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**General Council  
Council for Trade in Services**

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## **ROLE OF TELEMEDICINE SERVICES IN RESPONSE TO THE PANDEMIC**

### **COMMUNICATION FROM INDIA**

The following communication, dated 23 February 2023, is being circulated at the request of the delegation of India.

#### **1 INTRODUCTION**

1.1. The COVID-19 pandemic represented an unprecedented disruption to the global economy and world trade. In the run-up to the Twelfth Session of the Ministerial Conference, WTO Members worked towards formulating a multilateral response to COVID-19 to guide the WTO's work to render the multilateral trading system more resilient and better prepared for futures crises. This culminated in the 'Ministerial Declaration on the WTO Response to the COVID-19 Pandemic and Preparedness for Future Pandemics' adopted by the membership on 17 June 2022 (WT/MIN(22)/31).

1.2. The Declaration calls on relevant WTO bodies to continue or initiate work to analyze lessons learned and challenges experienced during the COVID-19 pandemic. These deliberations would serve to build effective understanding of potential solutions in case of future pandemics. *Inter alia*, the membership underlined the importance of facilitating trade in services, including health services and ICT services, during COVID-19 and future pandemics. Further, while taking into consideration Members' public health policies and experiences during the COVID-19, the Members acknowledged the relevance of further cooperation including on interoperability and mutual recognition of digital health applications.<sup>1</sup>

1.3. At the global level, COVID-19 pandemic presented a unique situation where surpluses and shortages of health-related resources existed simultaneously as the pandemic came in waves, affecting different regions of the world at different times. At the domestic level, the COVID-19 pandemic overwhelmed the capacity of domestic healthcare systems. Social distancing measures made in-person consultations on medical issues challenging. This spurred the adoption of telemedicine services, that is, the provision of health care services through the use of information and communication technologies.

#### **2 DEFINITION, NATURE AND BENEFITS OF TELEMEDICINE**

2.1. The World Health Organization<sup>2</sup> has adopted the following broad description for telemedicine - "The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities". Telemedicine can include a broad range of services including (a) teleconsultation between the health provider and patient, (b) tele-expertise between two health providers, (c) telemonitoring when the health provider remotely monitors the patients' data (d) tele-assistance when a health professional remotely guides a medical procedure and

<sup>1</sup> <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/MIN22/31.pdf>

<sup>2</sup> [https://apps.who.int/iris/bitstream/handle/10665/44497/9789241564144\\_eng.pdf](https://apps.who.int/iris/bitstream/handle/10665/44497/9789241564144_eng.pdf)

(e) tele-education for health care providers. Mobile health (mHealth) is closely linked to telemedicine. It covers health practice through mobile devices such as mobile phones, patient monitoring devices and other wireless devices and health-related applications ('apps').<sup>3</sup>

2.2. The benefits of telemedicine include lowering the cost of health services, enhancing access where there is unavailability or undersupply of health services, early identification and prevention of diseases leading to a reduction in health expenditure and transfer of know-how and technology.

### 3 ADOPTION OF TELE-MEDICINE DURING COVID-19 - EXPERIENCE FROM DIFFERENT COUNTRIES

3.1. The COVID-19 pandemic catalysed the rapid adoption of digital solutions and advanced technology tools in healthcare within the national boundaries. In recent years, countries have undertaken various measures to facilitate this adoption. Some examples are as under:

- i. India - The government launched the e-Sanjeevani<sup>4</sup>, a national telemedicine platform, in November 2019, which provided an integrated telemedicine solution for 'doctor-to-doctor' consultations. The pandemic outbreak witnessed two important developments. India notified the telemedicine practice guidelines in March 2020 which provided comprehensive guidelines for tele-health-care delivery in India. Further, e-Sanjeevani evolved to a direct care module 'e-Sanjeevani outpatient department (OPD)' to facilitate 'doctor-to-patient' consultations. This web-based platform integrates registration, queue management, generation of e-prescriptions, short message service, and e-mail notifications. So far, e-Sanjeevani has crossed an astounding milestone by clocking 100 million teleconsultations.<sup>5</sup> This platform has facilitated healthcare access across the country especially rural and isolated communities. It is designed for scale and low-cost uptake by health providers and patients.

Further, the government launched the COVID-19 Vaccine Intelligence Network (CoWIN)<sup>6</sup>, a state-of-the-art digital solution for one of the world's largest COVID-19 vaccination programmes. It is a scalable, inclusive, and open platform for universal vaccination. The citizen-centric solution facilitates registration and booking of appointments for vaccination, regular reminders and communication, provision of vaccination certificates for citizens and helps programme managers and vaccinators to create and manage sessions, develop reports and monitor progress. India offered the technological prowess of the Co-WIN platform as a Digital Public Infrastructure (DPI) freely to all countries in the fight against COVID-19. India has so far achieved the historic milestone of 2.2 billion doses of vaccinations.

India also launched the Aarogya Setu app, aimed at COVID-19 contact tracing, self-assessment and informing the citizens about the best practices/relevant advisories pertaining to the containment of COVID-19. This open source app is a readily available package for developers.

- ii. Brazil - The government launched the 'Coronavírus SUS' app. If the app-facilitated diagnosis indicates a likely infection, patients are referred to the nearest healthcare facility for testing, improving the effectiveness of the traditional healthcare setting. The app also provides evidence-based insights as to the spread of a pandemic, reducing the prevalence of fake news and associated panic. The combination of prevention, triage and information in one app helped reduce demands on the public healthcare system.<sup>7</sup>
- iii. Germany - Reimbursement is a key challenge for many new digital health solutions, whose importance and value have been highlighted and expanded by the current COVID-19 pandemic. Germany's new Digital Healthcare Act (Digitale-Versorgung-

<sup>3</sup> 'Cross-border telemedicine – practices and challenges', Ose Paper No. 44, Sherihane Bensemmane and Rita Baeten, October 2019.

<sup>4</sup> <https://esanjeevani.in>.

<sup>5</sup> <https://pib.gov.in/PressReleasePage.aspx?PRID=1899855>.

<sup>6</sup> <https://www.cowin.gov.in>.

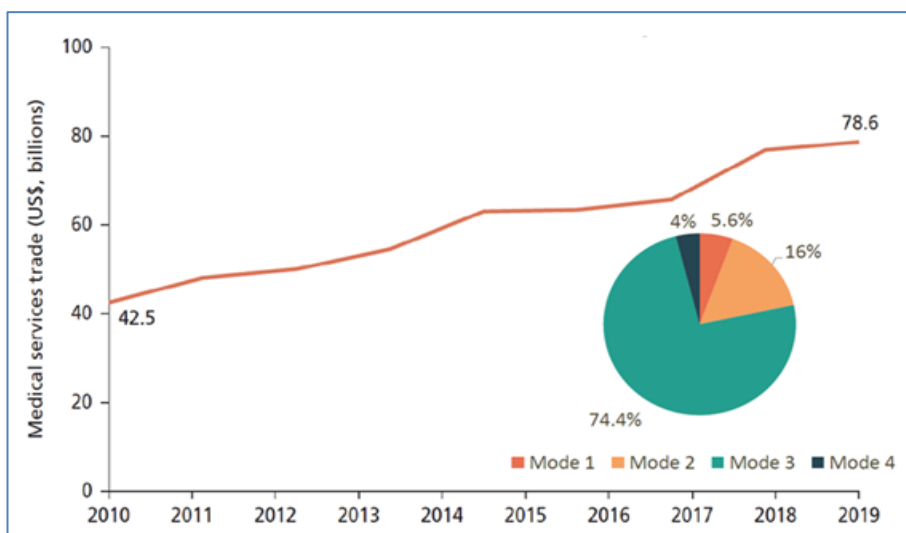
<sup>7</sup> The worldwide impact of telemedicine during COVID-19: current evidence and recommendations for the future', Stefano Ombani and others, January 2022.

Gesetz or DVG) entitles all individuals covered by statutory health insurance to reimbursement for certain digital health applications (i.e. insurers will pay for their use).<sup>8</sup>

- iv. Kenya - To ensure that effective health-related information can be transmitted to and from rural areas, Kenya fast-tracked the issuance of an operating licence to a company to extend the availability of WiFi to remote locations.
- v. South Africa - Before COVID-19, telemedicine use was limited in South Africa, partly because of the restrictive 'General Ethical Guidelines for Good Practice in Telemedicine'. The Government allowed temporary relaxation of the guidelines for the duration of the pandemic, allowing telemedicine to be practiced 'without an established practitioner-patient relationship'.<sup>9</sup>
- vi. United States - The Federal Communications Commission (FCC) adopted a USD200 million telehealth programme to support healthcare providers to purchase telecommunications, broadband connectivity and devices necessary for providing telehealth services. The FCC also launched a Connected Care Pilot Program to provide up to USD100 million worth of support from the Universal Service Fund (USF) to help defray healthcare providers' costs of providing connected care services and to help assess how the USF can be used in the long term to support telehealth.<sup>10</sup>

#### 4 CROSS BORDER TRADE IN TELEMEDICINE SERVICES

4.1. As can be seen in the Chart below, the bulk of health/medical services trade takes place through Mode 2 (consumption abroad) and Mode 3 (commercial presence) with Mode 1 (cross border without movement of service supplier and consumer) and 4 (movement of natural persons) accounting for a small proportion. Given the pandemic situation, Mode 2 and Mode 4 that requires movement of people are likely to be largely paralysed. Mode 3 may not be helpful on account of global contraction in FDI during such crisis, its dependence on Mode 4 and the initial time needed to set up commercial presence. Cross-border trade in medical services (Mode 1) is thus most suitable mode in pandemic like situations. This will not only expand trade of health services during and after the pandemic, but also allow countries to benefit from the positive spill overs of building crucial digital infrastructure.



Source: WTO estimates based on TISMOS Database.<sup>11</sup>

4.2. Examples of countries engaging in cross-border supply of health services (Mode 1), that is, cross border telemedicine services including tele diagnostic, surveillance, and consultation are

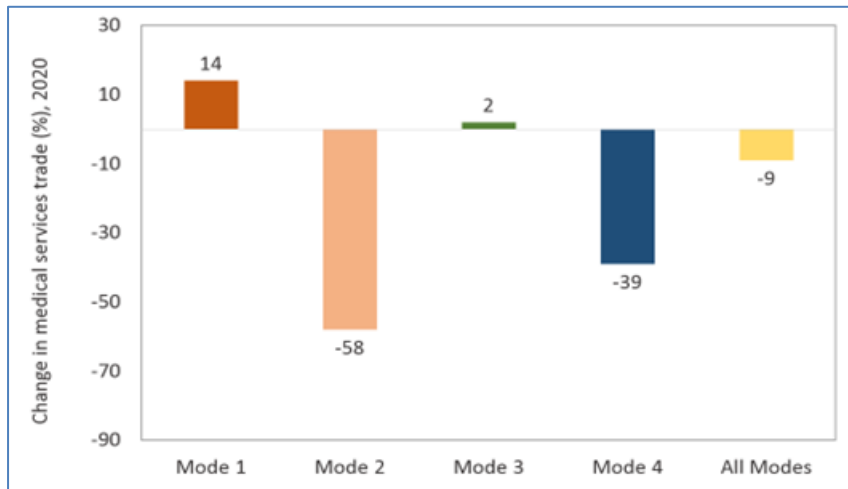
<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

<sup>10</sup> How WTO Members have used trade measures to expedite access to COVID-19 critical medical goods and services', Information Note, WTO Secretariat, September 2020.

<sup>11</sup> Trade Therapy: Deepening cooperation to strengthen pandemic defences, WTO Publication.

services being provided by US hospitals in many Gulf countries and some countries in Central America, telepathology services by Indian doctors to hospitals in Nepal and Bangladesh, teleradiology services by Indian radiologists to US hospitals and tele diagnostic services by hospitals in China to patients in Chinese Taipei; Macau, China; and some South East Asian countries.<sup>12</sup>



Source: WTO Estimates based on TISMOS Database.<sup>13</sup>

4.3. As per WTO estimates, global trade in medical services fell in 2020 with trade through Mode 2 and Mode 4 falling sharply, trade through Mode 3 remaining resilient and trade through Mode 1 (cross border supply) soaring by 14%. Cross-border trade in telemedicine services, though has gathered momentum, remains underdeveloped.

## 5 CHALLENGES WITH TRADE IN TELEMEDICINE SERVICES

5.1. Growth of international telemedicine remains a challenge given the wide regulatory diversity and differing national capabilities. Some of the major challenges include:

- i. Digital capability - Digital capability in terms of accessibility and affordability of connectivity, digital technologies, digital identity system, digital payment system, and digital skilling are building blocks of digital transformation in the healthcare sector including telemedicine. Digital transformation of health provides the foundation for national use of telemedicine which would eventually translate into international telemedicine. As per ITU statistics for 2022, 34% of the world's population does not use internet. While internet usage in the developed countries is 90%, it is only 20% in the LDCs. About 23% of the population in LDCs has no access to a mobile broadband network and even when they do, it is typically at relatively low download speeds and high cost.<sup>14</sup> Lack of digital skills is another challenge that prevents adoption of telemedicine by health providers and patients. The availability of a clear/trusted framework for digital payment systems for the provision of telemedicine services is also important and is often underdeveloped in such countries. In India's recent submission (WT/GC/W/863), the role of DPI in addressing the digital divide and promoting e-commerce has been outlined.
- ii. Regulations and guidelines - Telemedicine services often face geographic regulations, such as requiring the health professional to reside in the jurisdiction of the patient. Easing 'territorial' restrictions on telemedicine, with appropriate regulatory oversight, even on a provisional basis can be useful especially to deal with a global health crisis. A pre-existing relationship between the patient and the health professional is a

<sup>12</sup> ADBI Working Paper 668, Trade in Health Services and Sustainable Development, Rupa Chanda, 2017.

<sup>13</sup> Trade Therapy: Deepening cooperation to strengthen pandemic defences, WTO Publication.

<sup>14</sup> UNCTAD COVID-19 and e-commerce-A Global review.

precondition which some countries relaxed in the COVID times.<sup>15</sup> The pandemic presented situations such as nationals/persons stranded in a country not being able to procure their regular medicines as prescriptions of doctors of their home country were not being recognized by the local pharmacists, while there was shortage of local doctors to seek treatment. For viability of international telemedicine, country-level regulations/guidelines need to be put in place. Arrangements for cooperation on harmonising national guidelines or formulating standardised international guidelines for the delivery of cross-border telemedicine needs to be explored.

- iii. Reimbursement under insurance schemes - The non-portability of health insurance coverage prevents people from seeking often less expensive treatment abroad. Web or app-based medical appointments and consultations are typically not covered by medical insurance programs, despite some countries changing these regulations in response to the COVID-19 pandemic to facilitate remote diagnosis.<sup>16</sup> Such re-imbursement schemes need to be introduced for cross border telemedicine.
- iv. Interoperability of digital applications/systems – Interoperability of health-related digital applications which requires integration of systems with different standards, though costly and complex, could enhance the adoption of digital health applications and the compatibility of health care systems.<sup>17</sup>
- v. Health provider licensure/registration requirements - The need for recognition of doctor's qualification and license to practice is among the most challenging aspects of an international telemedicine program. Hospitals need to be qualified and registered in the foreign jurisdiction as a 'health services establishment' before their doctors can provide telemedicine services into that jurisdiction.<sup>18</sup> Expedited conclusion of mutual recognition agreements, creation of an international registry of recognized health establishments/providers and temporary relaxation of recognition norms could be explored to address emergent pandemic like situations.
- vi. Professional liability provisions - Liability for the services provided is raised as an issue for providers involved in cross-border tele-expertise. Professional liability provisions vary between medical specialties and between countries. It is unclear to the tele-experts and the requesting providers as to who is liable for the services provided. Some telemedicine providers define the responsibilities of each party in their contracts. However, these contracts may not be compatible with the legal requirements in the countries involved.<sup>19</sup>
- vii. Quality and continuum of care – In case of remote healthcare delivery, challenges associated with ensuring quality and continuum of care could be faced. Adequate coordination may be required between telemedicine providers and health establishments, to ensure hospital care when needed.

## 6 OPPORTUNITIES FOR TRADE IN TELEMEDICINE SERVICES

6.1. Telemedicine has showcased tremendous growth in recent years. This growth is bound to get a fillip with the emergence and adoption of new technologies such as AI, Internet of things and machine learning. The global telemedicine market was USD41.6 billion in 2019. It is projected to grow from USD79.8 billion in 2020 to USD396.8 billion in 2027 at a CAGR of 25.8% during 2020-2027.<sup>20</sup> Addressing digital capability and regulatory challenges will be key to achieving the potential of cross-border supply of telemedicine services.

<sup>15</sup> Trade in services in the context of COVID-19, Information Note, WTO Secretariat, May 2020.

<sup>16</sup> Health services trade and the COVID-19 pandemic, Ian Gillson and Karen Muramatsu, World Bank Group, May 2020.

<sup>17</sup> International Trade in Health Services under GATS, Chantal Blouin, Nick Drager, Richard Smith, World Bank Publication, 2006.

<sup>18</sup> Cross-border telemedicine – practices and challenges', Ose Paper No. 44, Sherihane Bensemmane and Rita Baeten, October 2019.

<sup>19</sup> Ibid.

<sup>20</sup> <https://www.fortunebusinessinsights.com/industry-reports/telemedicine-market-101067>.

6.2. Cross border telemedicine provides immense opportunities for timely and affordable consultations, interventions and diagnostics especially when long waiting periods and high cost exist for such services in the home country.

## **7 CONCLUSION**

7.1. Telemedicine can help address global health equity problems, thus accelerating the achievement of United Nations Sustainable Development Goal 3 (Good health and well-being), which is part of the 2030 Agenda. Telemedicine complements the physical healthcare systems and its use across borders can help enhance access, reduce costs and relieve the healthcare systems around the world strained with constraints including shortages of doctors in pandemic like situations.

7.2. Deliberation on lessons learnt and sharing of best practices and experiences by the membership can help build effective solutions for bridging the divide in digital capabilities and addressing regulatory barriers that prevent the expansion of cross-border supply of telemedicine services. International collaboration between the membership is needed to facilitate reliable and sustained cross-border supply of telemedicine services as a credible tool to deal with future pandemics. We propose that Members organize dedicated discussion in the Council for Trade in Services along with a Workshop/Seminar to share information, experiences and views on this matter.

## **8 QUESTIONS FOR DISCUSSION**

- i. What are Members' experiences regarding adoption of telemedicine services domestically and supply of cross-border telemedicine services?
  - ii. What are the challenges and opportunities for expanding telemedicine services? What steps are Members taking to address these challenges and harness these opportunities? For instance, what domestic programs, policies or regulations have been or are being put in place? What trade facilitating measures have Members taken to promote cross-border trade in telemedicine services?
  - iii. What role can Digital Public Infrastructures (DPIs) play in facilitating technology transfer and promoting digital delivery of health services? How can Members with rich experience in the use and development of DPIs support other Members in their adoption and use?
  - iv. How can WTO Members move forward in pursuance of WT/MIN(22)/31 and agree on the next steps to enable use of cross-border supply of telemedicine services in dealing with future pandemics?
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