MOH NATIONAL TELEMEDICINE GUIDELINES

SUMMARY CARD

The National Telemedicine Guidelines (NTG) aim to facilitate the appropriate delivery of Telemedicine services by healthcare providers through four domains: "**Clinical Standards and Outcomes**", "**Human Resources**", "**Organisational**", and "**Technology and Equipment**".

The **principles** outlined in these Guidelines are meant to address patient and provider safety, and provide a holistic approach to executing the delivery of Telemedicine services in Singapore. The principles - depending on the level of importance - are listed in the Guidelines through the usage of "**must**" **(mandatory)**, "should" (strongly encouraged), and "may" (truly optional).

The **target group**s of the NTG are healthcare providers (healthcare professionals and organisations), patients, and caregivers.

Whether Telemedicine is the reasonable vehicle to deliver a particular healthcare service is determined by the **clinical context**, the **clinical objectives** and the **compatibility of technology** to meet these clinical objectives.

Do note that when applying these National Telemedicine Guidelines, providers will need to take into account their unique circumstances and context. Providers must, hence, exercise due diligence and be mindful of legal and ethical requirements when delivering Telemedicine services.

Definitions of the domains of Telemedicine, scope, & interpretation

"Telemedicine" (which term is used interchangeably with "Telehealth" in these Guidelines) refers to the systematic provision of healthcare services over physically separate environments via Information and Communications Technology (ICT).

Exchanging information **for clinical purposes** between providers and patients/caregivers over the telephone, through text messaging (SMS) or other similar application (e.g. iMessage, WhatsApp) also falls within the scope and definition of Telemedicine.

Certain obligations in the guidelines only apply to individual healthcare **professionals** while other obligations accrue only to the broader healthcare **organisation** that delivers the overall "system" or "infrastructure" of care for the patient.

The guidelines explicitly differentiate between the responsibilities of "healthcare organisations" and "healthcare professionals", and refers to "**healthcare providers**" when a particular guideline applies to both groups.

Tele-collaboration:

- Refers to interactions between (facility-based or mobile) onsite and remote healthcare professionals for clinical purposes.
- Distinguishing feature: healthcare professionals are involved at both ends of the interaction and a patient may or may not be involved in the same Telemedicine interaction.

Tele-treatment

- Refers to interactions between remote healthcare professionals and patients/caregivers for the purposes of direct clinical care.
- Distinguishing feature: patient or caregiver is involved directly at one end of the interaction and this creates (or presupposes the existence of) a professional-patient relationship.

Tele-monitoring

- Refers to biomedical and other forms of data collection directly from patients or caregivers by remote systems, which are used by healthcare professionals for clinical purposes such as vital signs monitoring and home nursing.
- Distinguishing feature: a healthcare professional or organisation is engaged at one end but does not have a healthcare provider involved at the other end as part of an organized arrangement. Need not create a professional-patient relationship even though the healthcare organisation as a whole might owe a duty of care to the patient.

Tele-support

- Use of online services for non-clinical (i.e. educational and administrative) purposes to support the patient, and caregiver.
- Not addressed in the Guidelines

Key Ideas and Key Principles

The key ideas and the "**must**" do areas from the NTG have been summarized in the following sections. Only the most important aspects have been listed in this Summary Card. We highly recommend that one should read the NTG for a complete and proper understanding of the topics.

1. CLINICAL STANDARDS AND OUTCOMES (pg. 11-15)

1.1 Duty of Care (pg 11)

The "duty of care" **must** be established in all Telemedicine encounters to clarify any and all ongoing responsibility(s) for the patient/caregiver as well as the roles and responsibility of other health care professionals involved

1.2 Standards of Clinical Care (pg 11-12)

Any Telemedicine service **must** be provided as part of a structured and well organized system and the overall standard of care delivered by the system must not be any less compared to a service not involving Telemedicine.

i. Where a face-to-face consult is not reasonably practical, it is permitted to deliver care exclusively via Telemedicine as this is better than not having any access to care at all.
ii. Where face-to-face consultations are reasonably practical, the delivery of care via Telemedicine must not compromise the overall quality of care provided as compared with non-Telemedicine care delivery.

The standard of care must be upheld by all healthcare professions involved in the Telemedicine interaction.

As far as reasonably possible, the technology component of Telemedicine should be incorporated in the normal workflow of clinical processes by the healthcare organization so that the quality of care as delivered by Telemedicine is integrated within the organisation's governance and oversight of its other clinical processes.

1.3 Communication with Patients and Caregivers (pg 12)

Communication with patients and caregivers should be modified accordingly to suit this healthcare delivery mode.

The healthcare provider should familiarize patients and caregivers with the Telemedicine communication protocols before engaging them in the Telemedicine interaction.

If technical and environmental limitations affect the quality of a Telemedicine consultation such that minimum standards cannot be met, the consultation **must** be terminated and alternative technologies or rescheduling/postponement of the consultation must be considered.

1.4 Clinical Outcomes (pg 14)

Organisations providing Telemedicine services should monitor and improve the quality of their services to achieve the best possible outcomes.

1.5 Privacy and Patient Confidentiality (pg 14)

Healthcare organisations **must** ensure that patient information and records are protected by having a confidentiality policy in place.

1.6 Informed consent (pg 14)

The patient **must** be given the freedom to make informed decisions.

2. HUMAN RESOURCES (pg. 16-18)

2.1 Human Resources Plans and Policies (pg 16)

Should fully take into account any unique human resource and operational requirements involved in delivering Telemedicine (e.g. 24 hour operations).

2.2 Roles and Responsibilities (pg 16)

The delivery of Telemedicine services may require the creation of new roles and responsibilities or modifications to the existing roles and responsibilities of the healthcare team delivering healthcare services to patients.

2.3 Licensing & Credentialing / Privileging (pg 17)

Licensable health care professionals delivering Telemedicine services from or within Singapore **must** be registered and licensed with the respective regulatory and licensing body.

2.4 Competency and Qualifications (pg 17)

Organisations providing Telemedicine services should have policies and procedures to ensure that all staff involved in Telemedicine have the necessary qualifications and competencies to practice Telemedicine safely.

2.5 Education, Orientation and Training (pg 18)

Relevant education, training, and orientation is necessary to ensure that healthcare providers involved in Telemedicine stay abreast with the latest advances in the field and deliver safe and good quality services.

2.6 Reimbursement (pg 18)

Organisations offering Telemedicine services should have strategies for retaining personnel that include reviewing compensation to ensure that it is fair and equitable.

ORGANISATIONAL (pg.19- 22)

3.1 Organisational readiness (pg 19)

To ensure the long-term success of Telemedicine services, healthcare organisations should look into: (a) planning readiness, (b) workplace environment readiness and (c) technical readiness.

Organisations should be aware of legislation, professional, regulatory and licensing requirements that impact the delivery of Telemedicine services.

3.2 Organisational Accountability (pg 20)

Accountability relating to the delivery of Telemedicine services should address the following elements: (a) governance framework, (b) privacy and confidentiality, (c) documentation and storage of patient records, (d) liability and risk management; and (e) inter-jurisdictional services.

Organisations providing Telemedicine services **must** have policies and procedures in place to protect the confidentiality of information. Telemedicine security policy and procedures should be integrated with those for electronic health records, whenever possible.

3.3 Ensuring Quality & Safety (pg 21)

Healthcare organisations **must** apply their safety procedures and protocols to Telemedicine services, as applicable, and ensure that the use of Telemedicine does not compromise patient safety.

3.4 Continuity (pg 21)

An integrated system of ICT should be in place to enable continuity of care and to leverage Telemedicine as a strategic resource that increases and improves the capacity of each healthcare organisation – and the healthcare system – to deliver services across distances. Business sustainability should be duly considered so as not to compromise patients' interests (e.g. patient's investments in Telemedicine hardware are not rendered unusable due to business closure).

TECHNOLOGY AND EQUIPMENT (pg. 23-27)

4.1 Procurement Practices (pg 23)

Organisations should ensure that the essential equipment procured for delivering Telemedicine services meet the user requirements and relevant standards.

4.2 Safety (pg 24)

Organisations providing Telemedicine services **must** comply with all relevant safety laws and regulations. Necessary clearances need to be obtained from relevant authorities (e.g. Health Sciences Authority, National Environment Agency and Infocomm Development Authority) to import Telemedicine equipment.

4.3 Security (pg 24)

Healthcare providers must have appropriate IT security policies, standards and processes to ensure the secure operations of Telemedicine services.

4.4 Diagnostic quality (pg 24)

For diagnostic Telemedicine services, delivery of diagnostic quality images and audio are essential for safety, effectiveness and efficiency.

4.5 Reliability (pg 25)

Reliability of technology and equipment is essential for safe, effective and efficient delivery of Telemedicine services.

4.6 Acceptability (pg 25)

Acceptability of technology and equipment is essential for safe, effective and efficient delivery of Telemedicine services.

4.7 Interoperability (pg 26)

Interoperability of systems (computers, communication devices, networks, software, and other IT components) with other components of the health system is necessary for effective and efficient delivery of Telemedicine services.

4.8 Scalability (pg 26)

Organisations providing Telemedicine services should take steps to facilitate scalability when purchasing equipment and technology.

4.9 Maintenance (pg 26)

Organisations providing Telemedicine services should have processes in place to ensure the safety and effectiveness of equipment.

4.10 End-of-Life (EOL) Considerations for Equipment (pg 27)

Organisations providing Telehealth services must have processes in place to ensure the safe recycling or reuse of any e-waste generated.

4.11 Equipment Calibration (pg 27)

Critical equipment that has a significant effect on the test result should be calibrated in accordance with recognised calibration laboratories to ensure measurement traceability to the International System of Units (SI).

4.12 Current Standards and Guidelines (pg 27)

Organisations providing Telemedicine services should follow existing guidelines and standards, where applicable. A number of such standards and guidelines exist {e.g. application-specific: teleradiology, telepharmacy; and application non-specific: diagnostic imaging [e.g. Digital Imaging and Communications in Medicine (DICOM)], health messaging [e.g. Health Level Seven (HL7)].