

# DCT Elements Best Practices & Recommendations



**SCRS**  
**Digital**  
**Innovation**



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## Scope of Work:

### SCRS Workstream Efforts to Satisfy Need

SCRS and the multi-stakeholder Digital Innovation Initiative - Decentralized Trials Workstream team that created this document set out with a purpose of creating a simpler and more streamlined user experience. There is an inherent need within the industry to help clinical research sites understand what should be in place as sites continue to fine-tune their strategies to move forward with decentralized trials, versus what is study specific and sponsor-provided. It is important that the industry understands the best suited options and ideal course for adoption of decentralized trials at the site level, and can articulate needs from the various parties and vendors involved. Several concerns exist in this space and addressing the concerns and the need for a change in the site operating dynamic will be critical to the successful implementation of decentralized trials.

### The Intent of this Document and Needs to be Met

The intent of this publication is to serve as a reference as sites begin to operate hybrid decentralized trials so they can most efficiently assess their own capabilities and gaps. In order to continue to put the patient at the center of the clinical trial:

- Adoption of new technology under the decentralized umbrella must be effective and efficient.
- As the industry continues to change and quickly evolve, the goal is that hybrid decentralized trials will be embraced.
- Sites can aim to see more patients and enable them to offer research as a true care option and make it easier to participate.
- Harnessing the current opportunity to facilitate success amidst the increasing digitization of clinical trials is critical.

### What This Document Does Not Outline

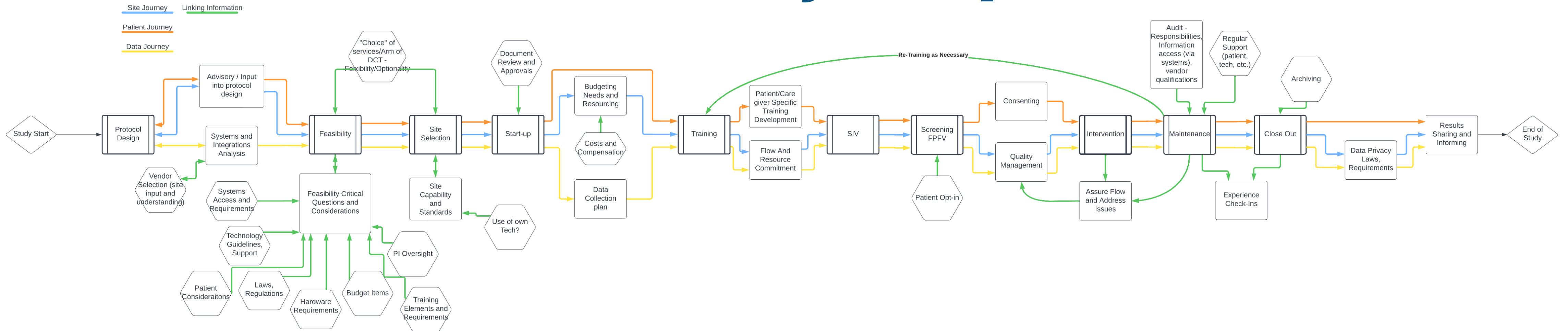
This publication is not meant to serve as a “one-size-fits-all” approach, but rather a guidance applicable to most sites and to give a sense of how to progress in this new paradigm. It will also be assumed that sites are starting out with a baseline knowledge of decentralized trials and virtual visits and that our industry and regulators will continue to develop along its current trajectory at the time of this publication’s authorship. Readers will also not find any specific industry or vendor recommendations, but instead be led through categories and types of technologies. It is important to note also that this is not a training on using a decentralized trial solution.

### What this Document Outlines

This publication is designed to be a guide for sites to successfully implement decentralized trial components containing:

- The visual elements to provide insight into how and when the many components of a decentralized trial come together.
- An explanation of those products or components and how that interaction occurs.
- Data points and other information to attempt to alleviate the aforementioned concerns that exist in this space.

# Journey Map



[Click here for full size Journey Map](#)

## Protocol Design

Adding clarification and transparency into the protocol design process is a valuable step to enhance the likelihood of success once that protocol is operationalized. This can be enabled through an early-as-possible sharing of the details of said protocol with the explicit intention of obtaining site feedback into the protocol feasibility. This also includes feedback on suppliers and technology modalities being instituted onto protocols.

This will help facilitate a better understanding of the potential burdens being placed onto sites and patients early on so they can potentially be mitigated. The practice will also allow sites to better estimate their potential costs and resource requirements associated with the trial and most importantly the expectations around Principal Investigator oversight. Eliminating the unknown or guess work performed by sites early on as they resource their clinical trials is the optimal outcome.

Engaging in this practice will also provide more accurate patient expectations and a better overall patient experience. When the site and patients have more time to prepare for the activities associated with the trial, they will be better enabled to maintain compliance.

### Site Actions:

- 1. Engage with Sponsors and CROs early on and ask if any early review of potential protocols can be performed, particularly in instances where potential trial selection has been started.**
- 2. Develop relationships with 1-2 key individuals at the organizations you work with closely. Use these individuals, through regular check-in, to ascertain potential protocol feedback opportunities.**
- 3. Assure said individuals are aware of your willingness to review protocols to assess site burden.**
- 4. Participate in forums, exercising the importance of early site review of protocols. Including advocacy groups, partnership programs, site trial liaison meetings, or other opportunities afforded by sponsors.**
- 5. Understand how systems will be integrated, and advocate for them to be so.**

## Feasibility

Feasibility should be considered a two-part process. Not only is the site assessing their ability to execute the clinical trial being presented, but the Sponsor and CRO should also be open to feedback from the site personnel on the feasibility of the trial. Often, many more details are being worked out and decided at this stage that may not be known during protocol design such as budget, vendor selection, and which elements of the trial may heavily rely on technology.

As referenced in the journey map, this is the time the site should obtain a firm understanding of:

1. Budgetary needs to cover costs associated with the trial and be profitable
2. Resourcing needs, such as staff, facilities, and equipment
3. External suppliers and parties that will be involved in the execution of the trial, such as labs, diagnostic services, specialized equipment
4. The purpose and scope of the study and the questions it seeks to answer

5. What advantage the various decentralized elements being employed by the trial will bring
6. In what form Principal Investigator oversight will be ensured
7. Training and support needs and processes
8. What the global site landscape for the trials looks like
9. What will be required of patients being asked to volunteer for the trial
10. What systems the site will need to access
11. Any local laws and regulations that may affect the execution of the trial and engagement in the decentralized elements.

After these items have been reviewed and a firm understanding is established by the site, any options or flexibility built into the trial will be realized.

#### **Site Actions:**

- 1. In addition to protocol design, this should be an open and honest feedback opportunity from the site back to the Sponsor and CRO regarding the viability of the proposed trial, as well as the specific decentralized aspects.**
- 2. Be transparent on viability of trial execution elements – will it work for you or not? If not, what needs to change to make it viable? Are you, the site, willing to engage in the required or optional services supporting the trial?**
- 3. If the above items aren't explicitly identified, then they should be asked and understood before any finalization and selection is completed.**
- 4. If you are not selected, be relentless in your inquiry as to why not. It is critical to your site's long-term success to identify areas of improvement as the industry ventures into a new area of conducting trials.**

### **Site Selection**

Historically the site selection process has been single way journey, Sponsors/CROs making inquiries and sites answering and passively waiting to be selected or not. However, this pattern has changed since sites are wanting an active role in the process and they are also declining projects more often than in the past. What is becoming more important is establishing a two-way dialogue. This will cement the site selection process as less of a static point in time, and more of an ongoing and fluid assessment of capability. This flexible model assures that the site can put its best foot forward, and the best site is selected for the trial.

It is at this stage that a complete list of DCT elements should have been or should be obtained by the site. This level of transparency is critical to an accurate assessment of the study by the site, and the site by the Sponsor or CRO. Part of this transparency is also the vendor selection for the trial. Understanding who will be supplying various DCT elements can affect long-term needs from a resource and budgeting perspective, as well as the optionality of various elements. If some components are optional and deemed not in the best interest of the site or patient, it is at this point those elections should be vocalized.

It is during the conclusion of feasibility as site selection occurs that site capabilities and standards come into

consideration. An honest and complete disclosure of what the site is capable of doing and what their standards are surrounding the implementation of decentralized elements is a major consideration for both sides. These capabilities and standards can include, but are not limited to:

1. What technology will be incorporated from the Sponsor or CRO, and what will the site be using or requiring on the trial?
2. Is the site capable of integrating or operationalizing various required DCT elements – i.e. Home health, tele-visits, eSource, eRegulatory, etc?
3. Are there established SOPs for operationalizing the required DCT elements?

As mentioned previously, it is valuable and important that these considerations are not established or determined at a static point in time. As sites develop and implement these elements and practices, an open dialogue on their status and willingness to proceed will be important to the rapid execution of the trial and selection process.

#### Site Actions:

1. **Establish early on the need and desire for open dialogue. This will allow exchange of needs and requirements for the trials as new information is learned and implemented.**
2. **As stated as part of feasibility, a thorough understanding of the various DCT elements is critical to understanding the trials' requirements.**
3. **Prepare feedback for any vendor selection and capability. Note this when it comes time to execute contract and budget.**
4. **Develop necessary capabilities, standards, and/or SOPs documenting what those are for consistency and transparency. If none related to that trial requirement exist, consider creating them, or be clear in the inability to execute. An example would be a master log of site capabilities to utilize when asked.**

### Start-up

Several unique aspects of start-up exist when participating in a decentralized trial (DCT). However, most of these activities are rooted in common practices with nuance around this new modality. With document review and approval, several unique documents that are required for the study will be presented to the site and require execution. This is particularly true when engaging with third party vendors, suppliers, or services. For example, agreements would need to be in place when working with a home health or home nursing service. A site also needs to recognize when documents for ancillary diagnostic services will need to be established. The documents in general are typically in addition to standard regulatory filings (Delegation of Authority, IRB filings, etc).

During this stage, sites should also work to determine that the technology being employed on the study is ready to go. Additionally, training on these various technology aspects will be starting during this time and it is important to identify any issues or bugs with the technology as early as possible. Part of this training should consist of alignment meetings with applicable external or third-party individuals who are involved in the administration of the trial. Assuring time has been spent to make sure all parties understand the patient, visit, and data flow will be a valuable practice to avoid deviations and anticipate potential risks.



This process will also be the time at which the budget and contract are being executed and finalized. It is critical that sites take this time to understand costs associated with all the identified aspects of the trial that are considered standard across a majority of trials, but also unique to this particular trial.

This can include but not be limited to:

1. Remote monitoring
2. Remote data or sample collection
3. Home-health / in-home visits
4. Telemedicine
5. Third party supplier and service provider expenses
6. Electronic versions of trial collection media (i.e., eSource, eConsent, eRegulatory)
7. ePRO and Connected Devices
8. Storage of investigational Product or Study Intervention

It is also highly valuable to understand the data collection plan as part of this process.

Often, data is being collected in new and unique ways in a DCT, so it is important to understand how that data will be collected, at which time points, and most importantly through what format. If one is not provided, it can be created once the study and technology flow is properly understood. Sharing this amongst the trial team will lead to higher success rates, understanding where certain pieces of data are collected and in what format.

### Site Actions

1. **Based on determined ancillary or third-party services that are part of the trial, determine which documents will need to be executed and allot necessary time to do so.**
2. **Get hands-on experience with any technology and processes as early as possible to identify any issues with the tech itself, or your workflows. Adjust accordingly but also inform the necessary parties in a timely manner.**
3. **Cost analysis is critical. Obtain and cost the aspects of this trial by obtaining this information early through regular inquiries to the Sponsor or CRO. Recommend not signing a budget until all aspects are finalized and determined to assure accurate budget.**
4. **Assure you understand the data collection plan as part of the planning process.**

### Training

Training both the site personnel, as well as providing adequate training and understanding to the patients is of paramount importance. It is first critical to understand the amount of training required of both the site and the patient. This will assure that training can be managed and anticipated. It should also be recognized that this training can take a considerable amount of time and therefore be compensated for appropriately. Understanding the amount of time each course or module will take is an essential step in this process. Performing this summary step early on will allow the site to better estimate the costs associated this training and bill for it appropriately. Granted, this training compensation was agreed to within the budget.

Training can also be recognized as redundant or having been completed for a previous study. As part of this early review of required trainings, any trainings or experience that could be viewed or identified as superseding that particular training requirement should be highlighted and appropriate evidence provided. All with the goal of not being required to re-take the same training and saving potential time by not being required to take a redundant training.

If possible, it is recommended that the site personnel request a testing or sandbox environment for the various technologies being employed by the study. This allows for:

- a. A hands-on application of any learnings and trainings
- b. Identification and risk mitigation for potential issues with the technology, prompting procedures to be developed
- c. Enhanced comfort with the use of the technologies and tools

If these testing environments are not available, creation of mock patients and providing time to familiarize with the technology is a minimum suggestion.

Another potential request is that of a site and patient trainer or coach, supplied by the Sponsor or CRO. This individual would provide a concierge like service for the site to assist with the items they are not experts in, as well as assure their time can be dedicated to patient recruitment and protocol related needs.

#### **Site Actions:**

- 1. Ask or develop a summary of all training required, along with the estimated times required of those being trained. This should include patient level training as well.**
- 2. All required training should be compensated, including the training of and for the patients. Assure this is agreed to within the budget, and billed.**
- 3. As trainings are reviewed, identify duplicate or redundant training and provide evidence of previous training or experience completed.**
- 4. If applicable and valuable, setting up opportunities to perform mock visits or visit related tasks will help anticipate potential risks that may arise during screening and subsequent visits.**
- 5. Request sandbox or testing environments for any technology being required of the study in order to facilitate above mentioned mock visits and testing to assure risk identification and comfortability.**
- 6. Establish a plan for re-training as necessary in the event that new knowledge or learnings are discovered.**

### **Site Initiation Visit (SIV)**

SIV's as they pertain to DCTs are focused on site preparation. The steps taken up to this point should culminate at this visit, therefore allowing the recruitment and screening of patients, so adequate preparation is critical. Sites should ask themselves:

1. Are there any other ethics review boards that may need to review the element interactions of the decentralized trial?

2. Does the IT department require any specific or unique information, or does the site need anything nuanced from them?
3. Is data privacy or risk involved from a personnel or departmental prospective? Is there any review of the various study components that needs to be performed?
4. Relationships with outside vendors and providers are common in the DCT environment – are those affiliations established or are there any potential blocks (i.e. procurement practices)?
5. Have all legal and regulatory limitations been addressed (i.e. state licensing for practicing)?
6. Has the clinical trial agreement been reviewed and is it acceptable?

This is not an all encompassing list, but should be considered foundational to the unique questions that should be addressed. Additional considerations will vary by trial, but the steps taken prior to the SIV should help identify these, and they should be built into the plans and preparation.

Staff preparation up to this point will also be a major step leading up to, and as a result of the SIV. Outlining these steps and various components of the trial that the various staff will need to complete is a valuable practice to assure efficient preparation. This includes ensuring an understanding and execution of training plans – to include initial trial launch training, mid-trial trainings for newly added staff, and any escalation trainings as the result of challenges or changes. It is at this stage that a firm understanding of all that is required of your staff and resources should be fully understood. If initial projections are insufficient based on newly discovered information, now is the appropriate time to initiate any re-negotiations to assure these newly discovered costs are covered. Adequate justification for these altered reimbursements is a must.

In preparation for the visit itself, it is important to assure staff come as prepared as possible through completion of protocol review, trainings, performing mock visits and technology trials, and any ancillary materials are thoroughly reviewed.

This is also the time to set and understand necessary expectations over the duration of the trial. This includes

1. Recruitment plans and strategies – where will patients primarily be found?
2. Monitoring expectations – frequency and format
3. Ongoing support for DCT elements – troubleshooting guidelines, tech support, patient support, ongoing trainings
4. Device and DCT element movement – storage, inventory, shipping, requisition, etc.

#### **Site Actions:**

- 1. Identification of critical questions and unique considerations outside of a standard trial should be performed leading up to the SIV, as outlined above.**
- 2. At this point, Staff should be prepared through an outline of their operational steps that will bridge the point between the SIV and the first patient visit.**
- 3. Perform a budget review to assure all costs are covered. If not, initiate a re-negotiation process.**
- 4. Prepare for the SIV itself – assuring a thorough review of all materials and trainings.**

## Screening and First Patient, First Visit (FPFV)

As the first patients are being recruited and scheduled for their screening visits, much of the preparation done prior to this will culminate at this stage. The site should be prepared to put into action many of the plans, policies, and procedures established up to this point. Additionally, enablement of various technologies will start at this time, being used in production for actual visits.

Recruitment is a major component leading up to this point and several considerations need to be made:

1. What information during this process will the patient be engaging with, and how will that information be absorbed? On-site? Remotely?
2. If a third party recruitment service is employed on the trial it is important to understand how they are qualifying the potential patients, and how the team will manage these leads and access them.
3. The timing of recruitment as it pertains to seasonality is also important. If recruitment takes place during holidays, etc. it may affect the pace.

After the SIV and prior to this stage, the site should establish several final points of understanding to include:

1. Do any virtual or remote staff need to be activated, prepared, and coordinated to assure seamless first visits?
2. How long will screening visits take based on the established plans and technologies involved?
3. If eConsenting is being utilized, will it be done remotely or in-person?
4. Has the necessary training been completed for the appropriate internal or external staff?

Another critical realization is that technology fails at times. We cannot predict when or what will fail but taking each step as part of the sites plans and analyzing what could occur because of a technology failure is an important step in preparedness. Establishing a contingency and mitigation plan because of that analysis will be critical to keep visits on track.

### Site Actions

1. **This is the culmination of all the proceeding steps as it pertains to operational preparation. Assure that all plans and policies are in place, all technology is ready to be utilized, and processes are understood before screening the first patient.**
2. **As first conversations with patients occur, assure that the understanding of the amount of in-person versus virtual interaction that will be videos occurring. This will affect the patient's ability and willingness to participate.**
3. **Staff – both internal and external to the site – should be briefed and prepared based on their roles with the information and resources necessary, particularly technologies needed as well as visit flow information. This includes investigators and their visit expectations.**
4. **Established contingency and risk-mitigation plans related to visits should be reviewed. If something occurs during the visit that causes a delay or technology fails, a plan should be in place to recognize and mitigate that issue.**
5. **Focus on the patient. Provide them the understanding, time, and as positive of an experience as possible even when issues arise.**

## Intervention

This stage of the site DCT journey is when the participant has received study IP, device, or other protocol related trial intervention. It represents the start of the active treatment life cycle of the study. At this point, primary training should be completed as referenced in the previous sections. This period of the trial is primarily about engagement, retention, data collection, and assuring patient safety.

Part of this process will involve assuring that the proper mechanisms and procedures are integrated to assure data is being collected properly. This should be considered one part of the regular engagements with patients. These engagements could not only occur during regularly scheduled visits, but also through separate engagement calls. With patients not coming into the site as regularly, it is important to consider and employ ways to keep them engaged and feeling valued remotely. Their concerns may be unique in this digital environment, so considering and addressing those concerns is critical. This flexibility around how we engage with our patients will increase the likelihood of long-term adherence and success. Adequate compensation for these visits on both the site and patient side is a must.

Patient compensation is one method that should be instituted to maintain compliance. In decentralized trials, this is applied to new types of visits and practices including completion of televists, or eDiaries as examples. Understanding the ways in which patients can be compensated for the trial, such as virtual payments, and how that process is integrated into your sites practices helps assure patient satisfaction and increase the likelihood of retention.

Issues are inevitable and are likely to arise when least expected. It is important for the site to understand the support availability, such as helpdesks that have been made available to the trial. These are typically 24/7 services that are offered in different languages to support the needs of the site and the patient. But when these services aren't able to help solve your issue, the site should understand the clear escalation plan and where they might look next. Part of this is the timely response from those providing assistance, including CRAs and other support services.

As problems arise, they should be adequately tracked or logged as determined by the Sponsor/CRO or the site. The level and detail needed in this tracking will vary, but the practice of tracking this work will allow better mitigation or faster resolution. These resolutions may come in the form of information provided to the sites, as well as push-updates to devices without intervention. Data may also require correction, particularly the data that is entered directly by the patients through things like ePRO devices. Clear instructions on how this data is corrected or modified should be understood, as well as how to gather required information in the form of reports.

The intervention for the trial may be dispensed and administered in new and different ways than the site is used to. It may be sent directly to the patient, or the patient may need to receive it through more in-person means. Regardless, a clear understanding of how this is performed will need to be understood and necessary accountability practices established. This holds true for technology as well. During the stage at which technology used will need to be re-administered, reviewed, or returned is considered equally important as it pertains to accountability.

### Site Actions

- 1. Determine and execute the patient engagement plan through both regular study visits as well as any engagement visits necessary.**
- 2. Assure compensation is properly established and executed.**
- 3. Establish and prepare to execute the support plan as laid out in the study materials. Understand**

**the necessary escalation steps so support can be provided, and issues resolved rapidly. Track issues as appropriate.**

- 4. Determine how the intervention will be administered, recognizing it may not be administered by site personnel. Assuring proper accountability procedures are finalized.**

## Maintenance

This stage of the site DCT journey consists of the ongoing life cycle of the study that begins at FPV and ends at study close out. Much of the activity here will be revisiting established procedures and performing regular check-ins with patients and site personnel. There may be retraining that needs to occur, as well as replacement of technology and accountability for intervention, and issue reporting and tracking as they arise.

An important consideration at this phase is the potential for patients to become difficult to follow-up with. They may become non-responsive or stop logging their trial data as instructed. In a potentially remote environment, maintaining regular engagement and a clear plan for potential lost-to-follow-up patients is a critical step. Part of this plan is the considerations around data. Understanding if that data is still viable and usable for the trial, as well as what can be done with it are important questions to ask. Can that patient be reengaged and brought back into the trial, or what happens to them if they are too far outside of visit windows? The site must also make every effort to recover the trial technology through creative means.

Adopting and employing an engagement strategy can help avoid this potentiality.

1. Have regular check-ins, as established during the beginning of the intervention phase.
2. Use creative, safe, and ethical ways to make the trial experience a premium one.
3. Provide the patient the necessary needs and assure their concerns are being alleviated.
4. Ask questions about their experience, not just those that are pre-determined by the protocol to assess their satisfaction.

## Site Actions

- 1. Assure your practices and procedures continue to be conducive to an efficient execution of the clinical trial. Modify as necessary.**
- 2. Be sure to execute on your patient retention and engagement efforts to prevent potential lost patients and technology. Modify as necessary.**

## Close-out

This stage marks the conclusion of the patient facing activities of the trial, but much work still remains for the site. The main activities that occur during this stage, as they pertain to DCTs, include:

1. Final data gathering from any multiple sources
2. Data integration from various sources
3. Cleaning and accuracy review of the data as it is gathered

4. Resolving data issues as they are identified
5. Receiving and decommissioning of devices
6. Patient gratitude activities, data sharing as allowed
7. Return of all DCT equipment used during the trial to the technology solution provider
8. Archiving of study resources

The amount of data that typically exists in DCTs is greater than those of standard trials. Sites will need to understand this reality and allocate appropriate resources according to the study start-up outline and data collection plan. Data privacy and transmission is also a critical consideration during this stage. Many laws exist around data privacy, both in and outside of the US and a site will need to understand all of these laws to remain compliant.

It is also essential that patients are shown appreciation for their participation in the trial. DCTs grant new ways for us to facilitate this work, so it is important that prior to this stage the proper method and process for sharing what can be shared with patients, and appropriate gratitude is extended to them.

**Site Actions:**

- 1. Understand and review the data collection plan so that proper data review and finalization can occur. This may be resource intensive.**
- 2. Review state/local laws and organizational policies pertaining to data storage, privacy, and transmission to assure you remain compliant.**
- 3. Review processes for returning and decommissioning devices.**
- 4. Recognize and begin to execute the process around patient gratitude procedures, data and result sharing, and finalization.**



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