EPSO TAC Working Group

2ⁿᵈ EPSO TAC (Tele-medicine, e-health, e-inspection Artificial Intelligence in healthcare guidelines, Cybersecurity in healthcare and health supervision) working group meeting	**16 February 2022 – 09.30 – 12.00 GMT (10.30 - 13.00 CET)**

Tele meeting 16-02-2022 – 9.30 AM UK time/10.30 AM CET

Participants: [IRG(1)][jv2]Addi Chan (HK), Advije Mala (Kosovo), Aurora Ursula Joala (Estonia), Hedi Harzia (Estonia), Ronald Calleja (Malta), Fiona M. McDonnell (Ireland), Claire Bryce-Smith (England Scotland Wales), Sarah Billington (England), Moritz Flockenhaus (England), Janet Ortega (England), Ilze Dzerkale (Latvia), Jooske Vos (Netherlands), Kaidy Teppe(Estonia), Kaja Ilmarinen (Estonia) , Tanya Miller (Australia), Willson Go(Singapore),, Crystal Lua(Singapore),, Shawn Tan(Singapore), Isaac Reuben Gason (Singapore), Chalene Pek (Singapore)

Chair: Janet Ortega

Support and co-ordination: Jooske Vos

Welcome and introduction

Jooske welcomed the group and introduced Janet Ortega from England who will be chairing this meeting. She briefly introduced the next TAC-work group meeting which will be held during the hybrid conference in Singapore from 22 to 24 June 2022. Members were informed to block their calendars for the event and told to await Singapore's confirmation of the conference go-ahead in mid-March.

Topic 1: Estonian e-Health Lessons Learnt[IRG(3)][jv4]

Aurora Ursula from the Ministry of Social Affairs provided an overview of the lessons learnt on implementing the e-health system and their national response to the Covid-19 crisis. Since 1995, Estonia received a major boost to digitalise their healthcare system, enabling the digital flow of health data and the development of digital tools that supported healthcare function. The nation-wide e-health services and digital health information system in Estonia has been operating for the past 14 years.

Lessons learnt from the implementation of the e-health system are summarised as follows:

a. It takes time. Designing a successful e-health system that meets the needs of all stakeholders (healthcare workers and patients) takes time. It is important to consult all stakeholders to understand where the pain points lie and to develop a solution that is easy to use. Furthermore, it is important to get agreement on the types of standards and data to be used.

b. It has to be meaningful. It is important not only to digitalise but also to re-imagine. The e-health system should minimise the doctor's time spent on mundane tasks and not create

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additional work. For example, with the e-health system, about 80% of the doctors have found it more efficient to electronically write prescriptions as opposed to the traditional pen-and-paper method. The latter method would require one to refer to a manual if the doctor does not recall the proper procedure in writing a prescription.

c. <u>To obtain big data, small data is required</u>. Different types of support may be required to obtain big data. For instance, training needs to be provided to ensure healthcare workers utilise the system correctly. Some general practitioners may require financial help to acquire state-of-the-art software to participate in the e-health system.

d. <u>Data quality and structure matters</u>. To efficiently use the data collected, the data needs to be comparable and readable with other data sets.

e. <u>Oversight can be good</u>. In Estonia, though it is compulsory for healthcare providers to use the e-health system, it is not strictly enforced. The Ministry feels that it might be better to allow the healthcare providers to familiarise themselves with the system and use it when they are ready, rather than to punish them for not using it. To encourage adoption, frequent reminders are sent to assure providers that the system is helpful, and support is readily available if they decide to use it.

f. <u>Patients drive physicians</u>. When the media reports something detrimental, for example, an incorrect treatment given to a patient, this may influence the decisions and actions of other patients, which in turn, may affect the way physicians operate.

g. <u>Sometimes, it is good to move fast</u>. Government bodies should consider the cost of remaining in a status quo position and not just the cost of change. For example, when Estonia embarked on the Genome project, it did not receive much support from the public, yet they pressed on. Eventually, public support increased with time as more people realised the benefits of the project. Aurora cautioned that government bodies should not always wait to find the best solution for every problem before proceeding with their proposed solution as that may impede progress.

In the context of Covid-19, aligning existing e-services and data exchange to address the challenges of the crisis is important. To do so, it is important to (i) <u>ensure interoperability of systems</u>, (ii) <u>upgrade existing e-services</u>, and (iii) <u>record data electronically throughout the system</u>. A digital medical history that provides a simple and quick overview of the patient's history will benefit both healthcare professionals and patients. For example, with a digital health record, laboratories can quickly analyse patient data, instead of browsing through multiple documents of patient medical history before reporting their findings. In response to the Covid-19 crisis, the Estonian e-health system had managed to integrate existing e-services and facilitate the data exchange of patient's medical information.

The Estonian e-health system relies on a distribution of data systems that communicate with each other through "X-road" links. These links, which are hosted on secured servers, facilitate the integration of data from various places. However, no data is stored on X-roads as they only permit data movement. As the different e-health data bases (e.g., e-health system, prescription centre

and patient portal) get connected, checks (e.g., to ensure doctor or company licence validity) can occur quickly.

Aurora shared how creating co-operation platforms for solutions to address the Covid-19 crisis was essential. During the initial stages of Covid-19, the private sector, healthcare professionals, government and citizens collaborated to address the crisis. For example, to accelerate Estonia's "Hack the Crisis" hackathons were initiated to empower the private sector to work together with the state to develop solutions. The Ministry also provided the private sector with an overview of the public health crisis and in turn, the private sector proposed several solutions which were helpful. It was a turning point as the responsibility of dealing with the crisis was not centred on the Government alone but fell upon the whole country including the private sector.

Aurora also shared solutions employed to help citizens to cope better with the Covid-19 crisis. These are summarised below:

a. Availability of e-consultations. During the crisis, there was a spike in e-consultations. Through e-consultations, patients had greater flexibility to consult different specialists for various conditions. Through the electronic system, practitioners were able to access electronic health records and determine if patients should come in-person or if their conditions could be handled virtually.

b. Specific healthcare tools were developed for citizens. This included the availability of online Covid-19 test results, requests for electronic sick leave via the patient portal, the contact tracing app and Estonia's own Covid vaccination certificate.

c. Up to date Covid-19 data was made available to the public. Making Covid-19 data public, allowed research institutions and private organisations to access and use the data. The data did not need to be submitted manually which significantly reduced the chances of human error. In addition, data exchange between healthcare providers occurred in real-time, which supported statistical reporting. Data was updated every 24 hours.

Lastly, Aurora shared on the challenges which lie ahead for healthcare digitalisation. These are summarised below:

a. Need for data analytics. In addition to data registries and information systems, having good data analytics is important to make sense of the data and help politicians make decisions.

b. Integrate new covid tools to existing workflow and systems. There is a need to have better communication between developers and users when developing new Covid tools, and for developers to understand the existing processes.

c. Upgrade the weakest links in the existing systems. The weakest links can either be an institution, a unit, or a person. As a result of the Covid-19 crisis, two challenges which Estonia faces are (i) dealing with backlogs because of project delays and (ii) managing burnout among public servants who have been working tirelessly.

d. Underfunded e-health system. Underfunding of Estonia's e-health system has made it difficult to mobilise resources from other national IT houses to strengthen the Ministry of Social Affairs & Health Data Board's IT house (responsible for the e-health system) during this crisis. Additionally, data harmonization from various national data bases is very time consuming and challenging as it requires many legal issues to be dealt with, so additional resources are needed to build more robust solutions.

e. Use of data during the crisis. A balance between flexibility and patients' privacy is required.

Janet: Are private sector healthcare practitioners including dental clinics connected to this e-health system?

Aurora: All licenced doctors and dentists are connected to this system (not just hospitals).

Jooske: How does Estonia pro-actively use the data collected? For example, is there a system that alerts GPs when their patients forget to collect prescriptions from the pharmacy?

Aurora: There is a system that supports primary care doctors. For example, during patient consultations, notifications are sent to the doctor to alert them if a particular illness warrants blood pressure to be checked, or prompt them to schedule other check-ups and medications for patients. In addition, Estonia is also working towards personalised medicine using the genomic data collected to aid physicians in making more informed decisions.

Chalene: How did Estonia get the elderly to use the patient portal, especially if the person is unable to read or does not feel comfortable with IT tools?

Aurora: This is a prevalent problem which Covid-19 resurfaced that the Ministry is still figuring out. There is an option where the elderly may assign a representative to access e-health services on their behalf. Alternatively, the elderly may also access some of these services via the phone.

Janet: Even in England there seems to be a divide in the community, between those who can use IT tools comfortably and afford it, vs those who cannot.

Aurora: For those who are not comfortable with IT tools in Estonia, they can choose teleconsultation services over the phone, although that may not be the safest option. Currently, the Ministry is exploring other ways to make teleconsultation services more appealing for practitioners, especially since, the average age of a GP is quite old in Estonia. The Ministry's investment in training have paid off as most of the GPs are now able to use the e-health system.

Jooske suggested to tackle this group of non-e-health users (e.g., elderly, non-IT savvy or lower-income group) as another topic in the next EPSO monthly meeting. Jooske shared that a study conducted by New Zealand[IRG(5)][jv6][jv7], showed how the authorities were initially concerned that the Māori people were not open to the concept of e-health, but the findings proved that they were as open to e-health as the rest of the population once the tools and training had been provided to them.

Janet: How does the health system encourage patients to take responsibility of their own healthcare needs?

Aurora: Patients may access all their medical data (e.g., X-ray images, MRI results, dental and medical history) on the system as the information will be uploaded onto the patient portal. By giving complete data access to patients, the government hopes to promote the importance of shared responsibility.

 Jooske: Why was the public initially not supportive of the genome project and what caused the public to be more supportive thereafter?

Aurora: The lack of information about the benefits of genomic medicine for one's personal health could have been a factor. Initially, many were afraid their genomic data falling into wrong hands such as the life insurers, or apprehensive about finding out if they might have a genetic mutation that increased their susceptibility to a disease. Hence, there is a need to mitigate people's fears by emphasising the importance of early detection and treatment.

Topic 2: EPSO-Blueprint on Telehealth

Janet opened the session by sharing the intent of the blueprint. The blueprint served to set some basic principles and guidelines on the minimum standards for telehealth, notwithstanding that some jurisdictions may have already developed their own set of requirements. The group discussed how the first draft of the telehealth blueprint could be further improved. These are summarised below:

a. Claire mentioned that the document should aim to define the different types of teleconsultations and provide principles of a good teleconsultation. It is important for the different EPSO country members to arrive at a common agreement of what teleconsultations are for future cross-border regulations. In addition, the definition should also take into account the public's opinion of teleconsultations, which can help in formulating subsequent regulations that will not impede innovation.

b. Claire also felt that it was important to keep the telehealth principles fairly high-level to prevent the document from getting easily outdated from the rapidly evolving nature of digital technology.

c. Sarah suggested that rather than focusing on definitions alone, it was important to remember that the heart of the issue was patient safety. Hence, the principles behind the interaction between the patient and healthcare professional should be a priority.

d. Tanya thought that the blueprint was a clear, simple, and highly workable guide. On ensuring patient safety (2nd page of blueprint, point 4), she commented that it was important for the patient to have privacy during the appointment as patients experiencing family violence would be more vulnerable during teleconsultations if other family members were present. Separately, it is important to equip both patients and practitioners with sufficient skills to communicate effectively in teleconsultations.

e. Crystal mentioned that the blueprint was a good set of guidance, and applicable to the different forms of telehealth. She suggested that the introduction could also cover the risks of the modality as this would better substantiate the guidance and principles provided. While she noted that the blueprint was written in a generic manner that similarly could be applicable to in-person consults, she proposed that the document should better define "accessible, high quality, and safe" care in the context of telehealth specifically. Additionally, she questioned the focus on prescriptions and proposed that other aspects of teleconsultations be included in the blueprint's considerations.

To Crystal's point above, Chalene added that Singapore had identified 4 broad modalities of telemedicine. These include: (i) teleconsultations (interactions between healthcare professionals and patients for providing direct clinical care), (ii) telemonitoring (collection of biomedical data by remote services and the transmission of data to the provider for vital signs monitoring), (iii) telecollaboration (interaction between healthcare professionals via ICT), (iv) tele-support (use of online services for non-clinical purposes such as education or administration).

Jooske enquired if each of these telemedicine modalities have their own standards which will be used during the inspections. Chalene responded that Singapore's e-health training guidelines focus primarily on teleconsultations between doctors/ dentists and patients, as such direct doctor / dentist-led teleconsultations are deemed to have the greatest patient risk out of the 4 modalities. Singapore's Ministry of Health does not provide detailed guidelines for the other more specific forms of telemedicine, although individual professional bodies are free to do so.

Topic 3: EPSO-Blueprint for Cybersecurity in healthcare

The group discussed how the first draft of the cybersecurity blueprint could be further improved. These are summarised below:

a. Fiona commented that the blueprint was clear and focused on key high-level areas. However, the structure of the checklist could be further tightened. She suggested to include the following reflective questions:

   i. What are the key functions / groups in the government looking at cybersecurity?
   ii. Is cybersecurity prioritised in the organisation?
   iii. Are cybersecurity practices of the agency aligned with the UN cybersecurity agency's guidelines (or its national equivalent) and with various ISOs/standards?

She added that it was also important to engage the cyber incident team to document and test out the cyber security plan of the agency. The plan should:

   i. Identify critical areas or systems which are more prone to cyber-attacks.
   ii. Establish recovery plans (i.e.identify what are the key business areas and recovery steps when affected).
   iii. Consider the cybersecurity risk management cycle.
   iv. Include Cyber incident simulation exercises to review the executive management's responsibilities assigned and to trial planned responses. Additionally, cyber drills can be conducted where the cyber incident team can send simulated phishing emails to see if staff respond to them.

b. Terry had provided some comments in an email which stated that the blueprint was short, simple, and easy to use (did not contain many technical jargon). That said, he suggested for a cybersecurity expert to eventually review the checklist. The checklist should include a response and recovery plan, in the event of an attack, so that the organisation can recover within the first few weeks to ensure business continuity.

c. Willson mentioned that the blueprint provides practical cybersecurity guidance. However, the blueprint can be further contextualised to the healthcare sector. It can specify the critical systems relevant to healthcare (e.g.clinical management systems used for day to day operations, electronic health record) and the type of training recommended for healthcare staff (e.g. basic cyber hygiene training, how to spot signs of cyber security attacks, appropriate incident escalation protocols).

Topic 4: Artificial Intelligence (not in agenda)

Moritz shared that he was interested to learn more about AI regulations undertaken by other countries. In the UK, the CQC has received feedback from software companies looking into the development and adoption of AI. They found it difficult to navigate the regulatory requirements needed. They feedbacked that the regulatory pathway was complex as it involved several regulatory bodies and often, they did not know which agency was responsible for the different processes of the pathway. The NHS, together with other organisations, has been working to streamline the information on a new website targeted at developers and doctors adopting AI.

The key challenges are

(i)   to map out the regulations and guidelines of different regulatory bodies and

(ii)   (ii) to understand the pain points from the user's perspective.

For follow-ups, Moritz shared that it will be helpful for other members to share about ongoing AI work in their countries during future meetings. Jooske shared that Singapore had previously given a presentation on AI and details of this were available in the minutes of EPSO's November TAC workgroup meeting.

Topic 5: Summary and next steps for the working group

For next steps, Janet mentioned that Kevin, Jooske, Fiona, herself and others who were interested will develop the two draft papers and bring it back for discussion in the next meeting. There are plans to invite one or two e-health healthcare providers (e.g., Babylon Health, Fox IT) to share their expertise with the group. In addition, a third blueprint for AI will also be started, led by Moritz .