INDIAN COUNTRY ECHO

LEADING THE WAY

Growing the Ability to Deliver Quality Healthcare to American Indian and Alaska Native People.

Indian Country ECHO Treatment Recommendation Analysis

April 27th, 2022

Ashley Wirth

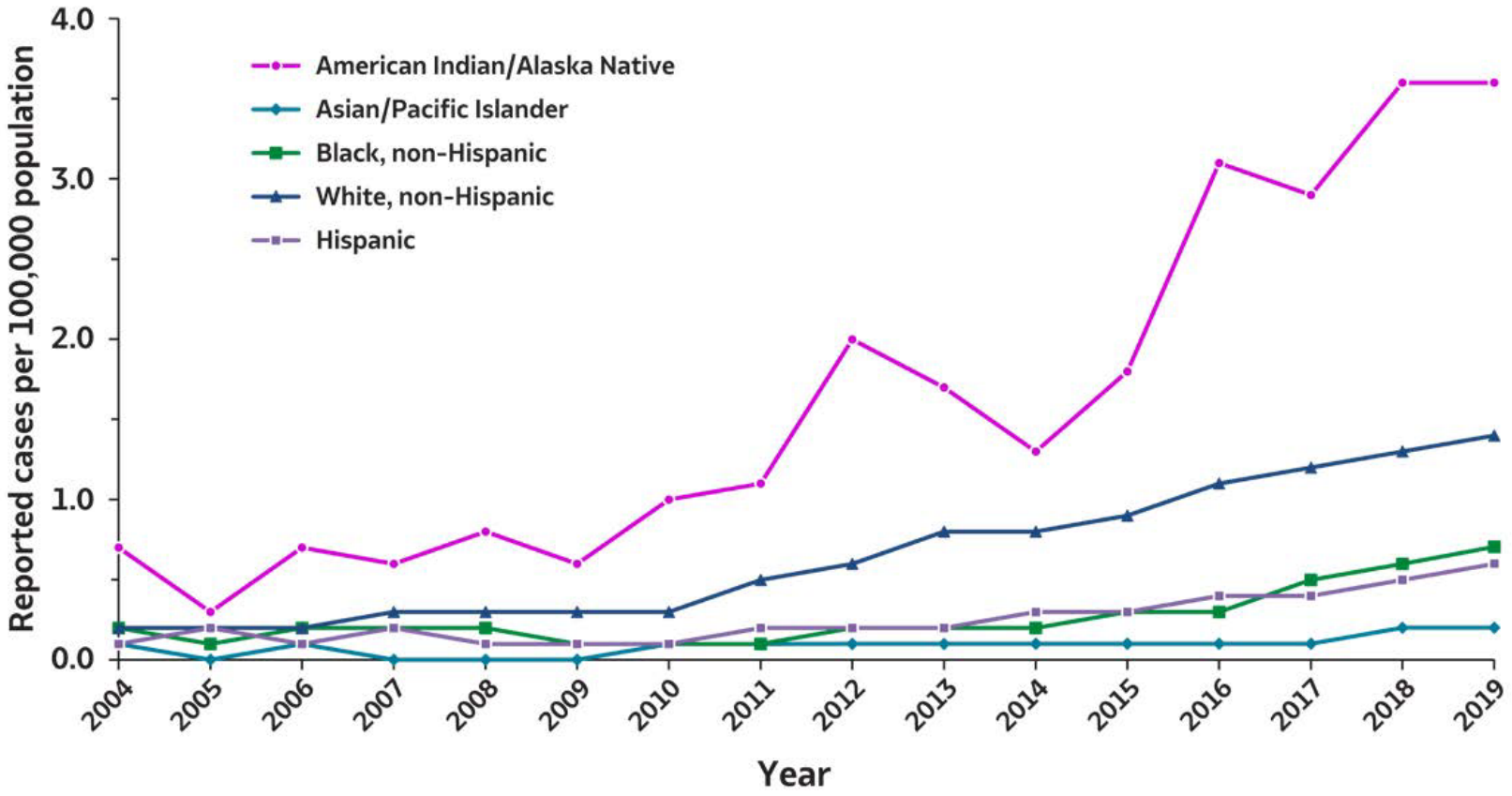
MD, MCR Candidate

Northwest Portland Area Indian Health Board

Oregon Health & Science University

awirth@npaihb.org

American Indians/Alaska Native (AI/AN) persons are disproportionately affected by Hep C



Division of Viral Hepatitis, National Center for HIV, Viral Hepatitis, STD, and TB Prevention. CDC Report Hepatitis C 2019. https://www.cdc.gov/hepatitis/statistics/2019survillance

What is Indian Country ECHO?

People need access to quality care for their complex health conditions.

There aren't enough specialists in Indian Country for everyone who needs care.

Indian Country ECHO trains clinicians to provide high quality care.

Patients get the right care, in the right place, at the right time. This improves outcomes.

Clinicians are connected to a learning community of peers and experts.

Components of ECHOs

- **Didactic Presentation**
- **Case Presentation**
- **Treatment Recommendation provision**
  - How many patients are being treated for Hep C through ECHO?
  - How does ECHO serve patients beyond the scope of Hep C?
  - How does ECHO serve patients with advanced liver disease?

Treatment recommendations analysis had Three objectives:

I. Determine how many patients received treatment recommendations for HCV treatment by their presenting clinician compared to referral to a specialist

II. Determine how treatment recommendations extended beyond the scope of DAA prescriptions for HCV treatment

III. Conduct sub-analysis for patients with advanced liver fibrosis presented at ECHO

Methods

ECHO Case Form Analysis

- Compiled all case forms into a dataset for categorization and analysis.
- Lab and imaging results on case forms determined liver fibrosis stage used in sub-analysis of patients with cirrhosis

Treatment Recommendation Categorization & Analysis

- Treatment recommendations were compiled into a dataset. Categories were created based on the type of treatment recommendation
- Data assessed included # recommendations, # recommendations per case, and the % of patients receiving each type of treatment recommendation.

Treatment Recommendation Categories

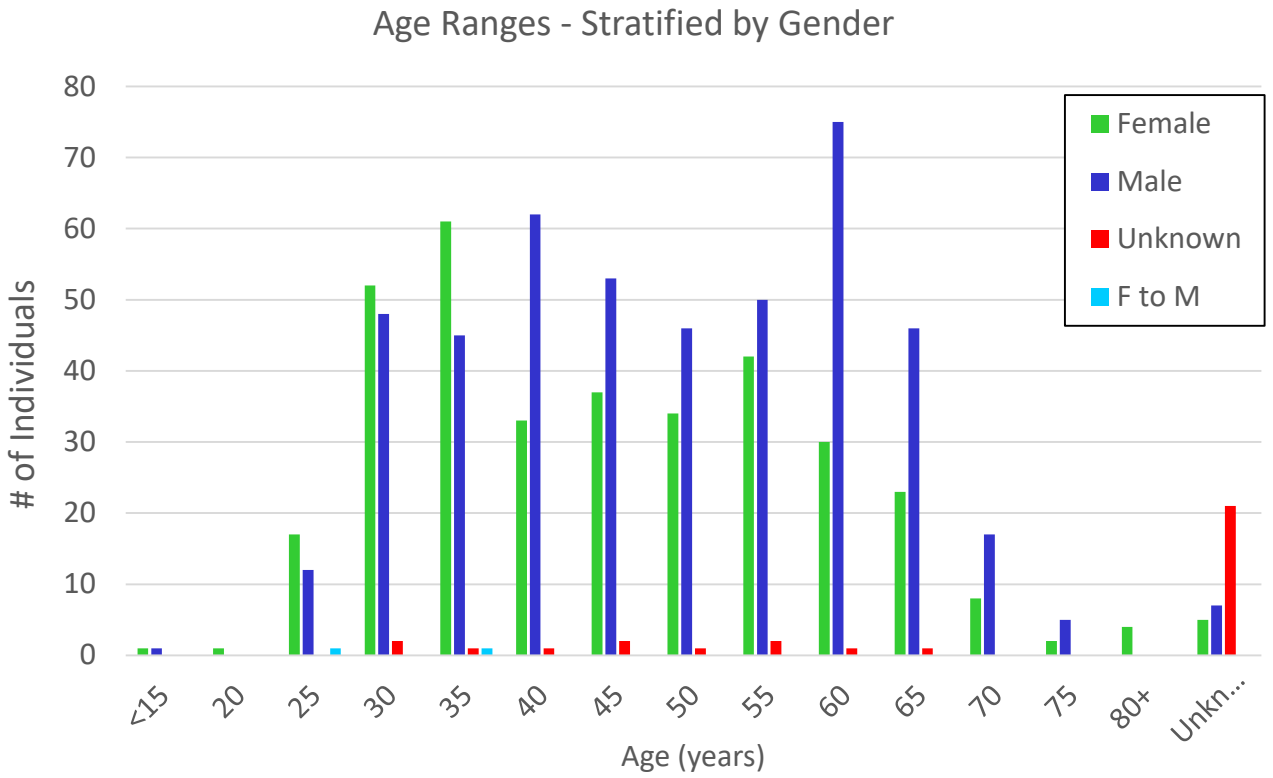
Treatment Rec Category	Description	Example
Hepatitis C Treatment	Medication prescriptions for HCV treatment	“Recommend Mavyret x 8 weeks (3 pills daily with food)”
Lab or Imaging Orders	Orders for any labs including Fibroscan, fibrotest or imaging orders such as ultrasound or EGD	“Obtain a fibroscan to determine fibrosis stage”
Pharmacological Considerations	Starting, stopping, changing dose of medication, or information about drug-drug interactions	“Recommend initiating contraception. Avoid products containing Ethinyl Estradiol when treating with Mavyret.”
REFER TO HEPATOLOGIST/ SPECIALIST	Referral to specialty care, specifically liver transplant center or hepatologist	"Recommend liver transplant consultation due to high MELD score"

Treatment Recommendation Categories

Treatment Rec Category	Description	Example
Prevention	Recommendations for hepatitis A and B vaccinations or hepatocellular carcinoma screening	“Recommend abdominal ultrasound and AFP every 6 months to screen for HCC”
Patient Lifestyle Changes	Recommendations for educating or encouraging patient on lifestyle changes	"Weight loss encouraged to prevent obesity related hepatic inflammation"
Other	Treatment recommendations that did not meet criteria for any of the other categories	"Consider HCV screening for household members/children"
Substance Use Treatment	Recommendations for referral to safe syringe program, referral to a behavioral health specialist, or substance use treatment	"Continue to provide support and access for alcohol use disorder management. Encourage engagement with behavioral health specialist."

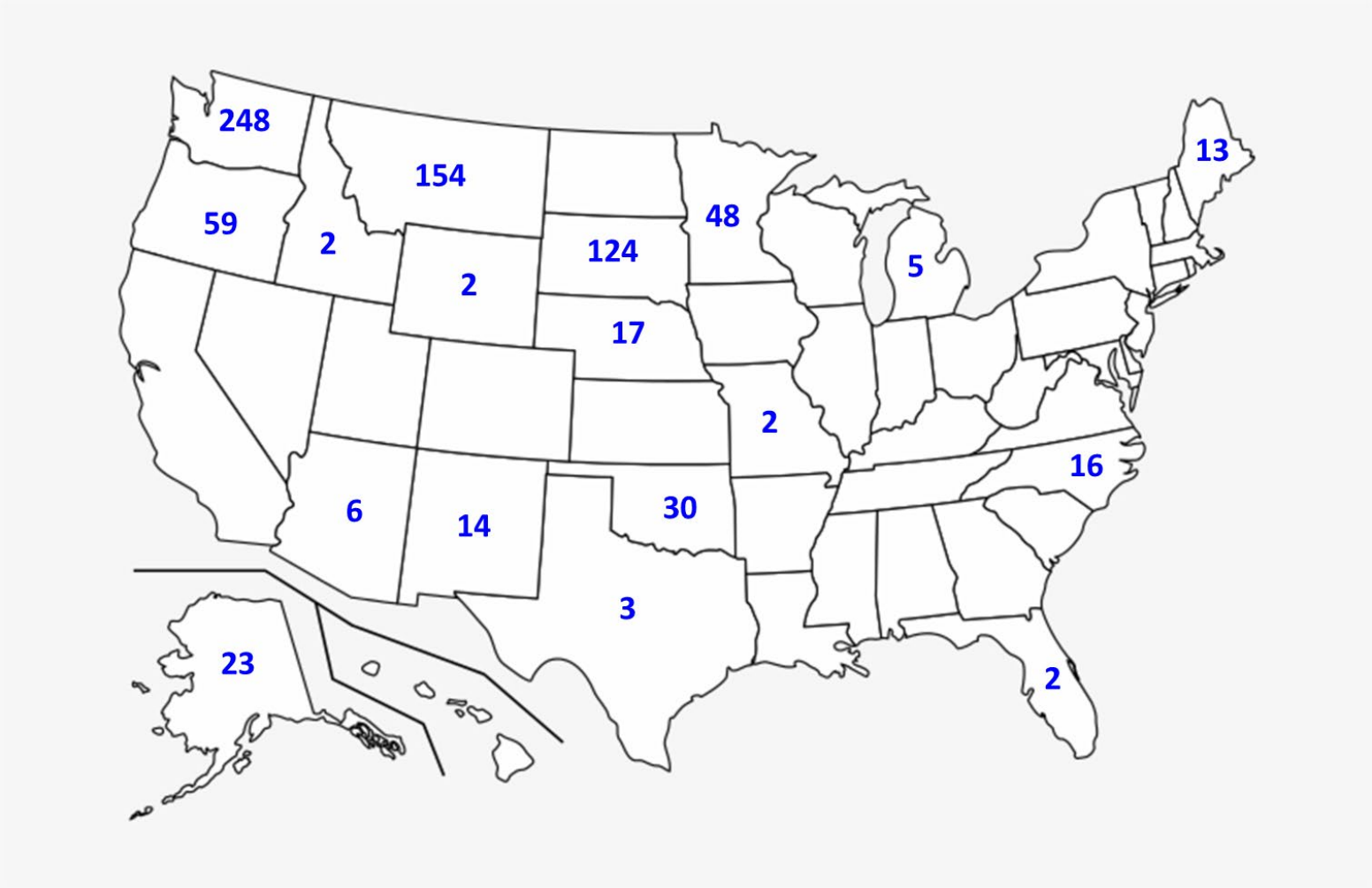
ECHO Patient Characteristics

- 853 case forms
  - 776 new cases
  - 77 re-presented cases
- 77 IHS, tribal, or urban clinical sites
- 430 males (55%)
- 317 females (41%)
- 27 gender unknown (4%)
- 2 trans males (0.2%)
- 687 (88%) treatment recommendations were collected and analyzed

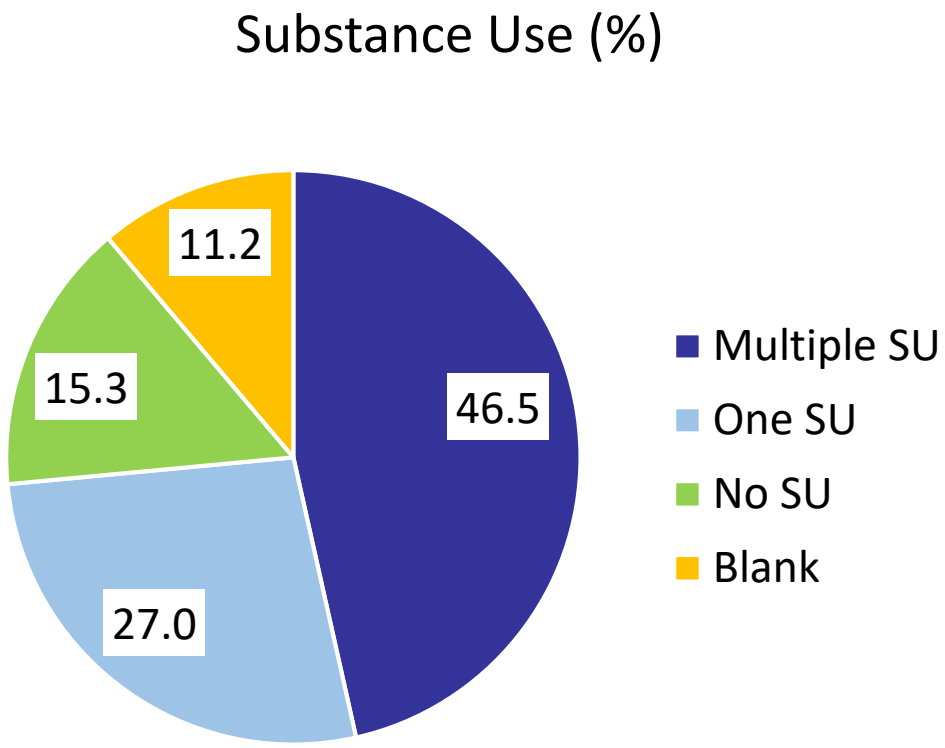


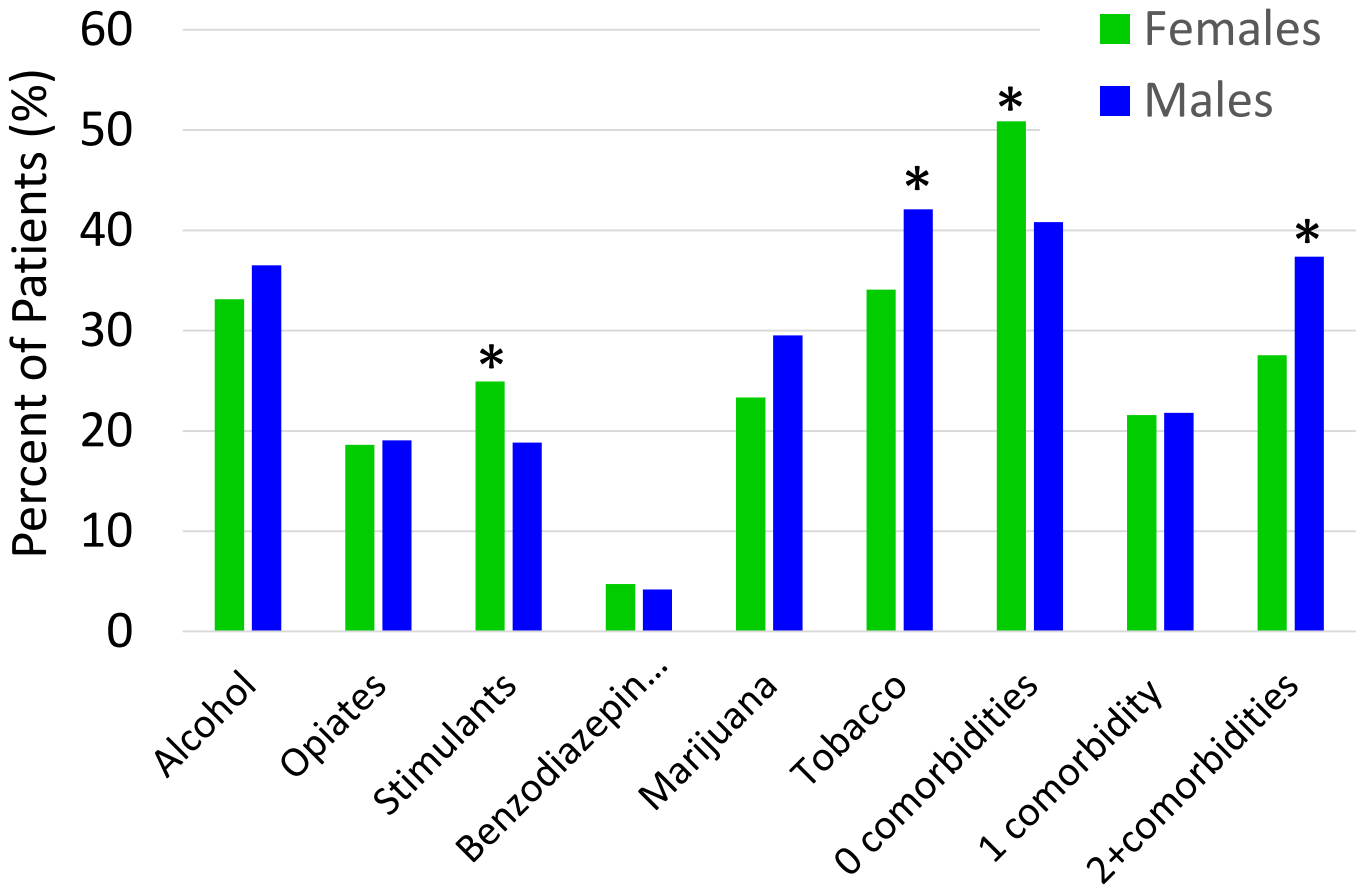
Females were significantly younger than males ($p<0.05$)

Cases by State

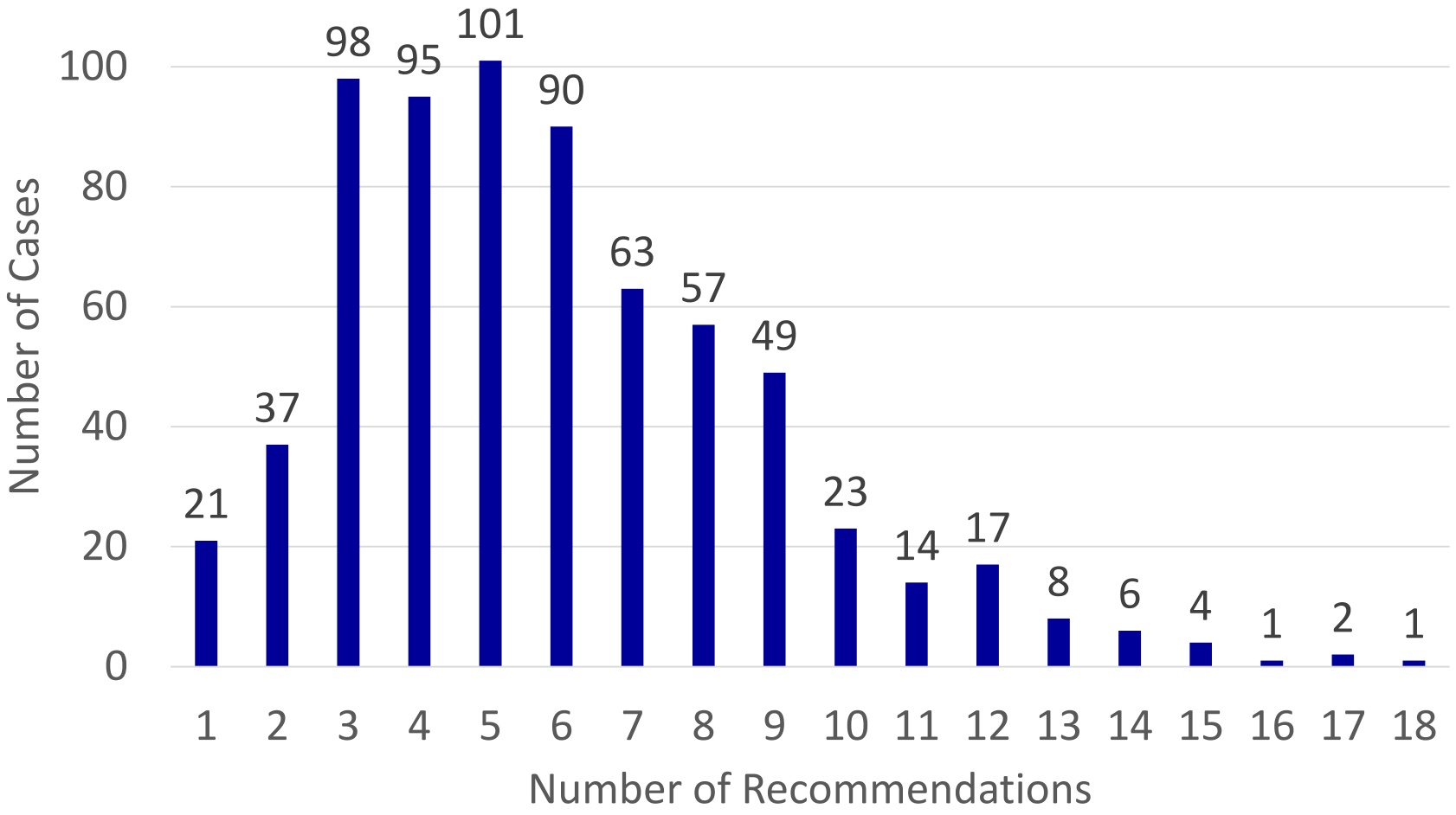


Comorbidities & Substance Use





Treatment Recommendations Per Case



Key Point: most patients presented at ECHO can be treated by their referring provider

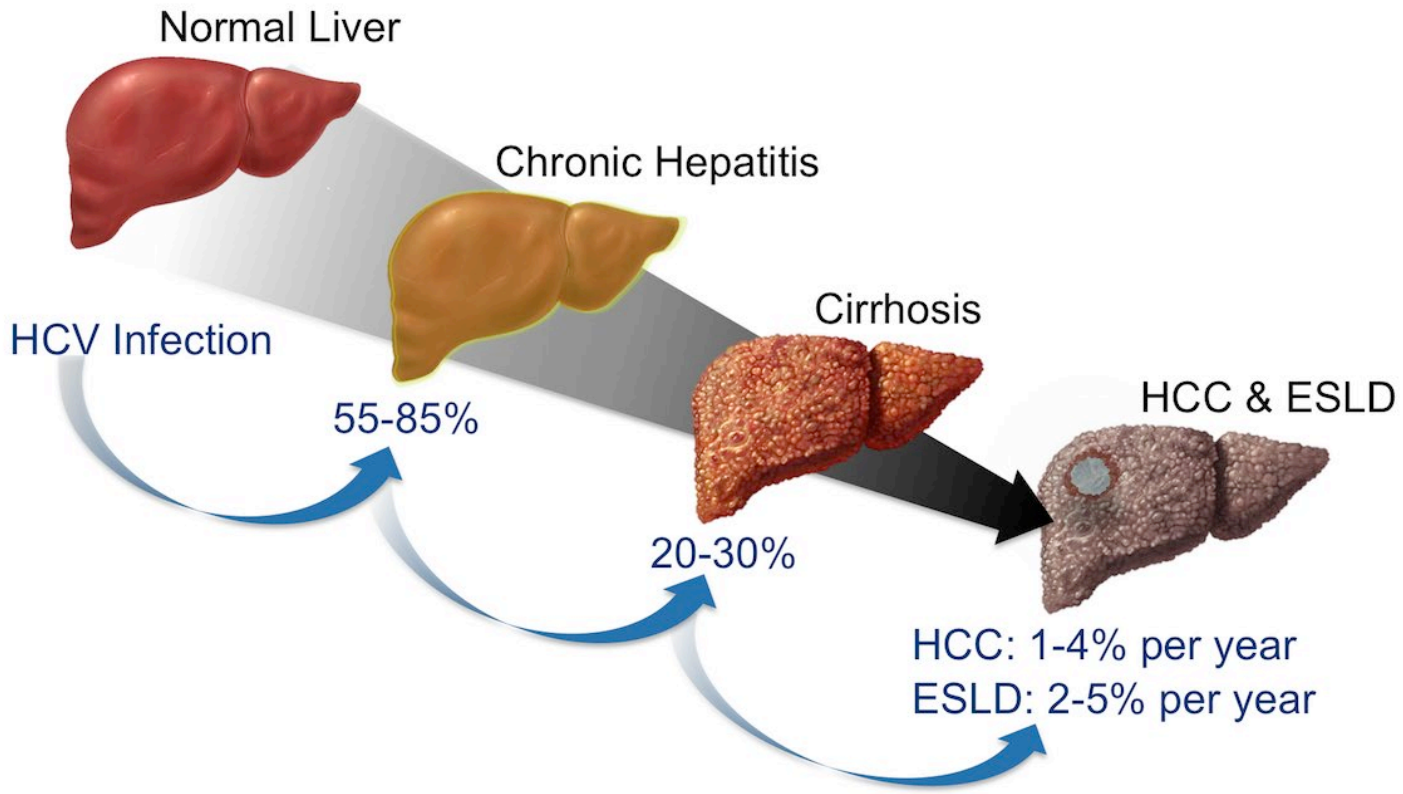
- **92%** of patients presented at Indian Country HCV ECHO received treatment recommendations to cure HCV
  - **97%** of these patients could be treated by their referring clinician
  - **2%** received recommendations for referral to a specialist
- **8%** received recommendations for further workup before treatment recommendations could be provided

Treatment Recommendation Category	Treatment Recommendation Description	Percent Patients Getting Rec (%)
Hepatitis C Treatment	Medication prescriptions for HCV treatment	**92**
Lab or Imaging Orders	Orders for any labs including FibroScan®, FibroTest® or imaging orders	**64**
Pharmacological Considerations	Starting, stopping, changing dose of medication, or information about drug-drug interactions	**61**
Prevention	Recommendations for hepatitis A and B vaccinations or hepatocellular carcinoma screening	**56**
Behavior Changes	Recommendations for educating or encouraging patient on lifestyle changes	**50**
Other	Treatment recommendations that did not meet criteria for any of the other categories	**41**
Substance Use Treatment	Recommendations for referral to safe syringe program, referral to a behavioral health specialist, or substance use treatment	**34**
Refer to specialist	Referral to specialty care, specifically liver transplant center or hepatologist	**2**

Key Point: ECHO provided holistic and comprehensive recommendations

- **56%** of cases received prevention-based treatment recommendations
- **50%** of cases received recommendations for patient behavior changes
- **34%** of cases received recommendations for treatment of substance use
  - **14%** received recommendations for prescriptions of naloxone or buprenorphine
  - **9%** received recommendations for HIV pre-exposure prophylaxis (PrEP)

How did ECHO serve patients with cirrhosis?



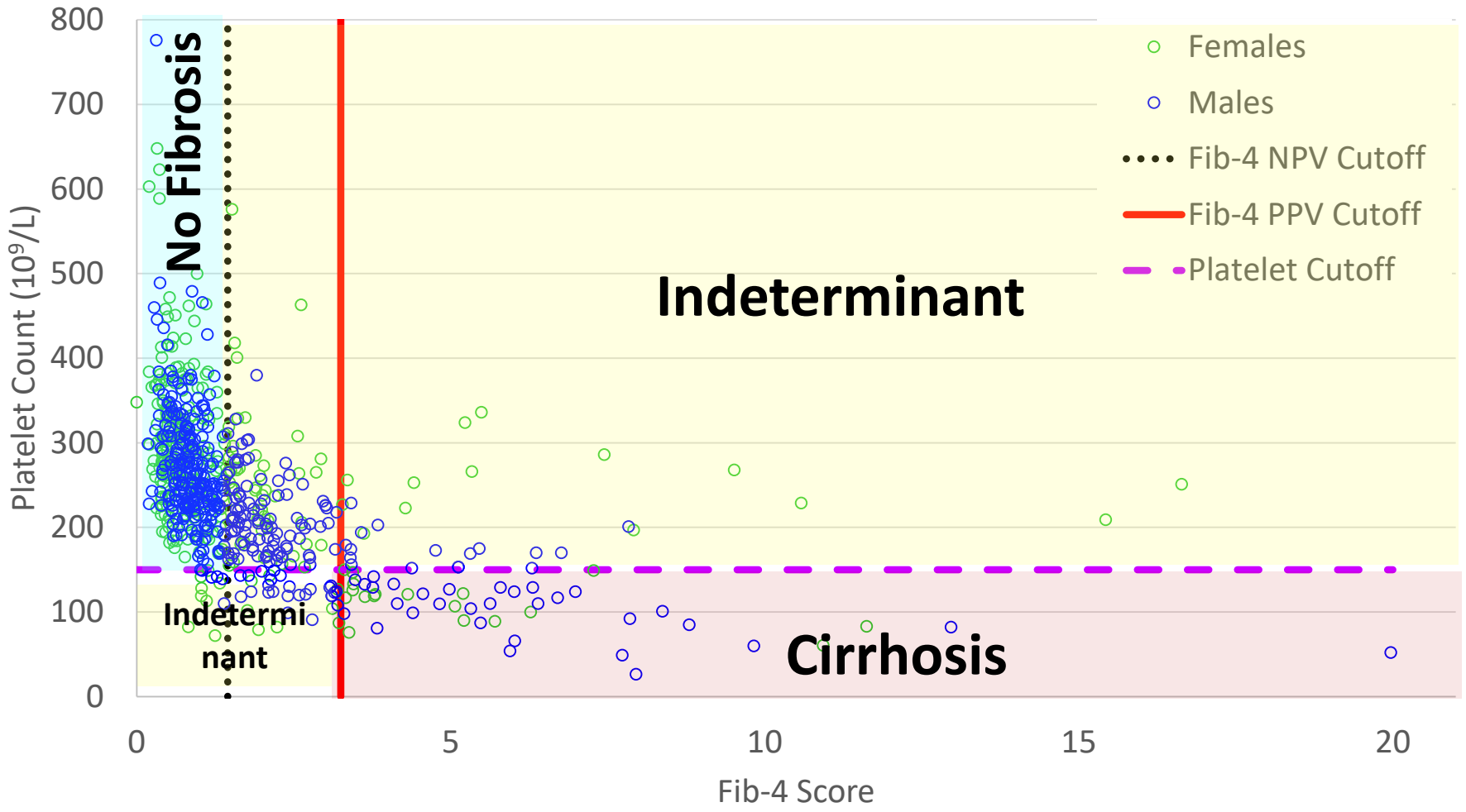
https://www.hepatitis.va.gov/hcv/background/natural-history.asp

How did ECHO serve patients with cirrhosis?

- Fib-4 scores were calculated from lab information in patient case forms. Platelet counts were obtained from patient case forms
- **No fibrosis =** low Fib-4 score (<1.45) and high platelets (>150(x10^9/L))
  - FIB-4 score <1.45 was had a NPV of 90% (1)
- **Indeterminant fibrosis** = Fib-4 scores and platelet counts were discordant
- **Cirrhosis =** High Fib-4 score (>3.25) & low platelets (<150(x10^9/L)) **OR** imaging or Fibrotest/Fibrosure results indicating cirrhosis
  - FIB-4 >3.25 had a 97% specificity for advanced fibrosis (1)

1. Sterling, RK, Lissen E, Clumeck N, et al. Development of a simple noninvasive index to predict significant fibrosis patients with HIV/HCV co-infection. Hepatology 2006;43:1317-1325.

8% of patients presented at Indian Country ECHO clinic had evidence of cirrhosis



No fibrosis = 357 (52%)
Indeterminant = 272 (40%)
Cirrhosis = 58 (8%)

Referral rates were higher for patients with cirrhosis, but most were still able to be treated for Hep C by their referring provider

Treatment Recommendation Category	Percent Patients Getting Recommendation (%)		
	All Patients (n=687)	Patients with No Evidence of Fibrosis (n=357)	Patients with Evidence of Cirrhosis (n=58)
Hepatitis C Treatment	92	97*	76
Lab or Imaging Orders	64	55	80*
Pharmacological Considerations	61	45	59
Prevention	56	51	67
Behavior Changes	50	53	37
Other	41	37	54*
Substance Use Treatment	34	35	33
Refer to specialist	2	0.1	19*

Summary & Conclusions

- Most patients presented at Indian Country ECHO, including patients with evidence of cirrhosis, received recommendations for HCV treatment by their primary care provider.
- Indian Country ECHO treatment recommendations were multidisciplinary, with most patients receiving recommendations beyond the scope of HCV treatment.
- The Indian Country HCV ECHO program provides comprehensive information to primary care providers to effectively integrate evidence-based HCV with holistic, culturally appropriate care.

Future Directions

More work must be done to assess the effectiveness of the Indian Country ECHO program and other ECHO programs throughout Indian Country. The following research is currently being conducted:

- Comparison of patient characteristics by CDC region, specifically investigating if ECHO usage differs in locations with different Medicaid expansion policies.
- Economic costs and benefits assessment of the Indian Country ECHO program.

Limitations

- **Missing Data**
  - 89 (12%) patients presented at Indian Country ECHO did not have treatment recommendations.
  - This may be due to transfer to different ECHO clinics (University of New Mexico or United South and Eastern Tribes) or cases that were scheduled but the presenting clinician was unable to present.
- **Inability to assess treatment outcomes including Hep C cure rate**
- **Observational study limitations**
- **Selection bias**
  - Clinicians engaging in ECHO may be more eager to treat Hep C compared to clinicians who do not engage with ECHO

Acknowledgements & Gratitude

- **Huge thank you to the Northwest Portland Area Indian Health Board ECHO team**
  - David Stephens
  - Nicholas Cushman
  - Brigg Reilley
  - Jessica Reinstra
  - Megan Woodbury
  - Jessica Leston
  - Jorge Mera
  - NW NARCH fellowship
- **Huge thank you to partners at Oregon Health & Science University & University of New Mexico**
  - Ximena Levander
  - Paulina Deming

What questions do you have?

INDIAN COUNTRY ECHO

Visit: IndianCountryECHO.org

Ashley Wirth
Northwest Portland Area Indian Health Board
awirth@npaihb.org