JPMSA

JOURNAL OF THE PHARMACEUTICAL MANAGEMENT SCIENCE ASSOCIATION

SPRING 2017 | IN THIS ISSUE:

pmsa

PHARMACEUTICAL MANAGEMENT
SCIENCE ASSOCIATION

How a Lack of Data Integration Can Hurt Patient Services

Anshul Agarwal, Principal, ZS

Abstract: What are the consequences of an uninformed decision? When it comes to patients and their journeys toward health, the stakes are very high. Pharmaceutical companies struggle to fully understand each patient: Patient data is limited in access, and companies must gather disparate information across multiple sources to paint a full picture of the patient journey. While many data-savvy pharmaceutical companies understand the value of new data sources, such as electronic medical records and specialty pharmacy data, those information sources don't tell the whole story. Data integration is the key—and the future—for pharmaceutical companies looking to create collaborative patient services teams that can design effective treatment plans and customized patient experiences, resulting in improved outcomes for patients. With improved insight, companies are able to start, retain and take patients through the entire journey with better success.

Recently, Bill was diagnosed with non-Hodgkin lymphoma and prescribed a new medication. Shortly after, the reimbursement hub team calls Bill to welcome him and delivers a complimentary supply of his prescription. The next week, Bill receives a second welcome call, but this time it's from the specialty pharmacy team saying that his prescription has been approved and will be delivered in a few days. However, Bill has now received a second complimentary prescription, and his commercial shipment is on the way.

The next day, Bill receives another phone call. This time it's from a nurse educator on the pharmaceutical company's manufacturing team, and she discusses the medication's potential side effects and how to manage them. One week later, Bill receives two more compliance calls before his next shipment of the drug. Needless to say, these redundant calls from multiple patient services groups and the abundance of medication leave Bill feeling confused about his main point of contact and unsure of his required dosage.

This is a hypothetical example, of course, and Bill is a hypothetical patient, but the experience unfortunately is a common one. Patients often are stepping into unknown territory when they start a new treatment, and their inherent uncertainty or confusion often is exacerbated—rather than alleviated—by the "helpful information" that they receive from providers, payers and pharmaceutical companies. Put simply, a lack of coordination and data integration among pharmaceutical patient services teams can result in a disjointed, negative patient experience.

From the pharmaceutical company's perspective, the situation illustrated in that hypothetical example also is riddled with problems. Without the complete view of the patient shared among patient services teams, those teams are unable to design effective services that work together to assist the patient along his entire journey—resulting in inefficiencies, wasted spending and missed opportunities.

An incomplete view of the patient journey also inhibits the ability to measure a patient services effort's success: The nurse educator, for example, thinks that her follow-up phone call lead Bill to stay on his medication for the duration of his therapy, but the specialty pharmacist, who has been making regular compliance and adherence calls, thinks that he is the reason that Bill has stayed on his medication. Moreover, this inefficiency could lead to a liability risk. Patient services teams working in isolation could miscommunicate or deliver mixed messages regarding a critical element of a patient's therapy, such as dosage adjustment.

To improve the patient experience—an imperative for all of healthcare—it's key to understand the patient journey in its entirety, from diagnosis to recovery. This holistic view helps patient services teams work together across the organization to design effective treatment plans and customized patient experiences, resulting in improved outcomes for patients.

Solving the Data Problem
Most pharmaceutical companies are struggling to use data and technology to glean the necessary insights. Access to patient data is limited, and the data that is available exists in silos, so companies must gather disparate data sets from across multiple sources. However, now that pharmaceutical companies are starting to identify patient-level data—largely thanks to the recent maturation of certain data sources, like electronic medical records, claims data and specialty pharmaceutical data—technology has improved as a result. Data providers are better enabled to share patient-level data, and an influx in data platform options now help pharmaceutical companies combine data sources and view data more securely.

Pharmaceutical companies need to go into data integration with clear business goals in mind. Companies need to assess whether they're aiming to improve patient services overall, or if there's a particular team within patient services that needs to become more successful. Once they've identified their business goals, companies can get started with their data integration strategy by addressing these six key elements:

1. **Master data management:** Implementing an MDM system is the first step to conforming multiple sources of data at the patient level. To do this, the MDM system uses a unified patient ID—such as first name, ZIP code, etc.—that facilitates integration. During initial data processing, an MDM system also will limit the use of sensitive patient information. Clean, standardized data is a core foundation for integrated data, so this step is crucial.

2. **Developing a "secure enclave" for protected health information:** HIPAA regulations limit access to secure data, but within a secure platform, data scientists can work to integrate and enrich patient data, and patient services teams can leverage the integrated, de-identified data to improve their programs and support services. All teams "win" within this environment, and confidential patient information still remains confidential.

3. **Cultivating an efficient ecosystem:** Stakeholders within a pharmaceutical company must have access to an efficient ecosystem that allows them to work within clearly defined rules for leveraging data. This ecosystem allows those who are unable to view patient-identified data to continue to weigh in on strategy decisions with the patient services teams. This is an important step for those on the business side, keeping them connected and able to make changes on a future business strategy.

4. **Integrating non-pharmaceutical data sources:** To build a more complete view of the patient, companies need to get a view of the patient beyond her disease, and third-party data sources can help. While data such as media consumption and lifestyle habits might not seem relevant for pharmaceutical companies, information like this can help patient services teams devise the best way to engage with a patient to keep her on therapy, for example. For companies that want to continue to improve their patient services offerings, this is an important step because they can begin to identify commonalities among patients on the whole versus segmenting patients based solely on observations on symptoms and diagnosis.

5. **Building an ability to make predictions based on small data sets:** The more that data sources are integrated and filtered, the thinner the patient information becomes, so patient services teams need to feel comfortable gleaning insights from a smaller patient pool. There is no single, complete data set, so predictions become a necessity.

6. **Collaboration:** Integration of patient data is only one piece of the puzzle. Companies need to think about how to leverage this integrated view efficiently. It's key to incorporate change management at this step, ensuring that collaboration and communication occurs, and making sure that everyone involved with the design of a patient services plan is working together.

While advancements in technology and data availability finally make integration a possibility, companies need to understand the potential—and long-standing—challenges that come along with it. These key elements of a data integration strategy involve contracting with multiple vendors to provide and integrate patient data—a time- and effort-intensive endeavor. Additionally, because ownership of patient data lies across several functional teams within an organization, aligning them on an overall objective and solution poses another challenge. And finally, this undertaking requires significant monetary investment and executive buy-in.

These challenges, however, are nothing new, and companies should be prepared to handle them as they start their journey.

Getting It Right
One large biopharmaceutical company has already started expanding and improving its view of patients' journeys through data integration. The company aimed to maintain and increase market share, and with a number of competitor launches planned, the company knew that it needed to start integrating data and developing patient-focused analytics that would help uncover insights related to four key areas:

- **Patient adherence and compliance, and reasons for discontinuations:** Getting the data is one thing, but being able to connect it with the patient journey is another. Consider the earlier hypothetical patient, Bill: The patient services team could use historical patient data to identify characteristics that increase the likelihood of discontinuation. If Bill is deemed likely to discontinue, the team could give him a call and offer the support he needs.

- **The effectiveness of patient services being offered and the impact on patient retention:** If patient services aren't being offered at the right time in the patient journey, then they're useless. With visibility into all of the services that a patient is receiving and the point in

time in which he is receiving them, the patient services team can also assess the relationship between these services and determine their true impact—and how they could be optimized.

- **Potential new customer segmentations based on patient's groups and prior treatment preferences:** At this level, companies utilize underlying patient-level data but aggregate it at the physician level: The idea is to use type of patients and treatment selection by patient type to segment the customers.

- **Details of patients' journeys and the identification of risk areas:** Connecting patient data sources together allows for a better understanding of your patient, which should shape your messaging and patient services offerings. A more complete view of the patient could reveal, for example, that Bill has a comorbidity, allowing the patient services team to readjust their messaging and provide more specific support.

In order for the company to accomplish these complex goals, it aimed to develop an integrated information management solution that connected multiple patient-level data sources. The goal was to connect data from specialty pharmaceuticals, claims, lab, patient services, HUB and electronic medical records.

The overall solution design was created with the help of the IT team, but a crucial component was the support and input from the business side. Compliance and legal teams were integrated into the process to identify and address patient data security concerns while still meeting business needs. The teams also were leveraged to help manage contract negotiations with different data vendors to ensure that patient-level data could be shared and connected.

Once the team designed the solution and secured the data inputs, the company embarked on developing the central component to the plan: a centralized patient de-identification and mastering solution. The team also worked to create a data warehouse capable of business intelligence, which connected patient-level data sources and housed business rules to create longitudinal patient journeys that facilitated analytics.

With integrated patient data now at their fingertips, the biopharmaceutical company was able to garner insight into patients who needed help. There was an uptake in patients with specific comorbidities, for example. The company also achieved visibility into risk areas that could be proactively managed through the right messaging, as well as the ability to design analytics-driven content for the market and for patients. Most importantly, the company was able to accomplish its goal of increasing market share in spite of growing competition, and it took a big step forward in its effort to become a patient-centric organization.

The Path Ahead

Once a company has integrated and optimized its patient data, how else can it make the data work for it? Turn that data into actionable insights that drive change. Here's a four-step framework for getting started:

1. **Engage:** Determine which patients will receive the most value out of a patient services program. Integrated data will provide greater visibility into historical patient adherence and compliance, as well as patient impact. Then, based on the collected data and patient experiences, companies begin to take that information

and segment future patients based on what they've learned about past patients, and then predict patient needs based on these segments. With these predictions, a company can design a stronger patient services program for the future. For example, based on the segmented patient data, companies can design a patient services program to provide unique support to patients with comorbid diseases, or they can adjust their programs to suit the needs of patients receiving private, in-home care. It's important to keep in mind, though, that much of the data required is "softer" data, like lifestyle habits and credit card usage, which is completely different than data from the medical ecosystem, and it might be more difficult to capture and merge.

2. **Get:** Incorporating newer data sources, such as social media or third-party data, will give a better glimpse into patient affinity and preferences. After integrating patient data, personalizing the experience for patients becomes a very real possibility, and technology plays a role. Social media, for example, can be a very effective tool for patient awareness. With the increasing number of people on social networks, the pharmaceutical industry needs to develop better social listening skills, following other industries' lead. This information will help map out the appropriate patient services— financial assistance, co-pay support, samples/free products, etc.—that best meet individual patients' needs in the early stages of the patient journey.

3. **Start:** Providing the appropriate onboarding services—treatment and disease education, peer support, injection/ medication administration training—will help set patients up for success from the start. Interactive apps are now being used

to onboard patients faster: Humira offers an instant benefit verification app, and Pfizer has an app that includes information on all of its products. These apps not only offer a new way of onboarding patients faster and more easily, but also serve as data sources that can result in advanced analytics and help design a better patient experience. Companies should beware, though, of spending too much time designing these services and not enough time ensuring that patients are adopting them. Implementation support is key.

4. **Stay:** Lastly, ensuring that patients are well-equipped for long-term success is a key component of patient services. In addition to adherence and treatment reminders, community support, and lifestyle/treatment support, the movement toward the Internet of Things—in which everyday objects send and receive data—and connected health will help take adherence programs to the next level. Sensors and wearable devices will not only ensure adherence, but also help improve outcomes by providing the ability to continuously monitor patient progress and react in real time to various events. Here are a few examples:
   * *Gaming and loyalty:* Companies like HealthPrize and MangoHealth both have apps that leverage points and rewards to encourage adherence, much like airline miles or hotel points.
   * *Digital coaching:* Fit4D, CareSpeak, LegacyHealth and many others use telephonic and virtual coaches to support their patients in ongoing adherence.
   * *Peer connections:* Apps and programs are starting to create peer connections outside of the program, itself.

Because of this continued advancement in technology, though, companies need to

ensure that they're agile enough to adapt and refine their approach in lockstep with changes to patient adherence.

While these futuristic scenarios may seem far off for some companies, there are many out there that are already experimenting and seeing results. For pharmaceutical companies that embrace integrated patient data, a new world of insightful analytics opens up the possibility for improved patient services, an increase in adherence and an uptake in patient retention. Keep in mind, though, that how a company integrates data and uses it to improve its patient services function is a journey, not a flip of the switch. It isn't as easy as simply buying a technology and installing it. Therefore, it's imperative to get started now. It takes time to build up the right skills internally so that the entire organization can feel comfortable working with new and improved data sets, but the payoff is worth it: Integrated patient data is the foundation for creating stronger support for patients.

About the Author
Anshul Agarwal *is a Principal in ZS's San Francisco office. He has over 11 years of sales and marketing consulting experience in sales force design, distribution channel strategy design, patient analytics and information strategy design. He leads the global oncology and specialty therapeutics (distribution channel) strategy design and information management vertical at ZS. He's helped numerous clients design/execute a patient analytics and data management strategy.*