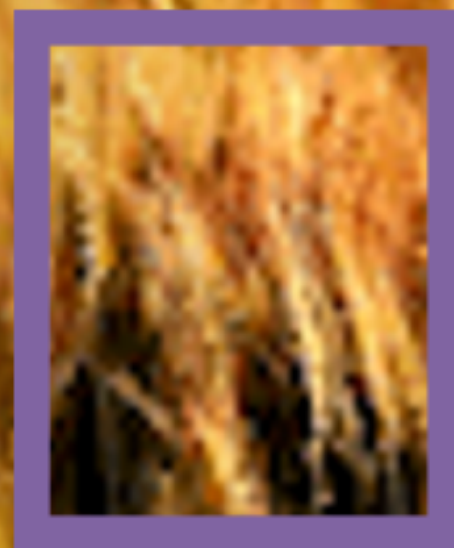


Tele-HIV/ Infectious Disease Practice


Stephen A. Klotz, MD
Infectious Diseases
University of Arizona



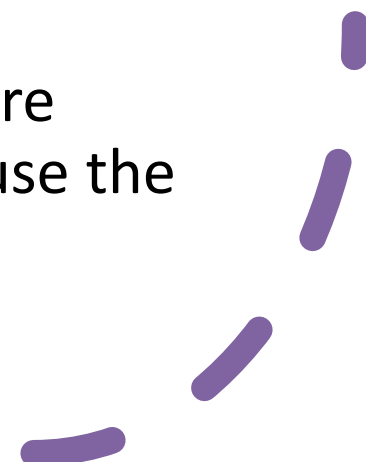
Objectives

- Describe our HIV/Infectious Diseases Telemedicine Clinic
- What I have learned that applies to Telemedicine



A large red circle on the left side of the slide, partially cut off by the edge.

Telemedicine for your Practice


- **If you are just starting**, limit the scope to patient problems that can be handled successfully on Telemedicine
 - This is a trial-and-error process!
 - Determine what ancillary data is mandatory for the visit
 - Consider reducing your time and sharing encounters with a pharmacist and/or clinic manager or nurse- 8 minutes each
 - My Telemedicine clinics are constantly evolving because the patients are “evolving”
- 
- A decorative purple dashed line in the bottom right corner, consisting of several curved segments.

For Example...

- Patients have learned how to use the technology
- Patients enjoy Telemedicine more than brick-and-mortar clinics
- Patients are more focused on Telemedicine
- All aspects of care can be attended to...



My
Specialty is
HIV Care

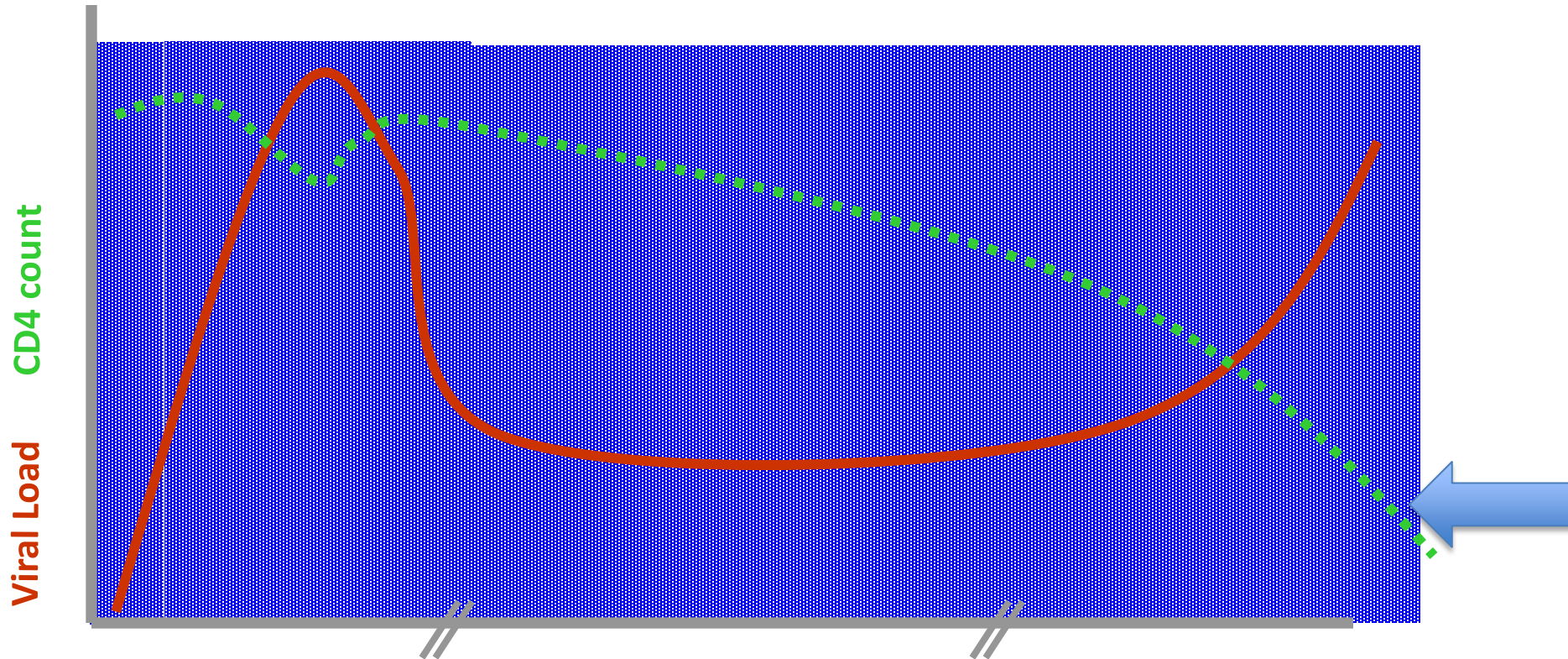
- I saw my first patient with HIV in 1981
 - Director of first HIV Clinic in 1984, six others since; on 3 continents
 - For all of this work it was ***absolutely*** necessary to physically encounter and examine the patient
- 

Binh Thanh Outpatient Clinic, Saigon

Average CD4 count of
the first 200 patients
was ~50
cells/microliter



Natural History of HIV-1 Infection, Untreated



HIV Treatment Today

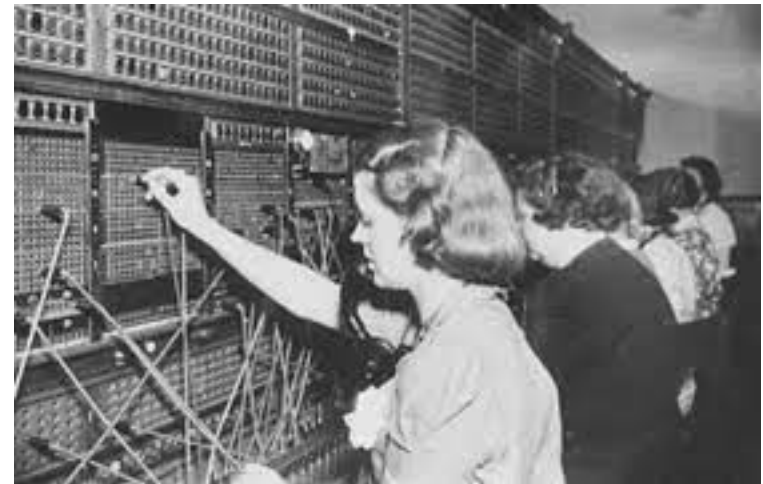
- Now, everyone with HIV is immediately placed on anti-retroviral drugs
- With new drugs every patient is generally undetectable for HIV RNA within 1 month
- This preserves immune cells and prevents transmission of HIV

Presently

- Antiretroviral therapy
(begin early and daily)
- See HIV patient once a year;
all patients are required to
have a PCP
- Laboratory tests once a
year

Our “Local” Telemedicine HIV Clinics

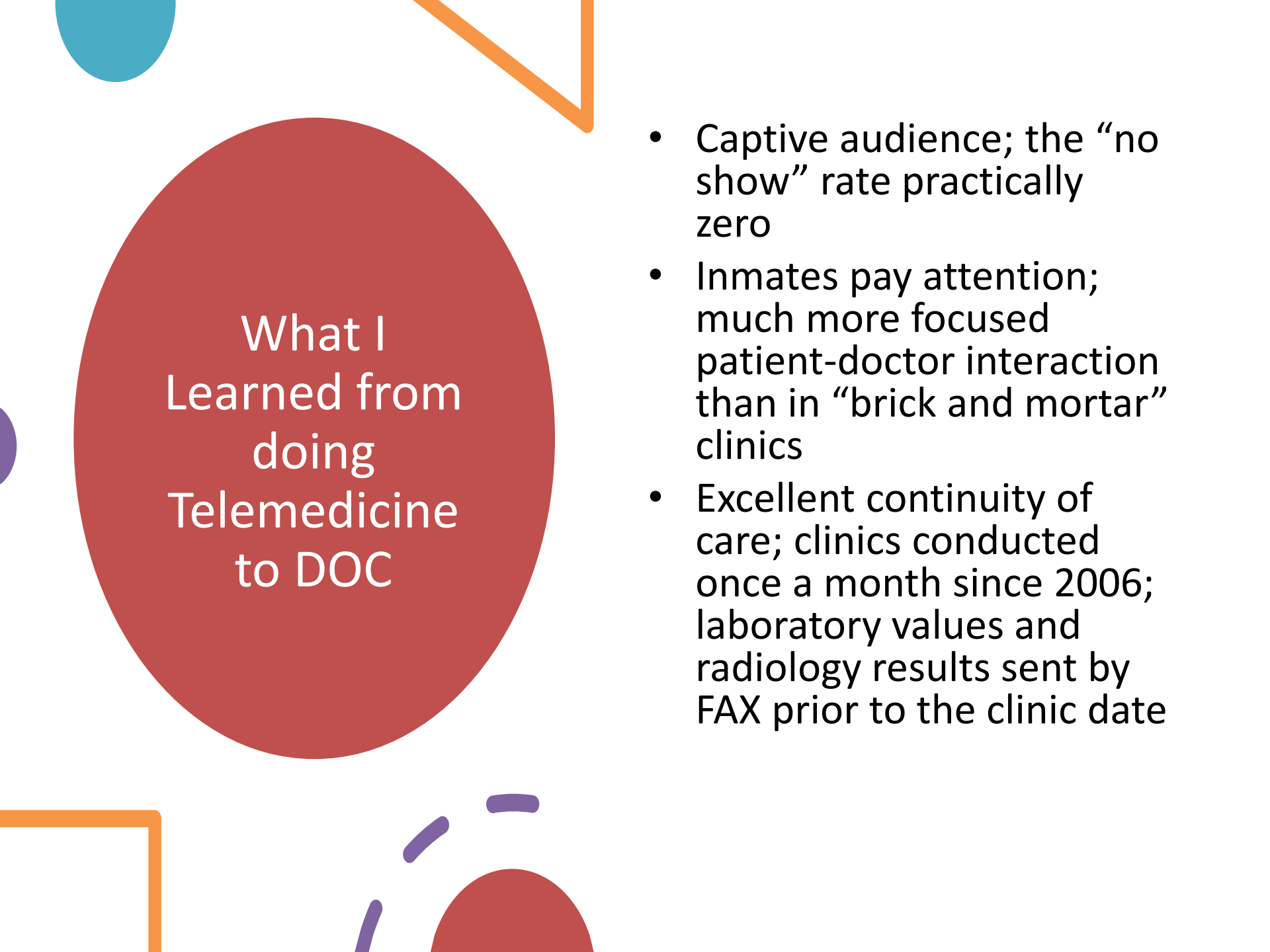
- 1 half day clinic/week
- Personnel needed: **physician, pharmacist, clinic manager**
- EMR: Cerner





Years of
Experience
with
Telmedicine

- We have provided HIV Telemedicine to Pima County Jail and Arizona Department of Corrections monthly since 2006.
- Communication with DOC allows laboratory and radiology results to be exchanged beforehand.




What I Learned from doing Telemedicine to DOC

- Captive audience; the “no show” rate practically zero
- Inmates pay attention; much more focused patient-doctor interaction than in “brick and mortar” clinics
- Excellent continuity of care; clinics conducted once a month since 2006; laboratory values and radiology results sent by FAX prior to the clinic date



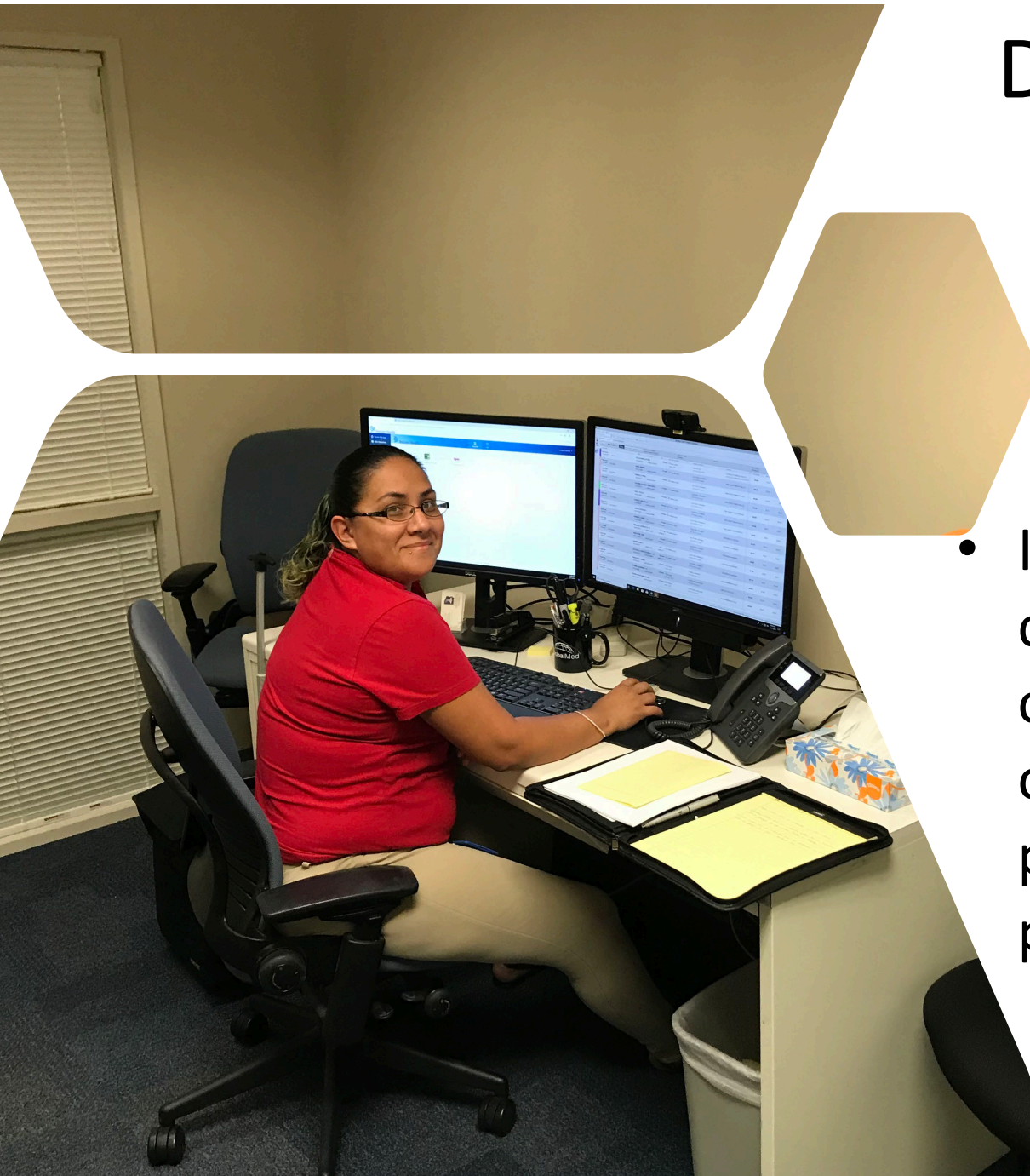
How We Do It: Day Before Clinic

- We use a DOC database to retrieve the names and records of the patients and enter clinic slots into a Cerner EMR
 - The clinic coordinator makes up the clinic list and enters the names and MRN into the database
- 

Day of Clinic

The DOC database is accessed, and list of clinic patients pulled up

- It is important that the clinic coordinator stay online for the duration of clinic to address patient-centered problems



Other member of Clinic

- Pharmacist specializes in HIV drugs and attends every clinic
- Enters separate notes in the computer which are sent to the DOC
- I use a clinic note specific to HIV; a copy is FAXED to the DOC. The note has orders for drugs and laboratory monitoring as well as a suggested time for the next clinic visit



Actual Clinic visit

- There is a health care worker arranging the camera at the DOC site and controlling patient flow
- Each clinic visit lasts from 10-15 minutes
- We can zoom in to visualize lesions

Caveat with Telemedicine Clinics

- We must work efficiently to accommodate 3 individuals asking questions (the physician, the pharmacist and the clinic coordinator)



Conclusions

- Telemedicine is one future of HIV care
- Telemedicine is preferred by the patients
- “One-stop shopping” from the comfort of home or office.
- Telemedicine may receive “pushback” from organizations.
- Persevere!

Recent Articles by Us

- Klotz SA, Jernberg JB, Robbins RA. Turn Healthcare Workers Loose with Outpatient Telemedicine-Let Them Decide Its Fate; No Top-Down Decisions on What It Can and Cannot Do. *Am J Med.* 2023 May 23:S0002-9343(23)00341-8. doi: 10.1016/j.amjmed.2023.05.005. Epub ahead of print. PMID: 37230402; PMCID: PMC10202893.
- Klotz SA, Chan CB, Bianchi S, Egurrola C, York LD. The Genie Is Out of the Bottle: Telemedicine Is More Effective Than Brick-and-Mortar Clinics in the Care of HIV-Infected Outpatients. *Am J Med.* 2023 Apr;136(4):360-364. doi: 10.1016/j.amjmed.2022.11.012. Epub 2022 Dec 8. PMID: 36495936; PMCID: PMC9910587.