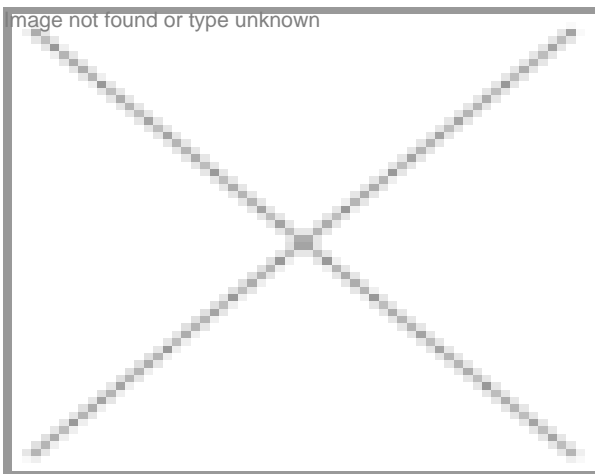


Patients' awareness can boost clinical market

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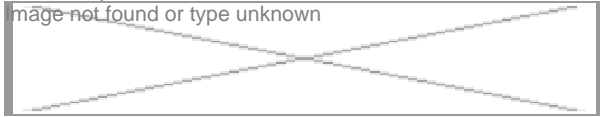
The Indian CRO market might have become the hot spot for its high patient recruitment rate but the system is beset with its own set of

Patient recruitment and retention remains a huge challenge for many CROs. Globally, at least 80 percent of pharmaceutical trials do not meet enrollment deadlines, with 52 percent trials delayed by one-to-six months resulting in a loss of \$1.3 million/day for a given candidate drug. Further, only 1 out of 20 patients who respond to clinical trial recruitment promotions, eventually, enroll in a study, and patient non-compliance can run as high as 80 percent; and up to 40 percent of patients are lost to follow up, in a clinical trial. This is coupled with pricing and cost cut

l downturn. In this backdrop, India has a basket of opportunities to offer to the \$18 billion global CRO industry in the form of skilled manpower and expertise, cost effectiveness, easing up of regulations and infrastructure. With a number of drugs going off patent by 2012, many companies will now turn to low cost destination regions like India and China to conduct clinical trials, not only because of the cost factor but also because of the large availability of a diverse patient pool. Industry experts claim that patient recruitment in India is four times faster than in the West. This, in turn, accelerates drug discovery and development processes that are crucial in the face of depleting R&D pipelines. According to the BioSpectrum-ABLE

annual survey of the biotechnology industry for 2010, the CRO segment has registered a growth of 28 percent in 2009-10,

over the previous year's total segment revenue of $\text{Rs. } 2,062$ crore. Exports continue to dominate this segment, accounting for over 90 percent of the total revenues.



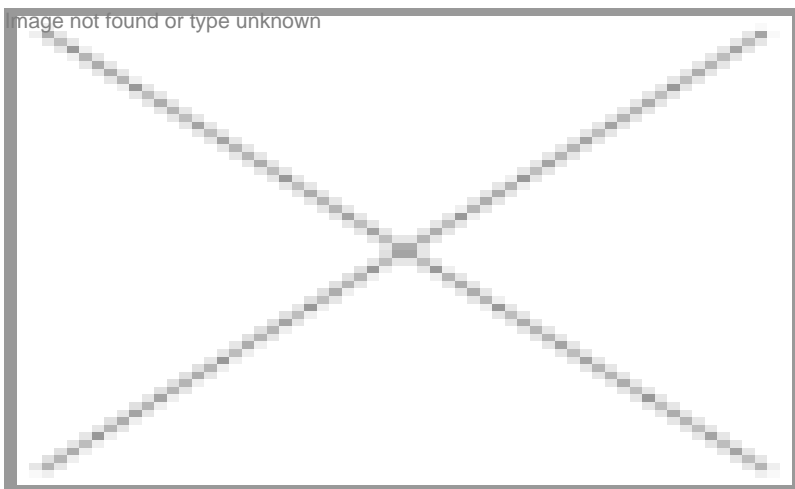
When the going gets tough

Clinical trials in the country are conducted as per the 'Ethical Guidelines for Biomedical Research on Human Participants', issued by the Indian Council of Medical Research, 2006. These guidelines are consistent with the subject protection tenets of the Declaration of Helsinki and CIOMS (Council for International Organizations of Medical Sciences).

Patient recruitment and retention practices in India have their own set of shortcomings, volunteer safety being one of them.

It has been brought to the observation of the Indian government that, off late, a number of big pharmaceutical companies have been conducting trials in India, without being reviewed by the ethics committee. There were reports doing the rounds of these very companies not taking patient consent, while enrolling them for a trial. In April 2010, the government suspended trials in two states for Merck's cervical cancer vaccine, Gardasil, after reports that the vaccine were allegedly tested on children before being tested on adults, leading to death of six of them. Earlier, in the late 1990s, there was a case of drugs being tested by a reputable big pharmaceutical, on patients in India without being tested on animals. This is how putting in place a system of stringent checks and balances becomes imperative.

Industry stalwarts opine that India has a meticulous regulatory structure as far as patient recruitment is concerned. "In fact, Indian authorities are even more stringent when we submit our data for trial approval. The data that the Indian government officials ask us to submit is not asked even by international regulatory agencies," commented an industry observer. The root problem stems from the lack of adherence and execution by investigators and doctors at the site level," says Nidhi Saxena, founder, Karmic Life Sciences, Maharashtra.



A key challenge is also the lack of awareness among patients enrolled for these trials. Even members of the ethics committee are unaware of certain guidelines. "There are some members in the committee who do not even understand good clinical practice (GCP) guidelines, when we submit our proposals," adds

The industry believes that a large section of the Indian community, unfortunately, associates clinical trials with "clinical trial deaths", while ignoring the benefits of enrolling for clinical trials. "In indications like oncology, where drugs in the market are limited and sometimes not efficacious, clinical trials come as a boon, wherein, patients can go in for drugs which might have an efficacy. In geographies like the US and Europe, people volunteer for a trial with the hope of being cured," adds

Dr Apurva Shah, managing director, Veeda Clinical Research. However, Dr Shah, along with other industry experts, opine that in the lure of "access to free medicines", patients in India as well as physicians, fail to assess the pros and cons of a drug before participating in a trial.

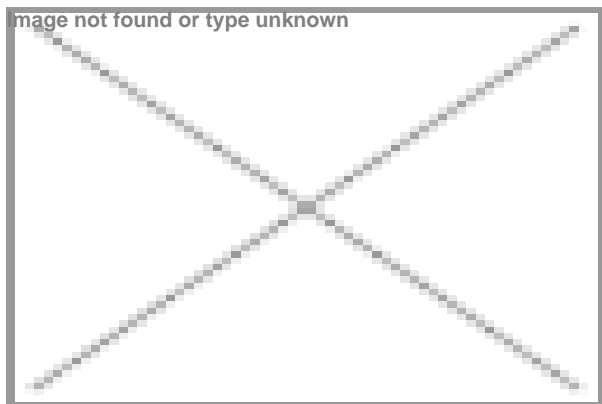
Typically, many patients, primarily from the weaker socioeconomic section of the society, show a sense of apprehension and fear of being used as 'guinea pigs' for these trials. Says Dr Arun Bhatt, president, Clininvent, "A large number of trials take place in public hospitals, most patients who take part in trials are from the weaker socioeconomic section of the society. This creates significant ethical challenges for the investigators."

Many investigators do not have the time and patience to explain the details of the trial to their patients, before taking their consent, which ideally is, the protocol. Says Dr Shah, "Patients blindly trust their physician, and generally do not get into the details of the information provided about the trial."

Ideally, the consent is taken by the investigator. The company's CRAs monitor the consent for compliance to regulations and GCP. The challenge is to train the sites in the correct way of taking and documenting consent. "Yes, it is a frequent problem. If a person is knowledgeable and well-to-do, his interest in participation is low; and if he is illiterate, his understanding is low and suspicion, high," says Dr Sanjeev K Chaudhry, CEO, Super Religare Laboratories.

Another area of concern is the endangered investigators. "There is a lack of good clinical trialists or investigators in India. It is clear that the country needs more investigators. There is also a shortage of people to work with the clinician investigator," says Dr Ramesh Jagannathan, director, Clinical Research, Astra Zeneca.

Lack of written documentation and maintaining databases of patients for different therapeutic segments is now snowballing into a major hurdle. Says Saxena, "Unfortunately, data is still maintained on paper. We have not yet got into the culture of maintaining information in electronic records." This delays the patient enrollment process. "Numerous clinical sites in India are government centers that do not maintain a database of patients, especially those who are in need of clinical trials for indications like oncology." says Dr Anand Bidarkar, vice president, Business Development, Siro Clinpharm. Even patients fail to maintain records of their medical history and past treatments. "Many a times we see patients do not maintain a history of their treatment, and we cannot let a patient go ahead with a trial unless we know his medical history," adds Dr Bidarkar.



"In addition to a diminishing supply of clinical investigators, a major difficulty lies in the lack of a coordinated and focused system of design, conduct, or analysis of trials. This results in improper documentation. So when the regulator demands for a particular document, companies don't director of

Clinical Operation, Asia Pacific, ICON Clinical Research. The running of clinical trials, therefore, demands a concentrated effort by a team, including trialists and information technology specialists. CROs should evaluate new approaches to perform and record clinical research, in order to enhance patient safety and streamline administrative

CROs also face the problem of paucity of patients in particular disease areas. Agrees Saxena, "India might have a large patient pool, but many a time there is a paucity of patients for certain disease segments." This apart, many industry experts believe that in terms of infrastructure, many sites lack the basic facilities and equipments like computers, centrifuges, refrigeration.

The dire need of the hour is to increase the number of clinical sites, if India has to move from being a destination for drug development to that of drug discovery hub. "Today, out of 70,000 hospitals only 500 hospitals participate in clinical trials. The total number of trials in India clocks at about 1300, out of the total number of 67000 global trials," adds Saxena. This number is predicted to shoot up in the coming decade, with the demand for cheaper medicines. "When compared to other countries, the number of trials conducted in India has decreased by 10-15 percent between 2008 and 2009, while the decrease is only 5 percent in China," adds Dr Bhatt.

Steps for volunteer safety

With volunteer safety being the stumbling block, the government has come up with steps to improvise the situation. The Drugs Controller General of India (DCGI) has announced that India is soon to begin regular and on-the-spot inspection of clinical trial sites to ensure transparency and volunteer safety in the country. Prior to this, clinical trial sites were either inspected by international agencies like the FDA or the UK MHRA." Why should the FDA be the only agency to inspect our clinical trial sites," asks Dr Bhatt.

This could, perhaps, change the landscape of the clinical trial industry in India, which has been beset with lapses in adherence to safety guidelines. Dr Surinder Singh, DCGI recently announced, "This will commence in September 2010, and we will begin by inspecting trial sites in Bangalore, Mumbai, Kolkata, Chennai and New Delhi. This step will not only strengthen the clinical trial scenario in India but also ensure that volunteers are in safe hands, and that there are no violations in protocols." For this, there will be a collaboration with the USFDA in terms of training of inspectors. "Altogether we have 169 inspectors, 25 have already been trained and we another 20 inspectors are to be trained to audit these sites," confirmed Dr Singh.

The industry again has its own set of concerns in this front. "The DCGI office unfortunately does not have enough trained staff, and my only concern is that this initiative should be devoid of the usual Indian bureaucratic attitude. Otherwise, it would be a good check and a potent tool of vigilance," concludes an industry observer.

Nayantara Som

(inputs from Rahul Koul & Jahanara Parveen)