

**Testimony submitted by Dr. Warren Zapol
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Before the Senate Committee on Indian Affairs
March 25, 2010**

Youth Suicide in the Arctic

Good morning, Chairman Dorgan, Vice Chairman Barrasso and Members of the Committee on Indian Affairs. I am pleased to submit testimony on Youth Suicide in Indian Country as part of the Committee's March 25, 2010, hearing. My testimony focuses specifically on youth suicide in the Arctic and on the goals of the U.S. Arctic Research Commission, which I represent as a commissioner.

I am the Director of The Anesthesia Acute Care Laboratories at Massachusetts General Hospital (MGH) and the Reginald Jenney Professor of Anesthesia at Harvard Medical School in Boston. I received my undergraduate education at Massachusetts Institute of Technology, attended the University of Rochester School of Medicine, and after graduation, served in the Public Health Service (1967-1970) at National Institutes of Health as a staff associate of the National Heart Institute. I currently serve as a commissioner for the U.S. Arctic Research Commission, representing academics and research while focusing on human health. It is in my capacity as the "human health" commissioner that I submit my comments.

The federal government, Congress and the Supreme Court have all determined that the federal government has a fiduciary responsibility to provide for the health, safety and wellbeing of Alaska Natives and American Indians. With youth suicide rates, especially in Alaska Native males, drastically exceeding the national average—the Arctic Human Development Report states that Alaska Native males are 80% more likely to commit suicide than the general American population—the federal government is not fulfilling this trust responsibility. Millions of dollars have been provided to stem these deaths, but youth suicide rates among Alaska Natives are increasing and continue to drastically outpace the American population, generally. We owe it to our Alaska Native populations to ensure that the federal funding provided for their health and wellbeing is used to promote maximized benefits—reductions in youth suicides.

Currently, the federal government does not know which programs work or which programs work most effectively to reduce youth suicides in Indian Country. It is critical that the federal government study these programs to determine how best to fulfill its fiduciary responsibility—without this, the Federal Government will continue to fund prevention and intervention programs, without regard to the programs' effectiveness in reducing youth suicides. This is not fair to our Alaska Native populations.

In recent years, there has been significant improvement in the general health of the Arctic resident populations, but significant behavioral and mental health disparities persist, especially between indigenous and non-indigenous populations of the Arctic. These disparities include unintentional injuries, suicide, homicide, infant mortality, and in part, account for a shorter life

expectancy and increased mortality related to suicide and accidents in Arctic residents, as compared to residents in more temperate climates.

Although Alaskans face the same behavioral and mental health issues faced by communities in other states, the severity of many of the problems is often greater and there are special challenges posed by the remoteness of many Alaskan communities. Some of the health problems of greatest concern include, but are not limited to, elevated suicide prevalence, child abuse/neglect, sexual assault, alcohol use, high prevalence of Fetal Alcohol Spectrum Disorders, and unintentional injuries. Additionally, the rates of smoking and obesity are higher in the Alaskan Natives, compared to non-Natives, and there has been a rapidly rising incidence of diabetes.

As described in the Arctic Human Health Assessment Program's 2002 report, the younger age structure, and predominantly remote locations of the majority of the Alaskan Native populations makes the State's communities particularly vulnerable to these disparities; however, it also provides an opportunity for establishing culturally specific, community-based intervention programs that emphasize resiliency and preventive measures for behavioral and mental health promotion. Many agencies and organizations have recognized the need to invest in further research and improve current services. There is also increased attention to the issue of culturally appropriate training of community-based health care providers. It is believed that coordination of these efforts will provide a maximal benefit to the affected communities.

The indigenous populations and other residents of the high northern latitudes disproportionately face a variety of mental and behavioral health and health-related social issues. Although many of these issues parallel those faced by residents of other rural areas, and are similar to those faced by other Native American populations in the lower 48 states, the problems in Alaska are compounded by the challenging physical environment (including extreme cold and photoperiod changes) and limited availability of and access to health services, and aggravated by the rapid social changes of the past few decades.

The Arctic Research and Policy Act, passed in 1984 (PL 98-373) and amended in 1990 (PL 101-609) was enacted to establish national policy, goals, and priorities for Arctic research. The Act established the Arctic Research Commission and an Interagency Arctic Research Policy Committee (IARPC). The Commission publishes a report on goals and objectives every two years to help guide the activity of the IARPC and its member federal agencies. In its 2009 report, the Commission outlined several research program recommendations. In addition to studies of the Arctic Region, Bering Sea Region, and research on resource evaluation and civil infrastructure, the Commission has called for a review of Arctic health research.

The Commission's recommendation for a research program on Arctic health calls for a focus on mental health in the Arctic since behavioral problems such as alcoholism, drug use, suicide and accidents are among the most frequent causes of ill health and death in Arctic populations (USARC, 2009). The Commission recommended that IARPC begin planning an interagency program to coordinate and emphasize research on mental health concerns in the Arctic, with the National Institutes of Health as the focal point for the effort. In response, a meeting on Arctic Mental Health was held under joint sponsorship of the NIH Fogarty Center and USARC in Anchorage on June 2 and 3, 2009. After a thorough review of the problems with extensive

representation from Alaskan Native groups, federal organizations (NIMH, NIAAA, NIDA, Fogarty Center, CDC, etc), State of Alaska agencies (Dept of Health, CMO of AK, etc), state legislators, and voluntary agencies (Mental Health Trust), it became clear that the problem was both difficult and chronic and little progress is being made toward reducing the suicide rate.

It was also believed that it would take extensive research to identify successful interventions, rigorously test them, scale them up, sustain them, and evaluate their effectiveness. The complete discussions of that meeting were published in December 2010 as a supplement to the International Journal of Circumpolar Health and are available on our website (www.arctic.gov).

It should be noted that, although a great number of northern residents are at risk and experience disproportionate mental and behavioral health complications, there are also Arctic inhabitants who are resilient to these risk factors. These differences can be seen not only between individuals, but between communities or villages, suggesting an important socio-cultural component to resilience. It is unclear what makes some individuals or villages more resilient to the same factors that put so many others at risk. With few exceptions, there is no current, compelling framework to guide development of a primary prevention approach for mental illness or addictive disorders in the Arctic. That is, it is not known which societal strategies are the most effective at fundamentally lowering incidence and prevalence of these disorders. Strategies might include modifications in housing, socioeconomic status, education, environmental hazards, behavior and violence.

In Alaska, multiple federal, state and local agencies are involved in promoting, preventing and treating mental and behavioral health disorders. In some cases, these agencies collaborate with international partners in the pan-Arctic such as the Canadian Ministry of Health. Each of these agencies comprises a critical piece of the infrastructure that supports and maintains the health of Alaskans. For example, within the federal government there are at least five agencies active in providing assistance, including the Indian Health Service, Centers for Disease Control, National Institutes of Health, National Science Foundation, and the Health Resources and Services Administration. In addition there are well over 20 non-federal agencies providing behavioral health services in Alaska. A coordinated effort among the various agencies and organizations is needed to provide the most effective prevention and intervention services.

Researchers in the behavioral and social sciences are exploring resilience factors that allow better coping, recovery, and resiliency to social and physical trauma. Research in neuroscience is identifying mediators and mechanisms of altered brain functioning and behavior. Community-based researchers are employing educational programs to teach cultural values and traditions, within the context of the modern society that may be successful in reducing youth suicides. Additionally, medical research is finding new approaches to diagnose and pharmacologically treat depression.

Focused research is desperately needed to identify more effective and comprehensive strategies for promoting resilience and recovery in individuals who live in the northern communities as well as to facilitate effective coordination among federal, state and local agencies. Despite many trials of intervention or “pilot programs” there is little effectiveness testing of interventions and no interventions have been scaled up to a statewide level. The mental health research agenda for

northern residents is much broader than can be accommodated by a single agency. Despite the enormity of the problem, a minuscule amount of funds are devoted to mental health research in Alaska.

The U.S. Arctic Research Commission recommends that \$1.2 million be made available for the Institute of Medicine (IOM) of the National Academies of Science to review what research is needed to improve the health of Alaskan Natives. This study will examine the science base, gaps in knowledge, and strategies for the prevention and treatment of mental and behavioral health problems faced by populations in Arctic regions, with a focus on Alaska. Specifically, the IOM research would:

1. Summarize the scope and nature of mental and behavioral health among residents of Arctic regions, with special emphasis on Alaska.
2. Assess the infrastructure for research into the mental and behavioral health issues in Alaska to determine if current mechanisms and resources are appropriate to facilitate progress in the field. This should include an analysis of which federal agencies are funding research programs and the mechanisms used to review research proposals.
3. Describe factors that contribute to promoting resilience and recovery among Arctic residents. Learn if any of these have been robustly tested for effectiveness. Learn if any of these have been scaled-up for large scale implementation. Have any scaled-up programs been tested?
4. Provide recommendations for strategies of implementation and testing of programs designed to increase resilience in the affected populations and reduce health disparities.
5. Describe and assess the infrastructure for prevention and treatment of mental and behavioral health in Alaska; including federal-, state- and community-based programs. This should include examination of collaborative efforts and discussion of ways to improve coordination between the multiple public and private agencies involved in promoting improved mental and behavioral health. The testing of pilot programs for effectiveness will be emphasized, and the scaling potential of pilot therapeutic efforts will be examined.
6. Identify steps that could be taken in the short-, medium-, and long-term to improve the mental and behavioral health of Arctic residents, including research needed to understand the impact of abrupt, Arctic climate change and rapid social changes on mental and behavioral health, improvements in community infrastructure directly related to improved health, changes in prevention and treatment programs, and mechanisms to improve selection and training of personnel for mental and behavioral health care services. Special emphasis will be made on the use of telepsychiatry to augment these efforts.

The U.S. Arctic Research Commission understands the widespread needs for funding of behavioral mental health services in Alaska for Alaskan Natives. In this vein, it is vital that the

federal government carry out an IOM-based report of our knowledge and knowledge gaps to learn which strategies for sustainable interventions and prevention might most effectively and efficaciously be developed to optimize the use of these federal dollars and achieve the most beneficial effects. Only through rigorous examination and testing can evidence-based, sustainable interventions reduce the complex set of factors that influence mental and behavioral health in the Arctic, especially in Alaska Native youth. Thank you so very much for the opportunity to present this testimony before the Senate panel.