Economic Evaluation of Youth Gathering of Native Americans (GONA) - A 2026 Special Report

Members of the Native American Health Center & Queen's University

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About this special report—

American Indian and Alaska Natives (AI/AN) face significant racial and ethnic stereotyping, which is associated with poor healthcare access, patient trust, and satisfaction (Findling et al., 2020; Wylie et al., 2019). In addition, health disparities impose significant economic burden on societies (National Institutes of Health, 2023; Public Health Agency of Canada, 2016; LaVeist et al., 2023; Jacobs et al., 2023; Reid et al., 2023; Jeffreys et al., 2023). Development of validated instruments measuring cultural connectedness has demonstrated that increased cultural connectedness is associated with improved health outcomes among AI/AN communities (Snowshoe et al., 2015, 2017; Masotti et al., 2020; Masotti et al., 2023). Snowshoe et al. identified a positive relationship between cultural connectedness and Indigenous youth mental health, as measured by the Cultural Connectedness Scale (CCS) (Snowshoe et al., 2015, 2017). The CCS was adapted to create the CCS-California (CCS-CA) to meet the needs of the heterogenous and multitribal AI/AN population in urban California (King et al., 2019). Masotti et al. also demonstrated that increased connectedness to culture, as measured by the Cultural Connectedness Scale-California, is significantly associated with improved mental health and wellbeing, life satisfaction, and reduced risk of depression (Masotti et al., 2020; Masotti et al., 2023). These results assert the notion that instruments such as CCS-CA can be used as viable health outcome measures.

This special report provides some preliminary information regarding the economic impact of the Gathering of Native Americans (GONA) program among AI/AN youth in California. This project was initiated by Native American Health Center (NAHC) who contacted Queen's University, Canada, for expertise, consulting, and technical assistance in conducting a retrospective economic evaluation of the GONA in a collaborative partnership.

A cost-effectiveness analysis of GONA was conducted from the healthcare payer's perspective using standard costing techniques (Drummond et al., 2015; Gold et al., 1996), evaluating American Indians and Alaksa Natives (AI/ANs) adults (18-28 years old) who had attended

GONA as a youth (18 years and younger) compared to AI/AN adults (18-28 years) who never attended a GONA (non-GONA participants). Costs were reported in 2023 US dollars. A retrospective cohort study design was used to evaluate 'down-stream' effectiveness through self-reported questionnaires [Cultural Connectedness Scale-California (Snowshoe et al., 2015, Masotti et al., 2020, King et al., 2019); CAGE-AID (Brown et al., 1995); Centre of Epidemiological Studies of Depression Scale Short Form (Andresen et al., 1994); Health Related Quality of Life 4 dimension (Moriarty et al., 2003); Satisfaction with Life Scale (Diener et al., 1985); Life Changers Scale (Masotti et al., 2025)]. All questionnaires have been previously validated, except for the Life Changers Scale, which was developed by GONA facilitators and AI/AN youths due to a lack of appropriate measures assessing empowerment and connection to community among AI/ANs. Participants filled out a survey and self-reported healthcare utilization over the previous year. Multiple linear, logistic, negative binomial and Poisson regressions were conducted depending on data distribution, adjusting for age and gender following Wilcoxon's and t-tests.

Preliminary downstream effectiveness results (measured as cultural connectedness, satisfaction with life, limited health days, empowerment/family/community connectedness) have been presented in the Canadian Society for Epidemiology and Biostatistics (CSEB, 2026) conference.

Despite a relatively small sample (GONA, N = 30, non-GONA, N = 39), we found statistical differences in GONA participants, compared with those who did not attend GONA: on average, scored 15 points higher on the cultural connectivity scale (β=14.61, 95% CI: 4.43 to 24.79), 3 points higher on the satisfaction with life scale (β=2.81 95% CI: 0.80 4.81), 6 points higher on the community connectedness scale (β=5.49, 95% CI: 2.79 to 8.19), and experienced 58% fewer limited health days (IRR=0.42, 95% CI: 0.21 to 0.85), after adjusting for age and gender.

The GONA intervention costs were $3,934.59 per participant. While non-significant, GONA participants experienced 30% less emergency department visits, 50% less hospitalization days, and 14% less urgent clinic visits. A preview of the cost-effectiveness results showed that the GONA intervention cost between $210.21 to $264.07 per point increase in cultural connectedness, $1,305.07 to $1,639.41 per point increase in satisfaction with life, $614.15 to $771.49 per limited health day averted, and $580.03 to $728.63 per point increase in empowerment/family/community connectedness.

These results support the previous findings on the effectiveness of GONA, as a culture-based intervention, in addressing health outcomes among AI/ANs, having been described as a "cultural booster shot" (California Reducing Disparities Project, 2024).

This special preliminary report sheds light to considerable downstream benefits and societal cost savings that could accrue from the implementation of GONA.

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