



PROJECT ECHO: OUTCOMES OF HEPATITIS C TREATMENT BY PRIMARY CARE PROVIDERS ABSTRACT 265056

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MISSION

The mission of **Project ECHO™ (Extension for Community Healthcare Outcomes)** is to develop the capacity to safely and effectively treat chronic, common and complex diseases in rural and underserved areas and to monitor outcomes.

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Hepatitis C in New Mexico

- 30,000 HCV cases
- In 2004 less than 5% had been treated
- 2400 prisoners diagnosed in corrections system— none treated before 2004
- Highest rate of chronic liver disease/cirrhosis deaths in the nation
- Low population density, large geographic area
- 19.3% poverty rate

Hepatitis C Treatment

- Good News:
 - Curable in 45-70% of cases
- Bad News:
 - Severe side effects – anemia 100%, neutropenia >35%, depression >25%
- No primary care clinicians treating HCV

Goals

- **Develop capacity to safely and effectively treat HCV in all areas of New Mexico and to monitor outcomes**
- **Develop a model to treat complex diseases in rural locations and developing countries**

Method

- Use Technology (multipoint videoconferencing and internet) to leverage scarce healthcare resources
- Disease Management Model focused on improving outcomes by reducing variation in processes of care and sharing “best practices”
- Case based learning: Co-management of patients with specialists (Learning by Doing)
- HIPAA compliant centralized database to monitor outcomes



Clustering of Poor Prognostic Factors in Heavy Patients

Weight, kg (lb)	< 75.0 (1,650)	≥ 75.0 (1,651)*
Male, n (%)	300 (100.0)	300 (100.0)
Male, Mean (SD)	76.2 (12.6)	81.0 (15.2)
Male, Range**	45.0-148.0	45.0-148.0
Male, Height†	173.0 (5.7)	173.0 (5.6)
Male, BMI, n (%)	193 (64.0)	193 (64.0)
Male, Mean (SD) (kg/m ²)	3.08 (0.77)	3.08 (0.77)
Male, HTL, n (%)	292 (97.3)	292 (97.3)
Male, n (%)	300 (100)	300 (100)
Female, n (%)	200 (100)	200 (100)

*Weight was not available for 1 patient in the < 75.0 kg group.
**The 148 kg patient had a height of 148 cm.
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Benefits to Clinicians

- Diminishes professional isolation
- Enhances professional satisfaction
- No-cost CMEs and Nursing CEUs
- A mix of work and learning
- Access to specialty consultation with GI, hepatology, psychiatry, infectious diseases, addiction specialist, pharmacist, patient educator

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

Results of the HCV Outcomes Study

Arora S, Thornton K, et al. N Engl J Med. 2011 Jun; 364:2199-207.



Objectives

- To train primary care clinicians in rural areas and prisons to deliver HCV treatment to rural populations of New Mexico
- To show that such care is as safe and effective as that given in a University Clinic
- To show that Project ECHO improves access to HCV care for minorities

Study Design

- **Prospective cohort study**
 - Participation determined by available technology
 - Randomization by patient, clinician, or site not feasible

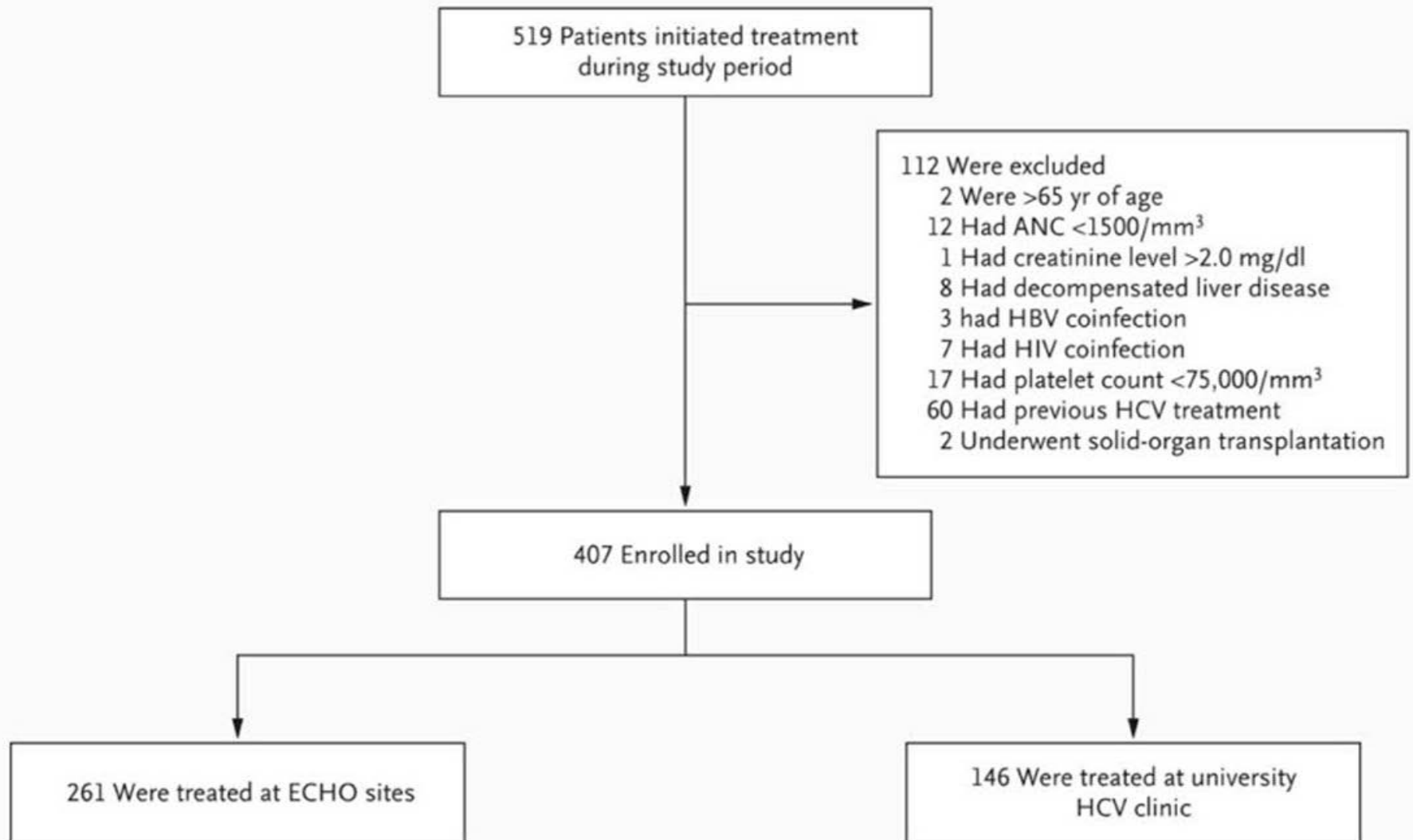
Participants

- Study sites
 - Intervention (ECHO)
 - 16 Community-based clinics, 5 Prisons
 - Control: University of New Mexico HCV Clinic
- Subjects meeting inclusion/exclusion criteria
 - Consecutive treatment naïve patients seen at the university or at an ECHO site

Principal Endpoint

- Sustained viral response (SVR): no detectable virus 6 months after completion of treatment

Results



SVR According to Genotype and Site of Treatment

HCV Genotype	ECHO sites	UNM HCV Clinic	P Value
All Genotypes	152/261 (58.2%)	84/146 (57.5%)	0.89
Genotype 1	73/147 (49.7%)	38/83 (45.8%)	0.57
Genotype 2 or 3	78/112 (69.6%)	42/59 (71.2%)	0.83

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.

Disease Selection

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

Successful Expansion into Multiple Diseases

	Mon	Tue	Wed	Thurs	Fri
AM	HIV	Antimicrobial Stewardship	Chronic Pain	Integrated Addictions and Psychiatry	Asthma
PM	Hepatitis C Corrections	Rheumatology	Hepatitis C Community	Palliative Care	Diabetes and Cardiac Risk Reduction

Thank You

