

CLINICAL TRIALS IN ASIA: DOUBLE-DIGIT GROWTH, MULTI-LINGUAL CHALLENGES

Background

The cost of conducting clinical research in the U.S. is steadily escalating—in large part because of unsuccessful domestic subject recruitment leading to costly time delays— forcing pharmaceutical and biotech companies to look abroad for solutions.

In fact, 86% of U.S. clinical studies fail to recruit the required number of subjects on time, according to Thomson Center-Watch statistics. As a result, many companies are currently outsourcing all phases of clinical research. Phase III clinical trials, in particular, are increasingly moving to non-U.S. markets due to the increased demand for multiple trials and larger subject pools (Gambrill, 2007).

If one considers that more than 40% of product development costs are incurred during the clinical trial process, this growing trend of outsourcing clinical research to countries where costs are dramatically reduced is understandable. Thus, many, if not most, pharmaceutical and biotech companies are moving clinical trials abroad, and Asia is quickly becoming a primary region of choice.

Why Asia?

The number of clinical trials in Asia has risen tremendously over the past few years. Between 2005 and 2006 alone, clinical trials conducted in Asian-Pacific countries increased by 50% (Thomson CenterWatch, November 2007). In addition to significantly lower clinical research costs, the region offers the advantage of a genetically diverse population of over 4 billion, many of whom have never been treated for their condition. Thus, subject recruitment is easily facilitated, and the enrollment requirements are more readily met.

Despite these advantages, outsourcing to Asia introduces new complications that must be addressed, including differences in regulatory procedures, infrastructure, medical practices, language, and culture. Although some of these factors are well understood, the importance of language is commonly underestimated.

A U.S. cancer research study involving Chinese-American subjects showed the importance of language and culture in the success of subject recruitment (Cancer, December 15, 2005). Although English is considered a second language in the majority of Asian countries involved in clinical research, this is not so for many of the less educated subject populations. Thus, even in those Asian countries where English is widespread, many language and cultural barriers still exist.

In addition, patient/physician relationships are traditionally different than in the West. Patients tend to unquestioningly follow physician recommendations and physicians do not always reveal the potential risks to study participants. Thus, poor translation methods and lack of localization strategy can ethically compromise the process of informed consent and directly affect data interpretation. Although these issues can impede the successful completion of a clinical trial study, they can be overcome to a large extent with proper clinical trial management. Moreover, as these countries improve their regulatory environment, there is a greater incentive to overcome language barriers and gain a better understanding of cultural differences.

Differences between Asian Countries

A wide range of government regulations and health care systems exist throughout Asia. Countries in the region can be divided into three categories, based on the existing degree of development of these systems.

Japan

The first category holds only Japan, whose regulations and quality of research are equivalent to Western standards. Although Japan is the most established clinical trial market in Asia, the cost of research is comparably high due to very strict government health care regulations, among other factors. Furthermore, despite the availability of infrastructure and technology in Japan, conversion to electronic data capture has been difficult. This is due to primarily to the fact that the Japanese language, Kanji, contains more than 20,000 unique characters. Therefore, all regulatory documents must be translated into Kanji, making language a major factor in this country. Thus, despite the quality of research in Japan, many companies are looking to other Asian countries for outsourcing of clinical trials.

Taiwan, Korea, Singapore, Hong Kong

The second category includes Taiwan, Korea, Singapore, and Hong Kong. These countries have well-developed health care systems, widely speak English as a second language (especially the educated population), and provide high-quality clinical trial services at a lower cost than in the West (or Japan). Among these countries, however, language issues are considerable. In Taiwan, although record keeping has switched primarily to English, 80% of the population speaks Mandarin or Taiwanese (Min Nan). To complicate matters, while Taiwanese is the most widely spoken language, Mandarin is the official written language. In Hong Kong, while English and Cantonese are official languages, Cantonese is spoken by 95% of the ethnic Chinese population, while English is spoken by only about one-third of the population.

India, China, and Southeast Asia

The third category includes India, China, and Southeast Asia. These health care systems are not as highly developed as those of the wealthier Asian countries discussed above, but the cost of clinical trials and research is significantly less—lower than 2/3 the cost of the West. In addition to cost, this region offers several advantages for conducting clinical research.

India

Along with a large, diverse, drug-naïve population, India has a pre-existing pharmaceutical industry and has undergone major changes in new drug patent legislation as well as improvements in government regulations. There is a strong IT presence, and technologies for Electronic Data Capture are readily available. A wide range of diseases are prevalent in India, including an emergence of diseases common in the West as well as a significantly large diabetes population. Many Indian investigators are Western educated, and English is the nation's unifying language, especially in urban hospitals. Even in India, however, where English is the main language of communication, language can be a significant barrier. Hindi is spoken by one-fourth of the population, and there are at least ten other languages spoken by more than 25 million people each. Differences in spoken Eng

China

The number of clinical trials conducted in China increased 25% from 2004 to 2005, the largest reason being the ability to recruit clinical trial subjects at a significantly lower cost. This is again due to the presence of large eligible populations. China has one of the largest urban populations in the world, and is projected to be the fourth largest pharmaceutical market by 2010. Other factors include the prevalence of disease-specific populations (such as cancer, cardiovascular, and respiratory diseases), formerly state-run health care centers, and well-educated investigators. Recently, studies conducted in therapeutic areas such as cancer and hepatitis have met U.S. FDA approval. Presently all health care documents must be submitted in Chinese, or Mandarin, the official language of China (850 million speakers). Other main languages spoken in China include Wu (90 million speakers), Min (70 million speakers), and Cantonese (70 million speakers). Thus, in addition to the issue of record keeping in Mandarin, the barriers and complexities that these secondary languages present in obtaining accurate data must also be taken into account. Medical practices such as acupuncture and herbal medicine, as well as cultural attitudes affecting clinical practices, are also key factors in China.

Southeast Asia

Among Southeast Asian countries similar issues arise as there is a great diversity of languages and cultures in this region. Presently Indonesia, Malaysia, Philippines, and Thailand are the most common locations for clinical trials in Southeast Asia, with Malaysia being the most dominant. Approval processes in these countries are relatively quick, and hospital infrastructure and regulatory environments are gradually improving. Despite the prevalence of English as a second language, generally only the educated populations in Southeast Asia speak English fluently. Other native languages include Malay, Thai, Tagalog, Indonesian, and various other dialects of each respective country and region. Thus, the issue of native language translation and integration of cultural factors in clinical data management must once again be taken into account.

Conclusions and Recommendations

Clinical trials are being pushed across the globe into ascending markets such as Asia largely because of timely subject recruitment and cost effectiveness in these regions. The benefits are clear; however, the challenges of conducting clinical research abroad are complicated by the issue of language. Even with English as a dominant language in many countries in Asia, important language barriers exist. Language and cultural differences that affect medical practices and data interpretation must also be taken into serious consideration.

Multinational trials can be conducted successfully in Asia if these issues are addressed in the planning stages of research. With a global trend to standardize regulatory practices, Asia will continue to provide a solution to the cost and recruitment problem. Therefore, overcoming language and cultural barriers will play a key role in conducting quality clinical research in this region. Accurate translation into multiple languages, along with an understanding of the complexities that different cultures introduce, is becoming a growing necessity in conducting clinical trials abroad.

Karen Politis Virk

M.S. in Microbiology & Immunology/ Molecular Biology
Project Manager, Life Sciences
Language Connections
Boston, Massachusetts

You can reach Karen Politis Virk at Karen@LanguageConnections.com

REFERENCES:

1. Gambrill, S. Tracking Emerging Markets of Clinical Research. Thomson CenterWatch: Press Release. April 19, 2007.
2. Changes in Asia-Pacific Regulations Position Region for More Growth. Clinical Trials Today. Thomson CenterWatch. November 2007; 529(14): 11. <http://www.clinicaltrialsociety.com/2007/11/centerwatch-mon.html>
3. Shin-Ping, T. et al. Clinical Trials: Understanding Female Chinese-American Cancer Patients. Cancer. December 15, 2005: 1-13.
4. Marshall P. Informed Consent in International Health Research. Journal of Empirical Research on Human-Research Ethics. 2006; 1(1):25-42. 30.
5. Online-Talking in a Foreign Language: Fluent Multi-Clinical Trials. Pharma DD January/February 2007. http://www.pharmadd.com/archives/Jan_2007/BN%20Foreign.asp
6. Gross, A. and Hirose, M. Conducting Clinical Trials in Asia. Pacific Bridge Medical. Asian Medical Publications. March 2007:1-7. <http://www.pacificbridgemedical.com/publications/html/AsiaClinicalTrials2007.htm>
7. Morphin, E. Clinical Trials-Developing Opportunities. PharmaFocus Asia. March 2006. <http://www.pharmafocusasia.com/currentedition/clinicaltrials.htm>
8. Bakhie, D. Global Clinical Trials in India-Challenges and Opportunities. PharmaTech. Touch Briefings. May 2003:109-110. <http://www.touchbriefings.com/cdps/cditem.cfm?NID=17>
9. Salt, B. Outsourcing Chinese Competitiveness in a Global Context. PharmaFocus Asia. March 2006. <http://www.pharmafocusasia.com/currentedition/outsourcing1.htm>