Policy, economics and technology are driving primary care with unprecedented speed. Responding to this rapidly changing environment is essential for maintaining state-of-the-art care delivery. Although Health Information Technology (HIT) offers much promise to primary care, electronic health records (EHRs) have produced only modest improvements in quality. To understand how HIT could better meet the needs of primary care, the North American Primary Care Research Group (NAPCRG) gathered a select group of Family Medicine physicians from across North America and Europe with a broad range of informatics expertise. Over several months, the group discussed existing standards, classifications, modelling, communications, data structures, coding systems and how each of these enabled or hindered primary care delivery. During the discussions, a broad consensus emerged on HIT requirements essential to the primary care domain. This summary provides the author’s interpretation of the identified technical challenges in ontology, terminology, continuity and portability in terms more familiar to most Family Physicians.

Although standardized EHR capabilities are described by Health Level Seven International [(www.hl7.org) a global standards development organization for health information], little is known about specific capabilities important to primary care. The committee characterized information services in terms of the capacity to support Family Medicine core values. Enhancement of continuing, comprehensive, compassionate and personal care provided an indication of responsiveness to primary care. The recommendations below reflect the most important challenges identified and provide a qualitative measure to discriminate HIT support for essential primary care services. The committee focussed on areas with known problems in order to guide providers, promote research and spur development by vendors.

Supporting the personal relationship

Good technology helps family doctors do what they do best. At the heart of family medicine is the recognition that every patient is a person and not a diagnosis. Technology should enhance the family physician’s ability to maintain a personal professional relationship, capture patient individuality and provide a context for treatment. Standard templates and checklists communicate less than context-sensitive screens capturing the complexity of multiple diseases across visits.

Integrating standard workflow

Standardized practice workflows and jobs with common expectations allow the business of primary care to be more transparent, ensure standard services, promote dissemination of better methods and decrease cost of shared solutions. Existing models inadequately describe people and interactions necessary to complete a job in primary care practices. Integration of formal practice models ease implementation and increase effectiveness.

Capturing the diagnostic process

The diversity of presenting complaints is unique to primary care. Most patient visits relate to the process of diagnosis. The presentation provides context, a patient ‘voice’ reflecting initial concerns, that is essential for improving the diagnostic process. Since billing is based on diagnosis, steps in reaching a diagnosis may not be captured. Important data elements including presenting complaint, cause of death, family history, source of social support and data source should be electronically available for evaluation, extraction and communication with other providers. Coding standards should track disease over time, across visits and account for changing symptoms and co-morbidities. The Committee examined multiple hierarchies, classifications and vocabularies and recommended use of the International Classification of Primary Care-2 with Systematized Nomenclature of Medicine–Clinical Terms as a reference terminology.

Care coordination

As the principal health care coordinator, communication is essential. The ability to share information with
other health care team members is dependent upon adoption of national standards and vocabularies. Ultimately, these standards allow patients a more central role in managing information. Although the Certification Commission for Healthcare Information Technology (CCHIT) has criteria for interoperability, CCHIT capabilities for certification are basic. Although technologies are available, communication beyond a single vendor remains a challenge. Contrary to conferring a market advantage, data locked in vendor-specific software compromises primary care core values, care coordination and patient safety.

Continuity of care

The patient-centred medical home reflects the value of continuity and the personal relationship between patients and providers. This new practice model supports care coordination between office visits and requires new functionality including disease registries with clinic and role-specific rosters, performance measures and actionable information to drive improvement. Integrating open data standards facilitates the introduction of component solutions providing greater flexibility for managing change than large centralized multi-purpose architectures.

Improving HIT responsiveness to these services will enhance the ability of primary care practices to provide care consistent with the core values Family Medicine.

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References