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Expansion of the Maternal-Infant Mortality Review to Include Older Children

Introduction

The Maternal-Infant Mortality Review (MIMR) was established during 1989 in response to the collective concern of State health officials and private health practitioners regarding Alaska's high infant mortality rate. The review expanded this scope to include all maternal and fetal deaths in its original design. Under the guidelines of Alaska Statutes Section 18.23.20 – 18.23.70, the MIMR Committee, composed of physicians and other health specialists, regularly meets to retroactively review and evaluate the circumstances surrounding all deaths among these groups.

During July 2005, MIMR expanded to include all deaths of children < 18 years old as part of a new Maternal-Infant Mortality, Child Death Review (MIMR-CDR) process. As with infant and maternal deaths, the extended age criterion should enable the Review Committee to provide comprehensive evidence-based public health recommendations for reducing child deaths (Figure 1).

Need for Expanded Review

Of the 2,195 Alaskans < 18 years old who died during 1990-2004, 1,105 (50%) were ≥ 1 year old. Mortality rates for children aged 1-4, 5-9, 10-14, and 15-17 years, respectively, were 46, 19, 33, and 90 deaths per 100,000 population per year.

Based upon cause of death reports from death certificates, 75% of non-infant (i.e., aged ≥ 1 through 17 years) deaths during 1990-2004 resulted from potentially preventable causes such as unintentional injuries (including those due to fire, poisoning, drowning, and forces of nature), transportation accidents, assault, or suicide. Medical causes, including infectious disease, made up the remaining 25% of deaths. Causes of death varied by age group, with fire-related deaths playing a relatively large role among the youngest children and suicide, assault, and transportation accidents assuming greater importance among older children. For all categories of deaths evaluated, Alaska Natives had higher mortality rates than non-Natives (Figure 2).

Among persons aged 1-17 years, mortality rates due to assault and suicide have remained stable since 1990. Rates due to unintentional injury have decreased, primarily as a result of a dramatic decline in unintentional death by fire among children ages 1-4 years old. Transportation accidents have also decreased.

Discussion

Post-infancy pediatric mortality is common in Alaska, with rates higher than among overall US populations (1). While some trends are encouraging, others are worrisome, such as the static rates of assault and suicide deaths. Additionally, there is a substantial and unexplained disparity in mortality rates between Natives and non-Natives for all categories of deaths evaluated.

Most of these deaths appear to be due to potentially preventable causes; however, death certificates do not provide descriptions of specific circumstances amenable to public health intervention (e.g., a history of abuse preceding homicide, lack of seatbelt use associated with death during motor vehicle accidents, or lack of smoke detectors associated with fire-related deaths). The expanded MIMR-CDR will enable the Review Committee to monitor trends in outcomes, identify specific high-risk populations, and provide more specific recommendations for public health interventions.

The procedures for the expanded MIMR-CDR will be the same as those used previously and will include collection of first responder reports, autopsy reports, and medical records from health care providers and institutions, and review by members of the MIMR-CDR Committee. Questions or concerns related to this new program should be directed to Renee Rudd, MIMR-CDR Program Manager, Alaska Division of Public Health, at 269-3401.

(1) Kochanek KD, Murphy SL, Anderson RN, Scott C. Deaths: Final Data for 2002. National Vital Statistics Reports; vol 53, no 5. Hyattsville, Maryland: National Center for Health Statistics. 2004. [Accessed online August 26, 2005 at http://www.cdc.gov/nchs/data/nvsr/nvsr53/nvsr53_05acc.pdf.]

Figure 1. Mortality rates (per 100,000 per year), by age group and category of death among persons aged 1-17 years; Alaska, 1990-2004

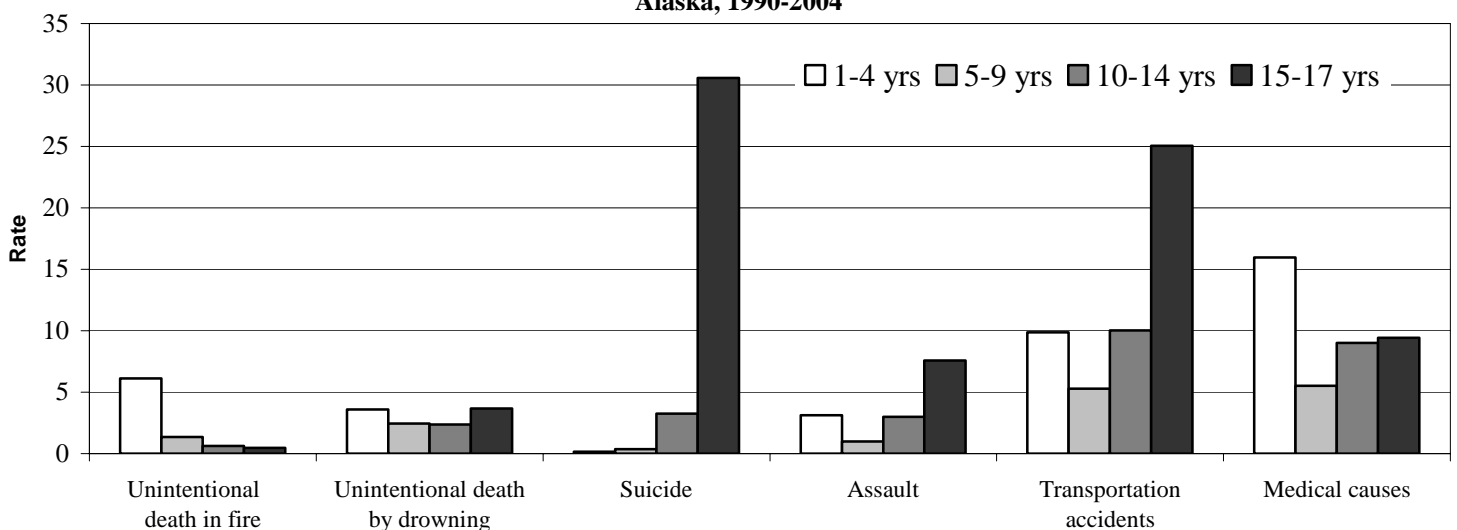


Figure 2. Mortality rates (per 100,000 per year) by Alaska Native status and category of death among persons aged 1-17 years; Alaska, 1990-2004

