

# Using the ECHO Model for HIV Education and Improving Health Outcomes

**Tracy Jungwirth, MA**

**Natalia Martinez-Paz, MA MPA**

*Sr. Program Manager, NM/SCAETC UNM project ECHO*

*Program Manager, Mountain West AETC ECHO U of Washington*



# Disclosures

Presenters have no financial interest to disclose.

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# Learning Objectives

At the conclusion of this activity, the participant will be able to:

- 1) Discuss how the project ECHO model has been used for HIV education
- 2) Compare how the New Mexico South Central AETC and the Mountain West AETC have used the ECHO model for HIV Education
- 3) Identify at least 1 way the project ECHO model could be used to improve HIV care in your community



# Obtaining CME/CE Credit

If you would like to receive continuing education credit for this activity, please visit:

<http://ryanwhite.cds.pesgce.com>



# The challenge

- Healthcare provider shortage/Specialist shortage
- Complex disease requiring interprofessional expert team management
- Rural/patients far away from access to care

# Project ECHO<sup>®</sup>

The mission of Project ECHO<sup>®</sup> (Extension for Community Healthcare Outcomes) is to expand the capacity to provide best practice care for common and complex diseases in rural and underserved areas and to monitor outcomes.

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# Moving Knowledge Instead of Patients



[www.echo.unm.edu](http://www.echo.unm.edu)

<https://www.youtube.com/watch?v=A7XPc5dWKEk>

# Methods of Project ECHO<sup>®</sup>

- Use technology to leverage scarce healthcare resources
- Sharing best practices; democratizing knowledge
- Case based learning
- Web-based database to monitor outcomes

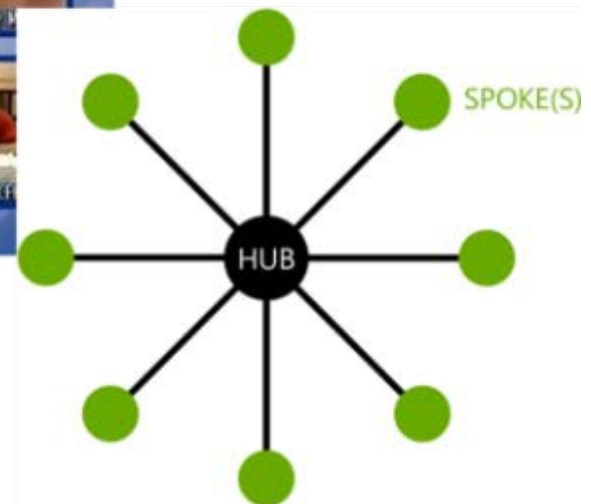
Arora S, Geppert CM, Kalishman S, et al: Acad Med. 2007 Feb;82(2): 154-60



# Steps of Project ECHO<sup>®</sup>

- Train physicians, nurse practitioners, physician's assistants, pharmacists and their teams
- Train to use web-based software
- Conduct teleECHO clinics – **“Knowledge Network”**
- Initiate case-based guided practice – **“Learning loops”**
- Collect data and monitor outcomes centrally

# Project ECHO



# Technology

- Videoconferencing Hardware and Software
- Zoom Platform
  - Cloud-based architecture to minimize single points of failure
- Video Recording System/YouTube-like Archive
- iHealth (ECHO Health) – Disease Management Tool
- iEcho (ECHO admin) - Customer Relation Management Solution

# ECHO vs. Telemedicine



# Project ECHO<sup>®</sup> Benefits to clinicians

- No cost CMEs and CEUs
- Professional interaction with colleagues with similar interest
  - Less isolation with improved recruitment and retention
- A mix of work and learning
- Access to specialty consultation from interprofessional team
- Access to national and international resources



# Project ECHO<sup>®</sup> clinicians

## HCV Knowledge, skills, & abilities

Scale: 1=none or no skill at all; 7=expert, can teach others

Community Clinicians N=25	BEFORE Participation MEAN (SD)	TODAY MEAN (SD)	Paired Difference (p-value) MEAN (sd)	Effect Size for the change
1. Ability to identify suitable candidates for HCV treatment.	2.8 (1.2)	5.6 (0.8)	2.8 (1.2) ( $<0.0001$ )	2.4
2. Ability to assess severity of liver disease in pts with HCV.	3.2 (1.2)	5.5 (0.9)	2.3 (1.1) ( $<0.0001$ )	2.1
3. Ability to treat pts with HCV & manage side effects.	2.0 (1.1)	5.2 (0.8)	3.2 (1.2) ( $<0.0001$ )	2.6

# Project ECHO<sup>®</sup> clinicians

## HCV Knowledge, skills, & abilities

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Community Clinicians N=25	BEFORE Participation MEAN (SD)	TODAY MEAN (SD)	Paired Difference (p-value) MEAN (sd)	Effect Size for the change
4. Ability to assess & manage psychiatric co-morbidities in pts with HCV.	2.6 (1.2)	5.1 (1.0)	2.4 (1.3) ( $<0.0001$ )	1.9
<b>5. Serve as local consultant within my clinic &amp; in my area for HCV questions &amp; issues.</b>	<b>2.4 (1.2)</b>	<b>5.6 (0.9)</b>	<b>3.3 (1.2)</b> <b>(<math>&lt;0.0001</math>)</b>	<b>2.8</b>
3. Ability to education & motivate pts with HCV.	3.0 (1.1)	5.7 (0.6)	2.7 (1.1) ( $<0.0001$ )	2.4



# Project ECHO<sup>®</sup> clinicians

## HCV Knowledge, skills, & abilities

Scale: 1=none or no skill at all; 7=expert, can teach others

Community Clinicians N=25	BEFORE Participation MEAN (SD)	TODAY MEAN (SD)	Paired Difference (p-value) MEAN (sd)	Effect Size for the change
Overall Competence (average of 9 items)	2.8* (0.9)	5.5* (0.6)	2.7 (0.9) ( $<0.0001$ )	2.9

Cronbach's alpha for the BEFORE ratings = 0.92 and Cronbach's alpha for the TODAY ratings = 0.86 indicating a high degree of consistency in the ratings on the 9 items

Arora S, Kalishman S, Thornton K, Dion D et al. Hepatology. 2010 Sept;52(3):1124-33





# Project ECHO<sup>®</sup> annual meeting survey

N=17	Mean Score (Range 1-5)
Project ECHO <sup>®</sup> has diminished my professional isolation.	4.3
My participation in Project ECHO <sup>®</sup> has enhanced my professional satisfaction.	4.8
Collaboration among agencies in Project ECHO <sup>®</sup> is a benefit to my clinic.	4.9
Project ECHO <sup>®</sup> has expanded access to HCV treatment for patients in our community.	4.9
Access, in general, to specialist expertise & consultation is a major area of need for me and my clinic.	4.9
Access to HCV specialist expertise & consultation is a major area of need for me and my clinic.	4.9



# Outcomes of Treatment for HCV Infection by Primary Care Providers. Results of the HCV Outcomes Study.

## Objectives:

- To train primary care clinicians in rural and underserved areas and prisons to deliver hepatitis C treatment
- To show that such care is as safe and effective as that given in a university clinic
- To show that **Project ECHO**<sup>®</sup> improves access to hepatitis C care for minorities



# Outcomes of Treatment for HCV Infection by Primary Care Providers.

## Results of the HCV Outcomes Study.

### Study Sites

Community-based clinics = 16  
New Mexico Department of  
Corrections = 5

Control: University of New  
Mexico HCV Clinic

### Principle Endpoint

Sustained Viral Response  
(SVR) = no detectable  
virus 6 months after  
completion of treatment



# Treatment outcomes

Outcome	ECHO N=261	UNMH N=146	P-value
Patients from Minority Groups	68%	49%	<0.01
SVR Genotype 1	50%	46%	0.57
SVR Genotype 2/3	70%	71%	0.83

- Primary care clinicians deliver HCV care under the aegis of Project ECHO that is as safe and as effective as that given by the university clinic.
- Project ECHO improves access to HCV care for New Mexico minorities.



# Disease selection for Project ECHO<sup>®</sup> clinics

- Common diseases
- Management is complex
- Evolving treatments and medicines
- High societal impact (health and economic)
- Serious outcomes of untreated disease
- Improved outcomes with disease management



# Project ECHO<sup>®</sup> clinics

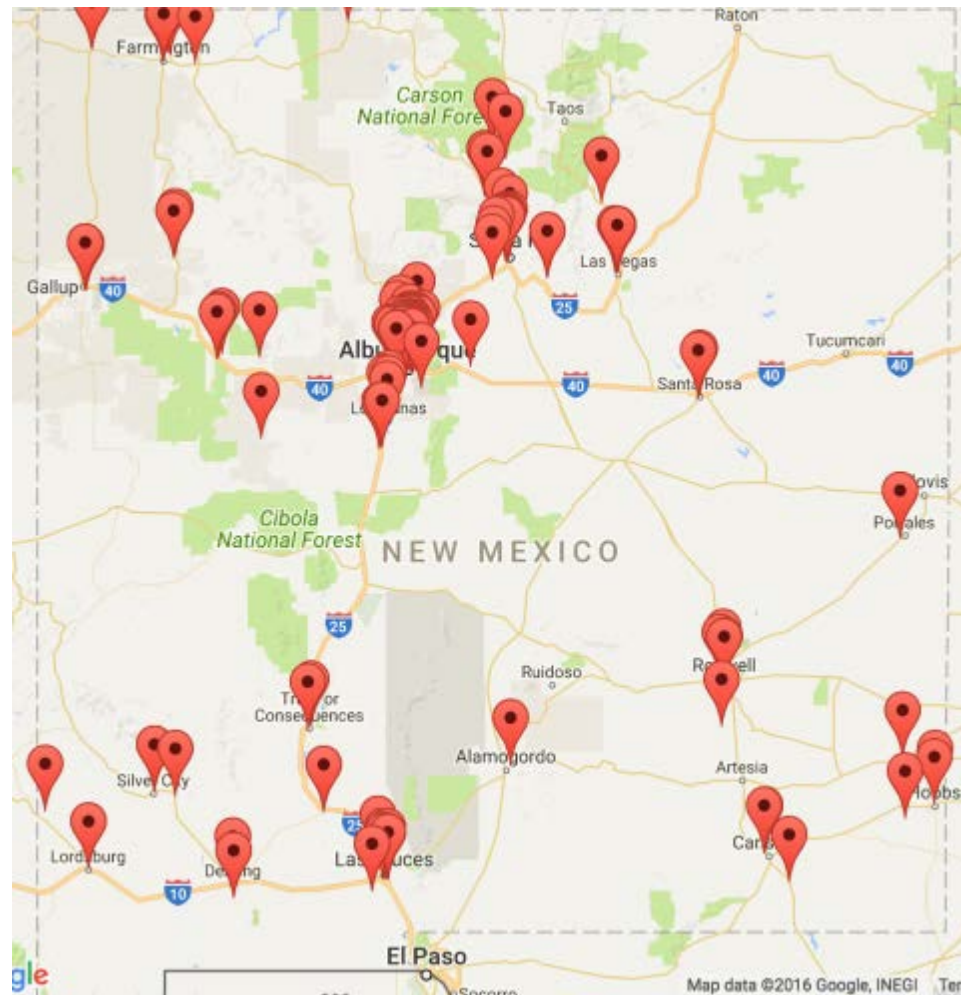
- Bridge between healthcare agencies: HSC, State DOH, private practice, community health centers
- Force multiplier: use existing community clinicians
- Interprofessional teams: chronic disease management is a team sport



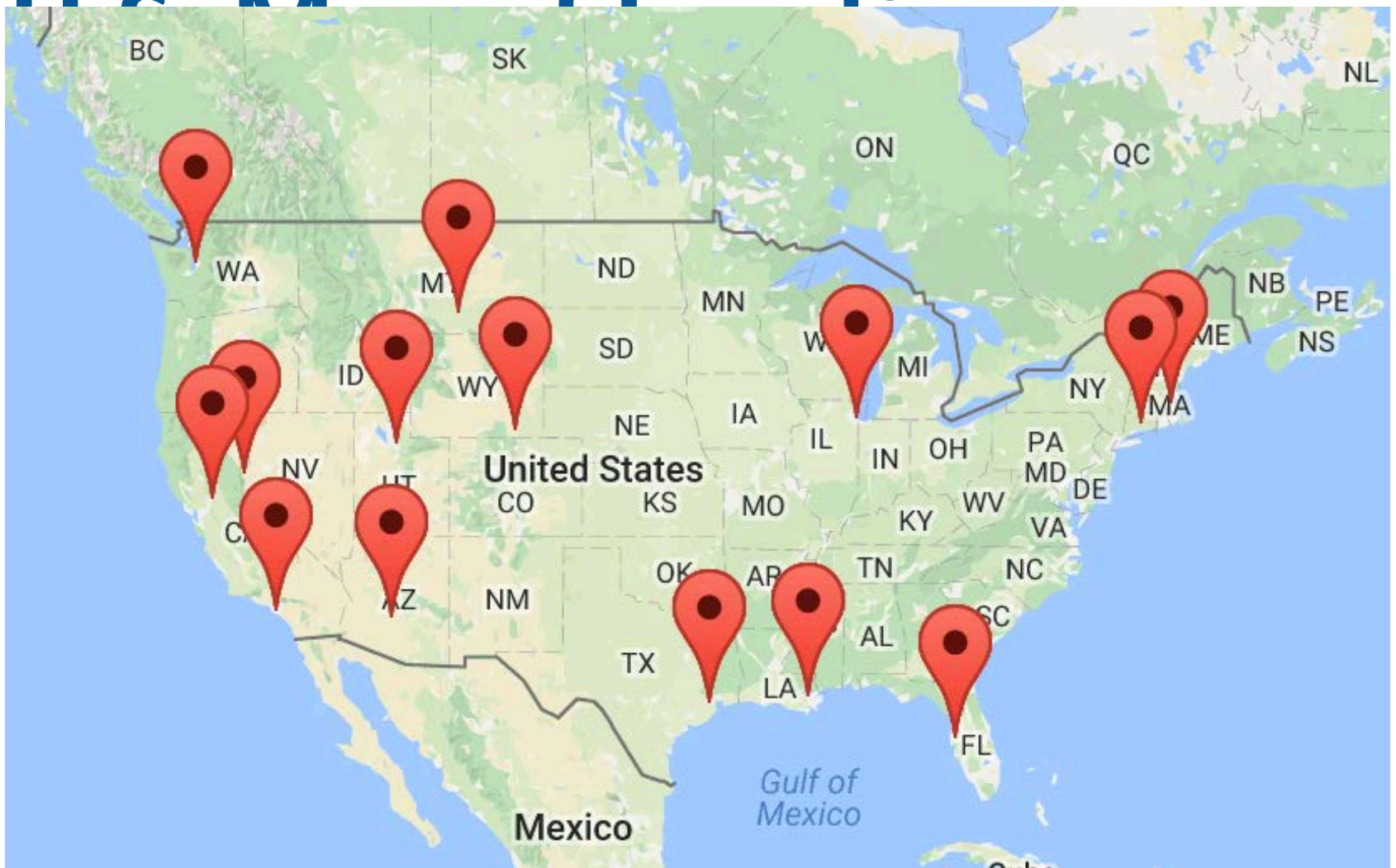
# Project ECHO<sup>®</sup>

- Multiple partners
- Multiple Project ECHO<sup>®</sup> hubs in U.S. and Internationally
- Multiple Project ECHO<sup>®</sup> clinics (disease states) at the hubs
  - Community health worker trainings
  - HCV, HIV, Antibiotic Stewardship
  - Chronic pain, Substance use, Mental health, Diabetes, etc

# Locations







# World Map



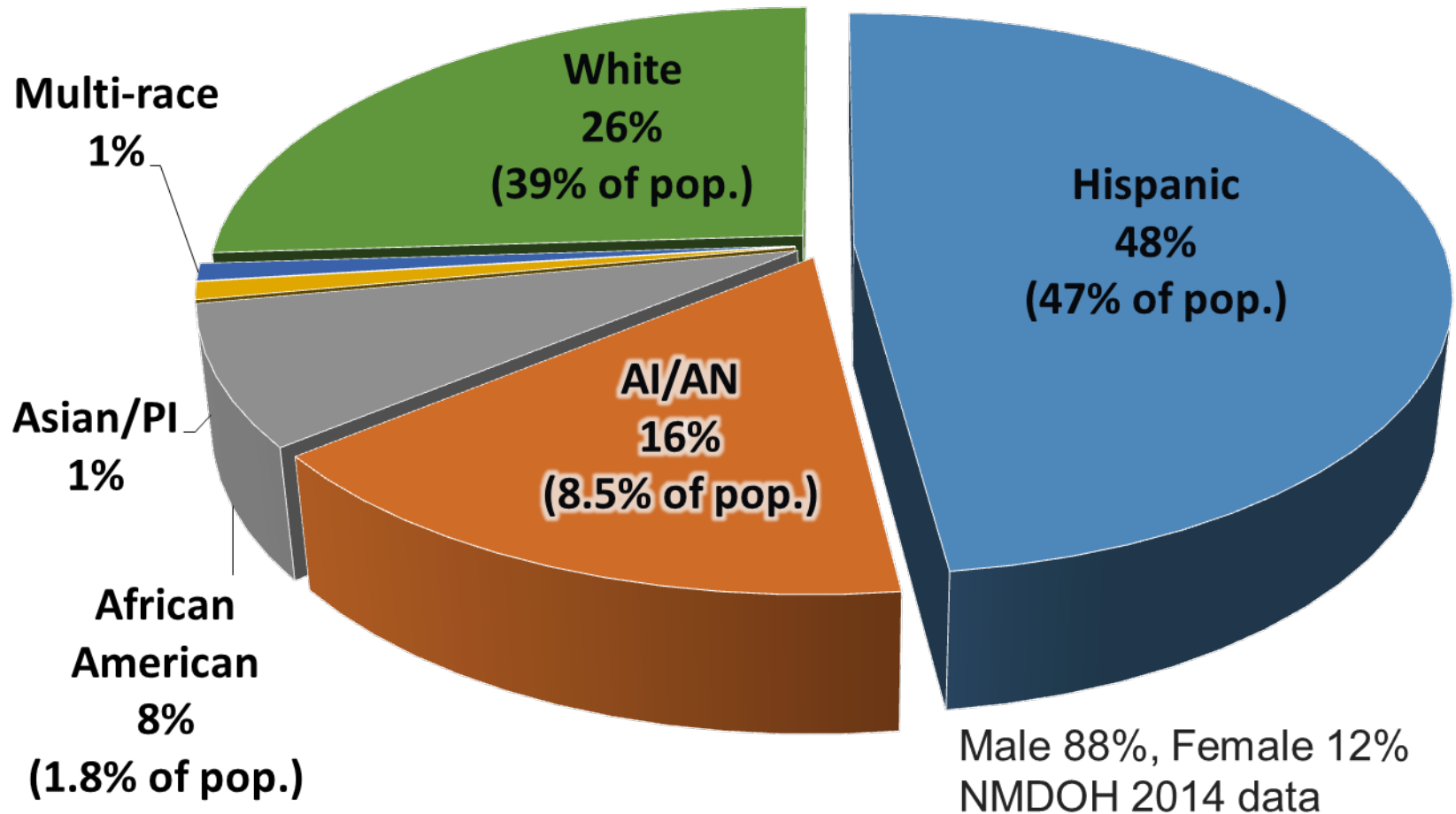


# New Mexico

- 32 of 33 NM counties MUA
- 14 counties HPSA
- 18% poverty rate (12%US)
- Medicaid expansion state
- Majority minority state
- NP can legally practice without physician oversight
- Clinical PharmD: naloxone
- Legal clean needle exchange

# NM HIV Incidence

8/100,000, Total 3,468 PLWH



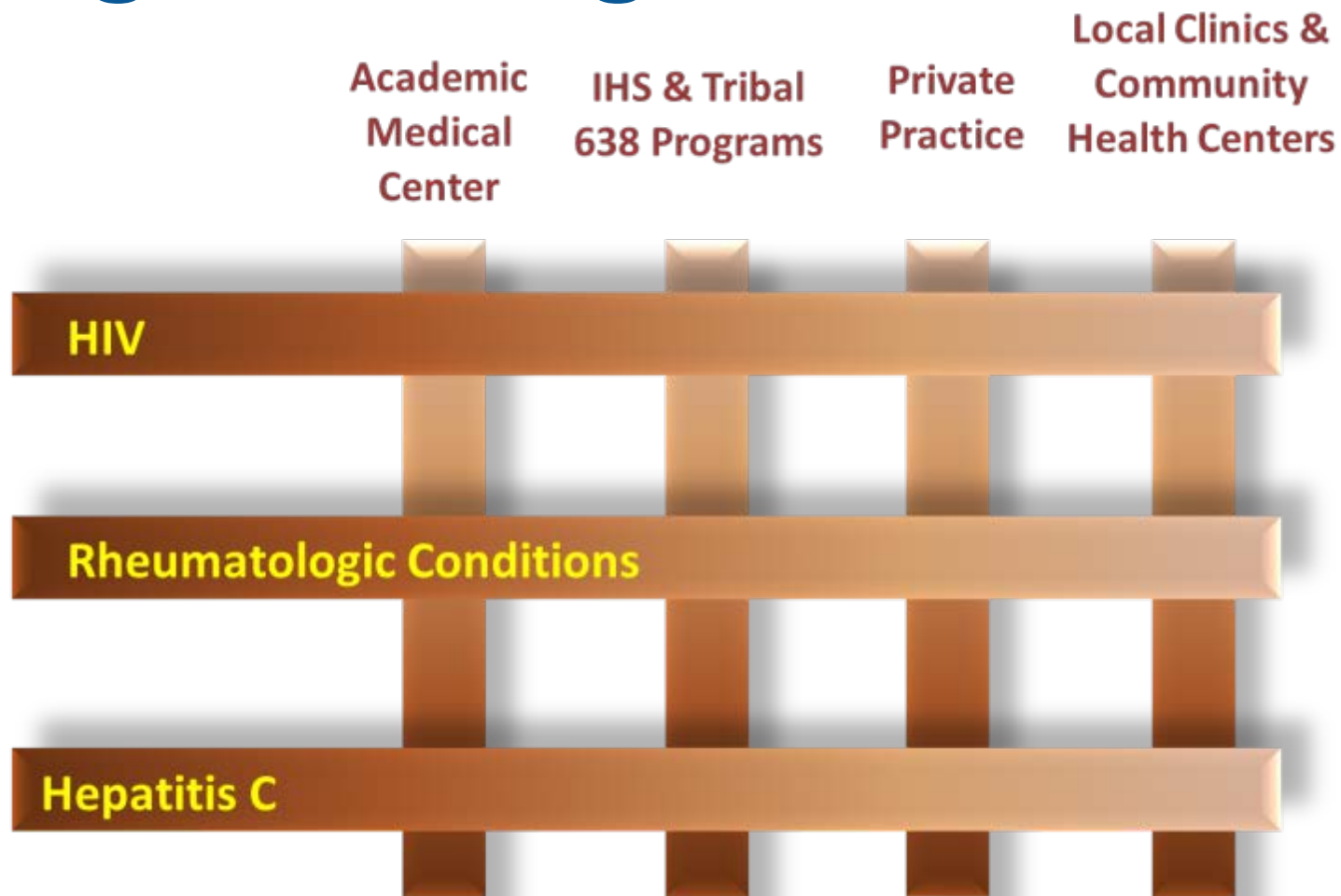


# HIV NM TeleECHO Clinic 2015

<b>TeleECHO sessions</b>	<b>48 regular, 11 IHS</b>
<b>Presentations</b>	<b>68</b>
<b>Number of unique patients presented</b>	<b>45</b>
<b>Total number of unique participants</b>	<b>293 (&gt;1700 PIFs)</b>
<b>Credentials of unique participants</b>	<b>MD, DO, PharmD, PA, MHS, NP, CRNA, DNM, CNS, RN, BSN, FNP, MA, CMA, Case Manager, Other</b>
<b>Average number of participants per session</b>	<b>30</b>



# Bridge Building



# Force Multiplier

Chronic Disease Management is a Multidisciplinary Team Sport

