A close-up, slightly blurred photograph of a field of golden wheat. The stalks are in sharp focus in the foreground, showing their texture and color. The background is a soft-focus expanse of more wheat, extending to a bright, hazy horizon. The overall tone is warm and natural.

A Successful Tele- Infectious Disease Practice

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Objectives

- Discuss what clinical problems are amenable to Telemedicine
- Describe our HIV/Infectious Diseases Telemedicine clinics and Department of Corrections Telemedicine clinics
- What I learned that we apply to our Telemedicine encounters



Bringing Telemedicine to your Practice

- Telemedicine has as many applications as there are people using it
- If you are just beginning on Telemedicine, I would suggest you think about some common patient problems you encounter in your practice and limit the scope to what you think can be handled successfully on Telemedicine—this is going to be a trial and error process
- Determine what ancillary data is mandatory and how to retrieve it before the Telemedicine visit
- Consider reducing your time and sharing the encounter with a pharmacist or a clinic manager or nurse: say 8 minutes each; together a 20-minute visit
- Just get started! You will rapidly learn what works and what needs to be dispensed with



My Disease
Specialty is
HIV

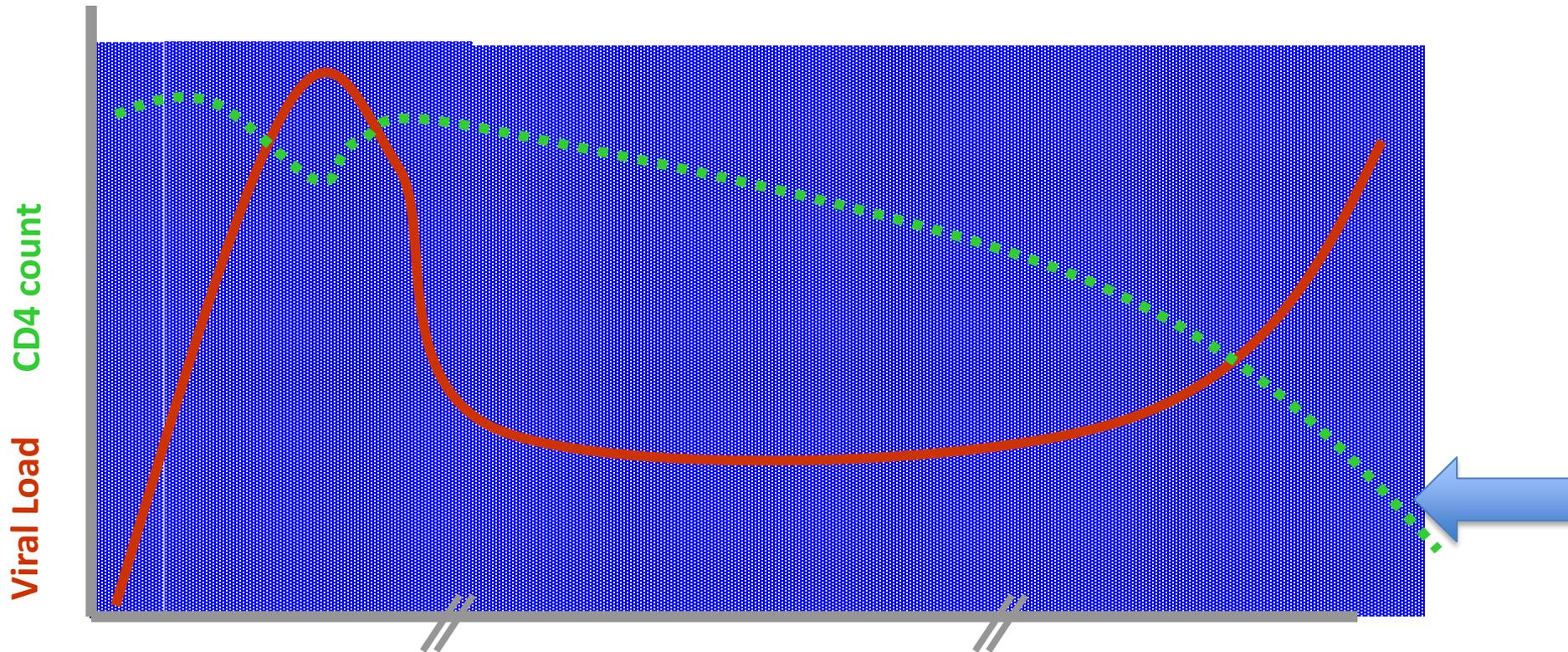
- I saw my first patient in 1981
 - Director of first HIV Clinic in 1984, six others since; on 3 continents
 - For all of this work it was ***absolutely*** necessary to physically encounter and examine the patient
 - That is not the case anymore
- 

Binh Thanh Outpatient Clinic, Saigon

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



Natural History of HIV-1 Infection



HIV Treatment Today

- Everyone with HIV is immediately placed on anti-retroviral drugs
- With new drugs every patient is generally undetectable for HIV RNA within 1 month– disease is controlled
- This preserves (or restores) immune cells and prevents transmission of HIV

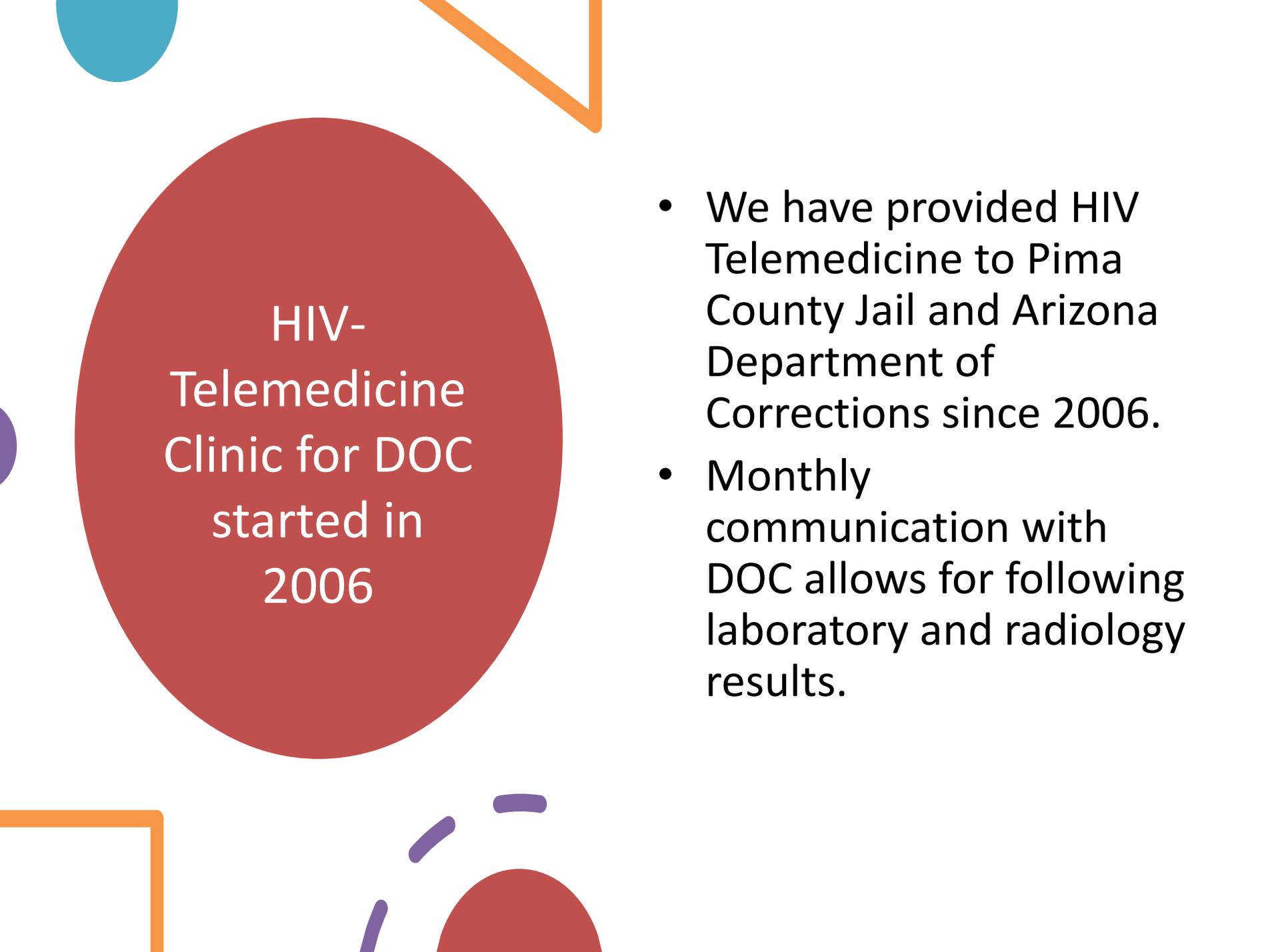
Current HIV Therapy

- Antiretroviral therapy (early and daily)
 - See HIV patient once a year; all patients are required to have a PCP
 - Laboratory tests twice a year
 - Soon, therapy may be an injection once every other month
 - Having told you the above, you can perhaps envision how useful Telemedicine would be in taking care of these patients
- 

Two Types of Telemedicine Clinics

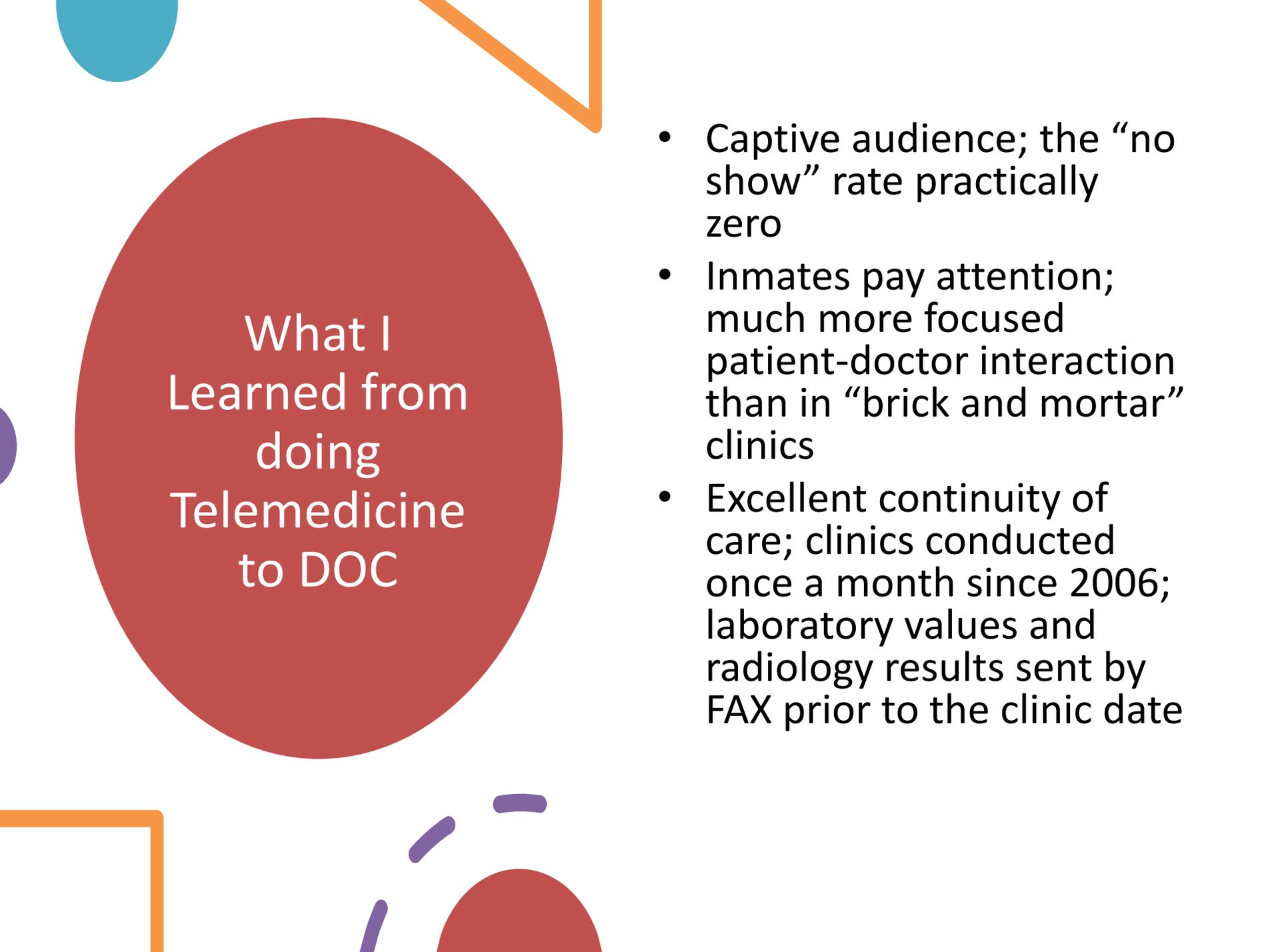
HIV care statewide

HIV and Infectious
Diseases for the
Arizona Department
of Corrections



HIV-
Telemedicine
Clinic for DOC
started in
2006

- We have provided HIV Telemedicine to Pima County Jail and Arizona Department of Corrections since 2006.
- Monthly communication with DOC allows for following laboratory and radiology results.



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

Tricks adopted from DOC Work

Don't try	Don't try to go it alone; way too many technical and informational problems on Telemedicine
Keep	Keep your camera on during the entire patient encounter, even when others talking.
Learn	Learn to accept, short, to-the-point notes; I use a form for HIV encounters.
If	If you are a specialist, be sure you know the name of the PCP or insist they have one.

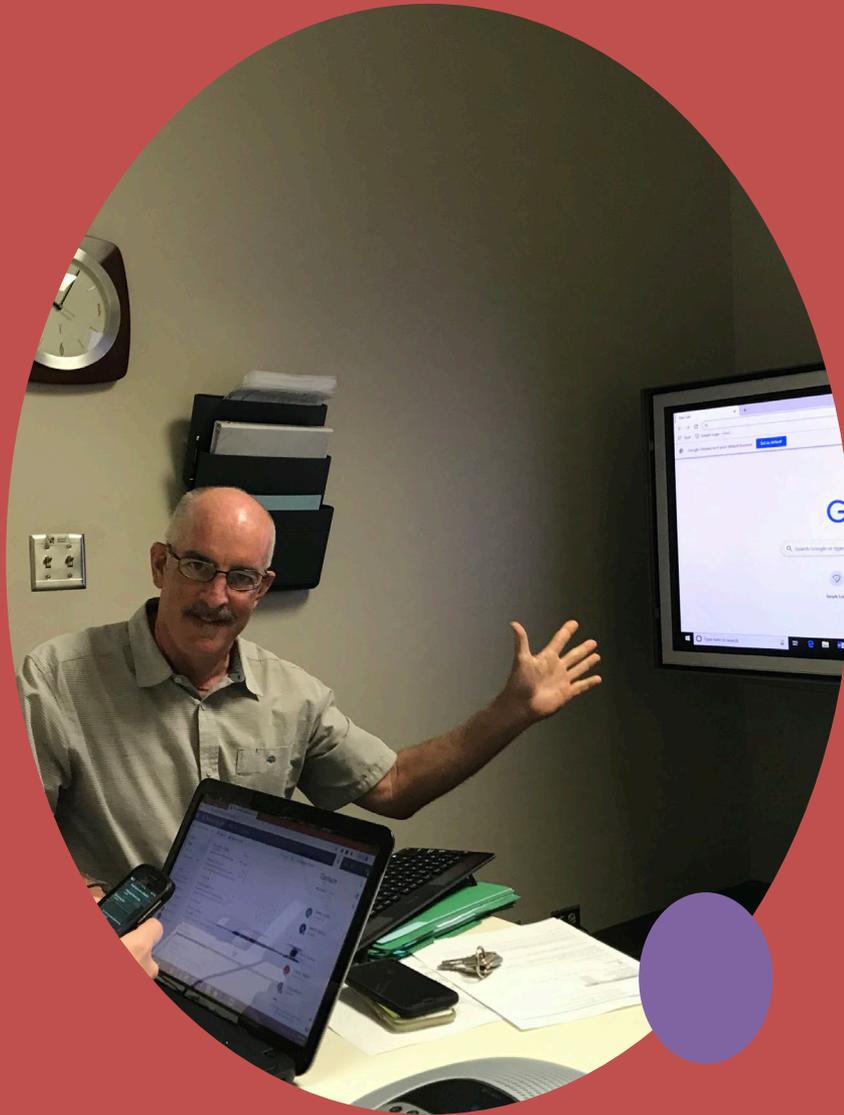


How We Do It: Day Before Clinic

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

Clinic Day: Connecting to the DOC

Pete turns on all the
equipment and insures we
can reach all the DOC sites





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

- Krystal lets me know which patient is coming next onto the screen and provides me a patient folder with copies of all the lab results and notes of DOC physicians
- She also visits patients in jail to insure transitioning to civilian life

Our video room

- Pharmacist Larry specializes in HIV drugs and attends every clinic
- He 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



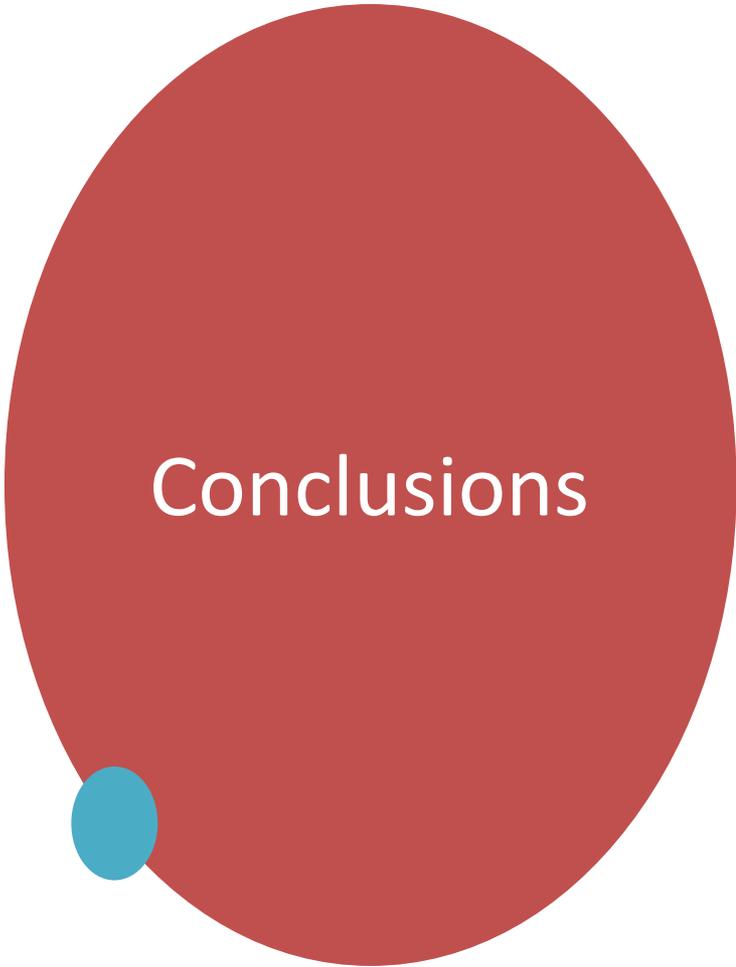
Actual Clinic visit

- 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



Plans for new Programs

- Our direct marketing of care to HIV patients (~2000 patients in our Ryan White Clinic) is already ongoing along with the DOC Telemedicine.
 - HIV TelePharmacy: twice per year
 - HIV TelePrEP statewide will grow to weekly clinics
- 



Conclusions

- 
- HIV is a disease made for Telemedicine
 - Telemedicine is the future of HIV care