



مبادرات محمد بن راشد آل مكتوم العالمية
Mohammed Bin Rashid
Al Maktoum Global Initiatives

BMC-Kongress 2022

Driving Innovation in the United Arab Emirates Healthcare System

19th May 2022

UAE Health
Systems



Dr. Immanuel Azaad Moonesar R.D.
Associate Professor-Health
Academic Program Head-
Master of Public Policy
President, AIB-MENA
(Twitter @DrAzad_Immanuel)

كلية محمد بن راشد
للإدارة الحكومية
MOHAMMED BIN RASHID
SCHOOL OF GOVERNMENT



تأسست عام ٢٠٠٥ كمؤسسة حكومية تعليمية وبحثية



twitter@MBRSG

www.mbrsg.ae



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Food for thought

“It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change.”

--- Charles Darwin



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United Arab
Emirates



10.08 million population (88.5% Expats)
111th most populous country on earth

7 Emirates

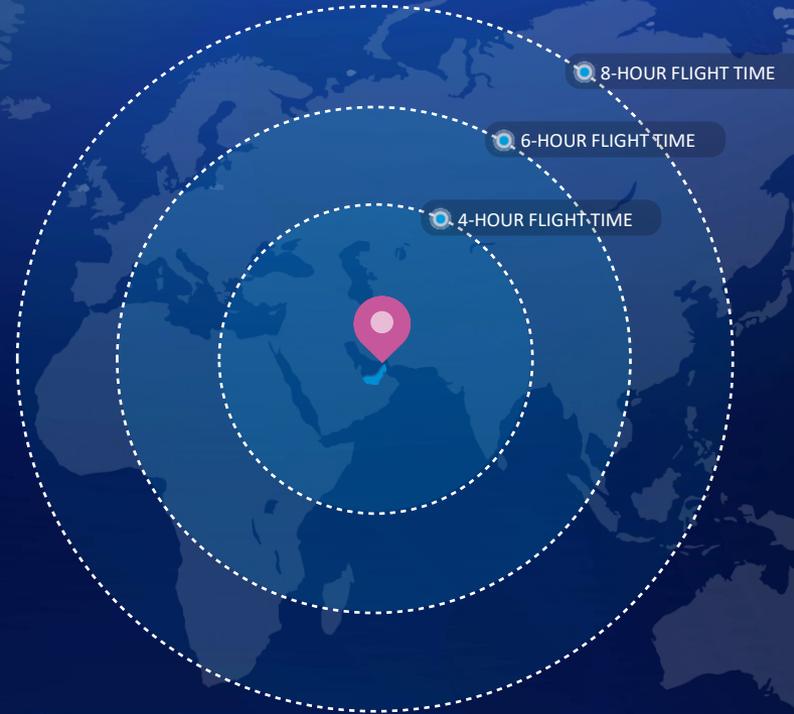
Capital: Abu Dhabi

Currency: Dirham (AED)

Language: Arabic & English



UAE'S UNIQUE LOCATION



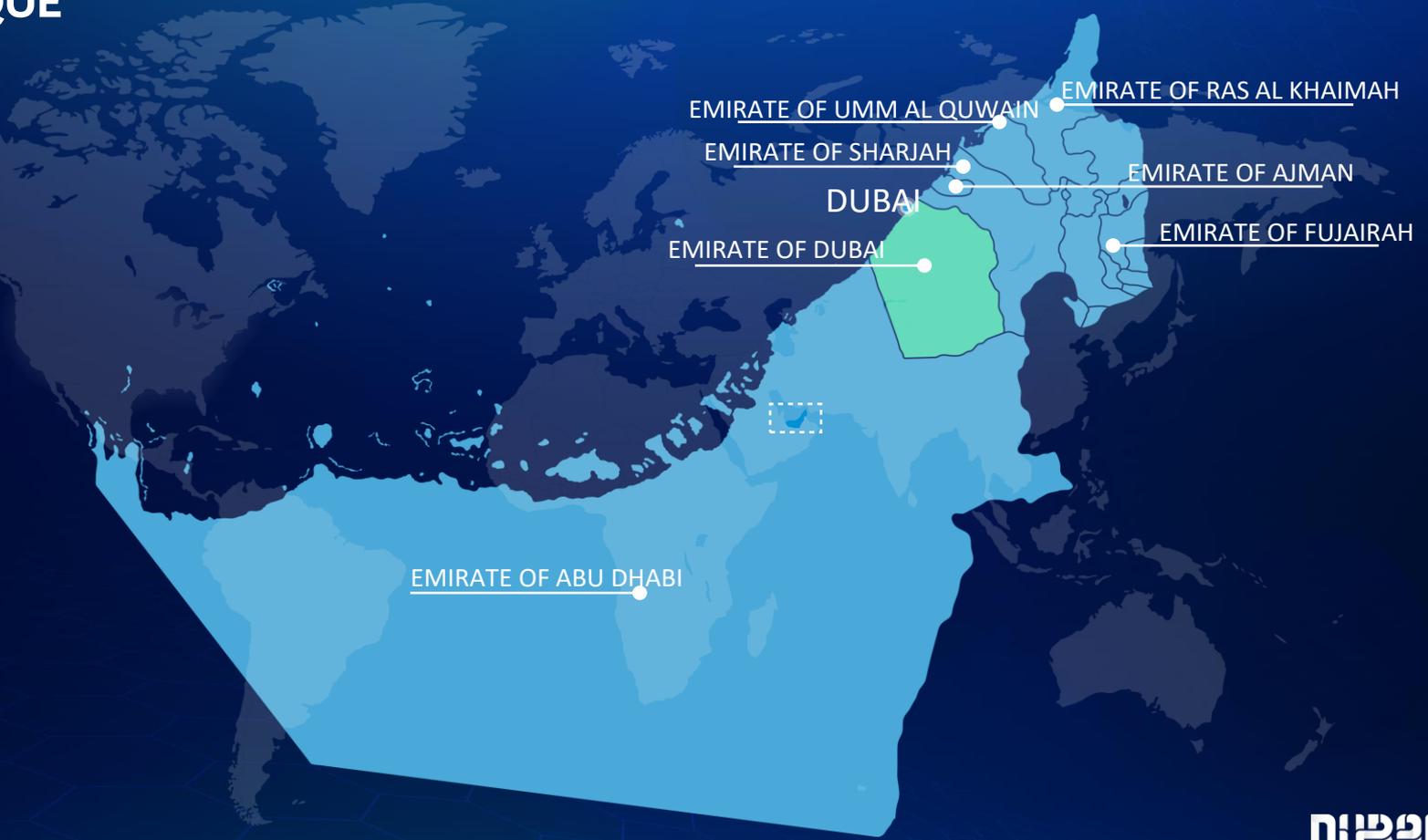
KEY FACTS

MORE THAN 2.5 BILLION
LIVE WITHIN A FOUR
HOUR FLIGHT FROM
DUBAI

FIVE BILLION ARE EIGHT
HOURS FLYING TIME
OR LESS FROM DUBAI



UAE'S UNIQUE LOCATION



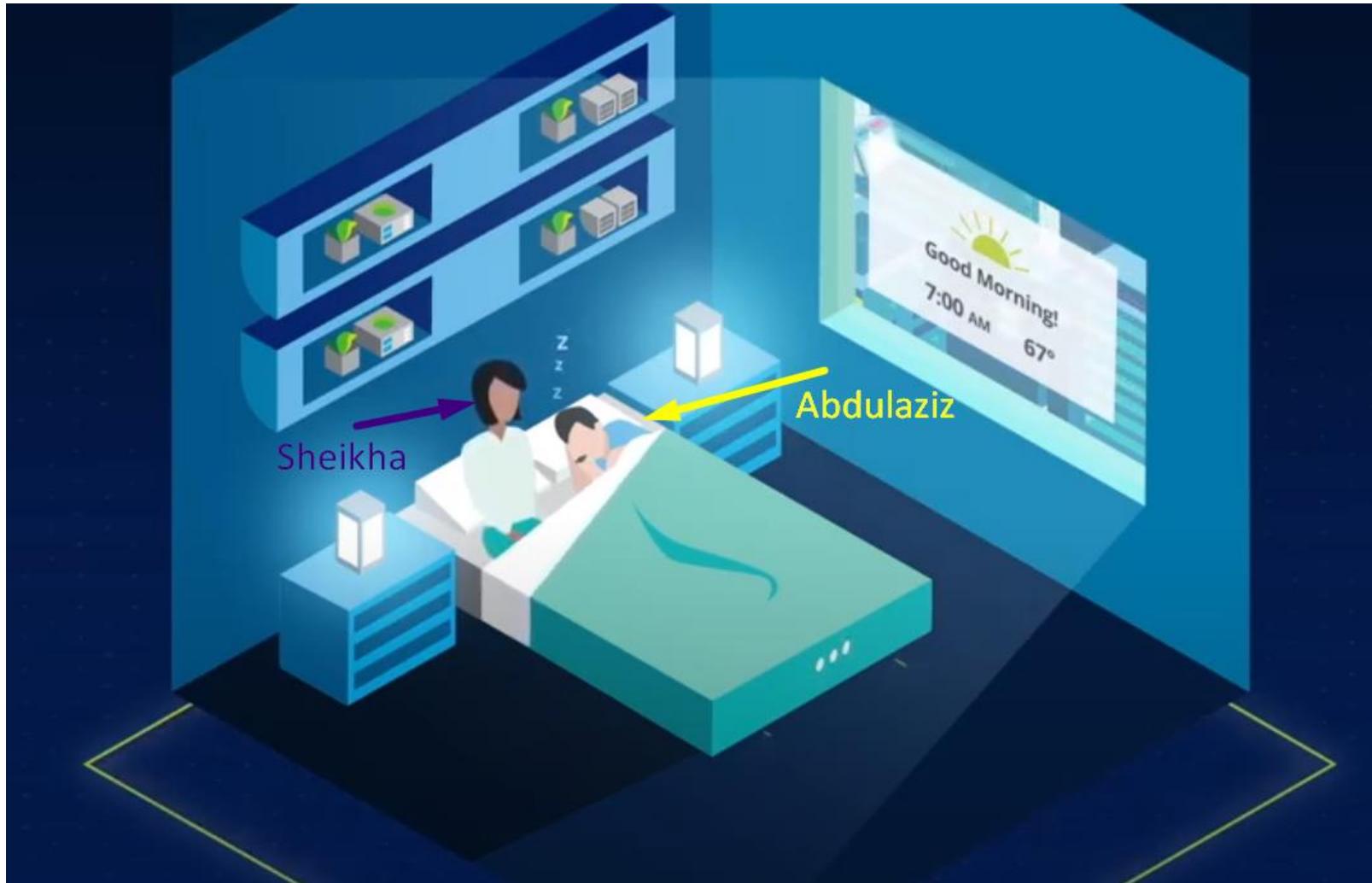


UAE POPULATION GROWTH (FROM 1980 - 2022)





“Let’s Meet Sheikha and Abdulaziz”





.....In fact, the future of health is at your very fingertips....

The future of health





Background

- Given that success requires an open mind and health body, the UAE Vision 2030 National Agenda aims to achieve a world-class healthcare system in alignment with the National Innovation Strategy.
- The UAE has a **comprehensive, government-funded** health service and a rapidly developing private health sector that delivers a high standard of health care to the population. [**AED 4.766bn (8.09% of total budget)1.231bn EURO**]
- *Regulatory Authorities:* Ministry of Health and Prevention, Health Authority-Abu Dhabi (HAAD), the Dubai Health Authority (DHA) and the Emirates Health Authority (EHA).

Problem Statement

- The UAE healthcare sector must rely on sophisticated technologies such as the **Tele-health system**.

Nature of the UAE Health Status

- Malaria, measles, and poliomyelitis have been eradicated from the UAE.
- Prenatal and postnatal care are on par with the most developed countries: newborn mortality is **5.54 per 1000** and infant mortality is **6.4 per 1000**.
- Maternal mortality is **3 per 100,000**.
- UAE life expectancy is **77.8**, similar to Europe and North America.



1. Background - Telehealth 'Now'



Tele-consultation



Tele-counseling



Tele-diagnosis



Tele-monitoring



Tele-emergency



Mobile Health



Tele-pharmacy



Tele-surgery



Tele-booth



Tele-ICU



1. Background - Telehealth 'Now'- working examples

Countries	1st Confirmed COVID-19 case Date	Telehealth Usage during COVID-19	Telehealth Regulations Before COVID-19	Telemedicine initiatives*									New Telemedicine Policies/ Process/ systems Introduced on MOH website/
				Telestroke	Teleradiology	Tele-ICU	Telemental Health	Telepathology	Cybersurgery	Remote Monitoring	Telepharmacy	Tele-Consultations	
China	17th November 2019	√	√	√	√	x	x	√	√	√	√	√	√
Thailand	13th January 2020	√	x	√	√	√	√	√	√	√	√	√	√
Singapore	23rd January 2020	√	√	√	√	x	x	√	√	√	√	√	x
Japan	14th January 2020	√	√	√	√	√	√	√	√	√	√	√	√
South Korea	20th January 2020	√	√	x	√	√	x	x	x	√	x	x	x
Australia	25th January 2020	√	√	√	√	√	√	√	x	√	√	√	√
Spain	31st January 2020	√	x	√	√	√	x	√	√	√	√	√	x
UK	28th February 2020	√	√	√	√	√	√	√	x	√	√	x	√
Germany	27th January 2020	√	√	√	√	√	√	√	√	√	√	√	√
Canada	25th January 2020	√	√	√	√	√	√	√	√	√	√	√	x
India	30th January 2020	√	x	√	√	√	x	√	√	√	√	√	√
UAE	29th January 2020	√	√	x	√	√	√	x	x	√	√	√	√
Iran	19th February 2020	√	x	x	√	x	√	x	x	x	x	√	x
Egypt	14th February 2020	√	x	x	√	x	x	√	x	x	x	x	x
Sweden	11th March 2020	√	√	√	√	x	√	√	x	x	x	x	x
Jordan	3rd March 2020	√	x	x	x	x	x	x	x	x	x	√	x
South Africa	1st March 2020	√	√	x	√	x	√	x	x	x	x	x	√
Italy	31st January 2020	√	√	√	√	√	√	√	√	√	√	√	√
USA	19th January 2020	√	√	√	√	√	√	√	√	√	√	√	√
France	24th January 2020	√	√	√	√	x	√	√	√	√	√	√	√

Key: √ - Yes, sufficient evidence; x - not sufficient evidence/ data not available; *as of end of September 2020; MOH: Ministry of Health/Authorities

Table 1: Telemedicine Initiatives and Actions in the Era of COVID-19 ^{1, 2}

1. Stephens, Melodena; Lopez Berengueres, Jose Oriol; Moonesar, Immanuel; Venkatapuram, Sridhar. "1479 data points of covid19 policy response times", 2020; *Harvard Dataverse*, V1, UNF:6:Uk0ndRTK8gKGJ01mKC960A== [fileUNF] <https://doi.org/10.7910/DVN/6VMRYG>
2. Stephens, M., Berengueres, J., Venkatapuram, S., & Moonesar, I. A. Does the timing of government COVID-19 policy interventions matter? Policy analysis of an original database. *MedRxiv*. 2020. <https://doi.org/10.1101/2020.11.13.20194761>



2. Objectives:

- The study's objectives were to
 - a) explore the legislative and regulatory journey of telehealth across the Organisation for Economic Co-operation and Development (OECD) and no-OECD countries, and
 - b) provide recommendations for policy decision-makers.





3. Methods:

- Secondary Research and analysis
- A review and descriptive analysis of the information sources were undertaken for OECD and non-OECD countries, including:
 - government and medical board publications (Laws, Regulations, Policy, Standards, and Guidelines),
 - government websites
 - and peer-reviewed literature.





4. Results:

- We reported on eight countries.
 - France,
 - United Kingdom,
 - Australia,
 - Sweden,
 - Singapore,
 - South Africa,
 - United Arab Emirates
 - Brazil.
- Legislation and regulation remain essential for governance, assuring healthcare professionals are held to account and technologies used are safe and secure.
- However, there is no uniform approach toward telehealth legislation and regulation. The precautionary principle has been adopted, but not in all countries.





4. Results:

Table 2. Telehealth and Telemedicine Initiatives by Country as of March, 2021

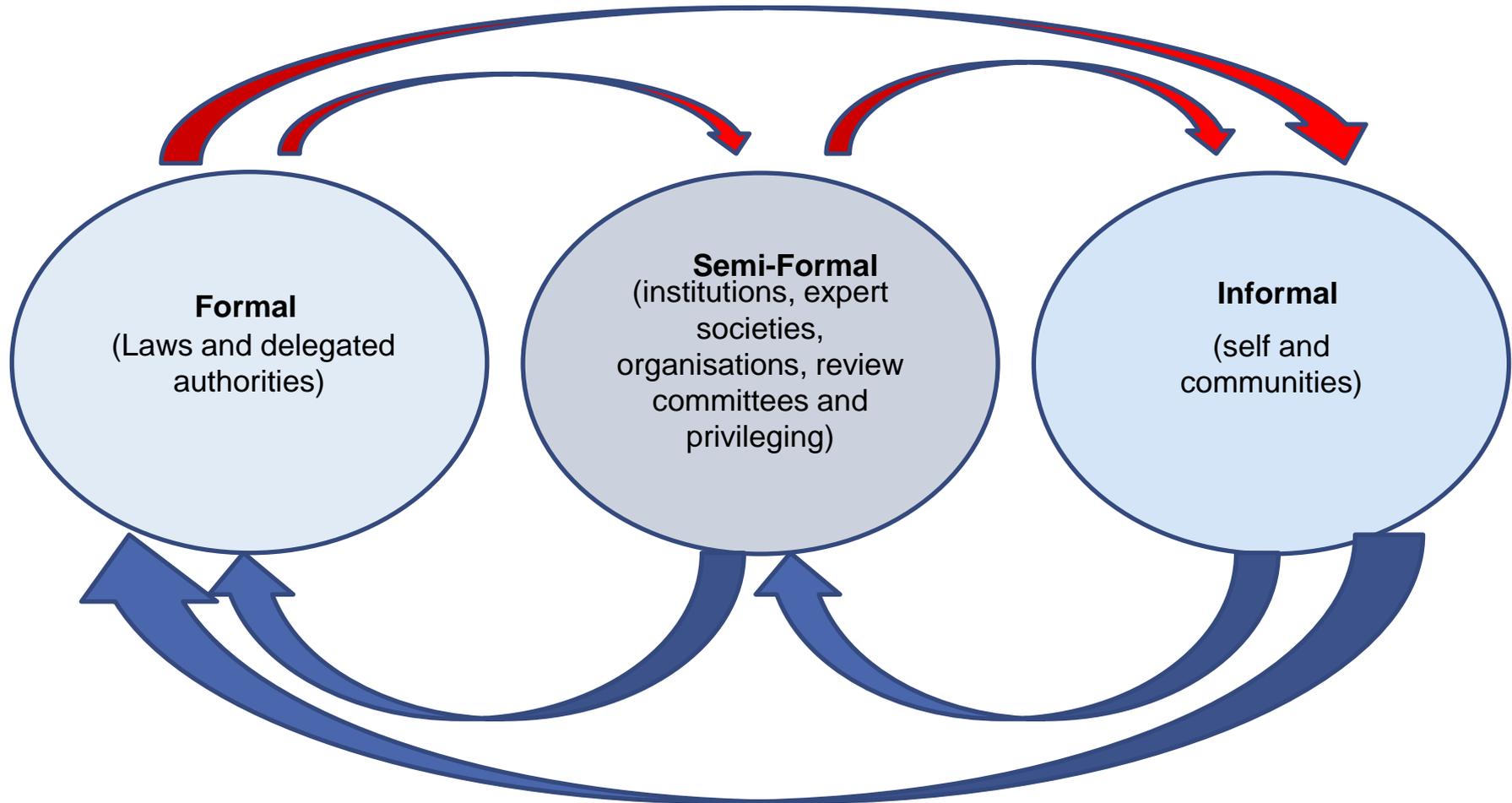
No.	Country		Is there a law for Telehealth/ Telemedicine?	Policy Approach?	Is there a Dedicated Strategy for Telehealth?	Govt funding stream to support telehealth start-ups?	Included in Health Insurance Coverage?	Full Integration of EMR across the public and private sector?	Is teleprescribing allowed?	Established relationship with patient required?	Mandatory accreditation for telehealth?	Performance Reporting of Outcomes?
1.	France	OECD	√	Top Down	x	√	√	x	√	√	x	x
2.	United Kingdom		x	Top Down	x	√	√	x	√	x	x	√
3.	Australia		x	Top Down	x	x	√	x	√	√	x	x
4.	Sweden		x	Top Down	√	x	√	x	√	x	x	x
5.	Singapore	Non-OECD	x	Top Down	x	√	√	x	√	x	x	√
6.	South Africa		√	Top Down	x	x	√	x	√	x	x	x
7.	United Arab Emirates		√	Top Down	x	√	√	x	√	x	√	√
8.	Brazil		√	Top Down	x	√	√	x	√	√	√	x

√ - Yes, sufficient evidence

x - No sufficient evidence/data not available

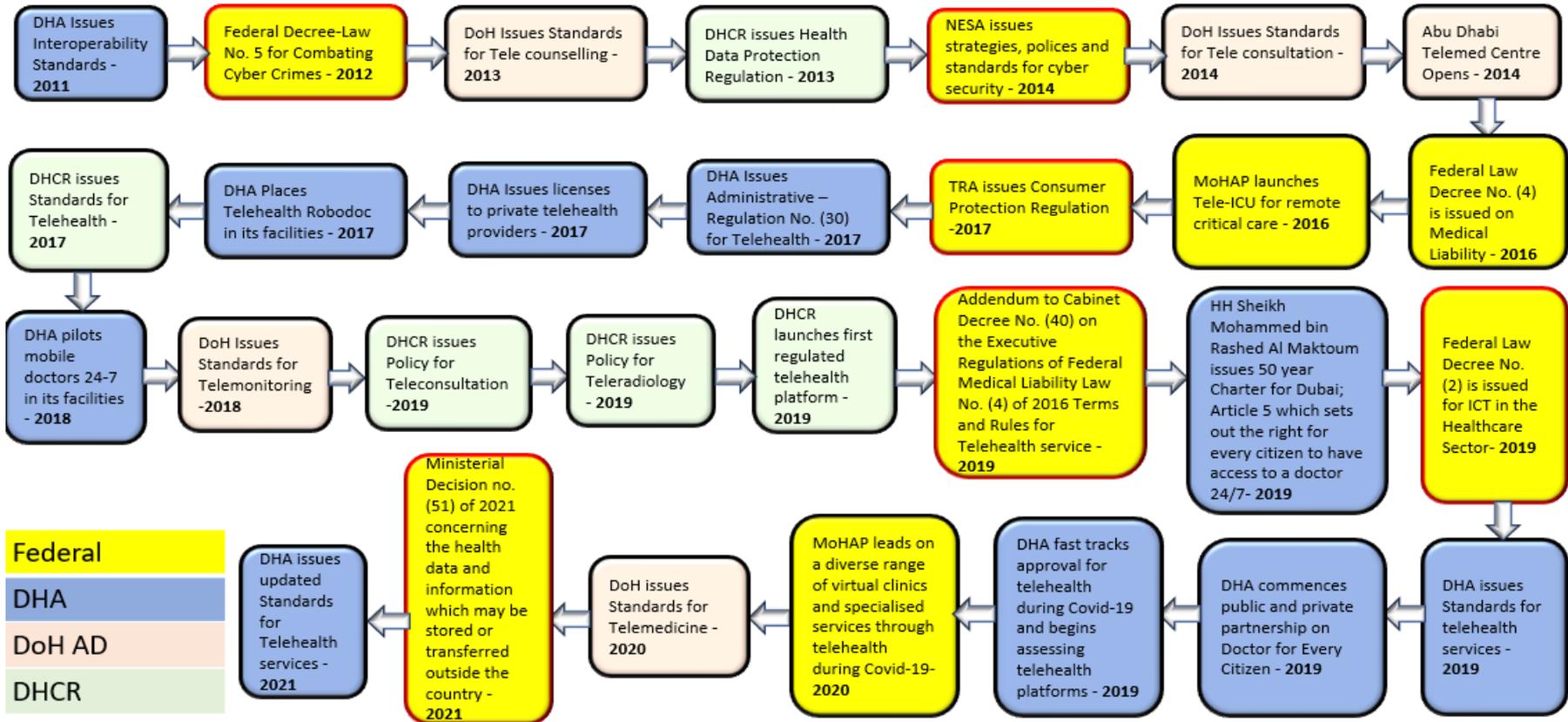


Regulating Telehealth – Principles of Regulation in the UAE





Ex. 1 Regulating Telehealth in the UAE - The Journey (2011-2021)





5. Discussions



What Is Already Known on This Subject?

- **Innovation in healthcare typically responds to unmet health needs** by spearheading new approaches to improve people's health, particularly those that are most vulnerable;
- The **fruition of medical and health technologies** have undoubtedly broadened the spectrum and potential for healthcare service delivery; and
- Due to the **rapid change in technology and medicine**, telehealth is no longer viewed as the mere interaction between two healthcare professionals or between the patient and the physician at a distance and a myriad of features and services.



5. Discussions

What Does This Case Study Add (in the context of the UAE)?

- Legislation and regulation remain essential for governance, assuring healthcare professionals are held to **account and technologies used are safe and secure**;
- Too much legislation and regulation impacts on the opportunity to problem solve and drive improvements within the health system because too much attention is placed on service line improvements (quick fixes) which are often inconsequential to health system priorities such as cost containment;
- Theoretical frameworks such as Kingdon remain helpful in understanding how policy issues become prioritized but do not go beyond the agenda-setting phase; thus; the need to consider other models for policy making such as the **Policy Analysis Triangle and Policy Development Cycle**; and
- Despite its importance, there is a need to go beyond legislation and regulation to improve health system performance and assure the future success of telehealth services.
- UAE Government **strategize and plan for telehealth services** as it will have implications for regulators, providers, payers, and patients.
- Further research is needed to **explore the extent to policy frameworks apply to innovations in healthcare such as telehealth**.



6. Conclusion:

- Despite its importance, there is a need to go beyond legislation and regulation to improve health system performance and assure the future success of telehealth services.
- Governments should strategize and plan for telehealth services as it will have implications for regulators, providers, payers, and patients.
- Further research is needed to explore the extent to policy frameworks such as Kingdoms Multiple Streams Approach apply to innovations in healthcare such as telehealth.
- *Keywords:* Legislation; Regulation; Telehealth; Telemedicine; Innovation



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Questions?



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