

APPLIED CLINICAL TRIALS

YOUR PEER-REVIEWED GUIDE TO GLOBAL CLINICAL TRIALS MANAGEMENT

Project Management

Diego Glancszpigel and Graciela Rácaro

Create a Successful Project Plan for Global Trials



PHOTOGRAPHY: JIM SHIVE ILLUSTRATION: PAUL A. BELCI

Structuring the knowledge and expertise within the organization is key to a project plan that works.

The number of new clinical trials worldwide has increased significantly, forcing the biopharmaceutical industry to look for new markets to conduct studies. Double-digit growth in the number of clinical trials conducted over the past five years in regions like Central Eastern Europe, Asia, and Latin America is a clear indication of this trend.

The globalization of clinical trials has resulted in changes to clinical research regulations around the globe. Regulatory authorities, particularly in emerging regions, have continued to introduce changes to existing clinical trial legislation and requirements to ensure patient safety. This situation has created a more complex scenario for project managers who now need to deal with several parties, fully understand updates to regulations, address increasing logistic and operational issues (as well as import/export requirements of products and supplies), and grasp cultural differences.

This article will address how global clinical trials can be successfully planned and managed within this increasingly complex environment.

Project plan creation

First, it is important to clarify what successful management

means. This can be defined as meeting clinical trial objectives in terms of timelines, quality, and budget. The key driver to successfully carrying out a clinical trial is to develop a comprehensive project plan, which needs to be in place before starting any trial activity. The project plan has several components to manage the quality and budget of the study, and to achieve the expected timelines with clear communication channels and defined roles and responsibilities. This document should be the source for risk management and decision making.

The main purpose of planning is to anticipate all possible actions that will take place throughout the project. Therefore, a diagnosis should be done for each aspect of the study to anticipate those actions and set realistic project objectives. Previous experience in the areas subject to planning is required to determine realistic objectives.

One of the main areas to address when developing a project plan is creating a system for the project team in a type of template format, which can be used for each new study, therefore avoiding rework. It is recommended to structure the knowledge of the organization in a tool that can be utilized by any project team for any new clinical trial.

This concept changes the traditional way of planning because the responsibility remains to a great extent with the organization and not just the project team. The organization is responsible for creating the framework that facilitates the planning for any project team. The planning should come down from the highest level of the organization to the lowest level and across functions; otherwise, each new clinical trial is like doing the first study again.

Tools of the trade

There are several tools available that can be used for the planning of a clinical trial, but those are useless if the organization cannot capture and structure the knowledge and expertise of its people in a way that can be utilized by the entire organization. Project planning tools available on the market allow the project manager to have under control all tasks to be performed throughout the clinical trial, including the duration of each activity, the resources needed, and the milestones.

Apart from the technologies that are used by the project team, the main obstacle the project team faces is defining the critical path for a global clinical trial. This includes all the tasks that need to be carried out in parallel and sequentially, when those tasks should be completed in order to achieve clinical trial milestones, and how those activities should be performed to successfully complete them. In order to determine the critical path for a study, it is important to understand what the end goal is as well as to use the strategic thinking of the experienced people in the organization. As a result, the

best possible strategy will be structured in a way that can be utilized by any project team that needs to conduct a trial.

The knowledge previously described should be in any organization that conducts global clinical trials. For organizations beginning to implement such concepts, the process of structuring knowledge can be done step-by-step as the organization gains experience in conducting clinical trials. In either case, the project team must involve experts experienced in global clinical development programs. It is critical to capture this knowledge and implement it into the projects so that the knowledge remains in the organization.

The planning of a global clinical trial should be done on a study, country, and site basis to increase the accuracy of planning. The project plan template should be developed by senior staff with input from the different departments, as a successful plan requires a high level of detail that can only be completed by people who know the best possible strategies to achieve study goals in the shortest period of time. Using this template, the project team does not need to go through the planning process each time there is a new clinical trial.

Gantt Chart for Start-up Phase of Global Clinical Trial						
	TRACK NAME	COUNTRY	DURATION	START	FINISH	PREDECESSORS
1	Study Start Date		0 days	Tue 6/6/06	Tue 6/6/06	
6	Feasibility Study		276 days	Tue 6/6/06	Tue 6/26/07	
143	Sponsor Approves Sites for Qualification		256 days	Tue 7/4/06	Tue 6/26/07	
268	Sponsor provides study documents for EC Submission		148 days	Tue 6/6/06	Thu 12/28/06	
274	Qualification Visits		205 days	Thu 9/21/06	Wed 7/4/07	
398	Qualification Visit Report		214 days	Thu 9/28/06	Tue 7/24/07	
518	Sponsor Approves Sites		202 days	Thu 9/28/06	Fri 7/6/07	
638	Translation, revision, and local customization of Regulatory Documents		91 days	Mon 11/6/06	Mon 3/12/07	
639	Spanish		50 days	Mon 11/6/06	Fri 1/12/07	
640	Protocol (version 04 Oct 2006)		26 days	Wed 12/6/06	Wed 1/10/07	269
641	ICF		29 days	Tue 12/5/06	Fri 1/12/07	
642	Colombia (version 1.0) 12 Dec 2006	Colombia	29 days	Tue 12/5/06	Fri 1/12/07	270
643	Peru (version 1.0) 27 Dec 2006	Peru	17 days	Tue 12/5/06	Wed 12/27/06	270
644	Venezuela (version 1.0) 13 Dec 2006	Venezuela	19 days	Tue 12/5/06	Fri 12/29/06	270
645	Investigator's Brochure (version 12 of 10 Oct 2006)		11 days	Mon 11/6/06	Mon 11/20/06	272
646	Amendment Investigator's Brochure (amendment # 1-19 Oct 2006)		11 days	Mon 11/6/06	Mon 11/20/06	272
647	Portuguese		91 days	Mon 11/6/06	Mon 3/12/07	
653	Sponsor provides documents for MOH		221 days	Tue 6/6/06	Tue 4/10/07	
671	SRP Preparation & Release per site		210 days	Thu 10/19/06	Wed 8/8/07	
775	Sites send the documents for IEC/REC site approval		160 days	Fri 11/10/06	Thu 6/21/07	
794	IEC Site Submission/Approval		215 days	Thu 1/18/07	Wed 11/14/07	
813	Sites submit documents to LEC		209 days	Fri 11/10/06	Wed 8/29/07	
914	Local Ethics Committee Submission/Approval		225 days	Thu 11/30/06	Wed 10/10/07	
1013	First Site Approved by Local Ethics Committee		47 days	Tue 1/9/07	Thu 3/15/07	
1018	CONEP submission/approval (Brazil, when applicable)		121 days	Wed 1/10/07	Wed 6/27/07	
1021	Sponsor provides drug labels		176 days	Tue 6/6/06	Tue 2/6/07	
1026	Contract service provider approves drug labels		12 days	Mon 2/5/07	Tue 2/20/07	
1031	Ministry of Health Protocol and first site Submission		90 days	Wed 1/10/07	Tue 5/15/07	
1036	Protocol and First Site Approved by Ministry of Health		144 days	Wed 2/28/07	Mon 9/17/07	

Source: Parexel International.

Figure 1. Chart includes a description of tasks and their predecessors, countries involved, and duration of activities.

Planning process

One of the main challenges project managers face in managing global trials is achieving the “last patient in” milestone on time. Delays in site activation have a significant impact on all study milestones. The complexity of the start-up phase is driven by several procedures, regulatory activities, and contracting processes with sites, as well as the availability of study drug, supplies, and site training. This results in countries and sites being initiated at different stages and times; however, the plan is usually simplified by defining key general study milestones.

The process described can be understood through an example. If a company wants to organize the planning of the clinical trial start-up process, we may assume that the project starts with country selection and identification of clinical trial sites at the same time the company starts the translation of all essential documents. However, the local Ethics Committee (EC) submissions will not start until the applicable essential study documents are translated for those countries that require document submission in the local languages.

A big issue in organizations is that the best strategies are not organized in a way people can use.

The duration of each activity should be defined based on previous experience doing these activities, internal metrics, and information provided by study sites. At the same time, those tasks linked by dependency (in this case, essential document translation is the predecessor for EC submission) and those to be done in parallel should both be identified (e.g., site identification and essential document translation) in order to get the critical path for any trial. In other words, a planning structure and framework that increases the level of predictability in the conduct of any trial should be provided to the project team.

Based on the above considerations, the process that leads to successful planning is as follows.

Introduce the concept of planning into the organization. Senior management should involve people from all levels of the organization to structure the knowledge so that the project teams can use this approach as a framework for planning the tasks to be performed throughout the duration of the study.

Define the limits of the planning by identifying the main goals. For example, if a company is defining the planning for a trial start-up phase, the main goal is to get all sites up and running.

Define the critical path including the duration of each task. The most important part of this step is to consider the best possible strategy when deciding which tasks will be done in parallel and which ones will be performed sequentially.

Describe how each activity should be performed. It is important not only to list the activities, but also to describe how they should be done by the project team. For example, if translating all essential documents into the local language is one of the

activities of the clinical trial start-up, the plan must describe how this task should be carried out.

Test the planning tool before final implementation. During this process, it is important to check whether the duration of each activity is realistic and if the critical path reflects the best possible strategy to be followed by the project team.

Once the project plan template is developed and implemented, the project manager should customize the tool according to study specific requirements. The next step is to lock the planning by saving the baseline—a screenshot of the activities and timelines expected to be accomplished. The baseline should be saved as early as possible after initiating trial activities to evaluate (throughout the project) any deviations from initial expectations. It is very important that the tool is updated on a regular basis with the actual data in real time and that it is shared with the project team accountable for the deliverables, as well as with the senior management to show study progress or for the purpose of escalating trial issues. A Web-based tool is the most suitable option for data entry and verification.

Control phase

Project control means evaluating the system put in place using standardized metrics to measure progress and quality. Project managers can easily lose control of the project and its scope when they do not manage based on the project plan. Deviations from the study baseline should be measured and tracked in a timely manner to identify issues, assess the impact of the changes in the plan, and apply corrective actions. The risk management plan should be followed in parallel with clear mitigation strategies and contingency plans, such as the activation of backup countries or the selection of additional sites. In this way, the delays are predicted with sufficient time, reduced, and resolved efficiently.

Lessons learned and metrics from current and past clinical trials are helpful to improve the project planning tools, redesign the processes, better estimate the timelines, and implement adequate strategies to conduct studies. A big issue in a majority of organizations is that the best strategies are not organized in a way that people can use—usually, SOPs are not enough to guarantee employee performance.

The development of a planning system where the knowledge strengthens the companies and remains in the organization allows teams to learn from past projects. Even if a project team does not have the knowledge to conduct a global clinical trial, the study can be performed with a good chance of success.

Diego Glanczpigel * is director, Clinical Operations, Latin America, at PAREXEL International, email: diego.glanczpigel@parexel.com. **Graciela Rácaro** is senior director, Clinical Operations and Peri-Approval Clinical Excellence (PACE), Latin America, at PAREXEL International.

*To whom all correspondence should be addressed.

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