An outlook on leveraging analytics to build patient payer connect
Generally, when confronted with a health issue, the insured reaches out to a provider -- in-network or out-of-network -- based on his knowledge and past experience. In case of a medical emergency, he has to access treatment from a physician or hospital without any delay, which means he has no time for required research. However, in non-emergency cases, when a physician recommends a treatment like a major or minor surgery, patient has time in his hand to avail the best treatment possible as per his requirements. In such cases, a patient tries to find answers to pertinent questions like, which providers are available in-network; which providers are located nearby, and who is the best provider for this kind of treatment. He takes the help of internet and social media to check reviews and preferences of other patients and physicians to make decisions. And these are crucial decisions!

How about a situation wherein the patient’s insurance company (Payer) or Third Party Administrator (TPA) answers all these questions proactively for him? The patient will be more than happy to have recommendations from payers. And the insurance company will also benefit from providing cost-effective treatment and customer satisfaction.

In general, the cost for the same kind of treatment differs based on the provider. Payers or TPAs can leverage analytics to identify and recommend the best provider for a patient based on the treatment required, list of in-network providers, providers’ past records, other patients’ reviews, total treatment cost, patient’s location etc. This recommendation could be useful in emergency treatment as well. A person who receives a recommendation from the payer for a non-emergency treatment can keep this recommendation in mind during emergency requirement. The insured person could also recommend the provider to another person in need.

Enhanced Customer Experience
Insurance companies need to adopt an effective approach for building trust with patients and maximizing customer satisfaction and business outcomes. Providing a relevant recommendation to the insured during a medical need would, for sure, be an effective step towards this.

In the era of internet and social media, a patient’s reviews and satisfaction can be measured by analyzing online data. Analytics algorithms for Text and Sentiment Analytics can be applied on social media data that can quantify the effectiveness and market presence of healthcare providers.

The approach (see Figure 1) at creating the most relevant recommendations can be summarized in the following steps:

1. Patient contacts Payer or TPA
   For any non-emergency medical requirement, patient will contact the insurance company or TPA via email, fax or phone call and request for pre-authorization of treatment and provider recommendation. Payer will have a turnaround time of a day or two as per the defined SLA to get back to the customer with approval and recommendations for some of the best-suited in-network providers available for the required treatment.
2. **Payer collects information and analyzes**
   Upon receiving the request from the insured, payer will collect all information pertaining to the patient that may include demographic data, location data, prior treatment data, disease information, policy data, previous claims data, premium data etc. Data integration, cleansing and transformation required to make the data correct and compatible for the analysis will be completed, and preliminary examination and thoughtful analysis will be initiated.

3. **Social media integration**
   In today's world, social media plays a vital role in brand recognition, assessment of company performance and customer perception. Many, today, choose physicians, providers and medical facilities for their treatment based on references and information taken from social media and online communities. Data from internet and social media can be fed into Text and Sentiment analysis models to extract better insights about patient preferences, and physician and people reviews.

4. **Use analytics to find best providers**
   Analytics algorithms, implemented on the data, will bring out relevant insights. For instance, it will estimate the amount each provider will charge, the provider that the insured would most likely prefer, which category (VIP, Deluxe, Economy etc.) of the treatment the insured will choose. Finally, the best providers will be chosen and listed out based on overall cost, physician recommendation, insured preferences and satisfaction that can be quantified in the form of ratings on the scale of five.

5. **Make recommendation**
   Based on the analytics outcome, the payer will recommend to a patient a set of providers that best-suit his requirement. This recommendation will include the attributes of the providers, users' ratings and payer's preference rating etc. Upon receiving the recommendation, the insured person can choose the provider best-suited to his needs.

---

**About the authors**

**Dr. Rajashekhar Karjagi**
Head of Analytics Solutions
Knowledge Services

Dr. Rajashekhar Karjagi has about 15 years of experience in market research, customer-driven analytics and statistical modeling. He has published more than 25 research papers, has one copyright and has conducted more than 150 analytics training sessions.

**Manish Jindal,**
Manager, Analytics Solutions
Knowledge Services

Manish Jindal has over 11 years of experience in implementing advanced analytics, statistical modeling, data mining, and BI solutions for leading clients across diverse industries like Insurance, Retail, Human Resource and Learning Management System.
Wipro Limited
Doddakannelli, Sarjapur Road,
Bangalore-560 035,
India
Tel: +91 (80) 2844 0011
Fax: +91 (80) 2844 0256
wipro.com

Wipro Limited (NYSE: WIT, BSE: 507685, NSE: WIPRO) is a leading global information technology, consulting and business process services company. We harness the power of cognitive computing, hyper-automation, robotics, cloud, analytics and emerging technologies to help our clients adapt to the digital world and make them successful. A company recognized globally for its comprehensive portfolio of services, strong commitment to sustainability and good corporate citizenship, we have a dedicated workforce of over 170,000, serving clients across six continents. Together, we discover ideas and connect the dots to build a better and a bold new future.

For more information, please write to us at info@wipro.com