

## QuintilesIMS™

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## About QuintilesIMS

### CREATING SOLUTIONS FOR YOU TO DRIVE HEALTHCARE FORWARD

QuintilesIMS (NYSE:Q) is a leading integrated information and technology-enabled healthcare service provider worldwide, dedicated to helping its clients improve their clinical, scientific and commercial results. Formed through the merger of Quintiles and IMS Health, QuintilesIMS's approximately 50,000 employees conduct operations in more than 100 countries. Companies seeking to improve real-world patient outcomes and enhanced clinical trial outsourcing through treatment innovations, care provision and access can leverage QuintilesIMS's broad range of healthcare information, technology and service solutions to drive new insights and approaches. QuintilesIMS provides solutions that span clinical to commercial bringing clients a unique opportunity to realize the full potential of innovations and advance healthcare outcomes.

As a global leader in protecting individual patient privacy, QuintilesIMS uses healthcare data to deliver critical, real-world disease and treatment insights. Through a wide variety of privacy-enhancing technologies and safeguards, QuintilesIMS protects individual privacy while managing information to drive healthcare forward. These insights and execution capabilities help biotech, medical device, and pharmaceutical companies, medical researchers, government agencies, payers and other healthcare stakeholders in the development and approval of new therapies, identify unmet treatment needs and understand the safety, effectiveness and value of pharmaceutical products in improving overall health outcomes. To learn more, visit [www.quintilesims.com](http://www.quintilesims.com).



## Commercial Effectiveness Services

# IMS Longitudinal Patient-level Data Analytics



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COMMERCIAL EFFECTIVENESS SERVICES  
IMS LONGITUDINAL PATIENT-LEVEL DATA ANALYTICS



**EVIDENCE-BASED INSIGHTS TO SHARPEN YOUR BUSINESS FOCUS, TAILORED TO YOUR EVOLVING NEEDS**

Today's healthcare markets are increasingly patient centric and demand new patient-based measurements and insights. The growth of the specialty medicines, tougher market access, rising payer controls, accelerating patient influence and escalating safety concerns are driving the need for a more consistent, patient-based views of your brands and markets.

Patient-level analytics have become the common language of healthcare, creating valuable linkages within your company and within the broader healthcare environment. IMS Brogan leverages patient-level data to track and quantify the patient experience in the Canadian healthcare environment, to unlock powerful, evidence-based insights for our healthcare clients.

**APPLICATIONS OF LONGITUDINAL PATIENT-LEVEL DATA (LPD) ANALYTICS**

- Evaluate the potential for brands amongst key patient populations
- Understand competitive position of brands at multiple phases along the treatment pathway
- Advanced customer segmentation and targeting
- Supports marketing, brand planning, messaging and positioning
- Support sales strategies and field force alignment
- Provide evidence to support forecasting, pharmacoeconomic and budget impact analyses

**WHY IMS BROGAN?**

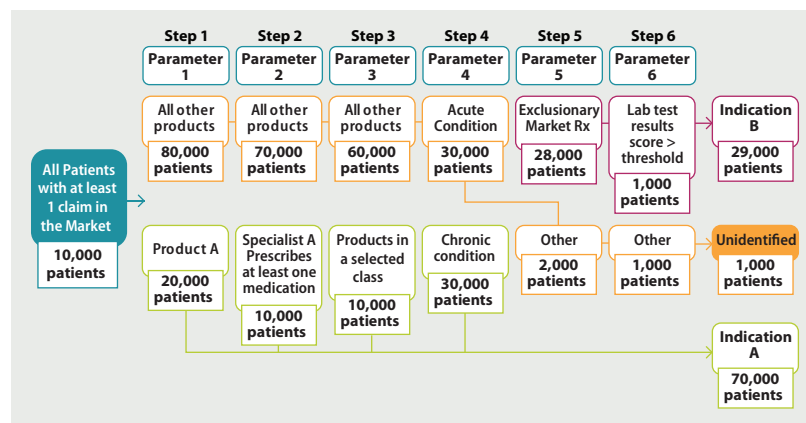
IMS Brogan continues to be a leader in the development of patient-centered insights through growing data assets and analytical capabilities. We have the right resources and experience to help you unlock the true value of a LPD universe with decades of experience in designing custom solutions, around complex business requirements addressing wide-ranging client-market issues. And we have unparalleled analytics capabilities and deep subject-matter expertise to deliver accurate measurements, high-quality reports and invaluable insights.

**APPLICATION EXAMPLES**

By infusing a patient-centric perspective into many core sales and marketing activities, you'll make more informed, evidence-based decisions that optimize commercial execution. Although the applications for Longitudinal Patient-level Data Analytics are many and customized, the following are a few examples:

**INDICATIONS ANALYSIS:** Where products are used for more than one indication, a thorough process applied to patient data provides the ability to define and validate a probable indication / Rx. Findings can be used to conduct market research studies for each individual indication or to report on market and product sales for each indication.

**A 6-step process was prepared, validated and applied to patient level data to identify patients using product A to treat condition B.**



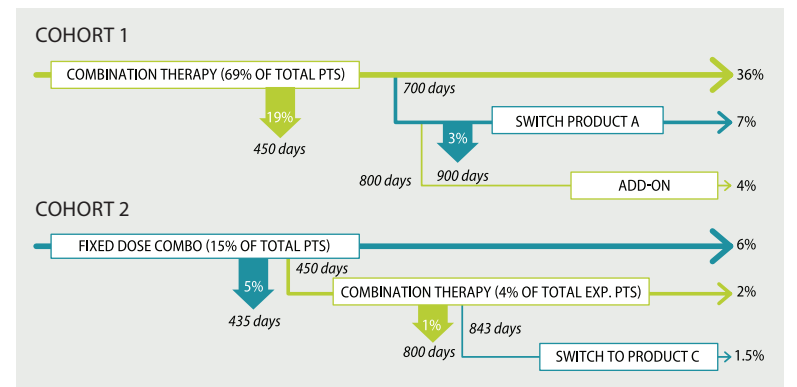
**PATIENT COHORT SELECTION:** Create more refined, meaningful and descriptive patient cohorts using measures of prescription dynamics, therapy/disease progressions, and payer types, in addition to traditional demographics. Isolating critical patient cohorts allows you to conduct important sub-group analysis.

**Patients can be grouped into cohorts to be analyzed for specific behavioural differences.**

FREQUENCY	THERAPY AREA EXPERIENCE	SEVERITY OF TREATMENT	AGE GROUP	GEOGRAPHY
<b>Cohorts</b> •Chronic •Subject of interest  Acute •xM patients excluded from analysis  <b>Criteria</b> •Based on frequency of prescribing	<b>Cohorts</b> •Naive (New) •Experienced (Add-On, Switch)  <b>Criteria</b> •History of Rx prior to first Rx in study period	<b>Cohorts</b> •Severe •Mod to Severe •Moderate  <b>Criteria</b> •Based on product class and dose	<b>Cohorts</b> •Age 18-64 •Age 65+  <b>Criteria</b> •Based on patient age	<b>Cohorts</b> •ON •QC •West •East  <b>Criteria</b> •Based on patient's Rx location
1 Cohort	2 Cohorts	2x3 = 6 Cohorts	6x2 = 12 Cohorts	12x4 = 48 Cohorts

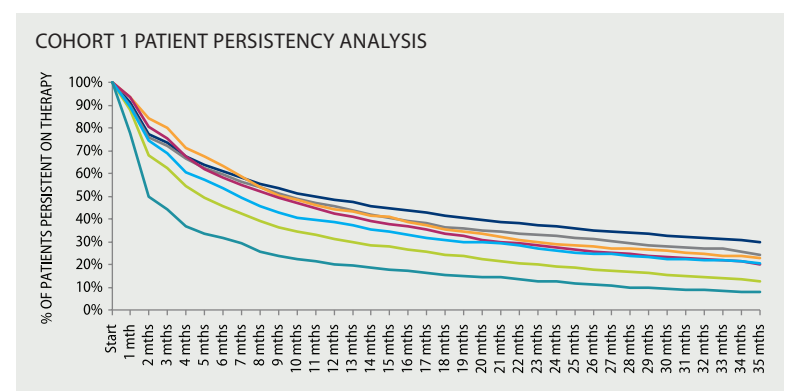
**LINE OF THERAPY ANALYSIS:** Track the patient cohorts over time to uncover how patients are currently treated. Treatment options for each disease state, duration of treatment, top drug combinations and product shares in each line of therapy, frequency and duration of drug holidays.

**Cohort 1 patients are more stable than Cohort 2 patients with 48% remaining on the same therapy over the study period.**



**ADHERENCE ANALYSIS:** Evaluate patient persistence and compliance to brands. This can facilitate the design and evaluation of programs to improve patient adherence.

**Overall, only 30% of cohort 1 patients are persistent after 35 months.**



**UTILIZATION ANALYSIS:** Track changes in daily dosing, dose titrations, cycles of therapy, and concomitant drugs. This allows you to evaluate whether products are being used as per suggested guidelines, and where opportunity exists to improve utilization amongst existing patients.

**Cohort 2 patients often receive treatment with Product A on multiples of 1 week intervals, up to a ~4 week interval.**

