



JULY 2024

Industry-wide Outcome Data Sharing Will Improve the Way Behavioral Care is Delivered and Reduce the Cost of that Care

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In our last [commentary](#) we reviewed how the need for industry wide, standardized quality metrics becomes evident as management of care delivery organizations seek to optimize the delivery of high quality clinical care while realizing attractive returns for investors. In fact, better clinical care, based on measurable standards, can lead to better health outcomes and better business results.

Is there evidence that industry wide data sharing can enable better clinical, organizational and financial results? Will hyper competitive organizations consider participation, sharing de-identified data with their industry peers? How can the needed standards be created? How can they be implemented across various organizations with different governance, cultures and business models? Can industry wide quality metrics be any more than a pipe dream?

In fact, industry wide data sharing among fierce competitors is an increasingly common practice in many industries (including healthcare) and we can learn from their experiences how the benefits of data sharing platforms accrue to all participants. There are several industries that we think are particularly compelling to review.

Financial Services

Probably the best known example of cross industry data sharing by arch competitors is the creation of the Bloomberg Company. In the 1980's, Mike Bloomberg established a shared data business involving arch competitors on Wall Street as his partners. Over the next decade he succeeded in attracting most major investment and commercial banks around the world to his platform to deliver a complete securities data solution to better price positions and more efficiently allocate firm capital.

There was a regulatory and risk management need in the 1980's to price trader positions accurately based on "independent" market data for each security (in particular in the fixed-income markets where accurate and complete data was not available in one comprehensive solution). Regulators increasingly applied pressure to mark the positions the firm held based on a "true" market price (not an internal price) to enable the more efficient management of risk and the related capital allocation required to support trader positions. This need motivated The First Boston Corporation and Merrill Lynch (arch competitors) to partner with Mike Bloomberg at the beginning of his business (early 1980's) to develop an "independent" and reliable source of securities pricing data (initially only in fixed income). Over time, Bloomberg added Lehman, then Mike Bloomberg's former firm - Salomon, and JP Morgan - and finally, Goldman, and all major Wall Street firms in the U.S. and abroad quickly followed. After a short time, the entire "bulge bracket" of Wall Street, London and Asia was involved in an industry-wide, independent data solution that solved a problem (regulatory and pricing of a position) for them, delivered by Bloomberg. If one of them had sought to do this alone (Goldman considered it), they would not have had a "complete" or "independent" data solution, and the basic analytics tied to that high quality data.

Instead, they treated Bloomberg as "Switzerland" or the neutral party. The platform became their entire independent, de-identified data solution, and each firm was part of making that data solution the best in the world. They each contributed their own securities data daily; Bloomberg de-identified the data, provided high quality and broad data coverage of all fixed income securities, applied basic analytics (not a competitive issue for the partner firms), and then rented it back to all participants who contributed to making this data set the highest quality fixed income data in the financial industry.

The firms that contributed and subscribed to the Bloomberg service all competed against each other every day in their core businesses, but with the creation of Bloomberg, could now help create and use a more complete security data solution for fixed income, a more accurate pricing indication by country, security, currency and sector, for optimally managing their positions and create more reliable benchmarks for tracking performance by security and by sector (1).

Healthcare

In its March 2022 edition, the Harvard Business Review published “How Collaboration Can Drastically Improve US Healthcare” authored by Ryan Howard, Thomas Leyden, and Michael Englesbe (2). They summarize the article as follows:

One of the positive results of the pandemic has been increased collaboration among hospitals in metropolitan areas of the country. But the value of collaboration isn't limited to crises. It can be a mechanism for improving quality and reducing costs in normal times. Collaborations among dozens of hospitals and physician organizations in Michigan that date back to 1997 are a case in point. They have scored impressive results in a variety of areas, including cardiovascular care, bariatric surgery, blood clot prevention, general surgery, joint replacements, and urology.

The article outlines the success of a collaborative program in the state of Michigan facilitated by their Blue Cross Blue Shield plan. Originally including five hospitals, it grew to include over 50 hospitals across the state, with the mission to improve cardiovascular care. Participants shared “deep clinical details i.e., how each hospital was treating the same disease, how many patients at each hospital had a complication, and whether each hospital was using the best available technology.”

1 Personal communication, one of the authors (WB)

2 [How Collaboration Can Drastically Improve U.S. Health Care \(hbr.org\)](https://hbr.org/2022/03/how-collaboration-can-drastically-improve-us-health-care/)

This was the first of nearly 2 dozen collaborative quality initiatives in Michigan, which achieved remarkable results:

- *Bariatric surgery – 56% reduction in mortality*
- *Blood clot prevention – 175,000 unnecessary lab tests prevented*
- *Cardiovascular care – 51% reduction in bleeding complications*
- *General surgery – 23% reduction in surgical-site infections*
- *Hospital medicine – Reduction in unnecessary antibiotics, leading to a change in national guidelines*
- *Knee and hip replacement – 53% fewer discharges to extended care facilities after surgery*
- *Urology – 50% reduction in procedure-related hospitalizations*

The key success factor was data transparency:

“This transparency enabled these hospitals to identify previously invisible performance gaps, develop new solutions, and change practices. Rather than trying to outcompete each other, they started learning from each other. If a hospital had impressively low infection rates after surgery, the collaborative turned to them to guide infection prevention protocols for the group. If another had a particularly successful smoking-cessation program, that approach was adopted throughout. Ultimately, this collaboration improved the quality of care and reduced cardiovascular complications, hospital readmissions, costs of care, and death across the state.”

Major EHR Technology Companies

The largest, most inclusive health data collection in the private sector resides in electronic health records (EHR) systems. While EHRs are rich in clinical, utilization and cost data, they are limited by virtue of the confidential nature of much of the data, the fact that data collection often ends at hospital discharge, and the unbridgeable gaps between different EHR systems.

Identified data can be shared with patient permission but de-identified data aggregation is beginning to occur and will likely have a positive impact on the industry’s clinical outcomes.

By way of example, Epic Cosmos is a dataset created in collaboration with a community of health systems using Epic and is designed to improve patient care. “By combining their data, participating organizations and Epic can make new discoveries and advance medicine. Cosmos also powers tools at the point of care, providing insights to clinicians that are tailored to the patient in front of them. Cosmos goes well beyond diagnoses and medications found on claims transactions and includes patient-generated health data, birth records, vitals, and social drivers like transportation and financial security assessments.” (3)

Healthcare Payers

Healthcare payers, including government agencies, employers, and insurance companies, aggregate enormous amounts of data, and their data sharing practices can be deployed to benefit both themselves and their competitors. Examples of how the payer industry shares or provides access to de-identified patient claims data for private and public use are of interest. There is a plethora of cost data to advance better control of costs incurred in a claim and to support the reputation of the organizations originating the research.

- **Insurance Claims Data Sharing**

Employers are pushing for greater transparency, urging payers to provide cost data without restrictions. This move benefits all competitors by fostering informed decision-making and cost containment. The Consolidated Appropriations Act of 2021 requires health plans and insurance companies to share information about the cost and quality of medical services.

3 <https://cosmos.epic.com/about/>

Claims data from multiple insurance carriers can be shared at the State and Regional level in what is referred to as an All Payer Claims Database (an “APCD”), often mandated by the State. For example, Connecticut acquires claims data from payers doing business in the state and shares those data under strict rules with qualified researchers. Other New England states (MA, RI, VT, NH and ME) all have their own APCDs and exchange best practices through a collaborative New England States Consortium Systems Organization (NECSCO). Each state collects with various degrees of completeness raw claims data and that data is de-identified by an expert third party. Again, the purpose is to understand claims and control of costs.

Insurance consortiums like Healthcare Cost Institute was formed by a group of large insurance carriers (e.g. Aetna, CIGNA, United Health) to conduct research on claims and cost, based on this publicly available information and their own private data.

- **Employer Claims Data Sharing**

Employer industry groups like the Leapfrog Group have been formed to aggregate, analyze and share clinical quality data from hospitals and claims data from self insured companies, to support quality improvement and cost reduction with managed care companies. This movement carries over to specific industry groups like autos or large tech groups sharing de-identified data to extract value from providers.

Employers increasingly adopt integrated health care benefits to enhance member engagement, patient experience, and cost control. Integrated health care benefits interweave pharmacy, ancillary, supplemental health, and other benefits data into the employer’s health plan. This facilitates smoother communication between employees’ providers and streamlines care coordination. Payers play a crucial role by sharing relevant outcomes data with employers (4). By making integrated health care benefits data available, payers help employers measure return on investment and optimize health plans.

- **Government Claims Data Sharing**

One of the largest repositories for healthcare claims data in the world is, of course, owned by the Center for Medicare and Medicaid Services (CMS). This data is available for analysis by any organization desiring to understand quality and cost of care.

4 <https://healthpayerintelligence.com/news/how-employers-payers-can-pursue-integrated-health-care-benefits>

- **Consortia Claims Data (Academic, government & large healthcare systems)**

One of the more interesting developments to flow from the tracking of patient data is the joint venture between large healthcare systems like Kaiser and academic institutions. This collection of data is largely originated and provided to support analysis enabled by grants provided by government and by foundations.

The provider conversation with payers is not as productive as it could be. For some time payers have benefited from their data aggregation of utilization and claims (cost) data. *What payers are missing, especially in mental health, is objective data measuring outcomes or agreement on standardized clinical benchmarks with which to track the effectiveness of care.*

Pharma

The pharmaceutical industry has made strides in data-sharing practices over the years, aiming to foster transparency, scientific advancement, and better decision-making. Some key aspects of how data sharing benefits both the industry and its competitor members include:

In 2013, the Pharmaceutical Research and Manufacturers of America (PhRMA) and the European Federation of Pharmaceutical Industries and Associations (EFPIA) endorsed principles for data sharing in order to promote transparency, quality research, and informed decision-making. These commitments include:

1. Share participant-level data, study-level data, and protocols from clinical trials of United States (US) and European Union (EU) registered medicines with qualified researchers.

2. Provide public access to clinical study reports (CSR), at minimum synopses, from clinical trials submitted to the Food and Drug Administration (FDA), European Medicines Agency (EMA), and EU Member States.
3. Share summary result reports with clinical trial participants.
4. Establish public web pages displaying the companies' data-sharing policies and procedures.
5. At a minimum, publish results from all phase 3 and any clinical trial of significant medical importance.

Since 2013, policies and recommendations for sharing specific data elements have been developed by various organizations, including the FDA, EMA, Health Canada, World Health Organization (WHO), US National Institutes of Health (NIH), Institute of Medicine (now the National Academy of Medicine), White House Office of Science and Technology Policy, International Committee of Medical Journal Editors (ICMJE), Bill and Melinda Gates Foundation, Wellcome Trust, and the GO FAIR Initiative, among others, highlighting significant developments in the data sharing landscape.

Experts conclude that data sharing plays a vital role in fostering scientific progress and supporting well-informed decisions in clinical practice, but further policy and process updates are needed to enhance accessibility and transparency. These achievable steps aim to facilitate the development of a data-sharing ecosystem that prioritizes science and patient-centered care, and is in the best interest of all institutions involved in clinical trials, including companies, universities, PhRMA/EFPIA, medical societies, advocacy groups, regulators, funders, and journals, because the ultimate goal is to ensure efficient resource utilization, foster scientific advancement, and facilitate the best decisions for patients (5).

5 Modi, N.D., Kichenadasse, G., Hoffmann, T.C. et al. A 10-year update to the principles for clinical trial data sharing by pharmaceutical companies: perspectives based on a decade of literature and policies. *BMC Med* 21, 400 (2023). <https://doi.org/10.1186/s12916-023-03113-0>

In Europe, a public private partnership was established in 2007, the overall goal of the *Innovative Medicines Initiative* being “significantly improving the efficiency and effectiveness of the drug development process with the long-term aim that the pharmaceutical sector produce more effective and safer innovative medicines. A detailed analysis by independent experts of IMI’s first projects reveals that they are generating socio-economic impacts... projects are making concrete improvements to pharmaceutical research and development (R&D); leveraging funding; creating new knowledge and tools; and making Europe an attractive place to carry out research.” (6)

In fact it was so successful that IMI1 was followed in 2014 by IMI2, “continuing to focus on the needs of patients and society, and on delivering tools and resources to speed up the development of urgently-needed treatments... The legislation creating IMI2 also emphasizes the need to bring partners from other sectors (e.g. diagnostics, animal health, IT, imaging, etc.) into the IMI community.”

Based on its continued success, IMI was followed in 2021 by the creation of IHI (Innovative Health Initiative). Like IMI, “IHI will work by bringing together diverse stakeholders (universities, companies large and small, and other health stakeholders) in collaborative projects that address disease areas where there is a high burden on patients and/or society. However, in IHI there will be a much greater focus on cross-sectoral projects including companies active in the digital area (7).

6 <https://www.ihf.europa.eu/about-ihf/history>

7 <https://www.imi.europa.eu/about-imi/innovative-health-initiative>

By way of example, a June 2024 notice of funding opportunities for collaborative research included the following topics:

- A city-based approach to reducing cardiovascular mortality in Europe
- Novel endpoints for osteoarthritis (OA) by applying big data analytics
- Modeling regulatory sandbox mechanisms and enabling their deployment to support breakthrough innovation
- Patient-centered clinical-study endpoints derived using digital health technologies (8)

Management Consulting Perspective

Consulting groups have recognized the importance of sharing data across industries to deliver business value.

- “Gartner predicts that by 2023, organizations that promote data sharing will outperform their peers on most business value metrics.” (9)
- “Arthur D. Little: INSIGHTS FOR THE EXECUTIVE: Across all industries, data is the fuel for increased collaboration and innovation to meet the twin needs of sustainability and customer-centricity... Data needs to be shared beyond traditional players, widening ecosystems to bring in new entrants for the greater good, while enabling existing companies to embrace new opportunities and reap the benefits of innovation. However, to be shared effectively, data needs to be freed from silos and made interoperable and available to all, while strong governance and consent mechanisms are ensured.” (10)
- MIT’s Sloan School of Management: Incorporating external, or third-party, data is an important part of data analytics programs as companies look for strategic insight from outside their firms.

8 <https://www.ih.europa.eu/apply-funding/future-opportunities>

9 <https://www.gartner.com/smarterwithgartner/data-sharing-is-a-business-necessity-to-accelerate-digital-business>

10 <https://www.adlittle.com/en/insights/prism/how-data-sharing-essential-deliver-industry-wide-transformation>

A 2018 MIT Sloan Management Review data and analytics report found that the most analytically mature organizations use more data sources, including data from customers, vendors, regulators, and competitors. “Analytical innovators,” or companies that incorporate analytics into most aspects of decision-making, are four times more likely than less mature organizations to use all four data sources and are more likely to use a variety of data types, including mobile, social, and public data.

And organizations that share their own data with customers, vendors, government agencies, and even competitors report increased influence in their business ecosystem, the survey found... “In all sorts of areas, people are using third-party data to augment the data they already have,” said Asif Mahammad Syed, the vice president of data strategy at the Hartford Steam Boiler Inspection and Insurance Co. “In most cases, you can’t build high-quality predictive models with just internal data.” (11)

11 <https://mitsloan.mit.edu/ideas-made-to-matter/why-external-data-should-be-part-your-data-strategy>

Conclusion

In thinking about how best to produce patient outcome data to deliver positive clinical and organizational impact, the natural first question is: “Why has it taken so long to deliver an industry-wide solution in behavioral care?” As the CEO of one large investor put it recently: “It's all about the lack of high-quality data at scale in behavioral care” (12). Without agreed-upon protocols for outcome testing and rigorous collection and analysis of this data, the provider industry will remain the weak link at any negotiating table with payers and regulators. Fortunately, an industry-agreed solution can change this positioning quickly.

Mike Bloomberg put it nicely recently: “By harnessing the power of data, news, and analytics, we help organize, understand, and bring clarity to a complex world.” There is no reason why the behavioral health industry cannot do the same today.

If we observe closely the success of sharing deidentified, formerly proprietary data, then we can ask what are the key steps the behavioral health industry needs to take to standardize benchmarks of care to the benefit of the patient, the provider organization (and its regulators), and the payers. In our next paper, we will summarize the key issues we think are germane to the implementation of a shared data platform for behavioral health providers.

The implementation of this industry-wide solution will empower providers to deliver high-quality care and to be paid properly based on the well-defined outcomes that are delivered.

12 Personal communication with WB

APPENDIX A

Sharing data to establish and disseminate best practices is common in many industries. Here are a few key industries that actively engage in data sharing for this purpose:

(Outlined above)

1. Finance:

- Examples: Banks, insurance companies, and financial service providers share data to identify trends, prevent fraud, and improve risk management.
- Platforms: Financial information networks, industry consortia, and regulatory reporting systems.

2. Healthcare:

- Examples: Hospitals, clinics, and research institutions often share data to improve patient outcomes, develop treatment protocols, and enhance operational efficiency.
- Platforms: Health Information Exchanges (HIEs), clinical registries, EHR companies and research networks.

3. Pharmaceuticals and Biotechnology:

- Examples: Pharmaceutical companies, biotech firms, and research institutions share clinical trial data, research findings, and drug safety information to accelerate drug development and ensure patient safety.
- Platforms: Clinical trial registries, collaborative research networks, and regulatory databases.

4. Manufacturing:

- Examples: Manufacturers share data on supply chain management, production techniques, and quality control to optimize operations and reduce costs.

5. Platforms: Industry associations, collaborative platforms, and supply chain networks. Technology and Software Development:
 - Examples: Tech companies share data on security breaches, software performance, and user behavior to develop better products and security protocols.
 - Platforms: Open source communities, industry conferences, and collaborative research projects.
6. Education:
 - Examples: Schools, colleges, and educational research organizations share data to improve teaching methods, curriculum development, and student performance.
 - Platforms: Educational research databases, consortiums like the National Student Clearinghouse, and academic conferences.
7. Retail
 - Examples: Retailers share sales data, customer behavior insights, and inventory management techniques to enhance customer experiences, product development, and optimize operations.
 - Platforms: Retail analytics platforms, industry benchmarks, and collaborative research projects.
8. Agriculture:
 - Examples: Farmers, agribusinesses, and research institutions share data on crop performance, weather patterns, and sustainable practices to improve yield and sustainability.
 - Platforms: Agricultural extension services, research collaborations, and data-sharing platforms like the Global Open Data for Agriculture and Nutrition (GODAN).
9. Transportation and Logistics:
 - Examples: Airlines, shipping companies, and logistics providers share data to improve route efficiency, reduce costs, and enhance safety.
 - Platforms: Industry alliances, shared logistics networks, and regulatory reporting systems.

10. Energy:

- Examples: Utilities, energy companies, and research institutions share data to improve energy efficiency, develop renewable energy sources, and enhance grid reliability.
- Platforms: Industry consortia, smart grid initiatives, and collaborative research projects.