Using Telemedicine in HIV Care – Possibilities and Limits

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Objectives

• Define telemedicine (telehealth)
• Describe telemedicine usage in HIV care
• Demonstrate an example of the successful use of telemedicine in HIV care
• Discuss limitations
• Identify one potential usage for telemedicine in Swiss HIV care
Definition: Telemedicine/Telehealth

*Télos* - at a distance (*Greek*)

*Medicīna* - healing (*Latin*)

“*Healing at a distance*”

Strehle EM, Shabde N. One hundred years of telemedicine: does this new technology have a place in paediatrics? *Archives of Disease in Childhood*, 2006, 91(12):956–959
Four elements of telemedicine

1. provides clinical support

2. overcomes geographical barriers

3. uses various types of technology

4. goal is to improve health outcomes.

World Health Organization: Report on the second global survey on eHealth, 2010
Total HIV Appointments in Mohave County
Using Face-to-face and Telemedicine

- **Total TM**
- **Total F2F**
Case Study

Source Patient
- “Rob”
- 52 year old male
- HIV infection
- Last labs
  - Last CD4 541
  - Last HIV viral load <20
- Chronic Kidney Disease

Exposed Patient
- “Kathy”
- 54 year old female
- No medical problems
- Last labs
  - Normal chemistry
  - Normal blood count
Case Study

Source Patient
- 52 year old male
- HIV infection
- Last labs
  - Last CD4 541
  - Last HIV viral load <20
- Chronic Kidney Disease
- ARVs
  - abacavir/lamivudine 600/300 once a day
  - dolutegravir 50 once a day
- HLA-B*5701 negative

Exposed Patient
- 54 year old female
- No medical problems
- Last labs
  - Normal chemistry
  - Normal blood count
- HLA-B*5701 unknown
National Clinician Consulting Center

• Question: Is PEP indicated if the source patient has an undetectable viral load?
• Consultant is surprised that patient gave his medicine to his partner
• “If you were in Switzerland, then they may not treat this person.”
• Partner understands low risk but wants to take control of this situation and requests PEP.
Telemed Types by Timing

• Synchronous or Real time
  – Professional to Patient
  – Professional to Professional Consultation
  – Videoconferencing

• Asynchronous or store-and-forward
  – Professional to Professional Consultation
  – Data files
Synchronous services

Angela Hansen, RD
  • Nutritional Counseling
    – Diarrhea
    – Diabetes/hypertriglyceridemia

Terri Dunn, LCSW
  • Counseling services
Synchronous services

Randee Gelatic, Pharm D
- Review of polypharmacy clients
- Diabetes and dyslipidemia

Greg Melcher, MD
- Infectious Disease
  - Phone consultation
Asynchronous services

Therese Holguin, MD
• Volunteer consultant
• Asynchronous digital image review

Randee Gelatic, Pharm D
• Review of polypharmacy clients
• Diabetes and dyslipidemia

Greg Melcher, MD
• Infectious Disease
  – Email consultation
Didactic Series

HIV/HCV Co-infection – Part I: Epidemiology, Screening, Pathophysiology

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4/10/14

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Telehealth / eHealth / mHealth

• Telehealth can include a broad spectrum of technologies including:
  
  – Home monitoring
  – Electronic health records
  – Smartphone apps
  – SMS services
  – Websites
  – Etc...
Know Your Limitations

“(When confronted with a new technology), it is very easy to be swept up in the enthusiasm...so, there are three questions to ask...”

-Neil Postman

The MacNeil/Lehrer NewsHour, 1995
“What is the problem to which this technology is the solution?”

“Whose problem is it?”

“What other problems will be created by using the technology?”

The MacNeil/Lehrer NewsHour, 1995
HIV Telemedicine Successes

- Post-exposure Prophylaxis
- Starting care more quickly
- Nutritional counselling
- Medication adherence “check-in’s”
- Sobriety “check-in’s”
- Polypharmacy evaluations
- Depression evaluation and treatment
- Tobacco Cessation
Prison Care

Delivering HIV subspecialty care in prisons utilizing telemedicine. Patel MC, Young JD. Dis Mon. 2014


Telemedicine improves access to care for HIV-infected prisoners. Besch CL. HIV Clin. 2007
HIV Telemedicine Limitations

- Lack of physical exam
- Lack of personal contact
- Hard of hearing patients
Possibilities for HIV TM in Switzerland?

- Synchronous Services
  - Urgent Response for PEP
  - Services for remote settings
  - Highly specialized services

- Asynchronous Services
  - Learning Network
  - Polypharmacy evaluations
  - Teledermatology
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