An Alternate Viewpoint on Information Sharing: There is no Paradox

Larry Ozeran[1]   Richard Schreiber[2]

[1] Clinical Informatics, Inc., Yuba City, California, United States
[2] Physician Informatics and Department of Medicine, Geisinger Holy Spirit, Geisinger Commonwealth School of Medicine, Camp Hill, Pennsylvania, United States

Address for correspondence Larry Ozeran, MD, FAMIA, Clinical Informatics, Inc., 1002 Live Oak Blvd., Suite C, Yuba City, CA 95991, United States (e-mail: lozeran@clinicalinformatics.com).

In "*A Viewpoint on the Information Sharing Paradox*" by Stenner et al,[1] the authors outline a paradox that calls into question the value of more health data. We contend that considering the root cause of information overload—data presentation—there is no paradox.

The authors accurately describe the events leading to adoption of the information blocking rules. While recognizing that "*information overload occurs when more information is presented than can be readily processed*," the authors' viewpoint seems to focus on "*more information*" rather than "*presented*." Their suggestion that "*…the information-receiver may start filtering, summarizing, and routing information, potentially breaking the information blocking provision*" does not appear consistent with the regulation. Information blocking is about ensuring transmission of the health data. It would be irresponsible of the receiving entity not to enable filtering and summarization. All the data should be available, if the clinician wishes to review it, but good user-centered design would support a hierarchical approach to data visualization. Receiving the patient data and keeping it in a coherent format are distinct from how to display the data to enable, rather than obstruct, clinical decision-making.

The authors make several factual statements, but those facts may not necessarily lead one to conclude there is a paradox. They note that "*easily distinguishing relevant information from nonrelevant information is not possible in our current systems*." Is this failure of current electronic health records (EHRs)[2] intended to bolster their argument for a paradox? Equating clinical data to spam email does not seem appropriate. Some percentage of clinical data will be relevant, perhaps most of it, and some clinical data may even be critical to providing best clinical care and avoiding complications or even death. The concerns expressed about alert fatigue reflect a sad and true reality, but the failures of modern alerting systems are not a result of data or data volume, but rather the failure of commercial EHRs to manage and present these data appropriately.[3–5] The authors are also correct in stating that the information blocking rule "*amplifies the burden of information reconciliation on information-receiving health care entities*," but that is not a paradox. That will always be true when a clinician receives new information. Reconciliation of existing data with incoming data should always occur if we want to maintain accurate records. Are the authors implying that these additional data are not worth the cost of reconciliation?

We find it difficult to support any of the recommendations of the authors because they would move the country away from rather than toward better care, better population health, and lower cost. Our first goal as clinicians is to *do no harm*. How can we do that if we do not leverage the data that exist about our patient?

There is no need for policies to protect clinicians from more data. There is a huge need for better software. This is an area where we as informatics professionals must promote and implement best practices in health informatics. The American Reinvestment and Recovery Act of 2009 (ARRA) incentivized the adoption of EHRs nationally. In so doing, ARRA removed the market forces that would otherwise have led to a demand that the products meet user requirements prior to purchase. The ARRA incentives and penalties often led to administrative and financial decisions that muted the voices of clinical concern.[6] The root cause of information overload today is the failure of software to manage health data effectively in a way that those data are most useful to the clinician using the software.

As informatics professionals, the American Medical Informatics Association Code of Ethics drives us to "encourage the adoption of informatics approaches supported by adequate evidence to improve health and healthcare."[7] It is not productive toward our national goals to suggest that more clinical data could be harmful. It is productive to focus on improving our health information technology infrastructure to support and prioritize user-centered design, so that the data become the foundation for health improvement.

It is highly unlikely that we will undo ARRA or remove our digital record systems to regain market forces. The 21st Century Cures Act that led to the information blocking regulations was necessary to modify the unintended

consequences of ARRA to promote better health care. It seems likely that further legislation and regulation may be necessary to push improvements in user-centered design to reduce both alert fatigue and information overload. Let us not look at how adding more data to bad software will make the user experience worse, and then blame the data. Let us work with legislators, regulators, and software vendors to create the conditions that will lead to improving the software.

Protection of Human and Animal Subjects
There were no human and animal subjects involved in this project.

Conflict of Interest
None declared.

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