specify. Use the collaboratively developed specifications to state clear functional interoperability requirements in existing and future proposals, purchases, and contracts.

Assess. Establish and monitor short-term and long-term metrics for the progress and contributions of interoperability to system-wide learning and improvement of health outcomes.

Key roles in achieving interoperability

Procuring interoperability in health care begins at the individual level, with discussions among physicians, nurses, and other practitioners to inform how they currently use existing devices and products and what digital technologies could benefit them in the future. Understanding the needs of clinicians will also become critical in looking at interoperability from a person-centered view, which will be necessary as telehealth practices become more common.

Next, at the health care system level, this publication identifies certain elements that are necessary: an organization-wide interoperability steering group; a long-range interoperability road map; an interoperability needs identification process; and an interoperability specification process. Health care system leaders will need to convene stakeholders across their organizations to ensure that their needs are met and that they are bought in to the procurement plan.

Finally, successful government-level procurement strategies will require leadership to drive standards and prevent data hoarding and blocking. The elimination of these practices will not arise organically, but will necessitate regulatory disincentives and culture shifts. Similarly, government purchasers such as the Department of Defense and the Department of Veterans Affairs have substantial potential to drive interoperability through their contractual strategies and requirements.

AUTHORS

Peter Pronovost, Johns Hopkins Medicine (Chair)
Michael M. E. Johns, Emory University (Co-Chair)
Sezin Palmer, Johns Hopkins Applied Physics Lab (Co-Chair)
Raquel C. Bono, US Department of Defense
Douglas B. Fridsma, American Medical Informatics Association
Andrew Gettinger, Office of the National Coordinator of Health IT
Julian Goldman, Massachusetts General Hospital
William Johnson, WMJ Associates, LLC
Meredith Karney, Center for Medical Interoperability
Craig Samitt, Anthem Inc.
Ram D. Sriram, National Institute of Standards and Technology
Ashwini Zenooz, US Department of Veterans Affairs
Y. Claire Wang, National Academy of Medicine

Download the publication at nam.edu/Interoperability



NATIONAL ACADEMY OF MEDICINE

Note: The special publication described has undergone peer review according to procedures established by the National Academy of Medicine (NAM). Publication by the NAM signifies that it is the product of a carefully considered process and is a contribution worthy of public attention, but does not constitute endorsement of conclusions and recommendations by the NAM. The views presented in this publication are those of the authors and do not represent formal consensus positions of the authors' organizations, the NAM, or the National Academies of Sciences, Engineering, and Medicine.