The Rise of Direct-to-Patient

With patient-centricity high on the agenda, direct-to-patient is a novel method of managing supplies that can benefit all stakeholders of clinical trials

Brian Swites at Clinigen Group

The healthcare industry has changed its focus. The needs of the patient, rather than the needs of the industry, are now at the centre of clinical studies conducted. This patient-centric approach benefits the patient and, ultimately, the success and efficiency of clinical trials.

Conducting a trial can be complicated. With patients geographically spread out, in need of frequent doses, and a drug product that has strict storage and delivery conditions, the process is even more difficult. When dealing with homebound patients, an orphan indication, or a dispersed patient population, patient enrolment and retention can be a challenge.

Specialised clinical supply managers can help a sponsor execute a direct-to-patient programme to overcome fundamental challenges that prevent the sponsor from conducting a trial. The programme, which provides a highly customisable solution per patient and per protocol, helps reduce the number of patient dropouts and the overall cost of a study.

What Is Direct-to-Patient?

Direct-to-patient is a patient-centric approach to clinical supplies. Supplies are prepared, packaged, labelled, and then shipped directly to the home of the patient or caregiver. Patients no longer have to visit the clinical site for diagnosis, labs, and data collection, which is a challenge for many. As a result, direct-to-patient can positively impact patient enrolment and retention. This method also enables sponsors to avoid shipping to, and storing supplies at, clinical sites.

With the average cost of enrolling one patient in a clinical trial ranging anywhere from $15,700 to $26,000, the trial budget can be significantly impacted if patients find it hard to comply with the protocol (1).

There are many patients that can benefit from direct-to-patient, such as those who are dialysed at home. It also helps minimise stress and the emotional impact on children who have been diagnosed with diseases such as Duchenne muscular dystrophy or Prader–Willi syndrome.

Fear of Change

Proposing to change to a direct-to-patient method for running clinical trials can be met with resistance. Many stakeholders are invested in maintaining current practices, which is often considered easier than adapting to new ones. Rising above this fear will ensure that timelines are reduced, drug approval rates increased, and persistent questions about increasing development costs addressed. For sponsors, learning how to distinguish between companies that argue against change because of legitimate patient safety concerns and those that merely try to protect their own interests is crucial.

Easing the Burden for Sponsors

Innovative direct-to-patient solutions offer significant patient benefits while easing the burden for sponsors. The treatment is delivered to the patient's home, eliminating the need to travel as well as the associated costs. For patients who cannot leave home for health reasons, are bedridden, etc., this is essential to their participation in the trial. Being able to administer the drug at home also ensures that patients receive their treatment in a more comfortable setting than a hospital or doctor's office, as "patients are assured of potential time and cost-savings as well as additional conveniences when participating in direct-to-patient clinical trials versus traditional studies, use of the model has increased patient recruitment by up to 60 percent and helped maintain patient retention at over 95 percent" (2).

Direct-to-patient allows clinical trial sponsors to:

- Decrease timelines
- Reduce costs

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- Increase patient enrolment and retention
- Gain access to a wider patient population
- Reduce patient trips to clinical sites
- Use integrated couriers

Importantly, it enables sponsors to conduct trials that could never take place with traditional clinical supply chains. In trials involving a rare disease, orphan indication, or dispersed patient population, direct-to-patient is the ideal approach.

When combined with packaging and labelling on an as-needed basis, direct-to-patient enables clinical trial supply service providers to dispense daily dosing for a product that has a very short shelf life. These two innovative services together are instrumental in making personalised medicine a reality.

Role of the Investigator

The rise of the patient-centric movement in the healthcare industry sees investigators trying to make it easier for patients to participate in clinical trials using technology and services such as direct-to-patient.

According to GCP, the investigator must have oversight of their patients, including the receipt, disposition, and dispensing of medication. While this does not change with direct-to-patient, the manufacturing and distribution experts get more involved.

Impact on Manufacturing and Distribution

Traditionally, the clinical site performs both manufacturing (GMP) and distribution (GDP) services, despite not being adequately trained in these areas.

With direct-to-patient, a service provider (serving as the GMP expert) can work with couriers (serving as the GDP expert) as the direct link to delivering medication to the patient. Timelines and even the costs of clinical trials are greatly reduced by decreasing the physical distance between the patient and the drug. While the location of the drug handoff changes from a receiving department or site to the home of the patient or caregiver, everything else remains the same. The sponsor is still responsible for packaging, labelling, and distribution. Control of the drug during investigation and maintaining adequate records remain the responsibility of the investigator.

Preparing for the Challenges

As with any new process, sponsors will face obstacles when implementing direct-to-patient. From timing and temperature demands to patient confidentiality and regulatory requirements, there are many factors to consider. Standard courier delivery times may work for homebound patients, but not mobile patients. Utilising a specialty courier that offers flexible delivery times will ensure that the patient gets the drug.

The use of temperature monitors for all shipments gives the clinical supply manager the control they need over the drug supply. If the alarm goes off, the replacement shipment can be sent before the patient receives the first shipment. The shipment can even be cancelled before it is delivered to the patient, if a specialty courier is used.

Timing and temperature are critical considerations as they can compromise a study, endanger a patient, or damage the credibility of everyone involved.

Patient Confidentiality

One of the important aspects to consider before moving forward with the direct-to-patient approach is patient confidentiality. Every service provider that uses digital platforms or enterprise resource planning systems and handles a patient's personal information must respect good practice quality guidelines and regulations.

While clinical personnel manage most of the communication, many other parties handle patient data. Service providers and couriers are not fully trained in GCP, yet it is the service provider's responsibility to ensure that the courier adheres to the delivery protocol as well. Manufacturing and distribution have a patient's name, address, and, in some cases, the phone number of a patient or caregiver.

Compliance with the Health Insurance Portability and Accountability Act and GDPR (one of the most important changes in data privacy regulation in 20 years) can be a logistical challenge. GDPR not only applies to EU organisations, but also those outside the EU that offer goods or

services to EU citizens. While the EU issued its 'Question and Answers on the interplay between the Clinical Trials Regulation and the General Data Protection Regulation', "it nevertheless omits some core issues for which guidance would be useful. As a result, disparities are likely to remain and should be taken into account when implementing a clinical trial across various EU jurisdictions (e.g., additional time will be necessary to negotiate and adapt local agreements and notices)" (3).

The Current Regulatory Environment

In the EU, regulations do not engage direct-to-patient, and the sponsor needs to get approval from the authorities. Once the approval has been received, working together with a clinical supply manager that has years of experience with direct-to-patient in the US, for example, will facilitate the trial.

Ensuring that laws are not violated when providing direct-to-patient services and interpreting and using the existing laws with the patient's safety and needs in mind is key.

Outdated Methods of Quality Assurance

Another challenge to implementing direct-to-patient is that many clinical research companies still implement quality-by-inspection, rather than quality-by-design.

While quality-by-inspection is important in the commercial setting, it can inhibit innovation in the domain of clinical research as it requires planned deviations every time something new occurs. Moving towards a quality-by-design system eliminates this challenge.

Improving Treatment Accessibility

Direct-to-patient is a convenient and effective method of managing clinical supplies. While it is relatively new in clinical research, it has become standard in commercial settings. There is a lot that can be learned from the practice of shipping millions of prescriptions to the homes of patients every year.

The growing popularity of direct-to-patient highlights the opportunities that this novel method brings to clinical trials. The focus is on the patient and their needs. Delivering medication straight to home removes the need to travel, which is a big hurdle for patients, especially children. The process is simplified, and as a result, more people can take part and stay enrolled in the trial.

Implementing direct-to-patient does not come without challenges, and it may not be suitable for all trials. However, when applied correctly, it can radically improve the supply chain for clinical trials, especially when used in conjunction with on-demand packaging and labelling.

Partnering with an experienced service provider that understands the ins and outs of the method and has the expertise to take advantage of all the opportunities, and manage the challenges, is essential to the successful execution of the model.

The patient experience improves significantly with direct-to-patient. Changes can be implemented quickly and the medication is delivered more conveniently. Trial sponsors can reduce costs and improve enrolment and retention. Every innovative medication is different, but no matter what a study involves, it can benefit from the new level of flexibility offered by the direct-to-patient method.

References

1. *Visit: www.clinicalleader.com/doc/top-reasons-why-a-direct-to-patient-clinical-trial-is-right-for-you-0001*
2. *Visit: www.worldcourier.com/insights/the-direct-to-patient--model*
3. *Visit: www.lexology.com/library/detail.aspx?g=809a88a5-bf83-424f-ac54-c1c6c077ead7*

Brian Swites has over 30 years' experience in the biopharmaceutical industry, specialising in global clinical supply chain management. As Senior Vice President of Clinical Services at **Clinigen Group**, Brian oversees global capabilities, strategic partnerships, and ensures overall growth and performance goals are being met. Prior to joining CSM, which later became part of Clinigen Group, Brian held various management positions during his 13 years at Cephalon/Teva Pharmaceuticals Industries. He received his Master's Degree in Pharmaceutical Manufacturing from the Stevens Institute of Technology, US.