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Malaysia Decentralised Clinical Trial (DCT) Guidance Document

FOREWORD

Clinical research in the country is an important agenda by the Ministry of Health that has the potential to address unmet medical needs, improve patient access to innovative treatment, and transform health outcomes. There has been significant growth in clinical trials within the country, contributed by the structured ecosystem that's been established, streamlined processes in regulatory and ethics, as well as experienced investigators in their respective fields.

Similarly, the last decade has seen a significant growth in clinical research globally, with considerable advancements made in digital technologies and other novel approaches that may help to improve overall clinical trial conduct. The advent of the Covid-19 pandemic has impacted the clinical trial industry, with many disruptive innovations adopted to ensure continuity in clinical trial operations. Study activities and monitoring had to be continued through remote means to ensure trial participant's safety while maintaining data integrity. In addition to trial designs becoming more complex, there has been a shift in focus towards adapting decentralised clinical trial (DCT) elements to improve trial participant's experience throughout the study.

The development of Malaysia DCT Guidance Document is hence vital and the way forward, in communicating our readiness in implementing innovative trials designs. This is to ensure we remain competitive and stay relevant to global trends and innovations which are becoming more patient-centric.

I would like to extend my appreciation and gratitude to the working committee of this guidance document, which I am certain will prove to be invaluable to all clinical research stakeholders.

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ABBREVIATION LIST

AE	Adverse Event
CIU	Clinical Investigational Use
CRF	Case Report Form
CRM	Clinical Research Malaysia
CRU	Clinical Research Use
CTA	Clinical Trial Agreement
CTIL	Clinical Trial Import License
DCT	Decentralised Clinical Trial
DS	Device Study
ECG	Electrocardiogram
EMA	European Medicines Agency
eCRF	Electronic Case Report Form
EMR	Electronic Medical Record
ePRO	Electronic Patient Reported Outcome
GCP	Good Clinical Practice
GDP	Good Distribution Practice
GMP	Good Manufacturing Practice
GxP	Good 'x' Practice "x" stands for the various fields of quality guidelines and regulations.
HCV	Health Care Vendor
HHC	Home Health Care
HHCP	Home Health Care Professional
ICH	International Council for Harmonization of Technical Requirements for Pharmaceutical for Human Use
ICF	Informed Consent Form
IEC	Independent Ethics Committee
IP	Investigational Product
IRB	Institutional Review Board
ISO 14155	International Organization for Standardization certification for Clinical Investigation of Medical Devices for Human Subjects - Good Clinical Practice
IVD	*In vitro* Diagnostic
MCMC	Malaysia Communications and Multimedia Commission
MDA	Medical Device Authority
MOH	Ministry of Health
NPRA	National Pharmaceutical Regulatory Agency
PDPA	Malaysia Personal Data Protection Act 2010
PE	Performance Evaluation
PI	Principal Investigator
RACI	Responsible, Accountable, Consulted, Informed
rSDR	Remote Source Data Review
rSDV	Remote Source Data Verification
(S)AE	Serious Adverse Event
SDV	Source Data Verification
SOP	Standard Operating Procedure
UMMC	University of Malaya Medical Centre

1. INTRODUCTION, SCOPE AND GENERAL CONSIDERATIONS

Decentralised Clinical Trials (DCT) has been the emerging trend in clinical research, with many sponsors and investigators adopting DCT in trial design and conduct. Many differing terms are used in defining DCT (virtual, remote, site-less, home-based), but the concept is essentially the same, in which DCT moves away from the conventional study site, adopting tools/ technologies to facilitate the conduct of trial activities outside the site. This includes use of digital tools, conducting study visits outside study sites and delivering as well as collecting study materials to/from trial participants'[1] homes. Though adopting a full DCT design within a study may not be suitable in most cases, many trials have adopted several decentralised elements within its design, which are being called hybrid trials.

The purpose of this document is to provide guidance on the implementation of decentralized elements in clinical trials with investigational medicinal products, regardless of any health crisis, and with the intention to facilitate use of DCT elements in clinical trials in Malaysia. This will be done while keeping in mind of foremost importance, that the trial participants' safety as well as their protection, rights and dignity ensured, together with reliable data generated for publication and submission for regulatory decision-making.

This document is provided as a general guidance for all sponsored research/ commercial studies that is intended for the purpose of product registration in Malaysia. The document is also highly recommended to be adopted for research that intends to apply any of the DCT elements mentioned in this document in Malaysia. It is to address the roles and responsibilities of the sponsor, Contract Research Organisation (CRO) and investigator, electronic informed consent (e-consent), investigational medicinal product delivery, study visits/trial related procedures outside traditional study sites (eg: satellite sites, mobile sites and trial participants' homes), remote monitoring and data collection. This document provides some guidance on how to get started and is not intended to provide a comprehensive and complete overview of all scenarios for implementing decentralized elements in a clinical trial. Sponsors are encouraged to seek scientific advice and consult the relevant regulators (NPRA/MDA) regarding the use of specific decentralised elements and its impact on a potential product registration application in Malaysia.

This document was developed based on the EMA Recommendation Paper on Decentralized Clinical Trials (2022 Version 1) and the Danish Medicines Agency's guidance on the implementation of decentralized elements in clinical trials with medicinal products (Sept 2021 version 2.0), wherein particular sections have been reproduced from the document taking into consideration the local regulatory bodies and agencies' existing guidelines and the local clinical trial environment, Adaptation of relevant areas has also been done to facilitate the applicability of DCT in Malaysia.

This document was drafted with the DCT Working Group that comprises of the National Pharmaceutical Regulatory Agency (NPRA), Medical Device Authority (MDA), Medical Research & Ethics Committee MOH, UMMC Medical Research Ethics Committee, Clinical Research Malaysia (CRM) and industry representatives.

[1] Where trial participant/patient is mentioned in the paper, this can also include relatives and/or legal representatives of trial participant as applicable.

General considerations

DCT implementation may use digital tools such as e-consent, apps, wearable devices, telemedicine, and move trial activities away from traditional clinical trial sites. The use of decentralised elements in clinical trials depends on many factors including the type of trial, the trial population, the disease/condition treated, the condition of the trial participant, the type/characteristic of medicinal product and its development stage. These aspects should be considered individually and in combination when planning for and implementing decentralised elements. In addition, the following general considerations should be considered:

- The rights, safety, dignity and well-being of the trial participants[1] should be protected and prevail over all other interests. The implementation of decentralised elements in the conduct of a clinical trial should not result in increased risks to the safety, rights, and well-being of trial participants. The appropriateness of decentralised elements depends in particular on (but not limited to) the specific trial population, its disease, the type of assessment, the characteristics of the investigational medicinal product(s), including its/their stage of development and thus the current knowledge about its/their efficacy and safety profile.

- Adherence to national applicable laws, regulations and established standards and guidances for clinical trials (eg. the Malaysian Guidelines for Good Clinical Practice, Malaysian Guideline for Application of Clinical Trial Import Licence and Clinical Trial Exemption, the Malaysian Sales of Drugs Act, the Control of Drugs and Cosmetic Regulations, Private Healthcare Facilities & Services Act 1998, applicable Good Manufacturing Practice (GMP) provisions, applicable Good Distribution Practice (GDP) principles) and international ethical and scientific principles of medical research (eg. Declaration of Helsinki, Guidelines for Good Clinical Practice of the International Conference of Harmonization) is required for all clinical trials regardless the use of decentralised elements. High emphasis should be placed on compliance with the Malaysia Personal Data Protection Act 2010.

- Sponsors and investigators should engage potential trial participants or patient organisations in a meaningful inclusive process that involves them in an early and sustained manner in the design, development, and implementation of the clinical trial. Early participant involvement in the design of the clinical trial is likely to increase scientific value. It may help develop trust in the trial, facilitate recruitment, and promote adherence. Trial participants also provide their perspective of living with a condition, which may contribute to the choice of decentralised elements, for example, the feasibility of appointments by videoconference instead of a physical visit, the use of digital tools, or the measurements of endpoints that are meaningful to trial participants and selection of the appropriate population.

- When developing a clinical trial with decentralised elements, where possible investigators/healthcare professionals should be involved in the design, development, and implementation of the clinical trial. The expertise of the investigators/health care professionals may contribute to ensure clinically relevant objectives and endpoints, efficient safety monitoring and adequate medical care. They can also contribute to identify the risks/ consequences of having less personal contact or how to manage data collection and the quality and integrity of the (source) data.

- Any transfer of burden of trial related procedures to trial participants and/or investigators should be weighed against the potential benefits of using decentralised elements in the clinical trial. The sponsor may provide adequate support to trial participants and/or investigators to facilitate the appropriate conduct of their tasks.

- In clinical trials with decentralised elements, parts of the clinical trial may be conducted outside the traditional clinical trial sites (eg: alternate sites or trial participants' homes), with the involvement of vendors or service providers. Factors relating to reducing the burden of conducting part of the trial at traditional sites (eg: congestion at sites, delay in accessing equipment/ facilities in sites for procedures, distance from, accessibility of trial participants at sites) should be considered when adopting this.

- Protection of trial participant's safety should be upheld in trials with decentralised elements especially when trial participants are separated from traditional clinical trial sites. Among those is the assessment of individual trial participant's risk profile, including appropriate anamnestic information, physical examination and laboratory or imaging data by a responsible investigator with the required trial population specific medical background.

- Any elements involving DCT that has a financial arrangement should be transparent and is to be made available and provided when needed.

- For transparency reasons, and to facilitate the assessment of the clinical trial by the regulatory authorities and IRB/ IEC, the decentralised elements planned in the clinical trial should be mentioned and indicated in the application.

- If it is determined that decentralised elements are likely to have a significant impact on scientific validity, data integrity, benefit-risk ratio or impact on the protection of trial participants' rights, these should be explained in a specific and documented risk benefit assessment. This risk benefit assessment as well as any risk mitigation action taken should be clearly described in the clinical trial protocol or other protocol related document as part of the application to regulatory and IRB/ IEC. This is required for any element impacting the risk benefit assessment.

- Trials with decentralised elements should be designed to generate reliable and robust data. Regarding regulatory decisions supporting product registration, the data is required to meet the same expectations as those from trials with on-site procedures. Sponsors should carefully discuss expected challenges prospectively and clarify how they plan to address potential limitations introduced by decentralised elements in advance to ensure the scientific quality of the clinical trial. The following are examples:
    - potential differences between the study population and target population which may trigger discussion on the generalisability of the results (e.g. due to potential exclusion of digitally illiterate persons or people who live in areas with limited internet connection).

- imposed modifications in outcome assessments which may trigger a discussion on their validity (e.g, due to heterogeneous implementation of decentralised procedures across clinical trials sites or among trial participants).
- the potential increase in missing data, overall or for specific endpoints. See also chapter 6 on data collection.

These considerations are of utmost importance especially in trials identified as pivotal in product registration applications. Sponsors are strongly encouraged to engage with regulatory authorities for input when needed.

- IT devices / technologies which are developed and utilised should be fit for the purpose of reliable data collection and handling in accordance with the protocol and GxP. The use of computerised systems and/or the creation/capture of electronic clinical data, should be compliant with the Malaysian GCP Guidelines and applicable international standards.

- A contingency plan should be in place to minimise the impact of any risk, for example malfunction of a digital tool or disruption of a planned decentralised visit, for identified critical-to-quality decentralised elements.

- When medical devices, including in-vitro diagnostics (IVDs), are used in the clinical trial, their use should be compliant with the applicable medical device legislation, such as the Medical Device (Exemption) Order 2016 and Medical Device Guidance Document on Notification of Exemption from Registration of Medical Devices for The Purpose of Clinical Research or Performance Evaluation.

The following chapters outline more specific considerations regarding the decentralisation of certain clinical trial aspects.

2. CLINICAL TRIAL OVERSIGHT: ROLES AND RESPONSIBILITIES

When conducting a trial with DCT elements, there will be heightened dependency on technology or service providers to conduct the trial. It is therefore important that, when decentralised elements are implemented, to ensure that the investigator and sponsor still can fulfil their legal obligations as laid down in the relevant clinical research circular/ directives/ guidelines and Malaysian GCP. Every effort should be made to ensure additional oversight on the rights, safety, dignity and well-being of the trial participants as well as the reliability of trial results.

Considerations on responsibilities

- Notwithstanding the potential involvement of additional service providers, the clinical trial specific tasks as described in the protocol are ultimately the responsibility of either the investigator or the sponsor, in accordance with Malaysian GCP. Great care should be taken that the delegation of tasks to the different parties is well defined. The introduction of decentralised elements in a clinical trial may have a relevant impact in the trial conduct, therefore, it should be clearly documented which tasks are conducted when, by whom, and in which setting (e.g. at the clinical site, at the trial participant's home, etc.), and how the required oversight by the sponsor and/or supervision by the investigator is achieved. The general overview of the workflow of these different tasks and actions to be taken within the trial should be described in the protocol and associated documents (including the ICF and lab manual), and/or in more detail in a study related document.

- In case service providers have been delegated trial specific tasks, a corresponding rationale and the extent of their involvement should be described in detail in a study related document. The investigator retains the ultimate responsibility for tasks involving trial related medical decisions (i.e. trial participant eligibility and enrolment, protocol specified medical procedures, changes in medication, etc.) and for the rights, safety, dignity and well-being of the trial participants.

- The sponsor should ensure that the contracted service provider is qualified and experienced in the tasks they conduct for the trial. This should be reflected in the contract between the sponsor and the investigator, in order that the investigator is aware of, and can agree or not with the qualification of the service provider when the delegated tasks lie within the investigator's responsibility. The investigator should have the possibility to ask for any additional information in order to perform due diligence and to require any change to the agreement or to the service when considered necessary, including the possibility to reject a certain service provider. It is the investigator's responsibility to ensure that the service provider is properly trained on the trial specific tasks they have to conduct, when these tasks concern the medical care of the trial participants or lie within the investigator's responsibility.

- To maintain the investigator's responsibility regarding the medical care and safety of the trial participant and to ensure that the sponsor has adequate oversight over the conduct of the clinical trial, effective lines of communication should be established, documented and shared with all relevant parties, including trial participants, investigators, sponsor and any service providers. All parties involved should have access to the information required to fulfil their

roles and responsibilities related to the conduct of the clinical trial at any time. In case of an emergency, an effective communication plan needs to be in place, so that all relevant parties can act without undue delay. The trial participant should be well informed and receive contact details for all necessary situations including who to contact for acute cases, but also for device failures, questions on home visits, etc.

Considerations on Incoming Data Oversight

- Trial participants, investigators and service providers involved in the trial should receive training on how to use the digital tools employed in the trial, to ensure proper data collection, review, and transmission. In addition, the trial participants and service providers should receive training on what is considered an (serious) adverse event ((S)AE), who they should report this to, in what timeframe, and how to manage the (S)AE.

- When AEs are reported via several routes (digital tool, external healthcare professional, or trial participant) it is important that procedures are in place to identify potential duplicates.

- The use of digital tools (such as wearables) result in an increase in the amount of incoming data. This may challenge the capacity of the investigators to fulfil their responsibilities. Emerging data could be continuously at hand, and a clear procedure should be in place to determine how to handle this constant flow of information. The review frequency of the incoming data by the investigator should be based on the relevance of the data to the safety and well-being of the trial participant, and the relevance of the data for the efficacy. The review of safety data should be planned with a risk-based perspective, which may include the IMP safety profile, the indication, known potential risks, the use of notifications and alerts. The priority is to capture and assess (S)AEs in a timely manner, without creating an unacceptable burden for the investigator and/or the trial participant. The use of notifications and alerts is recommended to ensure timely assessment of (S)AE related data. In designing a trial with digital tools, the sponsor and investigator should anticipate what kind of safety alerts may occur and specify in the protocol how these alerts will be handled. If it is foreseen that a digital tool may generate critical safety data that needs immediate medical attention, a plan should be in place describing this. It should be outlined in the protocol or study related document on how the investigator and/or the service provider should manage these situations, what actions should be taken and by whom. A schematic overview of parties involved, information flow and respective duties is recommended. The trial participant should be informed what to expect and what actions they may need to follow in these situations. In addition, a participant targeted scheme of the duties and information flow with the parties involved might enhance understanding.

- The sponsor should ensure that digital tools are transmitting the required alerts as planned. The tool that generates alerts to the investigator should be validated. A risk mitigation plan should be in place for times that the tool may not work as intended.

- The trial participant should be fully informed in advance on how the information transmitted via digital tools, for example electronic Patient Reported Outcomes (ePROs), will be acted upon.

It should be made clear to the trial participant that the investigator may not review such data in real time, and that if the trial participant experiences any specific safety concern they need to directly contact the investigator to report such an issue.

3. INFORMED CONSENT PROCESS

Definition and considerations

According to Malaysian GCP, Informed Consent is a process by which a subject voluntarily confirms his or her willingness to participate in a particular trial, after having been informed of all aspects of the trial that are relevant to the subject's decision to participate. Informed consent is documented by means of a written, signed and dated informed consent form. The relevant documentation should be protected from any unauthorised modification.

The informed consent process should be carried out in compliance with the principles laid down in the Malaysian GCP, PDPA act and relevant national regulations. This is applicable for both traditional method of consenting and remote/electronic consenting (partial or full).

This guidance focuses on the following methods of consenting process:

- The use of different type of media to enhance the trial participant's comprehension of the trial.
- the use of any electronic media (such as text, graphics, audio, video, podcasts, or websites) to convey information related to the study ", and/or
- To seek and/or document informed consent via electronic device such as smartphone, tablet, or computer. "
- Alternative methods for the electronic provision of information should be available.

The sponsor is responsible to verify whether a clinical trial site agrees to the use and storage of electronic methods for the consent process. It should be ensured that the information provided to the trial participant is in a form that can be stored and retrieved by the trial participant.

Consenting process (in person and remotely)

In general, consenting process should be a physical meeting between the investigator and the potential trial participant. The following should be considered in the case of adopting e-consent, be it in-person or remotely:

1. Ensure that the e-consent process is user-friendly and easily accessible for participants:
    - The e-consent process should be designed to be user-friendly, intuitive, and easy to navigate for participants. Participants should be able to access the e-consent process using commonly available devices and internet browsers.
    - The e-consent process should also be compatible with different types of devices, such as desktop computers, laptops, tablets, and smartphones.

2. Provide clear and concise information about the study:
    - The e-consent process should provide clear and concise information about the study, including the purpose, risks, benefits, and confidentiality measures.
    - The information should be presented in a language and format that participants can understand. It should also be organized in a logical and easy-to-read manner.

3. Include an option for participants to ask questions and clarify any concerns before providing e-consent:

- The e-consent process should provide participants with the option to ask questions and clarify any concerns before providing e-consent.
- The contact details of the site study team or a helpline number should be provided for this purpose. Participants should be able to contact the study team (e.g. investigator or study coordinators) by phone, email, or online chat.

4. Verify the participant's identity before allowing them to provide e-consent:
    - Added measures should be taken to verify the identity of the trial participant before they provide e-consent. This can be done through various methods, such as using a unique login ID or sending a verification code to the participant's email or phone number.

5. Ensure that the e-consent process is secure and complies with relevant data protection and privacy laws and regulations:
    - The e-consent process should be designed to ensure the security and privacy of participants' personal data. It should comply with relevant data protection laws and regulations, such as the Malaysian GCP, PDPA act and all relevant national regulations.
    - The e-consent process should use encryption and other security measures to protect the transmission and storage of personal data.
    - Trial participant identifiers should not be made available to any parties outside its intended purposes. All efforts should be made to limit unauthorised access or disclosure of this information.

6. Provide participants with the option to withdraw their e-consent at any time and explain how to do so:
    - The e-consent process should provide participants with the option to withdraw their e-consent at any time. This should be explained clearly in the e-consent form, and participants should be informed about the implications of withdrawing their consent.

7. Keep a record of the documentation of e-consent process and store it securely for the duration of the trial:
    - The e-consent process should be documented and stored securely for the duration of the trial. This includes the e-consent form and any other relevant documentation.
    - The record of the e-consent process should be easily retrievable and auditable in case of an inspection or audit.

8. Provide clear instructions and guidance for participants on how to complete the e-consent process and provide additional resources and support when needed:
    - The e-consent process should provide clear instructions and guidance for participants on how to complete the e-consent process. This includes explaining how to access and navigate the e-consent form, how to provide e-consent, how to revise their personal information in e-consent and how to withdraw e-consent if desired.
    - The instructions and guidance should be provided in a clear and concise manner, and in a language and format that participants can understand.

- Consider providing additional resources and support for participants who may have difficulty with the e-consent process
- The e-consent process should be designed to be accessible for all participants, including those who may have difficulty with the e-consent process. This includes participants who have limited technology access, language barriers, or cognitive or visual impairments.

9. Obtain IRB/ IEC approvals/ favourable opinion for the e-consent process:
    - Before implementing the e-consent process, the study team should obtain IRB/ IEC approvals/ favourable opinion for the e-consent process.
    - The e-consent process should be designed to comply with the relevant guidelines and regulations, such as the Malaysian GCP guidelines and other relevant regulations/ guidance.

10. The e-consent process should be clearly described in the study protocol and/or other relevant documentation. Any changes or modifications to the e-consent process should be properly documented and communicated to the relevant stakeholders.

11. In situations where literacy is a barrier, alternative methods should be considered to ensure that informed consent is obtained in a meaningful and understandable manner. These methods may include using visual aids, pictures, videos, or oral presentations, depending on the cultural and linguistic context of the participants. The informed consent process should be reviewed and approved by the respective IRB/ IEC. The informed consent process or measures should be described in the protocol or relevant study document, with documented approval/ favourable opinion by IRB/ IEC to protect the right, safety and wellbeing of the subject.

Signature (eSignature, print to sign)

1. There are various ways of obtaining a signed informed consent but not limited to form by remote means. This includes:
    a. A hardcopy consent form sent to the participant, signed with a ‘wet ink signature’ and sent back by post, or
    b. An e-consent form signed with an electronic signature, i.e., completely electronic.

2. The sponsor should ensure that the systems used have proportionate security levels and that safeguards regarding confidentiality are in place. In general, the electronic signature functionality should be in accordance with the requirements described in the EMA Guideline on Computerised Systems and Electronic Data in Clinical Trials.

3. The method used to document the informed consent process should follow national and institutional requirements with regards to acceptability of electronic signatures.

4. eSignature practices shall comply with the Malaysia Electronic Commerce Act 2006 (ECA).

5. Procedures should be in place to handle follow-up steps after the consent has been withdrawn electronically, including partial withdrawal and complete withdrawal, due to the impact on trial participant participation and data collection.

6. These procedures should include timely notification to the investigator and a communication plan with all other stakeholders. By any means, withdrawals should also be possible outside of the system, and this should be recorded by the investigator.

Documentation

1. When using electronic methods, the trial participants should be provided a copy of the signed and dated informed consent form, whether it is an electronic copy (e.g. via email) or paper copy. The copy should be protected against unauthorised modification.

2. Investigator and sponsor should consider additional measures to retain the e-consent documents after the study ends, in compliance with Malaysian GCP.

In conclusion, e-consent is an important element of decentralized clinical trials that can help to improve participant engagement and enrolment.

To ensure that e-consent is effective in obtaining informed consent, it is important to design the e-consent process to be user-friendly, secure, and compliant with relevant laws and regulations.

It is also important to provide clear instructions and guidance to participants, and evaluate the effectiveness of the e-consent process on an ongoing basis.

4. INVESTIGATIONAL PRODUCTS DELIVERY TO TRIAL PARTICIPANTS AND SELF-ADMINISTRATION AT HOME

Introduction

Another aspect of decentralized trials involves administering Investigational Product (IP) at the trial participant's home. At present, only IP delivery from sites to trial participant are allowed.

IP delivery from sites to trial participant is not possible for IP that is considered as a controlled substance, due to its strict control in accountability (e.g., psychotropic drugs).

- The process of manufacturing, importing of the IPs and delivering the IPs direct to trial participants must comply with GxP requirements, local laws and regulations.

Item	Descriptions
Investigational Product (IP)	A pharmaceutical form of an active ingredient including plant/animal-derived medicinal products or placebo being tested or used as a reference in a clinical trial, including a product with a marketing authorization when used or assembled (formulated or packaged) in a way different from the approved form, or when used for an unapproved indication (off-label use), or when used to gain further information about an approved use. For the purpose of this guidance, IP also involves comparator and Standard of Care (SOC) products.

Risk Assessment

Where it is intended for the IP to be delivered and administered at the trial participant's home, a risk assessment should be completed and documented by sponsor to determine if such an approach is appropriate.

The risk assessment should, at a minimum, take into account the following aspects:

- Knowledge of the IPs safety profile (phase, known/possible adverse reactions, etc.), including the risk of serious adverse reactions that demand emergency treatment if, for example, allergic reactions which occur after injection. This process should be described/documented in the trial protocol.

- Develop procedures for monitoring and managing adverse events related to the self-administration of IPs at home, including documentation and reporting requirements.

- The IPs route of administration and need for healthcare professional's assistance and subsequent observation.

- Consider the trial participant population when determining the suitability of self-administration at home, considering factors such as the trial participant's ability to self-administer the IPs and the need for careful monitoring by the investigator.

- Ensure that procedures for delivery of IPs and self-administration at home are documented, with clear instructions provided to trial participants. In addition, the IPs are labeled with instructions for use, including storage and handling instructions.

- There is a need to maintain trial participant's anonymity and appropriately limit unnecessary outside access to information. The dispensing site and the service provider must collaborate to ensure the correct medication gets to the correct trial participant using minimal identifiers (eg: name, address, contact number) to safeguard trial participant information, in accordance to PDPA. There should be no further access to the minimal trial participant identifiers as soon as the final delivery is completed.

- Trial participant identifiers should not be made available to any parties outside its intended purposes. All efforts should be made to limit unauthorised access or disclosure of this information. The minimal identifiers of the participant (e.g., name, address, contact number) should only be shared with the service provider and not to the Sponsor.

- Access to the trial participant's personal data should be restricted. Information should be made available only for the purpose of monitoring, auditing, and inspections, if the need arises.

Expectation of implementation

Before delivering the IP to the trial participants, the below recommendations should be considered:

A. Logistics and Delivery

- Sponsor should consider during the planning stage of the clinical trial on how the appropriate storage and transport conditions of the IP can be met and whether the IP is suitable for administration at home.

- Protocol should include provisions related to the adequacy of the trial participant's home for IP storage if applicable, such as temperature control and restricted access where necessary.

- The sponsor may consider providing additional equipment necessary for the safe administration, use and safety disposal procedure to the trial participants, in which case this should be described in the protocol or other protocol related document (e.g., pharmacy manual), including the documentation provided to the trial participants.

- Sponsor should have a documented procedure for delivering and administering IP at the trial participant's home.

- Investigator should provide instructions to the trial participants on using and storing the IP. The instructions should be realistic and feasible. Instructions should also be applicable for ancillary supplies that comes with the IP (if applicable)

- Trial participants should be notified (documented) prior to implementing IP delivery that their contact details will be used for delivery purposes (including contact details to third parties) if the IP is to be delivered to the trial participant's home.

- Details regarding the use of contact information by service provider should be outlined in the participant information sheet, informed consent form or via any documentation (e.g., patient letter). Consent should be obtained from the trial participant.

- In instances whereby the trial participant (or a representative) is not available to receive the IP, the IP should be returned by the service provider to the sender (investigator's site) in accordance with proper storage and IP handling conditions.

- There must be a written contract between Sponsor or other third party (e.g. home health provider) and appointed service provider that clearly establishes each party's duties. It is recommended that the number of separate transportation steps is minimized, and principles of data privacy are adhered to. Delivery of the IP shall be arranged by site personnel directly with the appointed service provider.

- The investigator is responsible for all treatment decision. Any decision should be documented in source document (for example, prescription or Interactive Response Technology System) prior to dispensation and delivery of IP to the trial participant.

- IP should only be handed over to the trial participant (or a representative, if applicable) or the health care professional involved in the clinical trial. Full chain of custody documentation should be available, including IP dispensation and IP receipt.

- Storage and temperature monitoring from IP dispensation to IP receipt needs to be consistently executed and not compromising the IP, endanger the trial participant or damage credibility in accordance with applicable regulation. Documentation (including temperature log data) related to this step should be made available.

B. Processes and Communication

- Site staff should randomize and dispense the first batch of the IP to the participant at the site. In addition to the IP labeling, clear instructions for use, including storage and handling instructions, should be provided and explained to the participants during the first dispensing.

- Delegated site staff need to check on the IP condition before releasing it to the vendor for delivery. IPs should be double-checked before they are prepared and released for delivery to trial participants. Process and documentation shall be established whereby one delegated site staff prepares the drug while another site staff counterchecks it.

- A process whereby confirmation that the correct IP has been received and no temperature excursion has occurred, needs to be in place prior to IP release to trial participant (or representative). This could be done via a phone call.

- If it is anticipated that the trial participants will prepare and administer the IP at home as outlined in the protocol, they should be instructed in advance.

- Where appropriate, clear and simple instructions are to be provided, in addition to what is already present on the IP label or package leaflet. These instructions should be adopted to the needs of the individual trial participants and documented in the source documents.

- In the event where IP is delivered directly to trial participant's home but the IP is to be administered by a healthcare personnel, clear instructions should be given to the trial participant to not administer it before the healthcare personnel's visit.

- In the event of transport temperature excursion, clear instructions should be provided to the participant not to open the IP and to quarantine it in a cool, dry place with restricted access. Trial participant should notify the site immediately for further guidance. The site should consult with the sponsor and notify the trial participant whether the trial participant could continue utilizing the IP; or wait for the delivery of the next batch.

C. Drug Accountability and Compliance

- Based on Malaysian GCP, documentation of IP accountability and trial participant's IP compliance is investigator's responsibility. IP logs should be completed on a real-time basis, capturing all IP dispensation and IP return, if applicable.

- Procedures should be in place for IP return from the trial participant's home, and destruction of the unused IPs. The procedure should also cover IP recalls during the conduct of the trial, and the steps taken to avoid that the IP remains at the trial participant's home beyond the envisaged treatment period, in compliance with the protocol and local safety requirements.

In conclusion, this guidance is intended to bring up points of consideration and improve the sponsor oversight for IP delivery direct to trial participants. If the proper due diligence is undertaken, IP delivery to trial participants can be an effective tool for conducting DCT in Malaysia moving forward.

5. TRIAL RELATED PROCEDURES AT HOME

Home Health Care

In a clinical trial with decentralized elements, the trial-related procedures may take place outside the trial site. This makes it easier for trial subjects to participate in clinical trials by reducing the overall burden and need to travel to trial sites, promoting subject compliance and retention, and enabling subjects normally unable to participate in life-saving clinical trials.

Investigator-delegated Home Health Care Professionals (HHCPs) (e.g., nurses, phlebotomists) could now perform these used-to-be site procedures at the subject's home. Below are the activities that can be performed by HHCPs at home, as required under the study protocol and laboratory manual, while subjected to investigator's discretion and applicable regulations and guidance:

- Blood draws and processing (e.g., Pharmacokinetics, safety laboratory samples)
- Collection of biological samples (e.g., oral mucosal swabs, urine, faecal samples)
- Training and education of the trial subject and caretaker (e.g., IP self-administration)
- Administration of the Investigational Product (GMP, GCP)
- IP compliance check
- Clinical assessments [e.g., vital signs, concomitant medication checks, spirometry test, electrocardiograms (ECG by nurse only)]

Equipment importation, validation for portability, and calibration should also be considered for any specialized equipment used for home care visits in accordance with the regulation or requirement by Medical Device Authority (MDA).

Considerations for implementation are not limited to the following:

1) Sponsor

- Risk assessment related to home health care should be documented in the study protocol or a separate document. The trial subjects should not be exposed to higher risks than those foreseen for the same procedure applied in a clinical trial site. These risks should be conveyed to the Investigator via Investigator Brochure/written document so that Investigator can make an informed decision whether home visit is suitable.

- The procedures performed at the trial subject's home should clearly be described in the study protocol and related informed consent form and approved by IRB/ IEC and NPRA if for IP Administration for higher risk profile IP. Any exportation of human tissue samples of the trial subjects should also follow and comply with the same exportation requirement and regulations.

- Only health care vendor contracted by the Sponsor, and registered in Malaysia, could perform Home Health Care services per the scoped activities.

- There should be a written agreement (i.e., Clinical Trials Agreement (CTA) or additional addendum document) stating the scoped home care services, the health care vendor providing the services between the Sponsor and the Investigator/Site and relevant responsibilities and accountability by each party.

- Professional liability/ professional indemnity/ clinical trial insurance should be extended to cover home health care visits.

2) Investigator

- The trial subject should be informed during the informed consent process about trial procedures that may take place at the subject's home, which should be documented in the informed consent form. The trial subjects should be given the opportunity to choose a physical visit at the trial site (i.e., visit the investigator in person if needed/preferred).

- Due to subject data privacy and confidentiality, communication during Home Health Care (HHC) visits life cycle (booking, delegation of authority, conduct, and output review) should be between the investigator, subject, and the HCV/HHCP.

- The investigator is responsible for the medical care of the subjects even if the trial participant opted for HHC visits. Tasks-related to medical decisions (i.e., protocol-specified medical procedures, AE/(S)AE assessment, changes in medications, etc.) should remain the responsibility of investigator.

- The HHCP appointed for the procedure should be identified, and their tasks should be documented in Delegation Log by the investigator, as the investigator remains ultimately responsible for the conduct and oversight of the HHC activities.

3) Registered Health Care Vendor (HCV)/ HHCP

- Management of identification, qualification and professional competency of HHCP should reside with the HCV. The HCV should also have documented procedures (SOPs) for the above HHCP identification, qualification, training and management life cycle. Documentation and evidence such as Medical / Nursing licenses (as applicable), CV, training certificates and GCP certificate should be maintained.

- The HCV should ensure that appropriate guidance and training is provided to the delegated HHCP to conduct the tasks at home correctly and the training is documented.
    - For example, Protocol-specific training, General Home Health Care training & data capture training. These materials should be co-developed and approved by Sponsor.
    - SOPs and training material for managing of home emergencies and life-threatening signs and symptoms should also be considered.

- Effective lines of communication between the Investigator and the HHCP who manage the subject's HCV visit should be established in advance, there should be procedures in place to ensure investigator is constantly kept informed in relation to trial participant safety.

- Activities conducted at subject's home should be adequately documented in accordance with GCP requirement. The source documentation should be part of the Investigator's source documents and ready for monitoring, audit and inspection in accordance applicable regulations.

In conclusion, this guidance is intended to bring up points of consideration and improve the sponsor and investigator oversight for Home Care visits. Home Care visits can be an effective strategy to enable patients who normally are unable to participate, to be included in life-saving clinical trials by reducing the need to travel to trial sites, while increasing compliance and retention.

Collection & Delivery of Biological Samples from Trial Participants

1) Introduction

Collection & delivery of biological samples from trial participants can be either planned as a standalone service for samples collected from trial participants to the site, like 24hr Urine Samples, thus reducing the trial participant's burden. The service can be bundled with Home Care visits to maximize operational logistics, costs, and efficiencies.

There could be multiple samples with different temperature requirements, so the process could entail considerable coordination and planning.

2) Risk Assessment

Where it is intended for the samples to be collected from the trial participant's home, the sponsor should complete a risk assessment to determine if such an approach is appropriate.

The risk assessment should, at a minimum, take into account the following aspects:

a) The feasibility and burden of the trial participant collecting and personally delivering samples to the site.
b) Sample post-collection treatment that is needed.
c) Samples stability prior, during, and/or post collection in accordance with the Lab Manual.
    i) Pre-treatment of the sample collection container (e.g., chilled the blood collection tubes in ice prior to collection)
    ii) Priority and urgent post-collection processing (e.g., samples to be processed within 30 minutes of collection)
    iii) Specific post-collection processing (e.g., clotting time of 30-60 minutes before processing)
    iv) Specific storage condition post-processing (e.g., storage at -80℃ – dry ice) with potentially hazardous material handling
d) Requirement of temperature monitoring at specific temperature ranges for various sample types throughout the delivery journey.
e) Access to the trial participant's data should be restricted. Information should be made available only for scheduling the collection and delivery of the samples.

3) Sponsor Responsibilities

a) Sponsor should consider during the planning stage of the clinical trial how appropriate collection or delivery of sample collection from the trial participants' homes is required based on the risk assessment done above.

b) The sponsor is responsible for ensuring collecting and delivering the biological samples is performed by a qualified service provider.

c) A written contract between Sponsor and the appointed service provider must clearly establish each party's duties. Booking and collection of the biological samples shall be arranged by site personnel directly with the appointed service provider and trial participant.

4) Investigator Responsibilities

a) Investigator should provide documented instructions to the trial participant on self-collection, post-collection process, packing, storage, and completing the Laboratory Requisition Form of the sample at the trial participant's home before the collection by the service provider. The instructions should be realistic and feasible, and the trial participant's additional burden should be documented in medical records.

b) Trial participants should be notified with their consent documented that their contact details will be used for the collection of the sample from the trial participant's home.

c) Details regarding the use of contact information by the service provider should be outlined in the participant information sheet or informed consent form. If this was not performed during initial consent, reconsent should be obtained.

5) Service Provider Responsibilities

a) Contracted service provider is responsible for the:
   i) Liaising with the site and trial participant for the collection of the sample
   ii) A process of confirming the identity of the trial participant before accepting the pre-packed samples
   iii) It may involve the final packing of the pre-packed biological samples into the validated packaging
   iv) Ensuring that the sample is delivered within the scoped turnaround time

b) The service provider is also responsible for the exportation document and application process in accordance with the standard biological exportation process but not limited to the following:
   (1) Site Export License
   (2) Custom Declaration
   (3) Proforma Invoice
   (4) Chain of Custody Form
   (5) Packing List
   (6) Ministry of Health MOH, BLESS Endorsement
   (7) Master / House Airway Bill

c) A process whereby confirmation to the Investigator and Sponsor that the samples had been delivered and received and no temperature excursion has occurred needs to be in place.

d) All trial participants' information is blinded except to the personnel directly involved in arranging the sample collection. The service provider should also have a data retention policy on retaining and deleting such trial participants' information.

A well-executed DCT study may require the seamless delivery of the IP, the HHCP to conduct the visit, and orchestrate the delivery of the samples back to the site or to the central laboratory simultaneously.

6. DATA COLLECTION IN DECENTRALIZED CLINICAL TRIALS

According to Malaysian Guideline for Good Clinical Practice (GCP), the data recorded during the clinical trial should be accurate, credible, reliable, and verifiable, regardless of the method/mode of data collection. The following important attributes of source data and records should be followed:

- Accurate
- Legible
- Contemporaneous
- Original
- Attributable
- Complete
- Consistent
- Enduring
- Available when needed

In decentralized clinical trials, there is a shift in method of data collection and implementation of new technologies such as applications, wearables and devices supporting direct data capture from the trial participants and/or their caregiver and/or service providers (e.g., home nurses). Direct data collection using electronic systems [e.g., electronic Case Report Forms (CRFs), electronic Patient Reported Outcomes (ePROs), wearables, applications etc.] may occur, for instance, at the clinical trial site or off-site locations.

Considerations for implementation

A. Data collection – Electronic System(s)

When using electronic system(s) for direct data collection, the sponsor should ensure and implement adequate oversight and measures including, but not limited to:

- Ensure that all parties involved in the clinical trial have an overview of the data flow; a data flow diagram with additional explanations in the protocol is highly recommended.

- Ensure that the used data collection tools are created in a controlled manner, configured and validated in accordance with their intended use. Appropriate change control and ongoing validation is needed.

- Determine the type and scope of the trial participants' personal data to be collected and ensure adequate protection in compliance with the relevant Malaysia regulations.

- Ensure that when source data captured by a data collection tool is transferred to another location and subsequently deleted from the data collection tool, both the data and the metadata are transferred (refer to Malaysian GCP).

- Implement measures such as encryption to minimize the risk of unauthorized access, when transferring the data from a data collection tool to a server.

- Ensure access to trial data is controlled by defined user rights and methods of access for all relevant parties involved. Unauthorized access should be prevented using appropriate security measurers e.g., firewalls.

- Ensure control of and continuous and complete access by the investigator to both source data generated either on-site or off-site as well as source data reported to the sponsor (e.g., central laboratory data).

- Appropriate measures and procedures should be in place to minimize the risk of erroneous data entry for data measured and entered directly by trial participants, especially on primary, key-secondary or safety endpoints.

In summary, when electronic systems are used as a mode of data collection, the principles of data collection, handling and storage requirements as stated in the Malaysian GCP and applicable regulatory requirements must be adhered to. In addition, the data protection requirements according to the relevant Malaysia regulations, including data privacy and cybersecurity laws and regulations.

B. Medical devices

- Under the Medical Device Authority (MDA) in Malaysia, there are two types of clinical research notifications that are required before conducting clinical studies involving medical devices. These are the Device Study (DS) Notification and the Clinical Research Use (CRU) Notification.

- The purpose of these notification process is to meet Malaysian regulatory requirements under the Medical Device (Exemption) Order 2016 and through the Notification Letter issued can also facilitate the process of importing or placing the medical device in the research site.

- DS Notification is required for clinical studies that involve the use of medical devices in a clinical investigation setting to generate clinical data on the clinical performance and safety to support the product registration submission.

- Under Device Study Category, there are four (4) types of Notifications, which are:

Device Study Category	**Description**
Clinical Investigational Use (CIU)	Systematic investigation on human subjects, undertaken to assess the safety, clinical performance and/or effectiveness of a medical device.
Performance Evaluation (PE)	An assessment and analysis of data to establish or verify the scientific validity, the analytical and the clinical performance of an IVD device. To demonstrate the ability of an IVD device to achieve its intended purpose as claimed by the manufacturer.

Clinical Use / Post-market clinical follow-up study	A study carried out following marketing authorization intended to answer specific questions (uncertainties) relating to safety, clinical performance and/or effectiveness of a device when used in accordance with its labelling.
Feasibility Study	A study used to capture preliminary clinical performance, effectiveness or safety information of a near-final or final device design to adequately plan an appropriate pivotal clinical investigation.

- The DS is a notification process that informs the MDA of the clinical study and allows the MDA to review the investigational of medical device based on the ISO 14155 element.

- On the other hand, CRU Notification is required for clinical studies that involve the use of unregistered medical devices in the context of another health research. The device per se is not under investigation but is required to make the research feasible to be conducted in Malaysia, example for the purpose of companion diagnostic test i.e. medical device used in Drug Trial.

- Both the DS and CRU notifications require the submission of certain documents and information to the MDA through Medcast Online System. For more details on the notification process and their requirements, please refer to Clinical Research Study section in MDA portal.

C. Communication Devices Importation

- Communication equipment, which has communication network facilities or custom requirement, which may include fixed and wireless equipment would need to be certified before it can be used.

- Certification activities for communication equipment are carried out by SIRIM QAS International Sdn BHD (SIRIM QAS), which is a registered certifying agency with the Malaysia Communications and Multimedia Commission (MCMC). For further information, refer to FAQ on the MCMC website.

7. REMOTE MONITORING, INCLUDING REMOTE ACCESS TO SOURCE DATA

Remote monitoring here refers to the act of monitoring by sponsor personnel or representatives (e.g., clinical monitors, data management personnel, or statisticians when the activity of source data review or verification is done at a location other than the sites at which the clinical investigation is being conducted (not physically on site).

Remote monitoring processes can duplicate many of the capabilities of on-site monitoring if implemented well. The overarching goal of this section is to enhance or provide alternatives to on-site monitoring, so that trial participants' safety and clinical trial data quality are maintained through different methods of monitoring. Effective monitoring of clinical investigations by sponsors personnel or representatives is critical to the protection of human subjects and the conduct of high-quality clinical trials.

Monitoring Definitions	**Description**
Source Data Verification (SDV)	The process by which data within the Electronic Case Report Form (eCRF) or other data collection systems are compared to the original source of information (and vice versa) to confirm that the data were transcribed accurately (i.e., data from source matches data in the eCRF or other system and vice versa).
Remote Source Data Review (rSDR)	An activity that includes the remote review and evaluation of source documentation to assess the quality of the source, in compliance with Malaysian GCP and to ensure that protocol and site-specific processes are followed and documented appropriately.
Remote Source Data Verification (rSDV)	Process by which data within the Electronic Case Report Form (eCRF) are compared remotely to the investigational site's electronic medical records (EMR) or to another electronic database/site where the trial subjects' source documents are stored from a secure location to confirm that the data was transcribed accurately (i.e., data from the EMR matches data in the eCRF and vice versa).

The types of monitoring activities and the extent to which remote monitoring practices can be employed depend on various factors, including but not limited to the following:

- To address limited monitoring space
- Available technological capabilities (e.g., the sponsor's use of electronic systems; the sponsor's access to subjects' electronic records, if applicable)
- Additional monitoring on critical data points (e.g., the timeliness of data entry, safety events)
- Additional communication/training specific to source data entry requirements, remote subject reconsent assessments
- No access for on-site monitoring (e.g., due to pandemic/flooding)
- Policies at the respective trial sites

At present, remote monitoring can be conducted provided adequate measures are taken to ensure trial participants confidentiality and data integrity.

Considerations for implementation

- The use of remote monitoring, including rSDV can supplement monitoring plans to enhance data quality, real-time monitoring oversight and monitoring requirements should be documented.

- Malaysian Good Clinical Practice (GCP) states that upon request of the monitor, auditor, IRB/IEC, or regulatory authority, the investigator/institution should make available for direct access for all requested trial-related records. Direct access can also refer to remote access of the data.

- The sponsor personnel or representatives are responsible for ensuring that remote monitoring including rSDV complies with Malaysian GCP and will maintain trial participant data privacy in conjunction with country personal data and privacy act, clinical trial agreement and hospital requirements.

- It is recommended that Informed Consent Forms (ICF) contains language that allows for remote access to medical records and corresponding privacy language clause are present. If remote monitoring is to be conducted for a particular clinical trial, it is recommended to have it stated in the ICF.

- Establishing remote access must be in accordance with the principles of necessity and proportionality and must always be done in a way that protects the rights of the participants and does not place unnecessary burden on site staff.

- Remote monitoring should follow the principles of on-site monitoring where access to trial participant medical records is restricted only to trial participants based on their consent. The research site should make every effort to limit risks of any privacy or data breaches.

- The sponsor personnel or representatives should make every effort to ensure this process is performed with the highest integrity. The remote access must be traceable (i.e., audit trail of who accessed the records trial participants or equivalent documentation).

- Every effort should be made by all parties to assess the benefits and manage any risks of implementation.

- The establishment of remote access to source data should be documented. The process of remote access of source data should be documented and agreed by sponsor personnel or representatives, investigator, institution, and applicable departments at site.

- Access must be established under secure conditions. This includes a secure connection on a machine protected from unauthorized access. The sponsor personnel or representatives should consider the quantity and types of source data that need to be accessed remotely.

- The sponsor personnel or representatives should not make unauthorised copies (eg: screenshots) or store personal data about the trial participants on their computer.

- The sponsor personnel or representatives' remote access shall only be granted when necessary and be terminated immediately when the need for remote access is no longer present.

- Communication between the sponsor personnel or representatives and the study site staff is an essential component of remote monitoring. Various modes of communication could be used for this purpose (e.g., teleconferences, videoconferencing, email), provided it is a secure platform.

In conclusion, remote monitoring is intended to improve the quality and efficiency of sponsor oversight of clinical trials although it is acknowledged that the process in Malaysia is not consistently established yet, hence the recommendations of this section.

For more information, please refer to the FDA Guidance for Industry Oversight of Clinical Investigations — A Risk-Based Approach to Monitoring, August 2013 Procedural or any relevant applicable regulatory requirements.

8. ALTERNATE HEALTHCARE FACILITIES

The traditional clinical trial model centres around a primary site. Trial participants must return to the clinical trial site for trial visits and procedures. With the evolution of technology, growth in the infrastructure of the healthcare system, it is possible to include more than the primary site in providing comprehensive clinical trial support for the trial participant. The investigator retains overall responsibility and oversight of the trial participant and works with the sponsor to select the best options for the trial participants.

Some trial participants are not comfortable with home health care services, implementation of digital technology and may still prefer to visit a healthcare facility or see a HCP or study coordinator for their clinical trial visits.

With alternate healthcare facilities as part of the clinical trial model, trial participants will be supported by various options that are closer to their geographical location. The intent of an alternative healthcare facility is to bring the trial closer to the trial participants for his/her convenience. It is important that all safety and data integrity and collection parameters are kept in mind when considering these hybrid trial options.

Some examples of these models that sponsors may apply to the trial protocols:

- Increasing use of satellite sites that are part of the public health care system (e.g. Health care clinics) or private health care system.
  Note: A satellite site is a study site that is linked to an existing parent site where the parent site and the satellite site share the same principal investigator. Trial participants are seen by the same principal investigator and visit both the parent site and the satellite site according to their own business requirements.

- Alternative sites can be contracted by the sponsor to support the primary site. This allows greater access for trial participants, distribution of workload between the main trial site and alternative sites, and ultimately reduces congestion at public hospitals which the traditional clinical trial sites are. This may include use of mobile sites.

- Alternate sample collection facilities: Trial participants can opt to visit selected and qualified facilities for certain routine procedures.

Details of the implementation, the process and procedures should be clearly documented. The appropriate regulatory and IRB/ IEC approval/ favourable opinion should be obtained, and the responsibilities of both sponsor, investigator and alternate healthcare facility should be clear and sound with all the elements and principles of GxP and local regulations considered.

9. APPENDIX

Categories	**References**
Clinical Trial conduct & relevant roles & responsibilities	Malaysian Guidelines for Good Clinical Practice
Investigational Product	Malaysian Guidelines for Application of Clinical Trial Import Good Distribution Practice (GDP) Good Manufacturing Practice (GMP)
Registration of Health Care Vendor	CKAPS (*Cawangan Kawalan Amalan Perubatan Swasta*) Private Healthcare Facilities and Services Act 1998
eSignature compliance	Malaysia Electronic Commerce Act 2006
Biological Samples	Business Licensing Electronic Support System (BLESS)

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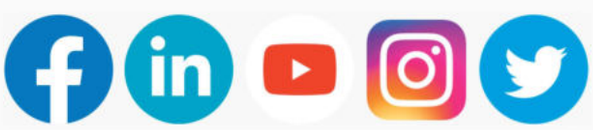

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