Addendum: Singapore Law

Governing Research Involving Human Participants

General Comments

Standards and Elements listed below address areas where policies and procedures must address specific requirements in the following laws:

- Medicines Act (Cap. 176)
- Medicines (Clinical Trials) Regulations
- Research Involving Human Subjects: Guidelines for IRBs (2004)
- Singapore Guideline for Good Clinical Practice (1999)
- Ethical Guidelines on Research Involving Human Subjects (1997)
- Ministry of Health Operational Guidelines for Institutional Review Boards (2007)
- Ministry of Health Code of Ethical Practice in Human Biomedical Research (2009)

Domain I: Organization

Standard I-1: The Organization has a systematic and comprehensive Human Research Protection Program with appropriate leadership.

Element I.1.B. The Organization delegates responsibility for the Human Research Protection Program to an official with sufficient standing, authority, and independence to ensure implementation and maintenance of the program.	IRBs or ECs should be appointed by and report to at least an authority at the level of the Chief Executive Officer of an organization, or the Principal of a university. (Research Involving Human Subjects: Guidelines for IRBs ("Guidelines for IRBs") 5.30 and 5.31; Ethical Guidelines on Research Involving Human Subjects, 3.2.1.)
Element I.1.C. The Organization has and follows written policies and procedures that allow the Institutional Review Board or Ethics Committee to function independently of other organizational entities in protecting research participants.	Policies and procedures indicate that the fundamental responsibility of an IRB or EC is to act as an ethics review gateway for all research. (Guidelines for IRBs, 5.20) Policies and procedures indicate the organization grants the IRB or EC the authority to audit research. (Guidelines for IRBs, 8.6)
Element I.1.D. The Organization has and follows written policies and procedures setting forth the ethical standards and practices of the Human Research Protection Program. Relevant policies and procedures are made available to Sponsors, Researchers, Research Staff, research participants, and the Institutional Review Board or Ethics Committee, as appropriate.	In addition to the ethical principles which have their origins in the Declaration of Helsinki, the ethical principles that govern the conduct of research involving human participants include (Guidelines for IRBs, 4.17): • Respect for the human body, welfare and safety, and for religious and cultural perspectives and traditions of human subjects. • Avoidance of conflicts of interests or appearance of interest.
Element I.1.F. The Organization has and follows written policies and procedures for reviewing the scientific or scholarly validity of a proposed research study. Such	Policies and procedures describe the process to have scientific review of research conducted prior to ethics review by the IRB or EC. (Guidelines for IRBs, 5.22). Policies and procedures should describe: • Who conducts scientific review.

procedures are coordinated with the ethics review process.	• The process for making the results available to the IRB or EC. (Guidelines for IRBs, 5.23)
Standard I-4: The Organization responds to the concerns of research participants.	
Element I.4.A. The Organization has and follows written policies and procedures that establish a safe, confidential, and reliable channel for current, prospective, or past research participants or their designated representatives that permits them to discuss problems, concerns, and questions; obtain information; or offer input with an informed individual who is unaffiliated with the specific research protocol or plan.	Participants should be provided direct access to the full time secretariat of the IRB or EC to a senior officer of the institution charged with quality service standards and control to provide feedback or express concerns. (Guidelines for IRBs, 5.73). A registered medical practitioner or a senior member of the research team should be appointed to serve as a participant contact. (Guidelines for IRBs, 5.74).
Element I.6.B. The Organization has and follows written policies and procedures to identify, manage, and minimize or eliminate individual financial conflicts of interest of researchers and research staff that could influence the conduct of the research or the integrity of the Human Research Protection Program. The Organization works with the Institutional Review Board or Ethics Committee in ensuring that financial conflicts of interest are managed and minimized or eliminated, when appropriate.	The holder of a certificate or any person assisting him in a clinical trial or any subject in a clinical trial shall not, directly or indirectly, shall not have any financial interest in the trial. (Medicines (Clinical Trials) Regulations, item 20)
Standard I-7: The Organization has and follows written policies and procedures to ensure that the use of any investigational or unlicensed test article complies with all applicable legal and regulatory requirements.	
Element I.7.A. When research involves investigational or unlicensed test articles, the Organization confirms that the test articles have appropriate regulatory approval or meet exemptions for such approval.	No clinical trial shall be conducted except in accordance with these Regulations. (Medicines (Clinical Trials) Regulations, item 3) No clinical trial shall be conducted except at such place as may be specified in the certificate. (Medicines (Clinical Trials) Regulations, item 8)
Domain II: Institutional Review Board or Ethics Committee	
Standard II-1: The structure and composition of the IRB or EC are appropriate to the amount and nature of the research reviewed and in accordance with requirements of	

applicable laws, regulations, codes, and guidance.	
Element II.1.A. The IRB or EC membership permits appropriate representation at the meeting for the types of research under review, and this is reflected on the IRB or EC roster. The IRB or EC has one or more unaffiliated members; one or more members who represent the general perspective of participants; one or more members who do not have scientific expertise; one or more members who have scientific or scholarly expertise; and, when the IRB or EC regularly reviews research that involves vulnerable participants, one or more members who are knowledgeable about or experienced in working with such participants.	The chair of each IRB or EC shall be a registered medical practitioner. (Ministry of Health Operational Guidelines for Institutional Review Boards 7.12(e)) The composition of the IRB or EC includes (Ministry of Health Operational Guidelines for Institutional Review Boards 7.12(e)): • At least one unaffiliated member whose primary concerns are non-scientific. • At least one unaffiliated medical practitioner.
Standard II-2: The IRB or EC systematically evaluates each research protocol or plan to ensure the protection of participants.	
Element II.2.C: The IRB or EC has and follows written policies and procedures for conducting meetings by the convened IRB or EC.	Approval by a two-third majority of the quorum is required before any research may be approved. (Ministry of Health Operational Guidelines for Institutional Review Boards 7.12(g))
Element II.2.F. The IRB or EC has and follows written policies and procedures for addressing unanticipated problems involving risks to participants or others, and for reporting these actions, when appropriate.	Researchers report unusual or unexpected events within 15 days of occurrence. (Guidelines for IRBs, 5.26(b)) Researchers report unexpected serious adverse events related to the research immediately to the IRB or EC. (Ministry of Health Operational Guidelines for Institutional Review Boards 8.3)
Element II.2.H. The IRB or EC has and follows policies and procedures for managing multisite research by defining the responsibilities of participating sites that are relevant to the protection of research participants, such as reporting of unanticipated problems or interim results.	A lead IRB or EC should be appointed for multi-site research which is responsible for the primary ethics review of the research proposal and for keeping other participating IRBs or ECs informed of any decisions. (Guidelines for IRBs, 5.50)
Standard II-4: The IRB or EC provides additional protections for individuals who are vulnerable to coercion or undue influence and participate in research.	
Element II.4.A. The IRB or EC has and follows written policies and procedures for	Children should not be enrolled in research except when the research cannot be conducted on adults. (Ethical Guidelines on Research

determining the risks to prospective participants who are vulnerable to coercion or undue influence and ensuring that additional protections are provided as required by applicable laws, regulations, codes, and guidance.	Involving Human Subjects, 2.5.5.1.) Pregnant women should not be enrolled in research except where pregnancy is an essential condition of the research (Ethical Guidelines on Research Involving Human Subjects 2.5.6.1.) Prisoners should not be enrolled in research except where being incarcerated is an essential feature of the research. (Ethical Guidelines on Research Involving Human Subjects 2.5.6.2.)
Domain III: Researcher and Research Staff	
Standard III-1: In addition to following applicable laws and regulations, Researchers and Research Staff adhere to ethical principles and standards appropriate for their discipline. In designing and conducting research studies, Researchers and Research Staff have the protection of the rights and welfare of research participants as a primary concern.	
Element III.1.G. Researchers and Research Staff have a process to address participants' concerns, complaints, or requests for information.	Researchers are responsible to inform participants of the opportunity to turn to the IRB or EC for advice if they are in any way unhappy with the research protocol. (Ethical Guidelines on Research Involving Human Subjects 3.2.6.)
Standard III-2: Researchers and Research Staff meet requirements for conducting research with participants and comply with all applicable laws, regulations, codes, and guidance; the organization's policies and procedures for protecting research participants; and the IRB's or EC's determinations.	
Element III.2.D. Researchers and Research Staff follow reporting requirements in accordance with applicable laws, regulations, codes, and guidance; the organization's policies and procedures; and the IRB's or EC's requirements.	Researchers report to the IRB or EC: • Unusual or unexpected events within 15 days of occurrence. (Guidelines for IRBs, 5.26(b)) • Changes to the research to eliminate immediate hazards within seven days. (Guidelines for IRBs, 5.26) • Final reports within three months of completion of projects (Guidelines for IRBs, 5.26)