ASSOCHAM-EY report on 
Medical Process Outsourcing in India
Health care is one of the prominent sectors, which touch every individual and government, and consumes more than 10% of GDP of some of the most developed countries globally.

We believe that there has been an ample push from health care payers, providers and pharmaceutical companies to move non-core processes to third-party service providers, and India has been one of the leading destinations for outsourcing in this space.

On behalf of ASSOCHAM I would like to thank the EY team for preparing a comprehensive report on medical process outsourcing in India.

We hope that this report will be read by all the relevant stakeholders and they will benefit from its extensive research.

D. S. Rawat
Secretary General
ASSOCHAM
June 2015
EY, in association with Associated Chambers of Commerce and Industry of India (ASSOCHAM), is pleased to present this report, Medical Process Outsourcing in India.

Medical process outsourcing (MPO) (also referred to as health care BPO) refers to the contracting of specific medical processes/services to third-party providers in order for businesses to save costs and focus on their core business.

Outsourcing in the health care sector has picked up in the past few years, with India emerging as the second-largest destination in this space after the US.

Through this report, we attempt to throw some light on the services outsourced by end-market segments (payer, provider and pharmaceutical) in the health care industry.

Secondly, and more importantly, we have tried to give overview of the MPO market in India along with the factors that are driving the growth in the various segments, in spite of existing roadblocks. The Indian MPO market got a push with the recent US regulation on the Patient Protection and Affordable Care Act (PPACA) and introduction of ICD-10 standards. Furthermore, the Indian players are gradually moving up the value chain in terms of service offerings while maintaining their cost competitiveness.

This report also highlights some of the key impediments faced in terms of regulatory framework and elaborates on the measures taken/required to address these issues.

We take this opportunity to express gratitude to health care BPO companies who provided valuable insights and helped us in framing a point of view. We would also like to thank ASSOCHAM for its involvement and support.

We hope you find this report both interesting and informative, and will be happy to provide you with more information and guidance around some of these ideas.

Milan Sheth
India Technology Leader
EY
Medical Process Outsourcing in India
Contents

1. Introduction ................................................................. 08
2. Medical process outsourcing market overview ................. 10
   2.1 Service offerings by end market segment ................... 11
   2.2 Global healthcare BPO market .............................. 16
3. MPO market in India ..................................................... 18
   3.1 Payer market ......................................................... 20
      3.1.1 Drivers in the payer market ............................. 21
      3.1.2 Challenges in the payer market ....................... 22
   3.2 Provider market .................................................... 22
      3.2.1 Drivers in the provider market ......................... 23
      3.2.2 Challenges in the provider market .................... 24
   3.3 Pharmaceutical market .......................................... 24
      3.3.1 Drivers in the pharmaceutical market ............... 26
      3.3.2 Challenges in the pharmaceutical market .......... 27
4. Policy framework for MPO in India ............................... 28
   4.1 Challenges in policy framework in India .................. 30
   4.2 Measures to drive healthcare BPO in India ............... 31
5. Outlook ......................................................................... 32
Executive summary
Health care is one of the prominent sectors, which touch every individual and government, and consumes more than 10% of GDP of some of the most developed countries globally.

In terms of outsourcing, health care has been relatively late to the party. However, in the last two decades or so, there has been an ample push from health care payers, providers and pharmaceutical companies to move non-core processes to third-party service providers, and India has been one of the leading destinations for outsourcing in this space, which is led by the US, both as a source and a destination.

The global medical process outsourcing market is estimated to be worth more than US$100 billion\(^1\), of which pharmaceutical outsourcing is a key segment.

This report looks at payer, provider and pharmaceutical (except contract manufacturing) markets and provided insights into processes and services, which are typically outsourced to BPO players by each of these segments of players and how the global market is placed in each of these segments.

When we look at the Indian market from a health care outsourcing perspective, it deserves mention that India’s overall IT-BPM market is nearly US$150 billion\(^2\) currently and is growing by the day. As India-based BPO vendors continue to acquire capabilities in various verticals, this report assesses how far they have reached in the health care vertical.

The report also highlights various trends, drivers and challenges in each of the three end market segments – payer, provider and pharmaceutical along with some of the inherent advantages and disadvantages of the Indian BPO market, which affect the industry.

Primary and secondary sources estimate the size of the medical process outsourcing industry in India to be US$3.3–4.2 billion industry, including estimates by end market segments in this report. The report also provides insights into services, which are gaining traction in each of the segments, and where the industry would most likely see a robust double-digit growth in the coming years.

Lastly, the report provides the policy framework for the health care BPO industry, special incentives available for the sector and specific challenges faced by the Indian medical BPO sector. It also covers some of the regulatory measures which could help provide a boost to this sector.

Hope you find this report useful in understanding the MPO sector, particularly the breadth of the services outsourced in each segment, dynamics of outsourcing to India and specific drivers and challenges from an India perspective.
Introduction
Outsourcing in health care has become more of a compulsion than a strategic choice as players associated with the health care ecosystem look to reduce costs while providing effective health care services.

The BPO players help health care vendors to reduce administrative costs, reduce costs of delivering health care, manage electronic medical records, clinical transformation and consumer engagement. Furthermore, outsourcing reduces errors in medical billing, reduces support staff training costs and provides access to trained professionals; all of which enable health care players to improve their bottom line.

Several non-critical functions such as finance and accounting (F&A), payroll services, customer care services and HR services are also outsourced to ensure improved processing time, elimination of errors and staffing savings.

F&A outsourcing is done in the health care sector to standardize financial service processes, improve billing and collection process, manage accounts receivable and accounts payable, improve capital budgeting and financial strategy through pricing and cost analysis. Furthermore, the external accountants understand the accounting standards and financial reporting better and enable the organization to comply with constantly changing regulations and requirements.

The shortage of qualified workers is one of the major problems in the medical industry. Hence, HR outsourcing enables third-party service providers to speed up the time to fill vacancies, improve quality of the candidate and improve retention rates. Furthermore, they can perform background check of workers, track schedule of temporary workers, manage payroll services and training of workers.

The health care IT outsourcing market is also growing at a rapid pace because health care vendors need information technology infrastructure and devices such as servers, desktops, networks, personal digital assistants (PDAs), and laptops to electronically manage medical records, billing codes and monitoring systems. However, they lack required skills and IT domain expertise to maintain the infrastructure and services. This has resulted in demand for IT infrastructure and services outsourcing so that health care providers can focus on their core services.

Contact center or customer care outsourcing is done by health care organizations to efficiently handle customer complaints 24*7, answer queries related to claim processing, medical services and provide virtual receptionist services among others.

Health care market segments

The health care market is broadly divided into three segments, i.e., the payer, provider and pharmaceutical markets.

For each of these market segments, there are specialized processes, which are increasingly getting outsourced. The report covers some of these processes and services outsourced in detail in the coming section.
Medical process outsourcing market overview
2.1 Service offerings by end market segment

Based on the kind of the players involved in the health care ecosystem, the health care BPO market can be divided into three major segments:

**Payers (primarily health care insurance companies)**

With the increase in the number of the people enrolling for health plans, insurance companies find it more difficult to handle the surge in volumes themselves. In this scenario, BPO companies play a major role in helping these payers to streamline their claim operations, reduce operational costs, and bring new plans in the market with minimal costs.

Earlier, the health insurance companies were slow in adopting the outsourcing model due to their suspicion regarding security of the sensitive medical information in offshore countries. In addition, the state insurance regulators preferred job preservation in their own country and hence, many states required regulatory approval prior to offshoring.

However, of late, health insurance companies have adopted the outsourcing model to manage costs due to increased competition and leverage IT investments of service providers to differentiate their offerings.

The major health care payer BPO services include product development and business acquisition, member management, provider management, care management and claim management services.
**Figure 1: Healthcare payer BPO services**

- **Product development and business acquisition (PDBA):** It involves offering new product services (health care insurance plans) to customers based on the evolving marketplace, managing the channels to attract new customers and retain existing customers, assess risk associated with new policies and underwriting for guarantee of payments in case of losses/damages.

- **Member management:** Member management involves enrolling new members in health insurance plans and handling existing member changes. It also involves handling member’s grievances and complaints while tracking the patterns of problems encountered by members. Furthermore, it involves managing endorsements of insurance policies so that the insured party receives increased coverage than would exist for unendorsed policy. Records management enables the content to be captured, stored and rapidly retrieved from any source at low cost.

- **Provider management:** The payers utilize data-mining capabilities and analytical tools to manage the network of the providers (hospitals) by segmenting patients based on their engagement and membership. They also generate profiles of the providers based on several factors such as average wait time to schedule an appointment and number of hospital admissions, to compare them against a peer group and identify patterns of a provider’s care. Furthermore, through credentialing, they collect and verify the provider’s professional qualifications.

- **Care management:** Care management services include the usage of analytical tools by the payers to effectively manage the care of the patients to reduce costs. The disease management programs are designed to identify the patients suffering from chronic diseases so that active interventions and prevention measures can reduce the number of hospital re-admissions. Utilization management services ensure that clinical coverage decisions are made on evidence-based guidelines to avoid over-use and under-use of medical services. Pre-service reviews, concurrent reviews and post-medical service reviews are done to make appropriate clinical coverage decisions.

- **Claims management:** Claims management involves services such as initial claims processing, investigation of claims to detect discrepancies and aberrant billing behaviors, claim disbursements, fraud detection to reveal suspicious providers and policy holders, and claims litigation, recovery and subrogation.
The claim management market accounts for the largest portion of the health care payer BPO market. However, the highest growth is expected in outsourcing of value add services such as product development, provider management and care management, that require the players to offer innovative solutions using advancements in IT such as mobility, analytics, social media and cloud solutions.

Providers (hospitals)

The health care providers such as hospitals and health systems have been outsourcing non-core functions to improve the revenue cycle performance, maximize reimbursements and increase cash flow. Furthermore, BPO players enable the health care providers to strike a balance between rising health care costs and limited revenue from payers by deploying digital information system that ensures transparent and accurate data analysis. Furthermore, through outsourcing, providers can comply with industry regulations, operate more efficiently, reduce administrative costs and can readily access skillful resources.
Patient enrollment and strategic planning: Patient enrollment and strategic planning includes services related to enrollment of new patients.

Patient care: The patient care services include medical transcription, medical imaging and patient’s remote device monitoring. Medical transcription is the process of converting voice-recorded report of the health care provider into text format. With the development of the audio recording devices and encrypted e-mail system, the transcriptionists can work asynchronously while maintaining privacy of the patient’s health care information. Medical imaging is used for advanced medical treatment, since it creates visual representations of the interior of a body for clinical analysis and medical intervention. The professional and experienced diagnostic radiologists are required for reliable interpretation of medical imaging.

Revenue cycle management: It includes services related to revenue collection, claim filing with the insurance companies, medical billing and medical coding. Medical billing is the process in which the health care provider submits a bill or claim to a health insurance company in order to receive payment for rendering medical services. Medical coding or classification is the process of transforming descriptions of medical diagnoses into universal medical code numbers. When the patient receives professional health care, the provider documents the services provided and the medical coder abstracts the information from the documentation and assign appropriate codes for the medical claim.

Pharmaceutical outsourcing

Globally, many pharmaceutical players outsource a significant portion of their research (for drugs and medical devices) and manufacturing activity to low-cost countries such as China and India, to save costs and time.

The pharmaceutical outsourcing market is segmented into contract research outsourcing (CRO), contract manufacturing outsourcing (CMO) and business support functions. The scope of the report is limited only to CRO, since the purpose of the report is to look at outsourcing from an IT-BPM perspective.

The global CRO market is expected to grow at a CAGR of 6% from US$25 billion in 2011 to US$30.6 billion in 2015. Apart from clinical trials, which form the major portion of the CRO, the other clinical research services that are outsourced include bio-statistical data management services, regulatory submissions, medical writing and pharmacovigilance services.
Medical Process Outsourcing in India

Drug discovery stage: The stage primarily involves application of analytical chemistry and biology, and custom chemical synthesis to discover new potential drugs for the treatment of a disease.

Pre-clinical stage: Before the pharmaceutical companies start clinical trials on a drug, they conduct pre-clinical studies in test tubes and on animals to understand the preliminary efficacy and toxicity of the drug. The results of the pre-clinical studies decide whether the drug has scientific merit for the next level trials.

Clinical stage: In this stage, the clinical trials are usually initiated on a small scale to assess the safety of a drug, after which larger trials are conducted that test its efficacy. The various phases of clinical research are the steps in which experiments are firstly conducted on few human subjects and thereafter on many study participants if the trial seems safe.

- Phase 0: Phase 0 trials are exploratory, first-in-human trials are conducted to establish, at an early stage, whether the behavior of the drug or agent in human subjects is in accordance with the expectations of preclinical studies.
- Phase I: Phase I trials are conducted on healthy volunteers, typically 20 to 80 individuals, to develop basic safety data related to drugs’ toxicity, metabolism, absorption and other pharmacological actions. This phase is conducted over a period of between six months and one year on an average.
- Phase II: Phase II trials are conducted on a small number of individuals, typically 100 to 400 patients, who suffer from the drug’s targeted disease or condition. Phase II trials provide the first evidence of their clinical efficacy as well as additional safety data. These trials are generally carried out over an average of two years.
- Phase III: Phase III trials are conducted on a significantly large population of several hundred to several thousand patients. Phase III trials are designed to measure efficiency on a large scale as well as determine the long-term side-effects of the drugs. These trials involve numerous clinical sites and are generally carried out over two to three years.

- Phase IV: This stage monitors long-term risks and benefits, and studies are conducted on different dosage levels or evaluate different safety and efficiency parameters in target patient populations. Phase IV trials, also known as post-marketing surveillance trials, are generally conducted over a period of between one and four years.
- BA and BE studies: BA studies are conducted to evaluate the absolute systemic availability of active drug substances from their dosage forms. Such studies also determine the linearity of their bioavailability parameters over the proposed clinical dose range. BE studies entail science-based regulatory research that includes a combination of studies based on specialization. The primary aim of BE studies is to determine whether the absorption rate and extent of a drug’s sample is comparable with its innovators’ formulations.

- Pharmacovigilance services: Pharmacovigilance relates to identification of hazards associated with pharmaceutical products and minimization of the risk of any harm that may befall patients. Medication errors such as an overdose, and misuse and abuse of a drug are also carefully monitored.
- Medical writing: Medical writing services include management of clinical study documents including clinical trial designs and protocol development; investigator’s and ethics committees’ brochures; clinical study reports and manuscripts; core safety and prescribing information; interim and final clinical study reports (CSRs); close-out reports and drug safety (adverse events) reports.
- Central lab: A central laboratory performs testing of samples collected during clinical study, compiles lab test reports and delivers lab kits and bio samples from/to medical institutions where diagnosis and treatment of patients is performed.
- Clinical data management: CDM is the process of handling data collected through a clinical trial, right from the development of study forms through the database-locking process to its transmission to a statistician for final evaluation.
- Clinical biostatistics and programming: This category includes a complete range of statistical services such as sample-size estimation, protocol and CRF (case report form) reviews, statistical analysis plan development for individual studies, programming of statistical tables, listings and graphs, interim analyses and exploratory analysis.
2.2 Global health care BPO market

The global health care BPO market is expected to grow at a CAGR of 10.7% from US$113.2 billion in 2013 to US$188.9 billion in 2018.

The pharmaceutical outsourcing segment has the largest share and accounted for close to 80% (US$90.6 billion) of the health care BPO market in 2013.

The outsourcing in the health care industry is on the rise especially in a country such as the US where the cost of the health care is high, the availability of man power is low and health care reforms are introduced by Patient Protection and Affordable Care Act (PPACA) to provide affordable medical insurance to low-to-middle income Americans.

The US healthcare accounted for the largest share (73.8%) of the worldwide healthcare BPO market at US$83.5 billion in 2013. It is expected to grow at a CAGR of 11.2% to reach US$141.7 billion in 2018.

---

**Figure 6: Global healthcare BPO market (US$ billion)**

CAGR 10.7%  
113.2  
2013  
188.9  
2018E

**Figure 7: Global healthcare BPO market by region in 2013**

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>74%</td>
</tr>
<tr>
<td>Rest of world</td>
<td>26%</td>
</tr>
</tbody>
</table>

**Figure 8: US healthcare BPO market (US$ billion)**

CAGR 11.2%  
83.5  
2013  
141.7  
2018E

**Figure 9: US healthcare BPO market by segment in 2013**

<table>
<thead>
<tr>
<th>Segment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceuticals</td>
<td>8%</td>
</tr>
<tr>
<td>Prayer</td>
<td>13%</td>
</tr>
<tr>
<td>Provider</td>
<td>79%</td>
</tr>
</tbody>
</table>
US health care accounted for the largest share (73.8%) of the worldwide health care BPO market at US$83.5 billion in 2013. It is expected to grow at a CAGR of 11.2% to reach US$141.7 billion in 2018.

The US health care payer, provider, and pharmaceutical outsourcing markets are valued at US$11.1 billion, US$6.8 billion, and US$65.6 billion, respectively, in 2013.

Furthermore, the US health care outsourcing market has significant potential for growth due to measures taken by the US government to lower increasing health care costs.

The introduction of PPACA expanded the insurance access to more than 30 million US citizens. This increased the demand for claims processing services, which led to large-scale outsourcing of these services by payers. The growth in the US health care provider outsourcing market is primarily driven by ICD-10 conversion reform and the shortage of medical coders in the US. Furthermore, pharmaceutical companies in the US have adopted various strategies such as downsizing and consolidation of infrastructure due to decline in global economy, which led to increase in pharmaceutical outsourcing services.

Furthermore, the Affordable Care Act has set the regulation around medical loss ratio (MLR) stating that insurers in the small group markets must spend at least 80% of insurance premium dollars to improve health care quality. However, the figure is 85% for insurers in the large group market. If the insurers generate lower MLRs than required, they need to refund the difference to the enrollees. Hence, the MLR rule ensures that insurer uses 80 cents out of every premium dollar to pay its customers medical claims and health care activities, thereby providing high quality of care and value to the customers.

The most preferred destination for payer and provider outsourcing in India is due to the various advantages such as high number of health care professionals available at affordable cost, a large patient pool and reduced time and costs for recruitment. Furthermore, the Philippines-based health care BPO players are also looking to compete with Indian players.

The below figure compares various preferred health care BPO destinations in terms of the drivers and market growth perspective.

<table>
<thead>
<tr>
<th>Broader comparison of healthcare BPO destinations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US</strong></td>
</tr>
<tr>
<td>Healthcare spending (US$): 2,834</td>
</tr>
<tr>
<td>Healthcare spending (US$ per head): 8,958</td>
</tr>
<tr>
<td>Doctors (per 1,000 people): 3.3</td>
</tr>
<tr>
<td>Hospital beds (per 1,000 people): 2.9</td>
</tr>
<tr>
<td>Largest source market for healthcare outsourcing</td>
</tr>
<tr>
<td>Healthcare providers in the US prefer near-shoring or on-shoring</td>
</tr>
<tr>
<td>Low risk of data security and confidentiality of medical information</td>
</tr>
<tr>
<td>Adequate skillsets for high-end services such as disease management, case management and pre-clinical trials.</td>
</tr>
<tr>
<td>BPO companies in US understand the US healthcare systems, standards and regulations better to provide these services.</td>
</tr>
<tr>
<td>Ability to offer integrated healthcare solutions, given inherent strengths of US$100+ billion Indian IT-BPO market</td>
</tr>
<tr>
<td>Leading Indian IT/BPO companies have strengthened healthcare BPO capabilities through global acquisitions</td>
</tr>
<tr>
<td>Established large BPO companies with capabilities in F&amp;A, customer relationship management and human resource management</td>
</tr>
<tr>
<td>Well-established medical and bio infrastructure</td>
</tr>
<tr>
<td>Availability of patients with diverse genetic characteristics for clinical trials</td>
</tr>
<tr>
<td>Cost competitiveness</td>
</tr>
<tr>
<td>Skilled workforce</td>
</tr>
<tr>
<td>Preferred market for healthcare payer outsourcing</td>
</tr>
</tbody>
</table>

| **India**                                    |
| Healthcare spending (US$): 75.9              |
| Healthcare spending (US$ per head): 61        |
| Doctors (per 1,000 people): 0.6               |
| Hospital beds (per 1,000 people): 0.7         |
| Existing large BPO companies with capabilities in F&A, customer relationship management and human resource management |
| Well-established medical and bio infrastructure |
| Availability of patients with diverse genetic characteristics for clinical trials |
| Cost competitiveness |
| Skilled workforce |
| Preferred market for healthcare payer outsourcing |

| **Philippines**                              |
| Healthcare spending (US$): 12.5              |
| Healthcare spending (US$ per head): 127       |
| Doctors (per 1,000 people): 1.2              |
| Hospital beds (per 1,000 people): 0.7         |
| Existing large BPO companies with capabilities in F&A, customer relationship management and human resource management |
| Well-established medical and bio infrastructure |
| Availability of patients with diverse genetic characteristics for clinical trials |
| Cost competitiveness |
| Skilled workforce |
| Preferred market for healthcare payer outsourcing |

Source: EY analysis
3

MPO market in India
India has been and continues to be one of the important markets for outsourcing. It has a proven track record of being a global hub for IT-BPO services. With capabilities of Indian BPO vendors growing day by day, they now offer specialized services across different verticals, thereby enabling growth in targeted BPO services. The global sourcing (includes IT and business process sourcing) market is estimated to be in the range of US$148-154 billion in 2014. India’s market share in global sourcing is estimated to be ~55% (US$81.4-84.2 billion) in 2014. However, there are other emerging BPO destinations in Eastern Europe, Asia and Latin America. Out of all the delivery centers opened in 2014, an estimated 27% (41 delivery centers) were in India, closely followed by Eastern Europe, Rest of Asia and Latin America.

Outsourcing in health care has been late to the party globally. However, outsourcing in this industry is picking up well and India too stands to gain from the same. In this domain, India is positioned well in some segments but in some others, it still lags behind due to specific challenges.

Primary and secondary sources estimate the overall size of health care outsourcing in India to be in the range of US$3.3-4.2 billion. Of this, around US$700-900 million would be the payer outsourcing market, US$100-200 million would be the provider market and US$2.5-3.1 billion will be the overall size of the pharmaceutical outsourcing market (excluding contract manufacturing services).

India, as a destination for outsourcing in health care, has a few inherent advantages, which include:

- **Mature medical education system:** India’s mature pharmaceutical and medical education system is a key driver of growth, since more than 1,500 institutions in the country offer various medical and pharmaceutical courses. The quality of education, medical infrastructure and facilities are also regarded as good.

- **Leading global hub for outsourcing:** India is regarded as one of the lead destinations for outsourcing due to factors such as large English speaking population, low cost base, large talent pool of graduates and post-graduates in various technical and non-technical fields and maturity of the industry with more than 500 firms engaged in providing BPO services.

- **Mature BPO vendors:** Diverse set of mature BPO providers including local BPO vendors, MNC BPO companies and captives of global companies.
Moreover, there are some inhibitors of growth in the health care BPO market in India, which include:

- **Data privacy:** Since personal health care information is as private as financial information, the most critical challenge in outsourcing health care processes is data privacy.

- **Stricter regulatory regulations around patient data protection**, including The Health Insurance Portability and Accountability Act of 1996 (HIPAA) and Health Information Technology for Economic and Clinical Health (HITECH) Act in the US, means that health care organizations are now faced with penalties including hefty fines for the unauthorized release of this information, which becomes a risk for both outsourcing organization and the BPO vendor depending upon the agreements between them.

- **Global competition:** Competition from leading health care BPO companies in the US is a big challenge for Indian vendors, since most of them are specialists in the health care sector and provide an increased gamut of services as compared to Indian vendors.

- **Integrated IT-BPO vendors’ advantage:** Another challenge in this industry is the fact that global/local service providers with IT and BPO capabilities and with the capability to provide integrated solutions, with big data/analytics capabilities and high investments in this area are likely to have an advantage over pure-play BPO vendors.

- **Rising costs in India:** Rising salary levels, inflationary pressure on overall cost of infrastructure, fluctuating exchange rates and infrastructural challenges such as power, broadband connectivity, etc. are other challenges that the Indian BPO industry is faced with. The Philippines and other low cost locations are emerging as a big challenge to Indian BPO industry including the Health care vertical.

The Indian medical process outsourcing market can be divided on the same lines as the global ones, and the report highlights the growth drivers and challenges in each market segment.

### 3.1 Payer market

The payer’s outsourcing market in India is one of the largest segments in the industry with leading local BPO vendors as well as IT services companies in India providing services to payers.

A significant part of services are provided to the US health care payer market, and the gamut of services provided by vendors from India include claims processing and management, new member enrollment, member management, business intelligence solutions related to fraud detection and management, wellness management and outcomes related services including disease management.

The overall market is estimated to be worth US$700-900 million in India with top BPO and IT vendors having presence in this segment. Claims processing and management continue to be the largest chunk of services provided but slowly other niche services such as case management, utilization management, disease management etc., are moving to India as vendors start developing capabilities in these areas.

<table>
<thead>
<tr>
<th>Commonly outsourced services</th>
<th>Payer</th>
<th>Provider</th>
<th>Pharmaceutical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claims processing and management</td>
<td>Medical transcription services</td>
<td>Bioavailability studies</td>
<td></td>
</tr>
<tr>
<td>New member enrolment</td>
<td>Medical coding</td>
<td>Bioequivalence studies</td>
<td></td>
</tr>
<tr>
<td>Member management</td>
<td>Billing</td>
<td>Clinical trials, most of the activity in India happens around Phase 2 to 4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Services gaining traction</th>
<th>Payer</th>
<th>Provider</th>
<th>Pharmaceutical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case management</td>
<td>Medical imaging related reporting</td>
<td>Drug discovery</td>
<td></td>
</tr>
<tr>
<td>Utilization management</td>
<td>Patient care and monitoring related services</td>
<td>New product development and formulation</td>
<td></td>
</tr>
<tr>
<td>Disease management</td>
<td>Patient enrolment</td>
<td>Pre-clinical trial management</td>
<td></td>
</tr>
<tr>
<td>Business intelligence solutions related to fraud detection and management</td>
<td>Patient relationship</td>
<td>Clinical data management</td>
<td></td>
</tr>
<tr>
<td>Wellness management</td>
<td></td>
<td>Medical writing</td>
<td></td>
</tr>
</tbody>
</table>

- | Pharmacovigilance |
- | Biostatistics |
- | Medical access |
Some of the areas such as health care product development, risk assessment and underwriting-related activities are still not outsourced by payers to India, as these areas are core to their business.

Outsourcing in the domestic market in India for health care insurers is very prevalent but it is typically done to specific third party administrators (TPAs). The Insurance Regulatory and Development Authority of India (IRDA) introduced TPA in 2001 and defined it as an entity, which, for the time being, is licensed by the Authority, and is engaged, for a fee or remuneration, in the agreement with an insurance company, for the provision of health services. TPAs manage insurers’ claims processing, provider network and utilization review. While some TPA operates as units of insurance companies, most are often independent. However, this model of TPA eliminates the need to outsource services further to any of the traditional BPO companies, which are engaged in providing services to global clients.

India is estimated to have a considerable share in payer outsourcing market as a destination. India, along with the Philippines and the US, are leading destinations for outsourcing in this segment. There are many advantages of outsourcing for the payers:

- Reduced administration costs and expenditure
- Improved accuracy of information and reduced fraud rate
- Access to skilled workforce to do specific transaction-oriented tasks
- Integration of multiple platforms and systems
- Access to data analytics as most vendors now have capabilities in big data/analytics

### 3.1.1 Drivers in the payer market

1. **US regulatory changes**
   - With the recent regulatory changes in the US including PPACA, people are enrolling for health plans more than ever before.
   - With a surge in volumes, payers are focussing on bringing out new healthcare plans to the market to attract new customers. Hence, BPO vendors can help streamline the claims management processes and handle excess volumes while reducing risks of fraud and abuse.

2. **Margin pressure on payers**
   - There is a pressure on margins of healthcare payers due to rise of health insurance exchanges (online marketplace to obtain health insurance from competing providers) in the US. This enables the consumer to obtain coverage from competing private healthcare providers that is likely to accelerate adoption of outsourcing in order to rationalize costs.

3. **Demand for niche services**
   - Though the demand for claim processing and management related services has quite saturated, the demand for other services is growing rapidly.
   - Services related to care management and healthcare plan development, channel management and risk assessment among others are in demand and need relatively special capabilities by BPO companies.

4. **Demand from new markets**
   - Demand from other markets in Asia Pacific, Australasia and Europe which do not have a centrally funded one-payer model is picking up and Indian IT-BPO companies are focusing on them.

5. **Big data / analytics**
   - The growing ability of the BPO vendors to discover hidden patterns and unknown correlations in data using big data / analytics is also driving the payer BPO market.
   - The BPO vendors having strengths across IT solutions, analytics, basic medical processes are likely to benefit the most.

6. **Demand for niche services**
   - Demand for outsourcing in healthcare is expected to rise in India as healthcare insurance penetration increases.
   - The government has also recently launched Rashtriya Swasthya Bima Yojana which provides hospitalization coverage up to INR 30,000 at the registration fee of just INR 30. The scheme is targeted at the poor, specifically the people belonging to below the poverty line (BPL) families and as of March 2015, over 37 million people have been enrolled in the scheme.
   - This may, in the future, push the volume of claims, and some insurers may look to outsource services to BPO vendors, where they do not rely too heavily on TPAs.

Source: EY analysis
3.1.2 Challenges in the payer market

1. Regulatory governance
   - Increased regulatory scrutiny of payers as well as control of fraud, waste and abuse is likely to impact the outsourcing levels in the BPO payer industry.

2. Competition from global players
   - Competition from global software, IT consultants and BPO vendors is increasing in the sector as technology continues to play a pivotal role in streamlining the processes in this industry.

3. Difficulty in expansion beyond US
   - The Indian BPO vendors have not been able to penetrate European and other developed markets for the insurance outsourcing business due to stricter regulatory norms and data privacy laws.
   - Further, the European markets are structurally very different, with government agencies providing healthcare services to people. Also, near-shoring maybe preferred in case the activities were to be outsourced.

3.2 Provider market

The health care provider outsourcing market in India is a relatively small segment with an estimated size of US$100–200 million. This is primarily due to the fact that the provider market itself is fragmented and very few players have the scale to derive considerable benefits from outsourcing.

The services outsourced include services clubbed under revenue cycle management (medical billing, coding, collections), medical transcription, medical imaging related reporting, patient enrollments, electronic medical records management, finance and accounts function, HR & payroll function and some aspects of sales and marketing.

The vendors providing these services are very fragmented as well with some small vendors in leading locations for IT offices in India serving various global hospitals and practitioners with medical billing related services.

Medical transcription services really picked up as one of the leading segments to be outsourced into India, due to its inherent English-speaking population; however, with the advent of intelligent speech recognition and conversion systems, this business is seeing a downward trend.

New trends in outsourcing include medical imaging-related reporting, patient care and monitoring-related services, which are performed by doctors and nurses based in India. There is also considerable focus on patient enrollment and patient relationship, which can also be outsourced easily to offshore destinations.

Medical coding and billing are key functions, which are outsourced to the third party vendors by the providers and with change in standards (implementation of the ICD-10 medical coding system), the providers are already looking to outsource these functions than implement themselves and train their staff on the new system.
3.2.1 Drivers in the provider market

1. **Loss of revenue due to billing error**
   - Healthcare practitioners and hospitals are estimated to lose up to 10% of revenue due to billing errors, and on top of it increasing complexity of coding adds the risk of non-compliance and fines from regulators. Thus, revenue cycle services are becoming popular for outsourcing.

2. **Know-how of minor services**
   - Lack of expertise on minor services such as HR, finance and accounts, sales and marketing etc. will continue to drive outsourcing in the provider market. Further, it enables the medical practitioners to focus on their core job of patient care.

3. **Margin pressures**
   - Declining reimbursement from government healthcare plans and private insurance companies have made it difficult for hospitals to maintain their historical profit margins for certain clinical services (such as imaging testing).
   - As a result, hospitals have started to use third party services for interpretation of imaging results or transcription of physician’s case notes.

4. **Healthcare uptake in India**
   - With rising middle class population and the demand for top-notch healthcare facilities, in the last few years, lot of multi-specialty hospitals chains have come up, which are driving the need for outsourcing in this sector

5. **ICD-10 coding standards adoption**
   - Implementation of the ICD-10 medical coding system by the Centers for Medicare and Medicaid Services (CMS) in the US, which got delayed by a year and is expected to be implemented by Oct 2015, will drive outsourcing in the providers market.

6. **Structured documentation**
   - Outsourcing leads to structured processes, documentation and improves the overall medical record management, which may not have been in place while the in-house model; thus driving outsourcing

7. **Consolidation in market**
   - Consolidation between providers is a key trend which drives scale and outsourcing in various areas

Source: EY analysis
3.2.2 Challenges in the provider market

1. Lack of knowledge on Western standards and policies
   - Lack of expertise on global medical coding standards, laws and policies pertaining to healthcare benefits in the source country, inadequate skillset for documentation and medical record management are some challenges faced by the industry in India.

2. Fragmented source and destination market
   - The provider market is very fragmented with very few hospital chains having the scale to turn to outsourcing.

3. Near-shoring preferred
   - A far-off offshoring location of Indian vendors for the providers in the West is another dampener since most of the providers prefer outsourcing near-shore, due to the nuances involved in the processes being outsourced and the comfort level of the providers.

4. Skilled doctors
   - Providers outsourcing medical imaging or similar services which require doctors to review or write reports, prefer properly trained doctors to conform to western standards.
   - It may require expat doctors to move to India to train the team of doctors or base permanently there.

5. Competition from hospital management companies
   - Hospitals have a very diverse of activities to be outsourced including housekeeping, procurement, safety, billing, supplies, patient care, customer care, claims management etc.: which are very diverse for BPO companies to capture. In the developed countries, specialist hospital management companies have come up which take care of the overall running of the hospitals with lower scope of further outsourcing.

6. Concern on benefits of outsourcing
   - Not many providers realize the benefits of outsourcing in areas over and above HR and F&A, and thus there has been a trend of outsourcing the function first and then moving it back in-house.
   - Such examples also lead to apprehensions among providers on outsourcing.

Source: EY analysis

3.3 Pharmaceutical market

Pharmaceutical outsourcing in India can be broadly divided into two categories – CRO and CMO, which combined is also known as Contract Research and Manufacturing Services (CRAMS) market. The report looks at only the CRO market in India.

The CRO industry in India has seen rapid growth in the past and is estimated to be worth US$2.5–3.1 billion market in India in 2013, considering various industry estimates. It is also expected to grow at a CAGR of 18%–20% over the next three to four years. CROs provide services including drug discovery, new product development, formulation, pre-clinical trial management and clinical research. The Indian CRO industry has grown significantly over the past few years. It has witnessed the emergence of several players in the area of drug discovery and development over the last decade. The Indian contract research market can be broadly divided into services provided for new drug development (research involving clinical trials) and services provided to undertake bioavailability / bioequivalence (BA/BE) studies (to assess bioequivalence of generic drugs).
Broad CRO activities in India:

- **BA/BE services**: Studies are conducted to assess the equivalence of a drug with an existing drug to file for Abbreviated New Drug Application (ANDA).

- **Clinical R&D research**: Clinical trials are used to determine whether new drugs or treatments are safe and effective.

In India, several CROs are engaged in providing BA/BE services, while others provide clinical R&D services. Typically, clinical R&D is undertaken by affiliates or divisions of global CROs operating in India. Indian CROs are mainly engaged in BA/BE studies. Profit realization is higher in clinical R&D, and it will be a boost for India CRO players if they start providing clinical services, along with BA/BE studies.

The cost benefits of conducting clinical trials in India are the key growth driver for the Indian CRO industry. India offers a significant cost advantage in the clinical trials domain, as compared to western countries. A multinational company moving R&D to India could save up to 50% of overall costs.

Within clinical trials, most of the activities in India happen around Phase 2 to 4 as Phase 0 and 1 are difficult to achieve in the Indian environment. Most Indian CROs also have significant capabilities in several parts of the drug discovery value chain, but none of these offer the entire spectrum of services pertaining to drug discovery. They lack capabilities in target identification and validation as well as in designing animal disease models.

However, the more established Indian CROs have transitioned from being mere providers of one-off chemistry or biology-based services to offering broader, more partnership-oriented, innovation-driven service offerings.

Since the pharmaceutical outsourcing market requires expertise in the pharmaceutical space, none of the leading IT and BPO companies have strong capabilities in the pharmaceutical outsourcing market. Most of the players who are present in this domain are specialist players and largely MNCs who lead this space with few domestic companies providing these services.

The traditional IT/BPO vendors have developed capabilities around pharmacovigilance, clinical trial reporting and disclosure, medical access etc., and they directly serve pharma companies on these services without themselves running any clinical trials or providing any biological studies. Any impact on conducting clinical trials in India does not affect their business, and in fact their business continues to grow with even more opportunities of outsourcing seen in the market.

---

**Recent regulatory changes**

The clinical trial industry in India faced a major drawback in 2013 when the Supreme Court revoked the right of the Central Drugs Standard Control Organization (CDSCO), national regulatory body for Indian pharmaceuticals and medical devices, to approve clinical trials in the country. This was done, since there was increasing number of patient deaths during clinical trials in India. Around 2,644 individuals who had signed up for the trials of 475 new drugs died between 2005 and 2012.

The Supreme Court also banned clinical trials on 162 drugs in India and asked the authorities to strengthen approvals and monitoring for clinical trials in India.

Therefore, over the last two years, Indian contract research industry has been adversely affected by regulatory hurdles and clinical trials have reduced from 2012 levels.

However, recent policy actions and notifications on some of the concern areas have improved the overall outlook for the clinical trial industry. These include guidelines on compensation for patients; push for IT-enabled systems for clinical trial approval, enforcement and monitoring; mandatory audio and video recording of the entire process for organizations conducting drug trials and awareness of the patient of all of the side effects of the trial before giving a written consent. Introduction of the Drugs and Cosmetics (Amendment) Bill to amend the Drugs and Cosmetics Act, 1940 for upgrade and introduction of provisions for clinical trials and regulation of medical devices is under plan for 2015, which shall further provide a clear policy framework.

---

**Clinical trials approved in recent years in India**

- 2007: 3
- 2008: 65
- 2009: 391
- 2010: 500
- 2011: 321
- 2012: 262
- 2013: 107
- 2014: 150
- Till Mar 2015: 15

Medical Process Outsourcing in India | 25
### 3.3.1 Drivers in the pharmaceutical market

<table>
<thead>
<tr>
<th>1</th>
<th>“Patent cliff”</th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ With a large number of blockbuster drugs expected to go off patent, there will be more competition in the generics segment and the profitability of innovator companies will be affected adversely. Therefore, innovator companies are being compelled to curtail their operational cost, which has resulted in their resorting to outsourcing.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2</th>
<th>Increasing R&amp;D costs and strict regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ In the past 30 years, the cost of developing new molecular entities (NMEs) has grown manifold, mainly due to rising regulatory pressures, given the increase in the size and duration of sample clinical studies.</td>
<td></td>
</tr>
<tr>
<td>➤ Drug development costs in developed economies are likely to increase further on the back of growing regulatory scrutiny. Therefore, outsourcing production to low-cost regions such as India enables global innovator companies to reduce their costs without compromising on innovation.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3</th>
<th>Decline in R&amp;D productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ There is a decline in new drug approvals for the pharma companies while the cost of drug development has shown a marked rise.</td>
<td></td>
</tr>
<tr>
<td>➤ Outsourcing of drug research helps to reduce the risk burden of failure on an innovator company, since outsourcing is relatively cost-effective.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4</th>
<th>Pricing pressures due to increased generic drug usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ There is pricing pressures on branded prescription drugs as governments seek to control health care costs.</td>
<td></td>
</tr>
<tr>
<td>➤ Governments in developed countries are imposing regulation that requires branded drugs to be substituted by their generic versions to reduce health care costs.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5</th>
<th>Focus on core</th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ Global pharmaceutical companies are focusing on marketing and discovery, while outsourcing drug development, clinical trials and manufacturing. This enables them to focus on their core capabilities.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6</th>
<th>Medical and bio infrastructure in India</th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ India's established medical, biometric and central lab infrastructure and training centres are driving growth. Further, large numbers of established health care players are expanding their reach to tier-II towns which will give them access to a large pool of new trial patients.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7</th>
<th>Availability of patients for clinical trials</th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ For clinical trials, high rate of patient enrolment and the low cost of conducting trials acted as strong drivers. Moreover, India's large population base provides a diverse genetic pool of people available for clinical trials.</td>
<td></td>
</tr>
<tr>
<td>➤ There are over 1 million hospital beds in the country, which can be utilized for clinical trials.</td>
<td></td>
</tr>
</tbody>
</table>

Source: EY analysis
## 3.3.2 Challenges in the pharmaceutical market

1. **Strict regulations on conducting clinical trials**
   - For Clinical Research outsourcing, stricter regulations around approval process, patient compensation and penalties lead to high risks in case of lack of therapeutic effect of the under-trial drug or adverse medical reactions from the drug. This has affected the outsourcing of clinical trials to India.

2. **IPR protection**
   - Eastern European countries offer superior IPR protection than Asian countries. Though India has enforced patent laws, there are still uncertainties in working with Indian partners.

3. **Lengthy approval time for clinical trials**
   - The time taken for the approval of a clinical trial is significantly longer in India compared to that in other Asian countries.

4. **Competition from global CROs**
   - Competition from global CROs is another challenge for the local vendors, though most of the large global CROs have operations in India and contribute to outsourcing.
   - Also, competition from Southeast Asian countries, mainly China, is a major challenge.

5. **Lack of pre-clinical infrastructure**
   - India does not have adequate infrastructure for pre-clinical studies, especially in terms of animal testing laboratories.
   - Animal testing is a key preliminary step in the drug discovery process.

6. **Lack of capabilities for traditional IT/BPO vendors**
   - IT and BPO vendors have not focused on this business since it requires very different capabilities and talent pool than their traditional business.
   - Now, they have started focusing on some areas within pharma outsourcing which are independent of running clinical trials or drug discovery.

Source: EY analysis
4
Policy framework for MPO in India
Indian regulatory framework has evolved over a period of time to provide more conducive environment for the promotion of the outsourcing industry.

**Regulations for services outsourcing market**

In order to promote export of goods and services, attract domestic and foreign investments and give momentum to the employment opportunities, the GoI came up with Special Economic Zone (SEZ) Act, 2005. According to this Act, the incentives for setting up a business in SEZ unit includes:

- Duty free import/domestic procurement of goods for development, operation and maintenance of SEZ units
- 100% Income Tax exemption on export income for SEZ units under Section 10AA of the Income Tax Act for first five years, 50% for next five years thereafter and 50% of the ploughed back export profit for next five years.
- Exemption from Central Sales Tax.
- Exemption from Service Tax.
- Exemption from State sales tax and other levies as extended by the respective state governments.

Furthermore, the GoI introduced Services Exports from India Scheme (SEIS) under Foreign Trade Policy 2015-2020 to encourage export of notified services from India. The SEIS scheme replaced the earlier existing Served from India Scheme (SFIS), which was applicable only to India service providers. However, the new scheme is likely to extend the rewards under the scheme to all the service providers located in India, regardless of their constitution.

**Regulations for clinical trial outsourcing market**

To promote the clinical trial industry in India, there is no import duty imposed on clinical trial supplies. Drug Controller General India (DCGI) is responsible for granting approvals for clinical trials as well as manufacturing and marketing of drugs in India. Furthermore, to put all trial-related information in the public domain, it is mandatory that clinical trials should be registered with Clinical Trial Registry India (CTRI). The Government made the registration of institutional ethics committees (IECs) mandatory, i.e., 8 February 2013. The investigators are required to report serious adverse events (SAEs) to the IEC within 24 hours followed by a detailed report within 14 calendar days. Within next 30 days, IECs are required to analyze and forward these reports to national expert committee with opinion on financial compensation.
The financial compensation formula for compensating patients is devised in such a way that younger participants get more compensation as compared to older participants. The CDGI compiles the final order regarding the compensation within 30 days. For calculating the compensation, the SAEs are divided into four categories – permanent disability; congenital anomaly or birth defect, chronic life-threatening disease; or reversible SAE in case it is resolved. The compensation for all these categories is calculated differently.25

Hence, the Government has taken several measures to promote the health care outsourcing in India. However, several regulatory challenges still exist, which need to be addressed.

4.1 Challenges in policy framework in India

Although India has grown as a preferred outsourcing destination for health care BPO services, several concerns regarding policy framework in terms of tax laws, data privacy laws, IP protection laws and clinical trial laws exist.

The Health Insurance Portability and Accountability Act (HIPAA) by the US, defines policies, procedures and guidelines for maintaining the privacy and security of electronic health care transactions and outlines the offenses and penalties for health care violations. Hence, to provide outsourcing services to overseas vendors, the Indian vendors need to comply with international standards of security and privacy, since this can result in business being attracted or lost.

Although the Government is gradually taking steps to provide more clarity on these laws, the current scenario is adversely impacting the health care BPO market in India. Few of the challenges from the regulatory perspective include:

- **Threat to data privacy and security:** Various types of personal and private data, including demographics, clinical, and genomic information, is collected and stored in electronic medical records (EMR)26. Hence, there are concerns regarding confidentiality and security of the sensitive health care data in digital data-sharing environments. The data privacy laws are unclear in India and the extent to which Indian authorities enforce them is also not clear27. Therefore, the fear of information leakage and loss of data affects the business landscape of Indian companies catering to overseas companies.

- **Complex tax laws:** Indian IT-BPO companies face strict and complex tax regime due to controversies on characterization of income and transfer pricing issues relating to provision of R&D services28. This results in companies complaining about arbitrary tax demand by tax authorities on transfer pricing. Moreover, a high Minimum Alternate Tax (MAT) of 18.5% is imposed on SEZ unit which adversely impacts the investment sentiment29.

- **Laws on patent protection and intellectual property rights:** According to US Chamber of Commerce’s Intellectual Property Index, India ranks very low in intellectual property environment as compared to developed and many developing countries30. Furthermore, in India, there are restriction on ever greening of patents, in which new patents are applied to products for which patent protection is about to expire. India has strict regulations for granting additional patents on previously patented molecules.

- **Inadequate R&D incentives to CROs:** To encourage R&D initiatives in India, a weighted tax deduction of 200% is available for scientific research on in-house R&D expenditure (including capital expenditure but excluding land and building)31. However, no such R&D incentives are given to CROs, which adversely impact the R&D outsourcing in India.

- **Changing regulations around approval of clinical trials:** The changing regulatory mechanism and the time taken for approval of clinical trials in India has resulted in pharma companies running clinical trials in other countries such as China32,33. Drugs Controller General of India (DCGI) is the main authority responsible for granting the requisite approvals for clinical trials in India. Indian regulations do not permit Phase I clinical trials for drugs discovered and developed outside India34. Moreover, conducting advanced clinical trials (Phase II and beyond) in the country is dependent on prior approval of Phase I trial reports. Furthermore, the Supreme Court’s order against the approval of clinical trials in January 2013, has led to an uncertain approval process in India. The Government has also levied a service tax of 12.3% on clinical trials services providers. The proposal is likely to increase the cost of drug development in the country and lead to a corresponding increase in the price of drugs35.

However, the government of India has been working to evolve the regulations and address the existing concerns to give a boost to health care BPO industry in India. Some of the measures that are ongoing or can be adopted in future to stimulate the growth in this industry are as follows.
4.2 Measures to drive health care BPO in India

Focus on data privacy laws: The GoI has made several attempts at drafting a Privacy Bill since 2010, to avoid the misuse of the individual's personal data by Government or private agencies. The latest bill of 2014 plans to expand the Right to Privacy to all the residents of the country\(^46\). Once the bill gets converted into law, the Government or a private agency need to inform citizens before collecting data, state the appropriate reasons and only collect as much information as is necessary. Furthermore, the companies need to have clearly documented standard operating procedures (SOPs) related to privacy to satisfy the clients and the regulatory authorities. Regular audits by internal IT team as well as by third party auditors can ensure conformation to regulations.

Need for focus on education: There is a vast gap in the availability of skilled health care personnel in India. According to health ministry estimates, there is a shortage of around 2.36 lakh medical technologists, 1.98 lakh surgical and intervention technology-related health professionals, 61,670 medical laboratory professionals and more than 19,217 radiography and imaging experts in India\(^37\). Hence, there is a need for increased government spending on medical colleges and quality of medical information to fill the skill-gap. Advanced curriculum in Indian universities and research institutes can be designed, and training programs can be launched to equip the workforce with better technical/IT skills and keep them up-to-date with the industry best practices.

In addition, the health care BPO companies can also educate their employees about health care compliance policies through programs such as online training sessions and awareness quizzes. As HIPAA makes constant changes by incorporating or discarding certain practices, Indian companies should be aware of such changes to ensure that the information is safe and highest standard of quality is maintained.

Proper regulations around intellectual property and patent laws: The Indian Government has been in talks with the US to figure out IPR-related differences to create a conducive environment for the protection of intellectual property rights\(^38\). Furthermore, the GoI plans to improve the functioning of the intellectual property offices in the country by implementing state-of-the-art technology, upgrading infrastructure and providing free access to the IP data through the websites\(^39\).

The “IPR Think Tank”, composed of Indian judges, lawyers and academics, drafted the National IPR Policy (which is yet to be approved), listing various new laws and amendments on trademark, patent, copyright and designs, to strengthen India’s IP rights\(^40\).

In-place regulatory framework for clinical trials: CDSCO proposed the creation of IT-enabled system to monitor all steps of clinical trial to ensure increased transparency. The online submission of clinical trial related information, online approval and online monitoring of clinical trials will ensure data authenticity and the protection of rights of the trial subjects\(^41\). Furthermore, it has also come up with a draft formula to determine the compensation for patients in case of injury in clinical trials\(^42\).

In addition, CDSCO has made it mandatory for the organizations conducting clinical trials to obtain written consent as well as audio-visual recording of the consent process of each trial subject\(^43\). Moreover, it mandated that clinical trials must be conducted only at accredited centers and the ethics committee (which ensures that clinical trial is conducted in ethical manner) should also be accredited\(^44\).

Furthermore, the Department of Health and Family Welfare plans to propose the Drug and Cosmetics (Amendment) Bill 2015, in the Budget Session of the Parliament to define clearly the rules for conducting safe and secure clinical trials in India\(^45\). However, clinical trial approval rate is slow in India. Hence, measures can be taken to initiate a fast-track process and single-window clearance for regulatory approval of clinical trials\(^46\). Furthermore, the Government can take steps to provide R&D incentives (such as weighted tax deduction on R&D expenses) to the CROs in India.

Hence, it is important for the Government to conduct due diligence of the above mentioned bills and proposals and convert them into laws, so that the regulatory environment in India can be strengthened. The improved regulatory environment with reduced uncertainty is likely to boost the growth of health care BPO in India while maintaining highest quality and security/privacy standards.
Outlook
In the preceding sections, the report focused on the health care sector from an outsourcing perspective and also specifically analyzed the growth drivers and challenges for India as a destination for providing these services in each of the market segments. Clearly, outsourcing in this sector is picking up and India is a key destination for these kinds of services.

After providing services such as claim processing for payers, medical billing for providers and later stage clinical trials for pharmaceutical companies, Indian BPO vendors are now slowly moving into other areas as they build strong capabilities in this sector.

However, the profile of vendors serving these markets is very varied and requires very specific capabilities; none of the vendors have the scale and capabilities to address each opportunity, which health care outsourcing provides. Therefore, the vendors are focused on expanding their range of services as well as the global markets they serve, to derive more business in the health care sector.

The use of technology in providing platform-enabled health care solutions and using big data/analytics to provide value-added services is shaping the future of outsourcing in this sector.

India continues to be one of the most preferred destinations for payer outsourcing, and will continue to be so. With the regulatory push from the US government, this segment is registering growth and the Indian BPO companies are looking to grab a big chunk of the pie. Overall, the global payer BPO market is expected to grow at around 10% year-on-year in the next three to four years and Indian payer BPO market should witness a similar growth trend.

In the provider market, the focus is on expanding the range of services offered. While some services such as medical transcription are becoming less popular, others involving patient care, medical imaging, patient enrolment etc., are on the rise. Moreover, the ICD-10 standards implementation, as and when finally implemented in the US, will drive medical coding and billing outsourcing in this industry. Industry sources estimate provider outsourcing to be growing at more than 30% from 2011-2016 and the Indian players would also be looking to build strong capabilities in this market.

Within the CRO market, challenges include regulatory changes, which have adversely affected the number of clinical trials run in India. This has impacted the companies running clinical trials in India and providing various other related services. However, the ones focusing on BA/BE studies or traditional BPO companies in India, which were providing services around the clinical trials have not been affected significantly. Overall the CRO market is expected to grow at a healthy rate of 18%-20% in the coming years.

Overall, the Indian BPO industry stands to gain from the growing demand in health care outsourcing; and there needs to be a strong focus on building capabilities in specific services and complex processes, which help them tap the growing demand and differentiate them from the rest.
About ASSOCHAM
The knowledge architect of corporate India

Evolution of Value Creator

ASSOCHAM initiated its endeavor of value creation for Indian industry in 1920. Having in its fold more than 400 Chambers and Trade Associations, and serving more than 450,000 members from all over India. It has witnessed upswings as well as upheavals of Indian Economy, and contributed significantly by playing a catalytic role in shaping up the Trade, Commerce and Industrial environment of the country.

Today, ASSOCHAM has emerged as the fountainhead of Knowledge for Indian industry, which is all set to redefine the dynamics of growth and development in the technology driven cyber age of “Knowledge Based Economy”.

ASSOCHAM is seen as a forceful, proactive, forward looking institution equipping itself to meet the aspirations of corporate India in the new world of business. ASSOCHAM is working towards creating a conducive environment of India business to compete globally. ASSOCHAM derives its strength from its Promoter Chambers and other Industry/Regional Chambers/Associations spread all over the country.

Vision
Empower Indian enterprise by inculcating knowledge that will be the catalyst of growth in the barrierless technology driven global market and help them upscale, align and emerge as formidable player in respective business segments.

Mission
As a representative organ of Corporate India, ASSOCHAM articulates the genuine, legitimate needs and interests of its members. Its mission is to impact the policy and legislative environment so as to foster balanced economic, industrial and social development. We believe education, IT, BT, Health, Corporate Social responsibility and environment to be the critical success factors.

Members – Our strength

ASSOCHAM represents the interests of more than 450,000 direct and indirect members across the country. Through its heterogeneous membership, ASSOCHAM combines the entrepreneurial spirit and business acumen of owners with management skills and expertise of professionals to set itself apart as a Chamber with a difference.

Currently, ASSOCHAM has more than 100 National Councils covering the entire gamut of economic activities in India. It has been especially acknowledged as a significant voice of Indian industry in the field of Corporate Social Responsibility, Environment & Safety, HR & Labour Affairs, Corporate Governance, Information Technology, Biotechnology, Telecom, Banking & Finance, Company Law, Corporate Finance, Economic and International Affairs, Mergers & Acquisitions, Tourism, Civil Aviation, Infrastructure, Energy & Power, Education, Legal Reforms, Real Estate and Rural Development, Competency Building & Skill Development to mention a few.
Insight into “new business models”

ASSOCHAM has been a significant contributory factor in the emergence of new-age Indian Corporates, characterized by a new mindset and global ambition for dominating the international business. The Chamber has addressed itself to the key areas like India as Investment Destination, Achieving International Competitiveness, Promoting International Trade, Corporate Strategies for Enhancing Stakeholders Value, Government Policies in sustaining India’s Development, Infrastructure Development for enhancing India’s Competitiveness, Building Indian MNCs, Role of Financial Sector the Catalyst for India’s Transformation.

ASSOCHAM derives its strengths from the following Promoter Chambers: Bombay Chamber of Commerce & Industry, Mumbai; Cochin Chambers of Commerce & Industry, Cochin; Indian Merchant’s Chamber, Mumbai; The Madras Chamber of Commerce and Industry, Chennai; PHD Chamber of Commerce and Industry, New Delhi.

Together, we can make a significant difference to the burden that our nation carries and bring in a bright, new tomorrow for our nation.

D. S. Rawat
Secretary General
d.s.rawat@assocham.com

The Associated Chambers of Commerce and Industry of India
ASSOCHAM Corporate Office:
5, Sardar Patel Marg, Chanakyapuri, New Delhi-110 021
Tel: 011-46550555 (Hunting Line)
Fax: 011-23017008, 23017009
Email: assocham@nic.in
Website: www.assocham.org
References


**EY offices**

<table>
<thead>
<tr>
<th>City</th>
<th>Address</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahmedabad</td>
<td>2nd floor, Shivalik Ishaan Near C.N. Vidhyalaya Ambawadi Ahmedabad - 380 015 Tel: + 91 79 6608 3800 Fax: + 91 79 6608 3900</td>
<td></td>
</tr>
<tr>
<td>Bengaluru</td>
<td>12th &amp; 13th floor &quot;UB City&quot;, Canberra Block No.24 Vittal Mallya Road Bengaluru - 560 001 Tel: + 91 80 4027 5000 + 91 80 6727 5000 Fax: + 91 80 2210 6000 (12th floor) + 91 80 2224 0695 (13th floor)</td>
<td></td>
</tr>
<tr>
<td>Chandigarh</td>
<td>1st Floor, Prestige Emerald No. 4, Madras Bank Road Lavelle Road Junction Bengaluru - 560 001 Tel: + 91 80 6727 5000 Fax: + 91 80 2222 4112</td>
<td></td>
</tr>
<tr>
<td>Chennai</td>
<td>Tidel Park, 6th &amp; 7th Floor A Block (Module 601, 701-702) No.4, Rajiv Gandhi Salai, Taramani Chennai - 600113 Tel: + 91 44 6654 8100 Fax: + 91 44 2254 0120</td>
<td></td>
</tr>
<tr>
<td>Hyderabad</td>
<td>Oval Office, 18, iLabs Centre Hitech City, Madhapur Hyderabad - 500081 Tel: + 91 40 6736 2000 Fax: + 91 40 6736 2200</td>
<td></td>
</tr>
<tr>
<td>Kochi</td>
<td>9th Floor, ABAD Nucleus NH-49, Maradu PO Kochi - 682304 Tel: + 91 484 304 4000 Fax: + 91 484 270 5393</td>
<td></td>
</tr>
<tr>
<td>Kolkata</td>
<td>22 Camac Street 3rd floor, Block ‘C’ Kolkata - 700 016 Tel: + 91 33 6615 3400 Fax: + 91 33 2281 7750</td>
<td></td>
</tr>
<tr>
<td>Mumbai</td>
<td>14th Floor, The Ruby 29 Senapati Bapat Marg Dadar (W), Mumbai - 400028 Tel: + 91 022 6192 0000 Fax: + 91 022 6192 1000</td>
<td></td>
</tr>
<tr>
<td>NCR</td>
<td>Golf View Corporate Tower B Near DLF Golf Course Sector 42 Gurgaon - 122002 Tel: + 91 124 464 4000 Fax: + 91 124 464 4050</td>
<td></td>
</tr>
<tr>
<td>Pune</td>
<td>4th &amp; 5th Floor, Plot No 2B, Tower 2, Sector 126, NOIDA 201 304 Gautam Budh Nagar, U.P. India Tel: + 91 120 671 7000 Fax: + 91 120 671 7171</td>
<td></td>
</tr>
</tbody>
</table>

*Note: For the most current and accurate contact information, please refer to the official EY website.*
Ernst & Young LLP
EY | Assurance | Tax | Transactions | Advisory

About EY
EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. For more information about our organization, please visit ey.com.

Ernst & Young LLP is one of the Indian client serving member firms of EYGM Limited. For more information about our organization, please visit www.ey.com/in.

Ernst & Young LLP is a Limited Liability Partnership, registered under the Limited Liability Partnership Act, 2008 in India, having its registered office at 22 Camac Street, 3rd Floor, Block C, Kolkata - 700016

© 2015 Ernst & Young LLP. Published in India.
All Rights Reserved.

EY refers to the global organization, and/or one or more of the independent member firms of Ernst & Young Global Limited

This publication contains information in summary form and is therefore intended for general guidance only. It is not intended to be a substitute for detailed research or the exercise of professional judgment. Neither Ernst & Young LLP nor any other member of the global Ernst & Young organization can accept any responsibility for loss occasioned to any person acting or refraining from action as a result of any material in this publication. On any specific matter, reference should be made to the appropriate advisor.

JG