STANDARDIZATION OF TELEMEDICINE SERVICES IN KYRGYZSTAN

Recommendations for policy









the People of Japan

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This report is to provide information and suggestions for standardization of telemedicine services. It does not express an opinion as to the accuracy or completeness of the information provided by the author(s), the assumptions made by the parties that provided the information or any conclusions reached by those parties. This report is based on the information received or obtained, on the basis that such information is accurate and, where it is represented to the author(s) as such, complete. The information contained in this report has not been subject to an audit. All parties using this report must not rely on it as an alternative to legal/financial advice.

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ACRONYMS

AI	Artificial Intelligence
ATE	At the Elbow Support
CDC	The Centers for Disease Control and Prevention
CIS	The Commonwealth of Independent States
СМЕ	Continuing Medical Education
COVID-19	Coronavirus Disease 2019
CPG	Clinical Practice Guideline
GAPP	Generally Accepted Privacy Principles
НСР	Health Care Provider
HO KR	Healthcare Organizations of the Kyrgyz Republic
ІСТ	Information and Communication Technologies
M&E	Monitoring and Evaluation
MAST	Model for Assessment of Telemedicine
MHIF	The Mandatory Health Insurance Fund
PAHO	The Pan American Health Organization
RPM	Remote Patient Monitoring
SGBP	The State Guaranteed Benefits Package
тмс	Telemedicine Consulting
UNICEF	The United Nations Children's Fund
USA	The United States of America
WHO	The World Health Organization

1. PURPOSE AND OBJECTIVES

This document provides recommendations for developing a policy for the provision of telemedicine services in Kyrgyzstan. These recommendations are informed by a rapid review of the use of telemedicine in Kyrgyzstan as well as a review of telemedicine policies in several countries.

A major gap identified in the rapid review was the lack of a legal basis and policy related to telemedicine. This is a major barrier to scale up of programmes and their sustainability as telemedicine consultations are not reimbursed by the Mandatory Health Insurance Fund (MHIF) or covered under the State Guaranteed Benefits Package (SGBP). A set of recommendations for drafting a telemedicine policy for Kyrgyzstan has been developed through:

- Observations from the rapid review gathered through an analysis of existing telemedicine programmes
- Draft policy documents shared by the eHealth Center
- Comprehensive policy analysis of telemedicine laws and policies in several countries

2. INTRODUCTION TO TELEMEDICINE

In today's connected world, the use of mobile and digital technologies, including in the healthcare sector, is growing rapidly. Telemedicine is one such application of information and communication technologies to provide health care at a distance. There are many benefits of using telemedicine, including:

- Improves health access: especially for rural areas where people have to travel far and spend a considerable amount of time and money to get health care services. Telemedicine improves the geographic accessibility to health services.
- Helps with shortage of health providers: while the overall doctor-patient ratio in the world is low, doctors and specialists are largely concentrated in urban areas leaving rural areas without a sufficient supply of health providers. Telemedicine makes expertise available where it's needed through a virtual expert.
- Helps improve health worker competence and reduce isolation: health providers who work in rural or hard-to-reach areas can get support from remote specialists enabling them to do their job better while also upgrading their clinical skills.
- Reduces delay in health seeking, promotes early diagnosis and identification of diseases: patients often delay seeking care if they have to travel far or spend a lot of money. This is especially true for more marginalized populations like those living below the poverty line, socially or economically isolated communities, women, and the elderly. Telemedicine can promote better care-seeking behaviour by lowering the barrier to access.

Telehealth or telemedicine - what is the difference?

Telehealth and telemedicine are terms that are often used interchangeably. However, they are slightly different in scope and meaning. Telemedicine refers to providing health care services at a distance using information and communication technologies (ICT). It has an actual patient encounter as its basis with the services provided ranging from online consultation between a patient and a doctor to remote patient monitoring through medical devices, as well as consultations between two doctors to arrive at a management plan for a patient case.

The term "telehealth" is a broader umbrella term which encompasses providing health services at a distance (telemedicine) as well as other health system activities like health provider education (eLearning), research and evaluation (online questionnaires), and health administration activities (electronic health record).

Telehealth is broadly defined as "the delivery of health care services, where patients and providers are separated by distance. Telehealth uses ICT for the exchange of information for the diagnosis and treatment of diseases and injuries, research and evaluation, and for the continuing education of health professionals. Telehealth can contribute to achieving universal health coverage by improving access for patients to quality cost-effective health services wherever they may be. It is particularly valuable for those in remote areas, vulnerable groups and ageing populations." (WHO 2016). Figure 1 below shows some common terms in telehealth and telemedicine.

Figure 1. Common terms in telehealth and telemedicine



In 2016, the WHO Global Observatory for eHealth surveyed member states about the implementation of eHealth and telehealth policies. The survey reported that globally almost 60% of countries have a specific national telehealth policy or that there is a reference to telehealth in their national eHealth policy. 27 countries (22%) responded that they have a dedicated national telehealth policy (Figure 2). However, the extent to which the policy has been implemented in practice in these 27 countries is unclear. Figure 2. Share of countries with a dedicated national telehealth policy or strategy





Source: WHO Global Observatory for eHealth 2016

The key barriers to scale up and sustainability of telehealth programmes reported in this survey are – (1) lack of funding to develop and support such programmes, (2) lack of infrastructure (e.g. connectivity and/or equipment), (3) competing health system priorities, and (4) lack of regulation or legislation. See Appendix A for a list of WHO member states that participated in this survey that have a national telehealth policy.

The review of telemedicine programmes in Kyrgyzstan showed similar challenges with the three greatest being – lack of regulations, lack of reimbursement/funding mechanisms, and lack of infrastructure.

Based on the review, there are eight known active projects in the country:

- Four provider-to-provider telemedicine projects where doctors in primary health centers or secondary level provincial hospitals connect with specialists at tertiary level hospitals in Bishkek or outside the country (Geneva, India, China) for advice on the management of complicated cases. Application areas are psychiatry, emergency medicine, neurology, pediatrics, surgery, cardiology and family medicine.
- One surgical telementoring project where surgeons at a secondary hospital in Naryn connect with specialist surgeons in Bishkek to get real time support during an operation.
- Three eLearning projects where health providers receive continuous medical education through webinars and online educational content.

3. BACKGROUND OF TELEMEDICINE POLICY IN KYRGYZSTAN

Currently, the country has not yet adopted a law on telemedicine. This is a major barrier to the scale up and sustainability of the existing telehealth projects in the country. While the draft Law of the Kyrgyz Republic "On Telemedicine Services" was submitted in the parliament in 2012 and 2013, adoption of the bill by the Government is still pending as some details need refining. (Resolutions of the Government of the Kyrgyz Republic on the conclusion of the Government of the Kyrgyz Republic "On Telemedicine Services" of 28 March 2012 # 211 and of 10 June 2013 # 320)

The following d ficiently create
1. "Agreementional telen 2010, Saint
2. Decree of t Strategy fo - 2020" of
3. Order of th tion on the with the ord
4. Decree of th gyz Republi
5. Decree of th Electronic S
6. Programme Developme

The following documents provide some limited regulatory guidance, however, none of them sufficiently create a policy framework that promotes the standardization of telemedicine services:

- "Agreement on cooperation of the State Parties of the CIS in creation of compatible national telemedicine systems and their further development and use" of 19 November 2010, Saint Petersburg, http://www.base.spinform.ru/show_doc.fwx?rgn=32672.
- Decree of the Ministry of Health of the Kyrgyz Republic "On Approval of the Development Strategy for Postgraduate and Continuous Medical Education in the Kyrgyz Republic 2014 – 2020" of 18.05.2015. #248.
- 3. Order of the Ministry of Health of the Kyrgyz Republic "On approval of the Model Regulation on the Telemedicine Counseling System" of 06.10.2015. #574. Link to the document with the order no 574.
- 4. Decree of the Ministry of Health of the Kyrgyz Republic "E-health Programme of the Kyrgyz Republic 2016- 2020" of March 18.03.2016, # 134.
- 5. Decree of the Ministry of Health of the Kyrgyz Republic "On Approval of the Architecture of the Electronic System 'Health Service of the Kyrgyz Republic 2018- 2023'" of 15.03.2018, # 190.
- Programme of the Government of the Kyrgyz Republic "On Protection of Public Health and Development of the Health System 2019 – 2030 'A Healthy Person – Prosperous Country'" of 20.12 2018 # 600.

See Appendix B for a detailed review of each of these laws. and Appendix C for a new policy directive, drafted in December 2019. . It is recommended that the policy directive be revised in keeping with the recommendations in this report.

4. RECOMMENDATIONS FOR NORMATIVE GUIDELINES

This section explains the key normative aspects that need to be addressed by a national policy. The ultimate aim of adopting a telemedicine policy is to increase health access, improve provider availability, and reduce healthcare costs for both patients as well as for the health system.

4.1. Legal basis for telemedicine and telehealth

The foremost important goal of the policy is to recognize the legitimacy of delivering healthcare services at a distance using information and communication technologies and create a legal basis for providers to deliver health services.

4.2. Scope of the guideline and definitions

The first question to be addressed is the scope of the policy and definitions. Telemedicine laws globally have evolved over time, with the first drafts being narrow in scope and then expanding and refining through lessons learned during implementation. At the very least, the policy directive should cover the projects currently ongoing in the country.

Should, then, Kyrgyzstan adopt a broader telehealth law or a narrower telemedicine law? Since eLearning activities are a significant part of the projects ongoing in the country,¹ adopt-

¹ The Decree of the Ministry of Health of the Kyrgyz Republic "On Approval of the Development Strategy for Postgraduate and Continuous Medical Education in the Kyrgyz Republic 2014 – 2020" of 18.05.2015, # 248 offers some legal basis for eLearning projects in the country under which these projects are able to continue.

ing a broader telehealth law may be beneficial to promoting these projects. However, broadening the scope to telehealth may add significant time to drafting legislation, in which case a narrower telemedicine law may be considered.

The following types of telehealth activities, that are currently ongoing in the country could be covered by the scope of the policy:

- Synchronous provider-to-provider telemedicine: Teleconsultations between two or more health care providers in real time through interactive video or audio.
- Telementoring: Procedural guidance of one professional by another from a distance using telecommunications. A remote health provider of a higher skill level guides the on-site provider in real time through audio or video connections, typically through a surgery or a complicated medical procedure.
- eLearning: Facilitating medical education of healthcare providers through the use of ICT such as webinars, online courses, live surgery broadcasts, etc.

The following types of telehealth activities, that are not currently ongoing in the country but are planned may be considered to be included in the scope of the policy:

- Asynchronous provider-to-provider telemedicine (store-and-forward telemedicine): This involves the sharing of medical data and images using email or web mobile communication by a lesser skilled healthcare provider to a higher skilled provider to get a diagnosis. In this case, the remote provider does not respond in real time and does not have a conversation with the originating provider. This is used in teleradiology and teledermatology and is a very common application area of telemedicine, particularly in developing countries where internet bandwidth may be too low to support video conferencing.
- Synchronous client-to-provider (online consultation): Teleconsultations between a patient and a healthcare provider using web and mobile technology, also commonly referred to as "virtual visits" or "direct-to-patient (D2C) telemedicine" in real time through interactive video or audio.
- Remote patient monitoring: Remote patient monitoring (RPM) uses digital technologies to collect health data from individuals in one location and electronically transmit that information securely to health care providers in a different location for assessment and recommendations. This type of service allows a provider to continue to track healthcare data for a patient once released to home or a care facility, reducing readmission rates.

Another consideration when defining the scope of a future law is – what constitutes telemedicine in terms of the modality used to communicate health information? Should a telemedicine encounter require a real-time video component, or could it also include collaboration between two providers or between a patient and a provider using audio, and/or picture, and/ or text and/or data? Some developed countries limit reimbursement of telemedicine to only those encounters that have a video component, and do not reimburse encounters that involve store-and-forward or audio-only consults.

However, the trend in developing countries is to allow the use of audio, picture, text, and data as a means of communication to share medical information at a distance. This is primarily, as mentioned before, because the internet infrastructure in developing countries, particularly in remote areas, is not sufficient to support video consultation. However, during a telemedicine encounter, whatever be the modality of communication between the originating site and the distant site, the healthcare provider at the distant site must make sure that the data shared is sufficient for them to be able to provide a diagnosis and a treatment plan and that tele-

medicine would be an appropriate standard of care in that case. If they feel that the data is not sufficient for them to make a well-informed clinical decision, then they should refer the patient for in-person consultation.

For example, the following excerpt from the Telemedicine Regulations in the Kingdom of Saudi Arabia (2018) provides a clear scope of telemedicine regulation in the country and is sufficiently broad to cover the most common use cases.

2.1 DEFINITIONS

2.1.1.Telemedicine shall be defined as a remote medical practice using information and communication technology (ICT).

2.1.2. Telemedicine shall be synchronous (simultaneous transfer of information including videoconference) or asynchronous (non-simultaneous transfer of information).

2.1.3. Telemedicine should be delivered through video, and/or audio, and/or picture, and/or text, and/or data.

2.1.4. Telemedicine should be used for an interaction between a patient and a Health Care Provider (HCP), or between two or more HCPs.

2.1.5. Telemedicine should be used between an originating site and a distant site. The originating site is where the patient is located, and the distant site is where the remote HCP is located.

2.1.6. Telemedicine may involve robots or artificial intelligence (AI).

4.3. Standard of care

A telemedicine encounter is a replacement for an in-person encounter. What are the cases in which a telemedicine consultation can reasonably be used as a substitute for in-person care? What are the contexts in which telemedicine is a suitable standard of care? These are important considerations when determining reimbursement of telemedicine services by insurers, as it is important that the right modality (telemedicine or in-person care) is chosen for the patient in a way that is cost-effective without compromising service quality and patient outcomes.

In some states in the United States of America (USA), standard of care definitions are determined by the application area of telemedicine. For example, telemedicine is considered an appropriate standard of care for radiology. Instead of referring the patient to a radiologist and incurring extra costs, radiographic images can be transmitted to a remote radiologist. Evidence has shown that teleradiology delivers comparable outcomes as compared to in-person encounter at significantly lower costs. In some states in the USA, Medicaid (state-sponsored health insurance) does not reimburse for the use of telemedicine for certain specialities.

In other states in the USA, standard of care is defined by geographic inaccessibility. That is, the patient must be based in a geographically remote location where an in-person consult is not practical. However, states are slowly lifting these requirements as direct-to-patient telemedicine programmes gain popularity. Patients are opting-in for virtual visits for simple conditions because of convenience and lower wait times instead of going to an in-person provider, even if that provider is geographically nearby.

However, in the context of Kyrgyzstan, limiting standard of care definitions by specialty or geographic inaccessibility may not be practical. Hence, this report recommends a definition that is more appropriate to a developing country context where in-person consults may not be practically feasible in most cases.

Standard of care definition, excerpt from the National Telemedicine Guidelines for Singapore 2015

1.2 Standards of Clinical Care

The lack of face-to-face contact raises the important question of whether Telemedicine allows health care providers to reasonably meet the standard of care where a direct analogue to the traditional mode of health care delivery may not exist. The following are some principles for Healthcare providers to adhere to, to ensure that the standard of care is maintained in Telemedicine:

- a) 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.
- b) Prior to commencing Telemedicine services to a patient, the healthcare provider must be satisfied that the patient is suitable for a Telemedicine interaction and that the standard of care delivered via Telemedicine is reasonable considering the specific context.
 - i. A face-to-face evaluation/consultation where reasonably practical must be done before or very soon after commencement of Telemedicine services. For the avoidance of doubt, this requirement does not apply where the Telemedicine service does not involve any Tele-treatment e.g. Tele-radiology.
 - ii. The reasonableness of delivering care via Telemedicine is determined by the clinical context, the clinical objectives and the compatibility of technology to meet those objectives.
 - iii. Other considerations include the literacy level of the patient, the level of training of the healthcare professional, and the availability of satisfactory alternatives
 - iv. The adequacy of the Telemedicine interaction to meet the desired standard of care should be discussed with the patient and caregiver. The patient and caregiver should be informed of other suitable alternatives that are available.
- c) The standard of care must be upheld by all healthcare professions involved in the Telemedicine interaction. Telemedicine opens up numerous options for referral and coordinated care. Proper referral and other necessary protocols should be put in place to avoid fragmentation of care, and all parties involved should be aware as to who is responsible for each aspect of care.
- d) The healthcare profession should follow existing Clinical Practice Guidelines (CPGs) where they provide for the delivery of care by Telemedicine. These CPGs may need to be modified to address the specific context of Telemedicine. It is

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recommended that any and all such modifications to the CPGs are approved by the governing bodies of the specific healthcare disciplines.

- e) To deliver quality care and meet the requisite standard of care in Telemedicine, a range of issues need to be addressed by healthcare organisations. These issues include informed consent, privacy/confidentiality, documentation, and protocols, each of which will be discussed in subsequent sections.
- f) As far as reasonably possible, the technology component of Telemedicine should be incorporated in the normal workflow of clinical processes by the healthcare organisation so that the quality of care as delivered by Telemedicine is integrated within the organisation's governance and oversight of its other clinical processes.

4.4. Entities involved in teleconsultations

Telemedicine involves communication between an originating site where a patient is located and a distant site where the remote provider is located. The patient may be directly reaching out to the remote provider (client-to-provider) or the patient may be under the care of a lower skilled local provider who is communicating with a higher skilled remote provider (provider-to-provider telemedicine).

• Who can request for a telemedicine consultation (originating site)

The guideline should define whether consultations can only be requested by licensed medical practitioners (doctors, nurses, midwives, community health workers) or also by patients themselves. In addition to healthcare facilities, the guideline should clarify whether the originating site can also be the patient's home to allow for remote patient monitoring or teleconsultations during home visits, which is a currently ongoing programme in the Kyrgyz Republic.

• Who can provide care in a telemedicine consultation (distant site)

The guideline should define the required level of licensure of the remote provider. It should specify whether providing a teleconsultation is limited only to registered and licensed physicians or if licensed nurses, counsellors, and midwives can also provide treatment. It should also specify whether the institution providing telemedicine services (distant site) must be a hospital or other registered medical institution and the licenses needed by that institution to provide telemedicine services.

International or cross-border teleconsultations

The guideline should specify whether cross-border telemedicine is allowed and whether the distant site can be in another country. It should also define whether the scope of cross-border telemedicine is limited to provider-to-provider where a provider at an in-country institution requests for consultation with a provider at a foreign institution or whether it also includes client-to-provider cross-border telemedicine where patients from Kyrgyzstan can request for consultations with providers in other countries.

Countries differ in approaches to cross-border telemedicine. Many country policies do not mention cross-border telemedicine and do not include it in the scope of regulation at all leaving its status somewhat ambiguous (e.g. China, Russia). Many states in the USA require that the provider at the distant site be licensed in the USA and practicing in the same state as the patient. This effectively prohibits cross-border telemedicine. This limitation was implemented due to a high rate of fraudulent healthcare providers from foreign countries providing online consultations at an extremely low price. In contrast, in order to promote cross-border telemedicine, while also protect from fraud, the Government of Malaysia issues a certificate to foreign providers who need to obtain approval from the Ministry of Health for providing healthcare services at a distance to originating sites in Malaysia.

Current projects in Kyrgyzstan do involve cross-border consultations with providers in foreign countries. These projects fill an important gap in availability of highly specialized medical practitioners and they also serve to train physicians in the country in the latest advancements in medicine.

Excerpt from the Laws of Malaysia, Act 564 – Telemedicine Act 1997

Persons who may practise telemedicine.

3. (1) No person other than—

- (a) a fully registered medical practitioner holding a valid practising certificate; or
- (b) a medical practitioner who is registered or licensed outside Malaysia and-
 - (i) holds a certificate to practise telemedicine issued by the Council; and
 - (ii) practises telemedicine from outside Malaysia through a fully registered medical practitioner holding a valid practising certificate,

may practise telemedicine.

(2) Notwithstanding paragraph (I)(a), the Director General may, upon an application being made by a fuily registered medical practitioner, permit in writing, subject to such terms and conditions as the Director General may specify, a provisionally registered medical practitioher, a registered medical assistant, a registered nurse, a registered midwife or any other person providing healthcare, to practise telemedicine if such person—

(a) is deemed suitable by the Director General to be so permitted; and

(b) is under the supervision, direction and authority of the fully registered medical practitioner making the application.

(3) Any person who practises telemedicine in contravention of this section, notwithstanding that he.so practises from outside Malaysia, shall be guilty of an offence and shall on corwiction be liable to a fine not exceeding five hundred thousand ringgit or to imprisonment for a term not exceeding five years or to both.

4. (1) An application for a certificate to practise Certificate

telemedicine referred to in paragraph 3(1)(b) shall be made by a medical practitioner registered or licensed outside Malaysia through a fully registered medical practitioner to the Council in such manner or form and accompanied by such documents, particulars and fees as may be prescribed.

(2) The Council may issue to the applicant a certificate to practise telemedicine for a period not exceeding three years subject to such terms and conditions as the Council may specify in such certificate.

(3) The Council may at any time vary the terms and conditions of a certificate to practise telemedicine issued under subsection (2).

(4) The Council may at any time cancel any certificate to practise telemedicine issued under subsection (2) if the person to whom the certificate is issued contravenes any term or condition specified in the certificate.

(5) Any person who is aggrieved by the refusal of the Council to issue a certificate to practise telemedicine or by the cancellation of a certificate to practise telemedicine may appeal to the Minister whose decision shall be final.

4.5. Responsibility and accountability for patient outcomes

As telemedicine is an emerging field, physicians may be understandably concerned about the legal implications and malpractice issues. As of yet, there is not a lot of data available on who is responsible for patient outcomes. The accountability also varies in different scenarios: provider-to-provider, client-to-provider and in cross-border telemedicine. Hence, it is difficult to assign a clear person responsible for a telemedicine encounter given the wide range of use cases. Just as in an in-person setting all healthcare providers that are directly involved in the patient's care are exposed to the legal risk associated with an adverse event due to medical error, the same holds true in a telemedicine context. The record of teleconsultation should include all providers involved in the care of the patient, including those providers who are remote. The provider responsible for follow up or ongoing care after the teleconsultation must also be clearly identified.

Simple precautionary measures may be taken by remote providers in order to protect from malpractice claims arising from a telemedicine encounter by following standard of care recommendations. While the remote provider is limited by the information they receive and cannot see or touch the patient directly, they may exercise their best judgement in determining whether they have sufficient information in order to provide a medical decision or whether they should determine that care using telemedicine is not possible and an in-person visit is required. This may be an important part of provider training when learning how to deliver care using telemedicine.

Excerpt from the National Telemedicine Guidelines for Singapore 2015

1.1. Duty of Care

Due to the nature of a Telemedicine encounter (e.g. care of a patient often involving a team of healthcare professionals, care not delivered in a traditional care setting, technology limitations), there is an emerging necessity to be clear when a "duty of care" has been established and to ensure accountability for the care of the patient at all stages. The following are some points to be kept in mind:

- a) 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.
- b) Healthcare professionals should collaborate with each other to clearly define their roles and responsibilities (e.g. who would deliver which aspect of care, ranging from the responsibility of ordering tests, to follow-ups, to keeping a record of the notes, etc)

c) The patient and caregiver should be given clear and explicit direction at the Telemedicine encounter as to who has ongoing responsibility for any required follow-up and ongoing health care.

4.6. Patient consent

Patient consent is generally considered an important part of telemedicine and the majority of telehealth policies include consent as an essential element. The examples below describe some scenarios.

Emergency case: A patient is brought to the emergency room of an oblast hospital after an accident with a severe brain injury and urgently requires surgery. However, there is no neuro-surgeon available. It will take 5-6 hours for the neurosurgeon at the nearest tertiary hospital to be transported to the oblast hospital during which time it is likely that the patient will die or become severely disabled. In such a case, the available surgeon may recommend surgical telementoring in which they would be guided by a remote neurosurgeon in performing the operation. There are significant risks associated with this approach, including risks associated with the performing surgeon's lack of experience or the risk of a technical failure that may disrupt the telementoring session. However, the risk of death or permanent disability while waiting for a neurosurgeon may be much higher than the risk associated with using telementoring. In such a case, the physician should explain the available choices to the patient's family or representative (wait for a neurosurgeon or proceed with a remotely-guided surgery), the risks associated with both approaches and allow the representative to make an informed choice about their care.

Non-emergent case: A patient living in a rural area learns about a new mobile app through which they can directly communicate with a doctor in Bishkek and attend a virtual visit from the comfort of their home instead of having to travel several kilometers to the nearest family medicine center. The patient should be made aware of the risks associated with choosing a virtual visit instead of an in-person encounter (such as any data security and privacy risks) as well as about what will be done with their data (their right to access their own medical records, what will be done with their information, consent for data sharing and use for research purposes).

Minimum requirements that may be included in the process of consent:

- Explanation of risks, consequences and benefits
- Consent to share medical records electronically and explanation of data privacy protections
- Withdrawal of consent
- Confidentiality, privacy and security of data
- Consent in case of minors, disabled or those incapable of providing consent
- Cost of the telemedicine service to the patient if any
- Alternative approaches available
- Record of consent in the medical chart

See Appendix D for a sample patient consent form used in the Aga Khan Telemedicine project.

4.7. Record keeping standards

Telemedicine consultations should be documented in the patient's medical record. The record could include the following information at the minimum – who requested the teleconsultation, reason for request, the remote provider giving the teleconsultation, including their qualifications and licensure (to protect against fraud), the location, date and time, type of telemedicine activity, details of medical investigations, tests, technical incidents that may have affected the teleconsultation, any adverse events observed. According to globally accepted best practices, a patient has the complete right over their health information and should be able to access all their information, including that information shared in a teleconsultation.

In addition, special guidelines for issuing ePrescriptions may also be included in the policy including:

- Standards for recording the digital signature of the provider giving medical treatment over telemedicine
- Classes of drugs that may not be prescribed over telemedicine (e.g. narcotics, psychotropic substances)

For example, the newly enacted telemedicine law in Russia in 2019 allows ePrescribing of all drugs including narcotics or psychotropic drugs provided that the prescription has "an enhanced qualified electronic signature" (a type of electronic signature where the identity of the signing authority is verified by a recognized government authority as opposed to a digital signature done using a tool like a simple PDF editor). There has been some pushback against this as it adds a high technical barrier of implementation. The USA allows ePrescribing with a digital signature for most classes of medicines and requires an enhanced electronic signature with two factor authentication by the pharmacy for restricted classes like narcotics and psychotropic substances. India, however, completely bans the sale of certain drug classes without a physically signed prescription. ePrescribing guidelines may also include basic minimum information that must be shared with the patient such as the remote provider's name, licensure, qualifications, medical registration number, etc.

An excerpt from "The Federal Law on amendments to certain legislative acts of the Russian Federation on the application of information and telecommunication technologies and the introduction of electronic forms of documents in the field of healthcare states,"

"paragraph 3 of Article 78 shall be stated as follows:

3) issue medical reports, prescriptions for medicines, including prescriptions for medicines containing prescription of narcotic drugs or psychotropic substances, medicines for medical use subject to quantitative registration, and medical devices, certificates on paper and (or) in the form of electronic documents signed by an enhanced qualified electronic signature, disability certificates in the manner prescribed by the authorized federal body;"

4.8. Data privacy and security

The policy must include the data privacy standards to be adhered to, including other data privacy laws in the country, such as "The Law of the Kyrgyz Republic on Personal Data No.58 of 14 April 2008 ('The Law on Personal Data')". Adequate protection of patient privacy and security through the use of data security and encryption methods and the use of patient privacy guidelines is absolutely necessary for patients to be comfortable sharing their medical information without fear. Such standards of data privacy and confidentiality should be maintained irrespective of whether the patient is being seen in-person or over telemedicine. See Appendix E for a summary of "Generally Accepted Privacy Principles (GAPP)."

4.9. Technology standards for hardware equipment, software, data sharing

The equipment used for telemedicine and infrastructure must support care delivery at a reasonable quality. Currently, telemedicine projects in Kyrgyzstan use donor funds or the facilities' own budget to procure equipment, which is a bottleneck to adoption. The law may create budgetary provisions for state-funded health organizations to procure and maintain telemedicine equipment as part of building the country's eHealth infrastructure.

Health organizations may ensure that the following factors are considered while procuring the necessary technical infrastructure for a telemedicine programme:

- Availability of internet
- Bandwidth
- Network capacity and interoperability
- Fidelity of data transmission
- Data security
- Maintenance
- Technical support
- Reliability of the software and hardware equipment
- Equipment calibration requirements and failure rate
- User-friendliness of equipment and software, including its availability in local languages (Kyrgyz, Russian)
- Scalability
- Adherence of equipment to relevant standards such as:
 - IEC 60601 for medical equipment
 - ICE 61010 for lab equipment
 - ISO 27001/2 for IT security
 - IEEE 11073 for connected device interoperability
 - HL7 for data sharing
 - DICOM for image communication
 - ISO/TR 16056 for interoperability of telehealth systems
 - ISO/TS 16058 for interoperability of eLearning systems

There are a number of different telemedicine devices and software technologies available in the market. While it would be restrictive to define a specific set of equipment, health organizations who are implementing telemedicine programmes should obtain equipment that meets the needs of the project. It should also meet standards for medical devices and software following the relevant laws and regulations in the country.

4.10. Training

Health providers must have some training prior to participating in telemedicine to educate them about the particular skills they need in order to provide care over telemedicine. At minimum these may include:

- Training in use of technology
- • Standard of care requirements knowing when telemedicine is an appropriate option and when it is better to refer to an in-person visit
- Familiarity with standard operating procedures and care protocols
- Communication skills over telemedicine
- Limitations of telemedicine
- Laws and regulations related to telemedicine
- Patient data privacy and data sharing

In addition, the law may direct medical associations to establish ethical guidelines for physicians to follow when providing telemedicine-based care, and they too may be included in the training to physicians².

The law may also establish whether providers may earn continuing medical education (CME) credits for undergoing training over an eLearning format. This would promote provider adoption.

4.11. Quality assurance and quality control measures

The policy may recommend that health organizations implement standards for assessment of telemedicine quality (e.g. MAST – Model for Assessment of Telemedicine, used in Europe), just as they implement quality assurance standards for in-person care. A central body may be designated as the authority responsible for quality assurance or quality audits. Some quality control indicators that may be measured may include:

- Adherence to standardized clinical processes
- Protocols in case of emergencies
- Patient satisfaction
- Provider satisfaction
- Data completeness
- Technical quality of consultation
- Quality of communication

² For example, the ethical guidelines published by the American Medical Association provide best practice guidelines for physicians practicing telemedicine and may be accessed here

- Performance metrics
- Cost
- Utilization
- Improved access to care

4.12. Reimbursement

Currently, the uptake of telemedicine-based care in Kyrgyzstan is hindered by the lack of reimbursement for the provider's time in a telemedicine encounter. In order to promote telemedicine activities in the country, the law must allow that telemedicine service providers may be remunerated for their activities when standard of care guidelines are met. Several countries reimburse telemedicine services including synchronous as well as store-and-forward care, provider-to-provider as well as client-to-provider care and also remote patient monitoring³.

4.13. Supervising authority

It is recommended that a central authority be designated to implement this telemedicine policy and monitor compliance. The law should define whether medical institutions undertaking telemedicine projects are required to report their activities to this authority or to the authority responsible for oversight of medical institutions in general as in traditional medical care activities. Process of receiving complaints regarding telemedicine services may be governed by the supervising authority. The authority may also initiate disciplinary action for non-compliance with regulations, such as suspension of license or fines. It may also refine and continuously improve telemedicine regulation based on country experience.

A single authority or a group of authorities may be designated as supervising authorities. For example, telemedicine regulatory measures in China delegate the responsibility to define the guidelines and operating procedures for telemedicine to medical societies, and authorize provincial healthcare authorities to supervise healthcare services offered online.

5. STRATEGY AND IMPLEMENTATION PLAN

The successful implementation of a national telehealth strategy requires careful planning. One research study showed that 75% of telemedicine projects fail in the implementation phase. This section presents recommendations for an implementation strategy for telehealth and telemedicine projects.

5.1. Telehealth or telemedicine strategy?

Based on the findings from the review, there are several eLearning projects ongoing in Kyrgyzstan that build capacity of frontline health providers. These projects could deliver strong impact if properly implemented and scaled. The infrastructure and skillsets required for eLearning projects overlap to a great extent with those required for telemedicine. Hence, it is recommended

³ An analysis of reimbursement mechanisms for telemedicine by Medicaid in the USA by the Center for Connected Health Policy can be accessed here and a historical trend of telehealth reimbursement can be found here.

that Kyrgyzstan adopt a National Telehealth Policy and National Telehealth Strategy to include eLearning projects in the scope of the policy and implementation.

5.2. Application areas

There are several application areas of telehealth and telemedicine, however, the implementation of these projects should be needs driven. Some application areas of telehealth and telemedicine include:

- Provider-to-provider teleconsultations for specialist care
 - Emergency medicine
 - Pediatrics
 - Oncology
 - Cardiology
 - Neurology
- eLearning to improve provider capacity
- Provider peer learning groups and support portals
- Access and reach to care services in rural areas or hard to reach areas where provider availability is low
- Home visits for early identification of conditions to reduce delays in care seeking
- Improved delivery of primary health care
- Teleradiology
- Teledermatology
- Home-based access to care for patients with disabilities, elderly, cancer patients
 - Virtual visits
 - Remote patient monitoring using connected devices
- Virtual visits to improve timely care for acute conditions more conveniently for the patient
- New care delivery models for mental health services
- Surgical telementoring where a remote provider guides an on-site provider in real time to manage the patient's case.

When selecting an application area for project implementation, the following may be taken into account:

- 1. Does this project solve an unmet need?
- 2. Does the project reduce the geographic and financial access barriers for patients? Will patients spend less time and money to get a health service through telemedicine as compared to the existing method of service delivery?
- 3. Will the improvement in access reduce delay in care seeking for patients and promote early identification of disease?
- 4. Will the project improve patients' satisfaction with the health system?

- 5. Is there sufficient evidence to show that delivery of health services using telemedicine is comparable to or better than the current standard of care in terms of quality of service delivery and end outcomes?
- 6. Does the project help with the shortage of health providers and improve the availability of health providers where there are no doctors? Does it allow for medical expertise to be virtually present if an expert can't be physically present?
- 7. Does it help improve health worker competence and reduce isolation of frontline health providers? Does it enable them to provide care for conditions that were previously not possible to manage?
- 8. Is the necessary infrastructure (availability of internet, power, computers and devices) available to support the project?
- 9. Is the project aligned with the health system's priorities (e.g. reduce maternal and child deaths, improve primary care services, digitization of the health system)?
- 10. How complex is the project to implement? What is the cost of implementation?
- 11. What is the plan for long-term sustainability of the project?

5.3. Establishment of a National Telehealth Center

Governance is an important component of the implementation of a telehealth strategy. Hence, it is recommended that a National Telehealth Center be created within the eHealth Center to drive the implementation of telehealth and telemedicine projects in the Kyrgyz Republic. The role of a National Telehealth Center is to,

- Identify application areas for telehealth projects by analyzing unmet needs and gaps in health service delivery and implement telemedicine services in the Kyrgyz Republic to address unmet needs, improve health access, improve quality, and reduce costs
- Co-ordinate with various stakeholder groups (Ministry of Health, Republican Health Centers, medical institutions, educational institutions, insurance providers, policy makers, local and international non-profits, professional associations, technology companies, private sector), to drive adoption of services
- Ensure the availability of necessary infrastructure and technology to support ICT-based health service delivery in co-ordination with the eHealth Center
- Procure, install and maintain technical infrastructure
- Promote health provider education, behaviour change, and organizational change to successfully integrate telemedicine projects into the health system
- Organize training, capacity building, and credentialing of providers in telemedicine-based service delivery
- Drive public policy to support telemedicine services
- Conduct monitoring and evaluation of existing projects and initiatives to identify if they are meeting their outcome goals
- Supervise current projects to ensure adherence to necessary laws and guidelines
- Conduct quality assurance of ongoing projects
- Perform cost-effectiveness analysis to inform reimbursement mechanisms

- Establish financing to support telemedicine projects
- Establish sustainability pathways for projects.

Figure 3. Cyclical process of implementation and continuous improvement of telehealth



5.4. Implementation plan with milestones

The timeline below shows (Figure 4) a proposed approach to the implementation of a National Telehealth Policy and an implementation plan for rolling out services.

Figure 4. Timeline of implementation of National Telehealth Policy



See Appendix C for a draft policy directive for the establishment of the National Telehealth Center and the plan for implementation of a pilot project aimed at ensuring the availability of emergency and routine medical care for children and adult population of Kyrgyzstan.

5.5. Project implementation flowchart

Once an application area is selected, the National Telehealth Center would be responsible for its end-to-end implementation. The following flowchart (Figure 5) may be used to guide the center in planning the flow of activities to deliver a smooth implementation.

Recommendations for policy

Figure 5. Project implementation flowchart



5.6. Barriers and facilitators to implementation

The barriers and facilitators to implementation have been well studied in the literature.

Table 1: Barriers to implementation of telemedicine services

Technological	 Lack of technological infrastructure and skills;
Environment	 Poor coverage in certain areas of the territory;
	• Diverse information systems available, with a large number of internal, tailor-made applications not providing for the possibility of interconnection;
	 Complex use of implemented solutions;
	Data security, confidentiality, and protection.
Organisational Environment	 The (re)design of the medical care model and the consequent need for learning about the new health care model;
	 Lack of strategic alignment between different participants of telemedicine projects;
	• The (re)definition of some existing roles and the emergence of new professional profiles which, together with the redistribution of responsibilities, give rise to conflicts about professional recognition and insecurity when taking over tasks at the highly hierarchical level typical of health care organizations;
	• The permanent change in which projects are forced to advance as the result of the speed of technological changes and the ever- improving health care environment.
Human Environment	 he human factor, generically defined as «resistant to change»;
	• The lack of emotional bond and sense of belonging to the project;
	• The level of individual competence in the information field and/or the necessary skills to perform confidently;
	• Existing opinions about telemedicine;
	 Skepticism toward certain types of «pilot» tests, considered almost unnecessary due to the very nature of the technology to be tested;
	• The workload required to implement this type of program in the existing setting;
	• Resistance to changing routines from one in which professionals feel safe and comfortable for a new and unfamiliar one, which entails a certain level of initial uncertainty;
	• Different interests, concerns, and priorities of professionals who have to implement telemedicine compared to those promoting the implementation.

Economic Environment	Implementation costs;
	• Initial funding and project sustainability. The fact that telemedicine is not included in the portfolio of administration services, and therefore lacks a well-defined and explicit economic framework to which all organizations can adhere,
	• is widely considered the most important barrier for standardization. This barrier is associated with the lack of scientific evidence regarding clinical and economic benefits.

(Source: PAHO. Framework for the Implementation of a Telemedicine Service. Washington, DC, 2016.)

Table 2: Facilitators to implementation of telemedicine services

The development of telemedicine should respond to a clearly perceived need by medical professionals of the organization.

The environment. When initiatives that have been successful in other organizations are transferred, it is necessary to take into account the reality and the needs of the specific environment of implementation.

Guarantee leadership. Having clear, identifiable, and proactive leadership that is capable of energizing and managing correctly all the parties, and is flexible enough to adapt to emerging situations, is a key factor in facilitating any telemedicine project.

Involve health professionals who will later use the new service in telemedicine projects as partners.

Establish collaboration with other organizations participating directly or indirectly in the project (health care, technological and service companies, administration) beyond the customerprovider relationship.

Together with the aforesaid, involve scientific institutions.

Implement public policies and strategies for telemedicine.

Verify the cultural predisposition toward telemedicine as a routine element of clinical practice; also determine previous experience of professionals in working with existing care models that incorporate technology.

Ensure that the technology to be implemented is functional and user-friendly.

Prepare the necessary resources for implementation and sustainability. The strategy should consider the changes implied by incorporating telemedicine and what changes will be necessary to introduce it, including necessary human and technological resources, dissemination of the new service, as well as required funding and time.

Resources and visibility. The initiative should be part of international projects, collaborating with organizations from other countries. It should generate its own resources and improve the visibility of participants in their own setting as well as internationally.

Establish meticulous evaluation mechanisms.

Establish efficient governance mechanisms.

Elaborate and implement a business plan.

Put the patient at the center of the service.

Ask for expert advice regarding legal, ethical, privacy, and security issues. Establish the necessary legal mechanisms. Apply the relevant security guidelines (for specific countries and for specific groups of health professionals, e.g., physicians) that encode legal and security measures and ethical and political considerations. Ensure privacy awareness of authors and telemedicine users (having adequate knowledge of conduct relating to privacy and security, based on current ethical and legal principles).

Control service operation to ensure the service is working smoothly, observing users' needs. Ensure that technology has the potential to be amplified *(Think Big)*.

(Source: PAHO. Framework for the Implementation of a Telemedicine Service. Washington, DC, 2016.)

5.7. Monitoring and evaluation framework for telehealth projects

Below a simple logic model with key indicators to monitor the extent to which the strategy is being implemented. The goal of this logic model is not for an in-depth monitoring and evaluation but to provide high-level indicators that at the very least must be measured to determine the overall progress towards the implementation plan.

 Table 3: Logic Model for monitoring and evaluation of telehealth implementation in the Kyrgyz

 Republic

Inputs	Activities	Outputs	Outcomes
 Establishment of a national telehealth policy Establishment of a telehealth working group Establishment of a national telehealth center Funding for telehealth activities Establishment of necessary infrastructure at telemedicine sites (internet, power & equipment) Data privacy & security laws eHealth Strategy 	 Needs analysis Implementation strategy & plan Identification of key priority areas for projects to implement Project planning, set up and roll out Day-to-day operations of projects Procurement & installation of technology & infrastructure Maintenance of technology Monitoring & evaluation 	 Number of ongoing telemedicine & telehealth projects in the country No. of health institutions where these projects are implemented No. of patients seen No. of centers where equipment was installed No. of centers where equipment is well-maintained and well-functioning No. of trainings conducted No. of partnerships and participating 	 Lives saved Lives improved Reduction in time taken, money spent and distance traveled by patients to access health services Reduction in cost of health service delivery for health institutions Provider satisfaction Improved provider satisfaction and reduced isolation Improved patient satisfaction Better care seeking behaviour

For more in-depth evaluation of telemedicine projects, the following frameworks may be useful.

Suggested M&E frameworks

- The MAST (Model for Assessment of Telemedicine Applications) is a framework for assessment of the value of telemedicine. Kidholm, K., Ekeland, A., Jensen, L., Rasmussen, J., Pedersen, C., Bowes, A., . . . Bech, M. (2012). A MODEL FOR ASSESSMENT OF TELEMEDICINE APPLICATIONS: MAST. International Journal of Technology Assessment in Health Care, 28(1), 44-51. doi:10.1017/ S0266462311000638. Accessed at: https://pdfs.semanticscholar.org/0412/8fc9ab750a1bec0ffb55719e783c3860d8dd.pdf
- Monitoring and evaluating digital health interventions: a practical guide to conducting research and assessment. Geneva: World Health Organization; 2016. Licence: CC BY-NC-SA 3.0 IGO. Accessed at: https://www.who.int/reproductivehealth/publications/mhealth/digital-health-interventions/en/

6. TELEMEDICINE AND COVID-19

The COVID-19 pandemic has placed increased importance on the role of telemedicine in the delivery of routine healthcare services. Remote healthcare minimizes direct contact between a patient and a provider and reduces the risk of infection transmission. It also allows for decongestion of healthcare facilities.

Hence, in the light of the current pandemic, guidelines have been issued for patients to seek medical consultations with healthcare providers on phone first and only then visit in-person if the healthcare provider deems that necessary. As much as possible, use of remote healthcare is encouraged for the delivery of essential health services.

The WHO includes telemedicine as a key component of "Maintaining essential health services: operational guidance for the COVID-19 context" (June 2020) and recommends shifting the delivery of routine services to digital platforms and establishing the mechanism of issuing ePrescriptions. The following uses of telemedicine and digital health can be considered as a way to strengthen healthcare delivery during this pandemic:

- 1. Establish interim guidance or laws to promote adoption of telemedicine. These laws should at the minimum establish a legal basis for the delivery of health services using digital technology keeping in mind accessibility, liability, safety and privacy
- 2. Promote use of electronic billing systems and payments
- 3. Promote electronic exchange of data among medical facilities, practitioners, laboratories, pharmacies
- 4. Up-to-date reliable websites or digital messaging services to share information with the general public
- 5. Implement tools and information systems for teleconsultations
- 6. Monitor the provision and utilization of health services using digital means
- 7. Initiate training of healthcare providers through eLearning platforms to rapidly disseminate emerging guidelines and evidence.

The CDC recommends that patients exhibiting symptoms of COVID-19 first call their healthcare providers in order to get proper information about how they should navigate the healthcare system. The following infographic (Figure 6) explains how a patient presenting with symptoms of COVID-19 may be triaged using telemedicine.

Figure 6. Covid-19: a remote assessment in primary care



(Source: Covid-19: a remote assessment in primary care)

7. CONCLUSION

Enactment of a telemedicine or telehealth law would greatly accelerate the uptake of telemedicine projects in the Kyrgyz Republic. An analysis of eight active projects showed that telemedicine and eLearning have helped to improve access to healthcare, lower costs, improve provider availability in remote locations, reduce provider isolation and increase their skills. The telemedicine policy needs to be supported by a strong implementation plan and championed by a central authority responsible for telehealth projects in Kyrgyzstan. Formal monitoring and evaluation of telemedicine projects in the country can provide information to further improve the scope of the services. The effective implementation of telemedicine services needs to be incorporated into the overall implementation of the country's digital health strategy. In light of the COVID-19 pandemic, the adoption of a telemedicine policy has become extremely important and the integration of telemedicine into the healthcare system is vital to ensure continued delivery of healthcare services.

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Appendix A: List of countries with telehealth/telemedicine policies

Source: Atlas of eHealth country profiles: the use of eHealth in support of universal health coverage: based on the findings of the third global survey on eHealth 2015.

Country	Year adopted
Argentina	2010
Armenia	2010
Benin	2012
Cabo Verde	2012
China	2013
Colombia	2010
Costa Rica	1996
Croatia	2010
Cuba	-
Democratic People's Republic of Korea	2008
Denmark	-
Israel	-
Italy	2014
Japan	2015
Lithuania	2011
Malaysia	1997
Mali	2013
Mongolia	2008
Norway	-
Paraguay	2014
Peru	2005
Portugal	2013
Russia	2008, updated 2018
Saudi Arabia	2018
Singapore	2014
Turkmenistan	2006
UK	2012
Uruguay	2014
Uzbekistan	2011

Appendix B: Review of regulatory framework on telemedicine in the Kyrgyz Republic

(Provided by eHealth Center)

Introduction of telemedicine technologies requires the establishment of a sound regulatory framework that would legalize telemedicine care, systematize and streamline individual telemedicine projects in the country, and serve as a trigger for the development of telemedicine technologies and their active implementation by healthcare organizations in the provision of medical care.

Currently, the country has not yet adopted a law on telemedicine technologies. The draft Law of the Kyrgyz Republic "On Telemedicine Services" was initiated by Parliamentarians of the Kyrgyz Republic in 2012 and 2013. Having considered the bill, the Government of the Kyrgyz Republic twice concluded that it currently considers the adoption of this law as inappropriate given certain issues of the bill.⁴

Of the other regulatory documents that use the concept of "telemedicine", the following should be mentioned:

#	Title of regulation	Date of adoption	Summary
1.	"Agreement on cooperation of the State Parties of the CIS in creation of compatible national telemedicine systems and their further development and use" ⁵	19.11.2010	The purpose of the Agreement is to create compatible national telemedicine systems among the CIS member states and to subsequently ensure their interaction in the provision of accessible and high-quality medical care to the population in the member states of this Agreement, regardless of the social status and place of residence of their citizens.
			The Agreement defines the terms "telemedicine," "telemedicine services," "compatible national telemedicine system"; reflects key objectives in creation of compatible national telemedicine systems; specifies conditions for the adoption of national regulatory legal acts when creating national telemedicine systems (in compliance with international standards, protection of the rights and freedoms of citizens, the agreed procedure for data collection and access to information,

⁴ Resolutions of the Government of the Kyrgyz Republic on the conclusion of the Government of the Kyrgyz Republic on the draft Law of the Kyrgyz Republic "On Telemedicine Services" of 28 March 2012 # 211 and of 10 June 2013 # 320

^{5 &}quot;Agreement on cooperation of the State Parties of the CIS in creation of compatible national telemedicine systems and their further development and use" of 19 November 2010, Saint Petersburg, http://www.base.spinform.ru/show_doc.fwx?rgn=32672

			the procedure for documenting, processing, storage, presenting, using and protecting information).
2.	Decree of the Ministry of Health of the Kyrgyz Republic "On Approval of the Development Strategy for Postgraduate and Continuous medical education in the Kyrgyz Republic 2014 – 2020"	Approved by the Decree of Ministry of Health of the Kyrgyz Republic of 18.05.2015, # 248.	Clause 11 of the Action Plan for the implementation of the Strategy states: "Development of the Regulation on the use of telemedicine and distance learning," "elaboration of a Strategy for the development of telemedicine and distance learning in postgraduate medical education and continuing medical education." (2015)
3.	Decree of the Ministry of Health of the Kyrgyz Republic "On approval of the Model Regulation on telemedicine consulting"	Approved by the Decree of Ministry of Health of the Kyrgyz Republic of 06.10.2015, # 574.	The Model Regulation on the system of Telemedicine Consulting (TMC) was approved. It was designed to create a unified telemedicine space, including telemedicine centers operating independently or as part of National centers, research institutes, educational institutions and healthcare organizations at various levels. The scope of the regulation covers the goals and objectives of telemedicine consulting, the organizational structure and principles for functioning of the telemedicine consulting system, indications for telemedicine consulting, qualification requirements for providers, the responsibility of participants of the telemedicine consulting process, protection of patients' rights, telemedicine consulting scenarios, human resources and financing matters.
4.	E-Health programme of Kyrgyz Republic for 2016- 2020	Approved by the Resolution of the Government of the Kyrgyz Republic of 18.03.2016 # 134	Clause 3. "Goals and objectives of E-Health" states that "the goal of the introduction of e-health is the creation of a unified health information system that will provide solutions to a range of tasks," including introduction and development of telemedicine technologies.

			In the Action Plan for the implementation of the Programme, Clause 22 set out: "The introduction of telemedicine services and technologies of mobile healthcare". The Expected outcome – establishment of a network of remote consultation centers of health organizations providing telemedicine and diagnostic services (June 2018).
5.	Decree of the Ministry of Health of the Kyrgyz Republic "On approval of the architecture of the electronic system" Health Service ofnational E-Health architecture in the Kyrgyz Republic for 2018-2023"	Approved by the Resolution of the Ministry of Health of the Kyrgyz Republic dated of 15.03.2018, # 190.	Introduction, clause 21: "The Unified Data Warehouse and Health Services forms the basis of the new e-health ecosystem in Kyrgyzstan and includes " telemedicine as the key unit. Section 1.2 "Fundamental principles for development of e-health in the Kyrgyz Republic": principle 1 "Document management with a focus on the patient", and principle 5 "Management and a strong e-health center" include the use of telemedicine applications. Section 1.6.1. Telemedicine is listed in the "Core Components of the E-Health Ecosystem". Section 1.12- is fully devoted to telemedicine: the purpose, types, modules of the electronic telemedicine subsystem are described there. Section 4.3. "Action Plan for creating an E-Health Ecosystem": development of information systems for telemedicine is described in the third stage- the development of improved e-health information systems (long-term stage for 2022- 2025), the foundations for which are laid in the second stage (2018-2022).
6.	Programme of the Government of the Kyrgyz Republic on protection of public health and develop- ment of the health system for 2019-2030 "A healthy person- prosperous country"	Approved by Resolution of the Government of the Kyrgyz Republic of 20.12 2018 # 600	Action Plan on implementation of the Programme includes: Clause 2.3.4. "Introduction of modern information technologies (telephone or online consultation, telemedicine, electronic registration, recording, appointment, referral of patients) in the activities of primary

care organizations to improve access and quality of services within the framework of e-health development".
This clause provides for the implementation of activities such as:
 Development and approval of procedures, standards for telephone consulting, online consulting, telemedicine (IV quarter of 2020);
• Development and approval of methodological and operational guidance for telephone consulting, online consulting, telemedicine (IV quarter of 2021);
• Integration of the methodological and operational guidance for telephone, online, and telemedicine consulting into the system of continuing professional education (IV quarter of 2023).
Clause 8.6.2 "Improving the quality and accessibility of continuing medical education".
This clause provides for the implementation of activities such as:
 Updating the national platform of continuing medical education, providing for individual online training with subsequent certification (IV quarter of 2020);
 Introduction of integrated methods of continuing education at the workplace (distance learning, telemedicine, panel/peer discussions, clinical mentoring) (II guarter of 2022).

In fact, at the moment, there is only one document that provides at least some regulatory guidance for using telemedicine technologies during telemedicine consultations – Decree of the Ministry of Health of the Kyrgyz Republic "On approval of the Model Regulation on telemedicine consulting" of 06.10.2015, #574.

However, given that telemedicine technologies involve using personal data of patients, availability of just this Decree is not sufficient. The Model Regulation on the telemedicine consulting system was analyzed by lawyers of the "Civil Initiative for Internet Policy" Public Foundation along with other legal acts during a regulatory legal review of the current legislation of the Kyrgyz Republic for implementation of e-health, in terms of using personal data of patients.

The analytical report states that "... the current Model Regulation on Telemedicine does not contain clear rules on the procedure for teleconsultation, and the limits of responsibility for each party described in the provision of the system".

According to the Regulation on Telemedicine, the objectives of a telemedicine consultation are the following:

- Diagnostics of the disease or clarification of the diagnosis;
- Identification or adjustment of treatment plan;
- The decision on the possibility / necessity of hospitalization or referral of the patient.

The main responsibility in the Regulation is assigned to the attending doctor and the head of the department of the medical institution where the patient is being treated. At the same time, responsibility for the completeness and reliability of the transmitted information, safety and non-disclosure of information constituting confidential information about the condition of the patient is not taken into account."

The experts proposed the following changes to the current Model Regulation regarding the distribution of responsibility of all participants in the process of providing telemedicine services:

"The medical worker (attending doctor, head of department) who compiled information for the telemedicine service should be responsible for the completeness and quality of the telemedicine information provided;

- The medical worker (consultant, members of board of doctors) should be responsible for the issued opinion, its quality, timeliness and adequacy of the prescribed treatment;
- The telemedicine intermediary (a person providing technological data transfer) should be responsible for the integrity and timeliness of the transmission of telemedical information, modification of information and ensuring the impossibility of refusing to receive information, as well as the authentication of participants in information exchange"⁶.

At present, the specialists of the Center for E-Health, jointly with the specialists of tertiary-level healthcare organizations, are developing a draft decree "On approving the regulations on the telemedicine cabinet as part of healthcare organizations," which will include temporary regulations for arranging and conducting telemedicine consultations, and the procedure for organizing and conducting telemedicine, telemedicine consultation, informed consent for consultation via telemedicine, telemedicine consultations log).

6 Analytical report on the results of the regulatory legal review of the current legislation of the Kyrgyz Republic for the introduction of e-health, Public Fund "Civil Initiative of Internet Policy", 2016

Appendix C:

Policy directive on the Telemedicine Consultation Center/Cabinet as part of the health system of Kyrgyz Republic

1. General policy directives

- 1.1. A Telemedicine Center/Cabinet is created with the aim of increasing the availability and quality of highly qualified consultative and diagnostic assistance to medical personnel and patients of healthcare organizations of Kyrgyz Republic (hereinafter HO KR), exchanging specialized medical information based on the introduction of modern telemedicine technologies in a medical institution, creating a telemedical information and diagnostic system with subsequent integration into the telecommunication information environment.
- 1.2. The Telemedicine Center/Cabinet in its activities is guided by the legislation of Kyrgyz Republic, regulatory legal acts of the Ministry of Health of Kyrgyz Republic.
- 1.3. The Telemedicine Center/Cabinet is the leading state-wide organizational and methodological structure in the network of telemedicine units of HO KR on the provision of remote consultative and diagnostic telemedicine assistance to the population and specialists of the HO KR, coordinates the implementation, development of telemedicine in the activities of medical and educational institutions of Kyrgyz Republic.
- 1.4. The Telemedicine Consultation Center/Cabinet is a structural unit of HO KR and is organized by the head of this health center.

2. The main tasks of the Telemedicine Center / Cabinet

- 2. 1. Implementation of action items aimed at ensuring the availability of emergency and routine medical care for pediatric and adult population of the Republic, through the introduction in HO KR of modern telemedicine technologies, remote provision of consultative, diagnostic and therapeutic services, including decisions on referral to highly specialized treatment.
- 2. 2. Audiovisual support for the prompt decision-making in complex clinical issues, including the continuity of emergency assistance and adequate measures appropriate to scale in disaster situations.
- 2. 3. Elaboration of long-term plans for the development of the telemedicine network, the provision of guidance to telemedicine departments on activities in various fields (teleconsulting, teletraining, the use of telemedicine for solving managerial problems, etc.).
- 2.4 Development of telemedicine projects and programmes, implementation of telemedicine technologies in HO KR, collaboration and facilitation of coordination with various institutions and structures in the field of telemedicine.
- 2.5 Participation in the preparation, improvement of the continuity of undergraduate, postgraduate medical education and subsequent capacity building of medical personnel, the implementation of teletraining, regardless of the place of work of specialists in HO KR.
- 2.6 Development of regulatory and methodological materials, arrangements for the implementation, operation, development, upgrading of the telemedicine network of the health system of Kyrgyz Republic.
- 2.7 Conducting telemedicine videoconferences with leading scientific and educational medi-

cal organizations and public authorities in the healthcare sector for remote discussion of territorial healthcare problems for an operational analysis of the situation and adoption of administrative and management decisions.

2.8 Securing the confidentiality of medical and other protected information.

3. The main functions of the Telemedicine Center / Cabinet

- 3.1 Ensuring the basic functions of the Telemedicine Center/Cabinet at the level of HO KR.
- 3.2 Conducting emergency and scheduled teleconsultations, telediagnostics, remote medical treatment of patients and victims.
- 3.3 The use of telemedicine methods and tools as part of emergency management measures in the provision of medical care in extreme conditions and at stages of emergency medical care.
- 3.4 Development of forms and methods for the provision of teleconsultation assistance and their implementation in the practice of medical services, expanding the range of telemedicine services.
- 3.5 Introduction of mobile telemedicine stations, telemetry devices/telemetry of general or functionally specialized purpose.
- 3.6 Development of a methodology for real-time telehealth monitoring and the use of control results in choosing a patient management strategy.
- 3.7 Carrying out on-the-job practical training in telemedicine technologies for HO KR employees , and methodological work to integrate the telemedical consulting and diagnostic infrastructure into HO KR .
- 3.8 Study and absorption of advanced domestic and foreign expertise in applying telemedicine technologies in healthcare, developing projects, telemedicine development programmes, telemedicine regulations (orders, decrees, policies), preparation of reports on telemedicine programmes.
- 3. 9. Distribution through information and telecommunication systems of instructional multimedia and training programmes, organization of educational video conferencing systems, broadcast lecture courses.
- 3.10 Organization of a data bank (registers) of consultants and consulting organizations, as well as specialists and institutions involved in teletraining, analysis of medical and economic efficiency of using telemedicine.
- 3.11 Establishment of a training system for medical students and medical workers in the field of telemedicine, organization of distance learning to ensure continuous training and professional development of doctors and nurses, dissemination of scientific expertise of leading medical specialists, organization of research activities and thematic and scientific-practical conferences in the field of telemedicine, ICT.
- 3.12. The development of intranet, internet and extranet technologies, technical modernization of the telemedicine network of HO KR and other interested organizations.
- 3.13 Ensuring confidentiality and protecting information from unauthorized access.
- 3.14 Maintaining accounting and reporting documentation.

4. Legal aspects of the Telemedicine Center / Cabinet

- 4.1. The Telemedicine Center/Cabinet may request information from HO KR required in preparing projects and programmes for the development of the telemedicine network, in introduction of telemedicine technologies in the medical and diagnostic activities of HO KR and for operational needs.
- 4.2. The Telemedicine Center/Cabinet is responsible for the organization, conduct and confidentiality of teleconsultations and distance learning, including:
 - In for the technical and organizational conditions for the conduct of a telemedicine consultation, upon condition that the attending physician provides the entirety of necessary information about the patient's condition to the remote provider and the correct interpretation of the recommendations received;
 - 2. 2. for the reliability of the transfer, the authenticity of the renditions of the discussed medical documents (the procedure for confirming the identical quality of the transmitted/received materials);
 - 4.2. 3. for the confidentiality of teleconsultations and the subsequent protection of patients' personal data;
 - 4. 2.4. for documenting telemedicine consultations and subsequent archiving of teleconsultation data;
 - 4.2.5. for technical support for the timely conduct of telemedicine consultations;
 - 4.2.6. for ensuring copyright and property rights to materials used in the process of teleconsultation (lectures) in accordance with the current legislation of Kyrgyz Republic on copyright protection.

5. Management, financing, staff of the Telemedicine Center / Cabinet

- 5.1 The activities of the Telemedicine Center/Cabinet are led by a head appointed by the director of the HO KR, and governed by orders and regulatory documents of the Ministry of Health of Kyrgyz Republic, as well as this directive.
- 5.2 Activities of the Telemedicine Center/Cabinet are financed from special-purposed funds, medical insurance funds and other sources of funds in accordance with applicable laws.
- 5.3 The staffing size of Telemedicine Center/Cabinet is determined depending on the scope of work assigned to the HO KR.

6. Reorganization and liquidation of the Telemedicine Center / Cabinet

- 6.1. Reorganization (transformation, break-up, separation, affiliation) of Telemedicine Center/ Cabinet is carried out by the head in the manner prescribed by the legislation of the Kyrgyz Republic.
- 6.2. The activities of the Telemedicine Center/Cabinet can be terminated by decision of its head to liquidate or by decision of a court.
- 6.3. In case of liquidation of Telemedicine Center/Cabinet, the property remains with the HO KR.

Temporary regulations for the organization and conduct of telemedicine consultations

This regulation is designed to improve the quality and accessibility of highly qualified and specialized medical care to the population in the healthcare system using telemedicine technologies, and it determines the procedure for conducting telemedicine consultations.

General indications for clinical teleconsultation.

- Emergency clinical cases, critical conditions, rapid trauma assessment of victims of accidents and disasters.
- Definition (correction) or confirmation of the diagnosis of complex patients.
- Definition of diagnostic methods and treatment tactics in rare, severe or atypically occurring diseases.
- Absence of a necessary specialist or sufficient clinical experience for the diagnosis and treatment of the disease.
- The need to perform a new or rare type of surgical intervention.
- Preliminary clarification of the diagnosis, method of specialized treatment, identification of the appropriate medical institution for emergency and planned treatment of the patient, prehospital decision-making (coordination) on the place and timing of following treatment.
- Definition of methods at different levels of preventive care (rehabilitation) .
- Doubts of the patient in the correctness of the diagnosis or method of treatment.
- Reduction of economic and financial costs related to patient diagnosis and treatment without compromising quality and effectiveness.
- Great geographic distance between patient and specialists providing necessary treatment.
- Provision of medical assistance to residents of poorly accessible settlements.
- Search for alternative solutions to the clinical problem.
- Acquisition of additional knowledge and skills on an ongoing clinical problem.

The algorithm of the planned telemedicine consultation:

- 1. Establishment by the physician attending to the patient of the need for teleconsultation, clear wording of questions to the consulting physician, approval- a request for teleconsultation of the required kind.
- 2. Preparation of an electronic application form for teleconsultation, a detailed extract with the results of a patient examination, selection (preparation) of the necessary images, visual material of diagnostic value.
- 3. Preparation of patient data in the form of an organized group of files (input images to a computer using a video camera, scanner, digital camera, checking their quality, saving in the database of teleconsultations).
- 4. Registration of a request for teleconsultation (assignment of an identification number to the package of materials on a specific patient sent to the remote provider).
- 5. Sending an application file with the materials to the desired HO KR (remote provider) by e-mail, IP telephony (Skype), or placing them on the advisory server and giving access to the selected remote provider.

- 6. Consulting physician examines presented package of materials (clinical record) of the patient and sends their conclusion (diagnosis, advice, treatment regimen, a request for additional examinations) to the on-site physician by e-mail or placing on the consultation server.
- 7. If necessary, an advisory video conference is appointed and conducted with the participation of the required specialists (video consultation) for the prompt resolution of clinical issues.

Algorithm of emergency telemedicine consultation:

- 1. The prompt decision by the doctor about the need for emergency telemedicine consultation on vital indications of the patient (victim)- an urgent request for emergency teleconsultation of the required kind, using all available means of communication (telephony- landline, mobile, IP (Skype), e-mail, video conferencing).
- 2. Immediate organization and conduct of a real-time teleconsultation with the participation of required specialists of HO KR (video consultation) to promptly solve emergency clinical cases and questions.

When conducting telemedicine consultations, all participants are required to abide by ethical-deontological standards:

Compliance with the principle of informed consent:

- Before conducting a teleconsultation, the doctor must give the patient clear and intelligible explanations regarding the need for telemedicine consultation, taking into account the possibilities and limitations;
- It is recommended to obtain a written consent of the patient to send information about his state of health via remote communications.

Compliance with confidentiality and anonymity:

- technical personnel processing and sending information in telemedicine systems should sign a pledge on the compliance with norms, requirements and rules of an organizational and technical nature regarding the protection and non-disclosure of processed information;
- when transferring (placing on a computer network) medical information, medical confidentiality is required (data without a full name);
- all personal computers of telemedicine units must have authorized access (passwords);
- folders and local disks containing teleconsulting materials should be closed for access on a local network.

Compliance with legal standards:

- responsibility for changes in the patient's state of health resulting from the use (not use) of the remote provider's recommendations is carried by the on-site physician;
- careful recording of all telemedicine procedures, creation of backup and "hard" copies is necessary;
- it is advisable to use a digital signature to identify a teleconsulting participant and to prevent third parties from accessing electronic patient data.

The procedure for organizing and conducting telemedicine consultations

1. Preliminary stage

If necessary, preliminary approval of the consultation conditions between the responsible representative of the Customer and the coordinator of the telemedicine center is allowed using the telephone through the Emergency and Scheduled Consultative Medical Care Department, fax or e-mail. The results of these discussions are not official in nature and do not impose mutual obligations on the Parties.

2. Submission of application

The request for telemedicine consultation is transmitted to the Telemedicine Center in the form of an electronic case report form by e-mail to: ______ or in electronic form personally to the coordinator. The electronic form of the clinical case is formed by the Customer:

for transmission by e-mail- in accordance with the structure of the request (attached).

-Notes:

Electronic forms of medical test results must comply with medical standards and requirements.

Questions that need to be answered during the consultation should be concrete and unambiguously interpreted.

3. Analysis of the application

Telemedicine Center assesses the quality of the transferred materials.

In the absence of objections to the quality and integrity of the transmitted data, the Telemedicine Center sends to the Customer a confirmation of the acceptance of the clinical case for consultation. The request is considered accepted for execution from the moment of sending confirmation of acceptance of the request.

In case of impossibility of organizing a consultation due to poor quality of submitted materials, coordinator of Telemedicine Center sends to the Customer a motivated notice of refusal, indicating the necessary improvements, and having it attested by the head of Telemedicine Center.

4. Organization of the consultation

The employee of the Telemedicine Center transfers the materials to the relevant remote specialist of the center and agrees on the time of the consultation.

If it is impossible to conduct a consultation with a specific remote specialist(personal consultation), the Telemedicine Center, in agreement with the Customer, suspends the request, or agrees with the Customer to consult with another specialist.

If the request does not require the organization of a consultation with a specific remote specialist (personal consultation), the coordinators independently select the specific remote provider to involve, depending on the qualification requirements.

By agreement with the Customer, the request can be transmitted to several remote providers or to other telemedicine centers of Kyrgyz Republic. In this case, each of the consultations held in several centers are considered independent.

5. Consultation

Upon receipt of the request, the Telemedicine Center employee transfers the clinical case to the appropriate remote provider and provides control over the timeliness and quality of the consultation.

The remote provider reviews the clinical case material, prepares their opinion (response to the issues raised in the request) in a hard copy or electronic form (with the assistance, if necessary, of the employee of Telemedicine Center) and transfers to the responsible employee of Telemedicine Center. The responsible employee of Telemedicine Center assesses the conclusion for completeness and accordance with the issues raised and, in the case of a positive decision, transfers both medical opinion forms to the Customer. The recommended medical opinion form is attached.

The electronic form of medical opinion is authenticated by the (as far as the technology is available) digital signature, as well as with the hard copy format signature of the remote provider and responsible employee of Telemedicine Center, and with the corresponding seal.

6. Completion of the consultation

After receiving a conclusion from the responsible employee of the consulting center, the responsible employee of Telemedicine Center conducts a repeated assessment of the conclusion on its compliance with the issues raised, certifies it and transmits the electronic conclusion form to the Customer.

After receiving a conclusion, the customer must confirm the fulfillment of the request by sending a notification to the Telemedicine Center. If there is no notification within a period of more than two business days, the request is considered fulfilled and claims are not accepted.

* Note:

The Telemedicine Center/Cabinet must operate 24/7 in accordance with this policy. For scheduled teleconsultations, the working hours of the Telemedicine Center are considered from 09:00 to 16:00 on weekdays.

The structure of the conclusion prepared by the consultant based on the results of the telemedicine consultation

- 1. Last name, first name, middle name of the remote provider.
- 2. Position, qualification category, certificate, academic degree, academic title of remote provider.
- 3. The full name of the medical institution where the remote provider works.
- 4. Answers to the questions identified in the request for consultation (depending on the nature of the questions):
 - 4.1 estimated diagnosis indicating the necessary measures for differential diagnosis with diagnostic search algorithms;
 - 4.2 diagnosis with justification, or justification of the reasons why a diagnosis cannot be established;
 - 4.3 necessary additional diagnostic measures and the purpose of their implementation;
 - 4.4 recommendations for treatment (rehabilitation, prevention). For drug treatment an indication of drugs, dosages, regimens, duration of treatment courses. For surgical treatment- the name of the operation recommended by the medical institution. If it is impossible to provide definite treatment recommendations, alternative options with a description of the algorithms for their selection;

- 4.5 answers to other questions posed to the remote provider.
- 5. Additional information that the remote provider considers necessary to reflect in the conclusion. Comments on the completeness and quality of the materials presented.
- 6. Date of consultation.
- 7. On the electronic medical opinion form- digital signature of the consultant (advisory center). On a hard copy conclusion- the stamp and seal of medical institution which held consultation. Remote provider's signature

The structure of the description of clinical case, the request sent to Telemedicine Center for conducting telemedicine consultation (in the case of sending the request by e-mail)

The clinical case description should include the following information:

Registration number

Date of completion

Surname, name, middle name of the specialist who prepared the data on the clinical case

Consultation profile (preliminary, simple, personal)

The purpose of the consultation (questions for the remote provider- clarification of the diagnosis, choice of treatment tactics, etc.)

General information about the patient:

Date of Birth

Gender

Occupation

Place of residence

Patient's condition:

Complaints

Medical history

Anamnesis of life

Family anamnesis

Present condition

Description of organs and systems (cardiovascular, nervous, supporting-motor, gastrointestinal, urogenital, etc.). Physical examination data (pulse, height, weight, temperature, blood pressure, respiratory rate, etc.)

Additional information about the patient (allergy history, social diseases, notes)

Data from general examination methods (results of laboratory tests, ECG, etc.)

Data from special examination methods

Diagnosis

Currently receiving treatment

List of attached files with the results of clinical and laboratory studies

* *Note:* to form the text part of the clinical case, a word processor should be used to create viewing and editing text documents.

Appendix No. 4

APPLICATION No. _____ of " ____" _____ 20___

ON TELEMEDICAL CONSULTATION.

- 1. The application is directed to (name of HO):
- 2. PIN (TIN) of patient:
- 3. FULL NAME of patient:
- 4. Date of birth:
- 5. Gender (underline): m/f
- 6. Place of residence:
- 7. List of attached medical documents and research data (pictures, graphics, photo, video and other images):
- 8. The purpose of the teleconsultation (underline the necessary): diagnosis of the disease, clarification of the diagnosis and treatment, consultation on the management of the patient, the possibility of hospitalization, otherwise indicate
- **9. Type of teleconsultation** *(underline the necessary)*: emergency / scheduled, primary / repeated
- **10. Communication method** (indicate the numbers (addresses) of the communication channel): ISDN, TCP / IP, Skype, e-mail, phone:
- **11. Teleconsultation is requested by** (underline the necessary):
 - on-site physician,
 - on-site physician in the presence of the patient/person acting in his interests,
 - other (specify)
- 12. Requirements for the consultant:

specialization ______ academic degree _____ unit _____

- 13. Questions to the remote provider, note:
- 14. FULL NAME, speciality of the attending physician, phone:
- 15. Desired date and time of the teleconsultation:
- 16. FULL NAME of person who submitted the application:
- 17. Name, address, and telephone (fax) of HO of remote provider:

18. Application sent: date "____" ____20_; time ____ hour . ___ minutes

Telemedicine Center/Cabinet Service Information

Draw a logbook

- 19. Date of receipt of the application: " ____ 20_; time: ____ hour . ____ minutes
 20. Incoming application number: _____
 21. The employee who accepted the application (full name, signature)
 22. Information about the received application materials (number of files, quality of materi-
- *als):* **23. Planned provider:** Name, position, academic degree, unit
- 24. Provider (full name, signature)

received an application No. _____ date: "_ _ _" _ ___ 20__; time : ____ hour. ___ minutes

25. Planned date, time of the teleconsultation:

26. Notes:

Appendix No. 5

(Name of HO of remote	e of provider)	
T E L E CONSULTATION No			
By application No, (HO of customer); date "_	″20	_ ; time	
hour minutes			
Incoming application number; date: "_ minutes		20 ; time :	hour
The method of communication for teleconsultati	on (underline	the necessary):	
ISDN TCP/IP/Skype/ E-mail/Phone			
FULL NAME. patient (PIN / TIN), date of birth, pla	ce of resider	ice:	
Remote provider:			
FULL NAME.			
position:			
subdivision:			
academic degree:			
Work phone, mobile:			
The result of the consultation:			
Conclusion-			

References-

Date "____ 20__ Provider Signature:

Employee (duty) of HO of provider (name, signature):

Date of reply: "____" ____20__; time: ____ hours. ___ min

The method of communication when sending a response

(underline): ISDN TCP / IP/Skype/e-mail

Appendix D: Sample consent form

Source: Aga Khan Development Network eHealth Resource Center

AKDN eHRC

AGA KHAN DEVELOPMENT NETWORK ehealth resource centre

Consent Form for Teleconsultation

Форма согласия для телеконсультации

Название учреждения здравоохранения:

Имя пациента:

Номер медицинской карты: _____ Пол: ____ Возраст: _____

Please tick Yes or No for the following:	YES	NO
Поставьте Да или Нет:	Да	Нет
I have been explained about the nature, purpose, procedure, benefits and risks of		
Teleconsultation.		
Я уведомлен\а о сущности, цели, процедуре, пользе и риске телеконсультации.		
I have got an opportunity to ask questions and my questions have been answered to		
my satisfaction.		
У меня была возможность залать вопросы и я удовлетворен\а всеми		
ответами.		
I understand that my personal information, medical information and images will be		
collected, retained, transmitted and disclosed for medical purposes.		
Я понимаю, что вся моя личная информация, включая медицинские данные и		
фотографии, будут сохранены, переданы и раскрыты по медицинскому назначению.		
I understand that I have a right to inspect all information obtained and recorded in		
the course of Teleconsultation.		
Я понимаю, что имею право проверять всю полученную и записанную информацию		
с помощью телекомуникации.		
I allow publishing my personal information, medical information and images as		
part of publication, marketing and research activities.		
Я разрешаю публиковать свою личную, медицинскую информацию и фотографии в		
публикациях ,маркетинге и научно-исследовательской деятельности.		
I agree to provide feedback regarding my experience of Teleconsultation.		
Я согласен/на на отзыв касаюшего своего опыта в получении телеконсультации.		

Я внимательно прочитал\а данный документ и понимаю все риски и выгоды телеконсультации и нашел/а все ответы на свои вопросы.

I have read this document carefully, and understand the risks and benefits of Teleconsultation, and have had my questions regarding the procedure explained.

AKDN eHRC

AGA KHAN DEVELOPMENT NETWORK ehealth resource centre

Имя и подпись	Пациента /Ближайший родственник
Name and Signat	ture of Patient/Next of Kin

Число Date

/		
•••••	••••••••••••••••	• • • • • • • • • • • • • • • • • • • •

Должен быть заполнен Координатором: To be filled by Coordinator

Участник прочитал или координатор прочитал ему\ей данный документ и участник согласен\а с вышеуказанной информацией. Он\она имел\а возможность найти ответы на все интересующие его/ее вопросы.

Я объяснил пациенту цель, процедуру, пользу и риск телеконсультации и ответил/а на все его/ее вопросы. Я уверен, что он\она понимает содержание данного документа.

The participant has read, or the eHealth Coordinator has read to her/him, and s/he understands the information provided above. S/he has been given an opportunity to ask questions and all of her/his questions have been answered to her/his satisfaction.

I have explained the purpose, procedure, benefits and risks of Teleconsultation patient, and have answered all of her/his questions. I believe that s/he understands the information described in this document.

Имя и подпись координатора	Число
Name and Signature of Coordinator	Date

Appendix E: Generally accepted privacy principles

Source: Intelehealth, Inc. Enterprise Privacy Policy 2019. Accessed at https://www.intelehealth.org/privacy-policy

The Generally Accepted Privacy Principles (GAPP) are founded on key concepts from significant national and international privacy laws, regulations and good business practices. The American Institute of Public Chartered Accountants and Canadian Institute of Chartered Accountants have developed and maintain the GAPP to assist organizations in designing and implementing sound privacy practices and policies. The guiding privacy principles articulated in GAPP are as follows:

- Management: Define, document, communicate, and assign accountability for the organization's privacy policy and procedures.
- Notice: Provide notice about the organization's privacy policy and procedures and identify the purposes for which personal information is collected, used, retained, and disclosed.
- Choice and Consent: Describe the choices available to the individual and obtain implicit or explicit consent with respect to the collection, use, and disclosure of personal information.
- Collection of personal information: Collect personal information only for the purposes identified in the notice.
- Limiting Use, Disclosure and Retention: Limit the use, storage and retention of personal information to the purposes identified in the data privacy notice and for which the individual has provided implicit or explicit consent. Retain personal information for only as long as necessary to fulfill the stated purposes or as required by law or regulations and thereafter appropriately dispose of such information.
- Access for review and update: Provide individuals with access to their personal information for review and update.
- Disclosure to third parties: Disclose personal information to third parties only for the purposes identified in the notice and with the implicit or explicit consent of the individual.
- Security practices for privacy: Protect personal information against unauthorized access (both physical and logical).
- Quality of personal information: Maintain accurate, complete, and relevant personal information for the purposes identified in the notice.
- Monitoring and enforcement: Monitor compliance with privacy policy and procedures and have procedures to address privacy related complaints and disputes.

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