

Cutting Back

Julia Forjanic Klapproth of Trilogy Writing & Consulting GmbH discusses the options available to pharmaceutical companies to reduce the time for clinical development and become more cost effective

The golden age of the pharmaceutical industry in which pipelines were full and cash cows were ample seems to be fading away. Pipelines are getting thinner and patent time is quickly running out on existing revenue-generating products. To keep the pharmaceutical industry viable, innovative solutions are needed to cut back on the time and costs of clinical development.

The first cuts began about 15 years ago, when the industry realised that the consecutive phases of clinical development could be run in parallel. Twenty years ago, Phase I studies were generally run before Phase II studies, which in turn were completed before Phase III studies. Now, outside of the initial first-in-man and perhaps a Phase IIa dose-finding study, most Phase I studies are run alongside the Phase II and Phase III programme. But that was only the beginning. The pressure to compress clinical development time continues to grow, and managers are trying to find ways to shorten the time to get their products to market.

TECHNOLOGY CAN HELP

As the industry has become more regulated and the requests from regulators for information have become better defined, it has been possible to take up the slack in many processes that were previously not standardised. Reductions in development time have been made by utilising better defined and tailored electronic systems to manage data and enable a rapid turn-around of analyses from studies. Electronic submission systems are now available to pull together the numerous documents included in a regulatory submission and to automate many of the tasks that were once done manually. Remember hand stamping the page numbers on a dossier? These electronic publishing systems provide enormous flexibility, not only for compiling an initial dossier, but also for assembling future dossiers that may be submitted in other regions.

Another electronic tool that is dramatically reducing time is specialised software for activities ranging from collecting data to managing clinical studies. This includes systems for web-based electronic data capture (EDC), for automating adverse event coding and for monitoring study progress. Tailoring such software to company specifications and standardised processes can make initiating and monitoring a study, and then

collecting, cleaning and analysing data, much more user-friendly, manageable and consistent across studies. By streamlining these activities, timelines can be pushed to their limits. A recent article reported that, by using such tailored software, Ferring Pharmaceuticals Ltd achieved database lock 10 days after the last patient visit, a full regulatory dossier of 24 clinical studies was submitted to regulatory agencies in the US and Europe three months after that, and approval was obtained less than 10 months after submission (1).

STRATEGIC OUTSOURCING

Improvements in clinical development are also being made by increasing the effectiveness of outsourcing. The buzzword in the industry on the topic of outsourcing and clinical service providers is the functional service provider (FSP) model. While this is not a new concept – the industry first started toying with the idea around 2005 (2,3), and Pfizer (4), Wyeth and Amgen (5) have been using it and singing its praises for the last few years – it is one that is finally getting a well-deserved foothold in the pharmaceutical industry.

Historically, outsourcing in the pharmaceutical industry was achieved using a transactional model. This meant sponsors would outsource on a project-by-project basis to support and/or bridge gaps in internal resources. A project might be performed by a single CRO or several niche providers, but there was often little continuity in how studies were designed, run and managed between projects for the same sponsor. In a transactional model, each team of providers deals with their project and has little interaction with other project teams. To coordinate this team, the sponsor often spends a large amount of time micro-managing the relationship between providers and monitoring compliance with company standards.

One way that pharmaceutical companies tried to reduce the burden of managing these outsourced providers was by



selecting as few providers as possible. Until recently, this was done using a full service model, which meant choosing service providers who could offer nearly all the services needed for a particular project. However, this model has several pitfalls that make it cumbersome and inefficient. With a single company providing numerous different functions to a client, it can be difficult for the client to manage and evaluate the performance for

each of the functions provided. It is also often difficult to achieve transparency in the costing of such large and diverse projects. But one of the key downfalls of the full service model is, quite simply, that many companies are truly experts in only one or a few areas (for example, in monitoring of clinical studies or in laboratory services) and they rarely provide superior service in the other areas they offer. A good example of this is medical writing, which often gets offered as a tag-on activity as part of a full service package. Clients need a report at the end of a study, and it seems simplest to have a CRO in place that will run the study and prepare the report. Unfortunately, a company specialised in running and monitoring studies may not have adequate expertise in writing documents, and the quality of the product and the process of generating the documents can be less than optimal. As CROs add services to their portfolio to offer complete packages, the effect can be similar to someone dabbling in things they do not truly understand.

Outsourcing to providers with expertise in a specific functional area has been used widely outside of the pharmaceutical world for decades. For activities ranging from IT to strategic HR and financial services, one or a few providers supply all of the expertise and support needed in that specific area for the entire company. This model has proven its worth in these other fields and is now doing the same in clinical development.

The growing popularity of the FSP model comes from its ability to overcome all of the pitfalls of the full service model (see *Benefits of an FSP model*). The FSP model does three things that are fundamentally different from a transactional or a full service model. The first is to determine the functional areas in which the sponsor has expertise. Those areas that are not core strengths of the sponsor then get outsourced. The second is to look specifically at providers with true expertise in non-core areas and create a collaboration of best-of-breed companies. The sponsor seeks out CROs or niche providers who have demonstrated their ability in the past and who can deliver a certain level of quality, speed and flexibility. Essentially, the sponsors handpick service providers with specialised skill sets that they can trust and depend.

Benefits of an FSP model

- Enables both sponsor and providers to focus on core capabilities
- Improves administrative transparency and reduces associated costs
- Reduces costs due to efficiencies gained from the proficiency and experience of the provider
- Improves flexibility – easy to exchange units that are not working while maintaining units that are
- Capitalises on local benefits (local knowledge and experience)
- Enables standardisation within a functional area across the company – one company is hired to perform a specific function across sponsor projects. This can be difficult to achieve if different CROs perform different projects
- Facilitates consistent application of sponsor-defined templates and SOPs
- Creates teams of specialists who have better relationships and are more committed to the goals

The third thing the FSP model does is to look for providers who have demonstrated the ability to handle a substantial volume of work so as to reduce the number of providers needed. In contrast to the full service model, these selected providers are not meant to carry out a bundle of activities on a single project, but rather are given the responsibility of performing their areas of expertise across several or all projects for the sponsor. For example, the provider would take over all data management or all medical writing, across all projects, and thereby become a strategic partner in developing standards and processes that apply throughout the company.

In the transactional model, where each clinical study is often a stand-alone project outsourced to different companies, the service providers who perform the activities for only one or a few projects have no chance to implement any learnings or standardisation across projects. They are not in a position to leverage expertise that could make their activities more time- and cost-effective for the clients.

By hiring a limited number of service providers who then perform a specific function across projects, sponsors can take advantage of the expertise they have hired to advise on and optimise processes across the company. The FSP model establishes a partnership between sponsor and provider, empowering the provider and creating a working relationship in which both sides have a vested interest in and are committed to finding solutions.

A classic example of how this is applied in other industries is the building of an automobile. The buyer of a Mercedes Benz wants high-end quality in every aspect of their vehicle. Whether it is the mechanics of the chassis, the engineering of the motor or the quality of the radio and the loud speakers, the expectation is that everything is of an excellent standard. It should all work together seamlessly and create a general sense of driving pleasure. The core strength of Mercedes Benz, however, is not to engineer radios or loudspeakers. To assemble an automobile of excellent quality that has all the parts the customer wants, Mercedes Benz outsources the engineering and constructing of non-core activities to reputable companies specialised in those areas.

GOOD DOCUMENTS REDUCE ASSESSMENT TIMES

Another area that has the potential to bring greater efficiency to clinical development, and that many people are overlooking, is utilising medical writing effectively. To assess data, regulators rely on the documents they receive, especially summaries of the common technical document and clinical study reports. The irony is that, after spending years and investing many millions of euros on clinical development, data management and statistical analysis, medical writing is still largely a tag-on to other activities. Few people in the industry have realised the importance of having documents that can effectively communicate the messages to the reviewers.

What tends to get overlooked is that a document does not inherently tell a message. It needs to be structured in such a way that it guides the reader through a logical flow of ideas, weaving the information together so that the reader easily understands the rationale and the implications of the results. A well-written document tells its story without the reader having to work to find out what the intended messages are, or spend time figuring out how various results fit together. This lets a reviewer focus on the task at hand of deciding if the messages are appropriate and sufficient for marketing approval. In this way, well-crafted documents will reduce the number of questions a reviewer has. Not only does this speed up review time, with fewer questions to address, it also shortens the time needed for the sponsor to respond to questions.

Crafting a well-written document takes skill and experience, which is part of the expertise that professional medical writers bring to clinical development. But the efficiencies to be gained from good medical writing are multi-fold. They begin with creating effective study protocols, include providing insight into the timing and content requirements of the regulatory documents needed during a clinical programme, and culminate in well-crafted dossiers.

When writing a clinical study protocol, an experienced medical writer structures and presents the details to ensure all investigative sites will have a consistent understanding of what the study is meant to achieve and how it should be performed. In addition, the experienced medical writer begins thinking about the study report and the CTD summaries while designing a protocol. They will flag up issues with planned design elements that may have consequences in the reporting stage, making it possible for clinical teams to avoid problems before they arise. Those medical writers who work on several studies across a project have a familiarity with the details of each study that enables them to recognise potential conflicts or inconsistencies between studies at the design stage, which teams may otherwise overlook. Finally, as professional communicators, experienced medical writers ensure that the study reports and CTD summaries tell the reviewers clearly and concisely what the data have to say. The benefit to be gained from medical writing in any one of these areas improves single steps of the process; the cumulative effect of these benefits makes medical writing a solution that can cut time and save money at all stages of clinical development.

About the author



After receiving her PhD in developmental neurobiology, **Julia Forjanic Klapproth** started her career as a Medical Writer in the pharmaceutical industry at Hoechst Marion Roussel (later Aventis) in 1997. Since then she has been President of the European Medical Writers Association (EMWA) twice (2001-2002, 2007-2009). Julia is also an experienced trainer of medical writers, regularly running workshops for EMWA and pharmaceutical companies around the world. In 2002, Julia co-founded Trilogy Writing & Consulting, a company specialised in providing medical writing. In addition to company management activities as Senior Partner and CEO, she continues to contribute her enthusiasm to client projects, writing a wide array of clinical documents. Numerous clients have depended on and appreciated her expertise in writing and coordinating study protocols, study reports, and CTD submission dossiers. **Email:** julia@trilogypublishing.com

CONCLUSION

Innovative solutions are constantly being sought that can make clinical development faster and more cost effective. Technology is already helping optimise many aspects of clinical studies. Further efficiencies are also being achieved by utilising the FSP model of outsourcing, which empowers the CROs and niche providers and brings them on board as strategic partners. In this way, pharmaceutical companies can begin to reap the benefits of learning from the experts they hire. By incorporating recommendations from outsourcing partners – recommendations gleaned from years of experience in the industry doing a specific function – companies will be able to streamline their processes.

A functional area in which expertise is not yet being utilised to optimise the process of clinical development is medical writing. Professional medical writers, especially in the context of the FSP model, can help to optimise clinical development from designing the first clinical study through to accelerating regulatory assessment at the end. By developing strategic partnerships with specialists, whether for software development, data analysis or medical writing, the system can finally graduate into one of true professionals working together toward the common goal of reducing the time to market for new drugs.

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