



## **The Power of Communication**

**In an increasingly globalised sector, Mark Woolf of Almac Clinical Services evaluates the challenges of clinical trial distribution in emerging markets. Mark Woolf worked for 22 years in distribution and supply chain management within the British Armed Forces after leaving full-time education. In 2007 he joined Almac Clinical Services as the Distribution Depot Manager and is responsible for the management of the 20 Almac third-party contracted depots. Mark is responsible for expanding the depot network and managing relationships between the depots and Almac.**

The current global nature of clinical trials and the push towards new markets continues to pose fresh challenges. Never has it been more crucial to understand how the clinical supply chain must be managed to access these new markets, be equipped to assess the pitfalls associated with less developed countries and identify what can be done to combat these weaknesses. We look at the relationships between all parties involved in the clinical supply chain and what their roles contribute to successful global IMP distribution.

The challenges presented to every distribution manager for the shipping of clinical trials materials to emerging markets are often identified early with the customer. Patient recruitment is now spreading to countries that have not previously had access to clinical trials. There are also countries that, although clinical trials have been established for three to four years, still present challenges to the IMP professional due to the existence of challenging regulatory systems.

Many new trials are being located in countries that often do not have a robust infrastructure or a regulatory system that is tailored for clinical trials. Together these factors produce many of the common pitfalls often associated with emerging markets. China, India and regions such as Eastern Europe, South America and South East Asia all present their own unique challenges to distribution.

Factors leading to globalisation include countries that have now developed economically and have significant populations that can offer excellent patient recruitment opportunities. There is also a greater awareness of clinical trials. Eastern European countries, inaccessible for over 50 years, now offer significant patient recruitment potential and more opportunities to expand the reach of the clinical supply networks than ever before, despite regulatory challenges.

### **DIFFICULTIES FOR IMP LOGISTICS**

With new countries and economies come the difficulties of distribution. Studies that are distributed to multiple countries will be subject to different conditions, both environmental and regulatory. Depending on the geographical location of a country, challenges include:

- Temperature conditions for shipments: cold chain shipments in warm climates (and vice versa) must be managed effectively to ensure a successful delivery and a reduced rate of out-of-specification shipments.
- Obtaining import licenses: this can be a lengthy process involving two or more parties, and coupled with the eventual customs clearance processes mean that communications

are tested at various critical stages. If the communications fail there is a risk that the consignments are not cleared in time for resupply to the patient?

### **TEMPERATURE ISSUES FOR SHIPPING**

Many clinical trials now involve some aspect of temperature control – either cold chain or controlled ambient conditions. These factors can complicate an already rudimentary system. A good level of trained personnel in countries that have to handle temperature-sensitive shipments can be a scarce resource. Getting the in-country depot to use a local courier familiar with temperature-sensitive cargo is a challenge in itself. Customs in these emerging countries may decide to open the shipments or hold them despite the best efforts of the consignee. Being at the mercy of these organisations and the inconsistencies in the regulations or how they are applied at ports of entry is frustrating and time consuming.

### **IMPORTATION ISSUES AND PAPERWORK**

If temperature complications can be overcome, there are additional paperwork difficulties to resolve. The quantities of drug required for a study may change as the study progresses, perhaps due to the stock predictions being inaccurate or because patient recruitment is better than expected, or extended. The import license will have a set drug quantity and usually a time limit of 12 months (although this varies from country to country). To extend this requires a further application to import additional trial supplies. The paperwork aspect of trial material importation is every bit as vital as the CTA and product specifications files and so needs appropriate management.

### **DISTRIBUTION STRATEGY**

Global supply chains are becoming increasingly challenging. There are a number of approaches that can be combined to create an effective supply chain, and these are best dictated by country, trial material restrictions and transit times for each study.

### **CENTRAL STORAGE**

A central master depot situated in a region that can act as a hub to distribute materials to several countries may solve some of the supply chain problems. The central master depot can perform storage and distribution operations so that individual investigator sites can be reached efficiently with a reduced transit time from depot to site. This has the advantages of reducing the exposure to risk of temperature-sensitive products being in the supply chain and also improves the response time for resupply to the patient.

### **IN-COUNTRY DEPOTS**

There can be regulatory requirements or distance restrictions that necessitate the contracting of a third party to hold bulk stocks of clinical trial materials. This is to overcome the repetitive nature of paperwork for dozens of shipments into the country in question. Sending a bulk order to a depot and then having a pick-and-pack operation can overcome the amount of work required to get individual shipments to the investigator sites.

On occasion, the distributor may be located on the other side of the globe in comparison to the region where the study is being conducted. South East Asia is an example of this. Country regulations are not an issue in themselves, but shipping and distributing temperature-sensitive or large numbers of site deliveries means that a depot located in this region is a solution. One bulk shipment and a pick-and-pack operation from country to country provides one solution.

Local depots present their own hurdles such as language, time zone differences, culture and differing interpretations of quality standards. The challenge is choosing the correct solution.

### **CUSTOM PITFALLS, CASE STUDY AND BEST PRACTICE**

Russia is an example of a country, which has repeated difficulties as a shipping destination, with extensive bureaucracy surrounding the importation of shipments. There are differences in paperwork depending on which brokers and indeed which couriers are used. Shipments are often opened by customs officials and not always released within the timeframes specified.

Access to temperature-sensitive cargo may be limited when these are held in customs areas for clearance. The most effective method to deal with this situation is to establish communication with a broker that, by reputation, does perform well with clinical trials. Keep shipments to a single broker who becomes familiar with your paperwork and presentation of documentation. This is the best method for working with Russian customs; they will not stand for any deviation in documentation and will examine every aspect of your shipments.

### **THE USE OF DEPOT MANAGEMENT**

Setting up a depot management function to deal directly with third-party distributors can be advantageous. The management of the depots includes the provision for setting up and maintaining commercial and technical agreements, along with micro-management of the supply chain and inventory at the depots. Depot management as a function needs to be included in general study set-up practices, and to be a proactive approach implemented by being involved with the customer and depot network from as early a stage as is practicable. It can lead to expertise being shared in this area and become a central point of contact for all parties concerned.

### **USE OF IVRS TECHNOLOGY**

The use of IVRS to facilitate management of the global inventory is a well-documented tool in the clinical supply armoury. This asset has been proven to work effectively with the distribution process to ensure that stocks in central and local depots are monitored, and that resupply is conducted in a timely fashion. The ability to track and trace the drug and ancillary stocks allows both the distributor and the sponsor to proactively manage the studies and to utilize resources where they should be ahead of the curve.

### **RELATIONSHIPS**

Countries new to clinical trials will continually test the resolve and ingenuity of sponsor, courier and the depot. Therefore, the relationships between these entities are critical to the success of the supply chain. Third parties such as independent brokers can be consulted – this knowledge is invaluable in assessing the emerging country.

These various organisations must build effective communication and take advice from those within the supply chain that have experience in new countries or have identified key areas in the regulations that must be adhered to.

### **CONCLUSION**

The hazards and frustrations of distributing clinical trials material to emerging markets are encountered daily by distributing organizations. Effective points of communication are the key to succeeding in emerging markets. Centralising the management of distribution to internal departments, such as depot management teams, will assist in the overall operational efficiency of the supply chain and provide effective communication with third parties.

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