# Is men's health a priority for tribal health directors? Results from a survey study 

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#### Abstract

Programs and initiatives addressing American Indian and Alaska Native (AI/AN) health disparities have recently shifted to better understanding, identifying and promoting successful programs designed to improve the health of $\mathrm{AI} / \mathrm{AN}$ men. We sought to describe the priorities of front-line leadership of Indian Health Service, Tribal, and Urban (ITU) health programs, especially in relation to men's health. We also sought to ascertain how potential future partners in men's health research perceive the priorities established by the Indian Health Care Improvement Act (IHCIA). We surveyed directors of Indian Health Service, tribally operated facilities/programs, and Urban Indian clinics (I/T/U's) on the relative importance of a range of health topics and issues and whether gender-based strategies were crucial to implementation. I/T/U directors identified diabetes (68\%), alcohol and substance abuse (61\%), mental/behavioral health (56\%), obesity (53\%) and addiction (40\%) as the highest priority issues affecting both men and women. Only seven directors (6\%) selected "men's health" as a stand-alone priority. However, $80 \%$ said gender-tailored implementation was at least somewhat important for three or more of the priorities they selected. While neither men's nor women's health was identified as a standalone concern, health directors identified gender tailoring as a useful strategy for addressing many health issues.


KEYWORDS: United States Indian Health Service; Men's Health; Health priorities; Health services

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## Introduction

Health disparities for American Indian and Alaska Native (AI/AN) people are significant and farreaching. AI/AN people have higher mortality rates than the U.S. all-race population across a number of categories, including chronic liver disease, diabetes, unintentional injuries, suicide, and assault (homicide) (Indian Health Service, 2015). Health disparities for many AI/AN populations have been widely reported in the literature (Cho et al., 2014; Herne et al., 2014; Veazie et al., 2014; White et al., 2014). Programs and initiatives addressing AI/AN health disparities have focused to a large extent on women and children's health, but attention has expanded recently to better understand, identify and promote the health of $\mathrm{AI} / \mathrm{AN}$ men.

The Indian Health Care Improvement Act (IHCIA) was permanently reauthorized as part of the Patient Protection and Affordable Care Act in 2010. The IHCIA authorized the establishment of an "Office of Indian Men's Health" in the Indian Health Service (IHS) to "coordinate and promote the health status of Indian men in the United States"(Heisler, 2011) without further appropriations. While the IHCIA was established with the best of intentions, we also noted that it lacked empirical grounding in the opinions of front-line, ITU health leadership. In order to address this gap in data, we partnered with the Men's Health Coalition to determine the extent to which men's health as a free-standing health issue was prioritized among IHS, Tribal, and Urban (I/T/U) health program leadership. Also, by gauging ITU leaders' perceived bandwidth for research in general, we sought to ascertain how potential future partners in men's health research perceive the IHCIA priorities. IHS Service Units,

Tribally-Operated Health Programs and Urban Indian Health Programs (ITUs) lack a number of resources, including funds, providers and equipment. Programs tailored to the unique health needs of men, while potentially useful and effective, require time, personnel and money, which AI/AN communities may or may not feel capable of supporting. We surveyed I/T/U health directors on the relative importance of a wide range of health issues and topics, one of which was men's health. We also asked how important gender-tailoring was for each health issue they ranked. Additional information concerning funding and other resources to support current programs was also collected.

## METHODS

We sent a self-administered survey instrument to a national list of I/T/U health directors from all 12 IHS regions (See Figure 1) in the summer of 2014. The survey was a short 28 -item questionnaire, and all items were developed by the research team. Respondents were asked to choose five health issues of greatest priority for their constituencies, estimate their capacity for research involvement, and gauge the importance of gender-tailored health programs in addressing health priorities identified. Survey recipients were presented with a list of 22 health issues derived from one of three sources: documented major health challenges, current prevention and treatment programs, or AI/AN health policy statements. Respondents were asked to pick one of the 22 listed health issues. They also could select "other" and specify the health issue in a free-text field. Following the issue selection, we asked participants to indicate the importance (very important, somewhat important, not important) of a gender-tailored program for addressing the selected health issue. The survey
contained five successive iterations of this twoquestion set, and respondents were asked to use these question iterations as a way of indicating their "top five" health concerns of greatest priority for their constituencies (i.e. first iteration $=$ first priority, second iteration = second priority, etc.).

Only rank order priority was captured in this way (the survey was not designed to assess the relative "distances" between identified priorities). Our objective to ascertain the relative priority of men's health was not disclosed in the survey materials.


Figure 1. Comparison of IHS regions by count of sites invited to the survey (color gradient) and rates of response to the survey (percentages)

In addition to the health priority items, respondents were queried about their past experiences about working with researchers (positive vs. negative experience), their capacity to take on new research projects and their interest in doing so, and their level of confidence that interventions developed from research in their constituencies would producing meaningful and lasting results.

Anyone with a functioning email address was first sent an electronic survey, and those who did not
respond were subsequently sent a paper survey (Group 1). The remaining group of participants received two waves of a paper survey. The electronic survey was deployed using REDCap (Harris et al., 2009). At the time of the first paper mailing, all participants (electronic respondents and all paper recipients in both groups) were mailed a copy of the book The Land Has Memory. Due to a typographical error for one item in the paper survey, trained phone survey staff also called paper survey respondents individually to
clarify their survey responses for one item. Instances of failure to reach participants and clarify their answers for these questions were reported as missing data for that item. The Mayo Clinic Institutional Review Board determined that the survey was exempt.

## RESULTS

Out of the 566 Native American entities recognized by the federal government (Bureau of

Indian Affairs, 2015), we were able to acquire contact information for 440 I/T/U directors. Email addresses were available for 372 (85\%) of these contacts. Mailing addresses were available for all contacts; however, ten were undeliverable. The overall response rate was 114/430 (26.5\%) (See Figure 2). Over $82 \%$ of respondents said funding deficiencies were a major challenge to their ability to implement programs and 31.7\% of respondents currently had programs related to men's health.


Figure 2. Survey response rate

I/T/U directors most often identified diabetes (67.5\%), alcohol and substance abuse (60.5\%), mental/behavioral health (56.1\%), obesity (52.6\%) and addiction (40.4\%) as being among the top five health issues (Table 1). In contrast, only seven directors (6.1\%) selected men's health as a priority.

I/T/U directors indicated that gender-tailoring would be important for some of their top health
priorities. Aside from women's health and men's health, sexual abuse and domestic abuse showed the strongest support for gender tailoring. However gender-tailoring was also considered very important for issues such as cancer screening (80\%), suicide (60\%) and mental/behavioral health (51.9\%) (Table 1). Most also said gender-tailoring was at least somewhat important for addiction (94.9\%), alcohol and substance abuse (92.9\%),
tobacco (87.5\%) and obesity (84.3\%). Overall, $80.2 \%$ of respondents said gender-tailoring was at least somewhat important for three or more of their priority health issues. There was no significant
difference regarding importance of gender-tailoring between respondents with and without active men's health programs (Fisher's exact p > .14).

Table 1. Importance of gender tailoring for each health priority in the top 5 among 114 health directors.

|  |  | Gender tailoring is important, N (Row \%) |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Issue | $77(67.5)$ | $22(33.3)$ | $31(47.0)$ | $13(19.7)$ | 11 |
| Diabetes | $69(60.5)$ | $25(44.6)$ | $27(48.2)$ | $4(7.1)$ | 13 |
| Alcohol and substance abuse | $64(56.1)$ | $28(51.9)$ | $22(40.7)$ | $4(7.4)$ | 10 |
| Mental health/behavioral health | $60(52.6)$ | $25(49.0)$ | $18(35.3)$ | $8(15.7)$ | 9 |
| Obesity | $46(40.4)$ | $16(41.0)$ | $21(53.9)$ | $2(5.1)$ | 7 |
| Addiction and its consequences | $32(28.1)$ | $20(80.0)$ | $4(16.0)$ | $1(4.0)$ | 7 |
| Cancer Screening | $26(22.8)$ | $6(25.0)$ | $15(62.5)$ | $3(12.5)$ | 2 |
| Tobacco | $25(21.9)$ | $1(6.3)$ | $5(31.3)$ | $10(62.5)$ | 9 |
| Facilities improvements | $21(18.4)$ | $12(60.0)$ | $6(30.0)$ | $2(10.0)$ | 1 |
| Suicide | $18(15.8)$ | $6(42.9)$ | $7(50.0)$ | $1(7.1)$ | 4 |
| Other | $17(14.9)$ | $13(92.9)$ | $1(7.1)$ | $0(0)$ | 3 |
| Domestic violence | $16(14.0)$ | $3(18.8)$ | $7(43.8)$ | $6(37.5)$ | 0 |
| Adapting to health care reform | $14(12.3)$ | $0(0)$ | $6(54.5)$ | $5(45.5)$ | 3 |
| Access to basic dental services | $14(12.3)$ | $3(27.3)$ | $6(54.5)$ | $2(18.2)$ | 3 |
| Social assistance issues | $14(12.3)$ | $3(21.4)$ | $6(42.9)$ | $5(35.7)$ | 0 |
| Strengthening health work force (eg, CHRs) | Very |  |  |  |  |
| Women's Health | $11(9.7)$ | $8(100)$ | $0(0)$ | $0(0)$ | 3 |
| Health IT | $10(8.8)$ | $1(12.5)$ | $3(37.5)$ | $4(50.0)$ | 2 |
| Home health | $9(7.9)$ | $3(33.3)$ | $6(66.7)$ | $0(0)$ | 0 |
| Men's Health | $7(6.1)$ | $5(83.3)$ | $0(0)$ | $1(16.7)$ | 1 |
| Sexual abuse | $3(2.6)$ | $2(100)$ | $0(0)$ | $0(0)$ | 1 |
| Communicable diseases | $1(0.9)$ | $0(0)$ | $0(0)$ | $1(100)$ | 0 |
| Public safety | $0(0.0)$ | $0(0)$ | $0(0)$ | $0(0)$ | 0 |
| Giving our people access to clinical trials | $0(0.0)$ | $0(0)$ | $0(0)$ | $0(0)$ | 0 |

## DISCUSSION

Our results suggest that I/T/U directors do not commonly view the establishment of genderspecific programs as a health priority per se. Rather their health priorities reflect large, well-known community-wide topics: diabetes, alcohol and substance abuse, mental/behavioral health, obesity and addiction. However, when asked whether gender-tailoring was important for these health priorities, frequently they agreed.
$\mathrm{Al} / \mathrm{AN}$ communities have a number of pressing health issues that cross the gender divide. Despite credible regularly monitored data that document that $\mathrm{Al} / \mathrm{AN}$ male mortality from suicide, diabetes, and alcohol can exceed $\mathrm{Al} / \mathrm{AN}$ females two to five fold in some age cohorts (Cho et al., 2014; Herne et al., 2014; Veazie et al., 2014; White et al., 2014), the sheer magnitude of the health challenges encountered by $\mathrm{Al} / \mathrm{AN}$ community health leaders may overshadow consideration of gender-based priorities and gender-tailored health services.

A growing body of literature examines sex differences in biological processes and disease, giving rise to clinical attention to gender as it relates to health promotion and disparities. In the $\mathrm{Al} / \mathrm{AN}$ community, a few studies have explored such gender differences (Bella et al., 2006; Blackett et al., 2005; Blackett et al., 2012; Brave Heart et al., 2012; Manzo et al., 2014; Rink et al., 2012; Spillane et al., 2012). These gender-sensitive studies identify plausible opportunities for discrete medical interventions that may improve health outcomes for specific conditions in $\mathrm{Al} / \mathrm{AN}$ men. For $\mathrm{I} / \mathrm{T} / \mathrm{U}$ directors, focusing prevention and treatment efforts in a way that addresses gender disparities may offer promise in reducing the overall disparities experienced in $\mathrm{Al} / \mathrm{AN}$ communities.

Gender tailoring could improve the effectiveness of care, could better reach a full range of community members, and could facilitate infrastructure to increase access to care. Development and implementation of $\mathrm{Al} / \mathrm{AN}$ men's health initiatives should be considered in the context of other pressing health priorities. Efforts to utilize genderspecific strategies to promote health would need to leverage already existing resources and would need to conform to the priorities of the communities involved. Gender tailoring of high priority health issues may be a strategy to achieve those overarching health priorities. More research is necessary to define and realize the potential impact of these strategies.

Due to limited resources, we were not able to collect data on patient perspectives about health priorities. Future research could explore whether patients have perspectives about health priorities that resemble the perspectives of I/T/U directors, including whether gender tailoring of those programs would be important. Some research-
mainly qualitative focus groups-has been done in AI/AN patients, but most of the available literature reports on disease-specific studies (e.g. diabetes programs (Shaw et al., 2013), etc.) and does not interact with global perspectives from AI/AN patients regarding how they might prioritize the services available to them.

A significant limitation of this study is the response rate. A $26 \%$ response rate among I/T/U directors is modest; it by no means represents all I/T/U directors. Also, this survey merely measured the perceived importance of men's health as a freestanding health issue and gender-tailored approaches to health. It did not ask respondents to make resource-sensitive value judgments of various health programs with or without gender-tailoring.
$\mathrm{Al} / \mathrm{AN}$ communities experience stark health disparities and a number of pressing health issues. Men's health programs may be helpful tools for addressing these realities if they focus on genderspecific approaches to improving health outcomes for community-specific priorities.

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## Conflict of interest

The authors declare that no competing or conflict of interests exists. The funders had no role in study design, writing of the manuscript, or decision to publish.

## Authors' contributions

$J T, E B, M H$, and $L N$ contributed to the design of the study; KN, JP, and JT analyzed the data; KN wrote the initial draft of the manuscript; and KN, JP, JT, EB, MH, LN and WP provided critical feedback and revisions.

## REFERENCES

Bella, J.N., Palmieri, V., Roman, M.J., Paranicas, M.F., Welty, T.K., Lee, E.T., Fabsitz, R.R., Howard, B.V., and Devereux R.B. (2006). Gender Differences in Left Ventricular Systolic Function in American Indians (from the Strong Heart Study)+. The American Journal of Cardiology 98, 834-837.
Blackett, P.R., Blevins, K.S., Stoddart, M., Wang, W., Quintana E., Alaupovic, P., and Lee, E.T. (2005). Body Mass Index and High-Density Lipoproteins in Cherokee Indian Children and Adolescents. Pediatr Res 58, 472-477.
Blackett, P.R., Khan, S., Wang, W., Alaupovic, P., and Lee, E.T. (2012). Sex differences in HDL ApoC-III in American Indian youth. Biology of Sex Differences 3, 18-18.
Brave Heart, M.Y.H., Elkins, J., Tafoya, G., Bird, D., and Salvador, M. (2012). Wicasa Was'aka: Restoring the Traditional Strength of American Indian Boys and Men. American Journal of Public Health 102, S177-S183.
Bureau of Indian Affairs (2015). Federal Register, Department of the Interior, ed., pp. 1942-1948.
Cho, P., Geiss, L.S., Burrows, N.R., Roberts, D.L., Bullock, A.K., and Toedt, M.E. (2014). Diabetes-related mortality among American Indians and Alaska Natives, 1990-2009. Am J Public Health 104 Suppl 3, S496-503
Harris, P.A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., and Conde, J.G. (2009). Research electronic data capture (REDCap)--a metadata-driven methodology and workflow process for providing translational research informatics support. J Biomed Inform 42, 377-381.
Heisler, E.J. (2011). The Indian Health Care Improvement Act Reauthorization and Extension as Enacted by the ACA: Detailed Summary and Timeline, C.R. Service, ed.

Herne, M.A., Bartholomew, M.L., and Weahkee, R.L. (2014). Suicide mortality among American Indians and Alaska Natives, 1999-2009. Am J Public Health 104 Suppl 3, S336-342.
Indian Health Service (2015). Indian Health Disparities.
Manzo, K., Tiesman, H., Stewart, J., Hobbs, G.R., and Knox, S.S. (2014). A Comparison of Risk Factors Associated with Suicide Ideation/Attempts in American Indian and White Youth in Montana. Archives of Suicide Research 19, 89102.

Rink, E., FourStar, K., Elk, J.M., Dick, R., Jewett, L., and Gesink, D. (2012). Young Native American Men and Their Intention to Use Family Planning Services. American Journal of Men's Health 6, 324-330.
Shaw, J.L., Brown, J., Khan, B., Mau, M.K., and Dillard, D. (2013). Resources, roadblocks and turning points: a qualitative study of American Indian/Alaska Native adults with type 2 diabetes. Journal of community health 38, 8694.

Spillane, N.S., Muller, C.J., Noonan, C., Goins, R.T., Mitchell, C.M., and Manson, S. (2012). Sensation-seeking predicts initiation of daily smoking behavior among American Indian high school students. Addictive behaviors 37, 10.1016/j.addbeh.2012.1006.1021.

Veazie, M., Ayala, C., Schieb, L., Dai, S., Henderson, J.A., and Cho, P. (2014). Trends and disparities in heart disease mortality among American Indians/Alaska Natives, 19902009. Am J Public Health 104 Suppl 3, S359-367.

White, M.C., Espey, D.K., Swan, J., Wiggins, C.L., Eheman, C., and Kaur, J.S. (2014). Disparities in cancer mortality and incidence among American Indians and Alaska Natives in the United States. Am J Public Health 104 Suppl 3, S377387.

