

## Health Information Asymmetries

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Studies show American patients “are constantly at risk of being harmed by the healthcare system because critical information on their health status is not easily accessible.”<sup>1</sup> The inaccessibility of patient health data is a feature of American health care businesses, which are individually isolated by reimbursement constraints that impede the facile sharing of patient records. This isolation of patient health data occurs whether the clinical data is on paper or in an electronic health record (EHR). Passing legislation to compel the purchase of “certified interoperable” EHRs will not automagically make the patient data agile and networkable, because moving all current paper health records to EHRs will not address the financial disincentive among health care providers to share patient data<sup>2</sup> nor will it create networks to orchestrate the sharing of patient data.

The current business model for patient care imposes financial and productivity penalties on site level efforts to make health data interoperable between separate patient care systems.<sup>3</sup> As patients circulate among health care providers, clinical data is stranded in paper charts or in EHRs at each facility. The standard practice in American health care is to maintain separated and inaccessible silos of patient data. Data hoarding, driven by an unforgiving reimbursement system, institutionalizes health information asymmetries between health care enterprises, and contributes directly to unacceptably high rates of preventable medical errors.<sup>4</sup>

Examples of institutional barriers to the sharing of health data:

- Closed clinical information feedback loops financially reward the hoarding and withholding of patient data<sup>5</sup> (e.g., lack of access to external patient data leads to duplicate tests which reward each health care enterprise with extra revenue while increasing costs to the entire health care system)
- Despite decades of advocacy,<sup>6</sup> incentives<sup>7</sup> and development, the adoption of EHRs for patient care remains low.<sup>8</sup> Most patient charts (as much as 82% depending on the study) are still on paper.
- Benefits of EHR adoption accrue to third parties who do not bear the cost of the installation and operation of the software, hence the rate of adoption remains low<sup>9</sup>
- Lacking market based incentives for true data interoperability, health information technology vendors build software solutions which operate as data silos by default, and are maladapted to interoperability
- A robust literature on the unintended consequences of EHR adoption<sup>10, 11, 12</sup> acts as a brake on unrestrained EHR sales pitches from software vendors

If all clinical practices adopt EHR software immediately, there is no proven network service to enable the patient health data to interoperate, no standard national framework for the legal interstate sharing of patient data, no ready business model to operate a health data exchange service and no facile patent recourse to audit or track the disclosures of their personal health data. Of course, if two health care organizations agree to share electronic clinical data, a sharing solution can be engineered, occasionally at great expense, between any two sites. But this one-off approach to interoperability is impractical for a regional (or nationwide) network of individual health care facilities. Building bilateral connections between every health facility in a community is an infinite



solution to a finite problem. It is inefficient and unaffordable. However, if each facility builds one data interface to a local health information exchange (HIE), then it is possible to imagine a practical electronic health data network. This network effect, the essence of the HIE concept, begins to address the asymmetries of patient data scattered across separate healthcare facilities.

Clinical data hoarding can be partially addressed by aggressive adoption of EHRs combined with aggressive development of HIE services. Paired, these incremental steps will gradually make information more agile and more available. However, the combination of EHRs installed in all the practices along with a nationwide network of HIEs will not fully mitigate all of the disincentives in American health care that obstruct the sharing of clinical information among health care providers, because there is more to health data asymmetry than the virtual agility of the data itself.

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- <sup>1</sup> de Brantes, Emery, Overhage, Glaser & Marchibroda. The Potential of HIEs as Infomediaries. *Journal of Healthcare Information Management*. Winter 2007, Vol 21, No. 7, p.69-75
  - <sup>2</sup> Simborg. Promoting Electronic Health Record Adoption: Is it the Correct Focus? *Journal of the American Medical Informatics Association*, March-April 2008, Vol 15, No.2, p127-129
  - <sup>3</sup> Brailer. Interoperability: The Key To The Future Health Care System. *Health Affairs*. 19 January 2005, <http://content.healthaffairs.org/cgi/content/abstract/hlthaff.w5.19v1.pdf>
  - <sup>4</sup> Institute of Medicine. To Err Is Human. *National Academies Press*. 1999.
  - <sup>5</sup> Diamond and Shirky. Health Information Technology: A Few Years of Magical Thinking? *Health Affairs*, 19 August 2008.
  - <sup>6</sup> The 25th annual health care trade show known as *TEPR* (Towards Electronic Patient Records) will be held in 2009, see <http://www.medrecinst.com/TEPR/TEPR.php>
  - <sup>7</sup> Kolodner, Cohn, Friedman. Health Information Technology: Strategic Initiatives, Real Progress. *Health Affairs*, 19 August 2008.
  - <sup>8</sup> DesRoches, Campbell, et al. Electronic Health Records in Ambulatory Care - A National Survey of Physicians. *New England Journal of Medicine*, June 2008, 359:50-60.
  - <sup>9</sup> Bates. Physicians and Ambulatory Electronic Health Records. *Health Affairs*. September/October 2005, Vol 24, No 5, p.1180-1189
  - <sup>10</sup> Sittig, Krall, et al. Emotional Aspects of CPOE: A Qualitative Study. *Journal of the American Medical Informatics Association*, September-October 2005, Vol 12, p.561-567.
  - <sup>11</sup> Campbell, Sittig, et al. Types of Unintended Consequences Related to CPOE. *Journal of the American Medical Informatics Association*, September-October 2006, Vol 13, p.547-556.
  - <sup>12</sup> Ash, Sittig, et. al. Extent and Importance of Unintended Consequences Related to CPOE. *Journal of the American Medical Informatics Association*, July-August 2007, Vol 14, p.415-423.