

Socioeconomic Marginalization is Associated with Lower Health Utilities (Quality of Life) in Chronic Hepatitis C Patients

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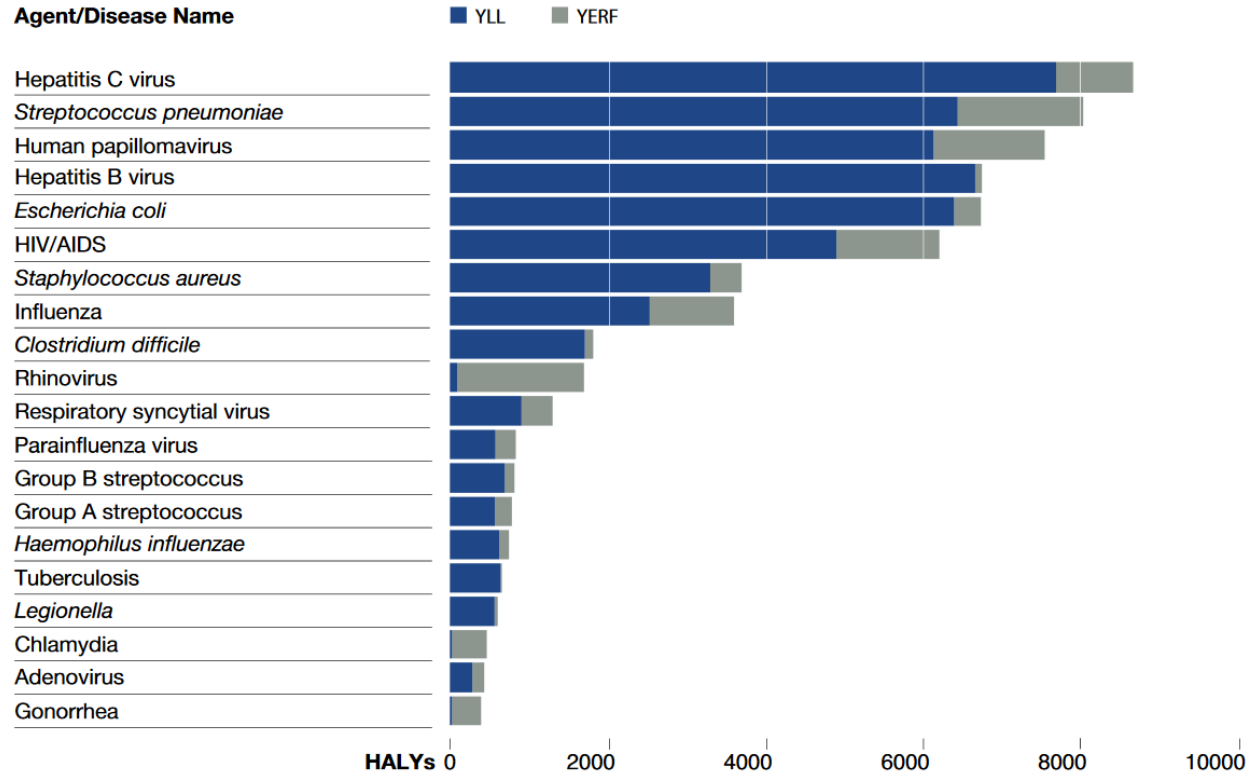
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 - Discovered 1989
 - ~0.7% of Canadians infected
- Transmitted parenterally (i.e. by blood)
 - Blood transfusions before 1992
 - Shared needles during IVDU
- High burden of disease
 - Leading cause of liver transplants in Canada & US
 - Ranked most burdensome infectious disease in Ontario

BACKGROUND

Ontario Burden of **INFECTIOUS DISEASE** Study



Years of life lost due to premature mortality (YLL), year-equivalents of reduced functioning (YERF) and health-adjusted life years (HALYs) for the top 20 pathogens, ranked by disease burden



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 - Higher cure rate, fewer SEs, fewer contraindications
 - **High cost**
 - **Accurate pharmacoeconomic analysis is crucial**

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 - Global measure of health status
 - Range from 0 (dead) to 1 (perfect health)
 - Preference-based
 - Can be measured directly or indirectly

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 - Including PWID, incarcerated, homeless
 - **Major limitation**
 - **Marginalized pop. disproportionately affected by CHC**
 - May experience different QoL

PURPOSE

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- Elicit health utilities (QoL scores) from marginalized CHC patients at community health clinics
 - To address a major gap in the utility literature
 - To enable future economic evaluations to include a more representative sample of hepatitis C patients

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- Community-based interprofessional program
- Provides CHC treatment, support, and education to marginalized individuals
- Difficulty accessing mainstream healthcare due to:
 - Alcohol and/or drug use
 - Low income
 - Past or current homelessness
 - Mental health issues

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- **Unique program that allows us to access this marginalized population**

METHODS

- Pilot study
 - Recruitment complete: 101 patients from TCHCP
- Measuring:
 1. Health utilities and quality of life using standardized instruments
 2. Demographic and clinical information
 3. (Out-of-pocket costs and time costs associated with CHC)

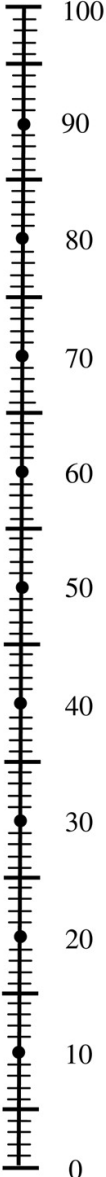
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- Measuring:
 1. Health utilities and quality of life using standardized instruments:
 - EuroQol-5D (EQ-5D)
 - Health Utilities Index Mark 2/3 (HUI2/HUI3)
 - Visual Analogue Scale (VAS)
 - Time Trade-off (TTO)
 - Hepatitis Quality of Life Questionnaire (HQLQ) (includes SF-36)
 2. Demographic and clinical information
 3. Out-of-pocket costs and time costs associated with CHC

Visual Analogue Scale

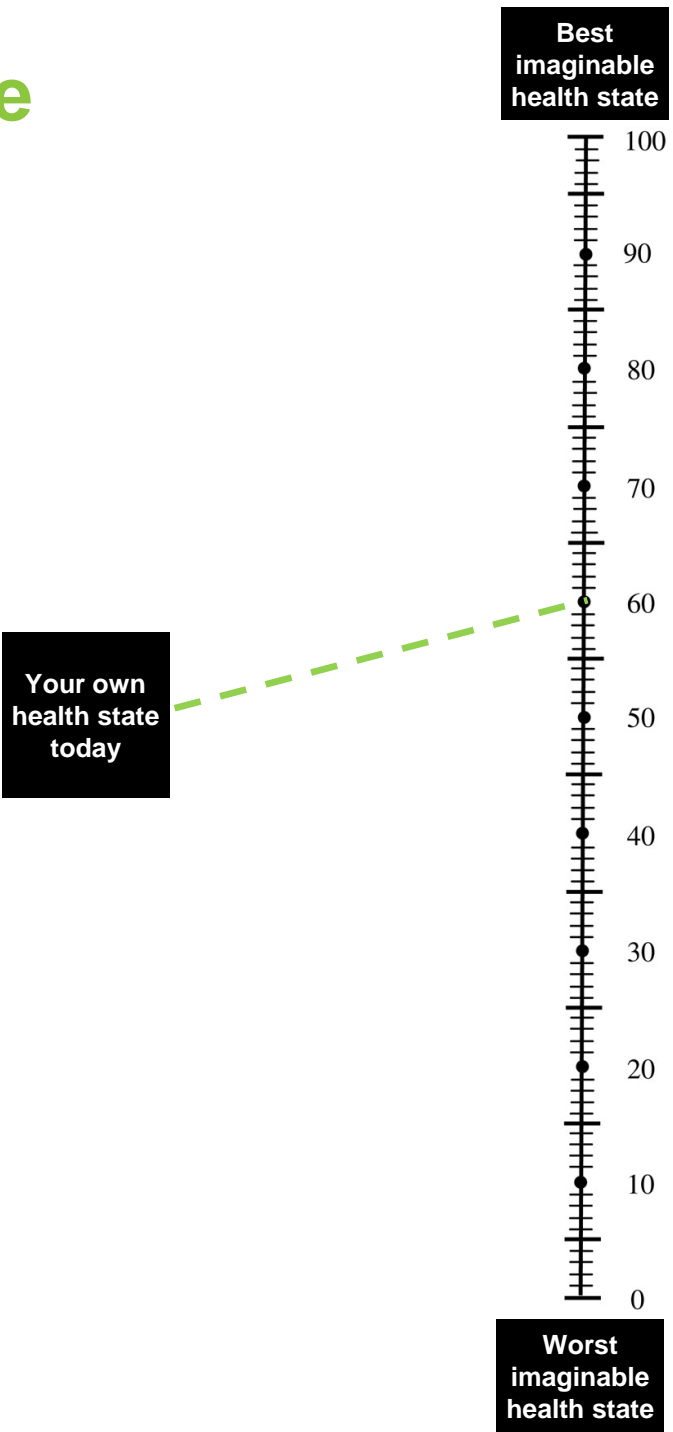
Your own
health state
today

Best
imaginable
health state



Worst
imaginable
health state

Visual Analogue Scale



Health Utilities Index

12. Which one of the following best describes your ability, during the past 2 weeks, to think and solve day to day problems?

- a. Able to think clearly and solve day to day problems.
- b. Had a little difficulty when trying to think and solve day to day problems.
- c. Had some difficulty when trying to think and solve day to day problems.
- d. Had great difficulty when trying to think and solve day to day problems.
- e. Unable to think or solve day to day problems.

13. Which one of the following best describes your ability, during the past 2 weeks, to perform basic activities?

- a. Eat, bathe, dress and use the toilet normally.
- b. Eat, bathe, dress or use the toilet independently with difficulty.
- c. Required mechanical equipment to eat, bathe, dress or use the toilet independently.
- d. Required the help of another person to eat, bathe, dress or use the toilet.

14. Which one of the following best describes how you have been feeling during the past 2 weeks?

- a. Generally happy and free from worry.
- b. Occasionally fretful, angry, irritable, anxious or depressed.
- c. Often fretful, angry, irritable, anxious or depressed.
- d. Almost always fretful, angry, irritable, anxious or depressed.
- e. Extremely fretful, angry, irritable, anxious or depressed; to the point of needing professional help.

RESULTS

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PATIENT CHARACTERISTICS

(mean \pm SD or %) n = 101

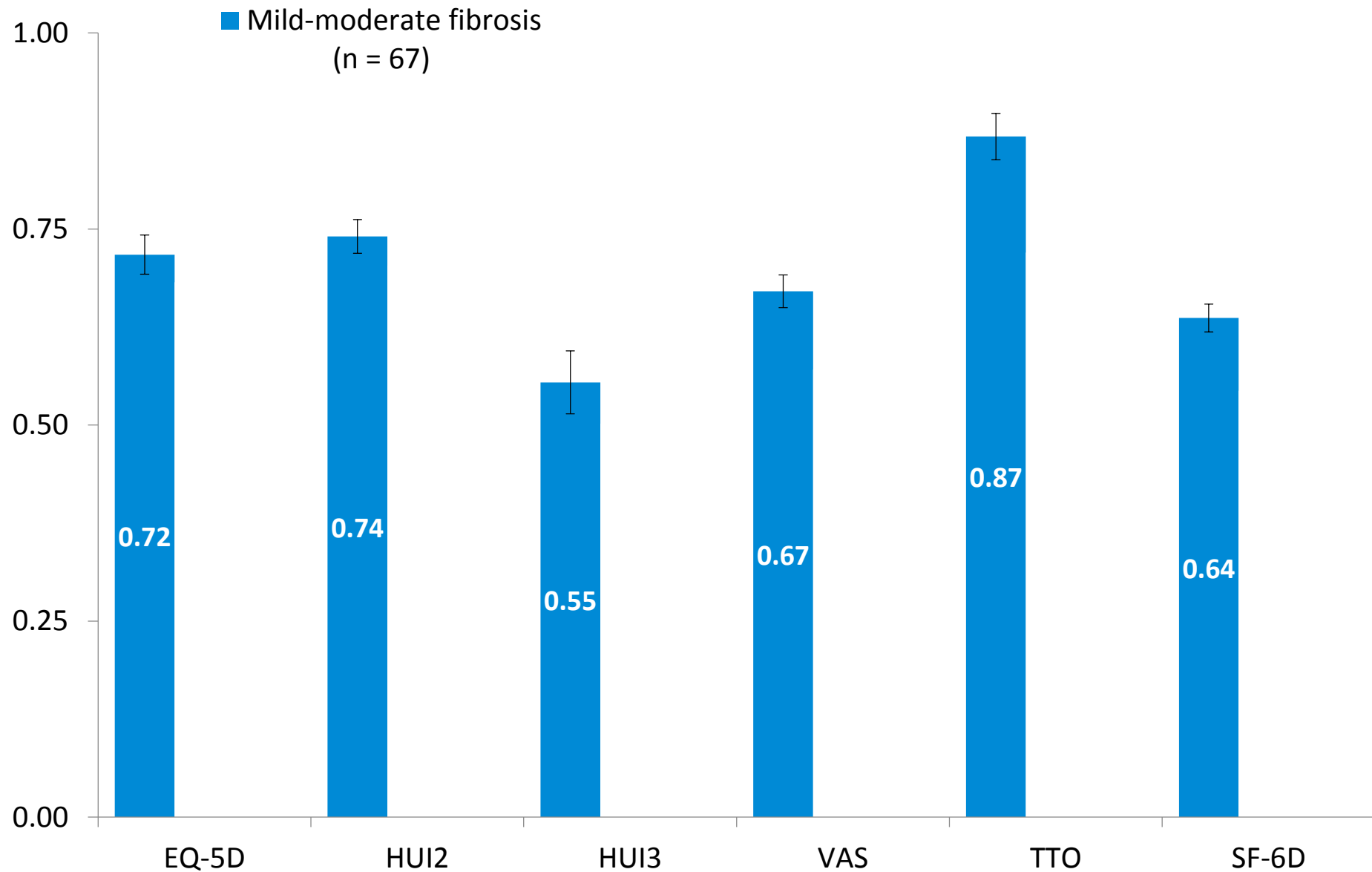
Age	51.2 \pm 9.5
Male	67%
Caucasian	77%
Clinical Characteristics	
Genotype 1 Genotype 2 or 3	62% 30%
Mild/moderate fibrosis Compensated cirrhosis	74% 22%
Decompensated Cirrhosis Hepatocellular Carcinoma	3% 0%
HIV Positive	5%
Charlson Comorbidity Score	0.97 \pm 1.61

RESULTS

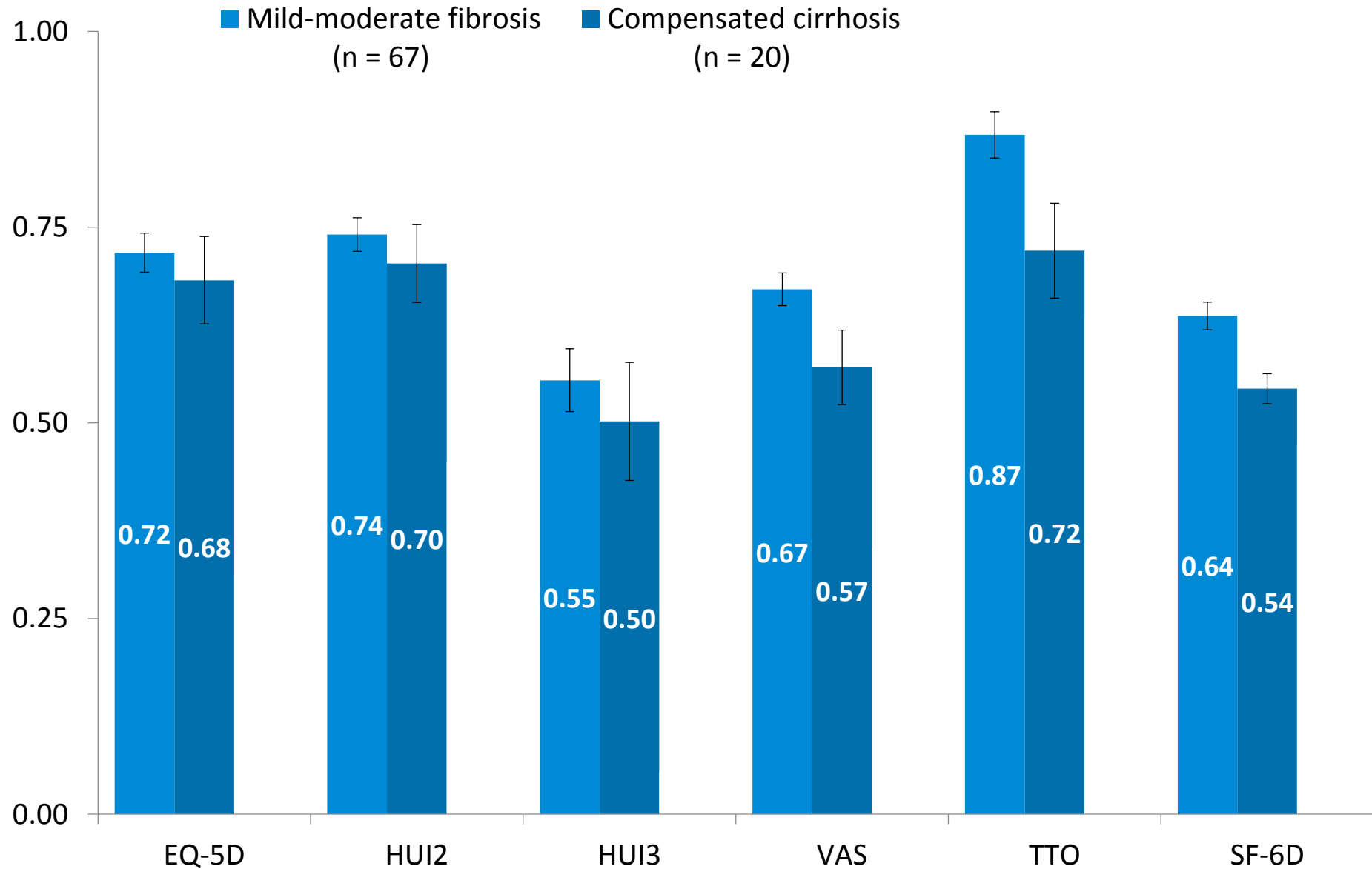
Socioeconomic Characteristics

Born in Canada	89%
Married	8%
Low Education (Completed High School or Less)	62%
Unemployed Receiving Support (Disability Pension or Welfare)	89% 97%
Past IVDU Current IV or Intranasal Drug Use	88% 25%
History of Mental Illness History of Alcohol Dependence	79% 70%
Permanent housing Living on the street	88% 0%

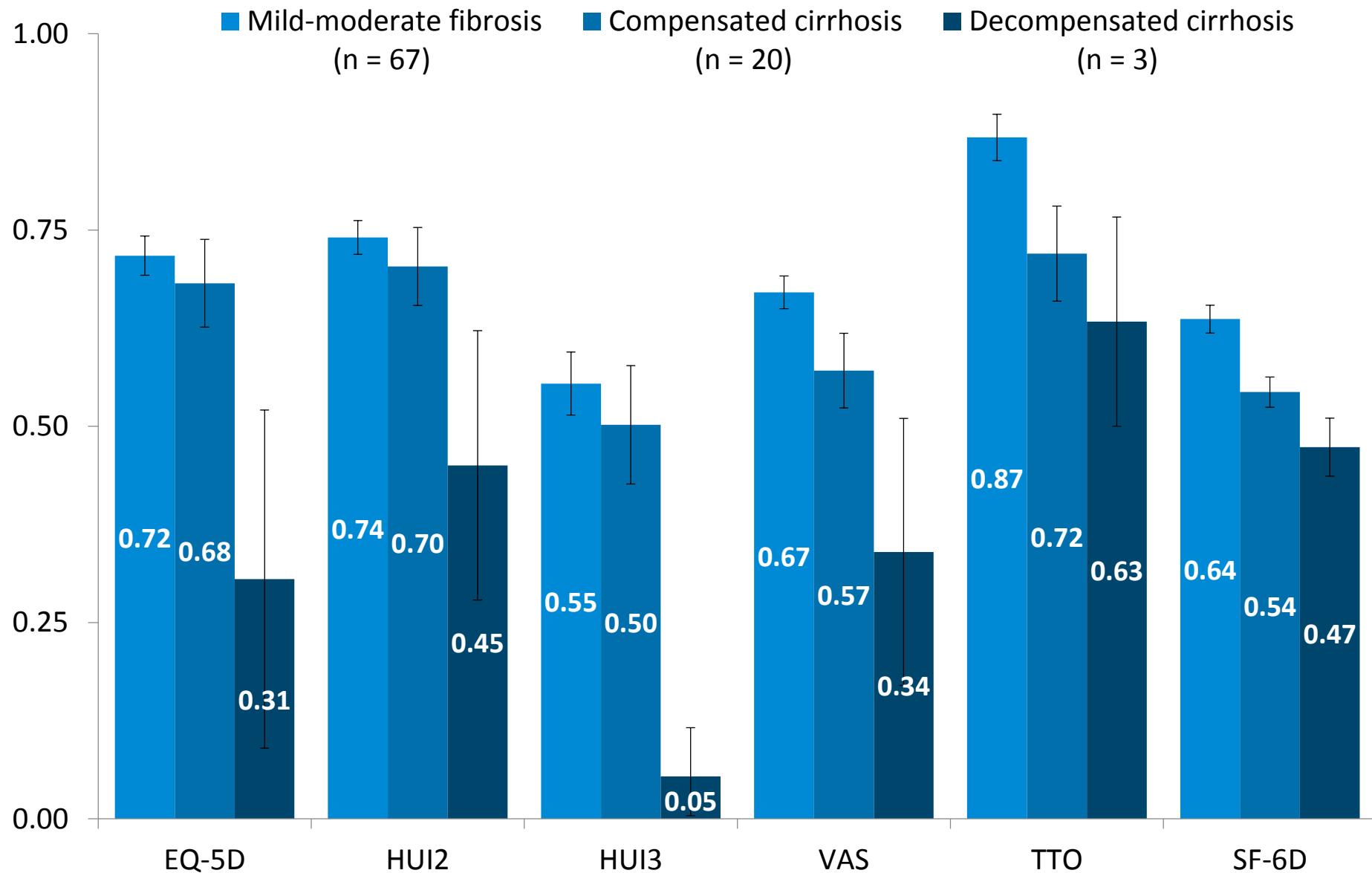
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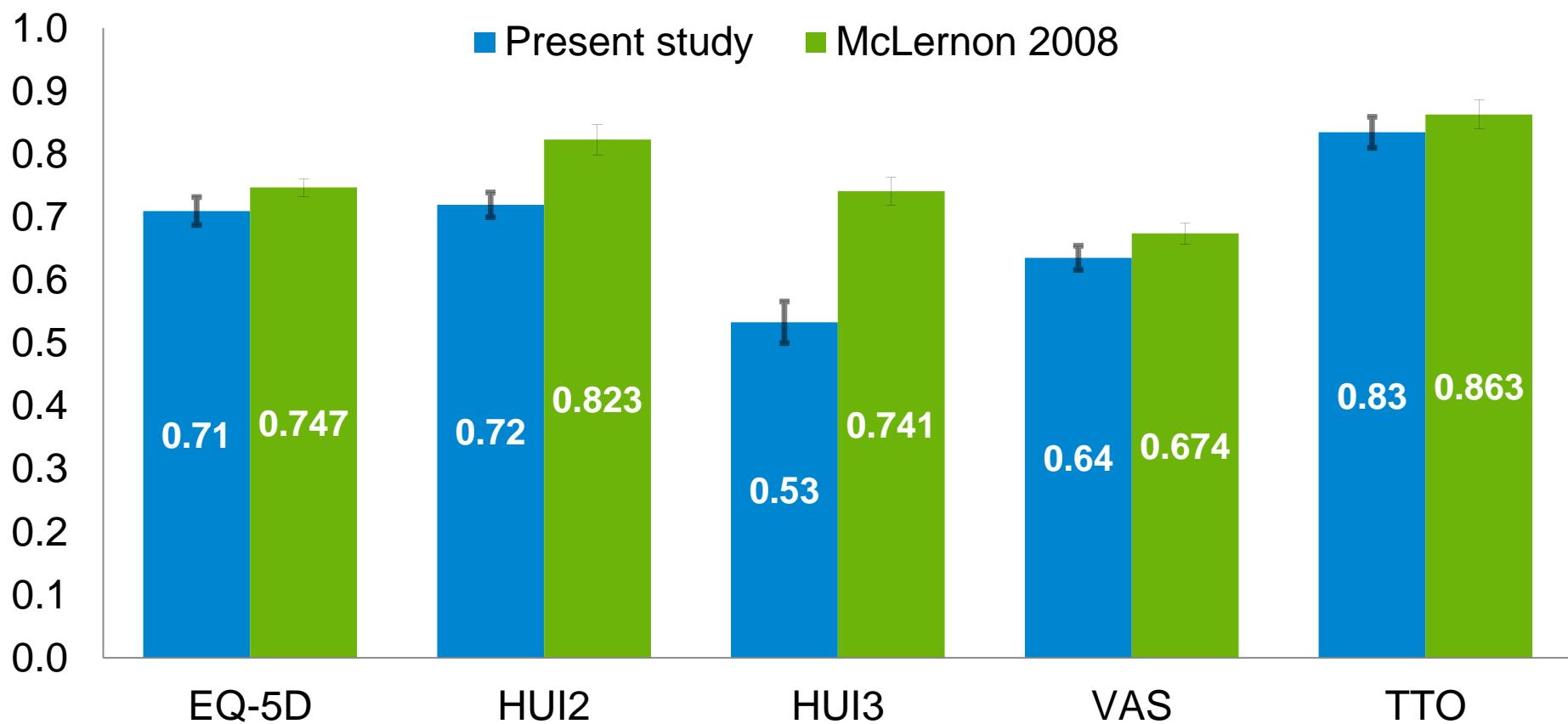


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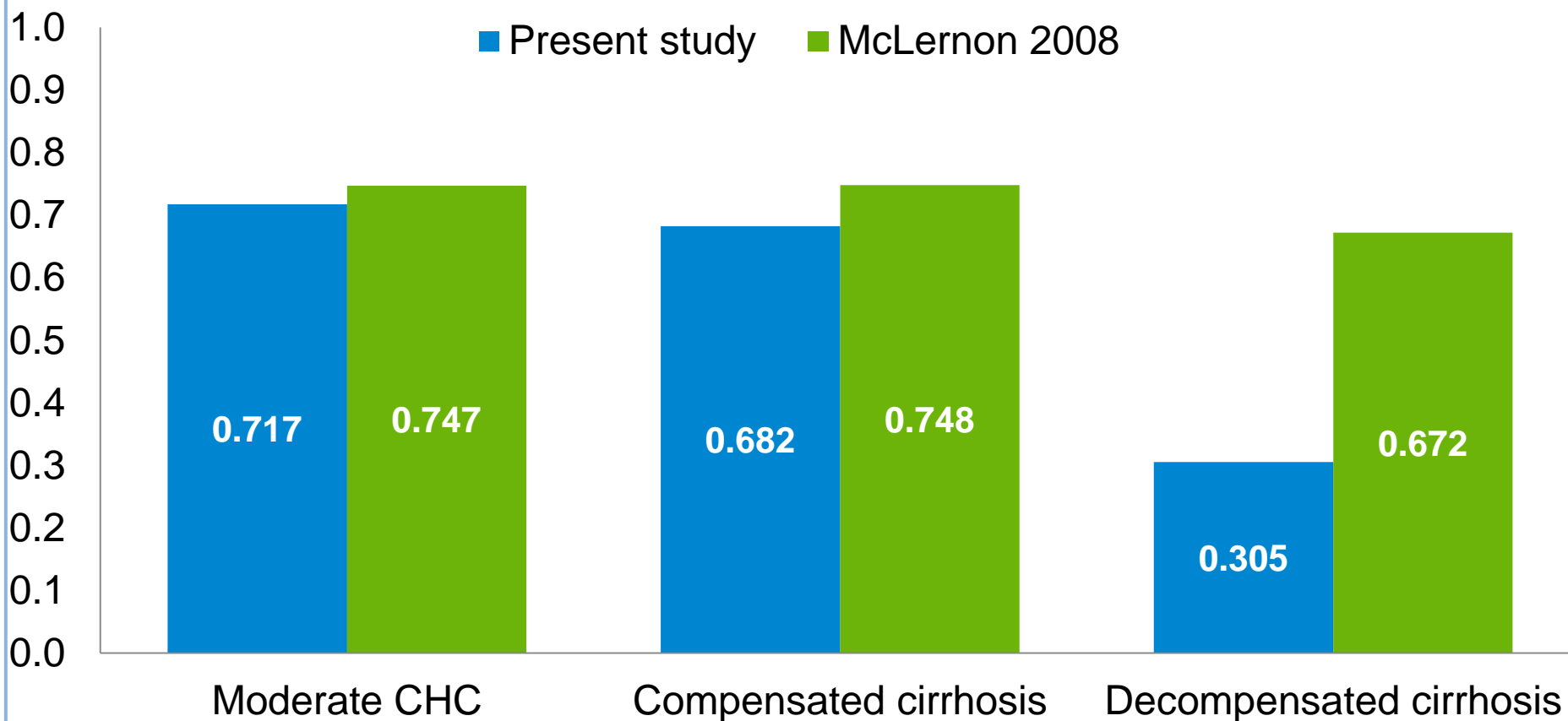
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COMPARISON TO PREVIOUSLY PUBLISHED UTILITIES



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COMPARISON TO PREVIOUSLY PUBLISHED UTILITIES: EQ-5D



RESULTS

REGRESSION ANALYSIS

Variable	Utility Instrument					
	EQ5D	HUI2	HUI3	VAS	TTO	SF-6D
Compensated or Decompensated Cirrhosis	-0.09	-0.10	-0.17	-0.15	-0.15	-0.10
Charlson Comorbidity Index	-0.01	0.00	-0.01	-0.02	-0.01	-0.01
History of IV or Intranasal Drug Dependence	-0.11	-0.05	-0.08	-0.11	-0.03	-0.07
History of Mental Illness	-0.12	-0.08	-0.14	-0.12	-0.13	-0.08
Low Education	0.00	-0.03	-0.13	-0.01	0.02	-0.07

p < 0.05

CONCLUSION

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- Note: some CHC patients more marginalized than ours
 - E.g. currently homeless patients
 - TCHCP has positive effect on patients

CONCLUSION

- **Marginalized CHC patients' utilities are lower than other CHC patients' utilities**
 1. Factors associated with marginalization were prevalent in our patients
 2. Our mean utilities were lower than 2008 systematic review
 3. Regression analysis suggests factors associated with marginalization are associated with lower utilities

CONCLUSION

- **Marginalized CHC patients' utilities are lower than other CHC patients' utilities**
 - **Why?**

Factors Affecting Health-related Quality of Life (HRQoL)			
HCV-related factors		Non-HCV-related factors	
Physiology of HCV	Ability to cope with HCV	Comorbid conditions	Ability to cope with comorbid conditions

NEXT STEPS

- **More utility data need to be collected from marginalized populations**
- **Incorporate into accurate cost-effectiveness analyses of new hepatitis C treatments**

THANK YOU. QUESTIONS?

