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Session 3:
How widespread is the use of
telemedicine in the region and
what challenges and opportunities
does it provide?

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Presentation to International Health Insurance Forum
by Prof. Winston G. Mendes Davidson
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**DOCTOR
ON CALL**

How widespread is the use of telemedicine in the Region?

Over the last 20 to 30 years, there has been no evidence of widespread telemedicine practice in the Caribbean. The term “telemedicine” was loosely referred to as “the use of the telephone to communicate with patients.” This definition did not take into account the multiple factors related to the telemedicine infrastructure, access to broadband, national internet ubiquity, communication devices, especially for rural populations and other underserved, inaccessible areas. Today these challenges have been overcome in a number of Caribbean countries and the Bureau of Standards Jamaica on the 9th of February 2023 has launched and confirmed the development and application of the WTO industry standards for the practice of telemedicine.

Historical Background: Relevance of COVID-19

During the COVID-19 outbreak as a pandemic, on March 11, 2020, the World Health Organization declared the coronavirus disease 2019 (COVID-19) outbreak as a pandemic, with over 720,000 cases reported in more than 203 countries as of 31 March 2021. The response strategy included early diagnosis, patient isolation, symptomatic monitoring of contacts as well as suspected and confirmed cases, and public health quarantine. In this context, telemedicine, particularly video consultations, has been promoted and scaled up to reduce the risk of transmission, especially in the United Kingdom and the United States of America. Based on a literature review, the first conceptual framework for telemedicine implementation during outbreaks was published in 2015.

How widespread is the use of telemedicine in the region? (cont'd)

Having established the international standards and also possessing the telemedicine infrastructure including the universal access to the internet via the cellphone, tablet, laptop or desktop. Further the participation and unanimous approval of all health and medical professional Councils in Jamaica confirms the confidence and widespread expectation by all professional groups in the use of telemedicine as an integral component in the management of health and medical care in the Caribbean. Since the launch of the international standards, the onboarding of service providers and patients/clients has begun with enthusiasm by both providers and patients alike. We anticipate that this process will achieve widespread participation now and in the future. Some aspects of the onboarding process has been recorded on the website and can be seen in the user manual and directory.

Critical list of some of the factors which motivated and informed the development of telemedicine in the Caribbean

1. University of the West Indies (UWI) Department of Social and Preventive Medicine Community Health Development Model (1967-present)
2. Impact of Extreme Poverty in Trench Town Community Voluntary Free Clinic
3. Absence of Primary Healthcare Development Infrastructure in most Jamaican rural communities (1950s-60s)
4. Government of Jamaica / World Bank Programme Development for Primary Care in Jamaican communities (1970s....)
5. International UN 1978 Alma Ata Kazakhstan declaration - Primary “Healthcare for All” by the year 2000

Critical list of some of the factors which motivated and informed the development of telemedicine in the Caribbean (cont'd)

6. A missed opportunity for universal, affordable and accessible healthcare in developing countries including Jamaica. Woefully disappointing outcome as the year 2000 did not achieve the objective of the Alma Ata declaration of “health for all” by the year 2000.

7. The absence of the achievement of this declaration motivated and inspired the search for solutions, and one of several research projects in Jamaica sought to explore the application of information and communication technology to enable the achievement of the following objectives:

1. Affordability and accessibility of “telemedicine for all”
2. Enabling “telemedicine for all” as a human right
3. WHO “One Health” Approach as a Universal Application of telemedicine in relation to climate change and the environment

(see www.doctoroncallja.com and www.who.int/health-topics/one-health)

Caribbean, Latin America searching for solutions

Two research initiatives in Jamaica pioneered the search for solutions in the absence of the primary healthcare for all international effort.

They were:

1. “Doctor on Call” (by Tele-Medicine Limited, Prof. Winston Davidson, Chairman and CEO)
2. MDLink (President, CEO and Chief Medical Officer at MDLink, Dr Ché Bowen)
3. All-in-ONE Telehealth platform by PAHO

In the final analysis, the failure of the Alma Ata initiative created opportunities for new and creative thinking in conceptual framework and clarity in understanding the pivotal role of the rapid advances in information technology which began to have a profound effect on the content, form and extent of population coverage. The convergence of “voice, video and data” and the ubiquitous application of the cellphone were perhaps the most powerful drivers of the telemedicine information management revolution. This reality has been captured in the outcomes of the research models in the Caribbean.

The gap in insurance coverage for the majority seeking healthcare services presents a challenge that must be addressed with a level of urgency

The Doctor on Call (DOC) telemedicine research platform diligently searched for an innovative health insurance solution that would compliment the existing models rather than become a competitive disruptor of existing models at home or abroad.

In Jamaica, health insurance coverage accounts for approximately 18-20% of the population with health seeking behaviour. 82% of Jamaicans are without health insurance. Four service providers give coverage and compete for a mere 18-20% of the market. The DOC model is based on the principle that the telemedicine virtual clinical encounter must be made affordable for the 82% of the population to have affordable access to health insurance. To achieve this goal, the researchers contributed over 20 years of financing as a dividend to the Doctor on Call telemedicine platform, requiring no provider or patient/client to pay any telemedicine license fee to use the platform.

The use of telemedicine as practiced by the Doctor on Call telemedicine platform

In the Caribbean, the pioneering work in telemedicine is reflected in the development of the Doctor on Call telemedicine platform, which features the business model taking into account affordability, accessibility and availability for all.

Secondly, the platform satisfies the industry standards established by the Bureau of Standards Jamaica. These industry standards were launched by the Bureau of Standards Jamaica on the 9th of February 2023. All stakeholders participated in the process of standardization by the BSJ and signed off enthusiastically in support of the findings of the final document. Doctor on Call complies fully with these industry standards.

New telemedicine platforms, new models for collegial participation in data management

This telemedicine model is built on a platform of collegiality, integrating the consultative and information sharing approach of all professional categories, working harmoniously in the patients' interests on the same telemedicine platform.

This includes doctors, dentists, nurses, allied medical professionals, public health inspectors and the other environmental health specialists, nutritionists, clinical pharmacy specialists and veterinary practitioners to see their patients/clients anywhere, anytime at a cost they can afford.

The philosophical principles of Doctor on Call

1. The philosophical principles guiding the creation of the Doctor on Call platform always referenced its focal point as the WHO Alma Ata declaration of 1978. Primary healthcare for all by the year 2000. This goal was never achieved by the Caribbean and Latin America. This declaration was then translated into the present Doctor on Call philosophy - “Telemedicine for All”, when translated as a practical slogan meant that the practice of telemedicine must be affordable and accessible for all.

The philosophical principles of Doctor on Call (cont'd)

2. The accessibility of telemedicine for all.

This principle ensures the right of access of all citizens in the use of telemedicine technology and Information Technology infrastructure. This presumes not only a source of broadband internet adequately distributed throughout the country, but also made accessible to all citizens.

These two philosophical principles when taken by themselves lay the basis for the justification of health as a human right for all citizens of the Caribbean, Latin America and the African Diaspora when using the Doctor on Call telemedicine platform.

The philosophical principles of Doctor on Call (cont'd)

3. Integrated platform use by all health and medical professional categories.

On the 9th of February 2023, the Bureau of Standards Jamaica launched the international industry standards for the practice of telemedicine. These standards were the product of all stakeholder participants in the formulation and development of these standards. This standard allowed for the practice of telemedicine by all professional categories within the health and medical sector on the same platform. In so doing, it enabled the practice of collegiality in our referrals to our colleagues and of course, timely consultations and second opinions. The platform therefore is also built to ensure the management of data through the eyes and perspectives of different providers drawn from different areas of specialization.

The philosophical principles of Doctor on Call (cont'd)

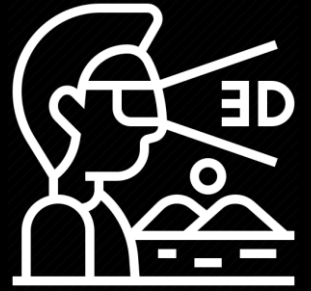
4. Doctor on Call has also considered the question of affordability for all. In this connection, over the 25 years of R&D, collaboration with the Association of General Practitioners and members of the Caribbean College of Family Physicians, the following principle was adopted after a survey of the doctors was done. The survey asked the question whether or not the cost of a clinical visit should be the same in the case of a face-to-face or virtual clinical consultation. 94% of the doctors surveyed agreed that doctors may choose to charge a half or less than half the cost of the visit of a patient or client as part of their agreement with the principle of affordability. This principle also contributes to the philosophical position of affordable healthcare being a foundation of health as a human right.

The philosophical principles of Doctor on Call (cont'd)

5. A major challenge to which Doctor on Call is committed is to the use of discounted cost to the patient/client to enable cost benefits for basic health insurance. This is interpreted to mean that the reduction in the cost of seeing a patient on the Doctor on Call platform should result in a lower rate of insurance for patients, through the development of an insurance transaction cost per virtual clinical encounter. This may be a fraction of the doctor's/provider's cost to the patient/client of the clinical encounter. Doctor on Call is committed to a health insurance solution that would include the poorest of the patients/clients who use the platform.

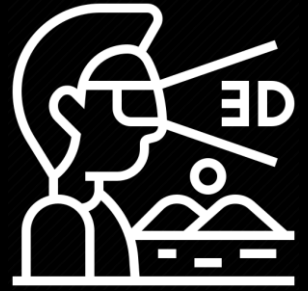
Telemedicine: Presenting new challenges for medical ethics

The practice of telemedicine must embody all existing ethical principles of the present day face to face practice of medicine. In addition, telemedicine's unique feature of the virtualization of the practice of medicine creates new ethical challenges, some of which were discovered during the research and development process.



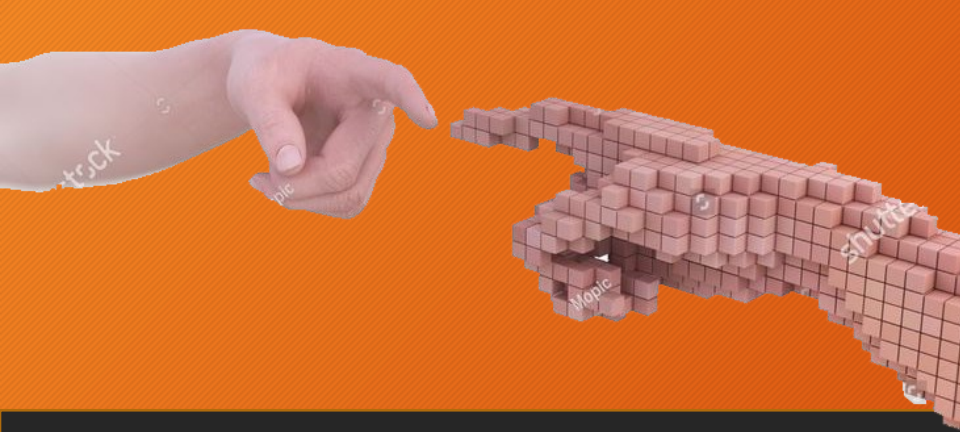
Telemedicine: Presenting new challenges for medical ethics

The essence of telemedicine is in its virtualization of the practice of medicine. This process presents new and exciting ethical challenges which must be resolved to ensure scientific credence, clinical validity and provider's / patient's acceptance and confidence.



VIRTUALIZATION OF HEALTH AND MEDICAL DATA: CHALLENGE

The process of virtualization by no means exhausts the challenges encountered during the telemedicine practice. Among others, questions of confidentiality and privacy of patient's information management loom large. The integrity of the payment system, especially its conformance with FINTECH systems and standards are vitally important to ensure the integrity and protection of the property rights of the users and providers of telemedicine health and medical services.



Virtualization presents unique ethical challenges as a result of the practice of telemedicine

What are the unique challenges of particular concern to practitioners of telemedicine?

The practice of medicine in a virtual, rather than a real space, presents unique challenges.

1. The first challenge is the result of the digital format of the transmission and management of the information arising from the virtual clinical encounter.
2. Secondly, is the principle of data reflection, which I define as an incremental process of change from real “measurable” / quantifiable data, to reflected or non-quantifiable data. The process of continuous reflection leads ultimately to an image which may be an abstraction of the real data. This I refer to as a “telemedicine data bubble”.
3. The real possibility of the process of virtualization creating a “telemedicine information data bubble”, objectively distorts the scientific validity of the clinical data, and therefore could be challenged as a valid representative of both the content and form of the patient/client clinical data.



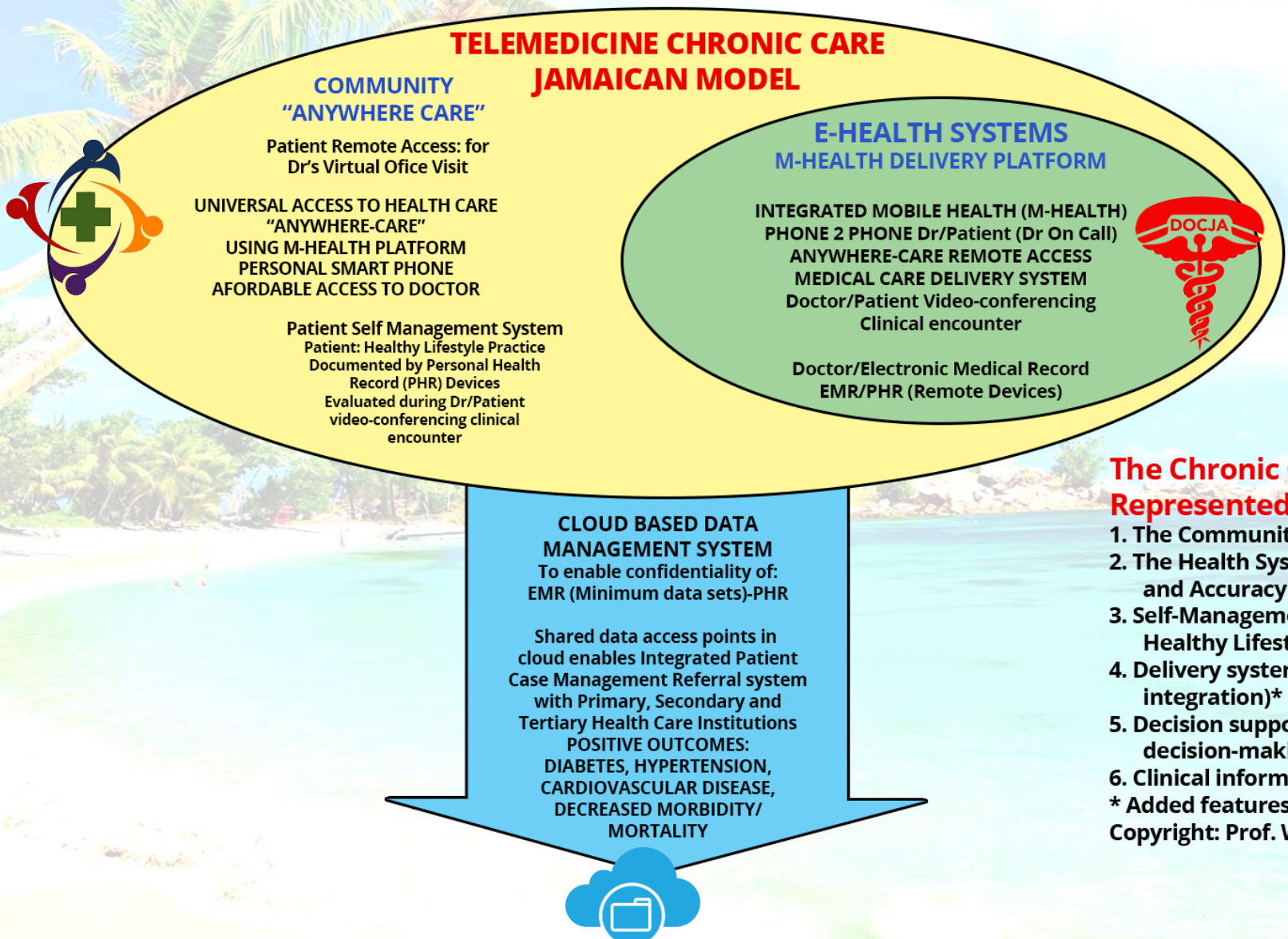
Artificial Intelligence (AI DOC-BOT)

“Artificial Intelligence” or AI, uses the performance of a computer as a machine learning device to independently perform functions of the doctor, the dentist or the veterinarian.

The applied research phase of “Doctor On Call” has tested over 2000 cases of an Artificially Intelligent Robot (AI DOC-BOT). It is a voluntary pre-diagnostic tool which will interact with patients if they so choose while waiting in the doctor’s/dentist’s/veterinarian’s virtual office lobby.

This artificial intelligent screening uses ICD 10 code as its database and makes pre-diagnoses during its virtual encounter with the patient. A pre-diagnostic virtual encounter is never complete without the process of validation by the physician or other qualified medical professional. The DOC-BOT is therefore a patient pre-diagnostic screening tool identifiable as a globally unique identification (GUID) of the patient / client. All data is in the full ownership and control of the clinician.

Application of Telemedicine to Non-Communicable/Communicable Disease Management



The Chronic Care - (Jamaican Model) Represented by the following elements:

1. The Community, (Resources & Policies)
2. The Health System, (Patient Safety, Confidentiality and Accuracy of Patient ID)*
3. Self-Management Support (Patient Benefits & Healthy Lifestyle Practice)*
4. Delivery system design, (Care coordination & integration)*
5. Decision support (Care coordination and decision-making focal points)*
6. Clinical information systems (Case management)

* Added features of Jamaican Model Telemedicine System
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