



# Partnership between Rural/Tribal Health Systems and Graduate Medical Education to Respond to Syphilis Public Emergency in Great Plains and Southwest Tribes

Ji Yoo, MD<sup>1</sup>, Yonsu Kim, PhD<sup>2</sup>, June Ko<sup>1</sup>, Hanna Namkung<sup>1</sup>,  
Alireza Farabi, MD<sup>3</sup>, Mandana Bozorgi, PhD<sup>3</sup>, Young Sung Kim, MD, PhD<sup>1,4</sup>

<sup>1</sup>Nevada Interprofessional Healthy Aging Network (NIHAN), Kirk Kerkorian School of Medicine at UNLV, Las Vegas, NV, USA,

<sup>2</sup>UNLV School of Public Health, Las Vegas, NV, USA, <sup>3</sup>Farabi Wellness Center, Las Vegas, NV, USA,

<sup>4</sup>Department of Anesthesiology and Pain Medicine, College of Medicine, Korea University, Seoul, Korea

HEOR Impact Cases  
Poster Session 1  
Poster Code: IC2  
Control #2225

## Problem Statement

■ Syphilis cases soared rampantly during 2021-2022. More rampant syphilis cases soar has been observed among American Indian and Alaska (AI/AN) people, more specifically, Great Plains and Southwest Tribes where syphilis cases had skyrocketed by 1,865%, during 2020-2022. Most service areas of these Great Plains and Southwest Tribes are rural or/and underserved communities where healthcare provider shortage is structural challenge of resolving above syphilis emergency. Another challenge of fighting syphilis emergency, particularly, among women in reproductive age (WRA) individuals of the Great Plains and Southwest Tribes is social and cultural norms regarding sexual health in rural communities where their social networks are small and relationships overlap

## Description

■ Intervention: Clinical rotation partnership between UNLV Kirk Kerkorian School of Medicine (GME) and the Ely Shoshone Tribal Health System to address the syphilis emergency among WRA in Great Plains and Southwest Tribes.

■ Methods:

Adopted a Markov simulation model (Figure 1) from a healthcare system (D-SNP) perspective.

- Simulated a cohort of 25-year-old Ely Shoshone women over a 19-year time horizon.
- Goal: Project the timeline and cost of returning syphilis epidemiology to pre-2020 levels.
- Methodology based on: Chesson HW et al. (2021) and Kim et al. (2025).
- Software: Treeage Pro Healthcare 2026
- Disease Stage Transition  
PS (Primary Syphilis), SS (Secondary Syphilis), LS (Latent Syphilis), TS (Tertiary Syphilis), Cure, Death
- Hypothesis: Clinical partnership will reduce the progression from PS, SS, and LS stages to more advanced stages

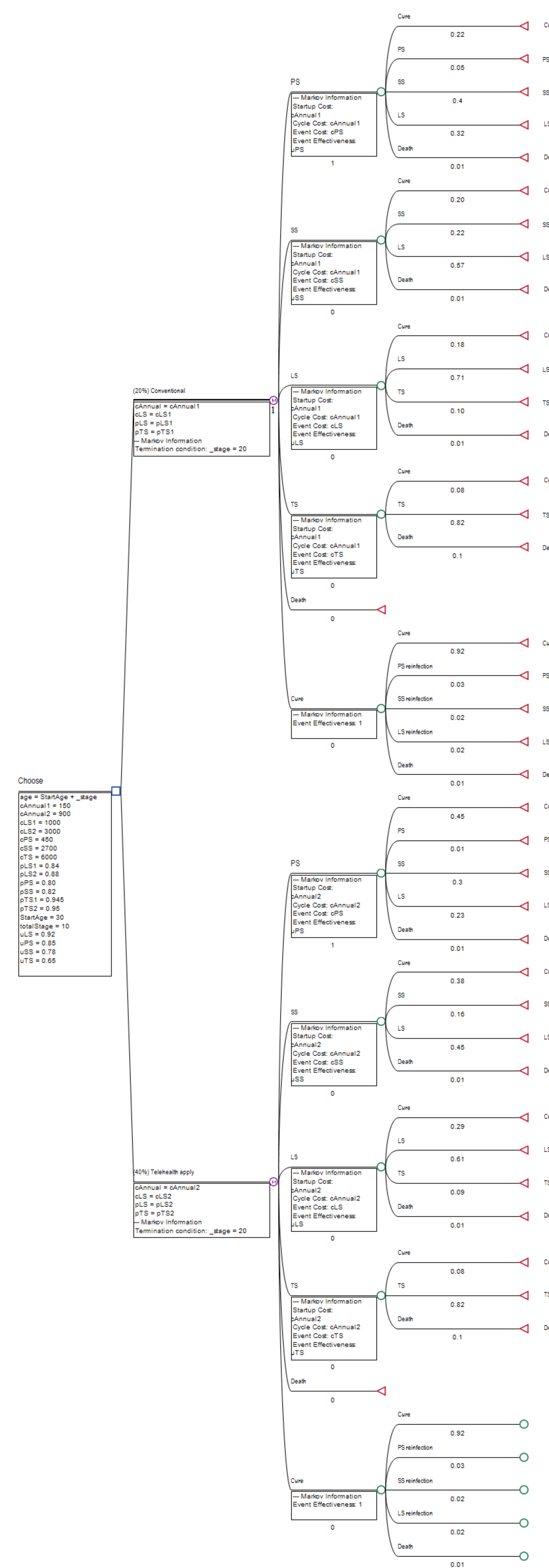


Figure 1. Markov model for syphilis

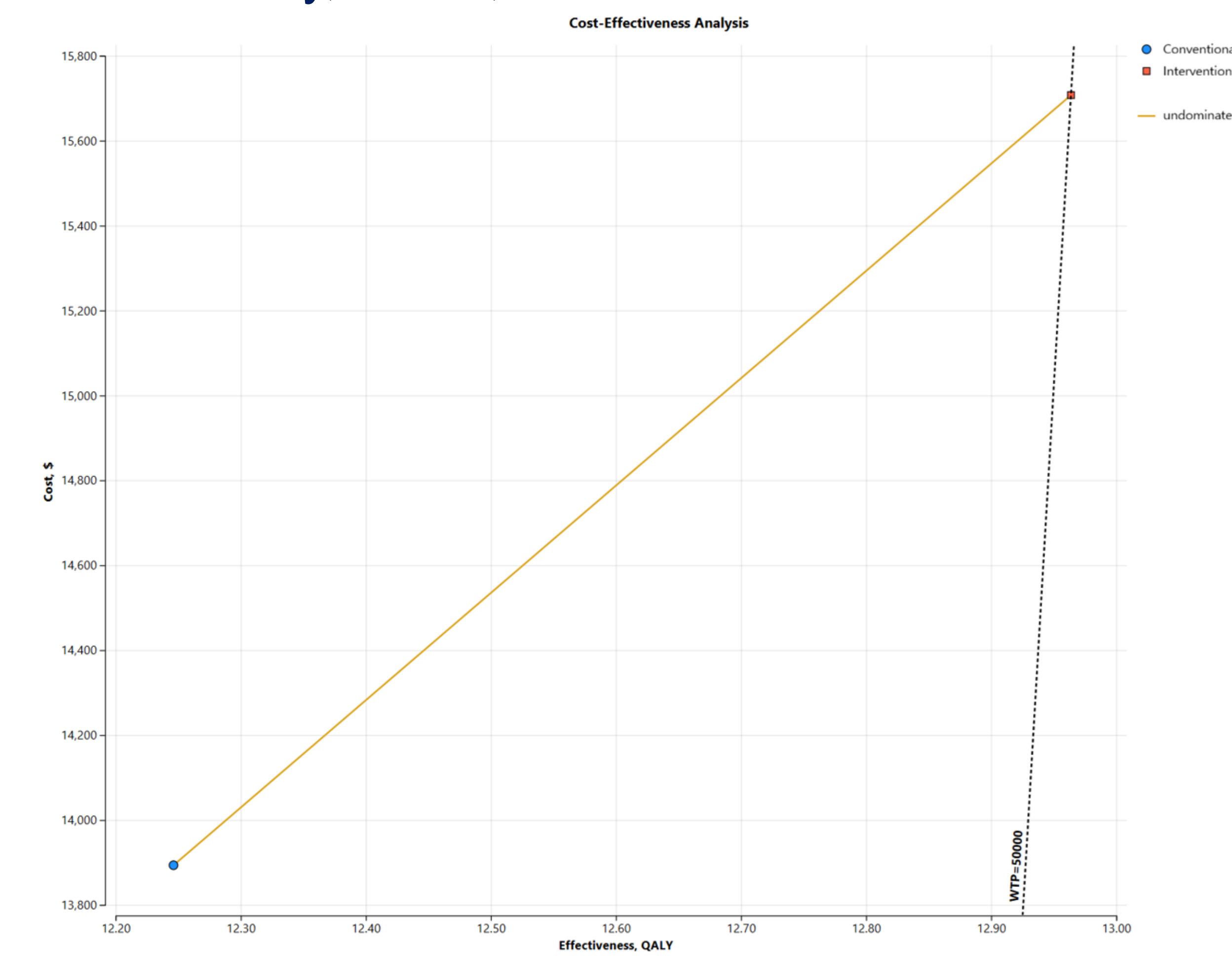


Figure 2. Cost-effective analysis

■ Results  
The partnership was estimated to be cost-effective. (Figure 2)

- Incremental Cost: \$1,814
- Incremental Effectiveness: 0.72 QALYs
- ICER: \$2,527 / QALY

## Lesson Learned

■ Culturally adaptive sexually transmitted infection (STI) curriculum for the WRA tribal individuals and their partners implemented by the GME multispecialty clinical rotation was prioritized and implemented in 2024. In terms of recruitment and retention of rural practitioners, rural exposure during GME training promotes non-rural students and trainees to choose rural career pathway after their graduation; rural training is more strongly associated with rural practice than having a rural background. This prioritized partnership between academia and rural/tribal health systems aligns with the Center for Medicare and Medicaid Services' Rural Health Transformation to recruit and retain healthcare providers in rural and tribal communities.

## Stakeholder Perspective

■ Healthcare system perspective with government-affiliated organizations (state-controlled high education system, Tribal Health System, Critical Access Clinic and Hospitals), and patients/caregivers with government payors (Indian Health Service, Tribal Employer Contribution, Medicaid or dual special needs plan)

## Funding Disclosure: US HHS HRSA U1QHP53032