IRB Mutual Recognition Guidebook:

Guidelines and Submission Requirements for Collaborative Studies Under Single IRB Review

Introduction

A*STAR IRB, NHG Health DSRB, NTU-IRB, NUS-IRB and SingHealth CIRB have entered into a "Mutual Recognition Agreement ("MOA") to streamline the ethics review procedures for Collaborative Studies to avoid duplicative review.

Under this arrangement, eligible studies will undergo Single IRB Review, whereby one designated IRB serves as the Reviewing IRB for all participating institutions.

Parties to the MOA

- A*STAR Research Entities (ARES)
- National Healthcare Group (NHG Health)
- Nanyang Technological University (NTU)
- National University of Singapore (NUS)
- Singapore Health Services (SingHealth)

Key Definitions

Research Institution (RI): A Party or Partner Institution acting as research institution, as defined in the Human Biomedical Research Act (HBRA) 2015.

Partner Institution: A third-party institution with formal arrangement with any of the Parties for ethics review services, as listed in Schedule 1.

Collaborative Study: A study involving at least two (2) or more Research Institutions (RIs) or Partner Institutions whose review purview is under one of the five (5) IRBs in the agreement. The study should be led by a Lead PI from one of the RIs and supervised by a Site-PI from at least one of the other RIs.

Please refer to the List of Institutions and Partner Institutions of the IRBs under Schedule 1.

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Eligibility for Single IRB Review

1. What types of studies are eligible for Single IRB Review?

With effect from 1 April 2025, all new IRB applications involving A*STAR, NHG Health, NTU, NUHS, NUS and SingHealth Institutions, or their Partner Institutions, are eligible to benefit from the IRBs mutual recognition arrangement and have their studies reviewed by one (1) IRB, if they meet the definition of a Collaborative Study.

To qualify as a Collaborative Study:

- Each participating institution must be engaged in research as a study site*; and
- Research activities are conducted under the oversight of the respective institutions, led by a PI or Site-PI.

*The determination of whether an institution is engaged in research is important, as it establishes whether the institution qualifies as a study site and, consequently, whether the study meets the definition of a Collaborative Study.

2. When is an institution considered "engaged in research"?

For collaborative research studies under the IRBs mutual recognition arrangement, an institution is generally considered engaged in research when it acts as a participating study site in a collaborative research study and research activities are conducted under the institution's oversight, led by a PI or Site-PI.

This includes institutions that are involved in one or more of the following:

- Recruit, enroll or obtain informed consent from research participants;
- Interact with research participants for research purposes (e.g. conducting research interviews or administering research questionnaires)
- Intervene with research participants for research purposes (e.g. drawing research blood, administering study drugs)
- Conduct study-specific activities involving research data and/or human biological materials as part of a collaborative research study and in support of the study objectives,

The following case examples illustrate situations in which an institution would generally be considered engaged in research. These examples are intended as guidance and are not exhaustive. Where there is uncertainty, investigators should consult the Reviewing IRB for further advice.

Case Example 1

Singapore General Hospital (SGH) and A*STAR Research Entities (ARES) conduct the research at their respective sites. At SGH, patients are recruited from the hospital and undergo study procedures, under the supervision of the SGH Principal Investigator. At A*STAR, healthy volunteers are recruited from the general public and undergo study procedures at A*STAR facilities under the supervision of an A*STAR Site-Principal Investigator.

- ***Is SGH or A*STAR engaged in the research?***
  - *Both SGH and A*STAR are engaged in research because their researchers recruit participants and conduct study procedures involving human subjects at their respective institutions. Each institution has responsibilities for the conduct and oversight of the research under its respective Principal Investigator or Site Principal Investigator. This study is eligible for Single IRB Review under the IRB Mutual Recognition arrangement.*

Case Example 2

Singapore General Hospital (SGH) and National University of Singapore (NUS) conduct a collaborative research. Participants are recruited at SGH and undergo study procedures, including the collection of research data and human biological materials, under the supervision of the SGH Principal Investigator. The collected research data and human biological materials are coded or de-identified before being transferred to NUS, where study-specific analyses are carried out under the supervision of an NUS Site-Principal Investigator.

- ***Is SGH or NUS engaged in the research?***
  - *SGH is engaged in research because its researchers recruit participants and conducts study procedures.*
  - *NUS is also engaged in research because its researchers perform study-specific analyses on research data and human biological materials under NUS's supervision and oversight. NUS is therefore considered a collaborating study site and is eligible for Single IRB Review under the IRB Mutual Recognition arrangement.*

Case Example 3

Singapore General Hospital (SGH) conducts a study in which participants are recruited and undergo study procedures at SGH. As part of the study protocol, participants are required to go to Nanyang Technological University (NTU) facilities to undergo specialised imaging scans that are not available at SGH. At NTU, the imaging procedures are conducted as part of the research protocol under the supervision of an NTU Site-Principal Investigator, and NTU is responsible for the conduct and oversight of the imaging component of the study.

- ***Is SGH and NTU engaged in the research?***
  - *SGH is engaged in research because its researchers recruit participants and conducts study procedures.*
  - *NTU is also engaged in research because its researchers perform study-specific research procedures under NTU's supervision and oversight. NTU is therefore considered a collaborating study site and is eligible for Single IRB Review under the IRB Mutual Recognition arrangement .*

3. When is an institution considered "Not engaged in research"?

An institution is generally not considered engaged in research when its role is limited to providing services, data, or participants referral, without responsibility for the conduct, supervision or oversight of study-specific research activities.

The following case examples illustrate situations in which an institution would generally not be considered engaged in research. These examples are intended as guidance and are not exhaustive. There may be other circumstances not described here that would lead to the same determination.

Case Example 4

Singapore General Hospital (SGH) conducts a study in which participants are recruited and undergo study procedures at SGH. As part of the study protocol, participants are required to go to Nanyang Technological University (NTU) to undergo specialised imaging scans that are not available at SGH. The imaging is performed at NTU, and the results are provided to the SGH study team. NTU performs the scans as a technical service only, and does not recruit participants, obtain consent, or participate in study design, data interpretation, or study-related decision-making. NTU does not have responsibility for the conduct or oversight of the study.

- ***Is NTU engaged in the research?***
  - *NTU is <u>not</u> engaged in research because its role is limited to providing imaging services and it has no responsibility for the conduct or oversight of the study. NTU is therefore*

considered a service provider, not a study site. Where applicable, service agreement between SGH and NTU should be in place.

Case Example 5

Clinicians at Singapore General Hospital (SGH) identify patients who may be eligible for a study conducted at Nanyang Technological University (NTU). SGH clinicians inform potential participants about study, including providing a copy of the study flyer and a brief explanation the study. Patients who express interest may either contact the NTU study team directly or provide permission for their contact details to be shared with the NTU study team for follow-up regarding study participation and enrolment. No informed consent for the study is obtained at SGH, and no study procedures are conducted at SGH.

- ***Is SGH engaged in the research?***
  - *SGH is not engaged in research because its role is limited to informing potential participants about the study and facilitating contact with NTU study team. SGH does not obtain informed consent or conduct study procedures and does not have responsibility for the conduct or oversight of the study. Referring potential participants, including providing study information or sharing patient contact details (with the patient's permission), does not constitute research activity. SGH is therefore considered a referral site, not a study site.*

Case Example 6

A clinician in Singapore General Hospital (SGH) provides a dataset of de-identified patient data to a researcher at the National University of Singapore (NUS) for use in a research study. SGH does not participate in study design, data analysis, data interpretation, or any study-related decision-making.

- ***Is SGH engaged in the research?***
  - *SGH is not engaged in research because its role is limited to providing de-identified data to the NUS researchers. SGH does not have responsibility for the conduct or oversight of the study. SGH is therefore considered a data contributor, not a study site. Where applicable, data sharing agreement between SGH and NUS should be in place.*

Determining the Reviewing IRB

4. Which IRB do I submit to?

From 1 April 2025 onwards, IRB applications can be submitted to A*STAR IRB, NHG Health DSRB, NTU-IRB, NUS-IRB and SingHealth CIRB, subject to the agreement between the parties involved.

Category A

Collaborative Studies falling under **Category A Studies** shall be reviewed by either **NHG Health DSRB or SingHealth CIRB** (Healthcare Cluster IRBs) affiliated to the Healthcare Institution employing the Lead PI of the Study.

Studies involving any one of the following:

(1) Medical records review under waiver of consent.

(2) An invasive procedure, interventional procedure or administration of medical device or product which is to be conducted at a site in a hospital, outpatient clinic or polyclinic.

(3) Research participants who are either not Healthy Volunteers or are Vulnerable Populations (such as minors, mentally incapacitated, pregnant women and prisoners).

The exception is where the subject participation is low risk, such as participating in surveys, interviews and focus group discussions, in which case the study can be considered as a Category B study.

(4) Where research activities will be conducted in a clinical setting*.

Studies under Category B description, if conducted in a clinical setting* with a Healthcare cluster Lead PI, should continue to be submitted to the Healthcare cluster IRB.

**For further guidance on determining clinical setting and non-clinical setting, including case examples, please refer to Annex 1.*

Category B

Collaborative Studies falling under **Category B Studies** shall be reviewed by either **A*STAR IRB, NTU-IRB or NUS-IRB** (Non-Clinical IRBs) where the Lead PI is an employee from an A*STAR / NTU / NUS institution.

No more than minimal risk studies involving any one or more of the following:

(1) Medical records reviews requiring informed consent of the research participants to be obtained.

(2) Surveys, questionnaires, and/or interviews only.

(3) Where research activities are not conducted in a clinical setting*.

Studies under Category A description, if conducted in a non-clinical setting* with a Non-Clinical cluster Lead PI, should continue to be submitted to the Non-Clinical IRB.

**For further guidance on determining clinical setting and non-clinical setting, including case examples, please refer to Annex 1.*

Category C

Collaborative Studies that will be **out of scope of this MOA** are Studies involving only unidentifiable/anonymized or de-identified human subject data or human biological material samples. Researchers should refer to their own institution's policies and procedures.

General Notes for Category A and B Studies:

- The Lead PI's institution will be the Lead RI for the IRB application (Lead RI is for the purpose of coordinating the research as defined in Section 16 of the Human Biomedical Research Act).
- For restricted research, the Lead RI will put up the application in TIARAS.
- For occurrences of contraventions and SAEs at the various sites/ institutions, the respective RIs will still be responsible for the reporting of contravention and SAE to MOH.
- Referral of participants for recruitment is not deemed as collaborative research and is not under the MOA.

- If a Partner Institution employee is appointed as the Lead PI of the Study, the Reviewing IRB shall be the IRB affiliated to the Lead PI's Partner Institution.
- IRBs cannot grant approval for Partner Institutions of the Healthcare Institutions or Non-Clinical Institutions, if they were not appointed by those Partner Institutions to review their application.

Implementation of Single IRB Review

5. How does this Single IRB Review affect current studies?

Studies approved before 1 April 2025 will remain under the oversight of their respective IRBs until study closure. For such studies, if additional sites from different cluster(s) are to be included after 1 April 2025, these sites will be required to obtain IRB approval from their respective IRBs.

Example:
A study involving survey research conducted by NTU study team was approved by NTU-IRB on 15 March 2025. Subsequently, after 1 April 2026, the study is expanded into a multi-site study to include NUS as an additional study site.

As the study was approved prior to 1 April 2025, it will remain under the oversight of NTU-IRB until study closure. However, the NTU PI cannot submit an amendment for Single IRB review to include the NUS study site. Instead, the NUS Site-PI will be required to submit a separate IRB application to NUS-IRB for approval to conduct the study at the NUS site.

6. Can Collaborative Studies under the MOA add additional sites from a different cluster and continue to be reviewed by the original IRB?

New studies submitted on or after 1 April 2025 will be eligible for Single IRB review. PIs may submit amendments to include additional sites from different cluster(s) and such amendments may continue to be reviewed by the initial reviewing IRB. This is provided that the study still falls within Category A (reviewed by Healthcare Cluster IRBs) or Category B (reviewed by Non-Clinical IRBs).

Example:
A study involving survey research conducted by NTU study team is approved by NTU-IRB on 2 April 2025. Subsequently, the study is expanded into a multi-site study to include NUS as an additional study site. As there is no change in the study methodology and it remains a survey-based study, the NTU PI may submit an amendment to add NUS as a study site and NUS Site-PI.

As the research activities at both NTU and NUS continue to fall within Category B, the amendment may be reviewed by NTU-IRB (the initial reviewing IRB). The expanded study would be considered a collaborative study under the MOA and is eligible for Single IRB review.

Submission Process

7. How should the IRB application be submitted?

The Lead PI for Collaborative Study should submit the IRB application via the IRB portal of his/her cluster/ institution's IRB.

Lead PI's Cluster/ Institution	Cluster/ Institution's IRB	IRB Portal
ARES	A*STAR IRB	No portal used. Submit IRB application dossier via hbro@a-star.edu.sg. Refer to instructions on A*STAR Intranet.
NTU	NTU-IRB	Ethics Review Management Portal (ERMP) User Guides: (1) How to submit an IRB application? (2) NTU-IRB Guidelines
NUS	NUS-IRB	Integrated Research Information Management Suite (iRIMS-IRB) Guides (accessible via NUS intranet only): (1) User Guides (2) Video Guides
NHG Health	NHG Health DSRB	Ethics and Compliance Online System (ECOS) https://www.ecos-research.com.sg/login/ User Guides: (1) NHG Health (2) SingHealth
NUHS		
SingHealth	SingHealth CIRB	

8. Does everyone in the study team need to create an account to access the ECOS portal?

Definition of study roles:

- Principal Investigator (PI) – Individual who assumes the authority and responsibility for the conduct of a research study.
- Site-Principal Investigator (Site-PI) - An investigator who assumes authority and responsibility for the conduct of the research study at a specific participating site.
- Co-Investigators (Co-I) – Members of the research/ clinical trial team designated by the Principal Investigator to perform study-related procedure and/ or make important research-related decisions.
- Study Team Members – Personnel responsible for the design, conduct or reporting of the research.
- All personnel who have responsibility for the consent process and/ or direct data collection for the study must be listed as part of the research/ clinical trial team via delegation log.
- If an individual's role on the study is part of his/ her regular duties (i.e. radiographer, imaging technologist) and involvement in the study is limited to performing those duties without contributing to the study goal, such individuals are not considered part of the research/ clinical trial team.

A*STAR IRB: Studies requiring A*STAR IRB review should be submitted via hbro@a-star.edu.sg. It will not be managed on ECOS.

NTU-IRB: Studies requiring NTU-IRB review should be submitted via ERMP and not ECOS. Non-NTU personnel do not need to create ERMP accounts to be listed in the study team.

NUS-IRB: Studies requiring NUS-IRB review should be submitted via iRIMS-IRB and not ECOS. Non-NUS personnel do not need to create iRIMS-IRB accounts to be listed in the study team.

NHG Health DSRB and SingHealth CIRB: Studies requiring DSRB and CIRB review should be submitted via ECOS. Users requiring access to ECOS must create an account before logging into the system.

All PIs, Site-PIs and Co-Is should be added into the IRB application using their registered ECOS accounts and should only carry out research-related activities upon obtaining approval from the reviewing IRB.

Study Team Members, Study Administrators and Sponsors may be added via the Clinical Research Management System (CRMS) as needed.

This will allow the study team to view the applications, download study-related documents such as approval letters and receive communications from the IRBs.

9. How do Department Representative (DR) and Institutional Representative (IR) access the portals for endorsement?

A*STAR IRB: Studies requiring A*STAR IRB review should be submitted via hbro@a-star.edu.sg. It will not be managed on ECOS.

For collaborative studies submitted to A*STAR IRB:

- The lead ARES PI and their Institution Representative would need to endorse the application.
- All Site-PIs and their Institution Representative would need to complete the PI Declaration and Institution Endorsement Form and submit it as part of the application dossier.
- If the PI's Institution requires endorsement from a Department Representative, the Site-PI must ensure that the necessary approval is obtained either through a separate email from the Department Representative or by having them sign on the same page as the Institution Representative's Endorsement.

Refer to instructions stated in the IRB Application Form.

NTU-IRB: This section is not applicable for studies submitted to NTU-IRB via ERMP. External DRs and IRs do not need to access NTU's Ethics Review Management Portal (ERMP). Where necessary, PIs submitting ethics applications into ERMP can upload the endorsed (or signed) DR/IR forms from the respective partner institutions.

NUS-IRB: Studies requiring NUS-IRB review should be submitted via iRIMS-IRB. It will not be managed on ECOS.

For collaborative studies submitted to NUS-IRB:

- The lead NUS PI and Organizational Approver (or HOD or designee) must endorse the application via the iRIMS-IRB system. All NUS staff may log in to the iRIMS-IRB system via their NUS ID account.
- All Site-PIs, along with their Department and/or Institution Representatives, where applicable, can complete the PI Declaration and Department and/or Institution Endorsement Form(s) if required by their institutions. The endorsed forms can be uploaded onto the Attachments section of the online application form.

NHG Health DSRB and SingHealth CIRB: All DRs and IRs are required to set up ECOS accounts prior to logging into the respective system.

Please refer to Question 7 for links to account creation with ECOS portal.

For collaborative studies submitted to NHG Health DSRB or SingHealth CIRB, if there is a A*STAR, NTU and/or NUS site, the A*STAR/NTU/NUS DR and IR would have to log into their ECOS accounts to endorse applications submitted by the NHG Health/ SingHealth institution's PI.

DRs and IRs guidebooks can be obtained from the following websites:
NHG Health: Please click here for ECOS User Guides
SingHealth: Please click here for "IRB Guidebook: Endorsement"

10. What are the Submission Deadlines for the IRBs?

A*STAR IRB: Studies which are subject to Full Board review for any particular month must be received by A*STAR IRB by the 1st of the previous month.

NTU-IRB: Please refer to resource here.

NUS-IRB: Studies which are subject to Full Board Review must be received by NUS-IRB by the 1st working day of the month (or the next earliest working day if it falls on a weekend) before these applications will be considered for review during the Full Board Meeting of the same month.

NHG Health DSRB: Studies which are subject to Full Board Review must be received by DSRB by the 15th working day of the month (or the next earliest working day if it falls on a weekend) before these applications will be considered for review during the Full Board Meeting of the same month.

This is with the exception of DSRB Domain B1 whereby the submission deadline for Full Board studies would be on the 1st working day of the month or the next earliest working day if it falls on a weekend.

The PIs are strongly encouraged to factor in sufficient lead time for the DR and IR to endorse the application, so that their applications will reach CIRB and DSRB on the stipulated deadlines described above.

Submissions received after the deadlines would be tabled for the subsequent full board meeting.

SingHealth CIRB: Studies which are subject to Full Board Review must be received by CIRB by the 1st working day of the month (or the next earliest working day if it falls on a weekend) before these applications will be considered for review during the Full Board Meeting of the same month.

This is with the exception of Green Lane Review whereby the submission deadline for Full Board Review is 1st and 3rd Monday of the month.

Studies which require exemption and expedited review can be submitted anytime, for the 5 IRBs.

11. Submission of Special Sites

(i) What are the Special Sites to take note of?

The Special Sites for submission are:
- P.H. Feng Research Centre
- TTSH Facility Site for NNI Study

(ii) When should these Special Sites be added?

'P.H. Feng Research Centre' and 'TTSH Facility Site for NNI Study' are facility sites under NHG Health, and should be added in the following scenarios:

- P.H. Feng Research Centre: When PHFRC is engaged as a facility site in a study, and if the PI is not employed or formally appointed by TTSH.
- TTSH Facility Site for NNI Study: When NNI is the Main Site, and the research involves TTSH Neurosurgery/ Neurology inpatients.

(iii) Who should be the Site-PIs of these Special Sites?
The Site-PIs of these Special Sites should be from NHG Health institutions, and from TTSH or NNI for the TTSH Facility Site for NNI Study.

Training Requirements

12. Are there any differences in the IRB minimum training requirements?

The minimum training requirements across the IRBs are slightly different, but training programs are cross-recognised among the five (5) IRBs (A*STAR IRB, NHG Health DSRB, NTU-IRB, NUS-IRB, and SingHealth CIRB). The PI and delegated study team member(s) should meet the minimum training requirements set by the reviewing IRB and/or the RI and be adequately trained on all delegated study tasks (e.g. protocol/ study specific training) prior to performing any research procedure. Please refer to the respective minimum training requirements of the IRBs and/or RIs:

A*STAR IRB: Please click here for A*STAR IRB minimum training requirements (accessible via A*STAR intranet only).

NTU-IRB: Please click here for NTU-IRB minimum training requirements.

NUS-IRB: Please click here for NUS-IRB minimum training requirements.

NHG Health DSRB: Please click here for NHG Health DSRB minimum training requirements.

SingHealth: Please click here for SingHealth minimum training requirements.

(i) How should the minimum training status for study team members be declared or updated on ECOS?

A*STAR IRB: This section is not applicable for studies submitted to A*STAR IRB, as ECOS will not be used.

NTU-IRB: This section is not applicable for studies submitted to NTU-IRB via ERMP.

NUS-IRB: This section is not applicable for studies submitted to NUS-IRB via iRIMS-IRB.

NHG Health DSRB and SingHealth CIRB:

- All PIs, Site-PIs and Co-Is involved in collaborative studies would need to submit their minimum training certificates for validation and issuance of 'labels' on ECOS. 'Labels' enable users to see the type of studies he/she has met the minimum training to conduct.

- Other study team members **NOT** listed in the Application Form (e.g. Clinical Research Coordinators, Study Administrators and Sponsors) can be added into CRMS study site User Authorisation List (UAL) if they require access to the IRB documents and submissions.

The PI should ensure that study team members are adequately trained for their delegated role, even though the training is not required to be submitted.

(ii) Who can issue the Min Training Labels on ECOS?

A*STAR IRB: This section is not applicable for studies submitted to A*STAR IRB, as ECOS will not be used.

NTU-IRB: This section is not applicable for studies submitted to NTU-IRB via ERMP.

NUS-IRB: This section is not applicable for studies submitted to NUS-IRB via iRIMS-IRB.

NHG Health DSRB and SingHealth CIRB:
Each cluster will have their Institution Minimum Training Secretariat to verify the minimum training records of their investigators / users and labels will be issued according to their oversight IRB and/or the institutions' training requirement.

(iii) Will my training completion status in one cluster, be accepted under another Reviewing IRB?

Yes. Although the minimum training requirements across the IRBs and RIs may differ, the IRBs will mutually recognise the training completion labels that had been granted to an investigator by their cluster. For example, an NHG Health investigator (with training completion labels) may be involved in a collaborative study submitted to SingHealth CIRB. The NHG Health training completion will be accepted for the study reviewed under SingHealth CIRB.

Informed Consent Requirements

13. Which Informed Consent or Assent Template should I use?

Each study site should use the Informed Consent (ICF) and Assent Template provided by their own IRB.

A*STAR IRB: Please click here for ICF and Assent template (accessible via A*STAR intranet only).

NTU-IRB: Please click here for ICF and Assent Template (accessible via NTU intranet only).

NUS-IRB: Please click here for ICF and Assent Template (accessible via NUS intranet only):
- For HBRA regulated research
- For other types of research

NHG Health DSRB: Please click here for ICF and Assent Template.

SingHealth CIRB: Please click here for ICF and Assent Template.

14. Are there any significant differences to the Informed Consent Form templates that I should take note of?

Yes. Please take note of the following differences to the Informed Consent Form templates.

a. **The Data Protection Policy Statement**
b. **The Research Compensation Statement**
c. **Who has reviewed the study? Which IRB contact details should be listed on the Informed Consent Forms - the reviewing IRB or the respective cluster / institution IRB?**

The IRB that has reviewed the study should be reflected on the Informed Consent Form.

The contact details of the respective cluster / institution IRB should also be listed on the Informed Consent Form, in the event that the participants from the cluster / institution sites have any questions or complaints about the study.

Study Sites	Reviewing IRB	Statement for Who Has Reviewed The Study and IRB Contact Details
ARES	A*STAR Institutional Review Board (IRB)	This study has been reviewed by the A*STAR Institutional Review Board (IRB) for ethics approval. If you have questions about your rights as a participant, you may contact the A*STAR IRB at hbro@a-star.edu.sg.
ARES	NTU-IRB / NHG DSRB / NUS-IRB / SingHealth CIRB	This study has been reviewed by the < NTU Institutional Review Board / NHG Domain Specific Review Board (the central ethics committee) / National University of Singapore Institutional Review Board (NUS-IRB) / SingHealth Centralised Institutional Review Board (CIRB) > for ethics approval. The approval is mutually recognised by A*STAR Institutional Review Board (IRB). If you have questions about your rights as a participant, you may contact the A*STAR IRB at hbro@a-star.edu.sg.
NTU	NTU Institutional Review Board	The study has undergone ethics approval by the NTU Institutional Review Board. If you want an independent opinion to address concerns, questions, complaints, or feedback; or require information regarding your rights as a research participant, please contact: **NTU-Institutional Review Board** Research Integrity and Ethics Office Blk N1.2, B1-02A 62 Nanyang Drive Singapore 637459 Email: irb@ntu.edu.sg, Tel: 6904 1293
NTU	A*STAR IRB / NHG DSRB / NUS-IRB / SingHealth CIRB	The study has undergone ethics approval by the < A*STAR Institutional Review Board (IRB) / NHG Domain Specific Review Board (the central ethics committee) / National University of Singapore Institutional Review Board (NUS-IRB) / SingHealth Centralised Institutional

		Review Board (CIRB) >. The approval is mutually recognised by NTU Institutional Review Board. If you want an independent opinion to address concerns, questions, complaints, or feedback; or require information regarding your rights as a research participant, please contact: **NTU-Institutional Review Board** Research Integrity and Ethics Office Blk N1.2, B1-02A 62 Nanyang Drive Singapore 637459 Email: irb@ntu.edu.sg, Tel: 6904 1293
NUS	National University of Singapore Institutional Review Board (NUS-IRB)	This study has undergone an ethics review by the National University of Singapore Institutional Review Board (NUS-IRB). For an independent opinion specifically regarding the rights and welfare of research participants, you may contact a staff member of the National University of Singapore Institutional Review Board at telephone (+65) 6516 1234 [Mondays to Thursdays from 8.30am to 6pm, and Fridays from 8.30am to 5.30pm, except public holidays] or email at irb@nus.edu.sg.
NUS	A*STAR IRB / NTU-IRB / NHG DSRB / SingHealth CIRB	This study has undergone an ethics review by the < A*STAR Institutional Review Board (IRB) / NTU Institutional Review Board / NHG Domain Specific Review Board (the central ethics committee) / SingHealth Centralised Institutional Review Board (CIRB) >. The approval is mutually recognised by National University of Singapore Institutional Review Board (NUS-IRB). For an independent opinion specifically regarding the rights and welfare of research participants, you may contact a staff member of the National University of Singapore Institutional Review Board at telephone (+65) 6516 1234 [Mondays to Thursdays from 8.30am to 6pm, and Fridays from 8.30am to 5.30pm, except public holidays] or email at irb@nus.edu.sg.

NHG Health / NUHS	NHG Domain Specific Review Board (the central ethics committee)	The study has been reviewed by the NHG Domain Specific Review Board (the central ethics committee) for ethics approval. If you want an independent opinion to discuss problems and questions, obtain information and offer inputs on your rights as a research subject, you may contact the NHG Domain Specific Review Board Secretariat at 6471-3266. You can also find more information about participating in clinical research, the NHG Domain Specific Review Board and its review processes at ethics.gri.nhg.com.sg.
NHG Health / NUHS	A*STAR IRB / NTU-IRB / NUS-IRB / SingHealth CIRB	The study has been reviewed by the < A*STAR Institutional Review Board (IRB) / NTU Institutional Review Board / National University of Singapore Institutional Review Board (NUS-IRB) / SingHealth Centralised Institutional Review Board (CIRB) > for ethics approval. The approval is mutually recognised by NHG Domain Specific Review Board (DSRB). If you want an independent opinion to discuss problems and questions, obtain information and offer inputs on your rights as a research subject, you may contact the NHG Domain Specific Review Board Secretariat at 6471-3266. You can also find more information about participating in clinical research, the NHG Domain Specific Review Board and its review processes at ethics.gri.nhg.com.sg.
SingHealth	SingHealth Centralised Institutional Review Board (CIRB)	This study has been reviewed by SingHealth Centralised Institutional Review Board (CIRB) for ethics approval. If you have questions about your rights as a participant, you can call the SingHealth Centralised Institutional Review Board at 8126 3660 during office hours (8:30 am to 5:30pm).
SingHealth	A*STAR IRB / NTU-IRB / NHG DSRB / NUS-IRB	This study has been reviewed by the < A*STAR Institutional Review Board (IRB) / NTU Institutional Review Board / NHG Domain Specific Review Board (the central ethics committee) / National University of Singapore Institutional Review Board (NUS-IRB) > for ethics approval. The approval is mutually recognised by SingHealth Centralised Institutional Review Board (CIRB). If you have questions about your rights as a participant, you can call the SingHealth Centralised Institutional Review Board at 8126 3660 during office hours (8:30 am to 5:30pm).

Reporting Requirements

15. How do I report Study Deviations / Non-Compliances to the IRBs?

A*STAR IRB: Please click here for Non-Compliance reporting requirements (accessible via A*STAR intranet only). Refer to instructions in the non-compliance report.

NTU-IRB: Please refer here for Incident Reporting Guidelines.

NUS-IRB: Deviations / Non-Compliances to be reported to NUS-IRB should be submitted via iRIMS-IRB as soon as possible, within 1 working day.

NHG Health DSRB: Please click here for Non-Compliance reporting requirements.

SingHealth CIRB: Please refer to "Study Deviation & Non-Compliance Report Form" here.

16. How do I report Safety Events to the IRBs?

A*STAR IRB: Please click here for safety reporting requirements (accessible via A*STAR intranet only). Refer to instructions in the SAE report.

NTU-IRB: Please refer here for Incident Reporting Guidelines.

NUS-IRB: Serious Adverse Events (SAEs) to be reported to NUS-IRB should be submitted via iRIMS-IRB as soon as possible, within 1 working day. Please refer here for NUS Policy on Reporting of Serious Adverse Events, Contraventions and Other Reportable Events (accessible via NUS intranet only).

NHG Health DSRB: Please click here for safety reporting requirements.

SingHealth CIRB: Please refer to "Reporting Requirement and Timeline for SAE" here.

Contact

17. Who do I contact if I require IRB or technical support?

For ECOS-related technical issues:

- PHI user to contact institution IT Helpdesk -
  NHG Health users: ITDHELP@nhg.com.sg
  NUHS users: ITDHELP@nuhs.edu.sg
  SingHealth users: it.helpdesk@singhealth.com.sg
- Non-PHI user to contact the ECOS Support team.

Should you have any IRB related enquiries, please contact the related IRB:
(Do not copy all IRBs. E.g. If your IRB application is to be reviewed by NHG Health DSRB, please write to NHG Health DSRB only)

NHG Health DSRB: nhggroup.OHRPP@nhghealth.com.sg
SingHealth CIRB: irb@singhealth.com.sg
A*STAR IRB: hbro@a-star.edu.sg
NTU-IRB: irb@ntu.edu.sg
NUS-IRB: irb@nus.edu.sg

SCHEDULE 1

LIST OF INSTITUTIONS AND PARTNER INSTITUTIONS OF THE PARTIES

S/N	The Parties	Institutions under the Parties	Partner Institutions of the Parties
1	A*STAR Research Entities	• All research institutes and centres, research entities, and programmes funded and/or managed by A*STAR	• Nil

2	NHG Health	• Geriatric Education & Research Institute (GERI)
		• Institute of Mental Health (IMH)
		• National Skin Centre (NSC)
		• NHG Health Polyclinics (NHGP)
		• NHG Health Pharmacy
		• NHG Health HQ
		• NHG Health Diagnostics
		• NHG Health Cares
		• NHG Health College
		• NHG Health Eye Institute
		• Khoo Teck Puat Hospital (KTPH)
		• KTPH@AdMC
		• P.H. Feng Research Centre (PHFRC)
		• Tan Tock Seng Hospital (TTSH)
		• Woodlands Health (WH)
		• Yishun Community Hospital (YCH)
			• National University Health System Pte Ltd, which include:
			  ○ Alexandra Hospital (AH)
			  ○ Jurong Community Hospital (JCH)
			  ○ Jurong Medical Centre (JMC)
			  ○ National University Hospital (NUH)
			  ○ National University Polyclinics (NUP)
			  ○ National University Primary Healthcare (NUPH)
			  ○ Ng Teng Fong General Hospital (NTFGH)
			•
			• Agency of Integrated Care (AIC)
			• Ang Mo Kio - Thye Hua Kuan Hospital Ltd (AMKH)
			• Dover Park Hospice
			• Communicable Diseases Agency
			• Health Promotion Board (HPB)
			• Health Sciences Authority (HSA)
			• Lilly Centre for Clinical Pharmacology Pte Ltd

S/N	The Parties	Institutions under the Parties	Partner Institutions of the Parties
3	NTU	• Nanyang Technological University (NTU) and its autonomous institutes and subsidiaries • National Institute of Education (NIE) • Lee Kong Chian School of Medicine (LKCMedicine) • Rehabilitation Research Institute of Singapore (RRIS) • S. Rajaratnam School of International Studies (RSIS) • Singapore Centre for Chinese Language (SCCL) • National Institute of Early Childhood Development (NIEC)	• Nil
5	NUS	• All NUS faculties, institutions and research centres, including Duke-NUS medical school	• Nil

6	SingHealth	• Changi General Hospital (CGH)
		• Eastern General Hospital (EGH)
		• KK Women's and Children's Hospital (KKH)
		• National Cancer Centre Singapore (NCCS)
		• National Dental Centre Singapore (NDCS)
		• National Heart Centre Singapore (NHCS)
		• National Neuroscience Institute (NNI)
		• Sengkang General Hospital (SKH)
		• Singapore General Hospital (SGH)
		• Singapore Health Services (SingHealth)
		• Singapore National Eye Centre (SNEC)
		• SingHealth Community Hospitals:
		  ○ Outram Community Hospital (OCH)
		  ○ Sengkang Community Hospital (SKCH)
		• SingHealth Investigational Medicine Unit (IMU)
		• SingHealth Polyclinics
			• Assisi Hospice
			• HCA Hospice Limited (HCA)
			• National Kidney Foundation (NKF)
			• Singapore Management University (SMU)
			• St. Andrew's Mission Hospital (SAMH)
			• Singapore Anglican Community Services (SACS)

Annex 1: Clarification on "Clinical Setting"

The classification of a study as being conducted in a clinical or non-clinical setting is an important consideration, particularly for studies involving activities across different environments or institutions. This classification determines the appropriate study categorisation and the selection of the Reviewing IRB under the IRB Mutual Recognition arrangement.

The following outlines the key principles for determining whether a study is conducted in a clinical setting, supported by illustrative examples.

Definition of Clinical Setting

"Clinical Setting" refers to "An environment where healthcare services are provided to patients. This can include hospitals, clinics, outpatient facilities, and other locations where medical care is delivered. In a clinical setting, healthcare professionals assess, diagnose, and treat patients, often involving direct interaction between the provider and the patient."

Key Principles for Determining a Clinical Setting

(i) **Nature of Activity**
The classification of a clinical or non-clinical setting is determined primarily by the nature of the activities performed:

- Activities involving clinical care (e.g. diagnosis, treatment, clinical monitoring, or procedures) are considered to take place in a clinical setting.
- Activities that do not involve the provision of healthcare services (e.g. general surveys, interviews, or non-clinical observations) may be considered non-clinical, even if conducted within a healthcare facility.

(ii) Purpose of Interaction
The classification also depends on the purpose of interaction with participants:

- If the interaction is part of clinical care or integrated with clinical services, the setting is considered clinical.
- If the interaction is independent of clinical care (e.g. standalone research activities), the setting may be considered non-clinical, subject to the overall study context.

Key Principle (Summary)

The classification of a clinical setting depends on whether the study activities involve clinical care or influence patient management, rather than the physical location where the study is conducted.

A study conducted within a healthcare institution is not necessarily considered a clinical setting; the classification should be based on the nature and purpose of the study activities.

The following examples are intended to guide investigators in determining whether a study is conducted in a clinical or non-clinical setting. Where there is uncertainty, investigators should consult the Reviewing IRB for further advice.

Illustrative Example # 1		
Study	Evaluation of a new insulin delivery device in patients with diabetes	Qualitative exploration on emotional well-being among patients with diabetes
Research Activity	Device use, blood glucose monitoring, and treatment adjustment	Questionnaires and interviews collecting self-reported experiences
Classification	**Clinical Setting**	**Non-Clinical Setting**
Rationale	Involves direct medical intervention, treatment & monitoring within a provider-patient relationship	Limited to data collection only, without the provision of diagnosis, treatment, or clinical management, even if conducted within a healthcare institution

Illustrative Example # 2		
Study	Research on medication adherence in chronic disease management	Qualitative research on barriers to medication adherence
Research Activity	Study team (clinician) conducts structured interviews and implements protocol-defined interventions (e.g. counselling, medication adjustment) based on responses	Study team conducts interviews online (e.g. Zoom) or in designated rooms in polyclinic to collect qualitative data for thematic analysis on patient perceptions and experiences with long-term medication use
Classification	**Clinical Setting**	**Non-Clinical Setting**
Rationale	Research procedures include clinical interventions and management actions, representing delivery of medical care beyond data collection	Interviews remain non-clinical when limited to research data collection, regardless of whether they are conducted online, in clinics, or within hospital premises

Illustrative Example # 3		
Study Aim	Evaluation of a symptom-tracking app integrated into care	User experience study of the same symptom-tracking app
Research Activity	Study team enrolls patients to use the app and reviews patient-reported symptoms data and may adjust clinical management or treatment	Study team enrolls patients to use the app and analyses app data to evaluate usability and engagement, without clinical interpretation or impact on patient care
Classification	**Clinical Setting**	**Non-Clinical Setting**
Rationale	App use is part of ongoing clinical management	No clinical interpretation or intervention