Informing the Tribal Health Profession Opportunity Grants (HPOG) 2.0 Evaluation Design: A Brief Review of the Literature

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Overview

This report summarizes the findings from a review of the literature on tribal research oversight, approaches to conducting evaluations in American Indian and Alaska Native (AI/AN) communities, and strategies and models have been used to implement programs similar to the Tribal Health Profession Opportunity Grants (HPOG) 2.0 Program. Additionally, this report describes how the findings from the literature review have informed the Tribal HPOG 2.0 evaluation design.

The Tribal HPOG 2.0 program supports demonstration projects that provide TANF recipients and other low-income individuals with the opportunity to obtain education and training for occupations in the healthcare field that pay well and are expected to either experience labor shortages or be in high demand. NORC at the University of Chicago is leading a comprehensive implementation and outcome evaluation of the Tribal HPOG 2.0 Program.

Primary Research Questions

The literature review was guided by a set of key questions organized into five priority areas: research oversight and processes, evaluation, post-secondary education, capacity building, and career pathways. The key questions are:

1. What are the protocols and guidelines for conducting research in AI/AN communities, as established by tribes?
2. What approaches are most appropriate or promising in conducting evaluations of interventions involving AI/AN populations?
3. What recruitment, orientation, and retention strategies, capacity building efforts, and career pathways models have been used or implemented at tribal colleges and universities or educational programs serving tribal populations?

Purpose

The purpose of the literature review was twofold:

1) to assess what is known about conducting research and evaluation in AI/AN communities, and
2) to gather information about implementation and evaluation of other programs in AI/AN communities that are similar to HPOG.

Key Findings and Highlights

The results of the literature review provide important context related to research oversight and approvals needed to conduct research in AI/AN communities, the impact of historical trauma on research in AI/AN communities, and strategies and approaches used when conducting research in AI/AN communities. AI/AN communities often have established research review processes, including review by Tribal Institutional Review Boards or review panels, or have developed research codes as part of their tribal laws. Additionally, given the history of unethical research practices in AI/AN communities, researchers should be careful to implement research methods that address the concerns of the study participants at

each stage of the project. These results broaden the evaluation team's understanding of the history of evaluation in tribal communities and inform the evaluation team's approach for engagement and collaboration with the Tribal HPOG 2.0 grantees and other stakeholders throughout the design and implementation of the evaluation. The results related to post-secondary education, capacity building, and career pathways provide information about how programs similar to HPOG have been implemented in AI/AN communities, which inform evaluation methods and strategies. Specifically, these findings helped to validate strategies and topics included in the evaluation of Tribal HPOG 2.0 programs.

Methods

The Tribal HPOG 2.0 evaluation team developed a set of search terms for each of the priority areas and used Google Scholar to conduct searches using the priority area, accompanying search terms, and the following terms: Tribal, Native American, and American Indian/Alaska Native. Results were limited to literature published between 1996 and 2016 (the period immediately following the creation of TANF). The evaluation team reviewed up to the first 200 results for each search. Articles related to international populations were excluded. Ultimately, 159 articles were included in the literature review.

Glossary
- **AI/AN:** American Indian/Alaska Native
- **HPOG:** Health Profession Opportunity Grants
- **TCU:** tribal colleges and universities

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Introduction

The Health Profession Opportunity Grants (HPOG) Program is administered by the Administration for Children and Families (ACF), U.S. Department of Health and Human Services (HHS).[1] In 2010, ACF awarded the first round of HPOG grants (referred to hereafter as HPOG 1.0) to 32 organizations, including five tribal organizations. ACF awarded a second round of HPOG grants (referred to hereafter as HPOG 2.0) to 32 organizations in September 2015, again including five tribal organizations. As in HPOG 1.0, HPOG 2.0 grant awards support demonstration projects that provide Temporary Assistance for Needy Families (TANF) recipients and other low-income individuals with the opportunity to obtain education and training for occupations in the health care field that pay well and are expected to either experience labor shortages or be in high demand.

The authorizing legislation for HPOG calls for a comprehensive evaluation of the demonstration projects funded under this program. Abt Associates and their partners, MEF Policy Associates, the Urban Institute, Insight Policy Research, and NORC at the University of Chicago, are leading the evaluation of HPOG 2.0. As part of this effort, NORC is leading a comprehensive implementation and outcome evaluation of the five Tribal HPOG 2.0 grantees. The Tribal HPOG 2.0 evaluation team has undertaken a number of activities to inform the evaluation design, including seeking feedback from the Tribal HPOG 2.0 grantees and the Tribal HPOG 2.0 Technical Working Group (TWG) and conducting a brief review of the literature related to research in American Indian and Alaska Native (AI/AN) communities.

Grantee and community engagement are important aspects of the Tribal HPOG 2.0 evaluation approach. NORC has worked with the Tribal HPOG 2.0 grantees from the beginning of the evaluation to understand each tribe's history, culture, and preferred strategies and methods for data collection. The evaluation design memo and draft protocols were shared with all of the Tribal HPOG 2.0 grantees and the evaluation team met with each grantee to review these items and gather feedback and input.

The Tribal HPOG 2.0 TWG is comprised of five experts with knowledge in a variety of relevant areas, including research and evaluation in AI/AN communities, health workforce research, rural health, and program development and evaluation. In addition to seeking feedback from the TWG on the overall evaluation design, the tribal evaluation team gathered feedback from the TWG on the scope of the literature review and the search terms.

This report summarizes findings from the literature review conducted by the Tribal HPOG 2.0 evaluation team. The purpose of the literature review is to identify what is known about research and evaluation in AI/AN communities and specifically about evaluation of HPOG-related programs in AI/AN communities. The results of the literature review provide important context and information

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[1] HPOG was established by the Affordable Care Act in 2010 and was extended by the Protecting Access to Medicare Act in 2014.

about appropriate methods for conducting research and evaluating education and training programs in AI/AN communities to inform the evaluation design.

Methods

The Tribal HPOG 2.0 evaluation team proposed a set of key research questions to focus the literature review. These questions were reviewed by the TWG members and reviewed and approved by ACF. The key questions are organized into five priority areas: research oversight and approvals, evaluation, post-secondary education, capacity building, and career pathways. The key questions are:

1. What are the protocols and guidelines for conducting research in AI/AN communities, as established by tribes?

2. What approaches are most appropriate or promising in conducting evaluations of interventions involving AI/AN populations?

3. What recruitment, orientation, and retention strategies have been used in tribal post-secondary education? Have these strategies been evaluated? What are the outcomes?

4. What capacity building efforts or workforce development programs are underway at tribal colleges and universities (TCUs) and educational programs serving tribal populations? Have these efforts been evaluated? What are the outcomes?

5. What career pathways models are currently being implemented at TCUs and educational programs serving tribal populations or for Tribal TANF recipients or other low-income populations? What accelerated learning strategies are being used and what has been effective?

6. Are there other initiatives or studies that address the implementation of career pathways in AI/AN communities?

The Tribal HPOG 2.0 evaluation team developed a set of search terms for each of these priority areas based on the team's knowledge of key issues related to research in AI/AN communities and in consultation with the Tribal HPOG 2.0 TWG and ACF. Exhibit 1 includes the search terms used for this literature review.

Exhibit 1. Search Terms

Priority Area	Search Terms
Research oversight and approvals	Tribal sovereignty Ethics Community engagement Knowledge sharing Culture Tribal Institutional Review Boards Tribal Research Committees Consent Benefit Research collaboration

Priority Area	Search Terms
Evaluation	Community-based participatory research Indigenous worldviews Oral tradition Cultural methods Implementation studies Quasi-experimental and impact evaluations
Post-secondary education	Native American students in higher education Transition to higher education Post-secondary recruitment Post-secondary orientation Post-secondary retention Persistence Family Education Model Cultural centers Graduation rates Social services Tutoring Mentoring Remedial education Cohort training Job shadowing
Capacity building	Workforce development Partnerships Health professions Employer engagement Public workforce investment system Human service systems Staffing/new hires training Facilities and infrastructure Curricula Supports and services Transferability and articulation Funding and leveraged resources

Priority Area	Search Terms
Career pathways	Accelerated learning models/interventions Career ladder Modularized learning Stacked and latticed programs Integrated Basic Education and Skills training (I-BEST) Contextualized learning Team teaching Self-paced learning Prior learning assessments Technology-enabled learning Simulations Assessment technology Online teaching/learning Real-time online interactions Tribal TANF work activities Sources of support or sponsors: ■ Colleges and universities, including community colleges and TCUs ■ Foundations ■ Nonprofit training organizations

The Tribal HPOG 2.0 evaluation team used Google Scholar to conduct searches using the search terms in Exhibit 1. For each priority area, a search was conducted using the priority area and the accompanying search terms as well as the following terms: Tribal, Native American, and American Indian/Alaska Native, which were included to narrow the scope of the results to the target population.

Search queries were constructed for each priority area as follows:

> **Search format**: "Target population term" AND "priority area" AND "secondary search term"

> **Example search**: "tribal" AND "evaluation" AND "Community-based participatory research"

Results were limited to literature published between 1996 and 2016. For each search, the evaluation team reviewed up to the first 200 results. These criteria were used in order to narrow the results to the most relevant and timely articles that could be analyzed for this brief literature review. Articles related to international populations were excluded to narrow the results to articles relevant to the Tribal HPOG 2.0 study population.

The Tribal HPOG 2.0 evaluation team identified 229 articles as potentially relevant based on the review of the literature. After further examination, 70 articles were excluded because they did not address the research questions, and 159 articles were included in the literature review. The findings from the literature review that address the research questions are described below.

Research Oversight and Approvals

WHAT ARE THE PROTOCOLS AND GUIDELINES FOR CONDUCTING RESEARCH IN AI/AN COMMUNITIES, AS ESTABLISHED BY TRIBES?

Research oversight in AI/AN communities has been influenced by international and national research guidelines, historical research injustices, and evolving research practices. Through the review process, twenty-one articles were identified on this topic. The articles generally fall into three main categories: research ethics, research review boards, and honoring tribal perspectives.

Research Ethics

The Belmont Report was published in 1979 to establish guidelines for conducting research.[1] The three main principles it outlines for planning and reviewing research are respect for persons, beneficence, and justice. The Belmont Report is the standard basis for which all research must comply, but according to Sahota (2009), it does not go far enough for AI/AN communities.[2] The Belmont Report is centered on the protection of individuals, but advocates of AI/AN communities believe that those protections should extend to groups. AI/ANs historically have not had adequate representation in the planning and review of research studies in which they have participated.[3] This has also been the case for other minority populations, namely African Americans. Exhibit 2 provides a brief summary of three commonly cited cases that demonstrate notable violations of human research conduct and ethics. The impact that research can have on an entire community or tribe was demonstrated in the case of *Havasupai Tribe vs. Arizona State University* (Exhibit 2). The Havasupai Tribe felt that the community as a whole was harmed by genetic studies, for which individuals did not provide full consent, because of the potential for the implications of the research to stigmatize the Tribe.[4]

Exhibit 2. Notable Cases in Human Subject Research

Reference Study/Case	Description of Research	Outcome
Tuskegee Syphilis Study	African American male patients were denied treatment for syphilis even after treatment became available for the purposes of studying the natural progression of the disease.[5]	A settlement was reached for monetary compensation and the U.S. promised lifetime medical benefits and funeral services for all living participants.
Henrietta Lacks	Cervical cancer cells were taken from Henrietta Lacks, a poor African American woman, and grown into a cell line called *HeLa* that was made available to scientists around the world, without her consent to use the cells in research.[6]	The National Institutes of Health (NIH) established a new agreement that *HeLa* cells will only be available to those who apply and are granted permission. In addition, two representatives from the Lacks family will serve on the group that reviews applicants. Lastly, any research conducted with the *HeLa* data must include an acknowledgement to the Lacks family.[7]

Havasupai Tribe v. Arizona Board of Regents (Arizona State University)	ASU researchers collected 200 blood samples from members of the Havasupai Tribe for a project studying "behavioral/medical disorders" with an emphasis on diabetes. Researchers went on to use the blood samples to study schizophrenia, inbreeding, and evolutionary-genetics without informed consent from participants.[8]	ASU agreed to settle for monetary compensation and return remaining blood samples to the Tribe; however, no formal legal precedent was set. The University's public apology increased awareness of the need to better understand what constitutes full informed consent and potentially stigmatizing results, and to address sensitive issues that arise when working with vulnerable populations.

Research Review

Research review policies and institutional structures to oversee research in AI/AN communities are important to protect tribes and tribal members from harmful research, to gain maximum benefits from research in which they are involved, and to exercise their authority as sovereign nations to control research conducted on their lands.[9]

The protection of human research subjects in the United States is governed by a federal regulation known as the "Common Rule" (45 C.F.R. § 46 subpart A). The Common Rule is a set of requirements for institutional review board review, informed consent, and Assurance of Compliance for the protection of human subjects.[10] Institutional Review Boards (IRBs) are committees that are established at universities and other research institutions to review and regulate studies that involve research volunteers.[11] The IRB review and approval process includes reviewing a detailed application that explains the study purpose, procedures, and risks and benefits for individual volunteers; steps for minimizing risk; and informed consent and interview materials, if applicable. [12]

Informed consent procedures and content serve as a means for documenting the rights of the study participant, including the voluntariness of their participation.[13] In a broader context, informed consent forms can also be used as legal documents that protect the interests of researchers and research institutions, especially in relation to property rights over bio-specimens.[14] Researchers and IRBs have an ethical responsibility to ensure that informed consent is part of a broader discussion about the terms of the study engagement. Informed consent processes and forms should be tailored to the cultural context of each study group. Some AI/AN communities choose to develop their own templates for informed consent forms to ensure that the forms address concerns that are specific to them and present the information in a way that aligns with their culture.[15]

The three most common processes for research review in AI/AN communities include review by a federally registered IRB, the enforcement of research specific codes within tribal laws, or review by a tribal ethics review panel. The type of review process chosen may depend on the size and frequency of involvement in research studies and the resources available to devote to research review.[16] Due to the varying structures of each tribal community, such as the organization of tribal governments, areas of authority and differing formal and informal processes, these review types may sometimes be used in combination.[17]

Tribal IRBs: Due to the resources and capacity required to maintain an IRB, most IRBs in AI/AN communities have been established either at Indian Health Service (IHS) Area Offices or at TCUs. These IRBs are important because they are designed to specifically address AI/AN concerns, such as

benefits and risks to the community as a whole rather than just the individual.[18, 19] Ways in which IRBs at IHS Area Offices and TCUs address community concerns include: 1) larger proportion of IRB members who are AI/AN individuals, 2) sometimes requiring confirmation that the tribal government(s) approved the study through a tribal resolution or letter of support, and 3) sometimes requiring that the researchers submit publication manuscripts to the IRB for review before submitting to the publisher.[20, 21]

Research Codes: Another way that AI/AN communities can establish research oversight, either in the absence of a formal IRB or in conjunction with an IRB, is by incorporating research codes into their tribal laws.[22] The Navajo Nation, for example, amended their Navajo Nation Code in 1995 to include a chapter on human research.[23] Within this chapter, the Navajo Nation established the creation of the Navajo Nation Human Research Review Board, which was founded in 1996 and today functions as an independent Tribal IRB as well as the official IRB for the Navajo Area Indian Health Service.[24] Many of the sub-sections in the Human Research Code chapter follow the same principles of other IRBs but reinforce the oversight power of the Tribe. For example, Chapter 25 § 3262, "Research permit required," states that any researcher conducting a study involving human subjects within the Navajo Nation must apply for and receive a permit from the Navajo Nation Human Research Review Board.[25] Additionally, some model research codes were developed by advocacy organizations to assist tribes in establishing their own research code.[26, 27] The American Indian Law Center, Inc. developed a Model Tribal Research Code and guidance document in 1999 that includes information about the history of research in tribal communities as well as a detailed instructions process for developing a research code. The instructions include guidance on code structure, policy statements, how to define the scope, and enforcement. A model code is provided, complete with format and standard legal language, with spaces to customize the content of the code.

Review Panels: Some AI/AN communities have established their own ethics review panels to provide direct oversight from a community perspective in instances where there is no tribal IRB established to represent the community.[28] The review panel is crucial in working with researchers and other IRBs in multi-site studies.[29] The research team should work closely with the review panel to gather feedback and build trust.[30] One example of an ethics review panel is the Tribal Nations Research Group (TNRG), which was established though a resolution with the Turtle Mountain Band of Chippewa Indians and support from the Collaborative Research Center for American Indian Health.[31] The mission of the TNRG is to improve the quality of life for all tribal members through culturally congruent, custom-fit research. The TNRG can establish laws to protect community members, and the community as a whole, who participate in research studies.

In the absence of an established research review committee that was formed specifically for reviewing research on a regular basis, tribes can form community advisory boards, research review consortiums, collaborate with an existing community committee that wants to be involved in research review, and/or rely on their tribal governance (e.g., tribal council) to review and approve research study participation and protocols as the need arises.[32] This option may be more feasible to maintain for certain communities that do not regularly review human subject research. Whichever process the AI/AN community decides

to use, they should be in control of their own review process because they are sovereign nations.[33] To ensure that these processes are adhered to, non-tribal researchers must recognize that each tribe is unique and should work with the collaborating tribe to determine the appropriate processes, protocols, and reviewers that are relevant to their study.[34]

Honoring Tribal Perspectives

Most importantly, researchers need to establish trust and demonstrate respect for tribal research partners, cultural beliefs, tribal institutions, and tribal sovereignty.[35, 36, 37] Governance, or oversight responsibility, should expand beyond the protection of research volunteers to a broader, shared responsibility for the research through the engagement of tribal governments or community-based review boards. Historic practices and policies that have violated tribal rights include the colonization of Native American land, federal policies that were intended to outlaw tribal practices, and researchers who have used tribal data without proper consent.[38] These events have impacted AI/AN community perspectives and feelings about the trustworthiness of outside research, especially when funded or conducted by the federal government.[39]

Oetzel et al. (2015) surveyed investigators and their partners about the relationship between community-engaged research approval and governance processes and perceived outcomes. In the survey, types of approval included tribal government, health board or public health office (TG/HB); agency staff or advisory board; or individual or no community approval. Results from the survey added to the body of research that has found that in both native and non-native communities, broad governance over research activities can lead to: enhanced trust of the research process by community partners; relationships that balance community and academic institutional power; IRB processes that reflect community interests; inclusion of cultural frameworks that fit the community; and academic members committed to community engagement.[40] Results from this survey showed that having TG/HB approval, compared with the other types, was associated with greater control by the study communities, which included participants from AI/AN communities and other minority communities. Study outcomes for participants that used TG/HB approvals included greater community control of resources, greater data ownership, greater authority on publishing, greater share of financial resources for the community partner, and an increased likelihood of developing or revising IRB policies.

Tribal partnership organizations can be effective entities for engaging communities in research.[41] One example of this is the Inter Tribal Council of Arizona, which is made up of elected officials from 21 Tribes in Arizona who convene regularly and participate in the formulation of public policy at the tribal, federal, state, and local levels. They administer grants and contracts in a variety of research areas and have service agreements with local universities to help tribes who engage in research activities. Other ways that funding agencies and non-tribal research partners can be more accountable to tribal research volunteers and their data include: develop mechanisms to negotiate data-sharing plans, include money in the budget allocated for consultation with tribes throughout the research design and implementation process, and require a specific dissemination plan to describe how outcomes from the study will be provided back to the community during and after the completion of the research.[42]

Evaluation

WHAT APPROACHES ARE MOST APPROPRIATE OR PROMISING IN CONDUCTING EVALUATIONS OF INTERVENTIONS INVOLVING AI/AN POPULATIONS?

The articles identified on the topic of evaluation in AI/AN communities largely fell into two categories. Thirteen of the articles were related to the impact of historical trauma on evaluation in AI/AN communities and approaches to conducting research that addresses historical trauma. The remaining 59 articles described research projects that had been conducted in AI/AN communities, including cross-cultural evaluation studies, the use of community-based participatory research (CBPR), and the evaluation of government grant programs.

Impact of Historical Trauma and History on Evaluation in AI/AN Communities

It is important for researchers to consider both historical trauma and history when conducting research in AI/AN communities. Government policies over the past centuries have resulted in removal of AI/ANs from their homelands, prohibition of cultural practices, and removal of children from homes.[43, 44] Additionally, there is mistrust of the scientific community given unethical research practices that have been implemented in AI/AN communities.[45, 46, 47] Further, researchers are sometimes described as "drive-by," "mosquito" or "helicopter" researchers, referring to researchers who come into the community only to conduct research and leave or to conduct research that does not have a benefit for the community.[48,49]

Community-Based Participatory Research and Cross-Cultural Evaluation

Given the history and context of research in AI/AN communities, researchers should be careful to implement research methods to address concerns of the study participants, such as using a CBPR approach.[50] A CBPR approach treats communities as "equal partners at all stages of a research project" and is a "philosophy about how research should be conducted so that community needs are prioritized."[51] While the CBPR principles remain the same, they can be implemented using varying strategies across research projects depending on the needs of the community members and researchers and the overall resources of the research project itself.[52] One common component of the CBPR approach is the use of an Advisory Group to oversee research projects in AI/AN communities. Advisory Groups comprised of community members can ensure that the perspective of the community is represented and that the research is relevant to its members.[53, 54]

Similar approaches for research, including the use of a CBPR approach, are recommended when conducting research among urban AI/AN populations. However, there are unique considerations when working with AI/AN populations living in urban settings versus on reservation lands.[55] For example, urban AI/ANs do not typically live in localized urban neighborhoods, creating challenges when defining community and garnering community support, and multi-tribal urban AI/AN communities often have diverse perspectives. Additionally, there is often no single entity that represents the community, as there is no sovereign government elected by the community that can form partnerships on behalf of its

members.[56] Researchers should be proactive in addressing the concerns of AI/AN populations regarding research and should consider the differences between populations living in urban settings or reservation lands when conducting research with urban AI/ANs.[57]

Several articles identified discuss experiences implementing CBPR and lessons learned from using this approach.[58, 59] For example, one article notes that when conducting CBPR the research team must: (1) take time to develop the partnership team and research project; (2) allocate the budget equitably among the research partners; (3) create partnerships with decision-makers at each organization; (4) provide salaries to AI/AN staff on the research team; (5) ensure effective communication among all partners; (6) share data with partners; (7) modify evaluation procedures to be culturally appropriate; and (8) follow tribal and researchers' protocols for disseminating and publishing the findings.[60]

A 2009 review by Chouinard identified themes from 52 empirical studies to frame discussions on cross-cultural evaluation, inform the development of a framework for future research, and build knowledge around the complexity of cross-cultural evaluation. The review aimed to examine how culture affects evaluations, the rationale for including culture in the evaluation approach, methods used, and challenges faced by researchers in cross-cultural evaluation. The results of the review were the identification of themes that capture strategies and approaches in cross-cultural evaluation, including: use of participatory and collaborative approaches; developing culturally-specific measures; being informed by emergent cultural conceptualizations and variations of definitions of culture; a focus on evaluator-stakeholder relationships; consideration of evaluator personality and roles; facilitating cultural understanding; and acknowledging methodological dissonance (e.g., understanding that culturally-specific measures and instruments may differ from established research practices).[61] The findings suggest that culture affects all parts of the evaluation.[62] A 2009 review by LaVeaux looked at recommended practices for research in AI/AN communities and how they aligned with the CBPR principles most frequently found in the literature. The principles for CBPR in AI/AN communities were similar, but often had different context and terminology. In addition, the review identified CBPR principles specific to AI/AN communities; examples included acknowledgment of historical experience with research, recognition of tribal sovereignty, understanding of the tribal community and its leaders, and planning for extended timelines to provide time for obtaining tribal approval for conducting research.[63]

Common Evaluation Approaches in AI/AN Communities

A CBPR approach or components of CBPR were commonly used when conducting research in AI/AN communities. Key components of these projects are engagement with the community and tribal leadership and ensuring the use of culturally responsive methods. Exhibit 3 below highlights common themes, approaches, and strategies that were described in the articles included in the review, which were critical to the success of the research projects.

Exhibit 3. Common Evaluation Approaches in AI/AN Communities

Evaluation Approach	Description	Relevant Articles
Engaging with community in all components of the project	A core principle of CBPR is to engage the community in all elements of the research, including the development, implementation, and analysis of findings. This may include engagement with tribal leaders and the use of an Advisory Board to oversee all components of the project. Establishing relationships and building trust with community partners is critical and researchers noted that it takes time to do so.	Blue Bird Jernigan, 2012[64] Brown, 2010[65] Burhansstipanov, 2014[66] Choi, 2011[67] Christopher, 2007[68] Daley, 2010[69] Lachapelle, 2011[70] Donovan, 2015[71] Lonczak, 2013[72] Thomas, 2009[73] Thomas, 2010[74] Goins, 2011[75] Goodkind, 2012[76] Gray, 2008[77] Horn, 2005[78] Jumper-Reeves, 2014[79] Jernigan, 2010[80] Makosky Daley, 2010[81] Mendenhall, 2010[82] Minkler, 2007[83] Mohatt, 2007[84] Mullany, 2012[85] Perry, 2010[86] Rasmus, 2014[87] Redwood, 2010[88] Richards, 2012[89] Richmond, 2008[90] Thomas, 2011[91] Thurman, 2004[92]
Having flexibility during the research process	Researchers noted that flexibility was important when conducting research with AI/AN communities. Researchers cited examples where the intervention needed to be modified halfway through the evaluation period as well as the need for flexibility when scheduling interviews and obtaining written informed consent (e.g., a scenario where a group of elders began the discussion before signing the consent form and consent was obtained later).	Donovan, 2015 Goins, 2011 Holkup, 2004[93] Laurila, 2015[94] Makosky Daley, 2010 Matloub, 2009[95] Richmond, 2008

Evaluation Approach	Description	Relevant Articles
Working with AI/AN communities/leaders to identify community needs	Often, the research agenda is determined in conjunction with the tribal community. Tribes or members of the tribe may have interest in a particular issue and partner with a university researcher to address the issue in their community. Researchers also described a process where they worked with tribal leaders to identify issues impacting their communities or populations to target.	Donovan, 2015 Goins, 2011 Holkup, 2004 Jernigan, 2010 LaChapelle, 2011 LaFromboise, 2008[96] Makosky Daley, 2010 Mendenhall, 2010 Moran, 1999[97] Moran, 2007[98] Mullany, 2012 Perry, 2010 Rasmus, 2014 Richards, 2012
Adaptation or modification of an intervention to be culturally appropriate	Interventions and the evaluations are tailored to each tribal community as cultural appropriateness is specific to each tribe depending on their history and culture. Researchers conducting evaluation in multiple communities noted that the intervention was adapted differently as needed. Researchers also described using a CBPR approach to modifying the intervention (e.g., conducting focus groups or interviews).	Blue Bird Jernigan, 2012 Brown, 2010 Choi, 2011 Daley, 2010 Donovan, 2015 Fox, 2011[99] Goodkind, 2012 Gray, 2008 Hemmingson, 2015[100] Horn, 2005 LaFromboise, 2008 Lichtenstein, 1996[101] Jernigan, 2010 Jumper-Reeves, 2014 Mullany, 2012 Minkler, 2007 Moran, 1999 Moran, 2007 Patten, 2013[102] Richards, 2012 Richmond, 2008 Subrahmanian, 2011[103] Thomas, 2011

Evaluation Approach	Description	Relevant Articles
Using culturally appropriate data collection methods	Researchers used methods adapted to AI/AN communities and sought feedback from tribal partners on the appropriateness of data collection techniques. This included review of the questions and data collection instruments to ensure questions were asked in a culturally appropriate manner; adaptation of data collection methods when recommended (e.g., conducting focus groups instead of surveys); and designing the evaluation so that AI/ANs are conducting data collection.	Brown, 2010 Choi, 2011 Christopher, 2007 Cross, 2011[104] Fleischhacker, 2011[105] Goins, 2011 Hazel, 2001[106] Juntunen, 2001[107] Laurila, 2015 Makosky Daley, 2010 Mohatt, 2007 Perry, 2010 Redwood, 2010 Richmond, 2008 Teufel-Shone, 2006[108] Thomas, 2011 Thurman, 2004
AI/ANs as part of the research team and/or to conduct data collection	Some of the studies reviewed were explicitly designed to have AI/ANs collect data or serve as a member of the research team. In other studies, the research design did not initially include collection of data by AI/ANs, but was later modified to include this due to input from tribal partners.	Brown, 2010 Choi, 2011 Blue Bird Jernigan, 2012 Christopher, 2007 Goodkind, 2012 Gray, 2008 Jumper-Reeves, 2014 Juntunen, 2001 Makosky Daley, 2010 Mendenhall, 2010 Perry, 2010 Redwood, 2010 Richmond, 2008 Teufel-Shone, 2006
Establishing appropriate outcome measures	Some articles noted that it is important to evaluate interventions based on the outcomes that are relevant and positive for the community being evaluated. Other articles described a process for developing measures using a CBPR approach.	Cross, 2011 Thomas, 2009 Gonzalez, 2014[109] Hazel, 2001 Jernigan, 2010 Lopez, 2012[110] Perry, 2010 Wallerstein, 2000
Disseminating knowledge from research	Sharing results from research with tribal partners and/or study participants is an important component of CBPR. Results may be used to raise awareness about the program in the community or provide feedback about program implementation that could be addressed. Researchers also described the pressure to publish the results of their studies but noted the importance of sharing the results with the AI/AN communities prior to disseminating them broadly.	Goins, 2011 Redwood, 2010 Richmond, 2008

The overwhelming majority of articles that discuss research projects conducted in AI/AN communities used one or more of the CBPR approaches identified above. Only a few articles described studies with AI/ANs populations that did not explicitly state that any CBPR approaches were used, including a quasi-experimental study on the use of learning groups in developmental math classes at a tribal community college and a process evaluation of an obesity prevention trial involving American Indian schoolchildren.[111,112]

Evaluation of Grant Programs

Seven of the articles summarized findings from evaluations of government grant programs for tribal grantees. These evaluations are particularly relevant to the evaluation of the Tribal HPOG 2.0 Program given the similarities in structure and management as a federally funded program.

One study was a cross-site evaluation of the Tribal Green Reentry Program, which was funded by the U.S. Department of Justice (DOJ) Office of Juvenile Justice and Delinquency Prevention and included grants to "incorporate green technologies and environmentally sustainable activities in programs designed to help detained and reentering tribal youth successfully reintegrate into their communities and to prevent future juvenile justice system involvement among at-risk youth."[113] There were two components to the evaluation, a process evaluation and a mixed methods outcome evaluation. Data were collected during site visits, which included interviews with staff, program partners, youth participating in the programs, and the youth's parents. Focus groups were held with tribal elders and parents. Other methods included structured program observations, a review of program documents, and a review of administrative data.[114] One key component of the evaluation was the focus on incorporating culture into program activities, the methods for doing so, and the effect of cultural programming on participants at each grantee site. The authors also noted how unique local context and circumstances can impact the implementation of programs.[115] Cultural experts at each program helped inform activities so they were tailored to their tribe and community. For example, programs used components of oral tradition, such as language, song, dance, and storytelling, to help participants learn.

The DOJ Services, Training, Officers, Prosecutors (STOP) Grant Programs for Reducing Violence Against Women Among Indian Tribes funded 123 tribal governments between 1995 and 2000. A mixed methods evaluation was conducted, which used surveys, interviews with practitioners and program recipients, and case studies, among other methods. The research team considered this methodology to be appropriate for use in tribal populations.[116]

The DOJ funds the Tribal Victim Assistance (TVA) program, which provides services to victims of a variety of crimes. The DOJ also funded evaluation efforts, including an evaluability assessment and further assessment of two TVA programs. The overall evaluation examined the process, results, and outcomes, and included an assessment of implementation and accomplishments. The evaluation used empowerment evaluation principles, which fosters self-determination and enables the community to be actively involved in the evaluation process, such as designing the evaluation, recruiting participants, and obtaining consent. These principles are designed to build program capacity for evaluation, ensure the programs will benefit from the evaluation, and involve program stakeholders in addressing challenges

that arise. An advisory committee was established at each site; members provided input on the evaluation design and methods.[117]

A report on promising practices from five AI/AN children's mental health projects funded by HHS' Center for Mental Health Services (CMHS) indicates that these projects integrate AI/AN healing methods into the systems of care model for children and adolescents with serious emotional disturbance.[118] An additional article, which further described the grant program and the congressionally-mandated evaluation, describes efforts to conduct the evaluation in AI/AN communities and to develop evaluations that address characteristics of tribal programs.[119] The national evaluation design included eight tribal grantees; the grantees raised questions regarding the cultural competence of the design because the evaluation was not developed to address circumstances in each community. For example, the study protocol was long and included sensitive questions that may be interpreted differently by different respondents or were inappropriate to ask of some individuals. As the evaluation was implemented, the tribal grantees discussed their concerns with the evaluation team, which resulted in modifications to the evaluation specific to their communities.[120]

In addition, although not a government program, the implementation and participant outcomes study of the Alaska Native Science & Engineering Program is particularly relevant to the Tribal HPOG 2.0 evaluation as the program used a career pathways model. Further discussion of this study can be found in the career pathways section.[121]

Post-secondary Education

WHAT RECRUITMENT, ORIENTATION, AND RETENTION STRATEGIES HAVE BEEN USED IN TRIBAL POST-SECONDARY EDUCATION? HAVE THESE STRATEGIES BEEN EVALUATED? WHAT ARE THE OUTCOMES?

The pertinent literature surrounding tribal post-secondary education examines strategies to support AI/AN students' educational attainment. More specifically, the twenty-six articles identified for this review primarily fall into two categories. The first category relates to relationships that are built while on campus as well as incorporating existing ones. The second category discusses resources available to students to facilitate a smoother transition into post-secondary education. The literature's main focus areas are retention and orientation of students, with less attention to recruitment strategies.

Exhibit 4. Strategies Used in Tribal Post-Secondary Education

Strategies	Description	Relevant Articles
Relationships		
Family Education Model	The Family Education Model (FEM) is a retention model that focuses on the importance of family often found in AI/AN communities. In these situations, it can sometimes be hard for a student to ignore family requests and obligations, even if it interferes with school. The FEM acts as a bridge between the family and student while engaging in the college community. For example, institutions may work with families to share ways in which they can provide appropriate support for their student or invite families to participate in cultural and social events.	Blair, 2015[122] Bosse, 2011[123] Lopez, 2010[124] Woman, 2011[125] Guillory, 2008[126] Bill, 2009[127]
Mentors	Whether it is when starting at a TCU or after transferring from a TCU to a four-year institution, having a mentor can reduce the feeling of isolation and confusion. Faculty mentors can help students in their field of study, while peer mentors can help incoming freshman, sophomore, and transfer students with personal development and can improve their first-year(s) on campus.	Shotton, 2012[128] Woman, 2011 Manson, 2006[129] Mosholder, 2011[130] Cross, 2013[131] Bill, 2009 Karlberg, 2007[132]
Interacting with other AI/ANs on campus	Making connections with other AI/AN students, staff, and faculty through organizations, cultural centers, or classes adds to the feeling of belonging. In addition to providing a support system, it allows the students to see others from their community succeed in higher education and encourages them to persist in school.	Bosse, 2011 Lopez, 2010 Taylor, 2001 Woman, 2011 Hunt, 2010[133] Crosby, 2011[134] Bill, 2009
Connecting with faculty/advisors	Building relationships with faculty and advisors can motivate students to remain in school and help them to feel more supported. With faculty that are approachable, students are less intimidated to ask questions and more open about any academic struggles they may experience. Additionally, having a strong relationship with advisors supports the clear planning of schedules and pathways to graduation.	Lopez, 2010 Guillory, 2008 Schmidtke, 2009[135] Bass, 2014[136] Beu, 1998 Smith, 2014[137] Karlberg, 2007

Strategies	Description	Relevant Articles
Resources Available		
Cultural centers	Culture centers can give AI/AN students a sense of community in their new environment. Here, the students can interact, learn, and explore their heritage in a supportive environment. On campuses with a non-Native majority, cultural centers are a way for AI/AN students to connect with their campus and build friendships with others that might have similar backgrounds and experiences.	Lopez, 2010 Champagne, 2005[138] Shotton, 2012 Taylor, 2001[139] Beu, 1998[140]
Scholarships/financial help	A common reason for the low retention rate of AI/AN students is financial challenges. Providing scholarships and grants enables more AI/AN students to attend college and increases diversity at the schools.	Taylor (2001) Guillory (2008) Bill (2009)
Curriculum	Many colleges have begun to offer AI/AN courses as a way to recruit and retain students, link their native culture with the new culture of campus life, and help them feel less isolated on campus. Remedial courses are also offered to prepare students for future college courses. While not all schools offer these types of courses, these courses allow the students to flourish and build self-esteem, where otherwise they might not feel comfortable. Additionally, the students feel connected with their heritage while away at school.	Wiseman, 2000[141] Woman, 2011 Mosholder, 2011 Guillory, 2008 Guillory, 2008[142] Bass, 2014 Cross, 2013 Hooker, 2010[143] Mendoza, 2012[144] Smith, 2014 Ward, 2007[145] Bill, 2009
Orientation/first year classes	Providing classes and orientation geared toward first-year and transfer AI/AN students acquaints them with the support services available and introduces them to other AI/AN community members on campus. Requiring participation in these programs at the beginning of their time on campus makes AI/AN students more likely to continue with their education.	Lopez, 2010 Shotton, 2012 Woman, 2011 Hunt, 2010 Crosby, 2011 Harrington, 2012[146] Bill, 2009 Karlberg, 2007
Recruitment Strategies		
Recruitment	Currently, social media and web-based recruitment strategies are being implemented and appear to be promising. Previously, in-person interaction, such as open houses and visiting days for prospective students, was considered a more effective method of recruiting students.	Adelman, 2013[147]

Capacity Building

WHAT CAPACITY BUILDING EFFORTS OR WORKFORCE DEVELOPMENT PROGRAMS ARE UNDERWAY AT TCUS AND EDUCATIONAL PROGRAMS SERVING TRIBAL POPULATIONS? HAVE THESE EFFORTS BEEN EVALUATED? WHAT ARE THE OUTCOMES?

The 37 articles identified by this review around capacity building and workforce development efforts in AI/AN communities can be characterized by three general themes: a general discussion on capacity building efforts in the context of AI/AN communities, capacity building efforts internal to TCUs, and specific capacity building strategies used by workforce development programs. For the purposes of this literature review, capacity building refers to strengthening the ability and authority of AI/AN communities to work towards more self-sufficient livelihoods while sustaining traditional cultural values and beliefs. This section describes a few key points from the literature on capacity building and workforce development efforts among AI/AN communities that are particularly relevant to the Tribal HPOG 2.0 evaluation.

Community Capacity Building Efforts

The literature shows that TCUs are key institutions in community capacity building, economic development, and engagement. TCUs strengthen and expand the local economy, sustain traditional cultural values and beliefs, provide a source of innovation and solutions for community needs, manage natural resources, address health and nutrition issues, engage in community programs, and provide role models for tribal youth, among many other roles. [148, 149, 150, 151]

Several authors argue that there is a need for capacity building programs and evaluations to be developed from within tribes as opposed to the traditional model of being brought to AI/AN communities from the outside.[152] Further, mainstream approaches to tribal capacity building tend to overlook community assets and assume that AI/AN communities are "deficient in the cultural, social, financial, and human preconditions necessary for successfully growing jobs and businesses." [153] Two authors argue that the success of economic development efforts should be understood and measured beyond monetary wealth to better represent AI/AN communities. [154, 155] According to these authors, successful economic development efforts work toward "the goal [of] alleviating long-standing systemic poverty and related social problems while holding the community and the culture together."[156]

Among large foundations' philanthropic efforts to Native American communities in 1989-2002, one report found that "education" (24.5%), "arts, culture, and humanities" (16.1%), "community improvement and development" (10.3%), and health issues (9.2%)" were the highest funded causes; this distribution was comparable to funding for non-tribal communities. [157]

TCUs Internal Capacity Building Efforts

Several articles discussed efforts aimed at increasing capacity within TCUs.[158, 159, 160, 161, 162, 163, 164, 165, 166] These include the development of new academic programs, addressing concerns about research

within AI/AN communities among current students, traineeships for students already enrolled in certain programs, community college strategic development initiatives, among others. TCUs are well positioned to leverage limited resources and provide accessible, high quality higher-education to AI/AN students, particularly in high-demand fields. TCUs are also well positioned to adapt academic programs, retention efforts, and programs aimed at diversifying students in health, research, and STEM professions that are culturally relevant to their student population.

Capacity Building and Workforce Development Efforts

Several capacity building and workforce development programs serving tribal populations have been documented in the literature (Exhibit 5). Programs can be generally characterized by the strategies and approaches used to build community capacity. These strategies include TCUs partnerships, tailored education programs, tribe-based enterprise, student and community support services, financial support and incentives, solutions to geographic barriers, increasing organizational capacity, and entrepreneurship. It is important to note that many efforts employed a variety of strategies depending on the structure and purpose of the program. Not all efforts have been evaluated, and some were part of larger evaluations so tribal-specific outcomes are unavailable.

Exhibit 5. Capacity Building and Workforce Development Efforts

Strategy/Approach	Description	Relevant Articles
Partnerships and collaborations	Partnerships between TCUs and state universities are one of the most documented collaborations in the relevant articles. Some of these higher education partnerships include articulation agreements, and others work together to expand services to meet community needs. Schools partner to provide service-learning opportunities for students in addition to classroom instruction and mentorship. Examples of other community partnerships include those with workforce development committees, academic centers, businesses, tribal entities, state government, and school districts.	Tinant, 2014[167] Kant, 2014[168] (2) Bill, 2009[169] Penn GSE, 2015 Nichols, 2003[170] Pacheco, 2010[171] Sawyer, 2014[172] Weintraub, 2015[173] Campbell, 2007[174] Anglin, 2010 Norman, 2015
Education programs tailored to local community	Education programs that are tailored to the local community include credit and non-credit curriculums that train students in fields that are in demand in the local community and help increase employability. Additionally, these education programs centered on local values serve as the foundation of training and outreach efforts.	Cunningham, 2000 Eller, 1998[175] Lantz, 2014[176] Eller, 2003 Anglin, 2010 Kezar, 2010[177] Norman, 2015 Pharr, 2016[178]
Tribe-based enterprise	Tribe-based enterprise describes community-wide business initiatives that originate within a tribe. Examples include tribal-owned casinos, specialized trade companies, and corporations. Tribe-based enterprise aims to generate and support economic development in AI/AN communities, but their success may vary.	Emery, 2006 Mantonya, 2007[179] Nelson, 2001[180]

Strategy/Approach	Description	Relevant Articles
Student and community support services	Support services are provided to individuals and/or the general community in order to facilitate capacity building. Examples include multicultural service offices to support social integration at colleges, advising, counseling, computer resource libraries, student navigation and case management, and gas vouchers.	Bill, 2009 Eller, 1998 Jacobson, 2007[181] Torres, 2008[182] Pharr, 2016
Financial support, aid, and incentives	Financial support is provided for a variety of purposes. Students receive local scholarships and benefit from tribal financial aid programs to attend school. Students and community residents receive business loans and business plan development support. Other financial support activities include community mobilization to advocate for money owed to the tribe. Financial incentives are used to bring development projects to reservations and hire workers.	Bill 2009 Eller, 1998 Emery, 2006 McSwain,2006[183] Torres, 2008 Eller, 2003
Solutions to geographic barriers	Many capacity building efforts are designed to overcome geographic barriers to education and service access. Examples include distance-based learning, mobile training centers, and business networks to connect and share resources.	Campbell, 2007 Bill, 2009 Needels, 2010[184] Eller, 1998 Pacheco, 2010
Increasing organizational capacity	Efforts aimed at increasing organizational capacity intend to serve the community by enabling existing organizations to better fulfill their missions. Examples include strategic planning, continuing education for existing staff, mission statement development, and financial resource development. Existing organizations include community-based organizations, non-profit organizations, TCUs, and tribal entities.	De Vita, 2013[185] Torres, 2008
Entrepreneurship	Workforce development efforts that promote entrepreneurship and provide entrepreneurial support aim to foster community development and build assets, integrate culture and business ventures, and empower individuals and communities.	Emery, 2006 Eller, 1998 Mantonya, 2007 Eller, 2003
Nation building	Nation building is a comprehensive, community-based approach to community growth, tribal identity, and sovereignty. While activities to reach goals may incorporate other strategies, nation building is a broader, strategic, and holistic process. Nation building is often driven by a long-term strategic plan and vision with specific goals that incorporate multiple sectors, including cultural and historical heritage, sustainability, and economic growth.	NCAI, 2015[186] Norman, 2015

Career Pathways

WHAT CAREER PATHWAYS MODELS ARE CURRENTLY BEING IMPLEMENTED AT TCUS AND EDUCATIONAL PROGRAMS SERVING TRIBAL POPULATIONS OR FOR TRIBAL TANF RECIPIENTS OR OTHER LOW-INCOME POPULATIONS? WHAT ACCELERATED LEARNING STRATEGIES ARE BEING USED AND WHAT HAS BEEN EFFECTIVE?

Four of the Tribal HPOG 1.0 grantees were TCUs and implemented career pathways programs that served AI/AN populations. The Tribal HPOG 1.0 evaluation assessed the structures, processes, and outcomes of the Tribal HPOG 1.0 grantees and provided information about models and strategies used to implement career pathways programs at TCUs.[2] However, the Tribal HPOG 2.0 evaluation team's search identified very limited literature related to other career pathway programs serving AI/AN populations. Of the three articles identified, the career pathway focus tended to occur during the creation of programs. TCUs are creating programs geared toward strengthening the Science, Technology, Engineering, and Mathematics (STEM) career pathways, as well as health professions. Through these programs, AI/AN students are exposed to new job opportunities and skills.[187]

Career Pathway Models at TCUs

The Alaska Native Science & Engineering Program (ANSEP), based out of the University of Alaska, supports Alaska Native students from middle school through graduate school in engineering and science careers.[188] The program hopes to increase the number of Alaska Natives in these fields through academic exposure and community resources. Components of the program allow students to explore the STEM fields, leading up to students earning college credit and participating in a paid internship before and during college, and financial and additional support to those continuing their STEM education in graduate school. Through this program, 98.5 percent of students who completed their undergraduate degree were employed within a year, with a majority of them employed in STEM or STEM-related occupations and/or employers. Additionally, 75 percent of participants reported that the supportive environment at the University of Alaska improved for Alaska Native students due to the ANSEP program, and access to academic and career planning supports improved as well.

Launching Native Health Leaders (LNHL) encourages an environment where undergraduate AI/AN students are able to connect with their community values while being introduced to health and research career pathways, networks, and CBPR. LHNL helped sixty students attend eight professional conferences related to "themes of cancer control, tribal wellness and indigenous knowledge systems for health." [189] At these conferences, students were able to connect and create relationships with other participants, mentors, and speakers, and to discuss ways to use CBPR tools to work toward improving

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[2] Tribal Health Profession Opportunity Grants (HPOG) Program Evaluation Final Report. (2016, March). Administration for Children and Families. Retrieved from http://www.acf.hhs.gov/programs/opre/resource/tribal-health-profession-opportunity-grants-hpog-program-evaluation-final-report

tribal health. The LNHL allows for these students to explore health profession opportunities in the context of their traditions and culture while seeing the possibility of giving back to their communities in these professions.

The Research on American Indian Science Education (RAISE) project and Northwest Indian College's improvements to their program are both projects supported by the TCU Program (TCUP) to improve STEM education at TCUs.[190] RAISE intends to "investigate the efficacy of culturally congruent instruction (CCI) for improving American Indian College students' science achievement." CCI is based on the concept that students will learn better in environments that are compatible with those of their communities,[191] meaning that if these students have been learning in smaller sized classrooms, then they are more likely to learn better in smaller sized classrooms at TCUs as well. While the results of the investigation have not yet been published, a positive correlation between CCI and improved achievement would lead to "higher levels of science achievement and greater number of students pursuing science related professions"[192].

Discussion

The results of the literature review provide important context related to research oversight and approvals needed to conduct research in AI/AN communities, the impact of historical trauma on research in AI/AN communities, and strategies and approaches used when conducting research in AI/AN communities. Additionally, the results related to post-secondary education, capacity building, and career pathways provide information about how programs similar to HPOG have been implemented in AI/AN communities, which inform evaluation methods and strategies.

Gaps in the Literature

Not all of the research questions could be fully answered with information in publications that were identified by this literature review. In particular, the literature review results suggest that there is limited implementation of career pathways programs at TCUs or by other organizations serving an AI/AN population as only a few examples of these programs were identified.

Similarly, there was limited literature related to evaluation of career pathways programs serving AI/AN populations. The Tribal HPOG 1.0 evaluation provided information related to the implementation of career pathways programs in AI/AN communities, identifying strategies and processes that contributed to the successful implementation of the programs, implementation challenges, and educational and employment outcomes of participants. Building on the Tribal HPOG 1.0 evaluation, the Tribal HPOG 2.0 evaluation provides an opportunity to further contribute to evaluation of career pathways models in AI/AN communities. The Tribal HPOG 2.0 will provide similar information related to the implementation of career pathways programs, including the administrative structures of the programs, processes for recruitment, orientation, and provision of supportive services, and outcomes related to education, employment, and program satisfaction. However, the Tribal HPOG 2.0 evaluation design is not experimental; as such, the results will not be able to attribute causality between HPOG 2.0 programs and outcomes. Future research would be needed to examine the causal impact of these programs.

Evaluation of career pathways models presents additional challenges. The comprehensive nature of career pathways programs, which often provide a variety of academic and social supportive services, creates challenges in determining which components of the program are most effective for participants. Additionally, career pathways program participants are often engaged in the program for multiple years as they complete a series of stackable trainings leading to successively higher credentials, and seek employment between trainings. Given the length of time participants are involved in the programs and the expectation that increases in earnings and employment will occur in the long-term, it is necessary but can be challenging to collect longitudinal data and assess long-term outcomes of the programs. The potential to link Tribal HPOG 2.0 participants to the National Directory of New Hires (NDNH), which provides wage and employment information, may provide additional data on long-term outcomes for participants. However, future research could also address long-term follow-up with participants in career pathways programs that serve AI/ANs.

HPOG 2.0 Evaluation Design

The results of the literature review provide important context for the Tribal HPOG 2.0 evaluation by broadening the evaluation team's understanding of the history of evaluation in tribal communities and affirming the evaluation team's approach for engagement and collaboration with the Tribal HPOG 2.0 grantees throughout the design and implementation of the evaluation. The literature review findings provide important context and suggested methods for conducting research and program evaluation activities in AI/AN communities. The Tribal HPOG 2.0 evaluation team will employ literature-informed strategies for engaging AI/AN communities and evaluation participants, ensuring proper research review, designing culturally appropriate methods and protocols, and ensuring tribal review of all methods used and products developed as part of the Tribal HPOG 2.0 evaluation.

A key component of the initial engagement with the Tribal HPOG 2.0 grantees was to learn about what Tribal approvals would be needed to conduct research in each community and to work through these review and approval processes. A number of Tribal HPOG 2.0 grantees required Tribal approvals, either in the form of Tribal resolutions or IRB/research review board approval. The results of the literature review provide context around the history and purpose of these types of reviews.

Grantee and community engagement is a key component of the Tribal HPOG 2.0 evaluation. The findings from the literature review highlight the importance of engaging the community when designing the evaluation and provide historical context for why this type of engagement is important. The Tribal HPOG 2.0 evaluation is being designed in collaboration with the Tribal HPOG 2.0 grantees. The tribal evaluation team met with each grantee to review the evaluation design and data collection instruments and gather feedback.[3] This process was also important to ensure that culturally appropriate data collection methods are used in the evaluation, another common approach identified by the literature. The findings also describe considerations for dissemination of research findings, which will inform efforts to share findings from the Tribal HPOG 2.0 evaluation.

The findings related to post-secondary education, capacity building, and career pathways helped to validate strategies and topics included in the evaluation of Tribal HPOG 2.0 programs. Specifically, several strategies observed in the literature are similar to those used by Tribal HPOG 2.0 programs. Where evaluations took place, the evaluation team reviewed the methods and strategies to ensure that the Tribal HPOG 2.0 evaluation protocols captured similar content and information. Similarly, the findings related to capacity building provide context for how programs like HPOG are implemented in AI/AN communities, allowing the evaluation team to review its methods and protocols to ensure that capacity building content was informed by prior research.

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[3] The tribal evaluation team discussed the evaluation design and gathered feedback during phone calls or grantee visits; no data collection occurred during the calls or visits.

Conclusion

As described, the results of the literature review provide important context and broaden the evaluation team's understanding of appropriate methods for conducting research in AI/AN communities as well as strategies and approaches used to implement similar programs in AI/AN communities. The Tribal HPOG 2.0 evaluation provides an opportunity to contribute to the knowledge base around implementation of career pathways programs in AI/AN communities and associated outcomes.

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