



Using Real-world Data to Better Understand the Patient Journey

A Patient Journey Analytics eBook

AUTHORS

Lou Brooks

Vice President, Commercial Analytics
Optum Life Sciences

Shelli Field

Principal Consultant, Commercial Analytics
Optum Life Sciences

 **Interactive pdf** - To fully access the pop-ups, please save this document first, then re-open.

ENTER

🏠 Table of contents

Click to navigate chapters

Traveling the patient journey

- » Stakeholder interest in the patient journey
- » Observing the patient encounter
- » Steps of a successful patient journey analysis



Holistic patient journey using multiple data sources

- » Data: The key to success in patient journey analysis
- » Choosing the right data



Listening to the voice of the customer

- » Learning from the customer



Incorporating the voice of the patient

- » Patient-centered research in the time of big data
- » Introducing the patient voice



Leveraging the voice of the provider

- » Adding context with the voice of the provider
- » Revealing the provider's voice with primary research
- » Comprehensive data leads to novel insights
- » Power awareness



Conclusion

- » How to bring it all together



Introduction



In today's continually evolving and competitive health care marketplace, life science companies, providers and other stakeholders are continuously challenged to find novel methods to demonstrate the value their products deliver and strive for innovation.

Fortunately, the health care industry is in the midst of a megatrend in which growth in electronic medical records (EMRs) and administrative health claims systems — together with advances in computing power and data integration methods — have created data assets that are becoming the go-to source for answering questions of health care utilization as all stakeholders strive to achieve better outcomes.

At the same time, there is great momentum in the area of patient-centeredness, with important advancements in the science and technology for capturing reliable information directly from patients. Yet it is still rare for patient-feedback data to be represented at scale in the leading big data assets. The continued overreliance on clinical and financial evidence limits our progress toward a patient-focused approach to delivering care and evaluating outcomes.

1

Traveling the patient journey

The patient experience with the health care system impacts all stakeholders.



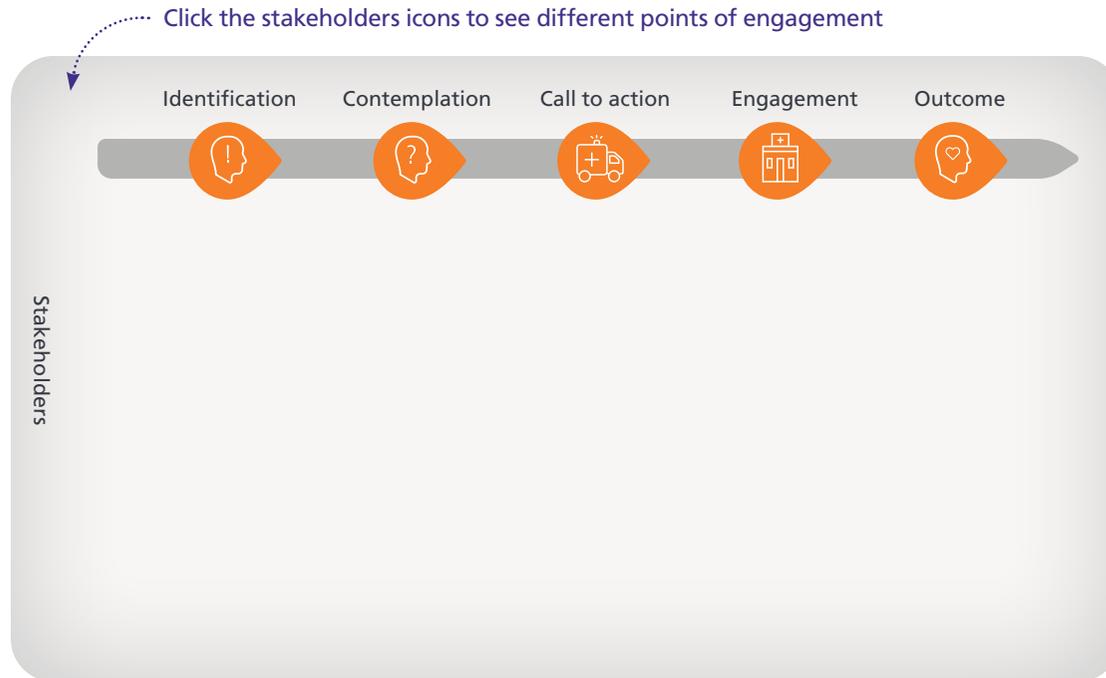
Understanding how patients navigate and experience the health care system is an important foundational element to maximizing the potential of novel treatments or services. But even with real-world data, it is hard to identify those key moments in care that have the greatest impact on treatment decision-making.

This is where the **patient journey** comes in. As with any journey, there are multiple steps individuals follow as they navigate the process of managing their health. Here, we are talking about a series of discrete health care interactions, each with its own individual patient, provider and payer implications.

As a result of the ability to describe these interactions and how they are interrelated, the patient journey connects the entire health care system. Understanding how patients seek and receive care is of interest to all stakeholders. Thus, the patient journey becomes foundational analysis for engaging stakeholders in common discussion on how to improve individual and population health, overall quality of care and cost-effectiveness.

Stakeholder interest in the patient journey

Interest in the patient journey and potential engagement currently lies at different points for each stakeholder. However, as organizations spend more time understanding the journey, and using it to engage other stakeholders, that is certain to change.



In the end, the themes of quality, satisfaction and cost are all key to the perspectives of each stakeholder.

What information are stakeholders looking to get from the patient journey?



Providers start late in the contemplation phase — they are looking for patient awareness of their services as they are competing with other providers for patients. This is easily demonstrated by the many billboards you see advertising health care services or even emergency room (ER) wait times.



Payers start a little bit earlier in the contemplation process. They look to aid patients in conducting research and determining how and with whom to engage in the health care system to aid them in managing the costs more effectively. This is most evidenced by networks of providers and tools that enable assessment of quality and cost, and the more recent implementation of nurse lines that allow patients to call in to discuss health care issues.



Life sciences companies tend to start a bit later — at the point of actual health care engagement. While direct-to-consumer (DTC) advertising is an example of a push into earlier stages of the patient journey, the vast bulk of resources are still focused on the point at which patients have already decided to engage with the health care system and are being treated.

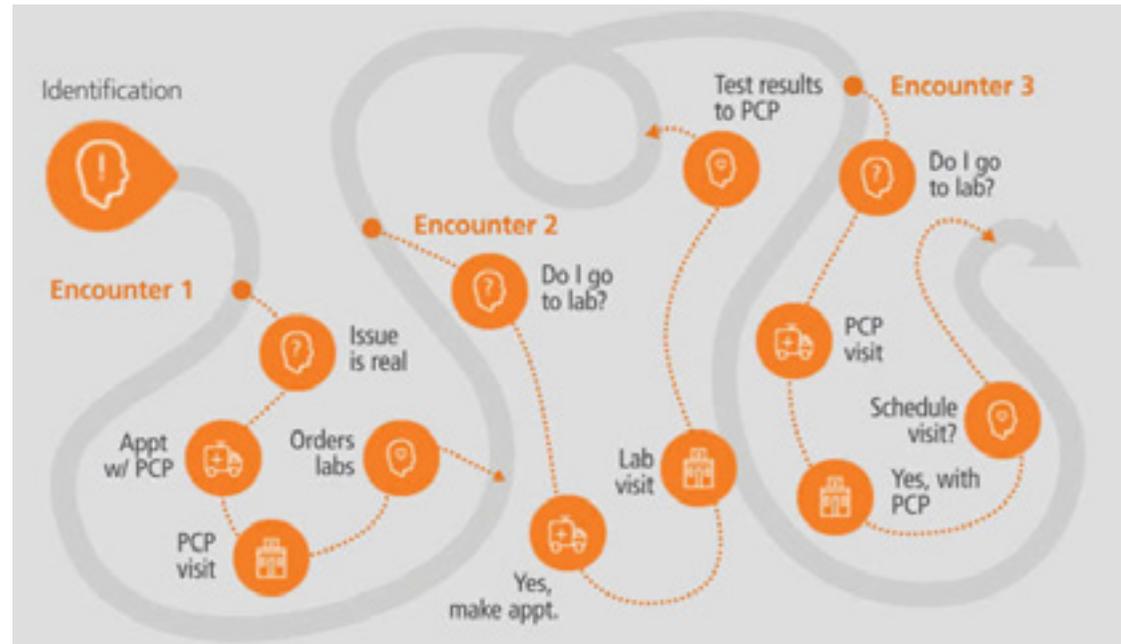
Observing the patient encounter

Patient journey analysis — also called patient flow analytics — allows us to observe the patient encounter at each stage, from symptom diagnosis to disease progression, treatment and resolution. Patient journey analysis involves a patient's interactions with doctors, health care providers and payers, the decisions made at each step and the rationale behind them.

A complete and accurate patient journey analysis offers quantitative data surrounding each health care encounter, along with qualitative information based on the interactions between patients, caregivers and providers. The value of patient journey analysis is substantial as it can drive:

- **Increased collaboration** and value among stakeholders by understanding the patient journey from different perspectives
- **More focused clinical development programs** through clearer identification of unmet needs and real-world product utilization
- **Greater commercialization impact** throughout the product lifecycle with better understanding of key utilization drivers
- **Better connection with patients** through a clearer understanding of their engagement process for health care and measures of satisfaction
- **Improved outcomes and value** through understanding perceptions and challenges around care and implementing solutions.

For life sciences and pharmaceutical companies, patient journey analysis can help to identify the most effective drug or treatment pattern based on patient characteristics. But that is just one of the many benefits that can be obtained through the analysis. Insight into how to better connect with patients, understanding the vocabularies utilized by patients and providers, understanding barriers and unmet needs can all be illuminated through patient journey analytics. Most importantly, it lays the foundation for developing a successful brand strategy and helps drive brand performance.

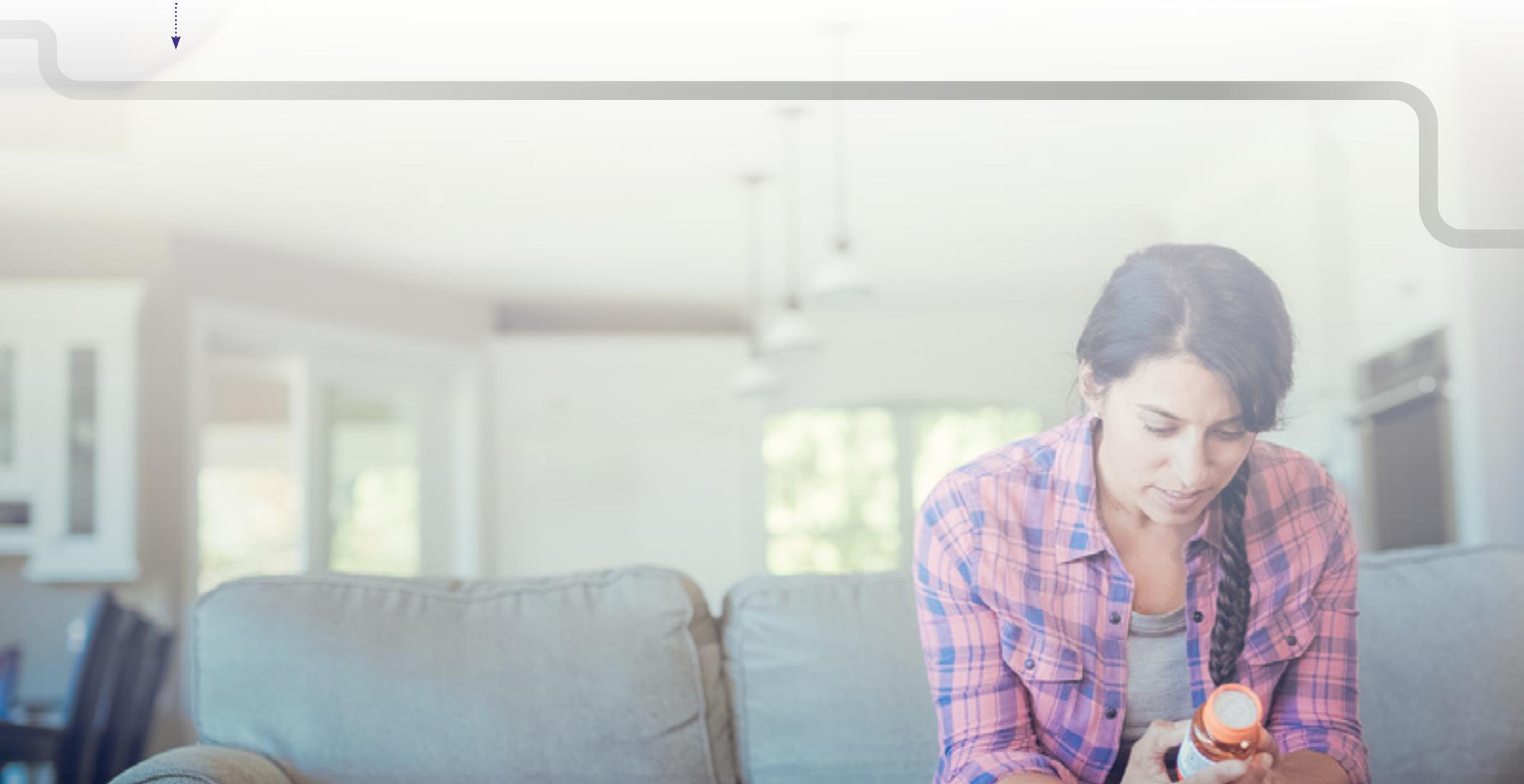


A mixed-method approach that brings qualitative and quantitative methods shows us the complete picture of the patient journey.

Steps of a successful patient journey analysis

The process of creating the patient journey has several key steps that must be evaluated and incorporated into any patient journey strategy. It has to include the right stakeholders. It needs to incorporate the voice of the customer. And once established, it needs execution along with continued monitoring and maintenance to ensure future opportunities and challenges are identified.

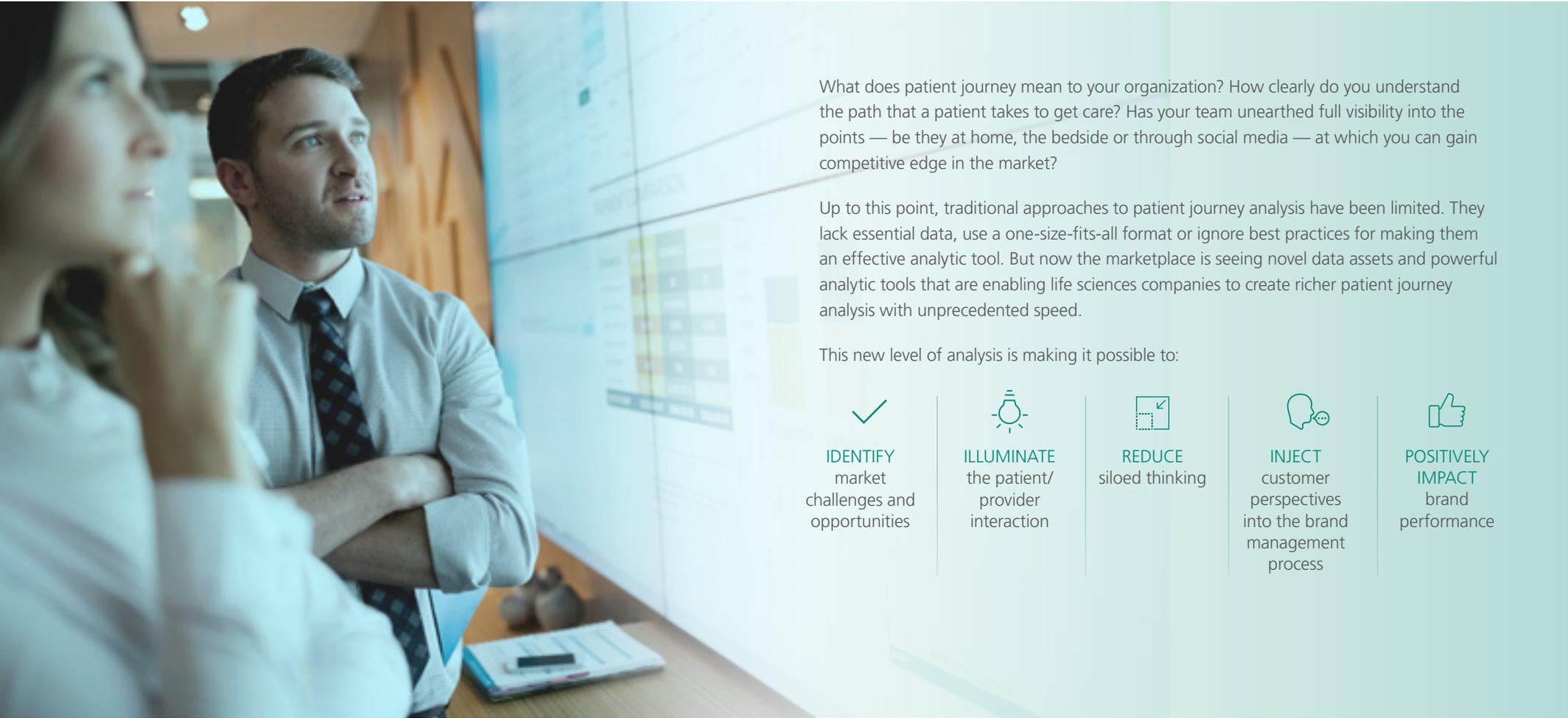
[Click the steps to explore a successful patient journey.](#)



2

Holistic patient journey utilizing multiple data sources

Determining the right patient journey analysis for your organization can be challenging.



What does patient journey mean to your organization? How clearly do you understand the path that a patient takes to get care? Has your team unearthed full visibility into the points — be they at home, the bedside or through social media — at which you can gain competitive edge in the market?

Up to this point, traditional approaches to patient journey analysis have been limited. They lack essential data, use a one-size-fits-all format or ignore best practices for making them an effective analytic tool. But now the marketplace is seeing novel data assets and powerful analytic tools that are enabling life sciences companies to create richer patient journey analysis with unprecedented speed.

This new level of analysis is making it possible to:

- 

IDENTIFY
market challenges and opportunities
- 

ILLUMINATE
the patient/provider interaction
- 

REDUCE
siloed thinking
- 

INJECT
customer perspectives into the brand management process
- 

POSITIVELY IMPACT
brand performance

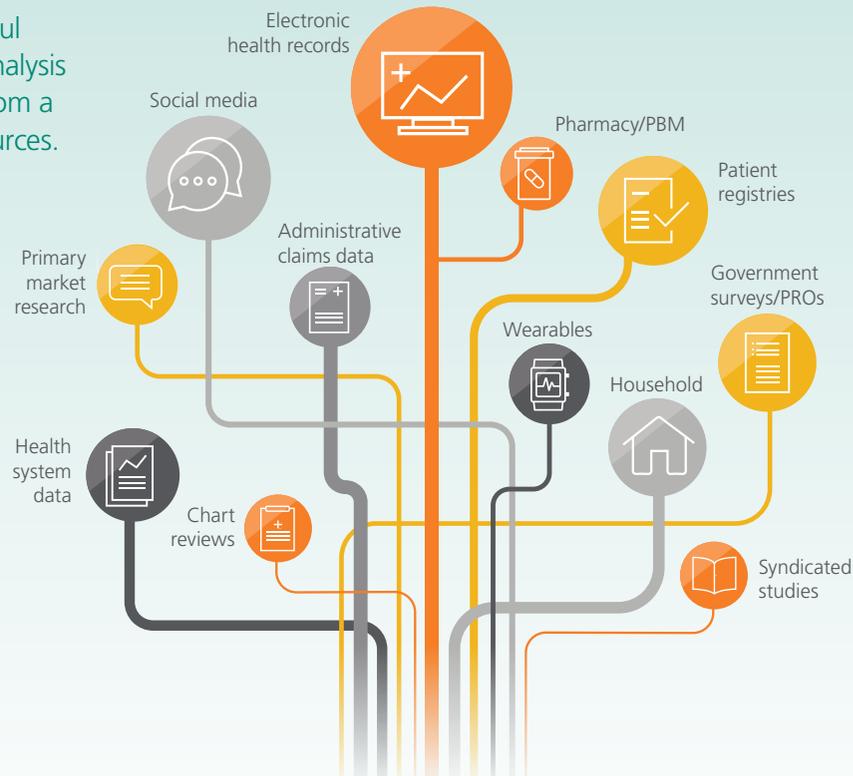
Data: The key to success in patient journey analysis

When considering patient journey analysis, think about what data you have access to as well as what you wish to include. A wealth of data exists to satisfy the information needs for patient journey analysis, from administrative claims data and chart reviews, to market research and surveys.

Amassing this data enables you to deliver a complete and accurate understanding of health care decision pathways to inform a sound product commercialization strategy. By adding patient-sourced information to the data-driven models, you can gain access to insights from patients that you can't get from claims or clinical data sources, such as:

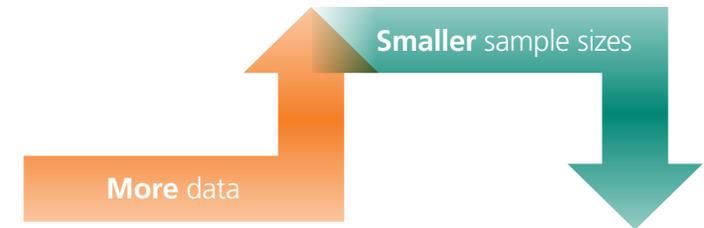
- Feel and function, burden of illness
- Expectations for treatment
- Health activation/literacy
- Treatment decision process and dialog between patient and provider
- Experience during specific treatments
- Clinical and functional outcomes
- Satisfaction/preference about the episode

 The most impactful patient journey analysis integrates data from a wide range of sources.



Choosing the right data

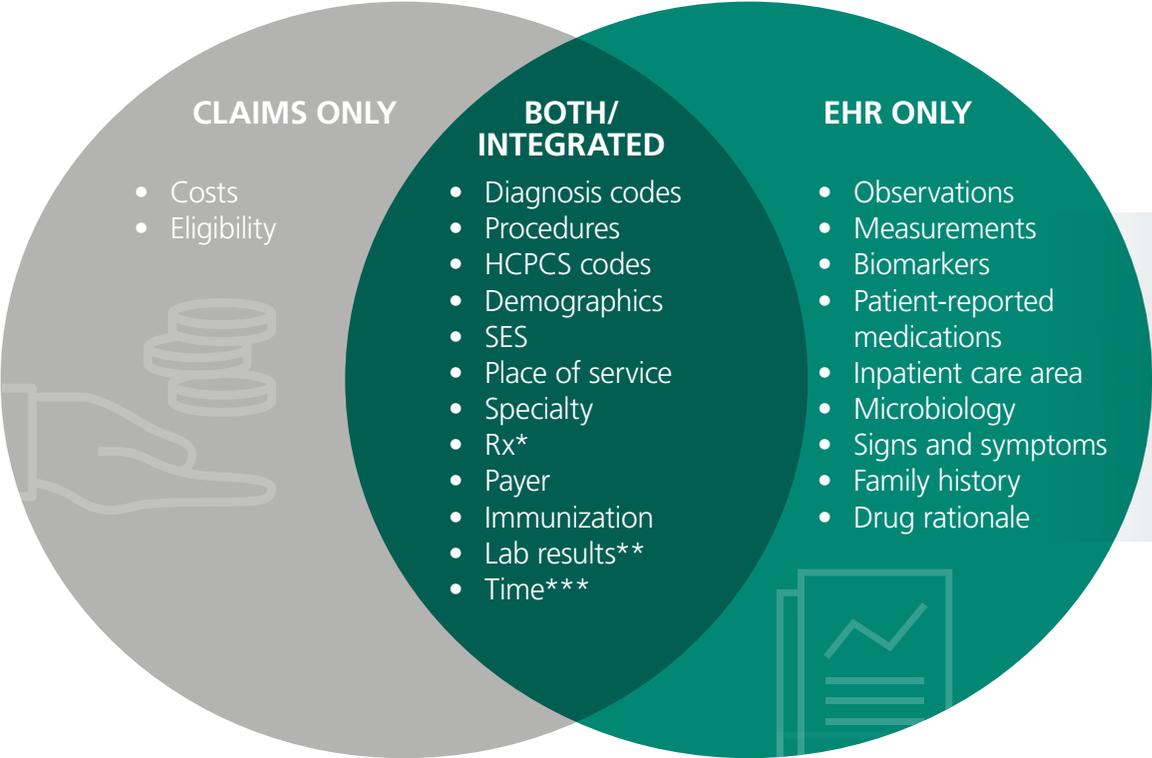
Data isn't always straightforward, so it's important to have qualified individuals for the analysis or plan accordingly for needed resources. Keep in mind that as you **add data, sample sizes tend to shrink**, so determining what is "must have" versus "nice to have" is essential in the planning stages. With all of that in mind, how do you know which data sources are appropriate?



Identifying the most appropriate set of data to leverage for patient journey analysis begins by understanding what each source includes — and comparing it to your business needs or analysis goals. Let's say you were undertaking a patient journey to understand the costs and health benefits of a bariatric surgery or weight-loss medication. What would be most important to the analysis?

How do you know which data sources are appropriate?

Let's imagine we are creating a patient journey analysis and we have identified the patient and payer costs, comorbidities, and BMI or weight as the information we need.



Claims data provides patient and payer costs. EHR data offers BMI and weight information and possibly insights into diet, exercise and fitness levels. Deterministically matched (using person-specific details) integrated data meets all of our identified data needs. But we could make this even more complex by obtaining household purchase data to assess how these individuals are consuming various types of products which may contribute to/or work against weight loss. This complicates the data integration and preparation phase of patient journey even more, as the additional information could impact de-identification.

The challenge of integrating different data sources can be daunting. Privacy concerns, data use rights, infrastructure and resources can all impact the process of data integration.



Take the necessary time to ensure you focus on the right data to address your business needs and aim for the minimum amount necessary. Be prepared to make informed trade-offs to ensure you remain in compliance with sound data practices while retaining the breadth of data to make your analysis impactful.

*Claims has filled prescriptions, EHR written
 ** Some claims sources (Optum for one) do have some lab results included although EHR will have a more comprehensive set
 *** Claims will have date of service, some EMRs contain actual clock time

3

Listening to the voice of the customer

Patients are not the only customer involved in the patient journey.



Understanding who your customers are is critical to understanding the patient journey. In some cases, the customer relationship may be subtle. Take the example of an Integrated Delivery Network (IDN) — while providers may be employees, they are also customers of the administration. There are things they need in managing their practice that impact the patient journey, such as treatment space, patient management software and access to various types of equipment. Another example is family members or caregivers — although they are not the patient, they are still part of the process as they can have a huge influence on treatment and care decisions, especially for the very young or the very old.

Depending on who is doing the patient journey research, you may be faced with de-identified data only, which can make it more involved to incorporate the voice of the customer, and conclusions may be more difficult to reach. In this case, primary research with similar patient types from panels or from providers within a similar specialty can be conducted and integrated into the patient journey analysis. It's not as accurate as person-linked data, but it provides a suitable alternative.

Understanding how people are arriving at their health care decisions, how they perceive each interaction along the journey and their ultimate satisfaction with the health care process are all very important aspects of the customer voice. While still very much obtained through primary research, the voice of the customer comes from many different places and sources (including survey responses, social media and wearables). Incorporating as many insights as possible from all stakeholders paints the most complete picture.

4

Incorporating the voice of the patient

We can better define health care when we put the patient at the center.



Many believe that the patient journey begins at the health care engagement or interaction when, in actuality, there are several steps along the journey that lead up to that engagement. While many data sources may not address these steps, it is possible to utilize information gathered outside of your real-world evidence data sources to provide insight into what goes on with the patient.

It is also important to recognize that while real-world evidence may have information reflecting patient input, the available data provides the voice of the patient as translated by the health care provider.

There are several resources to aid in gathering the patient voice — primary research, either qualitative or quantitative, patient-recorded input such as patient-reported outcomes data, and social media discussions. These “voices of the patient” add the context of what the patient was experiencing, what motivated him or her to take action, and how satisfied they were with the health care engagement and the resulting outcome.

Stakeholders are looking at health care with the patient at the center. Regulatory organizations, employers, health care quality, health plans and those making health policy all have a vested interest in understanding how patients feel and function.

Patient-centered research in the time of big data

How is patient-centered research done in this time of big data? How well are we able to answer the question about what matters to the patient?

As sophisticated users of existing big data sources for modeling and economic analysis, life sciences companies have made significant strides in measuring health from the patient's point of view. Companies are focused on the patients' experience of disease and treatment during drug development — encouraged by FDA programs, patient advocacy groups and the 21st Century Cures Act (legislation passed in 2016 to provide funding for the National Institutes of Health). Including patient-reported information on labeling and promotions also helps to support value propositions.

Let's look at the voice of the patient from the perspective of two groups: population health and life sciences.



POPULATION HEALTH

When we talk about population health, we mean the providers, payers and health care delivery systems. While all of these groups emphasize patient-centricity, they define it differently than Life Sciences companies. For these stakeholders, the voice of the patient is used to improve approaches to organizing and delivering care — making sure the needs of the patient, caregivers and family are reflected in care plans, treatment and risk prevention.



LIFE SCIENCES

For life sciences companies, providers and payers, it does not have to be an either/or situation between leveraging big data assets and patient-centricity insights.

In the long term, the health care ecosystem will evolve and enable large-scale assets that combine claims, clinical, PRO and other patient-centric data to be widely available. In the meantime, researchers and other stakeholders will need to be creative and thoughtful in developing methods to accelerate the process while delivering insights along the way.



Introducing the patient voice

We talked about the patient and the voice of the patient. Now, we will discuss where they intersect. As previously mentioned, the journey starts with the identification of a problem or issue. That's where we start seeking the voice of the patient.

 [Click to learn more about the patient voice](#)



Big data and patient-centricity does not have to be an either/or situation. We can combine both in a meaningful way to drive life sciences research, program evaluation and population surveillance.



5

Leveraging the voice of the provider

The voice of the provider is necessary for a complete, holistic patient journey.



The patient journey is not complete if it does not include the voice of the provider. Here, the emphasis is more on the engagement and outcome. Of course, providers supply insight into the identification, contemplation and call-to-action steps of the patient journey, typically through what they document on their interaction with patients in notes.

Real-world health care data is the foundation for patient journey, and much of this data comes from the voice of the provider.

The provider perspective is illuminated across many facets of the journey, including:



Treatment decisions



Symptom documentation



Severity or frequency of symptoms



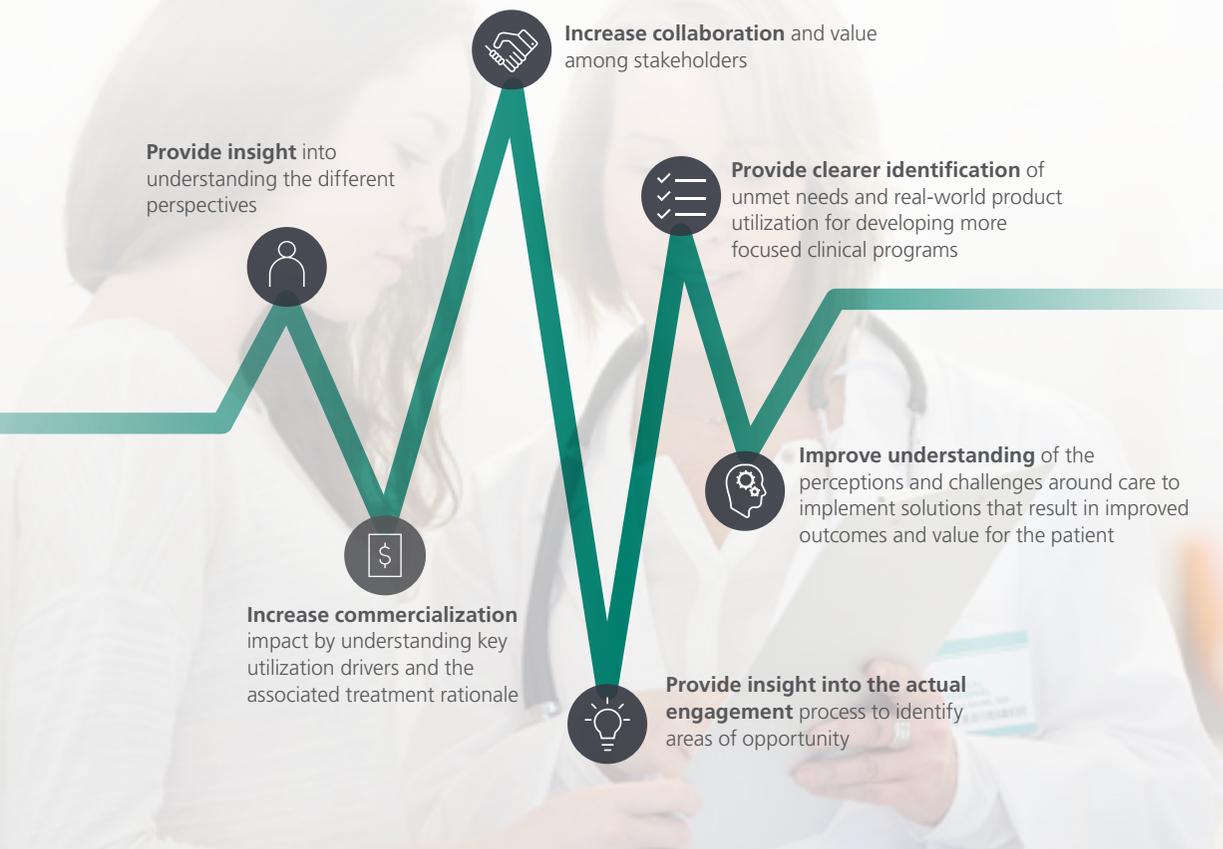
Information influencing health care decisions

Adding context with the voice of the provider

There is significant value in many of the insights and applications available in doing a patient journey, but adding multiple aspects of the voice of the provider helps to achieve the holistic perspective of the entire journey.

There are several resources that aid in gathering the aspects of the voice of the provider. The most prevalent of these is primary research, either qualitative or quantitative, or other provider-recorded input, such as provider notes. These voices add the context of what the patient was experiencing, what motivated him or her to take action, what influenced the treatment decision and, finally, how satisfied both the provider and patient were with the health care engagement and associated outcome.

The resulting analytics benefit commercial teams and research and development:



Revealing the provider's voice with primary research

Primary research always has been, and will continue to be, a great source of insight from providers. But the question is often asked, "How can it add value to the insights gathered with real-world health care data?"

The answer is not to exclude primary market research, but rather tailor it to gather the information that cannot be found in real-world health care data. Provider insight can be garnered from office protocols or procedures for patient interaction. Understanding what, if any, patient educational tools are most useful, or any of the other peripheral activities that may occur in patient treatment decisions, can provide additional insights.

We utilize provider notes for that initial insight into treatment rationale. But not everything is included in the notes, so we look for those more targeted primary sources, which can bring a more holistic perspective to understanding the entire patient journey.



Primary research



Real-world health care data



The best of the provider voice

Quantitative Methodologies

- Large samples can be cost prohibitive
- Information provided is "claimed" versus actual behavior

Qualitative Methodologies

- Provide insights into the treatment rationale or the "WHYS"
- Large samples are not practical

Comprehensive data leads to novel insights

The most impactful patient journeys are the ones that are able to integrate data from a wide range of sources. Choose a data provider who links EHR with claims data to create real-world data that is an especially rich source of provider insight. Three examples of such linked data include:



Medications. Written prescriptions as opposed to filled prescriptions provide a window into the true intent of the prescriber.

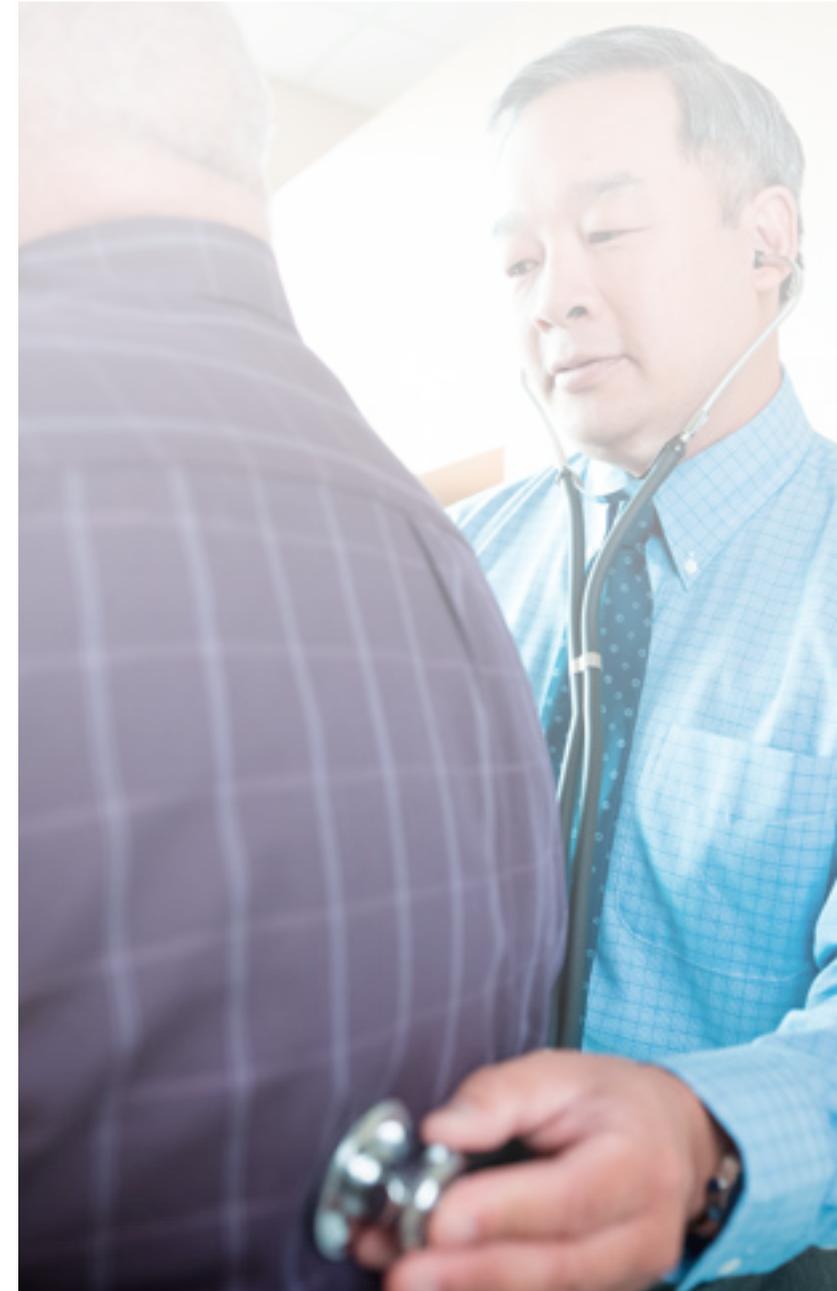


Provider detail. Robust identification and provider description — specialty, role of the provider (admitting, attending, referring provider) — gives important context when developing patient journey analytics.



Provider notes. Free text narrative between providers and patients helps uncover unique insights to better understand treatment rationale, observations, and signs and symptoms as recorded by providers.

Furthermore, make certain that the organization you are working with can partner to share their data or access other sources of data that can add value to the patient journey.



Power awareness

By using what's noted by providers when treating patients — essentially, the rationale behind the treatment decision — we better understand the drivers of treatment behavior. This is just one of the advantages of employing the use of notes data versus some of the alternatives.

Cost and time are two of the more obvious benefits of notes data, but another important element is the “real-world” dynamic that's at play — because the data is tracking what's actually happening in clinical practice and not subject to recall or other biases. It is this combination of primary research and real-world evidence that leads to the most robust and meaningful patient journey analytics.

Since the provider notes reflect real-world treatment decisions, there's a wealth of information that can be extracted and leveraged in analysis.

Types of notes

- Outpatient office visits
- Consultation reports
- Operative (procedure) reports
- Admission often with H&P
- Discharge summaries
- Nursing
- Emergency room
- Pathology
- Radiology
- Assessment and plan (MDM)

A complete, holistic patient journey must include the voice of the provider.



6

In conclusion

Learn how to bring it all together.



The assumption about the patient journey is that it starts at the point of health care engagement or interaction. But as we've established, the patient journey actually begins several steps before health care interaction. Developing a successful patient journey analysis means relying on real-world health care data combined with data gleaned from the voices of customers, especially patients and providers/providers.

Life sciences companies realize that understanding the patient journey is critical to the success of their business. Not just as it pertains to brand performance, but it is also critical to relationships with payers, providers and patients.

The value of patient journey spans many aspects of the health care ecosystem, including:

- **Increased collaboration** and value among stakeholders by understanding the patient journey from different perspectives
- **More focused clinical development programs** through clearer identification of unmet needs and real-world product utilization
- **Deriving greater commercialization impact** throughout the product's lifecycle with better understanding of key utilization drivers
- **Better connection with patients** through a clearer understanding of their engagement process for health care and measures of satisfaction
- **Improved outcomes and value** through understanding perceptions and challenges around care and implementing solutions

Patient journey analytics can serve as the platform to unite stakeholders across the health care ecosystem to achieve one overarching goal — the affordable management of health, both individually and across the population.

To learn how patient journey analytics can help you accomplish your goals, visit optum.com/lifesciences.



11000 Optum Circle, Eden Prairie, MN 55344

Optum® and its respective marks are trademarks of Optum, Inc. All other brand or product names are trademarks or registered marks of their respective owners. Because we are continuously improving our products and services, Optum reserves the right to change specifications without prior notice. Optum is an equal opportunity employer.

© 2020 Optum, Inc. All rights reserved. WF3645231 10/20