eCOA SET-UP

How to anticipate eCOA complexities and ensure a successful launch?

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Kayentis

Dedicated to eCOA & Patient Engagement

Setting up a study with eCOA should be straight forward: choose a questionnaire, program it, test it, and start the study. Unfortunately, complexities can crop up and without proper preparation, communication, and sharing of experience, these complexities can make getting the eCOA portion of a study up and running a headache. In order to cover all of these topics, we brought together a working group to discuss various factors (experience sharing, identification of hidden complications, and User Acceptance Testing) that can contribute to reducing the complexity and risk when implementing an eCOA strategy.

THANKS

This session was hosted by Audrey Chanet, Project Manager Lead at Kayentis.

We warmly thank all the participants for their active contribution to this session.

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Where does this variability in experience come from and where do the main complexities sit?

Complexities in eCOA set-up can bring delays to a study start, especially when teams lack experience or relevant advice is not available. The first step of the eCOA set-up process is to review the PROs and prepare the system around the protocol requirements, the schedule, the branching logic, the edit checks, and all other details that are required. Although this can be quite complex for some protocols, with experience it is possible within established timelines.

The second step is more challenging as it is based on experience sharing: being able to focus on what has been the prior eCOA set-up experience and identifying what has and hasn't worked is key. Although it is a difficult exercise, taking the time to learn from other's experiences, shed light on the hidden hurdles, and capitalize on this is the key to successful implementation.

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The set-up of patient diaries has also been described as an area with a lot of complexity, and capitalizing on experience is crucial here. *"Unless you have somebody central to share on how it has been done in the past, you are likely to be re-inventing the wheel"* as mentioned by an eCOA System Manager from a large CRO.

For many companies, change can be considered a risk. As clinical trials are about reducing the risk as much as possible, often just continuing with business as usual seems like the best option. However, it is important for teams to capitalize on information when it comes to integrating eCOA solutions in studies. A culture of openness to change is

important and this can only come about when one builds on experience and learns from the lessons, not only within a company but also across the industry. A central function for eCOA within a company can collect experience and understand why something worked or not, and this function can then advise across the organization.

> *"Breaking down the silos is hard"*

But vendors do not share lessons learned, and sponsors often struggle to share their bad experiences and recognize what failed; *"breaking down the silos is hard"* commented a System Implementation Leader from a large international pharma company.

And so, what can we do to be better at sharing our experience?

We need to all be working in an open environment. Vendors need to be honest on what is possible and what is not, and to share this information openly. They should feel empowered to openly discuss a sponsor's requests when they do not match with best practice or when improvements can be suggested for optimal implementation. It is important to remember that vendors are eCOA experts, having a global view across projects & across sponsors, and that this expertise should be used for every project.

Complexity can also be explained by the natural and, unfortunately, growing trend to over-complicate studies, from the perspective of protocols, diaries, or questionnaires. Patients are the first to pay the price of complex functionality; we, as industry stakeholders, need to make it simple!

eCOA SET-UP IS UNDOUBTEDLY COMPLEX, BUT WHERE DO THE COMPLEXITIES LIE?

Complexity can vary based on the stakeholders involved in the eCOA set-up process. There are pros and cons regarding the number of people involved, and choosing the right team to support this process can be challenging and sometimes even political.

It is a balancing act, on the one hand you need to make sure all stakeholders are represented to avoid missing an important perspective, such as data management, statistics, or medical. However, if your team has too many stakeholders, competing priorities can lead the discussions of eCOA specifications down a rabbit hole, and the time it takes to make a decision can take longer than expected. This can lead to delays to the programming, the UAT, and ultimately the first site initiation, and can result in what everyone wanted to avoid in the first place.

Involving multiple stakeholders also brings the risk of spreading out responsibilities and can potentially lead to those making decisions not necessarily being those who have the best understanding of eCOA.

Teams need to make sure they bring the right stakeholders to the table, but who exactly are the right stakeholders?

A clear discussion from the very beginning about which decisions need to be made, and when, can help guide sponsors and vendors on who

needs to be involved and when. This type of discussion is important to have prior to filling up calendars with meetings.

eCOA implementation does not happen in a vacuum. There is licensing for the questionnaire, the type of electronic mode, screenshot review by some authors, linguistic validation and review of those screens (also by the author sometimes!), official guidelines and best practices to be considered, ethics submissions, and so on. And all of this must happen before the study start! Needless to say, this adds complexities and can also generate uncertainty within teams.

Then when it comes to writing the specifications, the difficult part is to understand how the vendor's systems works and what programming options there are to support the study. With this in mind, having a demo can be helpful to understand what is meant and proposed.

Another difficulty is to be able to produce clear and precise specifications for programming teams. Each trigger, and all the logic to properly build the study schedule, the workflow or the scores should be carefully reviewed.

WHEN IT COMES TO USER ACCEPTANCE TESTING (UAT) PROCESS: WHO IS RESPONSIBLE FOR TESTING AND WHY?

The UAT must be performed by the sponsor, who is one of the end users of the system. The UAT is based on what was defined in the specifications document and agreed between the eCOA provider and the sponsor prior to the set-up.

This is the opportunity to ensure that the study requirements are fulfilled. A Senior Project Leader from Kayentis mentioned that: *"As a clinician, as a patient, as a CRA, as a medical monitor, it should be verified whether the way the vendor implemented the study is acceptable."*

Before the sponsor gets to the UAT, there are several other internal tests that need to be performed by the eCOA vendor. These tests are

> ***"As a clinician, as a patient, as a CRA, as a medical monitor, it should be verified whether the way the vendor implemented the study is acceptable"***

to guarantee the system works from a technical standpoint and they remain under the vendor's responsibility only. At the time of UAT, the

usability of the solution and its correspondence with the requirements and the specifications is tested.

When sponsors do not have the resources or the inclination to do the UAT, their CRO can fulfill this role. This should be discussed from the very beginning, during set-up, to anticipate the inclusion of the CRO in the UAT.

UAT is fundamental, but how far should the UAT process go?

It depends on exactly how the sponsor and vendor are involved from beginning to end. The UAT process can go quite smoothly if the technical documentation is well prepared and if the team has ensured

> *"We can be smarter by building several scenarios"*

that the content of the specifications properly reflects all the study documentation and requirements. However, if steps are not carried out or if the documentation is not accurate enough, there will be hurdles to be overcome, and some cases may not be covered. *"We can be smarter by building several scenarios"* stated a Global Trial Director from a big pharma organization.

Score calculations can be based on several parameters: how many times does one test that? There can be several sub-scores that lead to a final score which drives eligibility - how far should we go with testing in such situations? Should the teams be testing the calculation for every possible combination?

"When different parameters drive sub-scores reaching certain thresholds that influence eligibility, one may need days of diary entry and creation of data sets for 30 or more patients to test every possible combination. This does not seem to be a right use of people's time".

When regression testing is performed properly and UAT shows it works for a few scenarios, this should be accepted and considered sufficient.

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Sponsors may well choose which scenarios need testing, according to the specifics of a patient population or subpopulation that may be recruited at a certain site. But the sponsor's due diligence should not go as far as testing every single calculation that could come out of all study scenarios. *"Sponsors should not be doing validation testing, vendors are doing it, this is their responsibility and the sponsors should trust that the vendor they selected is going to do it"* recognized a System Implementation Leader from a large pharma company.

In 2013, the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) ePRO Systems Validation Task Force defined UAT as "the process by which the clinical trial team determines whether the system

> *"Sponsors should not be doing validation testing, vendors are doing it, this is their responsibility and the sponsors should trust that the vendor they selected is going to do it"*

meets expectations and performs according to the system requirements documentation".[1] Because differentiating between the specific activities recommended for UAT and those activities conducted during system validation can be confusing, the ePRO Consortium developed recommendations and considerations that should be accounted for during UAT by the sponsor or designee, which will soon be published.

[1]Zbrozek, A., Hebert, J., Gogates, G., Thorell, R., Dell, C., Molsen, E.,… & Hines, S. Validation of electronic systems to collect patient-reported outcome (PRO) data—recommendations for clinical trial teams: report of the ISPOR ePRO Systems Validation Good Research Practices Task Force. Value Health 2013;16:480-4. Available at: https://www.sciencedirect.com/science/article/pii/S109830151301797X#:~:text=UAT%20is%20the%20process%20by,to%20the%20system%20requirements%20documentation.

"The purpose of the UAT is not validation testing, it is meant to verify that every single user can use the system in a way that matches the protocol requirements."

Although the study protocol is the driver, internal tests are all based on the specifications document. Programming teams can lack the ability to identify if a workflow is not aligned with the protocol or if it is nonsensical from a clinical standpoint. This is also the goal of

> ***"Ambiguity can be everywhere; this is also what UAT is for: removing ambiguity"***

the UAT: it serves to cover cases when programming teams may have misinterpreted the protocol, because of imperfect study specifications. The sign-off of the requirements is the approval that all the specified requirements meet the needs of the protocol.

"Ambiguity can be everywhere; this is also what UAT is for: removing ambiguity".

What can initially be considered a straightforward "let's just put in a few questionnaires here" process can be laced with complexities. The most important aspects to reduce the risk of complexities are compiling lessons learned (from both the sponsor and the vendor), carefully choosing the stakeholders who will be around the table, and planning for a thorough UAT process. Aiming to integrate these aspects in every study that uses eCOA will increase the chances of success of the eCOA strategy.

Focused on eCOA set-up, this white paper transcribes the discussion that was held during one in a series of 4 workshops about eCOA complexities held by Kayentis in 2020.

WORKSHOP CONTRIBUTORS

- Clinical trials and eCOA experts from the pharmaceutical industry and CROs

WORKSHOP MODERATOR

- Audrey Chanet, Project Manager Lead at Kayentis

AUTHORS

- Estelle Haenel, Kayentis Medical Director
- Andrea Murison, Kayentis Business Development Director

eCOA COMPLEXITIES WHITE PAPERS

#1 eCOA training: How can we improve the sites' and patients' experience?

#2 How to anticipate eCOA complexities in multi-year studies & develop best practice to support sites?

#3 No longer the "what if" situation: today's reality and eCOA back-up strategies: how to make sure they are adapted?

#4 eCOA set-up: how to anticipate eCOA complexities and ensure a successful launch

Panacee - October 2020

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