



# **CUIMUN XXIV**

## **Study Guide**

**The World Health Organization**



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# WELCOME LETTER FROM THE CHAIRS

Dear delegates,

It is our pleasure to welcome you to the WHO committee at CUIMUN 2019. As this is a beginner committee, we expect that many of you are quite new to Model United Nations. We'll aim to brief everyone on the Rules of Procedure before we start the debate and hopefully get everyone on the same page.

Model UN conferences are great for learning about current issues (in our case, global health) and make great friends along the way – the best way to make the most of it is to immerse yourself in the experience. Listen to what your fellow committee members are saying in and out of session and do not be afraid to contribute.

We hope you find this study guide useful for preparing you for the conference. If you have any questions, please do not hesitate to contact us by email at [cuimun.xxiv.who@gmail.com](mailto:cuimun.xxiv.who@gmail.com).

We look forward to meeting you all in November!

Yours sincerely,

Maria Slobodina  
Director

Amit Arkhipov-Goyal  
Assistant Director

Jannis Giavridis  
Assistant Director

# INTRODUCTION TO THE COMMITTEE

The World Health Organization is a specialised agency of the United Nations established on 7th April 1948. It became the first specialised agency to which every Member State subscribed. Headquartered in Geneva, it has regional offices in many UN Member States. It currently comprises of 194 member states that appoint delegates for the World Health Assembly, the highest health policy setting body in the world which meets every year in Geneva.

WHO deals with a range of health issues that evolved over time. For example, after its inception the World Health Organisation prioritised dealing issues such as malaria, tuberculosis (TB), and sexually transmitted infections. Nowadays, WHO is still faced with the same issues but now they are made more multifaceted by drug and antibiotic resistance.

In its constitution, WHO defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” and outlines its main objective as delivering “the highest attainable standard of health”<sup>1</sup>. It outlines the following core functions in terms of its role in public health<sup>2</sup>:

- providing leadership on matters critical to health and engaging in partnerships where joint action is needed;
- shaping the research agenda and stimulating the generation, translation and dissemination of valuable knowledge;
- setting norms and standards and promoting and monitoring their implementation;
- articulating ethical and evidence-based policy options;
- providing technical support, catalysing change, and building sustainable institutional capacity;
- monitoring the health situation and assessing health trends.

Dr Tedros Adhanom, the current Director-General of the WHO, said: “The world is full of frameworks, roadmaps and action plans that sit on shelves collecting dust, and never make a difference to people.” Although we cannot expect decisions within our simulation to make an impact, as citizens of various countries we can use our understanding of global health issues to make better decisions and call on our governments to take steps in the right direction.

The aim of the delegates should be to write a constructive and comprehensive resolution that would benefit people in the Member States they represent and around the world.

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<sup>1</sup> The World Health Organisation (2006). The Constitution of the World Health Organisation. from Basic Documents 45th ed. [pdf] Available at: [http://www.who.int/governance/eb/who\\_constitution\\_en.pdf](http://www.who.int/governance/eb/who_constitution_en.pdf)

<sup>2</sup> The World Health Organization. (2017). The role of WHO in public health. [online] Available at: <http://www.who.int/about/role/en/>

# TOPIC A

## An international legal framework for the protection of Electronic Health Records (EHRs) and international eHealth data sharing

### INTRODUCTION

Electronic Health Records (EHRs) are an electronic version of paper-based stores of patient data. These are accessible only to authorised personnel across different clinical settings such as hospitals, pharmacies, emergency services as well as school and workplace based health services. The use of EHRs falls into the wider topic of eHealth, which WHO defines as ‘eHealth is the use of information and communication technologies (ICT) for health’<sup>3</sup>, it also includes mHealth which is the use of mobile phones in the delivery of eHealth strategies.

In 2005, the Fifty-eighth World Health Assembly adopted a resolution that established WHO’s eHealth Strategy and in the same year, the organisation set up the Global Observatory for eHealth with a purpose to study the history and evolution of eHealth around the world and its impact on health outcomes. Through the Global Observatory for eHealth and regional WHO Offices, WHO has been helping monitor the progress worldwide, focusing on individual countries, especially those in the low- and middle-income categories.<sup>4</sup>

At the Seventy-First Health Assembly run by the World Health Organization in 2018, passed a resolution that called on Member States “to develop, as appropriate, legislation and/or data protection policies around issues such as data access, sharing, consent, security, privacy, interoperability and inclusivity consistent with international human rights obligations and to communicate these on a voluntary basis to WHO”.<sup>5</sup> This highlights the main set of challenges that eHealth systems face around the world. In this section, we will consider these points in more detail and provide some suggestions of possible strategies for improving eHealth systems at a national level. Although our discussion will be mainly concerned with legal aspect of data collection, storage and sharing, as we will see later in this section, these aspects of eHealth are directly interconnected with the other challenges of eHealth systems.

Furthermore, the same resolution called for the Director-General of WHO to “develop, within existing resources, and in close consultation with Member States and with inputs from relevant stakeholders as appropriate, a global strategy on digital health, identifying priority areas including where WHO should focus its efforts”.<sup>6</sup>

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<sup>3</sup> World Health Organization. (2018). *eHealth*. [online] Available at: <http://www.who.int/ehealth/en/>.

<sup>4</sup> World Health Organization. (2018). *Global Observatory for eHealth*. [online] Available at: <http://www.who.int/goe/en/>.

<sup>5</sup> World Health Assembly resolution WHA71.7, *Digital Health*, A71/VR/7 (26 May 2018), available from [http://apps.who.int/gb/ebwha/pdf\\_files/WHA71/A71\\_R7-en.pdf?ua=1](http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_R7-en.pdf?ua=1).

<sup>6</sup> World Health Assembly resolution WHA71.7, *Digital Health*, A71/VR/7 (26 May 2018), available from [http://apps.who.int/gb/ebwha/pdf\\_files/WHA71/A71\\_R7-en.pdf?ua=1](http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_R7-en.pdf?ua=1).

## TIMELINE OF EVENTS

1998: Attention is drawn to the potential value of using internet technologies to disseminate information practices for the promotion and sale of medical products. Resolution EB101.R3 notes the importance of regulating online medical sales and related information flows.<sup>7</sup>

2005: WHO formally recognises eHealth and establishes an eHealth strategy, including the launch of a Global Observatory for eHealth (GOe), a body destined to study the development of eHealth and its implications.<sup>8</sup>

2013: Resolution WHA66.24 urges member states to increase eHealth system standardization across borders.<sup>9</sup>

2015: Largest data breach of EHRs on record, striking the US health giant Anthem Blue Cross and resulting in the theft of personally identifiable information such as names, home addresses and Social Security Numbers from 79 million individuals.<sup>10</sup>

2016: WHO recommends the incorporation of mobile technologies (mHealth) into eHealth strategies, citing high use among citizens of low- and middle-income countries where such initiatives could offer high impact solutions.<sup>11</sup>

2017: Launch of the first European Reference Networks (ERNs), an eHealth network dedicated to tackling complex diseases, encompassing over 300 hospitals across 26 EU member states.<sup>12</sup>

2018: A more elaborate version of the 2016 WHO report is published, outlining the applications of mHealth and indicating the potential value of advanced computer sciences such as AI.<sup>13</sup>

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<sup>7</sup> WHO Executive Board resolution EB101. R3, *Cross-border advertising, promotion and sale of medical products through the Internet*, (23 January 1998) available from [http://apps.who.int/gb/archive/pdf\\_files/EB101/pdfang1/angr3.pdf?ua=1](http://apps.who.int/gb/archive/pdf_files/EB101/pdfang1/angr3.pdf?ua=1)

<sup>8</sup> World Health Organization. (2018). *Global Observatory for eHealth*. [online] Available at: <http://www.who.int/goe/en/>.

<sup>9</sup> World Health Assembly resolution WHA66.24, *eHealth standardization and interoperability*, A66/VR/9 (27 May 2013) available from [http://apps.who.int/gb/ebwha/pdf\\_files/WHA66/A66\\_R24-en.pdf?ua=1](http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R24-en.pdf?ua=1)

<sup>10</sup> Pierson, B. (2018). *Anthem to pay record \$115 million to settle U.S. lawsuits over data...* [online] Reuters. Available at: <https://www.reuters.com/article/us-anthem-cyber-settlement/anthem-to-pay-record-115-million-to-settle-u-s-lawsuits-over-data-breach-idUSKBN19E2ML>.

<sup>11</sup> WHO Executive Board resolution EB139, *mHealth: use of mobile wireless*, (27 May 2016) [http://apps.who.int/gb/ebwha/pdf\\_files/EB139/B139\\_8-en.pdf?ua=1](http://apps.who.int/gb/ebwha/pdf_files/EB139/B139_8-en.pdf?ua=1)

<sup>12</sup> CEF Digital. (2017). *eHealth How it works*. [online] Available at: <https://ec.europa.eu/cefdigital/wiki/display/CEFDSIS/eHealth+How+it+works>.

<sup>13</sup> WHO Executive Board Report of the Director-General EB142/20, *mHealth: Use of appropriate digital technologies for public health*, (27 November 2017) available from [http://apps.who.int/gb/ebwha/pdf\\_files/EB142/B142\\_20-en.pdf?ua=1](http://apps.who.int/gb/ebwha/pdf_files/EB142/B142_20-en.pdf?ua=1)

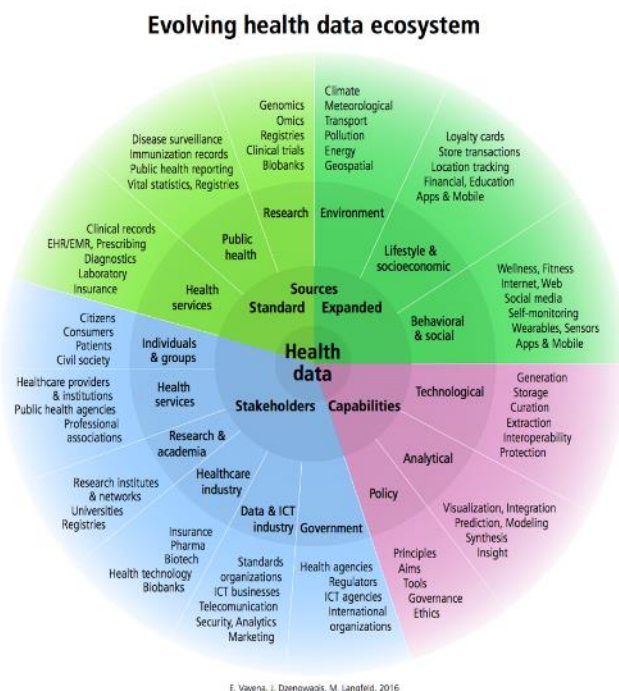
2018: Latest digital health reference made by the WHO Assembly in May 2018, summarising the previously agreed on approaches and recommendations into one resolution, WHA71.7.<sup>14</sup>

## DISCUSSION

Global integration of eHealth systems is currently covered less comprehensively by WHO than just the development of eHealth systems on a national level. In 2012, WHO published a practical toolkit for Member States aimed at helping them develop or set up national eHealth systems.<sup>15</sup> The toolkit is currently available in all of the official languages of the United Nations. Although it is an extremely helpful and comprehensive resource, the report emphasises that Member States

should use it as little or as much as they want, keeping in mind their individual healthcare challenges, so even though there is a substantial amount of resources helping countries work towards more efficient eHealth systems, there aren't yet any widespread commitments from Member States to organise their eHealth systems in any particular way.

Health data is being used in an increasing number of ways as illustrated in the graphic on the left. Besides improving standards of care, patient data can be used to predict epidemics, inform policy and improve health services as a whole.



The types of information contained in EHRs include patients' medical history, prescriptions, immunization dates, diagnoses, allergies as well as laboratory and other test results.<sup>16</sup> This, in theory,

means that all clinicians involved in a patient's care have access to the same information. In practice, this is not quite so simple and this is due to interoperability. Interoperability is defined as the ability of computer systems or software to exchange and make use of information. Within healthcare systems, even at the national level, interoperability or rather the lack thereof is often a barrier to increased efficiency of eHealth data sharing.

<sup>14</sup> World Health Assembly resolution WHA71.7, *Digital Health*, A71/VR/7 (26 May 2018), available from [http://apps.who.int/gb/ebwha/pdf\\_files/WHA71/A71\\_R7-en.pdf?ua=1](http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_R7-en.pdf?ua=1).

<sup>15</sup> National eHealth Strategy Toolkit. (2012). Geneva: World Health Organization. Available at: [http://apps.who.int/iris/bitstream/handle/10665/75211/9789241548465\\_eng.pdf;jsessionid=6BEF0FBE9D7C8C69532ECE0C050C7622?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/75211/9789241548465_eng.pdf;jsessionid=6BEF0FBE9D7C8C69532ECE0C050C7622?sequence=1).

<sup>16</sup> Healthit.gov. (n.d.). *What is an electronic health record (EHR)?* | *HealthIT.gov*. [online] Available at: <https://www.healthit.gov/faq/what-electronic-health-record-ehr> [Accessed 31 Aug. 2018].

In order to examine the problem of the lack of interoperability we will look more closely at the healthcare system in the United States. According to the Organization for Economic Co-Operation and Development, in 2017, the United States had the highest healthcare spending per capita out of all nations surveyed.<sup>17</sup> USA's developed economy and large amount of investments, as well as the range of healthcare providers that exist within the United States have led to a large number of different eHealth systems and software providers. This, in turn, has led to interoperability issues that are highlighted in a report written by the American Society of Clinical Oncology.<sup>18</sup> According to healthcare providers surveyed in 2015, only 19% had access to EHR systems that allowed patient data to be transmitted to third parties, a figure that makes it difficult for EHRs to benefit public health reporting and healthcare analytics. Many EHR System providers have implemented various barriers to information sharing that has significantly affected the interoperability of the eHealth system as a whole. These barriers include but are not limited to Per-transaction fees within contracts for transfer of information to a different platform for eHealth information, lack of interest in engaging with competing system providers to enable data sharing, and contractual requirements that give an electronic health record company exclusive license to use a healthcare provider's data.

In the same report, ASCO carried out a poll of cancer patient advocates, 80% of poll participants stated that it's either 'difficult' or 'very difficult to share healthcare information between providers. All these barriers present challenges for patients within national healthcare systems but also demonstrate that implementing widespread data sharing on an international level is no easy feat, considering the difficulties that already exist on a national level. When you scale up eHealth data sharing to an international level, other factors such as language barriers enter the picture.

The same issues are seen internationally. A survey of over 11,000 doctors around the world has revealed that only 7 percent of the participants felt like their eHealth system had meaningful connectivity with other providers.<sup>19</sup> The researchers behind the report also project that the Electronic Health Record system market will grow to over 30.2 billion US dollars by 2020.

Member States should consider how they can engage with national and international stakeholders within their national healthcare systems to make sure that eHealth data is truly useful. If it is extremely difficult to share EHRs between different healthcare providers, their usefulness fails to rise significantly above that of conventional paper-based patient records.

It Is worth thinking about how governments can introduce national standards for EHR systems and work with the private and public sectors to make sure that their guidelines are actually implemented into practice. This might be an even harder job for countries such as the US, where these systems are highly privatised and already in existence. Countries that are just starting out with the implementation of robust eHealth strategies, on the other hand, have the benefit of being

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<sup>17</sup> The OECD. (2017). *Health resources - Health spending - OECD Data*. [online] Available at: <https://data.oecd.org/healthres/health-spending.htm> [Accessed 31 Aug. 2018].

<sup>18</sup> ASCO. (2017). *Policy Issue Brief: Interoperability of Electronic Health Records*. [online] Available at: <https://www.asco.org/advocacy-policy/asco-in-action/policy-issue-brief-interoperability-electronic-health-records>.

<sup>19</sup> Healthcare IT News. (2018). *EHR interoperability, connectivity a big challenge around globe new study finds*. [online] Available at: <https://www.healthcareitnews.com/news/ehr-interoperability-connectivity-big-challenge-around-globe-new-study-finds>.



able to learn from other Member States' experiences and introduce government-approved standards for Electronic Health Records from the inception of their eHealth strategies.

Patient consent is a critical element when it comes to data protection and data sharing. If patient consent is not addressed properly, it could undermine the public's trust to the whole healthcare system and lead to disappointing results when it comes to public health. To maintain this trust, patients should be in total control of how their data is used nationally and internationally. As a rule of thumb, patient data should be used for the purpose that it was collected – to provide patient care.<sup>20</sup> However, that does not necessarily mean that patient data cannot be used for other means – there just need to be explicit information and the ability to opt in and out of the various data usage options. As demonstrated by the Cambridge Analytica scandal,<sup>21</sup> people really do care about how their data is used and misused, and although many companies protect themselves with long terms and conditions, when it comes to people's trust in the service they are using, a concise and informative interface and a clear explanation of data usage policies go a long way in comparison to lengthy T&C documents that scarcely anyone reads in full. If Member States are to implement large-scale cross-border health data sharing, consent for this type of data sharing should surely be included in consent forms of patients and it is up to the governments to make sure that healthcare providers, both public and private, stick to these guidelines.

When patients give consent for their data to be used in a range of ways, they have to have a degree of faith that their information is held securely within the healthcare service provider's servers. However, this also leads to increased risk of security breaches. According to the CynergisTek Redspin report of 2016, hacking attacks on healthcare services increased by 320% in 2016 and that 81% of records that were breached in 2016 suffered that fate due to hacking attacks.<sup>22</sup> The same report also indicated that malware and ransomware programs that hold data hostage until certain conditions are met are a particularly prominent threat to hospitals. At national level, governments should consider how they can help healthcare providers ensure the safety and security of their patient data and whether experts in cyber security from different sections of the civil service can be used to enhance people's trusts in Electronic Health Records and their use. This might also include giving more people within the healthcare sector training on data protection and privacy issues and solutions.<sup>23</sup>

Security and privacy are not one and the same when it comes to healthcare data. Security of healthcare data typically refers to protection of unauthorized access. Privacy tends to be defined as having the ability to protect sensitive information about personally identifiable health care information.<sup>24</sup> Although governments should obviously aim to ensure both security and privacy, explaining how data from patients is properly anonymised when used for analytical purposes can ensure more trust in EHR services and protect users even in case of security breaches.

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<sup>20</sup>Records. (n.d.). *Managing privacy and users consent in e-health records*. [online] Available at: <http://www.records.com.au/protecting-privacy-managing-consent-e-health-records/> [Accessed 31 Aug. 2018].

<sup>21</sup> The Guardian. (2018). *The Cambridge Analytica Files | The Guardian*. [online] Available at: <https://www.theguardian.com/news/series/cambridge-analytica-files> [Accessed 31 Aug. 2018].

<sup>22</sup> CynergisTek, Redspin. «BREACH REPORT 2016: Protected Health Information (PHI)» 2017. [Google Scholar](#)

<sup>23</sup> Abouelmehdi, K., Beni-Hessane, A. and Khaloufi, H. (2018). Big healthcare data: preserving security and privacy. *Journal of Big Data*, 5(1).

<sup>24</sup> Ibid.

According to the WHO, only 58% of Member States have an eHealth strategy, and only 55% of Member States have legislation that protects patient data.<sup>25</sup> Before any large-scale international health data sharing can take place, it is likely that member States will first have to take steps to give proper legal protection to the health data of their own citizens. Furthermore, Member States might not be incentivised to work with other Member States that do not provide the same level of legal protection to healthcare data of their own citizens. Member States might wish to prioritise countries with similar healthcare challenges when it comes to international cooperation.

Lastly, it is important to consider how the WHO can cooperate with the wider United Nations community to strengthen eHealth systems and make eHealth data sharing more secure. Coming back to the Digital health resolution of the World Health Assembly<sup>26</sup>, which aimed “to promote WHO’s collaboration with other organizations of the United Nations system and other relevant stakeholders to strengthen digital health implementation, by leveraging their capabilities”, Member States should think carefully about what stakeholders and UNOs would be of interest to their own healthcare goals. When looking at other stakeholders, for example, countries might wish to look how they can help organisations such as DeepMind Health to promote better healthcare within their countries.<sup>27</sup> Artificial Intelligence has revolutionised almost every aspect of modern life and healthcare is no exception, with the help of DeepMind and AI technologies, hospitals in the UK were able to use software to diagnose eye disorders with similar accuracy as top human experts. Looking out for and supporting such technological breakthroughs, whilst making sure third parties comply with government privacy and security regulations is essential to the healthy progression and prosperity of eHealth solutions.

Although many delegates might make the assumption that eHealth will be less valuable and usable in middle- and low-income countries because of access to the internet and other forms of technology, WHO has recently noted that technology of the digital age is becoming cheaper and more widespread in these countries. However, it is still true to say that the scale of implementation of eHealth strategies in those regions is also relatively small.<sup>28</sup> It will be important to consider how WHO can help further the interests of these Member States in terms of improving their healthcare systems and patient outcomes.

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<sup>25</sup> World Health Organization. (n.d.). *eHealth*. [online] Available at: <http://www.who.int/ehealth/en/> [Accessed 31 Aug. 2018].

<sup>26</sup> World Health Assembly resolution WHA71.7, *Digital Health*, A71/VR/7 (26 May 2018), available from [http://apps.who.int/gb/ebwha/pdf\\_files/WHA71/A71\\_R7-en.pdf?ua=1](http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_R7-en.pdf?ua=1).

<sup>27</sup> Moorfields.nhs.uk. (2018). *Breakthrough in AI technology to improve care for patients | Moorfields Eye Hospital NHS Foundation Trust*. [online] Available at: <https://www.moorfields.nhs.uk/content/breakthrough-ai-technology-improve-care-patients> [Accessed 31 Aug. 2018].

<sup>28</sup> Lewis, T., Synowiec, C., Lagomarsino, G. and Schweitzer, J. (2012). E-health in low- and middle-income countries: findings from the Center for Health Market Innovations. *Bulletin of the World Health Organization*, 90(5), pp.332-340.

## BLOC POSITIONS

As demonstrated in the discussion section, the primary separation between countries is based on those that have implemented eHealth strategies and those that have yet to do so. Beyond that, alignment can be sought with states that have matching healthcare strategies, such as those with highly privatized or nationalized services.<sup>29</sup> This section presents some existing frameworks from a variety of countries to streamline the discussion towards developing an international legal framework for the handling of EHRs and eHealth data sharing. As of 2016, 121 countries had adopted an eHealth national strategy, illustrating that there is an array of approaches to compare, with some notable ones described below. To gain a baseline understanding of the prevalence of eHealth in the delegate's respective country, reference can be made to WHO's Atlas of eHealth country profiles, which includes existing national legal frameworks.<sup>30</sup>

Because of the highly cooperative nature of this committee, this section is merely designed to help delegates to identify countries with similar healthcare systems and health challenges and shouldn't be seen as a constraint on what sort of blocs can be formed during committee sessions.

### Africa

Countries across the African continent have a high degree of variation in system adoption. Although a number of countries have established national eHealth strategies, they are often limited in legal and operational terms. For example, Kenya and South Africa both legally protect personally identifiable data, while Malawi, also a country with an eHealth strategy in place, has no such safeguards. Beyond that, sharing of data both nationally and internationally is not formally overviewed by national governments.<sup>31</sup> Despite this, both Kenya and South Africa have well-outlined strategies for developing an eHealth framework.<sup>32</sup> On the other hand, a number of countries like Morocco, South Sudan and Lesotho have no comprehensive eHealth strategy at all.

Given financial and institutional constraints, alternative solutions may be sought, as centralized systems are not the only approach. There are opportunities for need-based systems, such as OpenMRS-Ebola, a project piloted in Sierra-Leone for digitally recording and reviewing patient information during the Ebola outbreak in 2014-2016.<sup>33</sup> The project was successfully developed

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<sup>29</sup> National E-Health Transition Authority (21 April 2016) Evolution of eHealth in Australia: Achievements, lessons, and opportunities. Available from: [https://www.digitalhealth.gov.au/about-the-agency/publications/reports/benefit-and-evaluation-reports/evolution-of-ehealth-in-australia-achievements-lessons-and-opportunities/Evolution%20of%20eHealth%20in%20Australia\\_Publication\\_20160517.pdf](https://www.digitalhealth.gov.au/about-the-agency/publications/reports/benefit-and-evaluation-reports/evolution-of-ehealth-in-australia-achievements-lessons-and-opportunities/Evolution%20of%20eHealth%20in%20Australia_Publication_20160517.pdf)

<sup>30</sup> WHO Global Observatory for eHealth (2015) Atlas of eHealth country profiles. Available from: [http://apps.who.int/iris/bitstream/handle/10665/204523/9789241565219\\_eng.pdf?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/204523/9789241565219_eng.pdf?sequence=1)

<sup>31</sup> WHO Global Observatory for eHealth (2015) Atlas of eHealth country profiles. Available from: [http://apps.who.int/iris/bitstream/handle/10665/204523/9789241565219\\_eng.pdf?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/204523/9789241565219_eng.pdf?sequence=1)

<sup>32</sup> South Africa Department of Health (2012) eHealth Strategy South Africa. Available from: <https://www.health-e.org.za/wp-content/uploads/2014/08/South-Africa-eHealth-Strategy-2012-2017.pdf>

<sup>33</sup> Oza, S., Jazayeri, D., Teich, J., Ball, E., Nankubuge, P., Rwebembera, J., Wing, K., Sesay, A., Kanter, A., Ramos, G., Walton, D., Cummings, R., Checchi, F. and Fraser, H. (2017). Development and Deployment of the OpenMRS-Ebola Electronic Health Record System for an Ebola Treatment Center in Sierra Leone. *Journal of Medical Internet Research*, 19(8), p.e294.

and implemented within two and a half months, aiding the recovery process in the country. Such initiatives can be a viable option for sparsely populated areas with limited access to telecommunications. Delegates may consider how to best utilize and govern the high mobile ownership and advanced use of mobile payments in relation to the healthcare domain. Moreover, delegates may seek to increase continent-wide coordination and knowledge-sharing via the African Union.

## **China**

Being the most populous country in the world, the Chinese healthcare system has to serve a large number of patients. As a result, eHealth implementation is high, yet not so well coordinated. One of the issues that prompted the development of such a system is the SARS outbreak in 2003.<sup>34</sup> The country has a wide use of eLearning for medical professionals, EHRs, mHealth and social media engagement for healthcare purposes, yet as of 2015, almost no regulation protecting the storage and transfer of sensitive medical information.<sup>35</sup> Delegations that find themselves in a position similar to China, where the implementation has far exceeded regulation, are encouraged to explore how legal frameworks can safeguard patients without dismantling existing practices. This is particularly relevant for countries with high internet usage and lack of regulation of big data analysis and sharing. In the case of China, at least 25% of healthcare funding is private, meaning applicable regulation has to incorporate the interaction of private entities. Furthermore, China's immediate neighbours may want to consider ways to cooperate in order to strengthen epidemic response in the region.

## **European Union**

The EU has long been a protagonist in data protection, demonstrating its commitment with the rollout of the General Data Protection Regulation (GDPR) framework earlier this year. GDPR clarifies the rules for businesses that handle data of EU citizens and establishes fine for non-compliance.<sup>36</sup> Although the regulation is imperfect and its impact is yet to be gauged, this is one of the most concrete steps regulators have taken to increase protection of digital personal data. Besides that, the EU has demonstrated the willingness to take on major corporations that profit from user data, highlighted by the recent litigation that cost Google €4.34 billion in fines for illegal practices relating to the dominance of its search engine.<sup>37</sup> Although the case has no connection to the healthcare industry, it demonstrates the ability of the supranational body to take action against powerful entities. This is particularly relevant as only around 17% of the

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<sup>34</sup> Junping, Z., Zhenjiang, Z., Huayuang, G., Yi, L., Wanguo, X. and Yunqi, C. (2009). E-health in China, our practice and exploration. *2009 Annual International Conference of the IEEE Engineering in Medicine and Biology Society*.

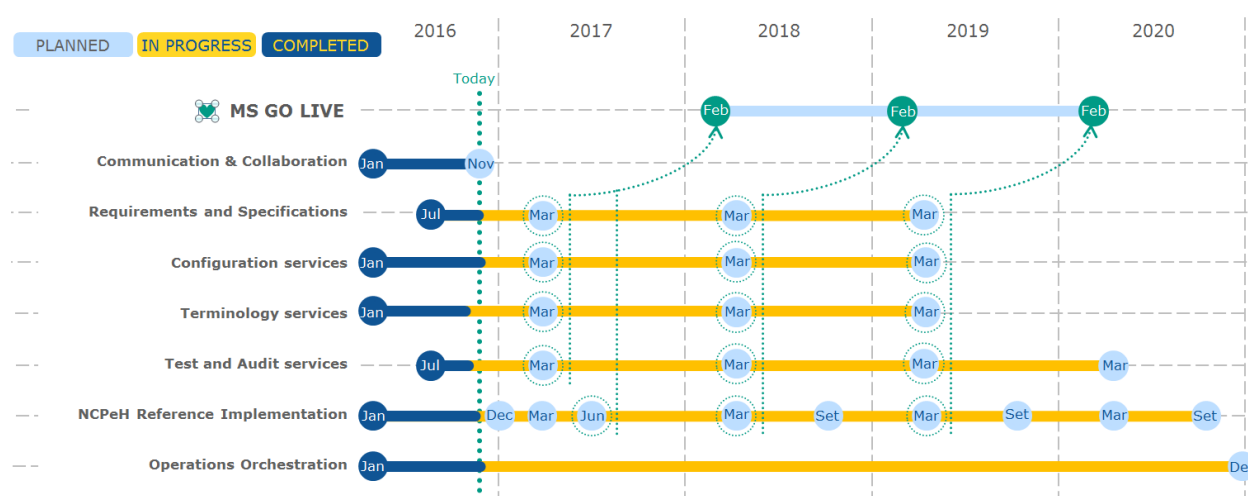
<sup>35</sup> WHO Global Observatory for eHealth (2015) Atlas of eHealth country profiles. Available from: [http://apps.who.int/iris/bitstream/handle/10665/204523/9789241565219\\_eng.pdf?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/204523/9789241565219_eng.pdf?sequence=1)

<sup>36</sup> European Commission - European Commission. (n.d.). *Data protection in the EU*. [online] Available at: [https://ec.europa.eu/info/law/law-topic/data-protection/data-protection-eu\\_en](https://ec.europa.eu/info/law/law-topic/data-protection/data-protection-eu_en).

<sup>37</sup> Europa.eu. (2018). *European Commission - PRESS RELEASES - Press release - Antitrust: Commission fines Google €4.34 billion for illegal practices regarding Android mobile devices to strengthen dominance of Google's search engine*. [online] Available at: [http://europa.eu/rapid/press-release\\_IP-18-4581\\_en.htm](http://europa.eu/rapid/press-release_IP-18-4581_en.htm).

countries worldwide govern the use of ‘big data’ in the health sector.<sup>38</sup> This means that an EHR legal framework needs to have actionable methods for punishing non-compliance, given the sensitivity of the material being handled.

From the perspective of eHealth, the EU has also been at the forefront of developing a unified strategy. Since 2011 the EU has been establishing a framework and rules for cross-border patient information sharing.<sup>39</sup> The goals of the system are to securely provide patient information access to European healthcare systems, to reduce frequency of medical errors and to provide life-saving information in emergency situations.<sup>40</sup> Besides the EU-wide plan, most EU members also have well-defined national eHealth frameworks.



Based on the last available information from the European Commission, the first cycle of the system has been launched earlier in 2018.<sup>41</sup> It is therefore of interest for countries belonging to the EU bloc to continue developing the existing framework, particularly focusing on the legal elements and the inter-operability with countries outside the EU. Moreover, delegations are encouraged to explore how the national eHealth system interacts with that of the EU.

## Singapore

Facing an onset of health-related challenges, including an ageing population and an increase in chronic diseases, Singapore had to adapt its system to meet rising healthcare demand. Despite the challenges, the country is said to boast one of the most advanced eHealth systems in the world,

<sup>38</sup> WHO Global Observatory for eHealth (2015) Atlas of eHealth country profiles. Available from: [http://apps.who.int/iris/bitstream/handle/10665/204523/9789241565219\\_eng.pdf?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/204523/9789241565219_eng.pdf?sequence=1)

<sup>39</sup> Official Journal of the European Union (2011) Directive 2011/24/EU on the application of patients’ rights in cross-border healthcare. Available from: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:088:0045:0065:en:PDF>

<sup>40</sup> CEF Digital. (2018). *eHealth Goals*. [online] Available at: <https://ec.europa.eu/cefdigital/wiki/display/CEFDSIS/eHealth+Goals>.

<sup>41</sup> CEF Digital. (2018). *eHealth Milestones*. [online] Available at: <https://ec.europa.eu/cefdigital/wiki/display/CEFDSIS/eHealth+Milestones>

in part due to its efficient governance, small size and high-income levels.<sup>42</sup> The effort is government-led and stems from a history of data sharing between hospitals, meaning the digital system is built on existing cultural foundation. Despite its advanced and well-governed model, it's not necessarily safe from a more general issue, cyberattacks. In June 2018, the hacking of the patient records system resulted in the theft of personal data of around 1.5 million Singaporeans.<sup>43</sup> The government has since initiated a review of the healthcare system, including its cybersecurity policy. The example of Singapore presents the opportunity for small sized or highly urbanized nations such as Cyprus, Qatar and Luxembourg to cooperate on developing efficient eHealth frameworks, as well as for higher income countries to divert some attention to the issue of cyberattacks and vulnerabilities that may arise with the development of data platforms.

## United Kingdom

The UK has a mixed history with digital health. The country suffered a blow with the development of the NPFIT, a centralized IT system for the NHS, which was eventually abandoned after costing the nation £12.4 billion.<sup>44</sup> Since then, a more decentralized system has been implemented, with the central body holding a limited amount of data. The recent focus has been on the Summary Care Records (SCRs), which exist for over 96% of the population, since the system is opt-out based. Within the 2017-2018 framework, the NHS has prioritized 10 criteria, with data for research and oversight, infrastructure and security leading the way with budgets of £65.9 million, £113 million and £28.5 million, respectively.<sup>45</sup> This highlights the demand for securing the information and deriving valuable information from the vast amount of patient data available. Based on this, alignment can be sought with like-minded partners, such as Australia, the US, Canada, New Zealand and the EU, though a significant factor is the variation in healthcare systems across these countries in terms of funding, ownership and operation.<sup>46</sup>

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<sup>42</sup> National E-Health Transition Authority (21 April 2016) Evolution of eHealth in Australia: Achievements, lessons, and opportunities. Available from: [https://www.digitalhealth.gov.au/about-the-agency/publications/reports/benefit-and-evaluation-reports/evolution-of-ehealth-in-australia-achievements-lessons-and-opportunities/Evolution%20of%20eHealth%20in%20Australia\\_Publication\\_20160517.pdf](https://www.digitalhealth.gov.au/about-the-agency/publications/reports/benefit-and-evaluation-reports/evolution-of-ehealth-in-australia-achievements-lessons-and-opportunities/Evolution%20of%20eHealth%20in%20Australia_Publication_20160517.pdf)

<sup>43</sup> Davis, J. (2018). *Hackers breach 1.5 million Singapore patient records, including the prime minister's*. [online] Healthcare IT Australia. Available at: <https://www.healthcareit.com.au/article/hackers-breach-15-million-singapore-patient-records-including-prime-ministers>.

<sup>44</sup> Davis, J. (2018). *Hackers breach 1.5 million Singapore patient records, including the prime minister's*. [online] Healthcare IT Australia. Available at: <https://www.healthcareit.com.au/article/hackers-breach-15-million-singapore-patient-records-including-prime-ministers>.

<sup>45</sup> NHS Digital. (2017). *A summary of NHS Digital's plans for 2017-18 - NHS Digital*. [online] Available at: <https://digital.nhs.uk/about-nhs-digital/corporate-information-and-documents/nhs-digital-s-plans-for-2017-18/a-summary-of-nhs-digital-s-plans-for-2017-18>.

<sup>46</sup> National E-Health Transition Authority (21 April 2016) Evolution of eHealth in Australia: Achievements, lessons, and opportunities. Available from: [https://www.digitalhealth.gov.au/about-the-agency/publications/reports/benefit-and-evaluation-reports/evolution-of-ehealth-in-australia-achievements-lessons-and-opportunities/Evolution%20of%20eHealth%20in%20Australia\\_Publication\\_20160517.pdf](https://www.digitalhealth.gov.au/about-the-agency/publications/reports/benefit-and-evaluation-reports/evolution-of-ehealth-in-australia-achievements-lessons-and-opportunities/Evolution%20of%20eHealth%20in%20Australia_Publication_20160517.pdf)

## CONCLUSIONS – KEY ISSUES

When preparing for the committee, delegates should consider the following points:

Does the Member State I represent currently have an eHealth strategy in place? If yes, how can it be adapted so it can be integrated with healthcare systems of other Member States with similar healthcare challenges? If no, what steps can be taken so we can benefit from other Member States' advancements in eHealth-related research, as we establish our own networks?

Does the Member State I represent currently have policies that protect patient Electronic Health Records? If no, how should they be formulated?

How is the healthcare system of the Member State I represent organised? Is it heavily nationalised or are there a lot of private healthcare providers that serve a significant proportion of the population? How should the government approach private healthcare providers when it comes to making sure they comply with any future or current eHealth strategies and standards? How can governments cope with private sector entities that refuse to cooperate with their competition when it comes to increasing interoperability of Electronic Health Record systems?

How can expertise from other civil service sectors help ensure the security of electronic health records?

For what purposes should cross-border health data be used? Some countries, for example, might benefit from this in terms of epidemic surveillance and response, whilst other countries might be more interested in health data sharing in order to gain a better understanding of non-communicable diseases.

Should countries aim to implement world-wide data sharing, or should regional cooperation based on shared healthcare challenges be prioritised in the short term?

Does the Member State I represent have a large proportion of the population without access to mobile phones and other digital technologies? If yes, how can this access be widened in order to maximise the benefits of implementing high cost eHealth systems?

Position papers should address the extent of eHealth systems in the countries that the delegates represent, as well as a vision for what Member State groups should work together in terms of data sharing in order to best address shared health challenges.

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# TOPIC B

## Building an international framework for the elimination of medical black markets

### INTRODUCTION

A black market is defined as a “an illegal traffic or trade in officially controlled or scarce commodities”. For the purposes of debate, we will consider “medical black markets” to cover black market medicine, illegal organ trade, as well as stolen Electronic Health Records (EHRs). Each type of medical black markets involves its own challenges and solutions, so the discussion section will address each type separately before covering overlapping solutions.

Officially, WHO does not currently have a dedicated information section pertaining to black markets. In fact, it could be argued that the issue is better suited to the United Nations Office for Drugs and Crime (UNODC). Although it is true that the UNODC is more specifically mandated to deal with drug and human trafficking - issues that are so central to medical black markets, the health systems and their users are ultimately the victims of medical black markets. When discussing this topic, delegates of the World Health Organisation will have to discuss how WHO fits into the issue of medical black markets as well as what parts of the issue could be better addressed by other United Nations organs.

Although illegal narcotics get a lot more press, prescription drugs entering black markets pose a comparable threat to societies as their illegal counterparts. In the UK, for example, £200 million worth of prescription drugs has entered the black market.<sup>47</sup> According to the Medicines and Healthcare products Regulatory Agency (MHRA) that provided these findings, organised criminal groups get the goods through bribery or impersonation of genuine buyers. Although little information is available about these practices in other countries, one can assume that similar issues are faced by countries other than UK which has relatively low crime and corruption rates as well as a fairly effective police force.

Many countries have an extreme shortage of organs for those that could be saved by organ transplants, with many patients having to deal with being on a waitlist for years before receiving a transplant. This has drove some of those that can afford it to purchase organs illegally. In low-income countries, many see the organ trade as an opportunity to rise above poverty. Unfortunately, many people end up being exploited by criminal organisations that harvest organs for sale without any regard as to the donors’ lives post their operations. In 2012, WHO estimated that over 10,000 illegal organ transplantation operations take place each year<sup>48</sup> and could very well be even greater now.

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<sup>47</sup> Geddes, D. (2018). *Prescription drugs worth £200m sold on black market*. [online] Thetimes.co.uk. Available at: <https://www.thetimes.co.uk/article/prescription-drugs-worth-200m-sold-on-black-market-mb0qjvxm1>.

<sup>48</sup> Campbell, D. and Davison, N. (2018). *Illegal kidney trade booms as new organ is 'sold every hour'*. [online] the Guardian. Available at: <https://www.theguardian.com/world/2012/may/27/kidney-trade-illegal-operations-who>.

Iran is, so far, the only country where it is legal to purchase kidneys which has led to some debate over potential benefits of legalising the practice. However, despite eliminating waitlists and queue times<sup>49</sup>, legalisation hasn't prevented the organ trade from benefiting the rich more so than people with low incomes, who have to depend on charitable organisations in order to obtain a healthy kidney. This also does not apply to other organs that are often sought, so legalisation cannot be discussed in a 'one size fits all' manner.

The emergence of Electronic Health Records (EHRs) discussed in Topic A has opened up more patients to risk of being targeted by hackers in an attempt to get their hands on their medical history, which is reportedly valued higher than even financial data.<sup>50</sup> Stealing this information allows criminal gangs to use patient identities to make large purchases of prescription medicine, which ties in with the issue of black market medicine. Although WHO is not really equipped to advise government cybersecurity agencies as to the best ways to safeguard their data, there might be other ways that WHO can help – for example, by helping healthcare providers support patients who have had their data compromised.

## TIMELINE OF EVENTS

- 1970s      Pharmaceuticals are developed that prevent organ rejection. There is barely any regulation on the subject, allowing an organ market to thrive.
- 1985      The World Medical Authority denounces the commercial use of organs.<sup>51</sup>
- 1987      The WHO declares organ trade illegal, stating that it violates the Universal Declaration of Human Rights.<sup>52</sup>
- 1991      The World Health Assembly adopts nine principles to guide human organ transplants, for example that no financial transaction should take place.<sup>53</sup>
- 1994      The Indian government makes organ trade illegal, but adds the exemption of unrelated kidney sales.<sup>54</sup>

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<sup>49</sup> Ghods, A. and Savaj, S. (2006). Iranian Model of Paid and Regulated Living-Unrelated Kidney Donation. *Clinical Journal of the American Society of Nephrology*, 1(6), pp.1136-1145.

<sup>50</sup> The Independent. (2018). *Why hackers just launched a huge cyber-attack on the NHS*. [online] Available at: <https://www.independent.co.uk/life-style/gadgets-and-tech/news/nhs-cyber-attack-medical-data-records-stolen-why-so-valuable-to-sell-financial-a7733171.html>.

<sup>51</sup> Digitalcommons.wcl.american.edu. (2018). [online] Available at: <https://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?referer=https://www.google.de/&httpsredir=1&article=1311&context=hrbrief> [Accessed 13 Sep. 2018].

<sup>52</sup> Cofs.org. (2018). [online] Available at: [http://cofs.org/home/wp-content/uploads/2013/08/11019\\_2013\\_9488\\_OnlinePDF.pdf](http://cofs.org/home/wp-content/uploads/2013/08/11019_2013_9488_OnlinePDF.pdf) [Accessed 13 Sep. 2018].

<sup>53</sup> Who.int. (2018). *WHO | Draft guiding principles on human organ transplantation*. [online] Available at: [http://www.who.int/ethics/topics/transplantation\\_guiding\\_principles/en/index1.html](http://www.who.int/ethics/topics/transplantation_guiding_principles/en/index1.html) [Accessed 13 Sep. 2018].

<sup>54</sup> Monitor, T. (2018). *Organ-trafficking laws in key countries*. [online] The Christian Science Monitor. Available at: <https://www.csmonitor.com/2004/0609/p12s02-wogi.html> [Accessed 13 Sep. 2018].

- 2000 The United Nations Convention against Transnational Organized Crime is adopted by the General Assembly.
- 2003 Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children is passed by the GA.
- 2005 This year a total of 66,000 kidneys, 21,000 livers, 6,000 hearts were transplanted globally<sup>55</sup>, making it a billion-dollar industry.
- 2008 The Istanbul Declaration is made, with over 100 countries endorsing its principles and countries like Pakistan, Israel, China and the Philippines adopting further regulation on organ trade.<sup>56</sup>
- 2013 UN resolutions 56/8 on “Promoting initiatives for the safe, secure and appropriate return for disposal of prescription drugs, in particular those containing narcotic drugs and psychotropic substances under international control”<sup>57</sup> and 56/14 on “Strengthening international cooperation in addressing the non-medical use and abuse, the illicit manufacture and the illicit domestic and international distribution of tramadol” are passed.
- 2017 The UN adopts a resolution on “strengthening and promoting effective measures and international cooperation on organ donation and transplantation to prevent and combat trafficking in persons for the purpose of organ removal and trafficking in human organs” (document A/71/L.80)<sup>58</sup>
- 2018 Resolution 61/8 on “Enhancing and strengthening international and regional cooperation and domestic efforts to address the international threats posed by the non-medical use of synthetic opioids “, is passed by the GA.

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<sup>55</sup> Who.int. (2018). [online] Available at: <http://www.who.int/bulletin/volumes/85/06.039370.pdf>

<sup>56</sup> Vathsala, A. (2018). *Structure and Content - declarationofistanbul.org*. [online] Declarationofistanbul.org. Available at: <https://www.declarationofistanbul.org/about-the-declaration/structure-and-content>

<sup>57</sup> UNODC Commission on Narcotic Drugs resolution 56/8, *Promoting initiatives for the safe, secure and appropriate return for disposal of prescription drugs, in particular those containing narcotic drugs and psychotropic substances under international control*, A/RES/67/97 (14 December 2012), available from [https://www.unodc.org/documents/commissions/CND/Drug\\_Resolutions/2010-2019/2013/CND-RES-56-8.pdf](https://www.unodc.org/documents/commissions/CND/Drug_Resolutions/2010-2019/2013/CND-RES-56-8.pdf)

<sup>58</sup> Un.org. (2018). *General Assembly Adopts Texts Including on Human Organ Trafficking Prevention, Indigenous Peoples Enhanced Participation in United Nations | Meetings Coverage and Press Releases*. [online] Available at: <https://www.un.org/press/en/2017/ga11938.doc.htm>.

# DISCUSSION

## Black Market Medicine

Medicinal drugs are strictly regulated for a number of good reasons. Many have addictive and/or psychoactive properties, the latter of which makes them subject to abuse. Antibiotics are another popular feature of medical black markets. Over-prescribing antibiotics is an issue in many countries even when it's done legally and has already raised concerns in terms of exacerbating the rise of antimicrobial resistance.<sup>59</sup> With this in mind, it is easy to see how antibiotics that can be purchased without a prescription illegally can be an even greater public health threat than their legally prescribed counterparts if this issue isn't addressed soon. Furthermore, stolen medicine can often be resold for extortionate prices in regions where such medicine is not as readily available.

Antidepressants and anxiolytic drugs are particularly targeted by criminal organisations. In the UK, for example, 160 million tablets with a street value of up to £200m were stolen over a three-year period by organised crime groups. Diazepam, Nitrazepam, Temazepam, Zolpidem and Zopiclone formed the bulk of these illegally traded medicines<sup>60</sup> and their addictive nature, as well as powerful withdrawal symptoms, lead users back to their original criminal supplier, exacerbating the problem. Although it is up to the police to seize the illegal goods once they enter the black market, securing the supply chain falls more under the umbrella of health services.

Pharmaceutical crime has, for a number of years, been of interest to The International Criminal Police Organization (INTERPOL), which has a specialised Medical Product Counterfeiting and Pharmaceutical Crime (MPCPC) Sub-directorate. They note that black market medicine can be not only stolen but also completely counterfeit. In 2014, several INTERPOL member states have reported an increase in pharmaceutical crime, with Central and South America being particular hotspots for this type of criminal activity. Illicit online pharmacies are the primary form of pharmaceutical crime and they are operated by all kinds of criminal bodies with different levels of organization.<sup>61</sup>

This should concern WHO for a number of reasons. Unsecured supply chains threaten to decrease public faith in domestic health care systems and ultimately endangers lives of the most vulnerable people. Unknown impurities in well-counterfeit medicine, for example, can lead to potentially life-threatening effects on users and at the same time might make them reluctant to seek out the same medicine from a legitimate source. Healthcare providers around the world are

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<sup>59</sup> Ventola, C. L. (2015). The Antibiotic Resistance Crisis: Part 1: Causes and Threats. *Pharmacy and Therapeutics*, 40(4), 277–283.

<sup>60</sup> Grant, P. (2018). *Millions of prescription drugs on black market*. [online] BBC News. Available at: <https://www.bbc.co.uk/news/health-42810148>

<sup>61</sup> INTERPOL Pharmaceutical Crime Sub-directorate, (17 July 2014) Pharmaceutical Crime and Organized Criminal Groups An analysis of the involvement of organized criminal groups in pharmaceutical crime since 2008. Available at: <file:///Users/DrBrainLab/Downloads/PUBLIC%20VERSION%20Pharmaceutical%20Crime%20and%20Organised%20Criminal%20Groups.pdf>

in an ideal position to raise awareness of the dangers of purchasing prescription drugs illegally and Member States should think about how to best use their resources in order to reach vulnerable groups.

However, relevant authorities are not very optimistic about solving this issue. The primary UK Medicines regulator (MHRA). And although this body works to shut down numerous online illegal pharmacies, a senior policy advisor at the MHRA said that “It's completely impossible to be on top of thousands and thousands [of sites]” because of their sheer number.<sup>62</sup> Because these websites cannot be easily disposed of after their creation, it is even more important to effectively tackle different aspects of this problem.

Some types of national legislation make it particularly easy for medical black markets to flourish. In India, for example, in an effort to circumvent international patent law, the government has made it legal to copy any patented medicine as long as a unique and different manufacturing process is used. This has led to medicine being available at prices at a fraction of costs seen in the US and Europe. Citizens of countries with extremely expensive healthcare like the US, are generally more likely to purchase such medicine even though the quality isn't always guaranteed.<sup>63</sup>

India's 'national black market' poses a real moral dilemma. Although much of the medical black markets are driven by selfish economic incentives of criminal organisations, are national black markets that provide more affordable medicine that bad if it means that more people in low- and middle-income countries can afford necessary measures as a result? This relates more generally to the common criticism of the so-called 'Big Pharma' companies. In order to address the full scope of this problem, Member States will have to seriously reassess their relationship with pharmaceutical companies and think about how they can make essential medicine affordable for at-risk groups. For example, a HIV positive individual or someone with a severe bacterial infection may be driven to a black market when they are unable to afford legitimate sources of the drugs. However, if the illegally obtained medicine is not of comparable quality to the medicine that's available from genuine suppliers then that individual will likely suffer fatal consequences and pose a higher public health risk by increasing the chances of transmission.

Member States should consider the development of digital technologies that could potentially help secure supply chains and flag up suspicious activity at certified pharmacies. Ukraine, for example, has been recently successful in saving millions of US dollars with anti-corruption software<sup>64</sup> and similar systems could be developed to make sure that pharmacies are not cooperating with criminal gangs by analysing possible accounting and inventory discrepancies.

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<sup>62</sup> Forster, K. (2017). *UK medicines regulator says it is 'completely impossible' to control illegal online pharmacies*. [online] The Independent. Available at: <https://www.independent.co.uk/life-style/health-and-families/health-news/uk-medicines-regulator-mhra-completely-impossible-illegal-online-pharmacies-antibiotic-resistance-a7623546.html>

<sup>63</sup> Grzybowski, S. (2004). The black market in prescription drugs. *The Lancet*, 364, pp.28-29.

<sup>64</sup> Apolitical. (2018). *Ukraine saves \$37 million on drugs with anti-corruption app | Apolitical*. [online] Available at: [https://apolitical.co/solution\\_article/ukraine-saves-37-million-drugs-anti-corruption-app/](https://apolitical.co/solution_article/ukraine-saves-37-million-drugs-anti-corruption-app/).

## Illegal Organ Trade

Much like black market medicine, the illegal organ trade exploits the vulnerable for vast amounts of profit. China, India and Pakistan are considered hotspots for organ export and patients from rich, mainly Western states, have paid up to 200 thousand US dollars for a kidney transplant, whilst the donors recruited by the organ rings usually get a fraction of the selling price, often as little as \$5000.<sup>65</sup> This means that those living in poverty are at a particular risk of being caught up in illegal organ harvesting programs.

The illegal organ trade is also closely linked with growing obesity rates around the world. Individuals with obesity are at a higher risk of developing Chronic Kidney Disease (CKD) as a result of complications from long-term conditions, such as hypertension and diabetes. Furthermore, obesity is projected to rise by 40% in the next decade.<sup>66</sup> When it comes to the growing demand for kidney transplants, the rise in obesity rates is a double-edged sword. On one hand, the growing number of people with obesity leads to the rise in the number of people who need a kidney transplant and on the other hand, the number of suitable donors decreases.

With this in mind, it is clear that combatting the illegal organ trade will come hand in hand with a wider range of possible healthcare reforms for Member States. Although WHO isn't going to issue strict commands as to what nations should do within their own jurisdiction, it is the WHO's aim to provide a platform for dialogue and to carry out robust research into a range of possible national policies that Member States might wish to implement.

Firstly, increasing the number of organ donors is a sure step to decreasing the demand for illegal organs. One policy that has been shown to make an impact is the switch from opt-in donation to opt-out donation.<sup>67</sup> This is due to what's called the default effect, which has been increasingly used by behavioural scientists and policy makers in recent years. Simply put, humans tend to stick with the default option and this has made a key difference in the proportion of people that have agreed to donate their organs. Germany, for example, has a donation consent rate of 12% under an opt-in system. Austria, whilst having a similar history and economic development, has a donation consent rate of 99.98% under an opt-out system.<sup>68</sup> However, individual cultural and policy differences around the world do not necessarily make this switch straightforward. In many countries, despite the wishes donors indicate on registers, family wishes have to be considered before organs can be donated which sometimes results in a disregard of the deceased's wishes.

Iran's choice to legalise kidney trade is unique and also deserves particular consideration. The UN has been generally against the idea of legal kidney trade, for the similar reasons that exist against the illegal organ trade. Although legalising kidney trade might provide donors with safer surgical procedures and decrease chances of exploitation, it still creates a culture where those living in poverty risk their health and well-being. Even in Iran, local watchdogs of the trade

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<sup>65</sup> Campbell, D. and Davison, N. (2012). *Illegal kidney trade booms as new organ is 'sold every hour'*. [online] the Guardian. Available at: <https://www.theguardian.com/world/2012/may/27/kidney-trade-illegal-operations-who>.

<sup>66</sup> Kovesdy, C., Furth, S. and Zoccali, C. (2017). Obesity and kidney disease: Hidden consequences of the epidemic. *Indian Journal of Nephrology*, 27(2), p.85.

<sup>67</sup> Johnson, E. and Goldstein, D. (2003). Do Defaults Save Lives? *Science*, 302(5649), pp.1338-1339.

<sup>68</sup> Thaler, R. (2009). *Making It Easier to Register as an Organ Donor*. [online] Nytimes.com. Available at: <https://www.nytimes.com/2009/09/27/business/economy/27view.html>.



comment that lack of government regulation has allowed inequalities to perpetuate and has also failed to eliminate the black market.<sup>69</sup> Although it cannot be said that just because the legal organ trade doesn't work well in Iran it won't work somewhere else, many countries have considerable wealth gaps and it is not hard to see how such a system would work against individuals living on the lower end of the socioeconomic scale.

Finally, as far as the illegal organ trade is concerned, WHO might wish to look upon what policy questions and issues might face the world in the future. Science and biomedicine are advancing at a rapid pace and one of the most promising avenues of research as far as the organ trade is concerned is the possibility to 3D print organs. This involves printing a scaffold followed by embedding that scaffold with the patient's cells, leading to a decreased chance in organ rejection. However, with promising new technologies come new challenges and one possibility is that criminal organisations now trading in conventional illegally harvested organs might eventually move on to endangering people's lives with counterfeit, low-quality 3D printed organs.<sup>70</sup>

### **Stolen Electronic Health Records (EHRs)**

Most of us are fairly conscious about protecting our financial information. Many banks employ sophisticated algorithms to detect unusual activity in clients' accounts, send SMS alerts of purchases and allow for cards to be blocked quickly and reissued with user-friendly mobile banking apps. This means that in case of compromise of financial data, it is fairly easy to fix the issue or at least stop it in its tracks before more damage is done.

This isn't the same for health data, where affected patients often do not realise their data has been compromised. This data can be used to falsify identity to obtain medical care, medical devices or medicine. Moreover, some criminals use the data to file fraudulent insurance claims.<sup>71</sup>

A survey of US users by Accenture revealed that around a quarter of those surveyed have suffered healthcare data breaches. Out of those affected, 50% have subsequently been affected by medical identity theft. On average, this has led to personal costs of about \$2500 for those affected. What's even more concerning is that half of those surveyed discovered they were victims themselves and did not first receive any alerts from their healthcare providers or law enforcement agencies.<sup>72</sup> Besides financial losses, having your medical details stolen can be a great source of distress for those affected. Healthcare services should be ready to address these concerns for their users and work on increasing the capacity for early detection of data breaches.

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<sup>69</sup> Krishnan, M., Oraby, F., Boreczky, C., Guedoir, A., Pearce, E. and Reddy, R. (2018). *Legalizing Trafficking: Iran's Unjust Organ Market and Why Legal Selling of Organs Should Not be The Resolve*. [online] Bpr.berkeley.edu. Available at: <https://bpr.berkeley.edu/2018/05/03/legalizing-trafficking-irans-unjust-organ-market-and-why-legal-selling-of-organs-should-not-be-the-resolve/>.

<sup>70</sup> Wordsworth, R. (2016). *Could 3D-printed organs be medicine's next grisly black market?* [online] Wired.co.uk. Available at: <https://www.wired.co.uk/article/printed-organs-black-market>.

<sup>71</sup> Suleyman, A. (2017). *Why hackers just launched a huge cyber-attack on the NHS*. [online] The Independent. Available at: <https://www.independent.co.uk/life-style/gadgets-and-tech/news/nhs-cyber-attack-medical-data-records-stolen-why-so-valuable-to-sell-financial-a7733171.html>.

<sup>72</sup> Digital Guardian. (2018). *Top 10 Biggest Healthcare Data Breaches of All Time*. [online] Available at: <https://digitalguardian.com/blog/top-10-biggest-healthcare-data-breaches-all-time>.

## BLOC POSITIONS

Evidently it is in the interest of every nation to have black markets within it eliminated to the greatest degree possible. This is likely going to remain uncontested during debate. The same however does not apply to the means by which and the extent to which the WHO should act against medical black markets. Some countries are engaged, some countries are reluctant, and for others where poverty and violence are everyday issues, organ trade is just one of a whole series of problems and therefore potentially not given sufficient amounts of attention and public resources, despite there being recognition of the harm dealt by medical black markets.

### India & Pakistan

The WHO estimates that up to 10% of the 63,000 kidneys “traded” each year were from donors (including involuntary donors) from the developing world and went to unrelated recipients.<sup>73</sup> In pure monetary terms, there is an economic incentive to keep the trade going in the developing world. In fact, the WTO and WHO have jointly reported that health service exports, including pharmaceuticals as well as foreigners entering the country’s territory for local treatment are frequently used as a tool for economic development. Organ trade is by now illegal in all countries except Iran, but in other developing countries, such as Pakistan, organ trade was legal and booming as late as 2005<sup>74</sup>.

India is known as an organ-exporting country, despite organ trade being illegal there since 1991. Allowing the rich to buy the organs of the poor is not a popular political policy, hence it has been mostly outlawed. Enforcement of this law and active investigation and punishment are less common though. To date, Pakistan is still one of the world’s biggest and most systematic organ exporters. Corruption in addition to lack of motivation and resources by the State are the main reasons for this. Regulation has been a slow process and mostly characterized merely by vague proposals that are scarcely followed through.

Existing legislation on the protection of live organ donors from coercion, exploitation and bodily harm is neither well developed nor well implemented. Research conducted by the American Medical Association concluded that of 305 Indian kidney donors, 96% sold their organ in order to repay debts. However, six years after the sale 75% of them reported still being in debt and 86% reported a deterioration in health after the operation. In most cases of illegal organ trade the donors do not get the necessary postoperative care and due to the bad hygiene standards, recipients often contract hepatitis B and C or HIV.<sup>75</sup> We therefore see many of the possible advantages of an organ trade, like it being beneficial to the poor, refuted.

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<sup>73</sup> Who.int. (2018). [online] Available at: <http://www.who.int/bulletin/volumes/92/11/14-137653.pdf>.

<sup>74</sup> Walsh, D. (2018). *Transplant tourists flock to Pakistan*. [online] the Guardian. Available at: <https://www.theguardian.com/world/2005/feb/10/pakistan.declanwalsh>.

<sup>75</sup> The Economist. (2018). *Psst, wanna buy a kidney?* [online] Available at: [https://www.economist.com/leaders/2006/11/16/psst-wanna-buy-a-kidney?story\\_id=8173039](https://www.economist.com/leaders/2006/11/16/psst-wanna-buy-a-kidney?story_id=8173039).

## **Middle East**

The majority of organ tourists in Pakistan are from the Middle East. It has been reported in many cases that their seeking of organs in Pakistan takes place under the blessing of their State, with local embassy officials helping out their citizens in finding the right hospitals, doctors, etc. for their operation, an example of this being the Saudi embassy in Islamabad. There are also reports of large numbers of Israeli citizens receiving organ transplants in Brazil and South Africa. This practice has been reported to be taking place in the Philippines as well. Iran is also one of very few countries that have not yet ratified the United Nations Convention against Transnational Organized Crime.

## **European Union**

Some European countries have been experimenting with presumed consent, aiming to fight the black market by simply making organs the legal way much more available. Austria, for example has adopted this policy quite successfully, having an organ donor rate of 99.98%. This leaves little room for a black market.

Furthermore, the European Commission has funded a project by the UNODC aiming to fight organized crime in the Western Balkans, where law enforcement is still below EU standards.<sup>76</sup> The EU has found it difficult to measure its progress in fighting organised and transnational crime due to a lack of data on the dynamics of such syndicates. Its efforts will be aimed at understanding the actions of organized crime groups, the means they use to conduct their business, as well as the size of the illegal markets they are operating in. For the success of this project the UNODC is closely collaborating with the national statistical offices of the affected countries. Ultimately, an analytical report will be published by the commission, which can then be used by local authorities to identify how they need to transform or build their capacities to become more effective in taking down criminal organizations.

## **Latin America**

The severe shortage of organ donors is driving illegal organ trade in Latin America as well. A series of Latin American countries have adopted opt-out organ donor policies to reduce the shortage. This will likely not suffice for the issue to disappear entirely. Endemic levels of poverty and high demand eventually lead many people in need under the scalpel. Some Latin American States have come together and agreed on minimum sentences for violations in organ trafficking. Most recipients originate from the Middle East and Europe. Mexico's Attorney General Office is reported to have received 36 reports of organ trafficking over the course of six years.<sup>77</sup> It only opened so far only four preliminary investigations. Like in other developing countries there does not seem to be a strong incentive to seriously tackle the issue.

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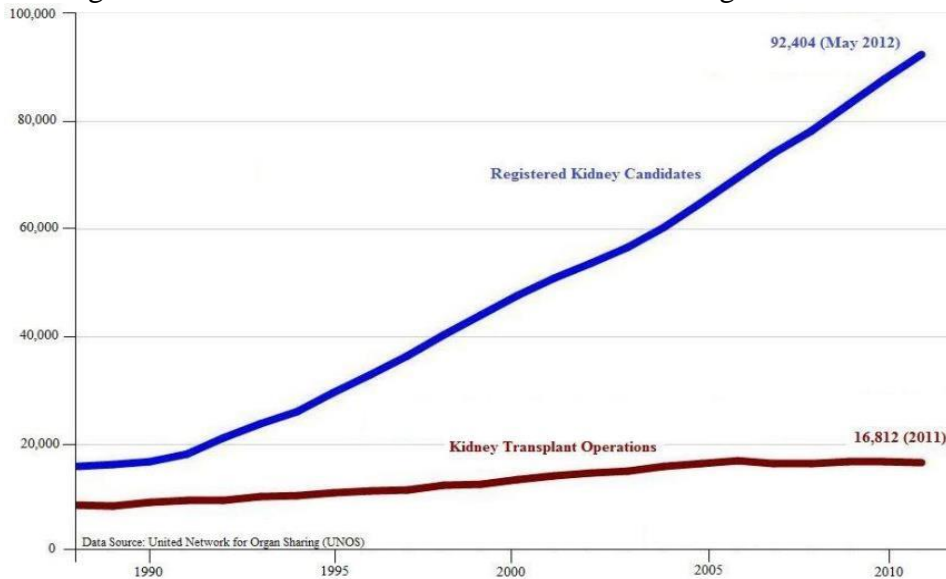
<sup>76</sup> Unodc.org. (2018). *UNODC advances efforts to measure organized crime*. [online] Available at: <https://www.unodc.org/unodc/en/frontpage/2018/January/unodc-advances-efforts-to-measure-organized-crime.html>.

<sup>77</sup> Excelsior. (2018). *Confirma la PGR cuatro casos de tráfico de órganos*. [online] Available at: <https://www.excelsior.com.mx/node/741168>.

## United States of America (USA)

Despite having relatively well functioning law enforcement, the US still has thriving black markets, especially in the area of prescription drugs. That is due to oftentimes skyrocketing drug prices, with notorious examples being the corporate giant Valeant, whose business model relied exclusively on the purchasing of smaller pharmaceutical companies and their patents and then increasing prices of these drugs almost indefinitely. This has driven many people, especially those whose lives depend on the medication, to resort to the black market.<sup>78</sup>

The organ black market in the US seems to be worsening as well.



Due to the demand for kidneys increasing at a constant rate (because of rising obesity rates) and the amount of donors remaining more or less the same, the shortage is growing with no end in sight. Many States of the US consequently offer tax cuts to people who become organ donors, but this had little impact on the donation rates.

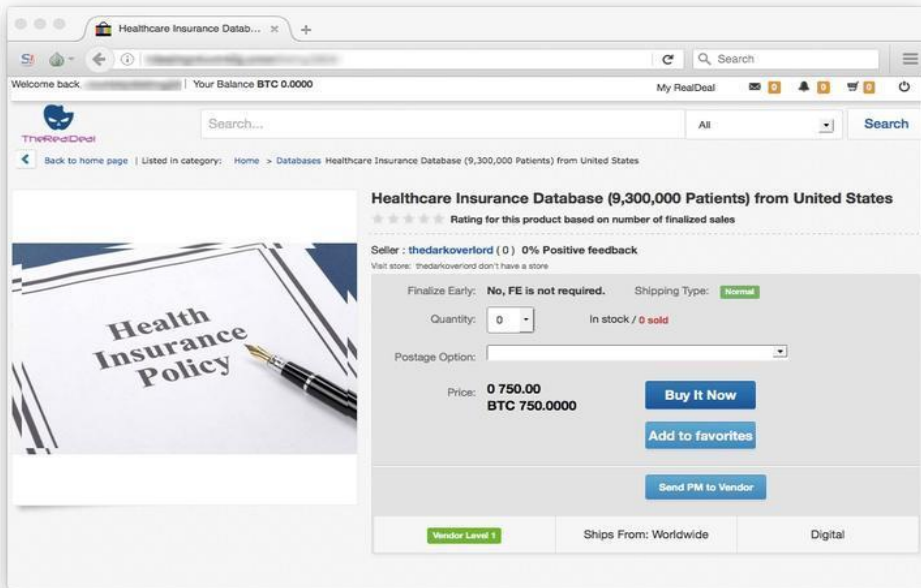
Generally, in the Western World and particularly the US has fallen victim to a great number of cyber-attacks, in which health records amounting to over a million people have been stolen, according to expert estimations.<sup>79</sup> These are then offered back to the insurance companies or hospitals they were stolen from in exchange hundreds of thousands of dollars. If these sums are not paid, the health records, often including passwords, are then auctioned on the darknet reaching similar price categories.

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<sup>78</sup> Bloomberg.com. (2018). *Terms of Service Violation*. [online] Available at:

<https://www.bloomberg.com/view/articles/2018-09-11/apple-aapl-considers-the-death-of-the-iphone-sim-card>

<sup>79</sup> Trendmicro.com. (2018). *Healthcare under Attack: What Happens to Stolen Medical Records?* - *Security News - Trend Micro USA*. [online] Available at: <https://www.trendmicro.com/vinfo/us/security/news/cyber-attacks/healthcare-under-attack-stolen-medical-records>



## Democratic People's Republic of Korea (DPRK)

Little is known about the DPRK's stance on medical black markets, but there are government run methamphetamine production facilities. Due to lack of alternatives the drug is used in the country for pharmaceutical purposes. Defectors and sources who spoke to the North Korea report claim that between a fourth and a half of the whole population to be using this drug. The drug is also produced and purchased in great numbers illegally.

As economic conditions are deteriorating, mid-level communist party functionaries tend to become more corrupt, making it easier for organized criminal organizations to traffic the drugs. The Chinese government reported that in collaboration with South Korean intelligence agencies it managed to seize 60 million USD worth of methamphetamines from the DPRK.<sup>80</sup> It is equally possible, considering that North Korea does not even shy away from sending labourers all over the world to places like Siberia or Qatar to work under the most inhumane conditions, that the government of the country would also resort to the trafficking of these drugs in order to enrich itself. To claim that the highest levels of North Korean government orchestrate the trafficking of Chrystal Meth into China might be too strong a claim and is not verifiable, however it is likely that at least individuals in mid-level positions of the government are turning a blind eye, if not using their influence to actively support the trafficking. With Chinese demand for the drug increasingly rising, production is now assumed to be largely taking place privately. The DPRK has repeatedly announced crackdowns on the meth black market in the country, but with very limited success.

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<sup>80</sup> Huang, J., Cathcart, A., Easley, L., Cathcart, A., Cathcart, A., Song, J. and Fields, D. (2018). *Spreading Meth across the Chinese-North Korean Border*. [online] Sino-NK. Available at: <https://sinonk.com/2012/02/07/spreading-meth-across-the-chinese-north-korean-border/>

## China

In China, the organ trade seems to be, at least in part, supported by the state. China is estimated to be transplanting more than 60,000 organs annually<sup>81</sup>. The vast majority of these are prisoners, of which many are Chinese citizens who have been imprisoned and later executed for the spiritual practice of Falun Gong. It is estimated that in one of China's clinics over half of all 900 transplants were for non-Chinese recipients. This has understandably led to allegations of state-sponsored organ trade and transplant-tourism.

China has made commitments to reduce international organ trade, albeit the absence of transparency in the country makes it almost impossible to verify whether it made its promises a reality. China most definitely still lacks a legal framework as well as enforcement mechanisms against organ trade and possibly even the most basic will to take serious action. On the other hand, when a controversy became public about Chinese doctors admitting to brokering cross-border deals with Taiwanese organ recipients, the country officially banned this practice.<sup>82</sup> Chinese officials also insist now that the practice of harvesting organs from executed prisoners has ceased.<sup>83</sup> It remains questionable, due to the controversy of some of China's policies whether the country would be open to assistance by international organizations.

China has shown some frustration with the DPRK and although initially hesitant to condemn the vast amounts of methamphetamines entering the country, in recent China begun cracking down on the trade, as a subtle mean of exerting pressure on the country. It should be noted that in the "World Drug Report" of 2011 by the UNODC there is no single mention of the DPRK as a meth production hub. That was surely a calculated decision by the Chinese government, because the Report relied strongly on government-provided data.

## Southeast Asia

A new organ trafficking route appears to have opened in Southeast Asia. Cases have been reported in Cambodia, Thailand and the Philippines. Organ trade is often happening with the use of forged identification to make it appear as if the recipient and the donor are related. Additionally, Singapore has reported a hack of its government health database, with the records of 1.5 million citizens stolen.<sup>84</sup>

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<sup>81</sup> The Independent. (2018). *China 'carrying out over 60,000 illegal organ transplants annually'*. [online] Available at: <https://www.independent.co.uk/news/world/asia/china-carrying-out-millions-of-illegal-organ-transplants-annually-report-finds-a7107091.html>

<sup>82</sup>The China Post. (2018). *Doctors banned from brokering transplants / The China Post*. [online] Available at: <https://chinapost.nownews.com/20060817-138609>].

<sup>83</sup> South China Morning Post. (2018). *We're not harvesting dead prisoners' organs any more, China insists*. [online] Available at: <https://www.scmp.com/news/china/policies-politics/article/2068708/ban-harvesting-executed-prisoners-organs-transplant>.

<sup>84</sup> Hack, I. (2018). *1.5 million health records stolen in Singapore hack*. [online] Computerworld. Available at: <https://www.computerworld.com.au/article/644156/1-5-million-health-records-stolen-singapore-hack>.

## Africa

All African countries have laws banning the trade of organs. Poverty rates, civil wars and rampant crime and corruption make the enforcement of such laws nearly impossible.

Additionally, considering that many of these countries are struggling with even more severe human rights violations, specifically organ trade may not be atop their agenda. Some states (e.g. Nigeria) have seen high rates of substance abuse, among which codeine-based cough syrup.

People suffering from such addiction remain in poverty, spending all their earnings on these drugs. High corruption rates make it very easy for the prescription drugs to be traded illegally on the black market. The addiction rates resulting out of this pose a considerable burden on the countries affected by these black markets. In Nigeria addiction rates rose to such high levels that the production of codeine based cough syrup was banned entirely in the country. Recently a second opioid-containing drug, tramadol has become tremendously popular in Nigeria.<sup>85</sup>

Tramadol is legally sold only on prescription, but in practice its available freely in most of the country. Large quantities of the drug are also trafficked illegally from South Asian countries like India. Aside from plaguing the general population, the drug is also abused by the Islamic terrorist group Boko Haram. The extremists use the drug while fighting to boost their morale. In the North-eastern communities of Nigeria, which are majority Muslim, alcohol consumption is forbidden. This taboo does not exist to the same extent on prescription drugs. Also, the fact that it is so cheaply available made it spread extremely rapidly.

## CONCLUSIONS

When preparing for the committee, delegates should consider the following points:

- Should WHO recommend that Member States investigate more widely as to the prevalence and value of black market medicine originating from within their borders as well as the extent of their domestic illegal organ trade? If yes, what stakeholders have to be involved in order to achieve comprehensive and reliable results?
- What may motivate healthcare workers to work with criminal organisations and contribute to the illegal trade in prescription drugs? How can Member States work with these individuals and the healthcare bodies they are employed by to decrease supply?
- How can digital technology be used to facilitate spotting missing medicine supplies or suspicious activity when purchasing prescription drugs? What are the best practices in digital technologies that WHO can recommend to a wider range of Member States?
- What can other Member States learn from Iran's experiences in legal kidney trade? When writing position papers, delegates should explicitly reference their stance. If legalisation is the answer, how can Member States prevent further healthcare inequality?
- With regards to sale of Electronic Health Records on the black market, member States should consider what relevant stakeholders will need to be engaged to lower chances of security breaches, as well as think about the possible negative impacts on patients whose data has been compromised and how these negative impacts can be mitigated through health systems.

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<sup>85</sup> BBC News. (2018). *The drug fuelling death, despair and Boko Haram*. [online] Available at: <https://www.bbc.com/news/world-africa-44306086> [Accessed 13 Sep. 2018].

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