Methodology for Evaluating Models of Telemental Health Delivery Against Population and Healthcare System Needs: Application to Telemental Healthcare for Rural Native Veterans

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Abstract

Background: Rural American Indian and Alaska Native (AI/AN) Veterans face exceptional barriers to receiving quality mental healthcare. We aimed to identify models of in-person and telemental health service delivery with promise for adaptation and wide dissemination to rural AI/AN Veterans.

Methods: Our method for matching specific populations with models of care includes (1) selecting frameworks that represent the healthcare organization's goals, (2) identifying relevant service delivery models for the target population(s), (3) assessing models against the selected frameworks, and (4) summarizing findings across models. We applied this approach to rural AI/AN Veteran populations.

Results: Searches identified 13 current models of service delivery for rural AI/AN Veteran, rural AI/AN, and general rural Veteran populations. These models were assessed against four frameworks—the U.S. Department of Veterans Affairs' Office of Rural Health's Promising Practices, Veterans Health Administration's Guide to Mental Health Services, the Institute for Healthcare Improvement's Triple Aim Framework, and the American Indian Telemental Health Clinic framework.

Discussion: The one model used for service delivery for rural AI/AN Veterans increases access and is patient-centered but lacks operational feasibility. Models for rural AI/ANs also increase access and are patient-centered but generally lack effectiveness evaluations. Models for rural Veterans demonstrate beneficial effects on mental health outcomes but do not emphasize cultural adaptations to diverse populations.

Conclusions: Our approach to selecting models of service delivery considers the needs of operational partners as well as target populations and emphasizes large-scale im-

plementation alongside effectiveness. Pending further testing, this approach holds promise for wider application.

Keywords: mental health services, North American Indian, rural population, Veterans' health, telemedicine

Introduction

American Indian and Alaska Native (AI/AN) Veterans who serve in the military at higher rates relative to other groups^{1,2} are the most rural of any Veteran population³ and suffer consequences of military services disproportionately.^{3–7} Studies of Veterans across multiple service eras have demonstrated that AI/AN Veterans are more likely than their white counterparts to have diagnoses of post-traumatic stress disorder (PTSD), mood disorders, substance use disorders, and traumatic brain injury.^{4,5,8} Despite higher prevalence of mental illness, evidence on relative use of mental health services is mixed when comparing AI/AN Veterans with white Veterans.^{8–10} Several barriers contribute to poorer service utilization by AI/AN Veterans, particularly rural AI/AN Veterans, including lack of health insurance,^{7,11} transportation problems,¹¹ navigating the health system,¹¹ and difficulty discussing personal matters.¹² Perceived cultural barriers to accessing the U.S. Department of Veterans Affairs (VA) system include its inconvenience, its lack of outreach and assistance to AI populations, and Veterans' concerns about trust and prejudice.^{12–14}

To improve mental health service delivery to rural AI/AN Veterans, the VA Rocky Mountain Healthcare Network (VISN 19) and Office of Rural Health (ORH) developed a unique clinical telemental health (TMH) model in partnership with the Centers for American Indian and Alaska Native Health at the University of Colorado Anschutz Medical Campus. The American Indian Telemental Health (AITMH) model of care comprises four key components: (1) mental healthcare, (2) technology (telehealth connecting a patient site and a provider site), (3) intensive care coordination, and (4) specific cultural facilitation.¹⁵ This comprehensive direct care model is distinct from other models of TMH in that the team providing

mental healthcare also does intensive outreach and care coordination. Care coordination addresses barriers to mental wellness like homelessness, food security, and complex physical health needs but is also more resource intensive than other models. Cultural facilitation ensures care addresses unique local cultural issues and is appropriate and effective in the eyes of the community through partnerships with local representatives (Tribal Outreach Workers, Tribal Veterans Representatives, traditional healers, tribal councils).^{15,16}

Although the AITMH clinic model has logged more than 7,500 patient visits since its inception in 2002,¹⁵ with a number of studies showing its feasibility, cost benefit, and efficacy,^{17–22} clinics outside VISN 19 have struggled with integration into the system-wide VA mental health architecture. Local adaptation challenges operational feasibility because considerable resources are required to identify and maintain physical space and equipment for each patient clinic site.

Despite the challenges of implementing the AITMH clinic model, using telehealth to deliver care to rural AI/AN Veterans has proven effective for individual Veterans. TMH increases the efficiency of care, improves service utilization, and improves outcomes, as demonstrated in this population and others.²³ As the largest provider of telehealth services in the country, VA has the capacity for increasing service to rural AI/AN Veterans, but other models of TMH service delivery may be easier to implement and equally effective.

With support from ORH, we undertook a review to evaluate the potential of other promising mental health service delivery models for successful application to rural AI/AN Veteran telehealth. One of the challenges of surveying the field of telehealth is how to identify which models of care best fit a specific population or service need. To our knowledge, no systematic approach exists to assess the fit of a model,^{24,25} despite a burgeoning number of models, treatments, and unique clinical services from which to select; therefore, we developed a process to evaluate identified models for service delivery against different frameworks for improving healthcare in both VA and non-VA settings. The aims of this article are twofold: first, we summarize the review process that we developed; second, we share our application of the review process to a specific review of service delivery models for rural AI/AN Veterans.

Methods

METHODOLOGY

We followed a stepwise process for this review:

- (1) Framework selection. Identify key frameworks against which to assess clinical models. In this article, we define

“framework” as a set of broad standards or guidelines for improving healthcare and “model” as a conceptualization of the way that a particular healthcare service is provided to patients.

- (a) Survey literature and agency/organization guidelines for key frameworks for healthcare improvement.
 - (b) Choose frameworks that reflect institutional goals for improved healthcare and needs of the target population.
 - (c) Review and operationalize framework criteria.
- (2) Model identification. Conduct a literature search to identify clinical models of care relevant to the target population and specific to the desired clinical service.
 - (a) For underserved populations where service delivery models are rarer, consider expanding searches to include models for populations that share some characteristics with the target population.
 - (b) Group identified reports, articles, and other documents by clinical model.
 - (3) Create a matrix to assess each clinical model against the selected framework criteria.
 - (4) Summarize and evaluate matrix findings.

METHODOLOGY APPLICATION

- (1) Framework selection
 - (a) We identified candidate frameworks that emphasized mental health and that could help to assess the ability of a model to be disseminated feasibly, particularly within the VA healthcare system, as well as its potential for improving health for rural AI/AN Veterans (*Figure 1*). Candidate frameworks included VA goals and guidelines, broader national guidelines for healthcare improvement, and frameworks guiding treatment of rural populations and AI/AN populations.
 - (b) We selected four frameworks. Two frameworks—the Veterans Health Administration (VHA) Handbook for Uniform Mental Health Services in VA Medical Centers and Clinics and ORH’s Promising Practices—had reasonable scope for assessing a variety of models of care and were most closely aligned with VA service needs. The Handbook for Uniform Mental Health Services defines minimum clinical requirements for VHA mental health services²⁶ and outlines nine principles that guide VA mental healthcare.²⁷ ORH’s Promising Practices designation includes six criteria²⁸—increased access, strong partnerships, clinical impact, return on investment, operational feasibility, and customer satisfaction. We chose the Triple Aim Framework as representative of ideal goals of improved

Fig. 1. Method for evaluating TMH models against population and healthcare system needs: Depiction of application to rural AI/AN Veterans. TMH, telemental health.

healthcare systems—healthier populations, satisfied patients, and decreased costs.²⁹ We adapted the four key factors from our AITMH model of care—mental healthcare for complex conditions, technology to access remote populations, intensive care coordination, and cultural facilitation¹⁵—(the “AITMH framework”) for their relevance to rural AI/AN Veterans.

(c) Publicly available descriptions of each framework defined specific criteria.

(2) Model identification

Literature searches covered publication dates 2010 and later to identify current models of service delivery. In January 2017, we searched Medline, PsycINFO, Published International Literature on Traumatic Stress (PILOTS) Database, the

Cochrane Library, and Google Scholar, using these search terms, exploding terms where possible: ((Indians, North American OR American Indian OR Native American OR Alaska Native OR Native Alaskan OR Indian Health Service) OR Veterans) AND (mental health services OR ((telebehavioral OR telepsych* OR telemental) AND (health services administration)) OR (“delivery of health care” OR telemedicine OR telehealth) AND (mental health OR psychology OR psychiatry))). We also performed informal searches (e.g., “snowballing,” “asking around,” varying search terms and combinations) to increase yield and efficiency of searches, as recommended for complex topics.³⁰ To identify unpublished reports of models of care, we searched Google and websites of specific agencies and organizations (e.g., VA, Substance Abuse and Mental Health Services Administration, Indian Health Service [IHS], Rural Health Information Hub, Southcentral Foundation, The Commonwealth Fund). Informal searches continued until we could not locate any new relevant documents.

- (a) We searched extensively to identify models for rural AI/AN Veteran populations and also expanded searches to include rural AI/AN and rural Veteran populations. We excluded models that never targeted rural patients.
- (b) We grouped results by model. To qualify for review as a model, we required a written description of delivery of mental health services in a real-world setting of sufficient detail to assess a majority of the criteria outlined by the four selected frameworks. Models of care could implement videoconferencing telehealth or in-person modes of delivery.

(3) Matrix completion

Two reviewers classified and assessed each model against criteria from each of the four frameworks, recording scores in

a matrix. Disagreements were resolved through discussion until consensus was reached. We categorized each model by population, mode of service delivery, and one of four platforms of care—direct/referral, collaborative care, behavioral health consultant, or psychiatric consultation—liaison—drawing on Fortney et al.³¹ as a heuristic for resource intensity (see reference for definitions). For the Triple Aim, ORH, and AITMH frameworks, we ranked each criterion as having contradictory evidence (“−1”), supporting evidence (“1”), or inconclusive evidence (“0”). We also recorded where there was insufficient evidence to assess (“N”). For example, the ORH framework’s feasibility criterion was scored as “1” if a model demonstrated success with dissemination, “−1” if problems prevented dissemination or implementation, “0” if some barriers delayed but did not prevent implementation (e.g., competing staff demands), and “N” if there was no mention of an attempt to disseminate the model or to implement it outside a research setting. For the VA Guide to Mental Health Services framework, we assessed each criterion dichotomously (as “met” or “not met”). For example, the criterion “mental health treatment in primary care” was scored as “met” if the model uses a platform of care that, by definition, co-locates mental health providers with primary care providers, like the behavioral health consultant or psychiatric consultation platforms, or if the model described delivering mental or telemental healthcare in a primary care setting. This criterion was “not met” if the model’s description did not include access to mental healthcare in the primary care setting.

(4) Summary and evaluation of matrix findings

During synthesis, we streamlined framework criteria to reduce duplication. For example, the “technology” criterion was eliminated from the AITMH framework because it reflects improved access to care, which duplicated “increased access” from the ORH framework. In addition, we consolidated the VA Guide for Mental Health and Triple Aim criteria, considering the entire framework as “met” if a majority of its criteria were “met.”

Results

SEARCH RESULTS

Database searches yielded 10 relevant models (45 citations) pared from a search of 641 citations. Three additional models (12 citations) were identified from website searches. We excluded six models for lack of sufficient details and one model that was urban-only.

IDENTIFIED MODELS

We assessed the remaining 13 models, characterizing each in *Table 1*. No models other than the AITMH clinic model^{15,16}

were identified for rural AI/AN Veterans. We excluded one AI/AN Veteran model because there was no indication of its use after 1995.³² Other models for Native Veteran care have not been described in the literature (e.g., Seattle Indian Health Board’s Veterans and Veterans Family Program, www.ruralhealth.va.gov/native/services). Finally, although included in evaluations of several VA mental healthcare models,^{33–35} AI/AN Veterans have not been examined separately.

The few identified models for rural AI/AN populations use telehealth, hybrid, or in-person modes of delivery. Telehealth models include the IHS Telebehavioral Health Center of Excellence³⁶ and a partnership between the University of California Davis and tribes in California.³⁷ Other AI/AN models include the Nuka System of Customer-Owned Care from the South Central Foundation³⁸ and the Chinle Comprehensive Health Care Facility.^{39,40} We excluded other models such as the Improving Mood Promoting Access to Collaborative Treatment model of care,⁴¹ San Carlos Apache Wellness Center model,⁴² and the Native American Health Center’s holistic system of care⁴³ due to lack of available information or because they did not address rural populations.

Models posed by VA for rural Veterans covered all three modes of service delivery. Telemedicine outreach for PTSD or depression,^{33,44–49} group-based video teleconferencing therapy,^{34,50–53} and home-based video teleconferencing^{54–63} all arose from research examining the effectiveness of telemedicine. Other models include “usual” PTSD care for rural Veterans in VA,^{64,65} utilizing hybrid delivery; “usual” telemental healthcare^{66,67}; and primary care mental health integration with various platforms—collaborative care,^{68–71} behavioral consultant,^{72–75} or a blend of the two.^{76–78} Many VA models were sufficiently similar to be considered together.^{68–71}

MODEL ASSESSMENTS

The matrix in *Table 2* summarizes each model’s assessment. Looking across all populations and modes of service delivery, some characteristics were rarely or insufficiently reported, including effects on population health, costs, and clinician experience (details not shown) from the Triple Aim Framework, as well as per capita costs/return on investment from the ORH Promising Practices framework.

The AITMH model^{15,16} unsurprisingly satisfies its own framework. Its emphasis on care coordination to meet basic needs was unique relative to other models. A focus on patient-centered care also enables it to perform well on the VA Guide to Mental Health Services and the Triple Aim Frameworks. Although it generally performed well on ORH Promising Practices, the AITMH model’s lack of uptake within VA indicates challenges with operational feasibility.

Table 1. Models of Mental Health Service Delivery in Rural AI/AN Veteran Populations, General AI/AN Populations, and General Veteran Populations

MODEL NAME	CHARACTERISTICS			DESCRIPTION
	POPULATION	MODE	PLATFORM	
AITMH Clinics ¹⁵⁻²¹	Rural AI/AN Veteran	Telehealth	Direct care/referral	A joint academic-community-VA partnership provides telemedicine care to patients in tribal communities. The AITMH model spans the entire mental healthcare process, from outreach to mental healthcare and spiritual healing to more comprehensive care coordination with other service providers. The team providing mental healthcare also drives outreach and care coordination.
IHS Telebehavioral Health Center of Excellence ^{36,79,80}	Rural AI/AN	Telehealth	Consultation	An IHS-academic partnership that provides care to rural AI communities through shared interview (joint sessions) with a patient. Care staff at IHS facilities are connected with the community and facilitate teleconferencing with a mental health expert at an academic institution.
California IHS Telemental Health ^{37,81}	Rural AI/AN	Telehealth	Consultation	A psychiatrist receives a primary care provider's request for consultation, evaluates the patient via video connection, then consults to a primary care provider at an IHS site, who in turn cares directly for the patient.
Nuka System of Customer-Owned Care ^{38,82-88}	Rural AI/AN	Hybrid	Behavioral consultant	A tribally run system, in which tribes select entities to deliver behavioral, dental, medical, and community services from a variety of providers including physicians, traditional healers, and health educators. Care providers travel and telecommute to provide care in remote areas. Native communities are engaged in the design, implementation, and control of their own programs. Quality indicators are tracked for quality improvement activities.
Chinle Comprehensive Healthcare Facility ^{39,40}	Rural AI/AN	In-person	Behavioral consultant	A tribally run comprehensive care facility that offers traditional healing to all patients. Traditional healers are embedded in the practice, collaborating with doctors and accessing medical records.
VA Telemedicine Outreach for PTSD/Depression ^{33,44-49}	Rural Veteran	Telehealth	Collaborative care	An offsite mental healthcare manager coordinates care for patients visiting small remote primary care clinics. The care manager discusses treatment with offsite pharmacists and mental health providers and shares their treatment recommendations with an onsite primary care provider. Care is intensified to add telephone and videoconference consultation as needed. Cognitive behavioral therapy is available to all patients via video connection.
VA Group-Based Video Teleconferencing Therapy ^{34,50-53}	Rural/Remote Veteran	Telehealth	Direct care/referral	Group therapy offered via videoconferencing for remote patients with PTSD. Groups met at local VA clinics or Vet Centers.
VA Home-Based Video Teleconferencing Therapy ⁵⁴⁻⁶³	Rural Veteran	Telehealth	Direct care/referral	One-on-one mental health services offered in patients' homes via videoconferencing. Services include medication management, psychotherapy, and therapies for PTSD, depression, anger management, chronic pain, and anxiety. Patients either use their own equipment, such as a home computer, tablet, or smartphone, or they receive videophones or tablets from VA.
VA Usual Care by Video Teleconferencing ^{66,67}	Rural Veteran	Telehealth	Direct care/referral	Traditional "hub-and-spoke" model, where patients use videoconferencing equipment at their local VA, which is typically a community-based outpatient clinic, and mental health providers of all disciplines videoconference from larger parent VA hospital facilities. Services include all types of therapy.
VA Usual Care for Rural Veterans with PTSD ^{64,65}	Rural Veteran	Hybrid	Not specified	Care received by a sample ($n=132$) Veterans for PTSD at 11 medium- and large-sized community-based outpatient clinics without an onsite psychiatrist. A majority of Veterans received medication management and psychotherapy. Of medication management sessions, psychiatrists delivered about one-third via videoconferencing, whereas primary care providers or psychiatric advanced practice nurses delivered the remainder in person. Videoconferencing was almost never used for psychotherapy. The majority of psychotherapy sessions occurred in a group format.
VA Primary Care Mental Health Integrated Care Management ⁶⁸⁻⁷¹	Veteran	Hybrid	Collaborative care	Care managers (experienced registered nurses) coordinate mental healthcare for patients with depression who visit a rural medical center or community-based outpatient clinic. Care managers provide brief and targeted support to primary care providers in the treatment of depression. They also connect patients with a wide range of medical center and community resources. Care coordination with patients occurs in-person or by telephone. Care managers also receive psychiatric consultations from mental health specialists in-person or by telephone. Patients with complex conditions received treatment directly from mental health specialists.
Primary Care Mental Health Integrated Co-located Collaborative Care ⁷²⁻⁷⁵	Veteran	Hybrid	Behavioral consultant	Embeds a mental health team in primary care. This team accepts warm hand-offs from primary care providers and can perform same-day, streamlined mental health assessment and treatment.
Primary Care Mental Health Integrated "Blended" Care ⁷⁶⁻⁷⁸	Veteran	Hybrid	Behavioral consultant and collaborative care	This model takes variety of forms but often includes both a care manager and an on-site behavioral health consultant. Patients are screened as part of a visit to their primary care provider. Care is stepped to the severity of symptoms, with patients remaining under care of the primary provider, undergoing phone-based assessment and treatment from a care manager, or receiving a referral to a mental health specialist. Patients in immediate need may be connected with an on-site behavioral health consultant for assessment and treatment.

AI/AN, American Indian or Alaska Native populations; AITMH, American Indian Telemental Health; IHS, Indian Health Service; PTSD, post-traumatic stress disorder; VA, U.S. Department of Veterans Affairs.

Table 2. Assessment of Models of Mental Health Service Delivery Against Four Frameworks: American Indian Telemental Health, Office of Rural Health Promising Practices, VA Guide for Mental Health Services, and Institute for Healthcare Improvement's Triple Aim

	ATMH CLINICS	IHS TELE-BEHAVIORAL HEALTH CENTER OF EXCELLENCE	CALIFORNIA IHS TELE-MENTAL HEALTH	NUKA SYSTEM OF CARE	CHINLE COMPREHENSIVE HEALTHCARE FACILITY	VA TELEMEDICINE OUTREACH FOR PTSD/DEPRESSION	VA GROUP-BASED VIDEO TELE-CONFERRING THERAPY	VA HOME-BASED VIDEO TELE-CONFERRING THERAPY	VA USUAL CARE BY VIDEO TELE-CONFERRING	VA USUAL CARE FOR RURAL VETERANS WITH PTSD	PRIMARY CARE MENTAL HEALTH CO-LOCATED COLLABORATIVE CARE	VA PRIMARY CARE MENTAL HEALTH INTEGRATED CARE MANAGEMENT	PRIMARY CARE MENTAL HEALTH INTEGRATED "BLENDED" CARE
ATMH													
Cultural facilitation	✓	✓	✓	✓	✓								
Care coordination for basic needs	✓										✓	✓	✓
ORH Promising Practices													
Increased access	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Strong partnerships	✓	✓	✓	✓	✓	✓					✓	✓	✓
Clinical impact	✓		○	○		✓	✓	✓	✓	×	✓	✓	✓
Return on investment	○						✓					✓	
Feasibility	×	✓	○	✓	○	✓			✓	✓	✓	✓	✓
Customer satisfaction	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
VA Guide for Mental Health Services (meets majority of criteria)	✓	✓	✓	✓	✓	✓					✓	✓	✓
IHI Triple Aim (meets majority of criteria)	✓	✓		✓							✓	✓	✓

✓, Moderate evidence or better; ○, measured but inconclusive evidence; ×, at least some evidence against.

IHI, Institute for Healthcare Improvement; IHS, Indian Health Service; ORH, Office of Rural Health.

In general, rural AI/AN models^{36–40,79–88} performed well against the AITMH framework, particularly with respect to cultural facilitation, often including traditional healing or health professionals embedded in local communities. They also promote access to care, frequently establishing high-quality service where none existed, and emphasizing partnerships across staff and institutions. However, clinical impact and return on investment could not be assessed due to lack of evaluations in these areas. The Telebehavioral Health Center of Excellence³⁶ met the criterion for operational feasibility, demonstrated efficiency through reduced no-show rates,⁷⁹ and reported patient and physician cost savings.⁸⁰ The hybrid, tribally run Nuka System of Care,^{38,82–88} which cited several improvements relative to traditional government-run care, performed well against all frameworks.

In contrast to the AI/AN models, most rural Veteran models^{33,34,44–78} did not specifically address elements of cultural facilitation and were weaker in terms of patient-centeredness and strong partnership; however, they did focus on clinical outcomes, demonstrating treatment effectiveness and customer satisfaction. These attributes translate to shortcomings on the AITMH and VA Guide frameworks but success against the ORH framework. The “usual” PTSD rural care model was an exception, as one study found that it rarely implemented evidence-based psychotherapy.⁶⁴

Many models did not meet the majority of criteria on the Triple Aim Framework, which has strictly defined requirements and spans a variety of subjects including patient experience, reduced cost, and population health outcomes.

Almost all models increased access to care. Some clinic-based telehealth models improved access without completely remedying all access barriers. For example, older adults might not be able to drive anywhere, even to a nearby community-based outpatient clinic.

Discussion

FINDINGS FROM THE APPLICATION OF OUR APPROACH

Many of the mental health service delivery models for rural AI/AN populations and rural Veterans did not meet criteria specified by our chosen evaluation frameworks, with specific weaknesses in the Institute for Healthcare Improvement's (IHI) Triple Aim Framework criteria, the ORH Promising Practices framework's return on investment criterion, and the AITMH framework's criteria on cultural facilitation and care coordination for basic needs. These criteria represent challenging new standards for healthcare that are likely unattainable for any single model. Nonetheless, many of these current models fell short on important components specified by evaluation frameworks.

Despite extensive searches for care models specific to rural AI/AN Veterans, only one met our inclusion criteria.^{15,16} Our searches retrieved many more studies on health disparities of rural AI/AN Veterans than on treatment options for them, underscoring this population's need for more choice in mental health service delivery. Expanding searches to include rural Veterans and AI/AN populations uncovered several additional models of service delivery, most of which miss at least one key element for rural AI/AN Veterans. For example, the VA model of “usual” PTSD care for rural Veterans⁶⁴ is not likely to be effective for rural AI/AN Veterans because of its limited use of evidence-based psychotherapies, absence of cultural facilitation, and gaps in access to care. Although newer VA models emphasize evidence-based care, they lack cultural facilitation. In contrast, AI/AN models of service delivery prioritize cultural facilitation, but clinical impact must be established before implementation for rural AI/AN Veterans receiving VA care.

While no single model emerged for rural AI/AN Veterans, a few models distinguish themselves. Models like the IHS Telebehavioral Health Center of Excellence^{36,79,80} and the Nuka System of Care^{38,82–88} exhibit strong cultural facilitation while maintaining operational feasibility. The care management^{68–71} and “blended” care^{76–78} models from VA also demonstrate operational feasibility while delivering effective evidence-based care. These VA models also require strong partnerships to coordinate care across a variety of healthcare staff; hence, they may be amenable to adaptation for cultural facilitation, which requires strong community partnerships to foster trust and to connect patients with a range of community-based care and services. As future steps include testing the implementation of a model selected using this approach, the most promising complementary models from VA and AI/AN populations could potentially be fused to improve healthcare delivery to a deserving population of rural AI/AN Veterans.

Our application also has implications for research. AI/AN service delivery models used consultation and behavioral health consultant platforms, which lack the evidence base of other platforms like collaborative care. Conversely, the swift uptake of care models on behavioral health consultant platforms suggests their operational feasibility over models on collaborative care platforms, which have been adopted more slowly.⁷² Models using behavioral health consultants are particularly popular in VA clinics serving smaller populations,⁷² highlighting their promise for rural areas. The operational success of these models in underserved populations like AI/ANs and rural Veterans could be reason to expedite investigation into their effects on health outcomes.

Finally, this review provides insight into specific healthcare improvement frameworks. The most prominent frameworks guiding our evaluation, the IHI Triple Aim and the VA Guide to Mental Health Services, address effectiveness and cost-effectiveness, patient and provider experience, access to care, and even system-wide improvement in health outcomes; however, adding ORH Promising Practices and AITMH frameworks better accounted for elements central to VHA healthcare and rural AI/AN Veterans, including culture, community, feasibility, and scalability. Thus despite their comprehensiveness, the most prominent healthcare improvement frameworks could better leverage connections between healthcare systems and culture/community.

REFLECTIONS ON THE METHODOLOGY ITSELF

Challenges of this approach stem from the heterogeneity of models of care and from the need to tailor framework selection to the healthcare system and patient population. Many models of care arise organically, with variation in terms of scope, conditions treated, and treatment methods, complicating cross-comparison of models and precluding rigid operationalization of framework criteria. Similarly, tailoring the selection of evaluation frameworks prevents comparison across reviews that use different frameworks. Both of these caveats reflect trade-offs to a pragmatic approach, which emphasizes relevance for stakeholders and widespread implementation. Ultimately, the approach strives to balance a systematic evaluation process with meaning for healthcare systems and patients. Following refinement and additional testing, this methodology holds promise for application to other populations and models of care.

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Disclosure Statement

No competing financial interests exist.

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