

Project ECHO®

Moving Knowledge, Not People

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At ECHO, our mission is to democratize implementation of best practices for health care and education to underserved people all over the world.



Founding Goals of Project ECHO

Develop capacity to safely and effectively treat Hepatitis-C (HCV) in all areas of New Mexico and to monitor outcomes.

Develop a model to treat complex diseases in rural locations and developing countries.



The ECHO Model



Use technology to leverage scarce resources



Share best practices to reduce disparities



Apply case-based learning to master complexity



Evaluate and monitor outcomes





Arora S., Thornton K., Murata G., et al. N Eng J Med. 2011;364(23):2199-207.



STUDY: Project ECHO Clinicians HCV Knowledge Skills and Abilities (Self-Efficacy)

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
 Ability to identify suitable candidates for treatment for HCV. 	2.8 (1.2)	5.6 (0.8)	2.8 (1.2) (<0.0001)	2.4
 Ability to assess severity of liver disease in patients with HCV. 	3.2 (1.2)	5.5 (0.9)	2.3 (1.1) (< 0.0001)	2.1
 Ability to treat HCV patients and manage side effects. 	2.0 (1.1)	5.2 (0.8)	3.2 (1.2) (<0.0001)	2.6



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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
 Ability to assess and manage psychiatric co- morbidities in patients with hepatitis C. 	2.6 (1.2)	5.1 (1.0)	2.4 (1.3) (<0.0001)	1.9
 Serve as local consultant within my clinic and in my area for HCV questions and issues. 	2.4 (1.2)	5.6 (0.9)	3.3 (1.2) (< 0.0001)	2.8
 Ability to educate and motivate HCV patients. 	3.0 (1.1)	5.7 (0.6)	2.7 (1.1) (<0.0001)	2.4



STUDY: Project ECHO Clinicians HCV Knowledge Skills and Abilities (Self-Efficacy)

scale: 1 = none or no skill at all 7= expert-can teach others

Community Clinicians N=25	BEFORE Participation MEAN (SD)	<u>TODAY</u> 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., et al. Hepatol. 2010;52(3):1124-33.



STUDY: Clinician Benefits

(Data Source; 6 month Q-5/2008)

Benefits N=35	Not/Minor Benefits	Moderate/Major Benefits
Enhanced knowledge about management and treatment of HCV patients.	3% (1)	97% (34)
Being well-informed about symptoms of HCV patients in treatment.	6% (2)	94% (33)
Achieving competence in caring for HCV patients.	3% (1)	98% (34)



Project ECHO Annual Meeting Survey

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





Results of the HCV Outcomes Study

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

Arora S., Thornton K., Murata G., et al. N Eng J Med. 2011;364(23):2199-207.

Principle Endpoint

Sustained Viral Response (SVR): no detectable virus six months after completion of treatment



Conclusions

• Rural primary care clinicians deliver HCV care under the aegis of Project ECHO that is as safe and effective as that given in a University clinic.

• Project ECHO improves access to HCV care for New Mexico minorities.



ECHO Adoption Areas

Since the first HCV ECHO in New Mexico in 2003, ECHO has been adopted for use <u>around</u> <u>the world</u> with 70+ diseases and chronic health conditions.

- 1. Adult Oncology
- 2. Advanced HIV Disease
- 3. AMR (Advanced Microbial Resistance)
- 4. Antimicrobial Stewardship
- 5. Autism
- 6. Behavioral Health
- 7. Bone Health
- 8. Cancer (All Kinds)
- 9. Cardiology
- 10. Chronic Lung Disease
- 11. Chronic Pain
- 12. Clinical Hepatology
- 13. Community Medical Response
- 14. COVID-19
- 15. Crisis Intervention
- 16. Critical Care
- 17. Diabetes
- 18. Dialysis
- 19. Drug Resistant HIV
- 20. Emergency Medical Services
- 21. Emergency Operations
- 22. Endocrinology
- 23. FETP (Field Epidemiology Training Programs)
- 24. Frontline Medicine
- 25. Gastroenterology
- 26. Geriatrics
- 27. Health and Wellness
- 28. Health Emergencies
- 29. Health Engineering
- 30. Heart Disease
- 31. Hepatitis
- 32. High-Risk Pregnancy
- 33. HIV/AIDS
- 36. Hypertension
- 37. IDSR (Infectious Disease Surveillance & Response)

- 38. Infection Prevention and Control
- 39. Infectious Disease
- 40. Integrated Addictions & Psychiatry
- 41. Internal Medicine
- 42. Laboratory Medicine
- 43. Leadership Development
- 44. LGBT Health
- 45. Maternal & Child Health and Mortality
- 46. Menopause Medicine
- 47. Mental Health
- 48. Midwifery
- 49. Multiple Myeloma
- 50. Neonatal Care
- 51. Neurology
- 52. Nursing
- 53. One Health AMR (Advanced Microbial Resistance)
- 54. Opioid Use Disorder
- 55. Oral and Maxillofacial Surgery
- 56. Oxygen Therapy
- 57. Palliative Care
- 58. Patient Safety
- 59. Pediatric Oncology
- 60. Pediatric, Adolescent and Young Adult HIV/AIDS
- 61. Pediatrics
- 62. Prison Peer Education
- 63. Primary Care
- 64. Quality Improvement (All Areas)
- 65. Reproductive Health
- 66. Respirators
- 67. Rheumatology
- 68. Safe Surgery
- 69. Sexually Transmitted Diseases
- 70. Trauma-Informed Care
- 71. Tuberculosis and DRTB
- 72. Vaccination
- 73. Viral Hepatitis



ECHO's Lasting Impact in New Mexico



ACTIVE HEALTH CARE PROGRAMS SERVING NEW MEXICO





ACTIVE EDUCATION PROGRAMS SERVING NEW MEXICO



NEW EDUCATION ECHOS PLANNED TO LAUNCH BY JUNE 2025



New Mexico Project ECHO Health Programs

ACEs ECHO: Putting Faces to the ACEs	Alcohol Use and Mental Health ECHO Program	Bone Health ECHO Program	Care of the Older Patient ECHO Program	Child and Adolescent Mental Health ECHO (launch Feb 2025)	Colorectal Cancer Screening (NM- CRCS) ECHO Program	Community Health Worker/Peer Support Worker Opioid ECHO Program
Community Peer Education Project (CPEP)	Dermatology ECHO	ECHO for School Based Health Centers	Gender Affirming Care ECHO Program	General Pediatric ECHO Program	HRSA TTELP Clinical Communications ECHO Program	HRSA TTELP Infectious Disease Consult ECHO Program
HRSA TTELP Infectious Disease Office Hours ECHO Program	HRSA TTELP Post COVID Primary Care	Improving Perinatal Health ECHO Program	Maternal Child Health for CHWs	Medicaid Quality Improvement and Hospitalization Avoidance (aka Long Term Care)	Miners' Wellness	Neurology (launching Nov 2024)
New Mexico After Time Served Peer ECHO Council	New Mexico Artificial Intelligence in Medicine ECHO	New Mexico Community Hepatitis C (HCV Community)	New Mexico Corrections Hepatitis C (HCV Corrections)	New Mexico HCV Training for Prescribing Clinicians	New Mexico Palliative Care ECHO	New Mexico Peer Education Project (NMPEP)
New Mexico Probation and Parole Collaborative ECHO Program	NMCD Reentry and Education ECHO (launching Sept 2024)	NM Cancer Survivorship for Primary Care ECHO	NM Detention Centers Substance Use Treatment ECHO	Opioid Crisis and Pain Management	Palliative Care Champions ECHO Program	Reproductive Health ECHO Program
Rheumatology	SafeCare New Mexico ECHO Program	Street Medicine ECHO	Substance Use Disorder in Pregnancy	Supporting Child and Youth Mental Health ECHO Program (Inactive as of Feb 2024)	Syphilis ECHO Program (between cohorts- next launching Jan 2025)	UNM HPB ECHO Progra

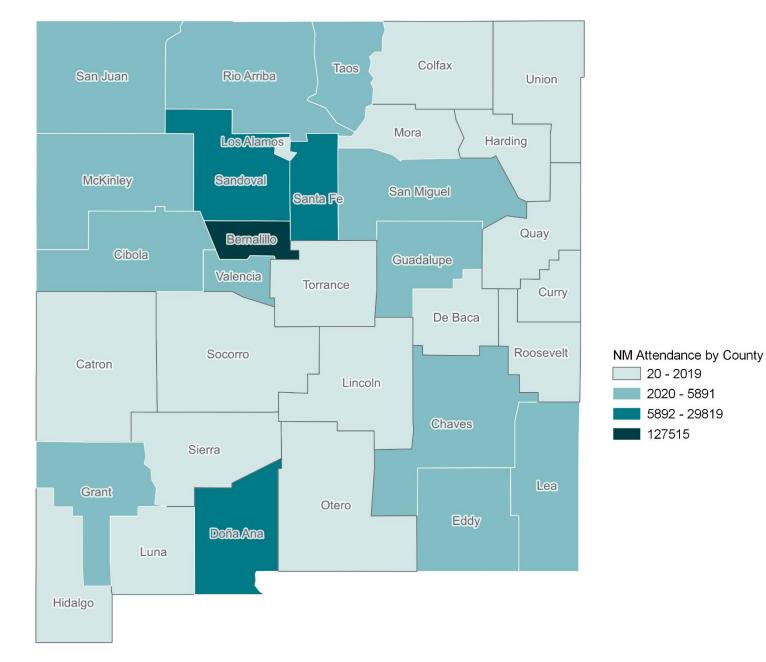


New Mexico Project ECHO Health Programs (cont'd.)

Diabetes Health Equity Community Health Workers	Diabetes Health Equity DSMES ECHO	Diabetes Health Equity SDOH ECHO	Endocrinology ECHO Program	Salud es Riqueza Diabetes Prevention Training ECHO Program	Behavioral Health Professional Worforce Resilience ECHO
Bureau of Indian Affairs and Office of Justice Services Resiliency ECHO	Climate Change and Human Health ECHO	HHS/ASPR Project ECHO Clinical Rounds: Patient Care, Clinical Operations, Worforce Training	Indian Health Services (IHS) HIV	Museums and Emerging Pathogens in the Americas (MEPA) ECHO	NM AETC HIV
Violence Prevention	Child Ready ECHO	CIT ECHO Knowledge Network	ECHO Autism: Advanced Diagnosis	ECHO Autism: STAT Early Diagnostic Model	Equity ECHO SeriesThe Ethics of Doing Research with Communities: Advancing Anti-Racist Models
Integrative Cognitive Rehabilitation Psychotherapy ECHO	MOUD ECHO	Primary Care AHEC ECHO Clinic	Project ECHO for Lobo Littles	Psychiatric Mental Health Nurse Practitioner (PMHNP) ECHO Clinic	UNMCCC / NMCCA Community Oncology Working Group
	ECHO for Citizenship Educators	Downtown Public Safety ECHO	Nob Hill-University Public Safety ECHO	VAP Pro Bono Collaborative ECHO	



August 2024



Map of Attendance by first line professionals in ECHO Sessions Across the State

As of 7/31/2024, there have been **more than 260,000** cumulative attendances by at least **22,000** individuals.

Force Multiplier

Use Existing Community Clinicians





Improved Liver Disease Survival Outcomes

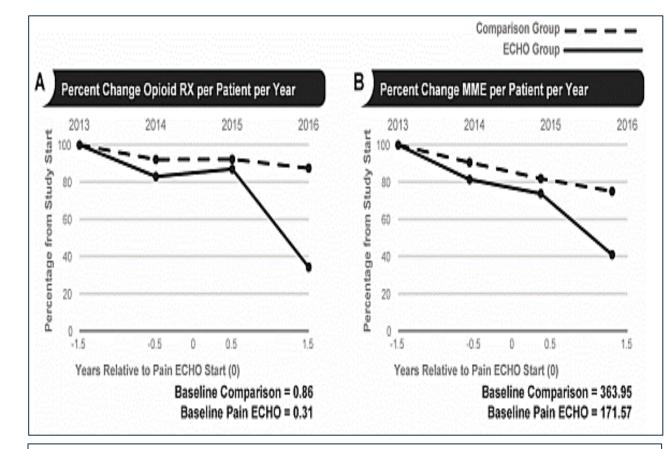
- This study through the Veterans Health Administration (VHA) compared the effect of patients having a virtual VHA SCAN-ECHO visit on all-cause mortality compared with patients with no liver clinic visit (propensity score matched).
- 513 patients who had a SCAN-ECHO visit were identified. As a cohort they
 were younger, more rural, and had symptoms of more advanced liver
 disease.
- Propensity adjusted mortality rates showed that a SCAN-ECHO visit was associated with a hazard ratio of 0.54 (95% CI 0.36-0.81, p = 0.003), or a 46% reduced risk of dying, compared to patients with no SCAN-ECHO visit.

Su, G. L., Glass, L., Tapper, E. B., Van, T., Waljee, A. K., & Sales, A. E. Virtual consultations through the Veterans Administration SCAN-ECHO Project improves survival for veterans with liver disease. *Hepatology*. 2018; *68*(6), 2317-2324.



STUDY: ECHO Pain

- Intervention group (99 clinics participating in ECHO Pain); Control group (1283 clinics)
- Method: Rx counts for [deidentified] patients enrolled with PCC teams from FY 2013-FY 2016.
- The average annual decline of # of Rx/patient/year decreased 23% for ECHO Pain participants compared to 9.2% for nonparticipants (*p*=.004).

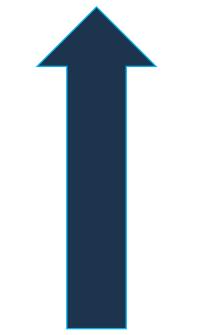


Katzman, J. G., Qualls, C. R., Satterfield, W. A., Kistin, M., Hofmann, K., Greenberg, N., ... & Arora, S. (2019). Army and Navy ECHO Pain Telementoring Improves Clinician Opioid Prescribing for Military Patients: an Observational Cohort Study. *Journal of general internal medicine*, *34*(3), 387-395.



ECHO Improves NM Medicaid Patient Care Quality

ENDO ECHO Cohort vs. Matched Propensity Score Control Cohort



Endo ECHO cohort experienced increases in:

- Outpatient visits
- Foot exams
- Eye exams
- Smoking assessments*
- # of annual HbA1c checks*
- Access to best-practice medications
 - Metformin
 - Statins
 - ACE inhibitors
 - Antidepressants

Blecker, S., Lemieux, E., Paul, M. M., Berry, C. A., Bouchonville, M. F., Arora, S., & Billings, J. Impact of a primary care provider tele-mentoring and community health worker intervention on utilization in Medicaid patients with diabetes. *Endocrine Practice*. 2020; *26*(10), 1070-1076.

*Paul, M. M., Saad, A. D., Billings, J., Blecker, S., Bouchonville, M. F., Chavez, C... & Berry, C. A. A telementoring intervention leads to improvements in self-reported measures of health care access and quality among patients with complex diabetes. Journal of Health Care for the Poor and Underserved. 2020; 31(3), 1124-1133.



ECHO Improves NM Medicaid Patient Care Quality

ENDO ECHO Cohort vs. Matched Propensity Score "Controls" in the Community

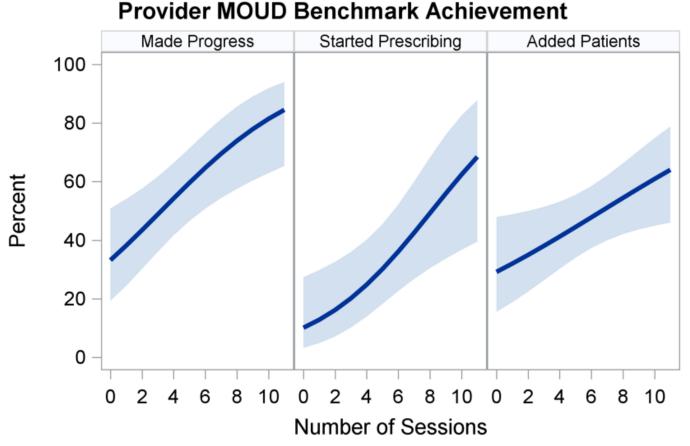
Endo ECHO cohort experienced decreases in:

- Mean HBA1c levels
- Fluctuations in HBA1c levels
- Inpatient admissions
- Inpatient spending on high-cost services

Blecker, S., Paul, M. M., Jones, S., Billings, J., Bouchonville, M. F., Hager, B... & Berry, C. A. A Project ECHO and community health worker intervention for patients with diabetes. *The American Journal of Medicine*. 2022; *135*(5), e95-e103. Cantor, J. C., Chakravarty, S., Farnham, J., Nova, J., Ahmad, S., & Flory, J. H. Impact of a provider tele-mentoring learning model on the care of medicaid-enrolled patients with diabetes. *Medical Care*. 2022; *60*(7), 481.



Participation in ECHO is Associated with Expanding Buprenorphine Treatment in Rural Primary Care for Patients with Opioid Use Disorder

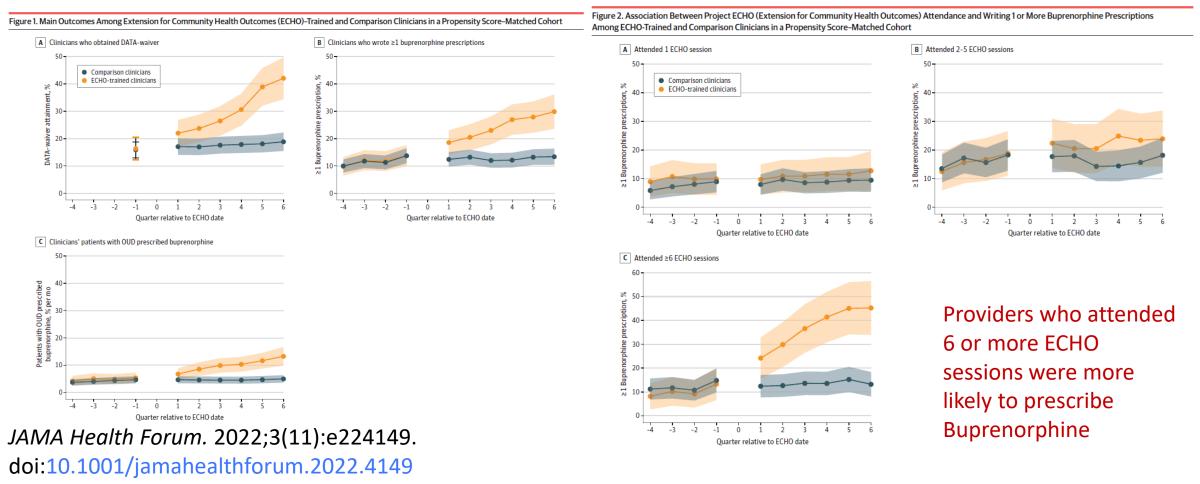


Julie Salvador, Heidi Rishel Brakey, Rana Alkhafaji, Jesus Fuentes, Magdalena McWethy , Laura Rombach, Rachel Abeyta, Julia Martinez, Andrew Sussman, Orrin Myers University of New Mexico, Albuquerque, New Mexico, USA

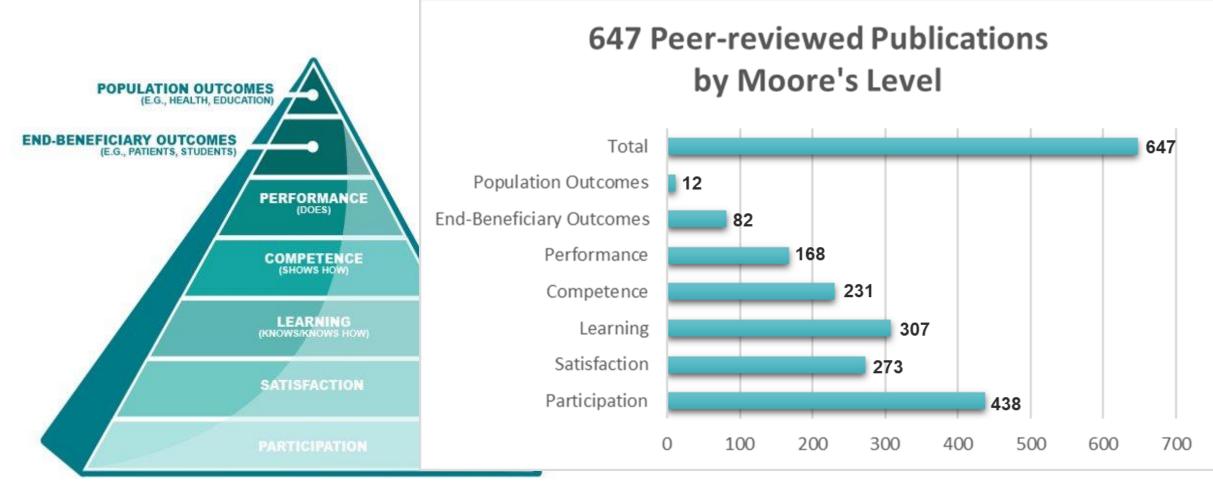
Made Progress (N = 79) OR = 1.24 (1.09, 1.42) P = 0.001Started Prescribing Benchmark | Not Prescribing (N = 60) OR = 1.31 (1.09, 1.57) P = 0.004Added Patients Benchmark (N = 79) OR = 1.14 (1.02, 1.28) P = 0.025



Study Indicates Provider Participation in ECHO Useful Tool for Expanding Patient Access to Buprenorphine



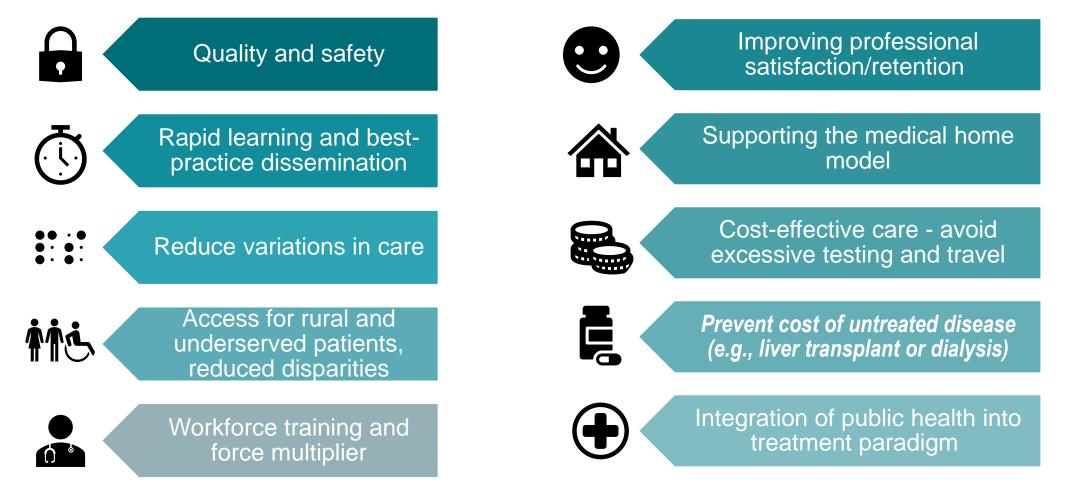
ECHO Publications by Outcome Levels



as of 4/1/24



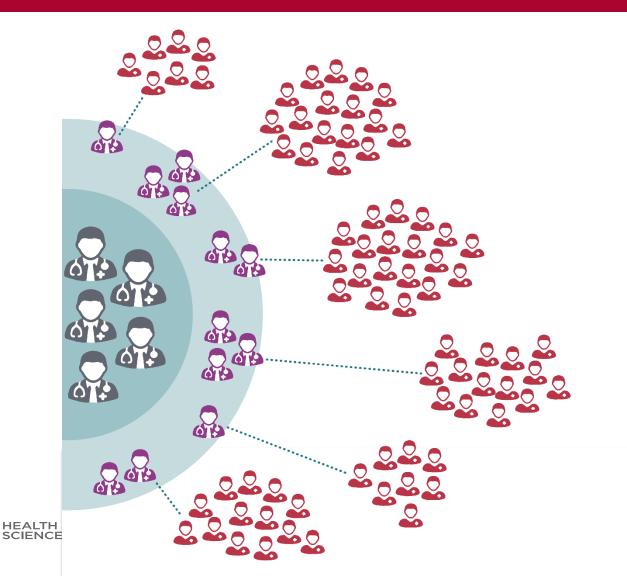
Benefits of the ECHO Model



Democratizing Implementation of Best Practices



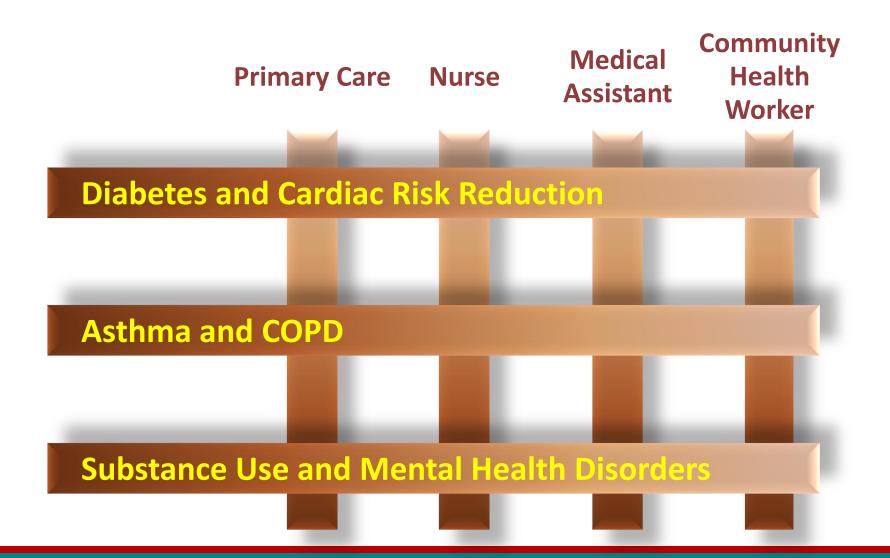
Force Multiplication via Technology-enabled Trusted Human Network





Force Multiplier

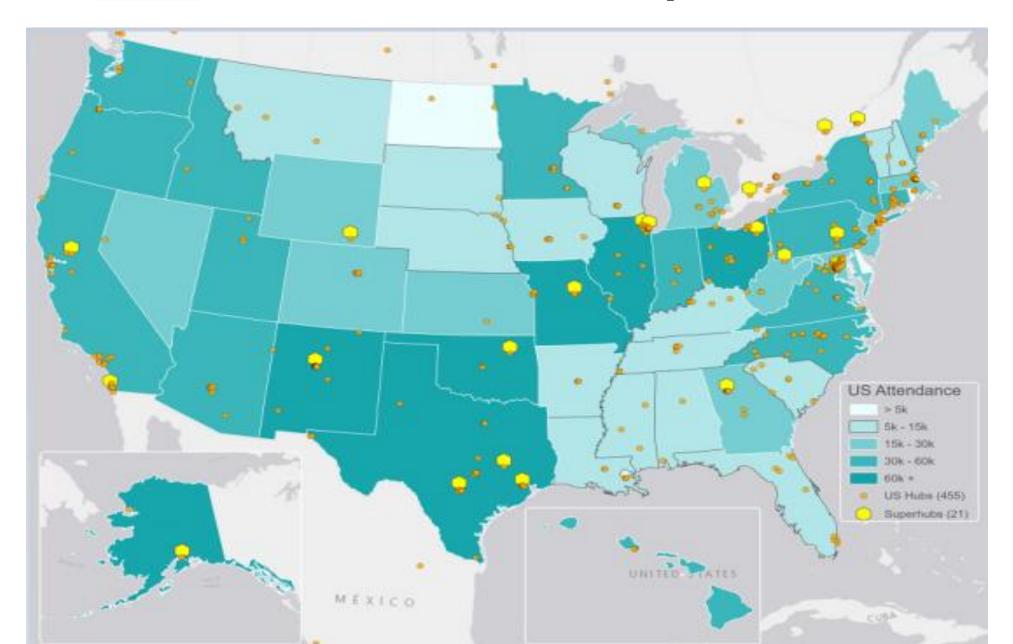
Chronic Disease Management is a Team Sport







U.S. Hubs and Superhubs



Ministries of Health in Africa: 20 Signed ECHO Partners



Ministry of Health and Wellness Botswana



Cameroon Ministry of Public Health



Ministry of Public Health of the **Democratic Republic** of the Congo



Ministry of Health, Gambia



Ghana Ministry of Health



Ministry of Health and Public Hygiene of Guinea



Ministry of Health, Lesotho

Ministry of Health &

Human Services,

Federal Government

of Somalia



Ministry of Health and Social

Ministry of

Health Sudan







Ministry of Health

Malawi

Ministry of Health, South Sudan



Ministry of Health

and Public Hygiene

Cote D'Ivoire



Namibian Ministry

of Health and

Social Services

Ministry of Health, Community Development, Gender, Elderly and Children, Tanzania



Federal Ministry of Health, Nigeria

The Republic

of Uganda

Ministry of

Health



Republic of Rwanda Ministry of Health



The Zambian Ministry of Health



Ministry of Health Sierra Leone



Impact: Decline in transactional costs associated with traditional didactic trainings

Paper 180

Cost of Using Multipoint Video-Technology for National Guidelines Dissemination in Kenya

<u>1</u>B. Mambo, ¹M. Kimani ²L. Misiko, ³K.Owour, ¹A. Wachira, ¹I. Mukui, ¹B. Kigen

¹National AIDS and STI Control Programme, Ministry of Health, Directorate of Preventive and Promotive Health Services, Nairobi, Kenya. ²University of Maryland, Baltimore

Using traditional didactic approach for training was associated with an average marginal cost of \$820.29 per

participant

Multipoint video technology (HIV ECHO) is drastically cheaper and is more time efficient that the traditional didactic dissemination method In comparison, the average marginal cost of training using multi point video technology

\$20.96 per participant trained

ECHO Partners Ministries of Health in Latin America and Caribbean



Ministries of Health in Asia Signed ECHO Partners



National Institute of Health, the Ministry of National Health Services, Pakistan



Ministry of Health of the Republic of Indonesia



Ministry of Health and Sports, Myanmar



Ministry of Health Armenia



Ministry of Health and Family Welfare Government of India



Ministry of Health of Vietnam



ECHO India Central Programs

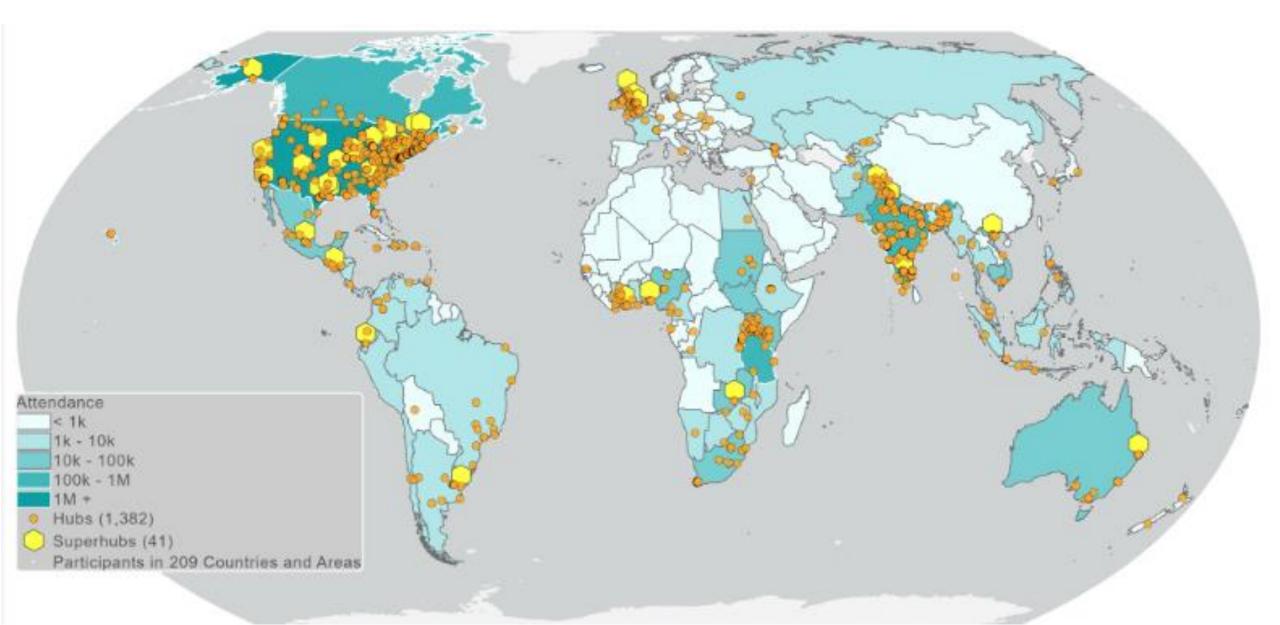
With an overarching MoU with the Ministry of Health & Family Welfare (MoHFW), several national-level health care programs have joined the ECHO movement for capacity-building.





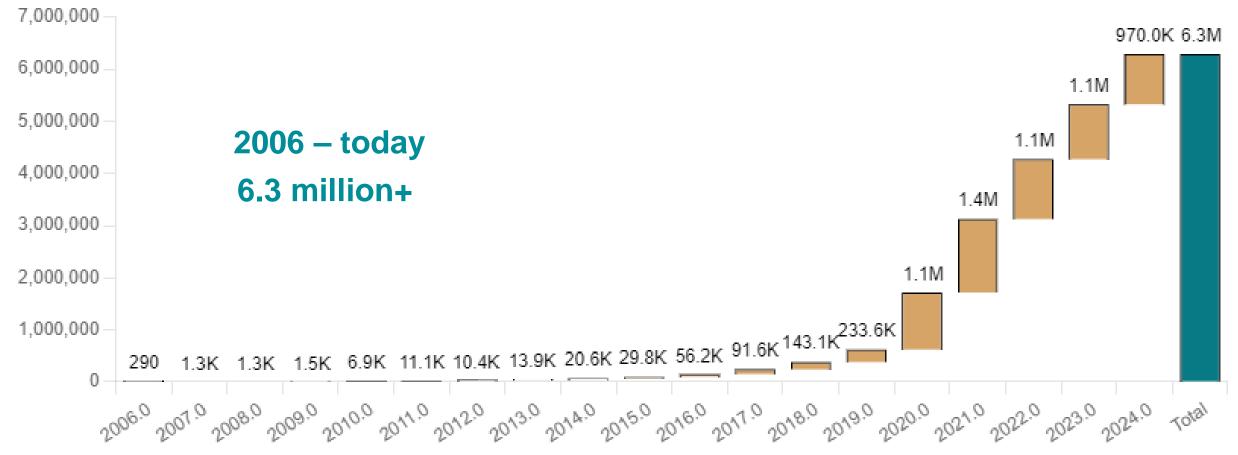


Global Hubs & Superhubs



Major Growth In Demand Since COVID 19: Cumulative Attendance Across ECHO Network

ECHO Attendance by Year Data as of 9/16/2024





Note: Data represents program attendance reported by ECHO Hubs thus far and may not entirely reflect all global ECHO attendance.

Opportunity to Improve U.S. Cancer Care

Across the Continuum of Care



Prevention

- Tobacco cessation
- HPV vaccination
- Hepatitis B vaccination
- Sun safety & skin cancer prevention
- Community cancer intervention & prevention



Screening

- Dermatology
- Breast cancer
- Cervical & colorectal cancer
- Oral & lung cancer
- Pathology best practices
- Training peer and community health advocates



Treatment

- Pain & toxicity
 management
- Cancer care navigation
- Precision medicine & cancer genomics
- Clinical trial enrollment



Survivorship & End of Life Care

- Palliative care
- Coping
- Health promotion
- Follow-up of cancer survivors
- Caregivers
- Transition from patient to survivor

Cancer ECHO Hub & Spoke Reach: U.S.

THE NETWORK BY THE NUMBERS

200+ Cancer ECHO Hubs

800+

Cancer ECHO Programs

36

Countries

300,000+

Attendances

*Data as of September 2024



Instead of waiting weeks or months, these women are getting follow-up procedures right here, in their community. This is about saving lives."

- Dr. Rose Gowen, OB-GYN specialist, Su Clínica, Brownsville, Texas

All-Time Cancer ECHO Programs







University of Texas MD Anderson **Cancer Center ECHO Superhub**

- ECHO Hub since 2013
- **Oncology Superhub** since 2017 ٠
- 35+ ECHO Programs & support for International • Gynecologic Cancer Society (IGCS) Programs



- **Foci**: Gynecologic cancers, breast cancer, head & neck cancers, tobacco cessation, early detection of melanoma, cancer pharmacy, palliative care, radiation oncology, survivorship and many others.
- Areas served: US, Africa, Central and Latin America – programming in English, Spanish, and French.





Since 2014

MD Anderson's programs have 1,105 ECHO telementoring sessions to expand knowledge and skills and to support 2,952 participants in 27 countries.

American Cancer Society





- ECHO Hub since 2018
- ECHO Superhub as of 2023
- 40+ ECHO Programs
- Foci: Bone health, breast cancer, colorectal cancer, lung cancer, health equity, HPV vaccination, LBGTQ+ cancer care, organizational development and strengthening, patient and caregiver support, biomarker testing, and tobacco cessation.
- Areas served: US, East Africa programming in English and Spanish
- <u>https://echo.cancer.org/</u>

4,383

Unique health care professionals and caregivers have participated in an American Cancer Society ECHO. 463

Learning hours focused on acquiring new skills and competencies. 42

ECHO series offered by the American Cancer Society.

National Cancer Institute Center for Global Health



- ECHO Hub since 2018
- Four ECHO Programs + support for KENCO, ICCP, UICC, and many other ECHO Partners
- Foci: APEC Cervical Cancer Screening & Prevention, Africa Cancer Research and Control, Caribbean Cancer Research and Control, Knowledge Summaries for Breast Cancer Control.









- ECHO Hub since 2019
- Programs:
 - NM Colorectal Cancer Screening ECHO
 - Cancer Survivorship for Primary Care ECHO
 - UNM Hepatobiliary (HPB) ECHO
 - FOSTER ECHO (for Clinical Trials Enrollment)
- Areas served: U.S.





NM COLORECTAL CANCER SCREENING ECHO March 2024 - Present

- **Need:** 960 New Mexicans will be diagnosed with colorectal cancer in 2024, 340 of which will die from the disease.
- Purpose:
 - Improve delivery and uptake of colorectal cancer screening
 - Ensure diagnostic follow-up
 - Navigate individuals to appropriate treatment services
- Audience: Clinicians, staff, and community health workers at medical care clinics across NM



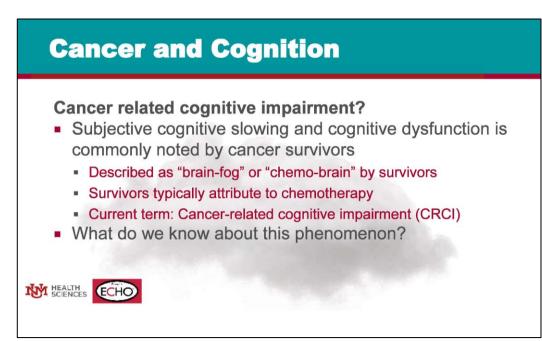


NM CANCER SURVIVORSHIP FOR PRIMARY CARE ECHO June 2021 - Present

 Need: Approx 9,590 New Mexicans are diagnosed with cancer each year, underscoring a need for ongoing clinical monitoring and support to improve survivor quality of life

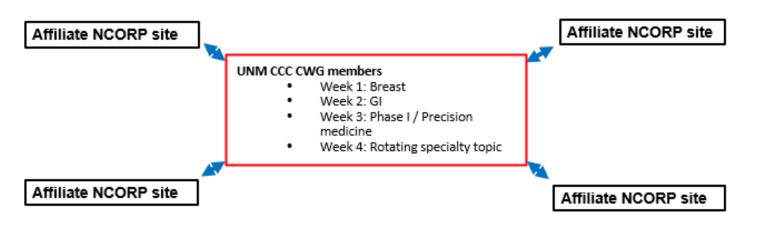
• Purpose:

- Improve care coordination between cancer treatment, primary care, and other providers
- Provide ongoing, evidence-based mentorship to support improved clinical and quality of life outcomes for cancer survivors
- Navigate cancer survivors to essential support resources
- Audience: PCPs, nurses, community health workers, patient navigators, psychologists, pharmacists, nonclinical practice staff

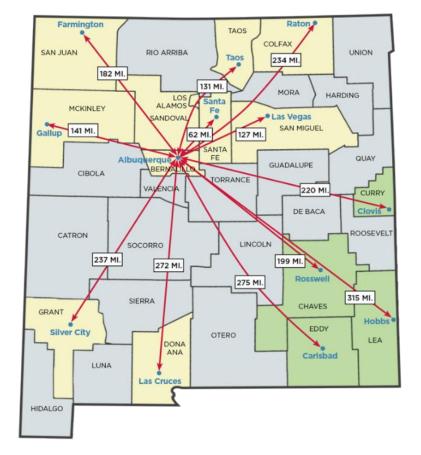


Sample Survivorship ECHO Didactic Credit: Christopher G. Manschreck, MD

- FOSTER (Facilitating enrollment Of community cancer patientS on Therapeutic clinical trials using project ECHO Resources) January 2019 – July 2020
 - **Purpose:** Facilitate personalized communication between UNMCCC Clinical Working Groups and NM Cancer Care Alliance affiliate sites for community oncology patient enrollment in clinical trials.







UNMCCC Clinical Sites (Albuquerque, Las Cruces, Silver City) and NMCCA Sub-Affiliate Sites (shown in Yellow). NMCCA Developing Sites in Green.



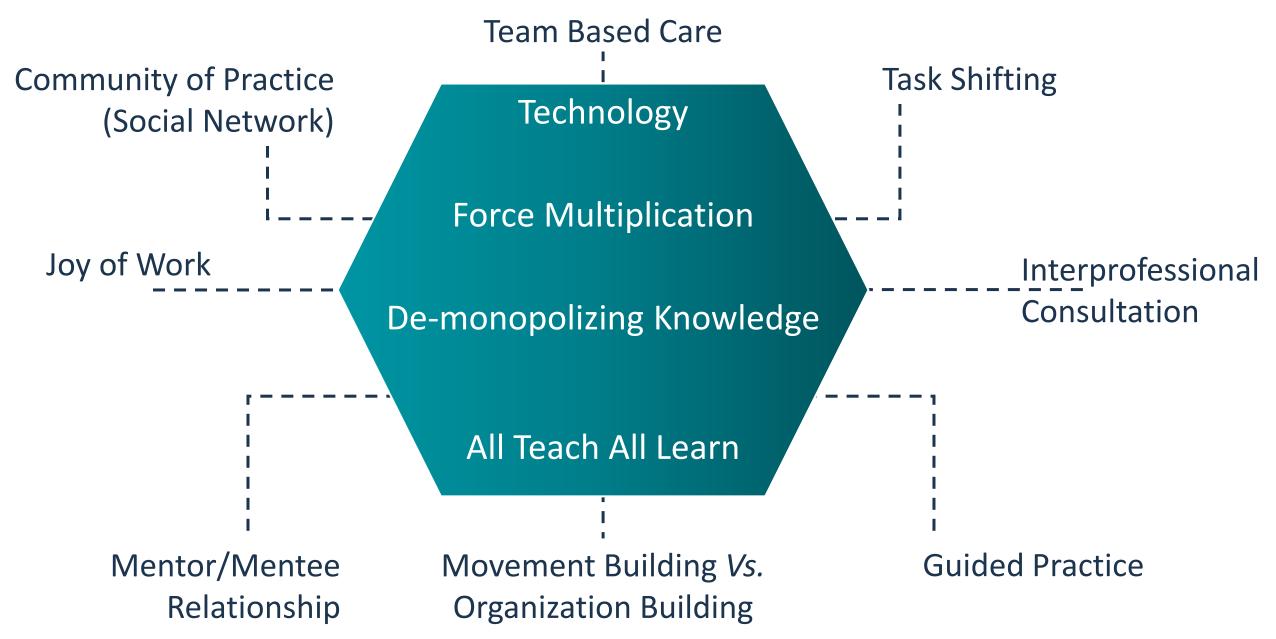
UNM HEPATOBILIARY (HPB) ECHO February 2024 - Present

• Purpose:

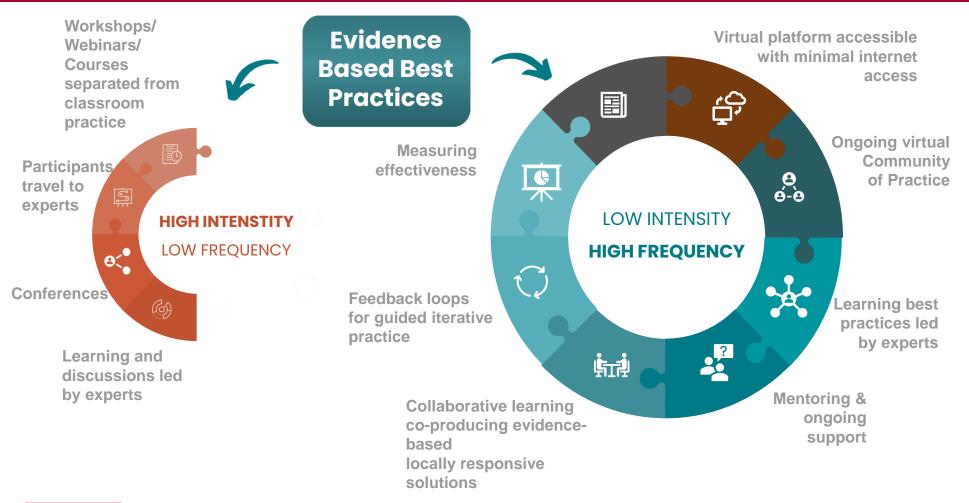
- Connect community oncologists with multidisciplinary expertise to facilitate timely, best-practice referral for hepatobiliary cancers
- Develop personalized treatment plans for patients with HPB cancers



Mealth Sciences What Makes ECHO Work?

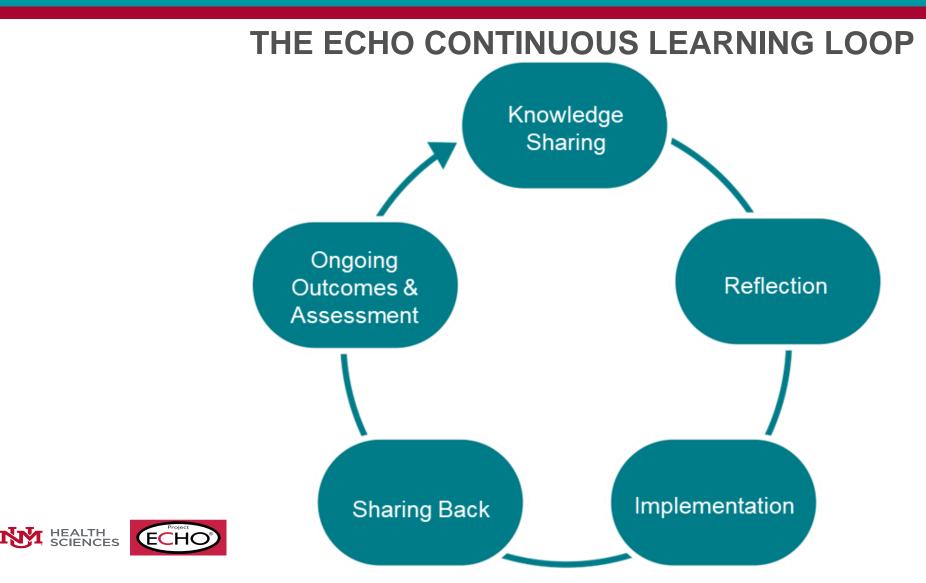


Project ECHO Turns Traditional Training on its Head





ECHO Mentorship Builds Deep Implementation Expertise Over Time



Join Us

To learn more about the Cancer ECHO Initiative:

email us <u>CancerECHO@salud.unm.edu</u> visit <u>https://hsc.unm.edu/echo/partner-portal/echos-initiatives/bmsf-cancer/</u>

