

WHAT ARE THE ETHICAL
CONSIDERATIONS OF
TELEMEDICINE CONSULTATIONS?



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Introduction

- Telemedicine embraces a wide range of clinical practice areas and activities.
- There are technical issues such as: person machine interface difficulties, the quality of transmitted images and the correct peripherals to insert or place onto the patient and acceptability to the patient. These difficulties should be mastered in order for the system to be useful.
- Although the telemedicine system can be used to hold meetings between centers, in this context we are looking at telemedicine as a patient care system. Using the fixed ISDN telecommunication line is prohibitively expensive for any funder. If ISDN telemedicine is going to be used, careful budgeting should be planned.
- The cell-phone companies provide an alternative, possibly cheaper platform for telemedicine communication. None of the telemedicine equipment is manufactured in South Africa, it has to be sourced from different overseas countries. One should try to source the technology from a single country and supplier.

The range of tele-consultations in telemedicine

- Simple telephone call between patient and clinician
- E-mail consultation between patient and clinician
- Videoconferencing between patient and clinician on an a smart device application.
- Classic telemedicine equipment installed between a peripheral site and a referral hospital on ISDN.
- Fibre-optic image transmission between the radiologist and the hospital is increasingly deployed.

Primary purposes of the telemedicine

- To confirm diagnosis of a distant patient.
- To validate diagnosis made at peripheral site.
- To give advice on further patient care.
- To prescribe new intervention/treatment.
- To refer to competent health centre for further treatment.
- To track emergence of epidemics (e.g. hepatitis, on the sample).
- To capacitate peripheral sites in patient management.

Primary purposes of the telemedicine

- Capacitation of peripheral sites staff with the passage of time.
- To manage comprehensively a presenting complaint of a patient at a distance.
- To help stabilise a patient before referral.
- To help advise on proper patient referral.
- To ensure that peripheral sites have access to, and are using clinical guidelines and the Essential Drugs List

Difficulties with patient and clinician identity

- On a simple telephone call the clinician needs to make certain that the identity of the patient is known to him.
- The clinician needs to ensure that the patient on the other side of the telephone line, Skype or smart device video call is known to the clinician.
- Clinician to introduce self to patient.
- In a classical telemedicine platform (between HCF) the patient will be accompanied by a health professional at a peripheral site.
- All these interactions should be recorded. This may be the only record of encounter with patient.

Transmission of clinical data

- Real time audio and visual data are sent over to the referral centre over the audio-visual equipment.
- The resolution of images should be high in order for such to be useful.
- Poor resolution can lead to misdiagnosis and inappropriate care.
- Radiology images have to be loaded onto a digitiser and transmitted.
- ECG trace and foetal cardio-tocograph have to be real time for the clinician on the other end to make interpretation.

Informed Consent Form

- All telemedicine consultations have to be accompanied by a signed consent form
- By agreement between clinician and patient, a recorded verbal consent can substitute a signed consent form.
- The condition for this is that the patient and clinician should be acquainted.
- The usual conditions should obtain for signing a consent form.
- It is advisable to send a digital image to the referral center.

Informed Consent Form

- Should be drawn on a proper letterhead of the healthcare provider.
- It should explain clearly to the patient what will happen during the consultation.
- It should state who will be present during such a consultation at the primary site and the referral site.
- It should explain what information shall be transmitted to the referral site (X-ray images, laboratory results, etc).
- Whether the consultation is recorded for later review.

Informed Consent form

- The patient must agree for peripherals such as otoscopes, ECG leads, etc, to be inserted or placed on him/her to transmit data.
- Patient should be assisted by parent/guardian to sign the consent form.
- The patient needs to be informed whether the images will be published and shared outside the platform and permission sought.
- The original signed consent form have to be kept in the original file of patient.
- A transcript will suffice in a case of verbal consent (followed by a proper document).

Informed Consent form

- Sage Bionetworks has developed an electronic informed consent application for the smart phone.
- It is made easy for the patient or study participant: with a total of 8 on screen pages.
- Welcome page, Research description, Data handling and usage, Impact on the life of patient/issues to consider, What is involved, Your Rights, Potential risks and benefits and Quiz, review and Consent.

Ethical pitfalls of a Telemedicine consultation

- Lack of advance preparation for the consultation.
- Lack of preparation of the patient.
- Falling short of patient's expectations.
- Unexpected surprises for the patient.
- Non-clinicians hovering around, overhearing the conversation between clinicians and patient.
- Lack of sound proofing of the consulting room (allowing conversation to be overheard)

Dealing with ethical pitfalls

- Clinicians should ensure that all the paperwork has been done.
- Ensure that they familiarise themselves with the patient well before the consultation.
- Ensure that expectations of the patient are properly met.
- That during an emergency consultation due diligence is adhered to.
- Ensuring that the patient is properly covered during a video interaction.

Dealing with ethical pitfalls

- It is the responsibility of the clinicians that the system is functioning optimally.
- The system technicians should get the system up and running before it is used.
- Technicians should be available within a calling distance during the consultation to do trouble shooting.
- They should not be inside the consulting room when the system is running online.
- Confidentiality and privacy of the patient to be secured at all times

Allocation of time on the platform

- Allocation should be made according to the roster
- Emergency Medicine should be available daily in the background at all times at the main centre.
- Any discipline can use the system
- In the available sample, the uptake was generally higher among the following: Diagnostic Radiology & Ultrasonography, ENT, Cardiology, Dermatology, General Dentistry,
- The trainees (e.g. medical registrars) should be part of the roster routinely.

Allocation of time on the platform

- If a module on e-health, telemedicine or informatics is part of the postgraduate curriculum in medicine, the trainees from various disciplines should given adequate time.
- Log books may have to be signed for attendance to patients on the platform to satisfy the training component.
- There should be adequate supervision of the trainees by senior staff.
- (All attempts should be made to deal with any additional complaint which the patient may suddenly bring up during the consultation)

A sample of patients seen on a platform

07/2008		Dental	38yr, F	Pain L side of face	Periodontitis and impacted tooth. Empiric treatment & extraction after 2 weeks at TH
07/2008	CHC	Dental	23yr, M	Painful L jaw	Impacted tooth with periodontitis. For surgical removal
08/2008	CHC	ENT	43yr, M	Hearing loss R ear	Waxol drops and syringing
08/2008		EM	38yr, Male	Fever, malaise, cough, LOW, LOA, for 1 month	Suspected PTB: sputa, CXR, FBC. Started empiric treatment.
05/2008		EM	1yr 9 months	Cerebral palsy	Follow up: physiotherapy consultation
07/2008	DH	ENT	Unknown	Wax impaction	Ear drops and syringing
08/2008	DH	ENT	51yr, M	Hearing loss	Audiogram and tympanogram
08/2008	DH	ENT	43yr, M	Painful ear	Ear drops and syringing
02/2009	CHC	O&G	18yr, F	Postdatisism (40wks)	Referred to DH
03/2009	CHC	EM	25yr, M	Cough and greenish sputum	? Bronchopneumonia. Transfer to DH

A further sample of patients seen

10/2009	CHC	EM	4 weeks	Growth on gums since birth	Referred TH (Maxillofacial clinic)
09/2009	CHC	EM	15yr, M	Diarrhoea vomiting, weakness and jaundice	? Hepatitis Rx IVF, refer to DH
09/2009	CHC	EM	23yr, M	Diarrhoea, vomiting, weakness and jaundice	? Hepatitis Rx: IVF, refer to DH
09/2009	CHC	EM	20yr, M	Fever, diarrhoea, vomiting and yellow eyes	? Hepatitis Rx: IVF, refer to DH
09/2009	CHC	EM	90yr, M	Weakness swelling of the lower limbs. Mass in R hypochondrium	Refer to TH

Conclusion

- Telemedicine is a useful modality under the correct deployment.
- Capacitation of peripheral sites does not capacitate healthcare professionals to go beyond their scope of professional practice.
- Sensitive examinations e.g. involving display of private organs should be avoided.
- Professional ethical practice should be maintained for the good of the patient.
- At the end of each encounter it is important to gauge the patient's satisfaction with the consultation.

Acknowledgements & References

- Sage Bionetworks, Doerr, C Suver, J Wilbanks:
<http://ssm.com/abstract=2769129>
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