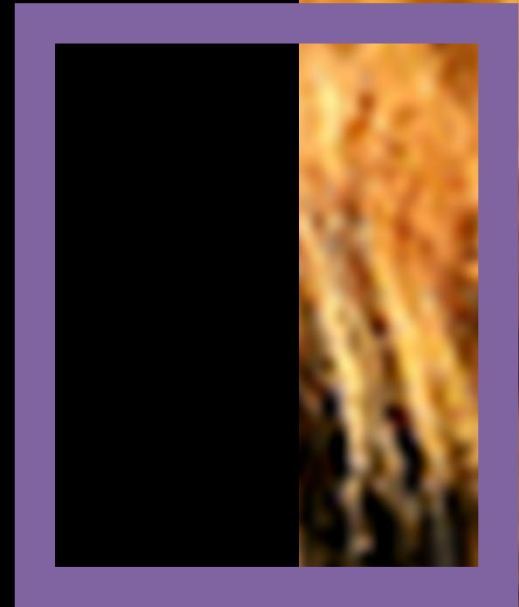


A Successful Tele- Infectious Disease Practice

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Infectious Diseases
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Objectives

- Describe our HIV/Infectious Diseases Telemedicine for Tucson residents and the Arizona Department of Corrections
- What I have learned that we apply to Telemedicine



Bringing Telemedicine to your Practice

Telemedicine is a modality with as many applications as there are people using it:

- If you are just beginning on Telemedicine, I would suggest you think about common patient problems that you encounter in your practice and limit the scope to those
- Determine what ancillary data is mandatory and how to retrieve
- Consider reducing your time and sharing the encounter with a pharmacist and a clinic manager or nurse: say 8 minutes each
- Just get started!
- My Telemedicine clinics are constantly evolving



My Disease
Specialty is
HIV

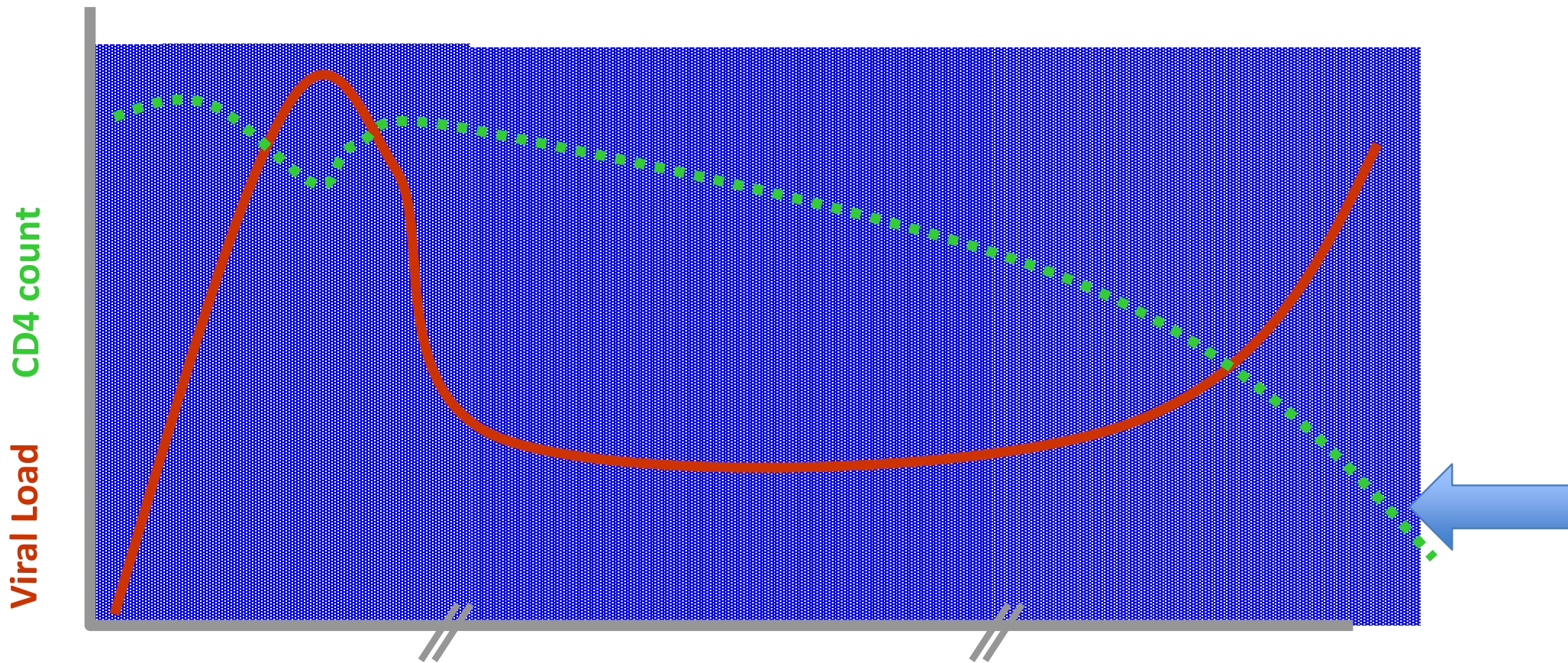
- I saw my first patient in 1981
- Director of first HIV Clinic in 1984, six others since; on 3 continents
- For all of this work it was ***absolutely*** necessary to physically encounter and examine the patient

Binh Thanh Outpatient Clinic, Saigon

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




Natural History of HIV-1 Infection, Untreated

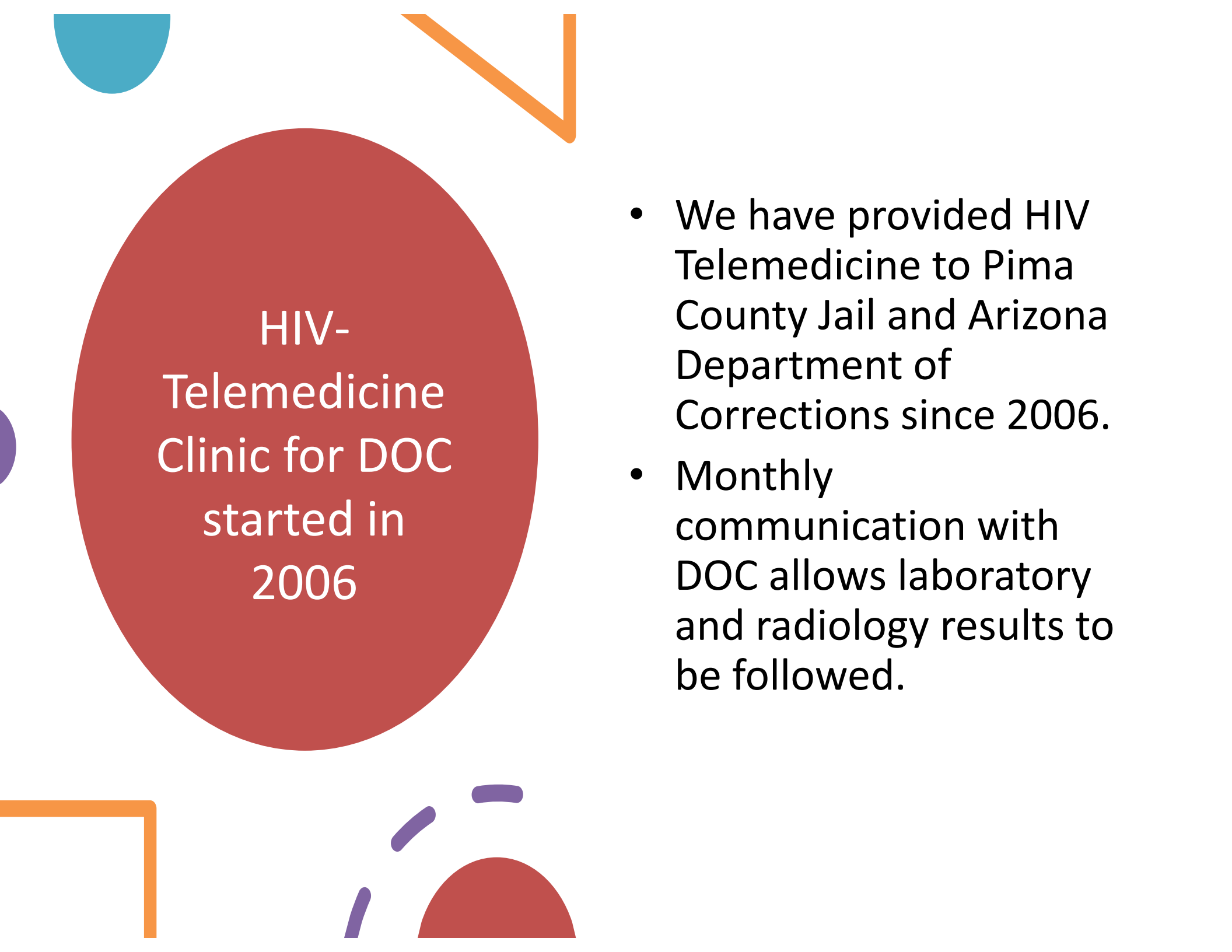


HIV Treatment Today

- 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– disease is controlled
- This preserves (or restores) immune cells and prevents transmission of HIV

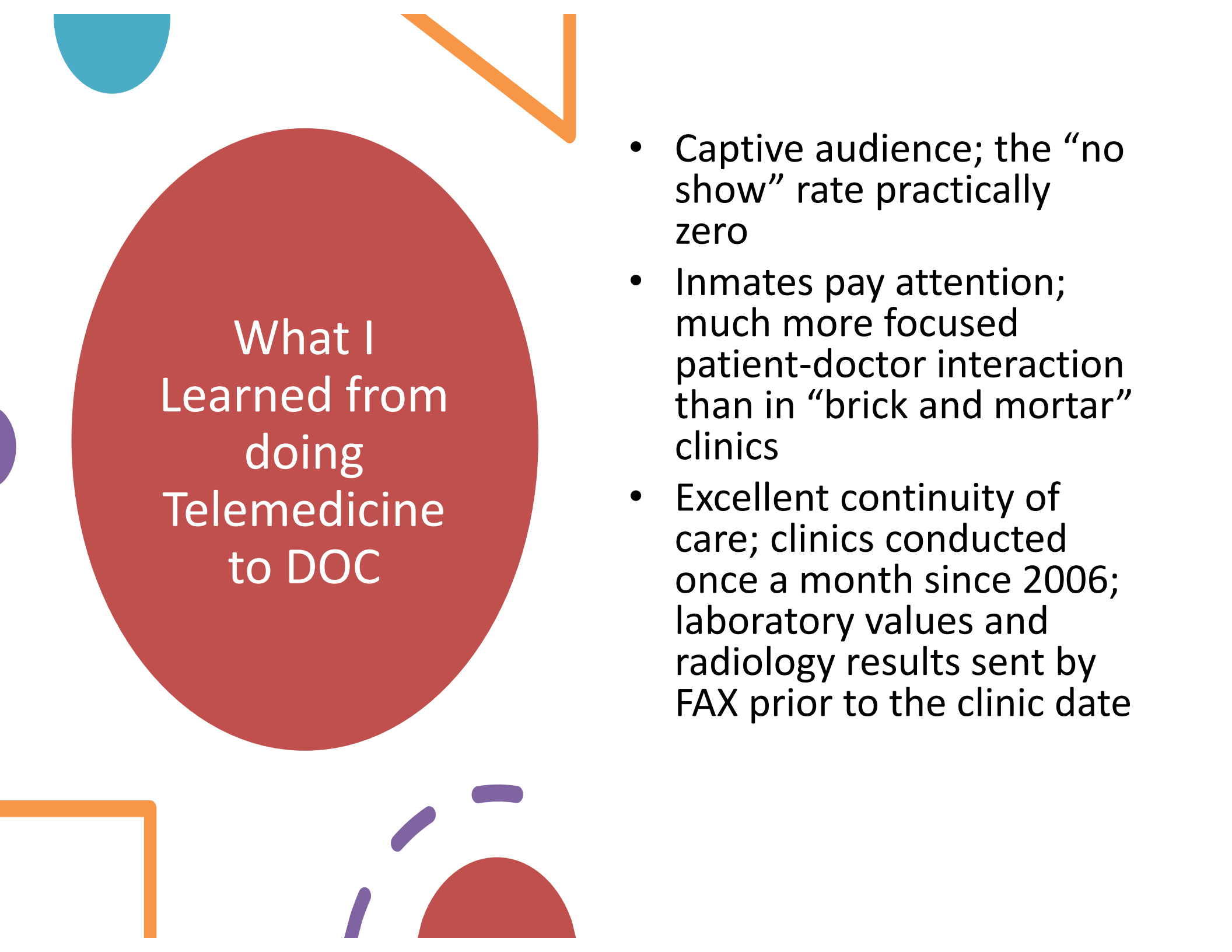
Current HIV Therapy

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



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 laboratory and radiology results to be followed.


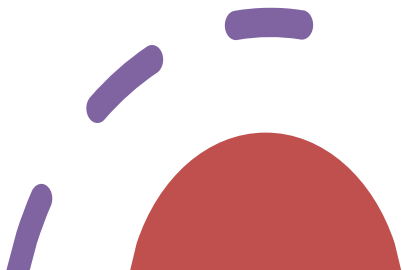


What I
Learned from
doing
Telemedicine
to DOC

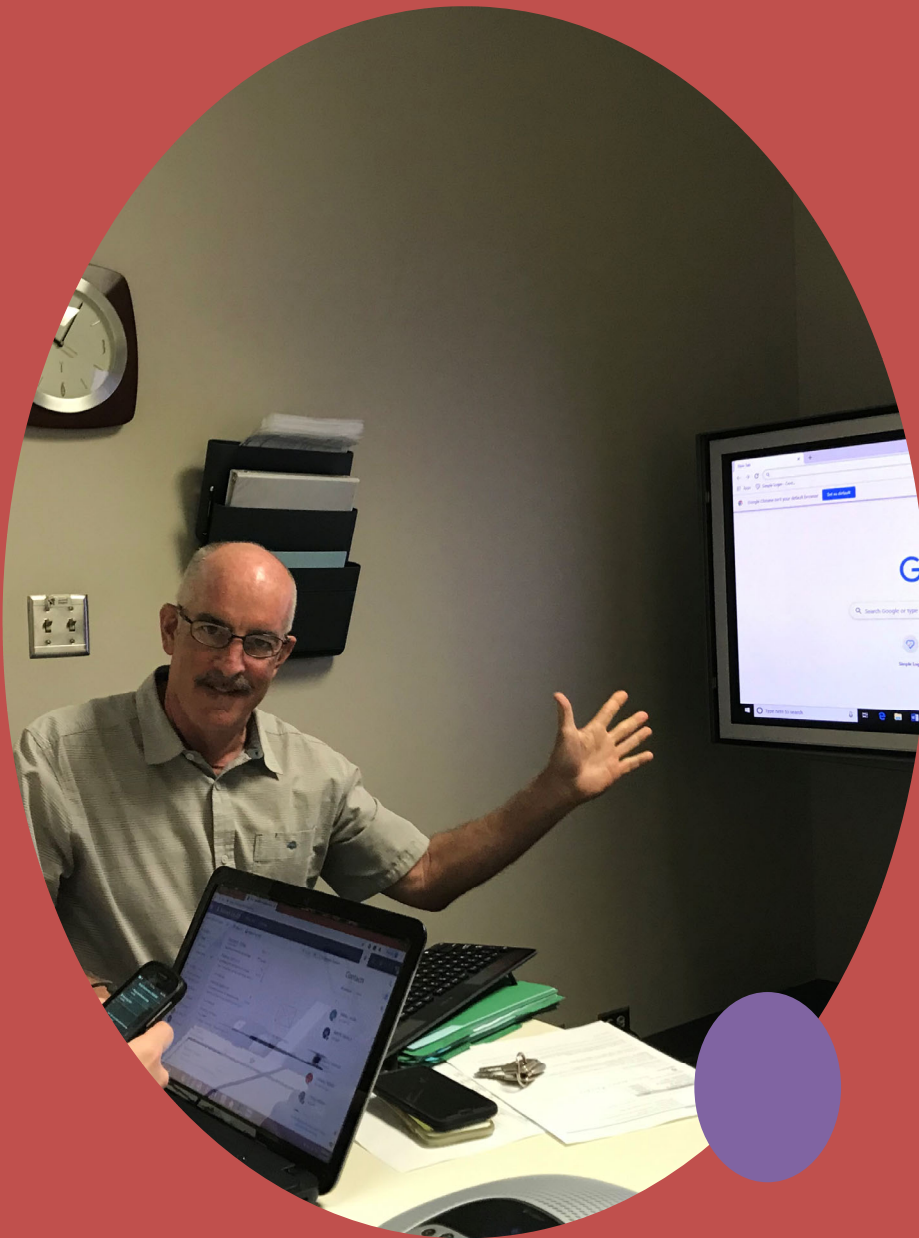
- Captive audience; the “no show” rate practically zero
- Inmates pay attention; much more focused patient-doctor interaction than in “brick and mortar” clinics
- Excellent continuity of care; clinics conducted once a month since 2006; laboratory values and radiology results sent by FAX prior to the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

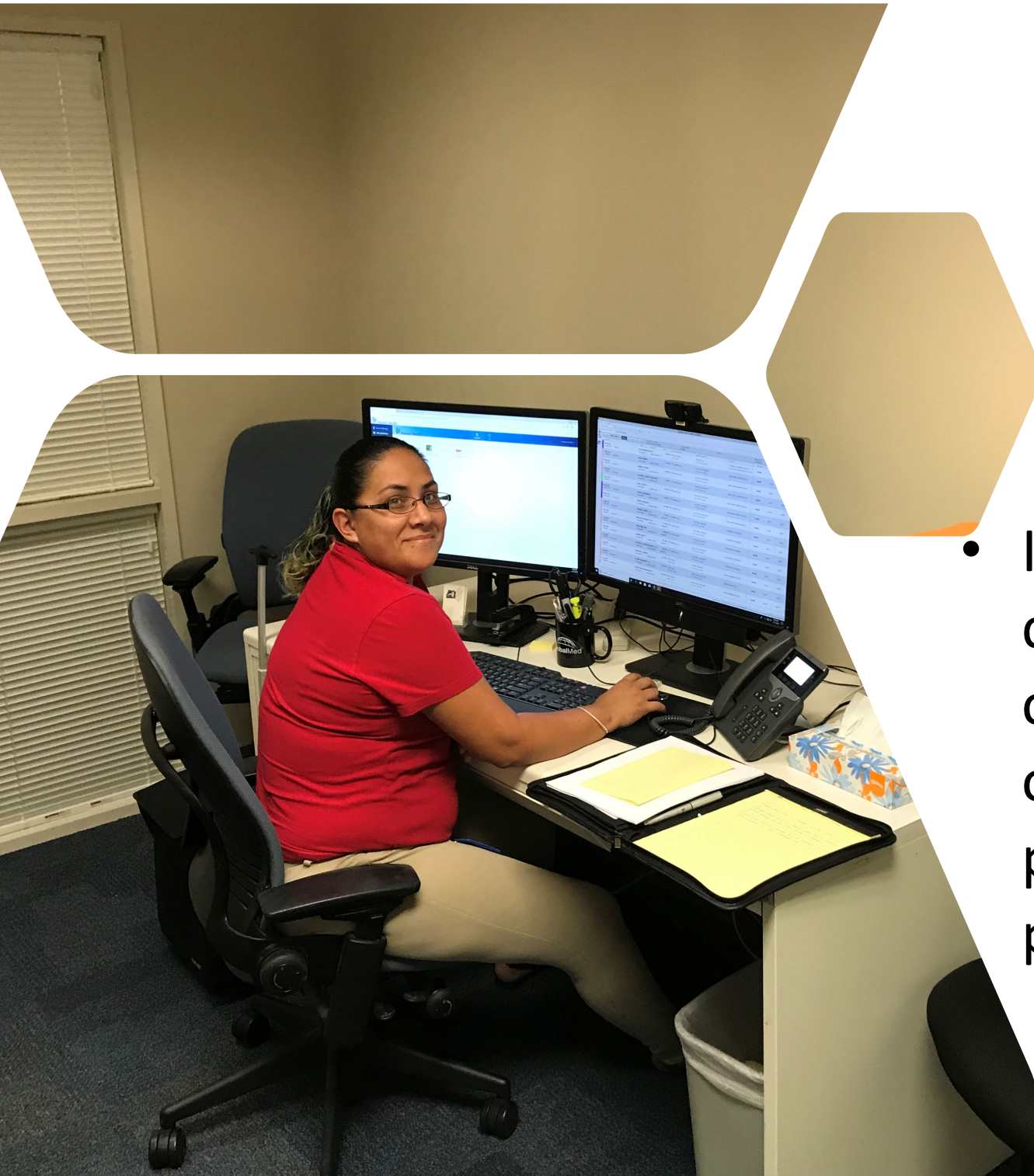


How We Do It: Day Before Clinic

- We use a DOC database to retrieve the names and records of the patients and enter clinic slots into a Cerner EMR
 - Enter names and MRN into the database
- 
- 

How we used
to do it: 1.) on
Clinic Day
Connect to
the DOC





2.) 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

3.) 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

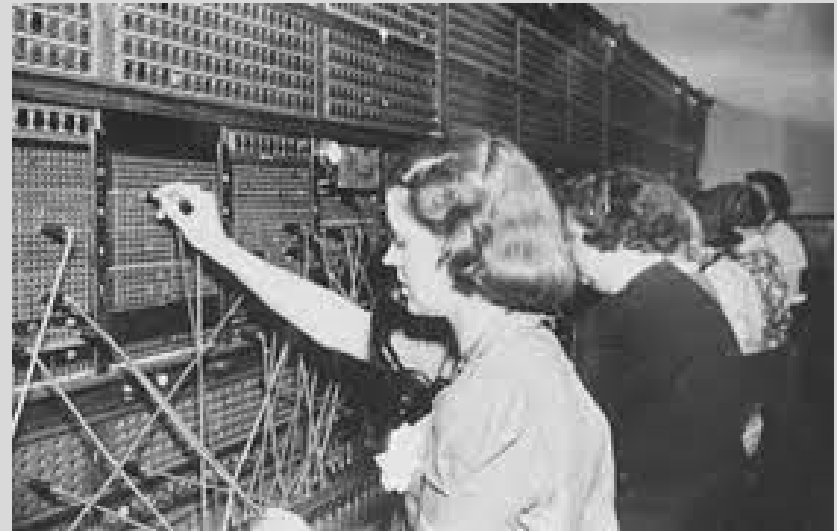


4.) Actual Clinic visit

- 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

Now our clinic is virtual from office or home

- One afternoon a week
- Personnel needed: physician, pharmacist, clinic manager
- EMR: Cerner



Problems to Solve with Telemedicine Clinics

- Some patients are still struggling with the technology
- We have to work efficiently in order to accommodate 3 individuals asking questions (the physician, the pharmacist and the clinic coordinator)



Plans for new Programs

- Telemedicine care to HIV patients (>1000 patients in our Ryan White Clinic) is ongoing along with the DOC Telemedicine.
- Future Telemedicine Endeavors:
- HIV TelePharmacy: twice per year
- HIV TelePrEP statewide will grow to weekly clinics

What we learned from over a thousand Telemedicine HIV visits during the COVID Pandemic

- The clinic show rate or attendance is much better for Telemedicine vs Brick-and-Mortar clinics, 94.6% vs 78.6%
- Medical outcomes are better, e.g., HIV is 98% controlled with Telemedicine vs 91% Brick-and-Mortar
- Expense is less for Telemedicine
- Less stigma for patients*



Conclusions

- Telemedicine is the future of HIV care
- Telemedicine is preferred by the patients
- “One-stop shopping” from the comfort of home or office.
- Everyone in the audience has a large group of patients with similar problems/diseases that can be met with Telemedicine better than in a Brick-and-Mortar Clinic

Our Results

ADVANCING HIGH VALUE HEALTH CARE

THE AMERICAN
JOURNAL *of*
MEDICINE®

The Genie Is Out of the Bottle: Telemedicine Is More Effective Than Brick-and-Mortar Clinics in the Care of HIV-Infected Outpatients



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INTRODUCTION

A new era in the care of individuals infected with HIV was ushered in upon the arrival of the COVID-19 pandemic in 2019-2020. Many individuals with HIV feared that coinfect-

cost-effectiveness, time management, and patient and employee acceptance of the clinics. Careful analysis demonstrated that telemedicine performed better than brick-and-mortar clinics in all categories.