Project ECHO®

Moving Knowledge, Not Patients

NM Legislative Education Study Committee
June 12, 2018 Aztec, NM11

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Goals and Objectives

- Share the history of Project ECHO
- Use of ECHO in Mental/Behavioral Health
- Update on Project ECHO today

Hepatitis C - a huge problem

- In 2004 30,000 untreated cases in NM
- 2,300 prisoners in NM were HCV positive
- Untreated, leads to cirrhosis, variceal GI bleeding, encephalopathy, ascites, death
- Successful treatment, even in cirrhotics, reduces long term risks and cost by 90%

New Mexico is a huge state

Poor, Rural, Medically Underserved

- 120,000 square miles
- 2 million people
- 50% Hispanic
- 10% Native American
- 20% poverty
- 20% lacked insurance
- Medically Underserved
- Health Professional Shortage Areas

UNM HOSPITAL
1001

Project ECHO

- Conceived and developed in Albuquerque by Dr. Sanjeev Arora at UNM to treat patients in NM with Hep C

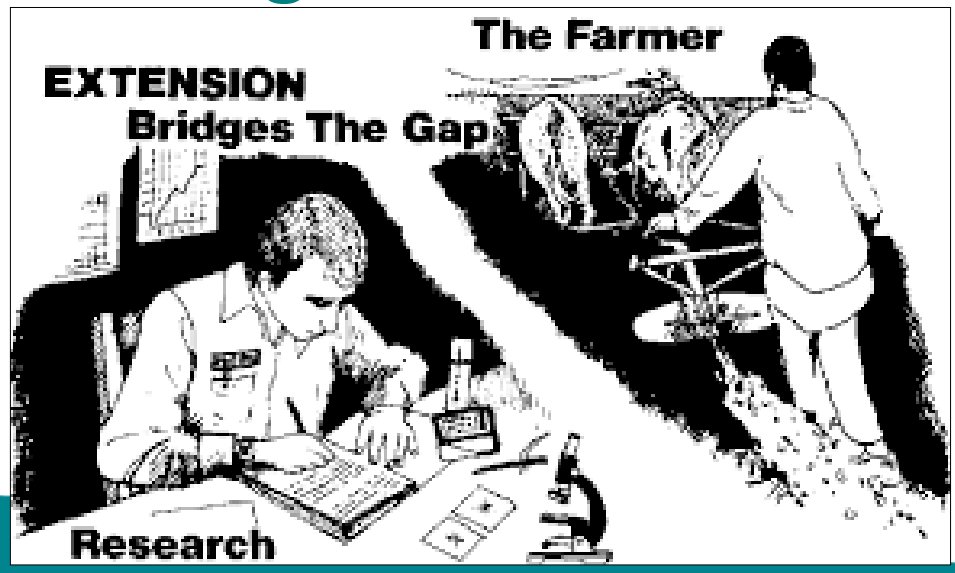
Principles

- Shortage of specialists
- **Will never have enough specialists**
- Think of specialty care vs specialists
- Need specialists to share their expertise
- Train in place “mini specialists”
- Increase specialty expertise exponentially
- Move knowledge to the need

ECHO

Extension for Community Healthcare Outcomes

- Modeled after agriculture extension agents
- Ag Agent or Extension Agent would go out to farmers and talk about new discoveries and best practices in farming
- Very effective
- Very inefficient



Project ECHO

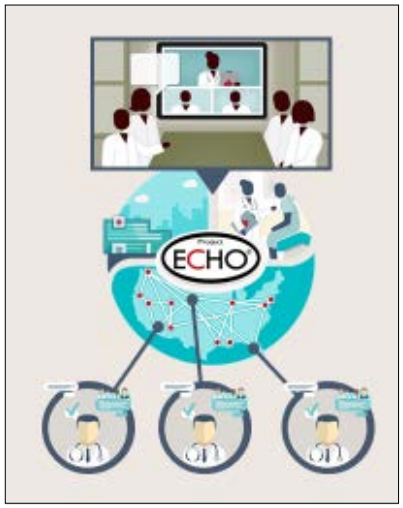
- Uses video conferencing technology to train healthcare providers in underserved areas to care for patients with chronic diseases that otherwise would require specialty referral

ECHO Model

- **Use technology to move knowledge and leverage scarce resources**
- **Share "best practices" to reduce disparity**
- **Use case based learning like in residency to master complexity**
- **Monitor outcomes**

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

Hubs and Spokes



- ECHO links specialist teams at an academic "hub" with primary care providers in local communities – the "spokes" of the model
- "Hubs" and "spokes" participate in weekly online teleECHO clinics
- Clinics combine patient case presentations with didactic learning and mentoring

Case Based Learning

ECHO

- Provider (“spoke”) sees a patient and presents the case by video to the expert (“hub”)
- They discuss the case and provider treats the patient
- Process is repeated over and over until the provider becomes expert at treating that disease
- The provider becomes the local expert for that condition

ECHO Whale

PCA Espanola

Baton Rouge

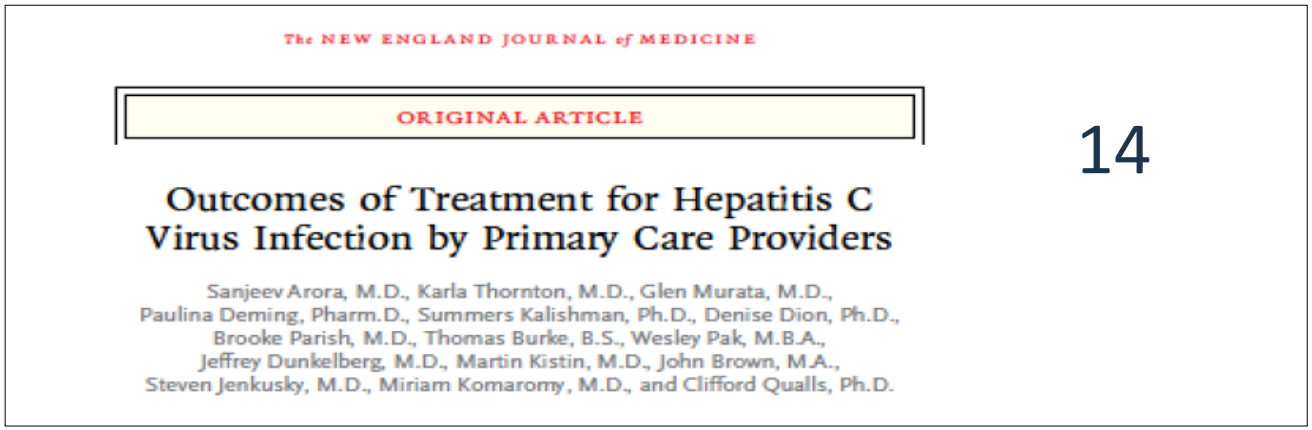
Pecos Valley MC

DOH Las Cruces

SBRT-First Choice South Vc

Memorial HDX7000

LAS VEGAS ECFH



The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Outcomes of Treatment for Hepatitis C Virus Infection by Primary Care Providers

Sanjeev Arora, M.D., Karla Thornton, M.D., Glen Murata, M.D., Paulina Deming, Pharm.D., Summers Kalishman, Ph.D., Denise Dion, Ph.D., Brooke Parish, M.D., Thomas Burke, B.S., Wesley Pak, M.B.A., Jeffrey Dunkelberg, M.D., Martin Kistin, M.D., John Brown, M.A., Steven Jenkusky, M.D., Miriam Komaromy, M.D., and Clifford Qualls, Ph.D.

- 407 patients with Hep C previously untreated
- 146 at UNM and 261 at 21 ECHO sites across NM
- Cure rate and safety were identical

Arora S, Thornton K, et al, *NEJM* 364:2199-2207, June 9, 2011

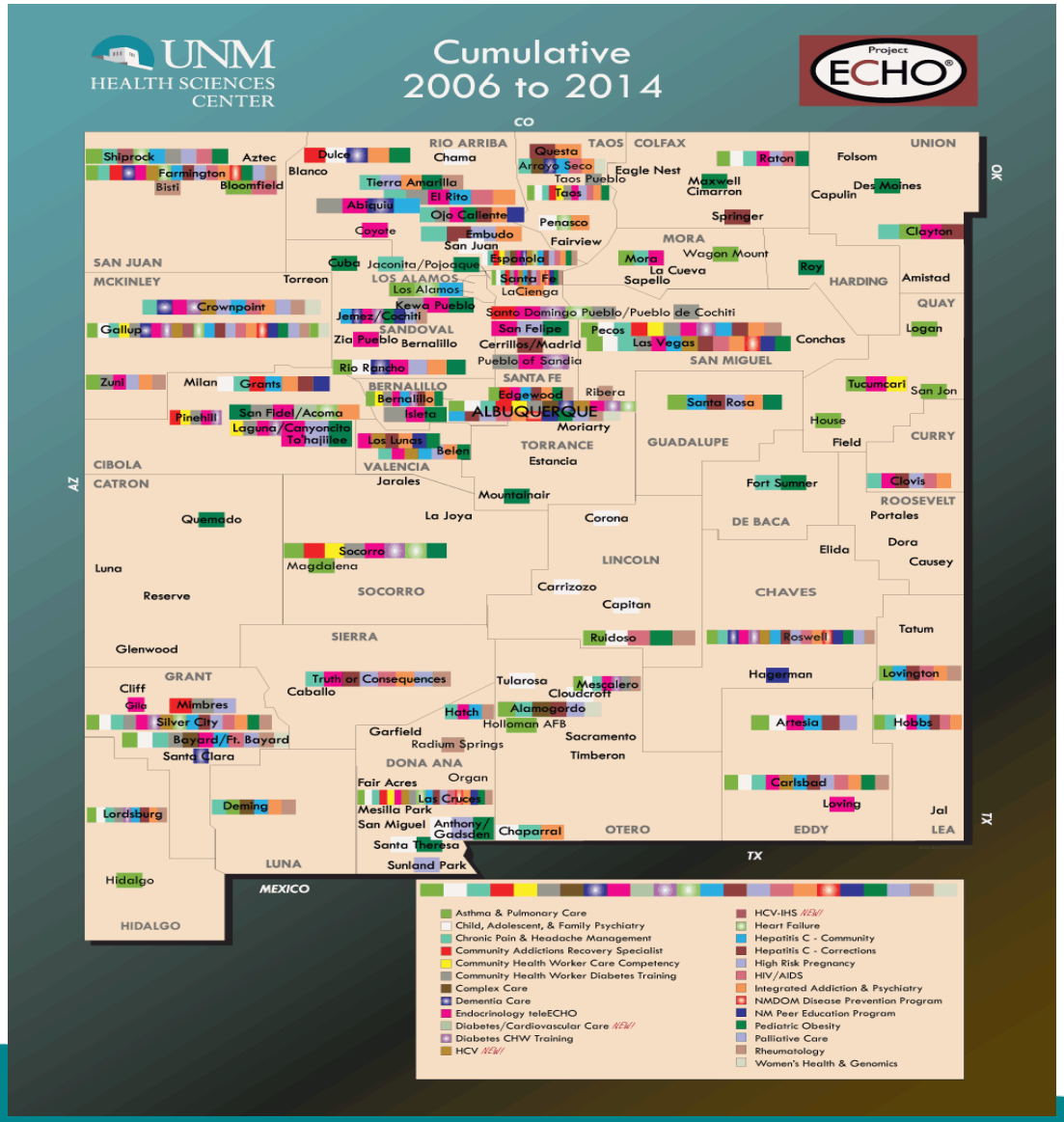
Conclusions

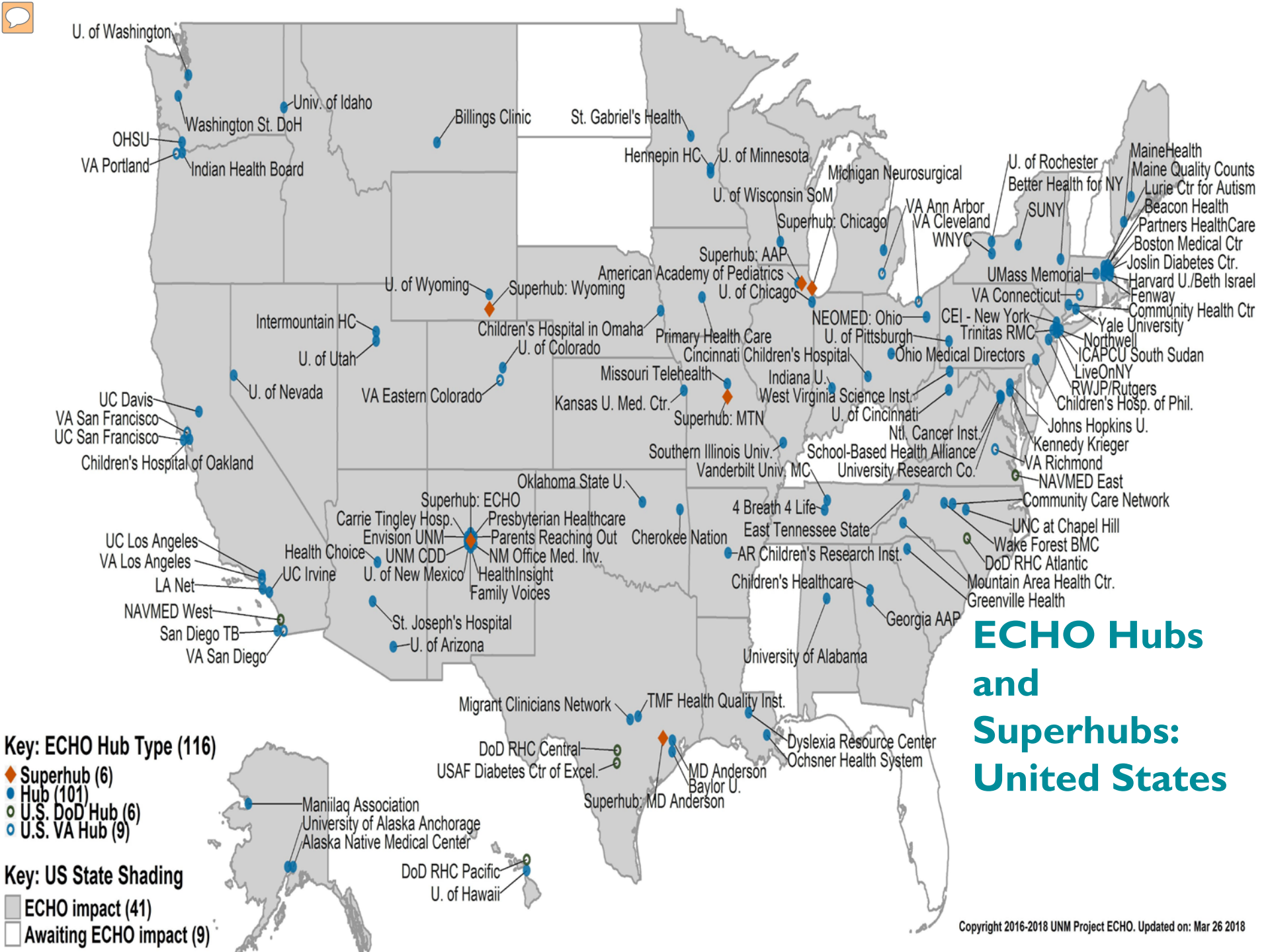
- Comparable medical results
- Comparable safety
- Increased access to Rx for minorities
- Costs were decreased in 60% of patients

ECHO Might Work for Other Diseases

- Common
- Chronic
- Complex with Changing Therapy
- High Societal Impact (Medical and Economic)
- Serious Outcomes of Untreated Disease
- Improved Outcomes With Treatment

80,000+ CME/CEU CREDITS PROVIDED FOR FREE IN NEW MEXICO	**135+ HUB PARTNERS IN THE US**	**81+ HUB PARTNERS GLOBALLY 31 COUNTRIES**	**50+ COMPLEX CONDITIONS COVERED**


UNM HEALTH SCIENCES CENTER
Cumulative 2006 to 2014
Project ECHO
CO
OK
AZ
TX
MEXICO
RIO ARRIBA
TAOS
COLFAX
UNION
SAN JUAN
MCKINLEY
LOS ALAMOS
SANDOVAL
MORA
HARDING
QUAY
SANTA FE
SAN MIGUEL
GUADALUPE
CURRY
ROOSEVELT
DE BACA
CHAVES
LINCOLN
SOCORRO
TORRANCE
VALENCIA
CIBOLA
CATRON
SIERRA
GRANT
LUNA
DONA ANA
OTERO
EDDY
LEA
HIDALGO
ALBUQUERQUE
Asthma & Pulmonary Care
Child, Adolescent, & Family Psychiatry
Chronic Pain & Headache Management
Community Addictions Recovery Specialist
Community Health Worker Care Competency
Community Health Worker Diabetes Training
Complex Care
Dementia Care
Endocrinology teleECHO
Diabetes/Cardiovascular Care NEW!
Diabetes CHW Training
HCV NEW!
HCV-IHS NEW!
Heart Failure
Hepatitis C - Community
Hepatitis C - Corrections
High Risk Pregnancy
HIV/AIDS
Integrated Addiction & Psychiatry
NMDOM Disease Prevention Program
NM Peer Education Program
Pediatric Obesity
Palliative Care
Rheumatology
Women's Health & Genomics


U. of Washington
Univ. of Idaho
Billings Clinic
St. Gabriel's Health
Washington St. DoH
OHSU
VA Portland
Indian Health Board
Hennepin HC
U. of Minnesota
Michigan Neurosurgical
U. of Rochester
Better Health for NY
MaineHealth
Maine Quality Counts
Lurie Ctr for Autism
Beacon Health
Partners HealthCare
Boston Medical Ctr
Joslin Diabetes Ctr.
Harvard U./Beth Israel
Fenway
Community Health Ctr
Yale University
Northwell
ICAPCU South Sudan
LiveOnNY
RWJP/Rutgers
Children's Hosp. of Phil.
Johns Hopkins U.
Kennedy Krieger
VA Richmond
NAVMED East
Community Care Network
UNC at Chapel Hill
Wake Forest BMC
DoD RHC Atlantic
Mountain Area Health Ctr.
Greenville Health
Georgia AAP
University of Alabama
U. of Wisconsin SoM
Superhub: Chicago
VA Ann Arbor
VA Cleveland
WNYC
SUNY
Superhub: AAP
American Academy of Pediatrics
U. of Chicago
UMass Memorial
VA Connecticut
CEI - New York
Trinitas RMC
U. of Wyoming
Superhub: Wyoming
Intermountain HC
U. of Utah
Children's Hospital in Omaha
Primary Health Care
U. of Colorado
VA Eastern Colorado
NEOMED: Ohio
U. of Pittsburgh
Ohio Medical Directors
Cincinnati Children's Hospital
Missouri Telehealth
Kansas U. Med. Ctr.
Superhub: MTN
Indiana U.
West Virginia Science Inst.
U. of Cincinnati
Ntl. Cancer Inst.
School-Based Health Alliance
University Research Co.
Vanderbilt Univ. MC
Southern Illinois Univ.
U. of Nevada
UC Davis
VA San Francisco
UC San Francisco
Children's Hospital of Oakland
Oklahoma State U.
Superhub: ECHO
Carrie Tingley Hosp.
Envision UNM
UNM CDD
U. of New Mexico
Presbyterian Healthcare
Parents Reaching Out
NM Office Med. Inv.
HealthInsight
Family Voices
Cherokee Nation
4 Breath 4 Life
East Tennessee State
AR Children's Research Inst.
Children's Healthcare
UC Los Angeles
VA Los Angeles
LA Net
UC Irvine
Health Choice
NAVMED West
San Diego TB
VA San Diego
St. Joseph's Hospital
U. of Arizona
Migrant Clinicians Network
TMF Health Quality Inst.
Dyslexia Resource Center
Ochsner Health System
DoD RHC Central
USAF Diabetes Ctr of Excel.
MD Anderson
Baylor U.
Superhub: MD Anderson
Maniilaq Association
University of Alaska Anchorage
Alaska Native Medical Center
DoD RHC Pacific
U. of Hawaii
Key: ECHO Hub Type (116)
Superhub (6)
Hub (101)
U.S. DoD Hub (6)
U.S. VA Hub (9)
Key: US State Shading
ECHO impact (41)
Awaiting ECHO impact (9)
ECHO Hubs and Superhubs: United States
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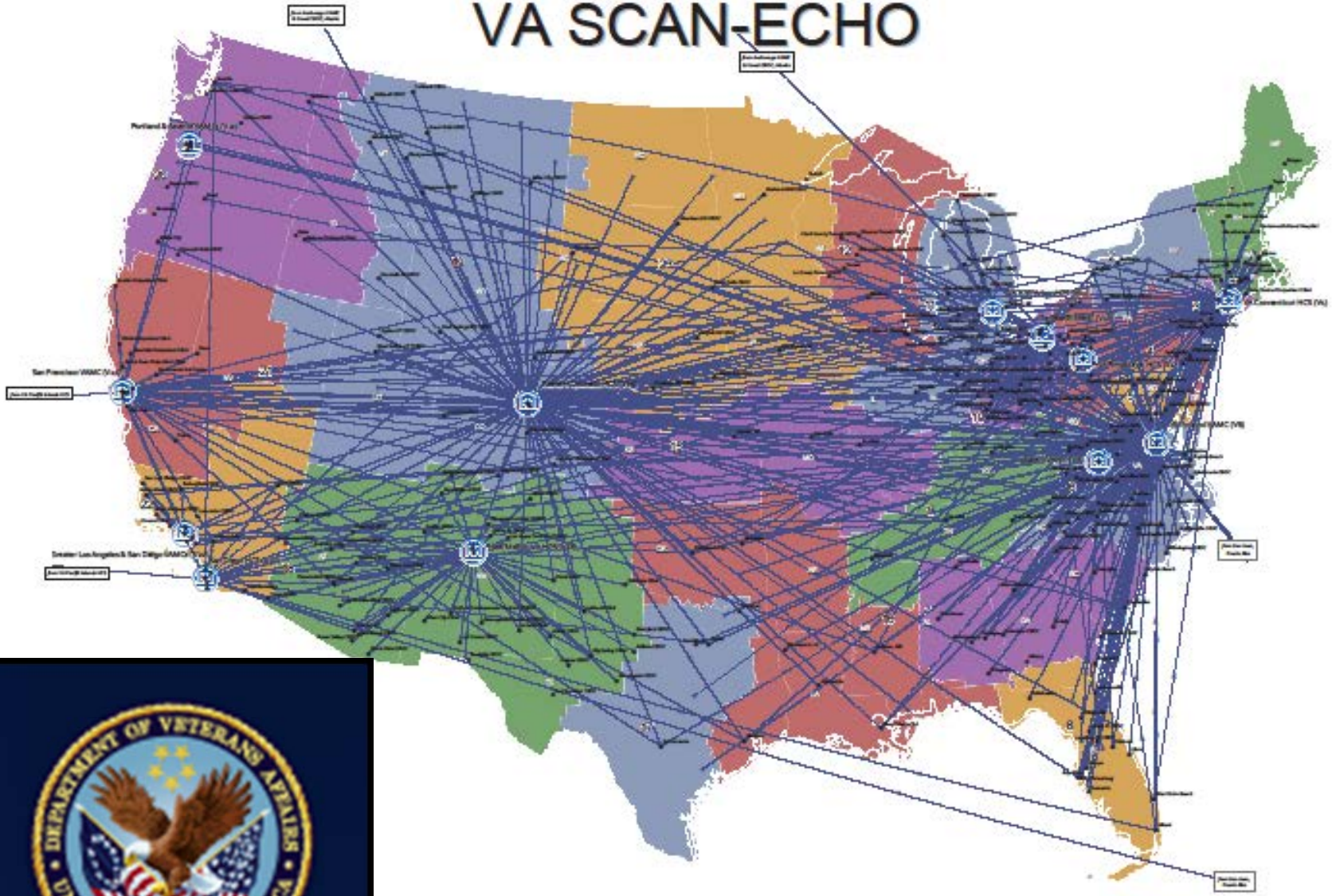
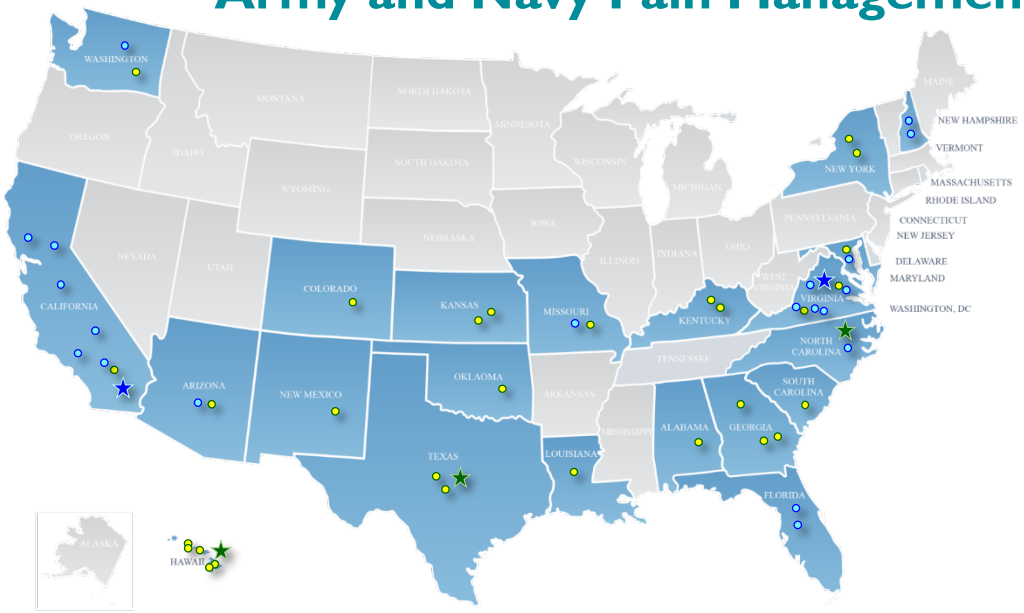
VA SCAN-ECHO



ECHO Institute™
Project ECHO®

UNM HEALTH SCIENCES

Army and Navy Pain Management ECHO Clinics



★ Army ECHO Hubs: Regional Health Command-Europe (RHC-E) – Landstuhl, Germany | Regional Health Command-Central (RHC-C)-Joint Base San Antonio-Brook Army Medical Center – TX | Regional Health Command-Pacific (RHC-P)-Tripler Army Medical Center – HI | Regional Health Command-Atlantic (RHC-A) – Ft. Bragg, NC

- Belgium:
  - Brussels
  - Supreme Headquarters Allied Powers Europe (SHAPE)
- Germany:
  - Grafenwoehr
  - Hohenfels
  - Katterbach
  - Landstuhl Regional Medical Center (LRMC)/FHC
  - LRMC/IMC
  - Stuttgart
  - Wiesbaden
  - Vilseck
- Italy:
  - Livorno
  - Vicenza
- Japan:
  - Camp Zama
- South Korea:
  - Camp Casey
  - Camp Humphreys
  - Camp Carroll
  - Camp Walker
  - Brian Allgood Army Community Hospital/ 121st Combat Support Hospital
- Alabama:
  - Redstone Arsenal
- Arizona:
  - Fort Huachuca
- California:
  - Fort Irwin
- Colorado:
  - Colorado Springs
- Georgia:
  - Fort Gordon
  - Fort Benning
  - Ft. Stewart
- Hawaii:
  - Schofield Barracks (Family Medicine and Troop Medical Clinic)
  - Adult Medicine Patient Centered Medical Home (PCMH) Tripler
  - Family Medicine PCMH Tripler
  - Warrior Ohana PCMH
  - VA Pain Clinic
- Kansas:
  - Fort Leavenworth
  - Fort Riley
- Kentucky:
  - Fort Knox
  - Fort Campbell
- Louisiana:
  - Fort Polk
- Maryland:
  - Fort Meade
- Missouri:
  - Fort Leonard Wood
- New Mexico:
  - White Sands Missile Range
- New York:
  - Fort Drum
  - West Point
- Oklahoma:
  - Fort Sill
- South Carolina:
  - Fort Jackson
- Texas:
  - Fort Bliss
  - Fort Hood
- Virginia:
  - Joint Base Langley-Eustis
  - Fort Lee
- Washington:
  - Madigan Army Medical Center

★ Navy ECHO Hubs: Navy Medicine East (NME)- Naval Medical Center (NMC) Portsmouth, VA | Navy Medicine West (NMW)- Naval Medical Center San Diego (NMCSD), CA

- Arizona:
  - NH Yuma
- California:
  - NMCSD Naval Training Center
  - NH Lemoore
  - NH Twentynine Palms
  - NH Camp Pendleton
  - Naval Air Facility El Centro
  - Naval Air Station North Island
- Florida:
  - Naval Hospital (NH) Jacksonville
  - Naval Air Station Jacksonville
- Maryland:
  - NHC Pax River
- Missouri:
  - Behavioral Health Clinic (BHC) Boone
- North Carolina:
  - NH Camp LeJeune
- New Hampshire:
  - BHC Portsmouth NH
  - Navy Safe Harbor
- Virginia:
  - NMC Portsmouth (Case Management, Pain Clinic, Physiatry, Internal Medicine)
  - BHC Oceana
  - TriCare Prime Clinic (TPC) Chesapeake
  - TPC Virginia Beach
  - 633rd Medical Group-Langley

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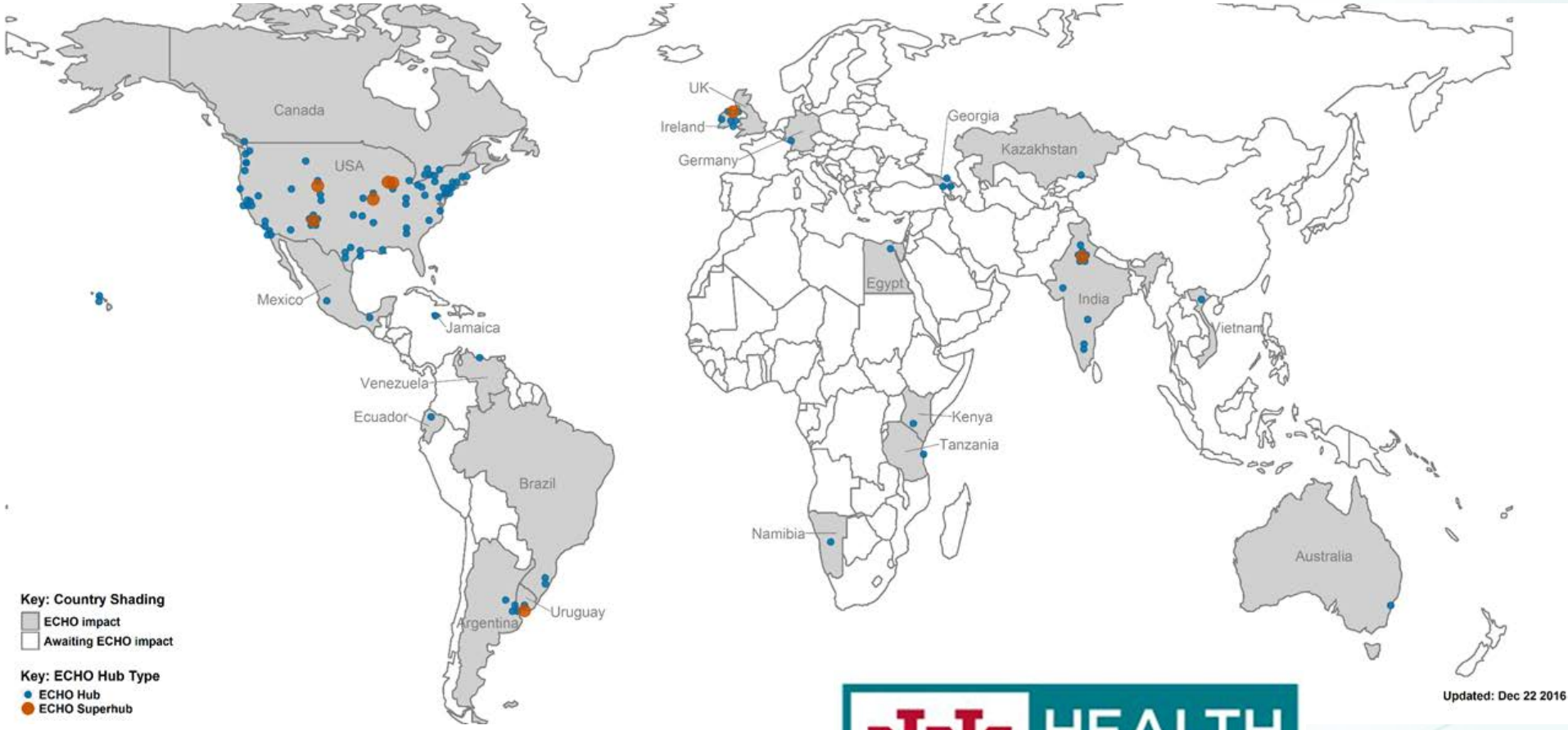
ECHO Partners Worldwide

ECHO is now is used in over 25 countries by 110+ replicating partners.



Non Medical

- **Crisis Intervention Training**
- **Education**
- Quality Improvement
- Hospital safety
- Food safety

Crisis Intervention Training - CIT

- Initially mandated by Dept of Justice
- Partnership between ECHO and APD
- To train law enforcement in behavioral health
- Now being replicated around the country

Mental and Behavioral Health

- Most ECHOs imbed Behavioral Health in the Hub team to treat chronic diseases
- Some programs have had Behavioral Health in Hub and Spoke
- Integrated Addiction and Psychiatry
- Chronic Pain
- Opioid Use Disorder – 37 states use ECHO

NM ECHO for Education

- College and Career Readiness NM PED
- Weekly 60 minute sessions
- Weekly topics from content experts
- "Cases"
  - Individual students
  - Systems issues

Gun Violence Behavioral/Mental Health

- Need early diagnosis
  - Primary medical providers
  - Schools –teachers, nurses, counselors
- Need increased capacity to treat problems when identified
- Improved ability to diagnose and treat leads to better quality of life

Gun Violence Behavioral/Mental Health

- Human trafficking
- Bullying
- Cyber bullying
- Sexting
- Sextortion
- Teachers, aids, school nurses, counselors can be trained to recognize and intervene

ECHO Act

- In April 2016, Senator Orin Hatch (R UT) and Senator Brian Schatz (D HI) co sponsored S 2873 to investigate imbedding ECHO in federal healthcare systems (Medicare)
- In June 2016, HR 5395 was introduced to the House of Representatives by Representative Michael Burgess (R TX) and Representative Doris Matsui (D CA)
- Passed the Senate 97-0 on November 29, 2016 and passed the House by acclamation on December 6, 2016
- Signed into law by President Obama December, 2016

In Conclusion

- Project ECHO – uses video conferencing, best practice protocols, case based learning, and monitoring of outcomes to safely and effectively train providers to treat common and complex diseases in rural and underserved areas in the US and around the world

Want More Information?

- Orientation – one day on-site conference
- Immersion – three day on-site "How to"
- Go to echo.unm.edu
  - Start an ECHO
  - Training events

THANK YOU

Want More Information?

echoreplication@salud.unm.edu

Visit: http://echo.unm.edu/cancer-echo/