

Table 2: Proposed Telehealth Interventions

Ref #	Intervention Type	Technology used	Advantages/Services	Challenges/Limitations
[1]	AI-Based Scope: USA	Video visits, virtual check-in, and communication via an online portal/mobile platform	<ul style="list-style-type: none"> - Online surgery, screening, diagnosis, and disinfection - Patient's triage and monitoring, care, manufacturing, and logistics 	<ul style="list-style-type: none"> - Network issues (especially outside of the healthcare facility) - Cost associated with developing, subscribing, using, or maintaining the system - While telehealth technologies supply high-quality healthcare services, they cannot entirely replace physical treatment - System reliability issues - Performance and accuracy issues
[2]	AI-Based Scope: Global	Robotic systems	<ul style="list-style-type: none"> - Disease detection and diagnosis - Virology and pathogenesis - Drug and vaccine development - Epidemic and transmission prediction - Medical image inspection 	<ul style="list-style-type: none"> - Dataset availability issues (e.g. lack of enough training data for AI-based systems) - Data imbalances between negative and positive samples - A large amount of noisy data and rumours - Scarcity of knowledge in the intersection of computer and medical sciences - Privacy, policy and security issues
[9]	AI-Based Scope: Global	Wearable sensor devices, mobile devices	<ul style="list-style-type: none"> - Patient's triage, monitoring, and contact tracing, - Disease detection, treatment, and diagnosis - Cardiovascular evaluation, respiratory assessment, clinical symptom monitoring, tele-imaging, tele-ICU, telerehabilitation, and telerobotics 	<ul style="list-style-type: none"> - Dataset availability issues (e.g. lack of enough training data for AI-based systems) - Ethical issues - Privacy, policy and security issues - Power consumption - System reliability issues - Cost associated with developing, subscribing, using, or maintaining the system
[11]	AI-Based Scope: Turkey	Wearable IoMT (Internet of Medical Things) devices	<ul style="list-style-type: none"> - Online consultation, virtual real-time monitoring, diagnosis, and teleophthalmology - Enhancing bandwidth efficiency and reducing latency 	<ul style="list-style-type: none"> - Policy and regulatory issues - Privacy, policy and security issues
[12]	Non-AI-Based Scope: India	Mobile application, Bluetooth, and GPS technologies	<ul style="list-style-type: none"> - Contact tracing, tracking, monitoring, and sensitization - Notifying users when they are near a COVID-19 infected person - Disease spread analysis 	<ul style="list-style-type: none"> - Privacy, policy and security issues - Compatibility issues (e.g. some systems only support Android 5.0 and higher, or iOS 10.3 and higher)
[13]	AI-Based Scope: Global	Wearable devices, chatbots	<ul style="list-style-type: none"> - Eliminating the distance between patient and provider via virtual/remote treatment - Real-time monitoring and diagnosis Reducing the time and the cost associated with access to healthcare - Reducing the risks of exposing providers and patients to the virus; Disease detection - Track vital signs and alert when an outlying conditions are detected - Patient initial triage 	<ul style="list-style-type: none"> - Adoption rates are restricted to medical emergencies, which is insufficient - Lack of knowledge, technical literacy, and skills needed to use virtual medical services - Network issues - System reliability issues - Privacy, policy and security issues - Policy and regulatory issues - Healthcare is highly resistant to change - While telehealth technologies supply high-quality healthcare services, they cannot entirely replace physical treatment
[14]	Non-AI-Based Scope: China	UWB (Ultrawideband) Radar sensor, Smart bracelet	<ul style="list-style-type: none"> - Remotely monitor self-isolated patient's health status, reduce medical staff's risk caused by contact, track detailed and accurate respiration status, obtaining 	<ul style="list-style-type: none"> - Cost associated with developing, subscribing, using, or maintaining the system

			patient's blood oxygen saturation and heartbeat information	
[15]	Non-AI-Based Scope: Ecuador	Teleconsultation apps (mobile phones, landlines, computers, tablets, etc.), Samsung Health, Google Fit, Mi Health (Xiaomi), Apple Health, Huawei Health	<ul style="list-style-type: none"> - Online consultations - Tele-monitoring and diagnosis - Video conferencing 	<ul style="list-style-type: none"> - Lack of knowledge and awareness about telemedicine and its benefits - People's uncertainty about using technology - Lack of public or private sector support for advancing medical technology that meets the demands of the populace - Lack of knowledge, technical literacy, and skills needed to use virtual medical services - While telehealth technologies supply high-quality healthcare services, they cannot entirely replace physical treatment - Performance and accuracy issues
[26]	AI-Based Scope: UK	Video conferencing	<ul style="list-style-type: none"> - Online consultation, health checkup, and self-screening - Online Medical test, ambulance/ appointment booking - Dispense medicines, and records keeping 	<ul style="list-style-type: none"> - User service misuse - While telehealth technologies supply high-quality healthcare services, they cannot entirely replace physical treatment - Policy and regulatory issues - Cost associated with developing, subscribing, using, or maintaining the system - People's uncertainty about using technology - System reliability issues - Network issues
[27]	AI-Based Scope: India	Smartphone, WebRTC video conferencing	<ul style="list-style-type: none"> - Patient's remote diagnosis and stratification - Patient triage and treatment suggestions - Special consideration to cyber security - Extending quality healthcare to all communities (SDG's goal) - Increasing efficiency in diagnosis and improving the quality of care 	<ul style="list-style-type: none"> - Cost associated with developing, subscribing, using, or maintaining the system - Lack of knowledge, technical literacy, and skills needed to use virtual medical services
[28]	AI-Based Scope: China	3D pose, cameras, contactless patient positioning system	<ul style="list-style-type: none"> - Contactless patient positioning and treatment (reducing the risk of medical professionals from getting infected) - Remote scanning 	<ul style="list-style-type: none"> - Performance and accuracy issues
[29]	Non-AI-Based Scope: India	Tablet devices	<ul style="list-style-type: none"> - Mitigating healthcare accessibility related challenges especially in rural areas; - Online consultation (using JITS) and prescription - Reducing the "digital divide" in usability and adoption of technology-based solutions in rural areas - Efficacy of the telemedicine models 	<ul style="list-style-type: none"> - Network issues - System reliability issues - Technical glitches - Lack of knowledge, technical literacy, and skills needed to use virtual medical services - Lack of public or private sector support for advancing medical technology that meets the demands of the populace - People's uncertainty about using technology - Some users (especially those in villages) do not use phones - Privacy, policy and security issues - It is difficult to have the same doctor(s) for follow-up appointments - Insufficient bandwidth and resources, as well as effective effort maintenance
[30]	Non-AI-Based Scope: Pakistan	Covid-Rapid API, Google Cloud Healthcare, Acurata Triage, iHealth, Uber	<ul style="list-style-type: none"> - Health status detection and triage - Remote monitoring, management, and care delivery - Ordering medications and tele-prescriptions - Scheduling telehealth appointments 	<ul style="list-style-type: none"> - Scalability, interoperability, and auditability issues - Privacy, policy and security issues - Lack of knowledge, technical literacy, and skills needed to use virtual medical services

		Health, CVS Pharmacy API, Uber Eats	<ul style="list-style-type: none"> - Scheduling transport for dialysis, order groceries, order meals 	<ul style="list-style-type: none"> - Network issues - Policy and regulatory issues
[31]	AI-Based Scope: Bangladesh	Mobile App, Fuzzy Neural Network, Logistic Regression Model, Bayesian Decision Tree	<ul style="list-style-type: none"> - Disease detection, tracking, and monitoring - Self-testing, real-time health status detection - Proximity detection and contact tracing 	<ul style="list-style-type: none"> - Privacy and security and issues - Policy and regulatory issues - Network issues
[32]	AI-Based Scope: Austria	Adafruit Bluefruit LE module, LCDR display, Thermistor	<ul style="list-style-type: none"> - COVID-19 symptoms checking - Easy and simple to use - Measure user's temperature - Medical diagnosis 	<ul style="list-style-type: none"> - Cost associated with developing, subscribing, using, or maintaining the system - Difficulty in accurately differentiating between COVID-19 and typical pneumonia or other relevant diseases
[33]	AI-Based Scope: China	Deep learning/machine learning models	<ul style="list-style-type: none"> - COVID-19 disease detection and diagnosis 	<ul style="list-style-type: none"> - While telehealth technologies supply high-quality healthcare services, they cannot entirely replace physical treatment - People's uncertainty about using technology - Difficulty in accurately differentiating between COVID-19 and typical pneumonia or other relevant diseases
[34]	AI-Based Scope: US	LTESafe – CNN based Contact Feature Extractor	<ul style="list-style-type: none"> - Contact tracing and monitoring - Privacy-preservation - Help in containing the spread of COVID-19 	<ul style="list-style-type: none"> - Performance and accuracy issues
[35]	Non-AI-Based Scope: KSA	Mobile Apps: TH mobile applications (e.g., Seha, Mawid, Tawakklna, Tabaud, and Tetamman)	<ul style="list-style-type: none"> - Patient tracking, triage, and monitoring - Patient health and vaccination status checker - Medical diagnosis - Online consultations, prescription refills, and follow-ups - Reducing patient expense for healthcare services provided - Prevent the medical front-line workers from the disease contraction - Detection and surveillance of COVID-19 	<ul style="list-style-type: none"> - Lack of knowledge, technical literacy, and skills needed to use virtual medical services - Compatibility issues (e.g. some systems only support Android 5.0 and higher, or iOS 10.3 and higher)
[36]	Non-AI-Based Scope: Qatar	Mobile App: Ehteraz	<ul style="list-style-type: none"> - Patient tracking, triage, and monitoring - Patient health and vaccination status checker - Medical diagnosis - Online consultations, prescription refills, and follow-ups - Reducing patient expense for healthcare services provided - Prevent the medical front-line workers from the disease contraction - Detection and surveillance of COVID-19 	<ul style="list-style-type: none"> - Lack of knowledge, technical literacy, and skills needed to use virtual medical services - Compatibility issues (e.g. some systems only support Android 5.0 and higher, or iOS 10.3 and higher)
[37]	Non-AI-Based Scope: Brazil	Mobile Apps	<ul style="list-style-type: none"> - Remote screening, care, and treatment - Assists in monitoring, surveillance, detection, prevention, and mitigation of the impacts on healthcare indirectly related to COVID-19. 	<ul style="list-style-type: none"> - Policy and regulatory issues - Lack of knowledge, technical literacy, and skills needed to use virtual medical services - Privacy, policy and security issues - Lack of public or private sector support for advancing medical technology that meets the demands of the populace