Siamit: A Novel Academic–Tribal Health Partnership in Northwest Alaska

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Abstract

Problem
American Indians and Alaska Natives hold a state-conferred right to health, yet significant health and health care disparities persist. Academic medical centers are resource-rich institutions committed to public service, yet few are engaged in responsive, equitable, and lasting tribal health partnerships to address these challenges.

Approach
Maniilaq Association, a rural and remote tribal health organization in Northwest Alaska, partnered with Harvard Medical School to address health care needs through physician staffing, training, and quality improvement initiatives. This partnership, called Siamit, falls under tribal governance, focuses on supporting community health leaders, addresses challenges shaped by extreme geographic remoteness, and advances the mission of academic medicine in the context of tribal health priorities.

Outcomes
Throughout the 2019–2020 academic year, Siamit augmented local physician staffing, mentored health professions trainees, provided continuing medical education courses, implemented quality improvement initiatives, and provided clinical care and operational support during the COVID-19 pandemic. Siamit began with a small budget and limited human resources, demonstrating that relatively small investments in academic–tribal health partnerships can support meaningful and positive outcomes.

Next Steps
During the 2020–2021 academic year, the authors plan to expand Siamit’s efforts with a broader social medicine curriculum, additional attending staff, more frequent trainee rotations, an increasingly robust mentorship network for Indigenous health professions trainees, and further study of the impact of these efforts. Such partnerships may be replicable in other settings and represent a significant opportunity to advance community health priorities, strengthen tribal health systems, support the next generation of Indigenous health leaders, and carry out the academic medicine mission of teaching, research, and service.

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Approach
This report describes a novel partnership between Maniilaq Association (a rural and remote tribal health organization in Northwest Alaska), Massachusetts General Hospital (MGH), and the Harvard Medical School (HMS) Center for Global Health Delivery to address health care disparities through physician staffing, training, and quality improvement initiatives. This partnership, called Siamit (say • mit, Inupiat, meaning to spread or scatter), leverages the resources of an AMC (MGH) and medical school (HMS) to promote community health. We believe Siamit advances several innovations in both academic medicine and tribal health. The partnership was initiated by the tribal health organization and falls under tribal governance, focuses on supporting community health leaders, addresses challenges shaped by extreme geographic remoteness, and advances the mission of academic medicine in the context of tribal health priorities. This model may be replicable for other AMCs, medical schools, tribes, and tribal health organizations.

Maniilaq Association is a nonprofit corporation representing 12 federally recognized tribes located across 40,000 square miles of Northwest Alaska. The region’s estimated 8,400 residents, approximately 83% of whom are Inupiat Alaska Native, live in 11 remote villages and the regional hub city of Kotzebue. No roads connect the villages to each other or to the rest of the state, so travel takes place by small aircraft and seasonally by boat or snowmobile. Maniilaq Association operates a 17-bed critical access hospital, Maniilaq Health Center (MHC), in Kotzebue. Care in the 11 remote villages is provided by local community health aides, with primary care physicians or advanced practice clinicians visiting monthly. The nearest tertiary care center is 550 air miles away, making MHC the second-most remote hospital in the United States.

Maniilaq Social Medicine, a center for health system strengthening at Maniilaq Association, began foundational work for Siamit in 2016 through a series of collaborations with the MGH Division of Wilderness Medicine, the MGH rural medicine programs, and the HMS Department of Global Health and Social Medicine. Early work included specialized continuing medical education (CME) courses, physician staffing, a clinical consultation network, and a summer internship program for Indigenous youth pursuing health careers.

Today, Siamit’s mission—to provide world-class care while training the next generation of tribal health leaders—is supported by an interlocking set of partnerships, shared faculty and trainees, and a joint governance structure between Maniilaq Association, MGH, and HMS. Siamit is a Health Equity Action Lab at the HMS Center for Global Health Delivery, led by a community and faculty advisory board and answerable to Maniilaq Association’s tribal board of directors.

In Northwest Alaska, Siamit has several core objectives: (1) to support high-quality clinical care through physician staffing; (2) to provide mentorship, training opportunities, and career support for community members pursuing health careers; (3) to improve care quality through educational and quality improvement initiatives; and (4) to train medical students, residents, fellows, and faculty pursuing careers in Indigenous health. As the COVID-19 pandemic emerged, the partnership adapted to provide additional disaster preparedness guidance and clinical care. The remainder of this report will describe Siamit’s progress toward these aims during the 2019–2020 academic year.

Outcomes
Clinical care
During the 2019–2020 academic year, 1 MGH wilderness medicine fellow and 1 MGH global medicine fellow designated MHC as their primary site and committed to 8–12 weeks of clinical work in Alaska, divided throughout the year, combined with longitudinal involvement in educational and quality improvement projects. Two additional fellows (1 from MGH and 1 from the University of Washington) participated in shorter clinical rotations (2–4 weeks) throughout the year. These rotations were scheduled based on anticipated gaps in MHC’s clinical schedule to address staffing shortages. During the 2019–2020 academic year, Siamit physician fellows provided an estimated 1,800 hours of patient care in field clinic, primary care, emergency room, and inpatient settings.

Siamit physician staffing allowed for the significant expansion of village field clinics, which was frequently noted by community members as a strength of the program. Staffing the emergency room with emergency physicians (as opposed to family physicians, which is common at many rural tribal health organizations) was an additional asset. All 4 fellows plan on remaining involved in Indigenous health, with 2 joining Siamit faculty and 2 still completing their fellowships.

Health professions pathways
Throughout the 2019–2020 academic year, Siamit significantly expanded its faculty and established a mentorship network that links Indigenous youth interested in pursuing health careers with faculty in their area of interest. Two community trainees, in nursing and social work, completed their education and joined the Siamit team as clinician-mentors for aspiring health workers in the region. MGH fellows served as preceptors for 4 advanced practice clinicians and medical students participating in remote medicine rotations, which include emergency medicine, primary care, home visits, and cultural and health equity education. One local Siamit faculty member taught a rural medicine independent study course at HMS and supported the participating student in conducting an evaluation of a traditional foods program with the region’s Elder care facility.

In November 2020, Siamit launched a dedicated fellowship in partnership with Maniilaq Social Medicine and the HMS Center for Global Health Delivery, called the Della Keats Fellowship in Indigenous Health Equity. The first fellow, a former Siamit youth intern from Northwest Alaska, joined the Siamit team with joint MHC and HMS appointments.

Continuing medical education
Since 2016, Siamit has delivered monthly CME courses focused on health and care in Native America, with curricula developed through annual community needs assessments. During the 2019–2020 academic year, these recurring
CME events, titled Social Medicine Grand Rounds, were led by 2 fellows, who planned the curriculum with Siamit faculty after rotations caring for patients in the hospital, village clinics, and at home. MHC leadership identified emergency and critical care basics as an additional need, so the course incorporated this focus in combination with a planned theme of substance use disorders and behavioral health in primary care. The MHC provider team voted on which topics within those themes to include.

Synthesizing local experience and subspecialty expertise at MGH, the resulting curriculum covered sepsis, alcohol use disorder, chest pain, airway management, posttraumatic stress disorder, and chronic pain. The course provided practical clinical approaches and protocols that are feasible to incorporate in a remote primary care setting or a small emergency department staffed by a single physician, combined with a framework that views these topics through the lens of social medicine.

Maniilaq Social Medicine provided local faculty and funding to cover the cost of CME accreditation for the monthly grand rounds through Mass General Brigham. This program was adapted to a podcast format and retitled Siamit Rounds during the pandemic, with approximately 200 tribal health workers across the nation listening weekly as of December 2020.

Alongside formal CME, Siamit physicians provided informal teaching on clinical reasoning, evidence-based medicine, procedural skills, and point-of-care ultrasound use. Local faculty provided mentorship and formal teaching for Siamit fellows during their time in Alaska, including curricula on communication, cultural safety, family and community health, and social medicine.

Quality improvement initiatives

Quality improvement initiatives during the 2019–2020 academic year emerged through the CME course, focusing on critical care, behavioral health, and substance use disorders. Siamit fellows created a unique sepsis protocol and order set, which include guidelines compatible with telemedicine and resource limitations in remote village clinics. To address wide variability in training and experience with airway management, the Siamit team developed an airway checklist and training materials, which reviewed ventilator basics tailored to the available equipment. Finally, to expand care for alcohol use disorder as an extension of MHC’s primary care–behavioral health integration initiative, Siamit fellows created a system to help providers incorporate motivational interviewing and administer naltrexone in primary care clinics, in the emergency department, and in village clinics via telemedicine.

As of December 2020, the sepsis order set and protocol continue to be used by MHC providers. The airway checklist and ventilator education materials were viewed by all emergency department staff and became critical pieces of the COVID-19 pandemic response plan. MHC’s integrated psychiatry and medication-assisted treatment programs supported 288 patients during the 2019–2020 academic year.

Pandemic preparedness

During the COVID-19 pandemic, Siamit faculty and fellows provided both clinical care and operational support in Alaska. As Massachusetts was an early COVID-19 epicenter, MGH and HMS members of the Siamit team leveraged frontline experience to help develop site-appropriate COVID-19 plans and procedures for the region. Two fellows from the 2019–2020 academic year cohort returned to MHC to provide emergency care during the pandemic. The Siamit team further worked with local staff to develop public health messaging and address community questions. As of December 2020, COVID-19 cases continue to rise in Northwest Alaska and protocols for patient screening and care designed in collaboration with Siamit faculty and fellows remain active.

Next Steps

Our experience demonstrates that a partnership between a large AMC, medical school, and tribal health organization can play a role in supporting community priorities for staffing, training, quality improvement, and health planning. This program began with a small budget and limited human resources, demonstrating that relatively small investments in academic–tribal health partnerships can support meaningful and positive outcomes. Such partnerships may be feasible to replicate in other Indigenous communities and at other academic institutions.

During the 2020–2021 academic year, we plan to expand these efforts with a broader social medicine curriculum, additional attending staff, more frequent trainee rotations, an increasingly robust mentorship network for Indigenous health professions trainees, and further study of the impact of these efforts. The Delta Keats Fellowship in Indigenous Health Equity will expand to 2 providers beginning in 2021 and will further support the development of Siamit’s research program.

Building responsive, equitable, and lasting academic–tribal health partnerships represents a significant opportunity for AMCs to further their mission of teaching, research, and service and to address critical issues of health and health care equity. Through such partnerships, the resources of a large AMC and medical school can be leveraged to support community health in practical and replicable ways.

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