

2010 - 2012

ALASKA HIV
PREVENTION PLAN





Dear Alaskan:

The Alaska HIV Prevention Planning Group is pleased to present the *2010-2012 Alaska HIV Prevention Plan*. In this plan, we offer our recommendations and guidance to community-based organizations seeking to apply for state funding for HIV prevention activities in Alaska over the next three years, and aim to give the broader public an understanding of the work of HIV prevention in Alaska. We employ an evidence-based process in developing our recommendations and guidance, and this plan presents the data used in deciding how best to guide and sustain effective HIV prevention activities throughout the state. Our goal is to prevent new HIV infections in Alaska.

Continued progress towards this goal requires contributions from all sectors. The strategies and interventions proposed in this *Plan*, a number of which will be carried out by local organizations with federal funds allocated through state grants, are just one part of the overall effort. Ultimately, the knowledge, attitudes, and behaviors that help individuals prevent infection are promoted and supported by families, friends, churches, health care providers, tribal health organizations, social groups, schools, public policy-setting bodies and communities.

At the same time, reducing the HIV/AIDS epidemic to a set of “risk factors” ignores the vast set of socioeconomic factors that constrain individuals’ behaviors and shape the context in which they make decisions regarding their health, including poverty, stigma, and discrimination. Persons who are living with HIV can make important contributions to raising awareness about the epidemic. Communities can play an important, positive role in educating their members about preventing the transmission of HIV and ensuring that the voices of persons living with HIV are not silenced by fear of discrimination.

We encourage all Alaskans to take part in local prevention activities, to increase awareness and understanding of HIV/AIDS, and to show compassion for those infected with and affected by HIV and AIDS.

Sincerely,

Handwritten signature of Alex Barros in black ink.

Alex Barros

Handwritten signature of Tim (Sigvold) Juliussen in black ink.

Tim (Sigvold) Juliussen

Handwritten signature of Mollie Rosier in black ink.

Mollie Rosier

2010 Co-Chairs
HIV Prevention Planning Group
State of Alaska HIV/STD Program
3601 C Street, Suite 540
P.O. Box 240249
Anchorage, Alaska 99524-0249
907-269-8000

The *2010-2012 Alaska HIV Prevention Plan* has been developed by the Alaska HIV Prevention Planning Group with support from the State of Alaska HIV/STD Program and funding from the federal Centers for Disease Control and Prevention. If you would like copies of this document, or additional information, please call the Section of Epidemiology HIV/STD Program at (907) 269-8000 or visit the website at <http://epi.alaska.gov/hivstd/hppg>.

2010-2012 ALASKA HIV PREVENTION PLAN

Table of Contents

Index of Tables and Figures	vii
2010-2012 List of Acronyms	x
Chapter One:.....	1
Introduction	1
OVERVIEW: 1982-2008.....	1
HIV Prevention Successes and Current Challenges	3
The 2010-2012 Alaska HIV Prevention Plan	4
Advancing HIV Prevention Initiative	4
Organization of the <i>2010-2012 Alaska HIV Prevention Plan</i>	5
Chapter Two:	7
Impact of HIV in Alaska, Distribution of Risk.....	12
Cumulative Cases.....	13
Category of Exposure	23
HIV Cases Presumed to Be Living.....	61
HIV Testing in Alaska: BRFSS and PRAMS Data	70
Chapter Three:	73
Community Services Assessment	73
Funding for HIV Prevention in Alaska.....	73
HIV Prevention Resources in 2009-2010 by Agency.....	75
HIV Prevention Resources by Target Population and Geographic Distribution	80
Population-Specific Indications of Need, Resources and Gaps.....	81
Men Who Have Sex With Men.....	87
Injection Drug Users	89
Heterosexual Women at Increased Risk	90
Heterosexual Men at Increased Risk.....	93
Supplement: Incarcerated Persons Needs Assessment	95
Chapter Four:	98

Priority Populations	98
Chapter Five:.....	100
Interventions	100
Information on Effective Interventions.....	100
Characteristics of Effective Interventions.....	103
CDC's Diffusion of Effective Behavioral Interventions (DEBI) Project.....	106
Provisional Procedural Guidance for Community-Based Organizations	111
2009 Compendium of HIV Prevention Interventions with Evidence of Effectiveness	113
Additional HIV Prevention Interventions/Activities	114
Selecting Interventions.....	117
Advantages and Drawbacks of EBIs.....	117
Additional Considerations in Selecting Interventions	118
Chapter Six.....	120
Recommendations	120
HIV Prevention Goals.....	120
HIV Prevention Recommendations	120
HIV-Positive Persons.....	121
Men who have Sex with Men (MSM)	122
Injection Drug Users	123
Heterosexual Females at High Risk.....	124
Heterosexual Men at High Risk.....	125
Recommendations for Viral Hepatitis Prevention	127
Recommendations for Capacity Building.....	128
Recommendations for Needs Assessment	129
Recommendations for Evaluation.....	129
Other Health Department Activities Carried Out Under the CDC Cooperative Agreement.....	130
Chapter Seven:	131
Overview of the Community Planning Process	131
HIV Prevention Community Planning.....	131
Goals of HIV Prevention Community Planning	131
Guiding Principles for HIV Prevention Community Planning.....	131
Current Alaska HIV Prevention Group Members	132
Community Input Process.....	133

Appendix A: 135

Tables Used by the Alaska HPPG in Prioritizing Populations..... 135

INDEX OF TABLES AND FIGURES

Tables

Table 1 Estimated 2008 Alaska Population by Race/Ethnicity8

Table 2 Cumulative HIV/AIDS Cases Reported to the Alaska Division of Public Health, 1982-200813

Table 3 Average Number of HIV/AIDS Cases Newly Diagnosed per Year by Gender, Nine-Year Periods, 1982-2008 – Alaska17

Table 4 Gender of HIV/AIDS Cases Presumed Living and Known to be Dead as of December 31, 2008, Alaska.....63

Table 5 Demographic Characteristics of Part B Ryan White Treatment Modernization Act Clients – 2008.....70

Table 6 Percentage of Females Delivering Live Births in Alaska Reporting That Their Prenatal Care Provider Discussed HIV Testing with Them.....72

Table 7 Percentage of Females Delivering Live Births in Alaska Reporting an HIV Test During Pregnancy72

Table 8 HIV/STD Program-funded HIV Prevention Interventions by Agency—July 1, 2007 through June 30, 2010.....75

Table 9 Recommended Interventions by Priority Population.....126

Table 10 Target Population by Risk Factor; HIV/AIDS Cases through 2008.....135

Table 11 Target Population by Demographics; HIV/AIDS Cases through December 31, 2008136

Figures

Figure 1 Alaska Population and In-State HIV/AIDS Diagnoses by Urban/Rural Residence as of December 31, 2008.....10

Figure 2 Cumulative HIV/AIDS Cases and Known Deaths, Both Sexes – Alaska, 1982-200814

Figure 3 Age-Adjusted HIV/AIDS Incidence per 100,000 Population, 2004-2008– Alaska and U.S16

Figure 4 Percentage of HIV/AIDS Diagnoses per by Gender, 1982-2008– Alaska18

Figure 5 Absolute Numbers of HIV/AIDS Diagnoses by Gender, 1982-2008– Alaska.....19

Figure 6	Cumulative HIV/AIDS Diagnoses Reported through December 31, 2008, by Age at First Known HIV/AIDS Diagnosis – Alaska	20
Figure 7	HIV/AIDS Diagnoses by Age Group, Both Sexes – Alaska, 1982-2008	21
Figure 8	HIV/AIDS Diagnoses by Age Group, Males – Alaska, 1982-2008	22
Figure 9	HIV/AIDS Diagnoses by Age Group, Females – Alaska, 1982-2008.....	23
Figure 10	Three-Year Moving Averages, Cumulative HIV/AIDS Diagnoses Reported through December 31, 2008, by Category of Exposure, Both Sexes – Alaska	25
Figure 11	Cumulative HIV/AIDS Diagnoses Reported through December 31, 2008, by Category of Exposure, Both Sexes – Alaska	26
Figure 12	HIV/AIDS Diagnoses by Category of Exposure, Both Sexes – Alaska, 1982-2008	27
Figure 13	HIV/AIDS Diagnoses by Category of Exposure, Males – Alaska, 1982-2008	28
Figure 14	HIV/AIDS Diagnoses by Category of Exposure, Females – Alaska, 1982-2008	29
Figure 15	Cumulative HIV Cases (with and without AIDS) by Race/Ethnicity through December 31, 2008 and 2008 Alaska Population Data	30
Figure 16	HIV/AIDS Diagnoses by Race and Ethnicity, Both Sexes – Alaska, 1982-2008	32
Figure 17	HIV/AIDS Diagnoses by Race and Ethnicity, Males – Alaska, 1982-2008.....	33
Figure 18	HIV/AIDS Diagnoses by Race and Ethnicity, Females – Alaska, 1982-2008	34
Figure 19	Percentage of HIV/AIDS Diagnoses per Year by Race/Ethnicity, Both Sexes, 1982-2008 – Alaska.....	36
Figure 20	Percentage of HIV/AIDS Diagnoses per Year by Race/Ethnicity, Males, 1982-2008	37
Figure 21	Percentage of HIV/AIDS Diagnoses per Year by Race/Ethnicity, Females, 1982-2008 – Alaska.....	38
Figure 22	Five-Year Incidence Rates, African-American & Other Black, Alaska Native & American Indian, and White Persons, 1994-2008	41
Figure 23	Five-Year Incidence Rates, African-American & Other Black, Alaska Native & American Indian, and White Males, 1994-2008	42
Figure 24	Five-Year Incidence Rates, Alaska Native & American Indian and White Females, 1994-2008.....	43
Figure 25	Incidence Rates per 100,000 Population, Alaska Native/American Indian Males – 2000-2008 (With 95% Poisson CIs)	44

Figure 26	Incidence Rates per 100,000 Population, Alaska Native/American Indian Females– 2000-2008 (With 95% Poisson CIs).....	45
Figure 27	Incidence Rates per 100,000 Population, White Males – 2000-2008 (With 95% Poisson CIs).....	46
Figure 28	Incidence Rates per 100,000 Population, White Females – 2000-2008 (With 95% Poisson CIs)	47
Figure 29	Incidence Rates per 100,000 Population, African-American & Other Black Males – 2000-2008 (With 95% Poisson CIs)	48
Figure 30	Region of Residence* at Time of First HIV/AIDS Diagnosis, In-State Diagnoses – Alaska, 1982-2008	49
Figure 31	HIV/AIDS Diagnoses by Region of Residence, Both Sexes – Alaska, 1982-2008	51
Figure 32	HIV/AIDS Diagnoses by Region of Residence, Females – Alaska, 1982-2008	53
Figure 33	HIV/AIDS Diagnoses by Region of Residence, Males – Alaska, 1982-2008.....	55
Figure 34	Urban vs. Rural Residence at Time of Diagnosis, Three-Year Moving Averages, 1982-2008.....	56
Figure 35	Urban vs. Rural Residence at First HIV/AIDS Diagnosis, Alaska – Both Sexes	58
Figure 36	Urban vs. Rural Residence at First HIV Diagnosis, Male HIV/AIDS Cases	60
Figure 37	Urban vs. Rural Residence at First HIV Diagnosis, Female HIV/AIDS Cases.....	61
Figure 38	Transmission Category for HIV/AIDS Cases Presumed Living and Those Known to Have Died through December 31, 2008 – Both Sexes, Alaska	64
Figure 39	Transmission Category for HIV/AIDS Cases Presumed Living and Those Known to Have Died through December 31, 2008 – Males, Alaska.....	65
Figure 40	Transmission Category for HIV/AIDS Cases Presumed Living and Those Known to Have Died through December 31, 2008 – Females, Alaska	66
Figure 41	Race/Ethnicity and Gender of HIV/AIDS Cases Presumed Living and those Known to Have Died, 1982-2008 – Alaska.....	68
Figure 42	Age Distribution of Cases Presumed to Be Living, 2002, 2005 & 2008.....	69
Figure 43	FY 2009 Grants and Contracts for HIV Prevention by Intended Population	74
Figure 44	The CDC’s Tiers of Evidence Framework	105

2010-2012 LIST OF ACRONYMS

3MV	Many Men, Many Voices
ADA	Alcoholism and Drug Abuse Program
ADAP	AIDS Drug Assistance Program
AKDOL	Alaska Department of Labor and Workforce Development
AN/AI	Alaska Natives and American Indians
AIDS	Acquired Immune Deficiency Syndrome
AK	Alaska
ANHC	Anchorage Neighborhood Health Center
ANTHC	Alaska Native Tribal Health Consortium
ASD	Anchorage School District
ASE	Anchorage Syringe Exchange
AYPF	Alaska Youth and Parents Foundation
BRFSS	Behavioral Risk Factor Surveillance System
CBAE	Community Based Abstinence Education
CBO	Community Based Organization
CDC	Centers for Disease Control and Prevention
CDP	Center for Drug Problems
CI	Confidence Interval
CLEAR	Choosing Life: Empowerment! Action! Results!
CRCS	Comprehensive Risk Counseling Services
CSA	Community Services Assessment
CT	(HIV) Counseling and Testing
CTRS	(HIV) Counseling, Testing, and Referral Services
DASH	Division of Adolescent and School Health, CDC
DBH	Division of Behavioral Health
DEBI	Diffusion of Effective Behavioral Interventions Project
DHSS	Department of Health and Social Services, State of Alaska
DIS	(Public Health) Disease Intervention Specialist
EBI	Evidence-Based Intervention
EIS	Ryan White Early Intervention Services
EPSDT	Early and Periodic Screening, Diagnostic, and Treatment Services
Four A's (4A's)	Alaskan AIDS Assistance Association
FOY	Focus on Youth + ImPACT (Informed Parents & Children Together)
FY	Fiscal Year
HAART	Highly Active Antiretroviral Therapy
HC/PI	Health Communication/Public Information
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HC/PI	Health Communications/Public Information
HE/RR	Health Education and Risk Reduction
HHRP	Holistic Health Recovery Program
HIV	Human Immunodeficiency Virus

HIVCT	HIV Counseling and Testing
HPPG	Alaska HIV Prevention Planning Group
HRSA	Health Resources and Services Administration
IAA	Interior AIDS Association
IDU	Injection Drug User
ILP	Infant Learning Program
IRR	Incidence Rate Ratio
ISER	Institute of Social and Economic Research, University of Alaska
MIP	Modelo de Intervención Psicomédica
MOARHC	Municipality of Anchorage Reproductive Health Clinic
MSM	Men Who Have Sex with Men
NIH	National Institutes of Health
NPIN	National Prevention Information Network, CDC
OR	Outreach
PCM	Prevention Case Management
PCRS	Partner Counseling and Referral Services
PFD	Permanent Fund Dividend
PLWHA	People Living With HIV and/or AIDS
POL	Popular Opinion Leader
POWER	Peer Outreach Worker Education and Referral Program
PrEP	Pre-Exposure Prophylaxis
PROMISE	Peers Reaching Out and Modeling Intervention Strategies
PS	Partner Services and Disease Intervention
RAPP	Real AIDS Prevention Project
RSE	Residual Standard Error
SAMHSA	Substance Abuse and Mental Health Services Administration
SCSN	Statewide Coordinated Statement of Need
SD	Standard Deviation
SHIELD	Self-Help in Eliminating Life-threatening Diseases
SIHLE	Sisters Informing, Healing, Living, and Empowering
SISTA	Sisters Informing Sisters on Topics about AIDS
SPRANS	Special Projects of Regional and National Significance
STARHS	Serological Testing Algorithm for Recent HIV Seroconversion
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TB	Tuberculosis
TLC	Together Learning Choices or Teens Linked to Care
UAA	University of Alaska Anchorage
UCSF	University of California San Francisco
VOICES/VOCES	Video Opportunities for Innovative Condom Education and Safer Sex
WIC	Women, Infants, and Children
WILLOW	Women Involved in Life Learning from Other Women
YKHC	Yukon-Kuskokwim Health Corporation

CHAPTER ONE: INTRODUCTION

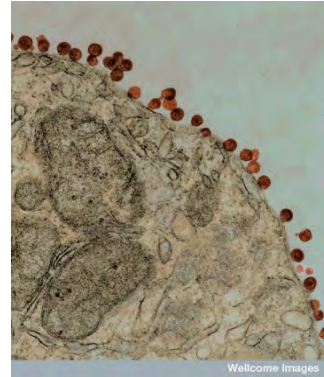
OVERVIEW: 1982-2008

THE FIRST CASE OF AIDS IN ALASKA was diagnosed in November of 1982. In the 26 years between that diagnosis and December 31, 2008, 1,261 cases of HIV or AIDS were reported in Alaska, and the early days of the epidemic, when public health authorities and others impacted by HIV faced a poorly-understood illness with a then-unknown route of transmission, have given way to a state of affairs in which HIV is seen by many as a chronic infection, easily treatable with a range of antiretroviral medications. Persons living with HIV and AIDS (PLWHA) are now able to lead long, full lives for decades following their diagnosis, and prevention with PLWHA has become a major component of HIV prevention programs.

HIV impacts women, men and children from all regions of the state and all socioeconomic backgrounds.

Just as the nature of life with HIV and AIDS has changed, so have the demographics of those infected. HIV impacts women, men and children from all regions of the state and all socioeconomic backgrounds: it is not simply an infection of men who have sex with men (MSM) or injection drug users. Though male-to-male sexual contact still accounts for more new diagnoses than any

other transmission category, it constituted just half (17 of 34) of new diagnoses in Alaska during 2008. Similarly, though the majority of HIV/AIDS cases continue to occur among males, the number and proportion of cases in males have declined and the proportion of cases in females has increased since 1982: from 2000-2008, 25% of all new HIV/AIDS diagnoses in Alaska were among women; from 1982-1990, just 10% of diagnoses in Alaska were among women.



Between 2004 and 2007, the most recent year for which national data are available, the estimated number of persons living with HIV/AIDS in 34 states with confidential name-based HIV infection surveillance rose from 475,668 at the end of 2004 to 551,932¹. The demographics of HIV infection are marked by significant racial and ethnic disparities. From 2004 through 2007, the estimated number of African-Americans and other black persons living with HIV/AIDS rose from 230,138 to 267,116, representing 48% of all PLWHA in the U.S, despite African-American and other black persons making up just 12.4% of the U.S. population². During the same period, the estimated number of white persons living with HIV/AIDS increased from 158,258 to 181,380, representing just 32.9% of all PLWHA in the U.S., though white persons constitute a full 75% of the U.S.

¹ Centers for Disease Control and Prevention, "HIV/AIDS Surveillance: General Epidemiology." <http://www.cdc.gov/hiv/topics/surveillance/resources/slides/general/index.htm>

² 2008 American Community Survey, U.S. Census Bureau. Available online at: <http://tiny.cc.xEu3v>

population. The number of Hispanic/Latino PLWHA rose from 78,480 to 92,943, representing 15.4% of all PLWHA in the U.S., while Hispanic/Latino persons constitute 16.8% of the U.S. population. The number of Asian and Pacific Islander PLWHA rose from 2,295 to 3,407, representing 0.6% of all PLWHA in the U.S., while Asian and Pacific Islander persons constitute 4.4% of the U.S. population. The estimated number of Alaska Native and American Indian PLWHA in these states increased from 1,895 to 2,281, representing 0.5% of PLWHA. Though the absolute number of Alaska Native and American Indian PLWHA may be small, they are especially over-represented in the demographics of HIV infection in Alaska, as detailed in Chapter 2.

In 2007, the HIV prevalence rate for African-Americans and other black persons was nearly eight times that of white persons (1,715 per 100,000 population vs. 224 per 100,000). The prevalence rate for black men—2,388 per 100,000—was six times as high as that among white men (395 per 100,000). Black women are also severely affected. The prevalence rate for black women (1,122 per 100,000) was 18 times the rate for white women (63 per 100,000). These shifts in the distribution of HIV/AIDS cases present new and ongoing challenges: how to effectively reach women and heterosexual persons at increased risk and how to mobilize racial/ethnic minority communities to engage with HIV prevention efforts, while continuing to provide effective approaches to risk reduction among men who have sex with men.

STARHS and the CDC's Revised Incidence Estimates

In August of 2008, the CDC revised its national estimates of HIV incidence using a new laboratory assay and an algorithm

known as the Serological Testing Algorithm for Recent HIV Seroconversion, or STARHS. In short, STARHS allows for more precise estimation of the date of infection; its use led CDC scientists to better estimate the date of infection among newly diagnosed cases. As a result, the CDC now estimates that 56,300 new HIV infections occurred in the United States during 2006, a significant increase over the 40,000 new cases per year that the CDC had estimated since the 1990s.

Of these 56,300 infections, 73.5% (41,400) were in males, and 26.5% (15,000) in females. Male-to-male sexual contact accounted for 53% (28,700) cases overall and 72% of cases in males; high-risk heterosexual contact accounted for 31% (16,800) of cases overall, 80% (11,550) of cases in females and 13% (5,250) of cases in males; injection drug use for 12% of cases overall, 20% (2,860) of cases in females and 9% (3,750) of cases in males; and male-to-male sexual contact and injection drug use for 4% (2,100) of cases overall and 5% of cases in males³.

Racial and ethnic minorities are disproportionately affected by HIV/AIDS and disparities have widened over time. Forty-five percent (24,900) of all new infections—39% (16,120) of all new infections in males and 60% (8,810) of all new infections in females—were among Black/African-American persons; 35% (19,600) of all new infections—40% (16,280) of all new infections in males and 22% (3,300) of all new infections in females—were among white persons; 17% (9,700) of all new infections—18% (7,420)

³ Table 3, CDC HIV/AIDS Surveillance Report: Cases of HIV Infection and AIDS in the United States and Dependent Areas, 2007. At <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2007report/default.htm>.

of all new infections in males, and 16% (2,300) of all infections in females— were among Hispanic persons; 2% (1,200) of all new infections—2% (1,010) of all new infections in males and 1% (180) of all new infections in females—were among Asian/Pacific Islander persons; and 1% (290) of all new infections—less than 1% (150) of all new infections in males, and 1% (130) of all infections in females—were among Alaska Native/American Indian persons⁴.

This revised estimate does not mean that the number of new diagnoses has increased since the 1990s; rather, the CDC states that the number of new infections per year was simply underestimated, and that incidence has actually remained unchanged since the 1990s. The fact that the number of new infections per year is not only higher than previously thought, but that it has not decreased in recent years, emphasizes the continuing importance of HIV prevention work. For further detail, see <http://www.cdc.gov/hiv/topics/surveillance/incidence.htm>.

HIV Prevention Successes and Current Challenges

The year 2009 was an exciting one in the field of HIV prevention. First, the Ryan White HIV/AIDS Treatment Modernization Act of 2006 was renewed by Congress in the fall, followed closely by a reversal of the longstanding ban on travel to the United States by HIV-positive persons, and of the ban on federal funding for needle exchange programs, an exciting development with major public health implications. Syringe exchange and/or syringe access will not be funded by the HIV/STD Program in FY2011, but it may be considered for

⁴ *Loc. cit.*

funding in FY2012 pending grantee justification for replacing an underperforming intervention, and publication of CDC guidance on the subject.

While Alaska has seen a drop in the number of incident cases per year since the 1990s, much work remains to be done. Alaska faces many of the same challenges in HIV prevention that confront the U.S. as a whole: engaging persons living with HIV in prevention services over the long run, recruiting high risk persons with low perception of risk to testing and prevention counseling, and finding fresh approaches to prevention for behavioral risk populations that may be experiencing HIV prevention fatigue or complacency.

In addition, because Alaska has a low prevalence of HIV, and a widely dispersed and diverse population, the state faces an ongoing challenge in keeping HIV at the forefront of health concerns for those at risk, and in extending prevention services to cover the full range of HIV's dissemination in Alaska. The *2010-2012 Alaska HIV Prevention Plan* sets out strategies to address these challenges over the next three years.

The 2010-2012 Alaska HIV Prevention Plan

The *2010-2012 Alaska HIV Prevention Plan* is the seventh comprehensive plan produced by the Alaska HIV Prevention Planning Group (HPPG) and the State of Alaska HIV/STD Program. The *Plan* represents the culmination of these bodies' planning work from 2008 to 2009, and it provides guidance for HIV prevention activities in all sectors and areas of Alaska for the next three years. It is intended to guide specific interventions for those at greatest risk of HIV infection; to generate community discussion and input; to encourage collaboration among individuals, organizations, and community groups providing HIV prevention and care; and to encourage integration of HIV prevention interventions into other services for people likely to engage in risk behaviors – all with the goal of preventing HIV and AIDS in Alaska.

The *Plan's* recommendations are based on scientific evidence, local experience, and community values, as detailed in subsequent chapters; these recommendations guide the state HIV/STD Program's application to CDC for federal HIV prevention funds, the allocation of these funds to community-based, tribal, local government and other organizations, and the implementation of HIV prevention activities in Alaska.

Advancing HIV Prevention Initiative

In 2003, the Centers for Disease Control and Prevention launched the *Advancing HIV Prevention Initiative* (CDC, 2003) with the goal of reducing the number of new infections in the U.S. by increasing the number of persons who know their HIV status and connecting persons with HIV to care and prevention services. The initiative proposed four strategies:

Comprehensive HIV Prevention Program Components

The State of Alaska HIV/STD Program receives funding for HIV Prevention activities from the CDC, which defines a comprehensive HIV prevention program as including the following eight essential components:

1. HIV prevention community planning;
2. HIV prevention activities:
 - a. HIV counseling, testing and referral services (CTRS);
 - b. Partner services (PS);
 - c. Prevention for HIV-infected persons;
 - d. Health education and risk reduction (HE/RR) activities;
 - e. Public information programs (if addressed in the jurisdiction's Prevention Plan);
 - f. Perinatal transmission prevention (for jurisdictions with ≥ 150 perinatal HIV cases);
3. Program monitoring and quality assurance;
4. Capacity-building activities;
5. Sexually transmitted disease prevention activities;
6. Collaboration and coordination with other related programs (e.g. viral hepatitis prevention);
7. Laboratory support; and
8. HIV/AIDS epidemiologic and behavioral surveillance.

From CDC Funding Announcement CDC-RFA-PS10-1001, HIV Prevention Projects. At <http://www07.grants.gov/search/downloadAtt.do;jsessionid=RmpZLM7TmyyK2PSszqmLVm61TWf9QXnsXyMwHmLprrr2v22L0cj6!-1299818899?attId=35617>. Accessed December 30, 2009.

1. Making HIV screening a routine part of medical care;
2. Implementing new models for diagnosing HIV infection, including the use of rapid testing;
3. Improving and expanding prevention services for people living with HIV/AIDS; and
4. Further decreasing perinatal HIV transmission through routine, voluntary HIV testing during prenatal care.

The *2010-2012 Alaska HIV Prevention Plan* incorporates AHP strategies applicable to low-prevalence settings. The *Plan* also proposes strategies to raise community awareness of risk and acceptance of risk reduction, and to reduce risk behaviors in HIV-negative individuals at high risk of HIV infection.

Organization of the 2010-2012 Alaska HIV Prevention Plan

The *2010-2012 Alaska HIV Prevention Plan* includes priority populations and a set of recommended interventions for each population. Populations are identified and interventions are chosen to maximize the public health impact of available prevention resources, in order to prevent as many new infections as possible. Key information used in developing the *Plan* can be found in the Epidemiologic Profile (Chapter 2) and the community services assessment (Chapter 3). The *Plan* is organized to incorporate the key products of a comprehensive plan as outlined in CDC's *2003-2008 HIV Prevention Community Planning Guidance* (still the CDC's most current guidance, as of January 2010).

Chapter One offers an **Introduction** to HIV prevention successes and current challenges, components of an HIV prevention program,

the national Advancing HIV Prevention Initiative, and an overview of the *2010-2012 Alaska HIV Prevention Plan*.

Chapter Two presents the **Epidemiologic Profile**, which describes the demographics of Alaska, the impact and the epidemiology of the HIV epidemic, and the geographic distribution of infection across the state.

Chapter Three consists of the **Community Services Assessment**, which provides information on the prevention needs of populations at risk for HIV infection, the prevention activities/interventions implemented to address these needs, and service gaps.

Populations are identified and interventions are chosen to maximize the public health impact of available prevention resources.

Chapter Four encapsulates the rationale for selecting the **Priority Populations** for 2010-2012. This chapter focuses on a set of populations identified for prevention efforts due to the impact of HIV infection in these populations and the prevalence of other risk factors.

Chapter Five focuses on **Interventions** that have undergone scientific evaluation and have demonstrated effectiveness in helping people make behavior changes to reduce their risk of HIV infection. The Alaska HIV Prevention Planning Group (HPPG) and the State of Alaska HIV/STD Program drew upon local experience, and knowledge of cultural/ethnic appropriateness, to select from among these interventions those likely to best meet the HIV prevention needs of each of the priority populations.

Chapter Six presents the **Recommendations** of the Alaska HIV Prevention Planning Group (HPPG) for prevention activities statewide and for interventions specific to each priority population. This chapter also describes activities to be carried out by the health department in the areas of quality assurance, evaluation, capacity building, and other elements of a comprehensive HIV prevention program.

Chapter Seven is an **Overview of the Community Planning Process**. This chapter discusses the Alaska HPPG and their major goals as set by the CDC, as well as the details of the community planning process.

Appendix A presents the tables used by the HPPG in prioritizing populations.

CHAPTER TWO: EPIDEMIOLOGIC PROFILE

THIS CHAPTER DETAILS THE epidemiology of HIV in Alaska as of December 31, 2008. Its purpose is to provide stakeholders—particularly the staff of community-based organizations and HIV care providers—with a more comprehensive picture of HIV in Alaska than is provided by the annual *Epidemiology Bulletin* summarizing these data. It lays out the data used to prioritize populations for the 2010-2012 HIV Prevention Plan by age, gender, transmission category, race and ethnicity, and region of residence at the time of diagnosis, thus ensuring an open and communicative prioritization process, and assists CBOs in responding to the HIV/STD Program’s request for proposals (RFP).). This chapter seeks to inform as broad a range of stakeholders as possible with a minimum of technical detail, so as to make *Plan* as a whole as accessible as possible.

As laid out in the CDC’s Suggested Guidelines for Developing an Epidemiologic Profile for HIV Prevention Community Planning, an epidemiologic profile should answer four key questions:

- 1. What are the sociodemographic characteristics of the population?**
- 2. What is the impact of HIV/AIDS on the population?**

- 3. Who is at risk for becoming infected with HIV?**

- 4. What is the geographic distribution of HIV infection?**

Given the extraordinary geographic, racial and ethnic diversity of Alaska, the answers to these questions are intertwined in this profile, rather than treated separately. Readers should note that, due to low prevalence, low case counts, and the small size of so many communities in Alaska, breaking data down too finely by gender race and ethnicity, region of residence, age, date of diagnosis and other factors might inadvertently disclose personal identifiers and allow for the identification of individual cases. Consequently, this chapter balances the need to maintain patient confidentiality with the need for care providers and community-based organizations (CBOs) to access to up-to-date data that is sufficiently detailed to allow them to target their efforts to given sub-populations as precisely as possible, by presenting year-to-year data as moving averages, and breaking other data into nine-year time periods.

Because of this, professional epidemiologists, and those looking for detailed statistics and complex analyses, might find many of their questions to be unanswered by this document. Again, it should be borne in mind that this chapter is meant as a general-purpose summary of HIV data in Alaska, and not an academic or a research document.

Sociodemographic Characteristics of the Population

The Alaska Department of Labor and Workforce Development (AKDOL) estimated the population of Alaska to be 679,720 persons as of July 1, 2008. Seventy-two percent of Alaska’s population

consists of white persons; Alaska Native and American Indian persons make up 17.9% of the population, African-American and other black persons 4.5% of the population, and Asian and Pacific Islander persons 5.5%. Of

these 679,920 persons, 4.2% are of Hispanic ethnicity. Detailed 2008 estimates of Alaska's population by race, ethnicity and gender are provided in Table 1.

Table 1 Estimated 2008 Alaska Population by Race/Ethnicity

Racial/Ethnic Category	2008 Estimated Population					
	Male		Female		Both Sexes	
	Number	% of Male Total	Number	% of Female Total	Number	%
White	252,090	72.7%	237,477	71.4%	498,567	72%
Black	15,421	4.4%	14,931	4.5%	30,352	4.5%
Asian/Pacific Islander	17,588	5.0%	20,284	6.0%	37,872	5.5%
Alaska Native/ American Indian	61,887	17.8%	60,042	18.0%	121,929	17.9%
TOTAL	356,060		341,322		679,720	100%
Of those in above categories, those of Hispanic Ethnicity	14,533	4.2%	13,962	4.3%	28,797	4.2%

* *Vintage 2008 population estimates, Alaska Department of Labor and Workforce Development. Available online at <http://laborstats.alaska.gov/?PAGEID=67&SUBID=171>.*

The racial and ethnic makeup of Alaska's population varies considerably by geographic region. One borough, the Northwest Arctic Borough, and three census areas (Bethel, Nome, and Wade Hampton) are more than 75% Alaska Native. Conversely, ten boroughs (Denali, Fairbanks North Star, Haines, Juneau, Kenai Peninsula, Ketchikan Gateway, Kodiak Island, Matanuska-Susitna, Sitka and the Municipality of Anchorage) and four census areas (Aleutians West, Southeast Fairbanks, Valdez-Cordova and Wrangell-Petersburg) are more than 75% non-Native. The Municipality of Anchorage has the highest absolute number of Alaska Natives and American Indians of any region, with 31,539 persons, or 26% of the Alaska Native and American Indian population. There are 229 federally recognized tribes in Alaska.

The Municipality also has the largest population of any borough or census region in the state, with 284,994 residents. The racial and ethnic composition of the Municipality reflects the diversity of the state: white persons make up 74.5% of the Anchorage population; Alaska Natives and American Indians 11%; African-American and other black persons 6.8%, and Asian and Pacific Islanders 7.5%. Of all persons residing in the Municipality, 5.6% are of Hispanic ethnicity.

Populations of African-American and other black persons, and of Asian and Pacific Islander persons, are concentrated in the state's two largest urban centers. Of the 30,352 African-American and other black persons living in Alaska as of July 1, 2008, 64%, or 19,479 persons, were living in the

Municipality of Anchorage, and 20%, or 5,965 persons, were living in the Fairbanks North Star Borough.

Of the 37,872 Asian and Pacific Islander persons living in Alaska, 56.7% reside in the Municipality of Anchorage, and a total of 21% live in the Fairbanks North Star, Kodiak Island and Matanuska-Susitna Boroughs.

Rural and Urban Regions

The US Census Bureau defines an urban place as an incorporated or unincorporated area with 2,500 persons or more. This “urban” designation obscures the geographic remoteness of many Alaska communities with populations over 2,500: Barrow, for instance, has 4,054 residents, and is obviously less isolated than many villages in the North Slope Borough, but one would be hard-pressed to call it “urban⁵.”

Consequently, the Alaska HIV/STD Program and the Alaska HPPG have since 2000 grouped data into four geographic categories based on population distribution and local infrastructure rather than the 2,500-persons cutoff point. This allows for a more nuanced understanding of the population, the availability of health and social services, and the cultural and social dynamics of communities impacted by HIV/AIDS in Alaska. These four categories, described further below, are: **(1) Urban Centers**, combining Anchorage, Fairbanks, and Juneau; **(2) Urban Satellites**; **(3) Rural Hubs**; and **(4) Rural Areas**.

⁵ Table 3, “Labor Department Releases State, Borough and Place 2008 Populations,” Alaska Department of Labor and Workforce Development (DOLWD), March 11, 2009. Available online at <http://labor.state.ak.us/news/2009/news09-11.pdf>. (Accessed May 5, 2009).

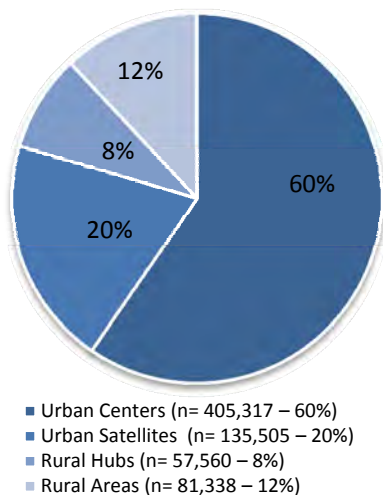
It is especially important to bear in mind that Alaska’s population is highly mobile, and that an individual’s place of residence at the time of infection is not indicative of where that person was actually infected. That is, an individual living in a rural area may well have been infected on a visit to an urban area, or vice versa, including travel out-of-state. The role of rural-urban migration and attendant socioeconomic vulnerabilities (e.g. lack of stable housing, employment and income) in shaping the risk of infection with HIV and other STIs in Alaska is an important topic that calls for further study⁶. The experiences of women who have migrated from rural to urban areas deserve special attention, given that women migrate from rural areas in slightly greater numbers than do males⁷.

⁶ Lowe (2009), for instance, found that stronger “migration chains,” in which the successful migration of friends or family to urban areas facilitates the migration of friends and family from rural areas, and circular migration, in which individuals move back and forth between urban areas and the rural areas from which they came, to be defining characteristics of migration from rural areas to Anchorage. The phenomenon of migration chains suggests that social, and potentially sexual, networks in urban areas might both be circumscribed and overlapping, and circular migration emphasizes the importance of assessing urban-rural linkages in the transmission of HIV and other STIs in Alaska. Combining network analyses such as Lowe’s with socioeconomic and epidemiologic data could shed considerable light on our understanding of the risks for HIV and other STI infection in Alaska. See Lowe ME 2009. New Students in the Anchorage School District: Where Are They From? Analysis of ISER 2008-2009 SurveyData.Institute of Social and Economic Research, University of Alaska (Available online at:<http://www.iser.uaa.alaska.edu/Publications/LoweMigrationReportFinal.pdf>. (Accessed December 11, 2009).

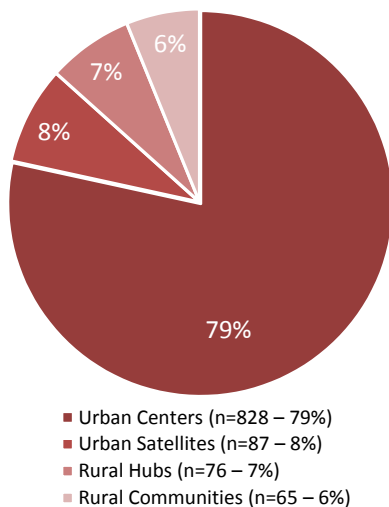
⁷ Martin S. Killorin M, Colt S. Fuel Costs, Migration and Community Viability. Report prepared for the Denali Commission by ISER, University of Alaska, May 2008. Available online at http://www.iser.uaa.alaska.edu/Publications/Fuelcost_viability_final.pdf. Accessed September 28, 2009.

Figure 1. Alaska Population (N=679,720) and In-State HIV/AIDS Diagnoses (N=1,056) by Urban/Rural Residence as of December 31, 2008

AKDOL 2008 Alaska Population Estimates (N=679,720)



In-State HIV/AIDS Diagnoses (N=1,056), 1982-2008



Urban Centers

Almost two-thirds of Alaska’s population (405,317, or 60%) lives in three urban regions: the Municipality of Anchorage (population 284,994), Fairbanks North Star Borough (89,896); and the Juneau Borough (30,427).

Urban Satellites and Rural Hubs

The combined population of urban satellites and rural hubs was estimated at 193,065 persons in the AKDOL’s Vintage 2008 estimates, constituting 28.4% of the state’s population. The term “urban satellite” refers to the communities of the Matanuska-Susitna Borough (population 82,515) and the Kenai Peninsula Borough (population 52,990), excluding villages that are not connected to Anchorage via the road system. While other communities lie on the road system north of the Mat-Su Borough and north and southeast of Fairbanks, these small, diffuse communities are more similar to rural villages than to urban satellites, and so are included in the Rural Areas category.

The role of rural-urban migration in shaping the risk of infection with HIV and other STIs in Alaska calls for further study.

“Rural hubs” include the 14 economic and transportation centers in the rural regions of Alaska and several other communities in Southeast Alaska, all of which have populations greater than 2,000 and health and social service infrastructure not found in smaller rural communities (there are 36 settlements in Alaska with populations greater than 2,000; 22 of these are either urban centers or urban satellites). The total population of these 14 rural hubs was estimated at 57,560 persons in the AKDOL’s Vintage 2008 estimates⁸.

⁸ *Loc. cit.* These 14 places are Sitka City and Borough, Ketchikan, Kodiak, Bethel, Barrow, Valdez, Nome, Unalaska, Kotzebue, Petersburg, Dillingham, Deltana CDP, Cordova (including Eyak), and Wrangell City and Borough.

Rural Areas

“Rural areas” include the incorporated and unincorporated cities, census designated places, and Alaska Native villages that do not meet the criteria for rural hubs or urban satellites, and also persons living outside of any community. All communities in this designation have fewer than 2,000 residents; the combined population of these rural areas is 81,338, 12% of the state’s total population.

Overall, both the proportion and the absolute number of Alaskans living in rural areas has decreased in recent years. However, the decline has not been distributed uniformly across the state, and some areas—the Bethel Census Area in particular—have experienced an increase in population. The bulk of the decrease is centered in Southeast Alaska, where the declining fortunes of the timber industry have led many to seek work elsewhere.⁹

In 2008, an increase in fuel prices led to speculation that this increase would raise the cost of living in rural Alaska beyond an acceptable threshold, triggering widespread migration from rural to urban areas¹⁰. At the same time, it was thought that a large 2008 Permanent Fund Dividend payout (\$2,069) and a one-time, \$1,200 “resource rebate” payment would give families and individuals the financial wherewithal to relocate to urban centers and establish

⁹ Alaska Department of Commerce, Community, and Economic Development, April 2009. Alaska’s Rural Population and School Population Trends: A Discussion of Its Components. Exhibits 5 & 6, p. 5. Available online at http://commerce.alaska.gov/dca/pub/rural_to_urban_migration2.pdf (accessed 1 November 2009).

¹⁰ Anchorage Daily News, “Bush Costs Prompt Exodus to Cities,” 29 September 2008. Available online at <http://www.adn.com/rural/story/541188.html> (accessed 29 September 2008).

themselves comfortably, spurring migration that otherwise would not happen owing to typical financial constraints.

Much of this speculation was spurred by increased enrollment in the Anchorage School District (ASD) for the 2007-2008 and 2008-2009 school years, but further study by the UAA Institute for Social and Economic Research (ISER) and the ASD revealed that the bulk of this increase was not solely a result of mass migration from Bush Alaska: 461 of the 881 new enrollments during this period, or 52%, were among students from the Mat-Su, Fairbanks North Star, and Kenai Peninsula Boroughs¹¹. Nevertheless, 391 (44%) of these 881 new students were from rural areas off the road system, and 11% of respondent families who had lived off the road system reported the high cost of living as an important motivation for moving to Anchorage, compared to just 3% of respondent families living on the road system. The most-cited reasons for moving to Anchorage were job opportunities (21% of families off the road system vs. 16% of families on the road system) and educational opportunities (17% of families off the road system vs. 5% of families on the road system)¹². These findings echo an earlier ISER study¹³ that found economic and educational opportunity, rather than fuel costs, to be the most important factors driving rural-urban migration.

¹¹Lowe ME 2009. New Students in the Anchorage School District: Where Are They From? Analysis of ISER 2008-2009 Survey Data. Institute of Social and Economic Research, University of Alaska. Available online at <http://www.iser.uaa.alaska.edu/Publications/LoweMigrationReportFinal.pdf>. (Accessed December 11, 2009).

¹² *Ibid.* p.6.

¹³http://www.iser.uaa.alaska.edu/Publications/Fuelcost_viability_final.pdf.

As stated above, the dynamics of rural-urban migration and attendant socioeconomic vulnerabilities, and their role in the epidemiology of HIV and other sexually-transmitted infections in Alaska, deserve further investigation. As the dynamics of rural-urban migration both change, and come to be better-understood, in coming years, such study will prove to be doubly important, and of potential significance in targeting prevention efforts to individuals and communities at highest risk for infection with HIV and other sexually transmitted infections.

Age Distribution of the Population

Despite a recent narrowing of the gap between the median age in Alaska and the median age in the United States, Alaska has long had a younger population than the United States as a whole: Alaska's 2008 median age was 32.5 years, 4.2 years lower than the US median age of 36.7 years. Within Alaska, there are also differences in the median age between racial and ethnic groups: the median age for white persons, for instance, is 35.1 years; for Alaska Natives and American Indians, 24.5 years, for African-Americans and other black persons, 25.8 years, for Asian and Pacific Islander persons, 30 years, and for Hispanic persons, 32.5 years.

Younger persons tend to have more sexual partners, and the younger one is, the more years of potential sexual activity one can have. As "population bulges," i.e. especially large cohorts of persons within the same age group (the "Baby Boomers" are perhaps the best known example), grow older, this can have significant impacts on both population structure and on the need for health and social services. For instance, the aging of America's population, and of Alaska's population, will require special attention to geriatric care and services. This

phenomenon, coupled with increasing rates of HIV infection in older persons, and the aging of PLWHA, presents novel challenges for work in HIV prevention and care, as discussed later in this chapter.

Impact of HIV in Alaska, Distribution of Risk

This section describes the racial, ethnic, gender and geographic distribution of HIV, its impact on the population of Alaska, and the population groups most affected by HIV infection.

Throughout this chapter, reported date of first HIV diagnosis is used as a substitute for HIV infection incidence, realizing that individual cases are diagnosed at different times, ranging from months to years after time of infection. Similarly, clinical detection of AIDS-defining conditions (the AIDS diagnosis) occurs at different points in the disease continuum for different individuals. Date of first known AIDS diagnosis is used as a surrogate measure for AIDS onset. Unless otherwise noted, data are presented by year of first known HIV diagnosis (as this is closer to the onset of HIV infection) rather than by the year they were first reported to the Alaska Division of Public Health.

Surveillance data have several limitations regarding reporting delays and undiagnosed positive cases, and these numbers should be treated as estimates of the actual number of persons newly diagnosed, or living with, HIV in Alaska during a given time period. Actual case counts are of use in allocating care resources, but for surveillance purposes, they are only a first step in trying to assess the underlying distribution of the risk of a given condition in a population. In this sense, then, the data presented here are a sample of the full population of PLWHA in

Alaska, and we can use this sample to attempt to estimate what the full distribution might look like.

Cumulative Cases

Table 2 presents a summary tabulation of the number of HIV/AIDS cases reported in Alaska, including both in-state and out-of-state diagnoses, from the first diagnosis in 1982 through December 31, 2008. A total of 1,261 cases have been reported, 871 of whom developed AIDS and 390 of whom did not; of the 871 cases who developed AIDS, 396 are known to have died, leaving 475 not known to have died. Of those 390 cases who did not develop AIDS, 37 are known to have died, leaving 353 not known to have died. In all, 433 of the 1,261 cases reported in Alaska are known to have died, and 828 are not known to have died. It should be noted that not all of these deaths

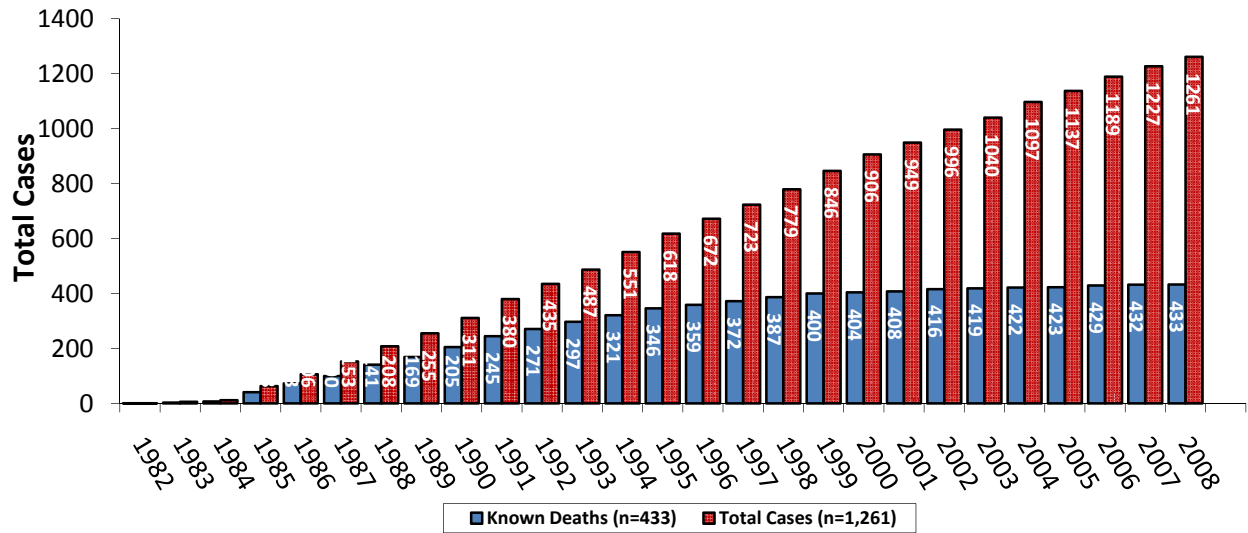
have necessarily been caused by HIV/AIDS infection; persons living with HIV/AIDS may die due to other causes, like the population as a whole.

Figure 2 gives a year-to-year depiction of cases known to have died and cases not known to have died, expanding on the data presented in Table 2. Of particular interest is the fact that as of December 31, 2008, just 29 PLWHA were known to have died since 2000, a testimony to the ability of antiretroviral medications and medical care to enable PLWHA to live longer, fully lives, and a stark contrast with the earlier days of the epidemic. This is reflected in the leveling-off of the lower (blue) bars, which indicate the number of persons known to have died, and the steady growth in the upper (red) bars, indicating the total number of cases reported since January 1, 1982.

Table 2 Cumulative HIV/AIDS Cases Reported to the Alaska Division of Public Health, 1982-2008 (N=1,261)

	Total HIV & AIDS Cases Reported In Alaska	HIV & AIDS Cases Not Known to Have Died	HIV & AIDS Cases Known to Have Died
HIV Cases with AIDS	871	475	396
HIV Cases without AIDS	390	353	37
Total Reported HIV/AIDS Cases	1,261	828	433

Figure 2. Cumulative HIV/AIDS Cases (N=1,261) and Known Deaths (N=433), Both Sexes – Alaska, 1982-2008 (N=1,261)



Rates, Percentages and Small Sample Sizes

What epidemiologists, CBOs, and other stakeholders generally want to know from looking at HIV data is how the picture of HIV incidence—that is, the number, proportion, and rate of new HIV cases—has changed from year to year, and whether are there more cases in a given subgroup, or fewer? Where we should direct prevention efforts and prevention funds? Since we are in the business of prevention, we want to know where—in what region of residence, among which gender and which racial and ethnic subgroup—we should expect the greatest number of cases to occur in coming years, and whether there are gross disparities in incidence that merit the targeting of a particular subgroup. We usually decide this on the basis of where the greatest number of cases *have occurred* in recent years. The trouble with this for Alaska is that because we have a low number of cases, random fluctuations from year to year can have an very strong impact on the data, and true shifts in the distribution of risk among

racial, ethnic and gender subgroups can be difficult to detect and masked by random variation. For instance, if during one five-year period, one case of HIV is diagnosed among the Asian/Pacific Islander population, and during the next five-year period, two cases are diagnosed and the population remains constant, the incidence of HIV in the Asian/Pacific Islander population has doubled. However, this may simply be random fluctuation. One cannot draw conclusions from a year or two of data—especially not when dealing with low case counts and small population sizes.

In many cases, the analysis of rates—a standardized measure of incidence per some unit of time that allows for a valid comparison of incidence across populations of different sizes, with varying case counts—is the preferred means of assessing the epidemiologic characteristics of a given condition: while absolute numbers and proportions have their place, truly robust analysis can occur only when the size and characteristics of the population as a whole,

and the distribution of a given condition among the population across a given period of time, are considered. However, in dealing with small sample sizes, rates tend to be less informative than when dealing with large sample sizes, owing to exceptionally wide confidence intervals (discussed below).

Epidemiologists and biostatisticians use a few basic tools to tease out the relative contributions of randomness and true shifts in risk to incidence. One of these is the calculation of confidence intervals (CIs), shown in Figure 3, and in later figures in this chapter, as bars extending upward and downward from the data points. As mentioned earlier, we can think of surveillance data as representing a sample of the population of PLWHA in Alaska: it allows us to calculate an estimate of the size and the characteristics of the population of PLWHA in Alaska. For a 95% CI such as those reported below, this means that, if we were to draw an infinite number of these samples from the population and then calculate an incidence rate based on these draws, we would expect 95% of our calculated rates to fall somewhere within the values specified by the *lower limit* and *upper limit* of our confidence interval. Unfortunately, small case counts and small populations lead to very wide confidence intervals: there is a good deal of potential variation around our estimates, and this reduces the precision of our results. This point is discussed in further detail later in this chapter, in which incidence rates are calculated for racial and ethnic subgroups by gender.

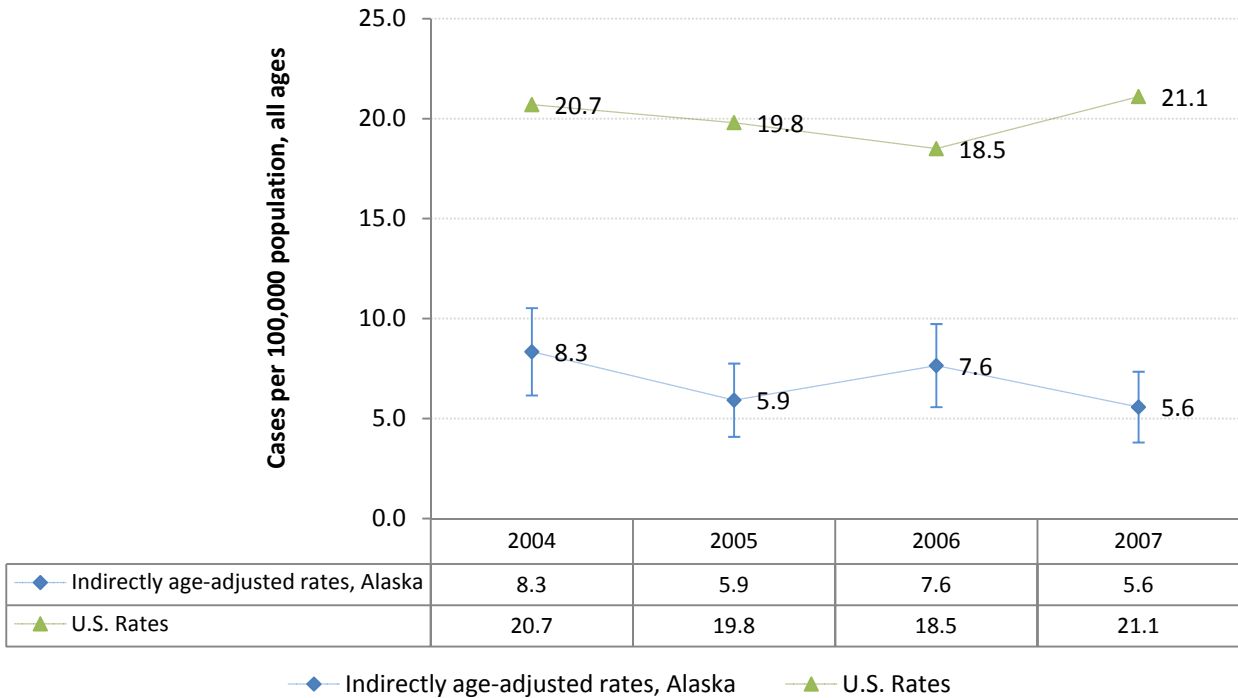
As Figure 3 shows¹⁴, Alaska's HIV incidence rate—the number of new

¹⁴ These numbers include only in-state diagnoses, all ages, by year of diagnosis (not year of report), as

HIV/AIDS diagnoses per 100,000 persons living in the state—remains well below that of the U.S. as a whole: for the past five years, Alaska's rate has been roughly one-third to one-quarter of the U.S. incidence rate. In 2004, the U.S. rate was 20.7/100,000, while Alaska's was 8.3/100,000; in 2005, the U.S. rate was 19.8/100,000 and Alaska's rate was 5.9/100,000; in 2006, the U.S. rate was 18.5/100,000 and Alaska's rate was 7.6/100,000; and in 2007, the U.S. rate was 21.1/100,000, while Alaska's rate was 5.6/100,000. Though U.S. incidence rate data for the year 2008 are not yet available, Alaska's 2008 incidence rate of 4.9/100,000 persons is likely to compare similarly to the incidence rate for the U.S. as a whole. Alaska rates were standardized to 2000 U.S. Census data using the indirect method; confidence intervals were calculated assuming a normal distribution. Because of the scale of the graph, the extremely small confidence intervals in the U.S. rates are not shown.

revised prior to Jan. 1, 2009. Alaska population data are 2008 vintage, all ages, drawn from <http://laborstats.alaska.gov/?PAGEID=67&SUBID=171>. U.S. numbers are all ages, drawn from the 2004-2007 CDC HIV Surveillance Reports, *Cases of HIV Infection and AIDS in the United States and Dependent Areas*, Table 5b in the 2004-2006 editions and Table 6a in the 2007 version (<http://www.cdc.gov/hiv/topics/surveillance/resource/s/reports/index.htm>). Numbers are not age-adjusted; preliminary analysis indicated no appreciable difference between crude and age-adjusted rates.

Figure 3. Age-Adjusted HIV/AIDS Incidence per 100,000 Population, 2004-2008—Alaska and U.S.



Gender

Table 3 presents the average number of HIV cases diagnosed per year in nine-year time periods, broken down by gender. This table is meant to complement Figure 4, which gives the proportion of cases diagnosed in each year since 1982 among males and females with a three-year moving average trendline to smooth out peaks and valleys in the data, and Figure 5, which does the same for the absolute number of cases diagnosed per year. As Table 3 shows, an average of 35 cases per year were diagnosed from 1982-1990, 31 (90%) in males and 3 (10%) in females. The bulk of infections in Alaska were diagnosed from 1991-1999—a period that saw the proportion of women diagnosed increase—with an average of 59 diagnoses per year, 47 (80%) in males and 12 (20%) in females. Note again that this is a *proportional*, not an *absolute* increase in diagnoses among women; an

average number of cases diagnosed per year declined to 46 during the period from 2000-2008, the proportion of women diagnosed continued to grow, with 25% of all diagnoses (an average of 12 cases per year) occurring among women and 75%

The number of new HIV/AIDS diagnoses per 100,000 persons living in the state of Alaska remains well below that of the U.S. as a whole.

of all diagnoses (an average of 35 cases per year) diagnosed among women from 1991-1999. It is not that more cases have been

diagnosed among women, just that more of the cases diagnosed in Alaska, even if this is

a smaller number than in previous years, are diagnosed among women.

Table 3 Average Number of HIV/AIDS Cases Newly Diagnosed per Year by Gender, Nine-Year Periods, 1982-2008 – Alaska (N=1,261)

AVERAGE NUMBER OF HIV/AIDS CASES NEWLY DIAGNOSED PER YEAR					
Time Period	Males		Females		Average Number of HIV/AIDS Cases Per Year in Time Period, Males & Females**
	Average Number of Male Cases Per Year	Proportion of Male Cases in Total HIV/AIDS Cases During Time Period	Average Number of Female Cases Per Year	Proportion of Female Cases in Total HIV/AIDS Cases During Time Period	
1982-1990	31	90%	3	10%	35
1991-1999	47	80%	12	20%	59
2000-2008	35	75%	12	25%	46

* First AIDS case diagnosed in Alaska in 1982

** Due to rounding, the sum of the average number of cases for males and the average for females may not always equal the average number for both sexes

Figure 4. Percentage of HIV/AIDS Diagnoses per by Gender, 1982-2008– Alaska (N=1,261)

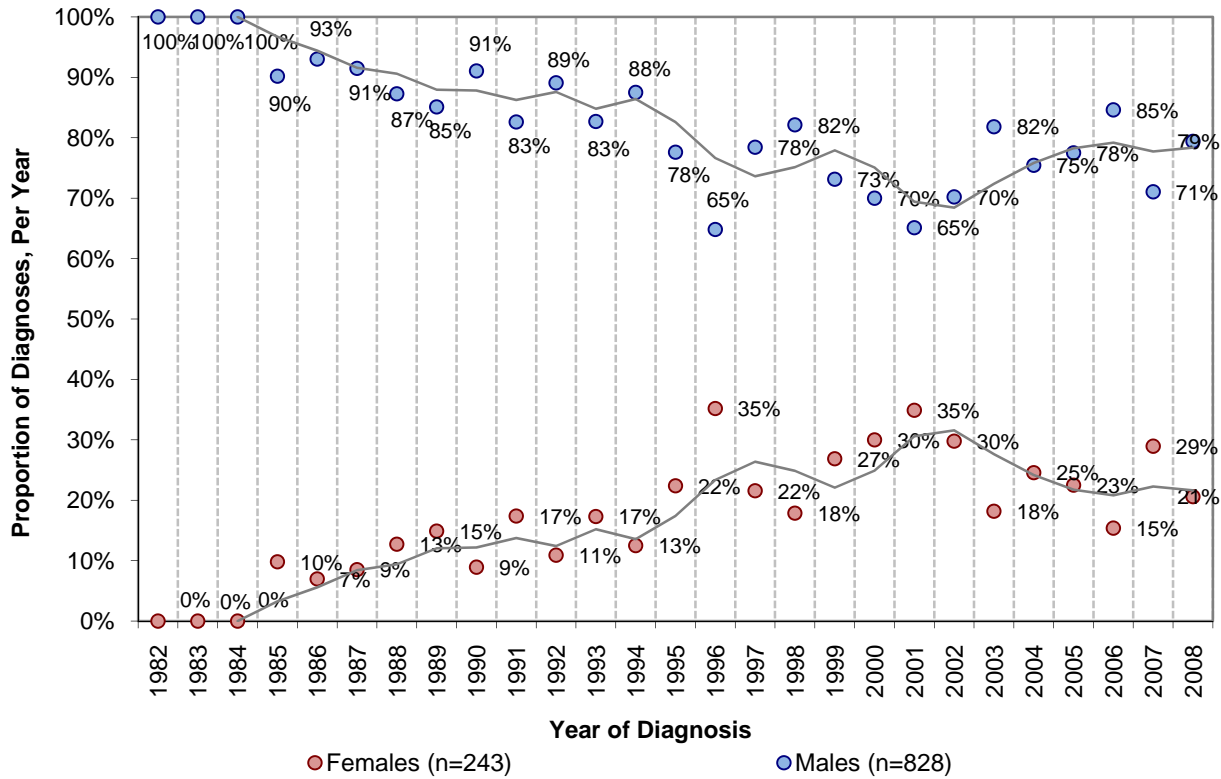


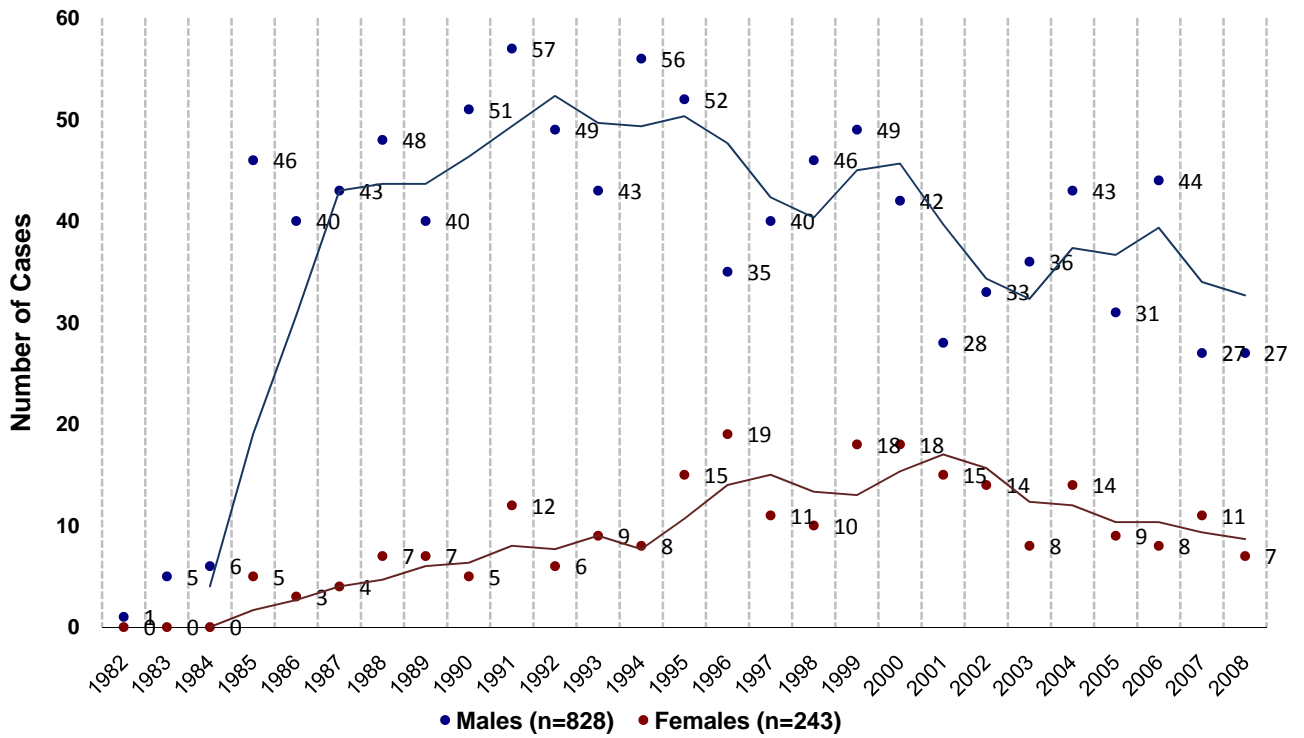
Figure 3 gives a year-by-year breakdown of the proportion of HIV/AIDS diagnoses by gender since 1982. As in Table 3, one can see the increasing proportion of diagnoses among women until roughly 2001, when this proportion began to decline, but it continued (and continues) to remain well above the proportions observed in the early days of the epidemic in Alaska.

The trendline represents a three-year moving average. It is extremely important, when dealing with small populations and small sample sizes such as those in Alaska’s HIV data, that one not take year-to-year fluctuations to be representative of any sort of trend; small populations and small sample sizes are susceptible to major fluctuations

owing to the small number of cases being dealt with. By allowing the reader can assess how much a given year’s proportion diverges from the three-year average, moving averages smooth out some of this fluctuation, and offer a more balanced look at year-to-year data.

For comparison, Figure 4 presents the absolute number of diagnoses for every year since 1982: for instance, in 2008, one can see that 27 cases were diagnosed in females, and 7 in males; in 2007, 27 cases were also diagnosed in males and 11 in females; in 2006, 44 cases in males and 8 cases in females; in 2005, 31 cases in males and 9 cases in females; and in 2004, 43 cases were diagnosed in males and 14 cases in females.

Figure 5. Absolute Numbers of HIV/AIDS Diagnoses by Gender, 1982-2008– Alaska (N=1,261)



Age

As Figure 5 illustrates, 13 cases (1.0% of all diagnoses between January 1, 1982 and December 31, 2008) have been diagnosed in persons aged 14 years and under at the time of diagnosis (due largely to perinatal transmission); 34 cases (2.7% of all diagnoses) have been diagnosed in persons aged 15-19; 139 cases (11.0% of all diagnoses) in persons aged 20-24; 215 cases (17.0% of all diagnoses) in persons aged 25-29; 261 cases (20.7% of all diagnoses) in persons aged 30-34 years; 216 cases (17.1% of all diagnoses) in persons aged 35-39; 188 cases (14.9% of all diagnoses) in persons aged 40-44; 99 cases (7.9% of all diagnoses) in persons aged 45-49; 47 cases (3.7% of all

diagnoses) in persons aged 50-54; and 49 cases (3.9% of all diagnoses) in persons aged 55 years and over. Though the bulk of cases in Alaska have been diagnosed in persons aged 25-39 at the time of diagnosis, Figures 7 through 9 discuss the steady rightward shift in the distribution of age at the time of diagnosis, as a result both of PLWHA living longer and of persons becoming infected later in life. It should be noted that this overall shift is driven primarily by aging in males; as discussed below, no statistically significant difference was found between the mean age at diagnosis for females between the periods 1982-1990, 1991-1999, or 2000-2008.

Figure 6. Cumulative HIV/AIDS Diagnoses Reported through December 31, 2008, by Age at First Known HIV/AIDS Diagnosis – Alaska (N=1,261)

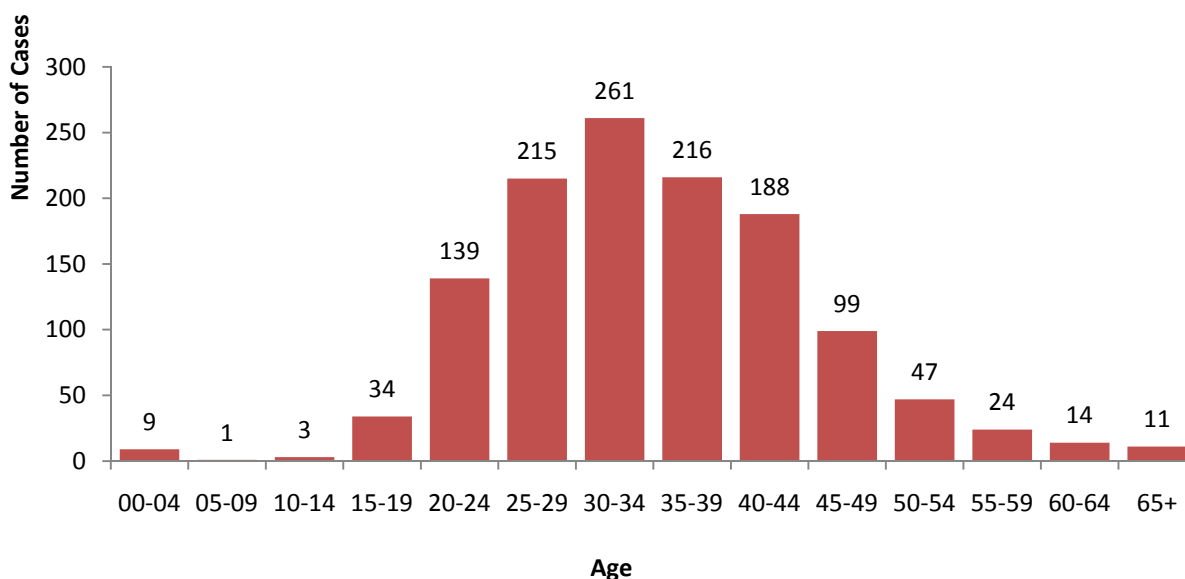


Figure 7 shows age data for all 1,261 cases reported in Alaska between January 1, 1982 and December 31, 2008, by nine-year time period. From 1982-1990 (n=311), the mean age at infection was **31.60** years (95% CI=30.56, 32.63; median=30; mode=27; sd=9.25; range=75); from 1991-1999 (n=535), the mean age at infection was **34.9**

years (95% CI=34.08, 35.76; median=34; mode=32; sd=9.90; range=70); from 2000-2008 (n=415), the mean age at infection was **37.1** years (95% CI=36.09, 38.18; median=38; mode=41; sd=10.87; range=73). All differences between means were found to be statistically significant at the 0.05 level.

Figure 7. HIV/AIDS Diagnoses by Age Group, Both Sexes – Alaska, 1982-2008 (N=1,261)

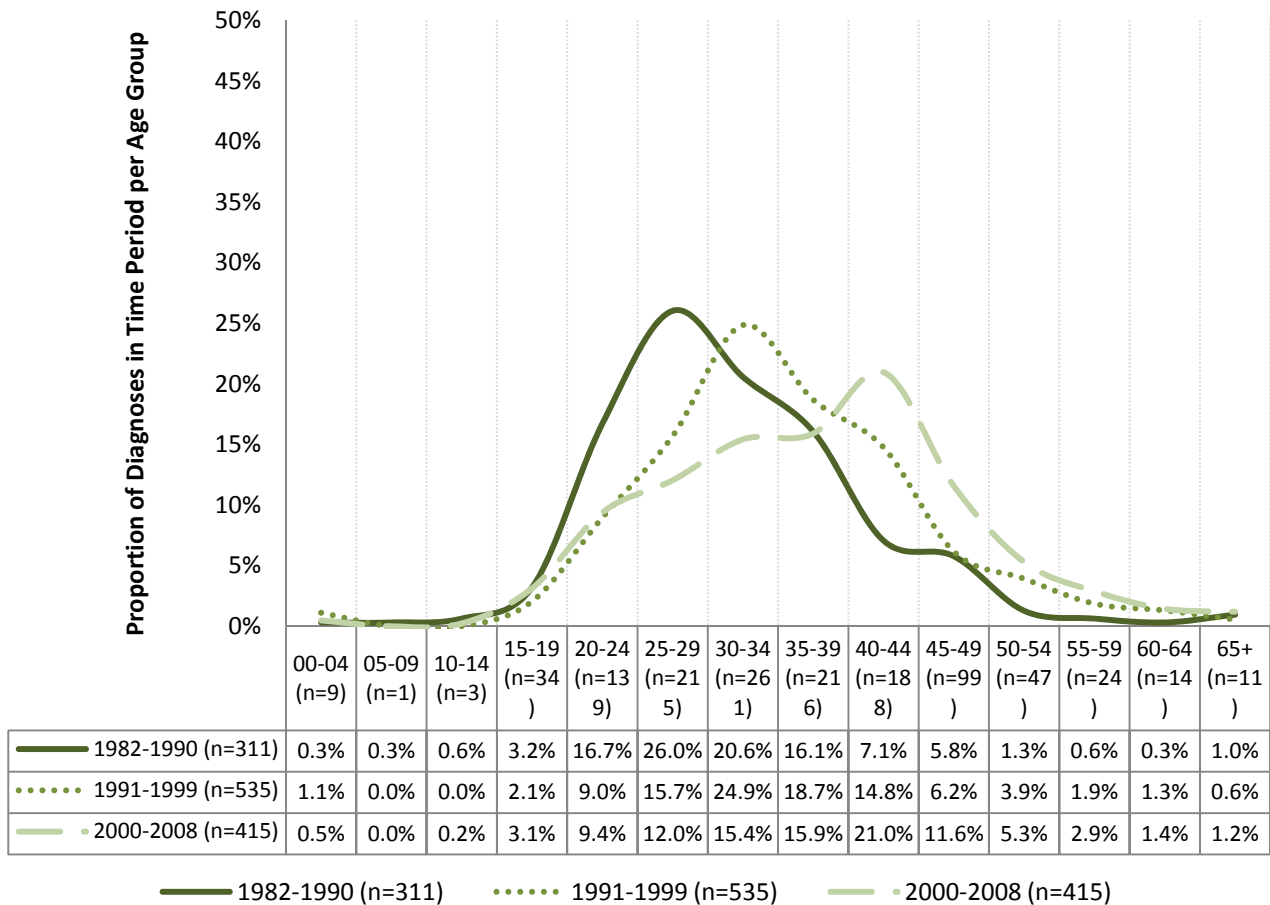


Figure 8. HIV/AIDS Diagnoses by Age Group, Males – Alaska, 1982-2008 (N=1,018)

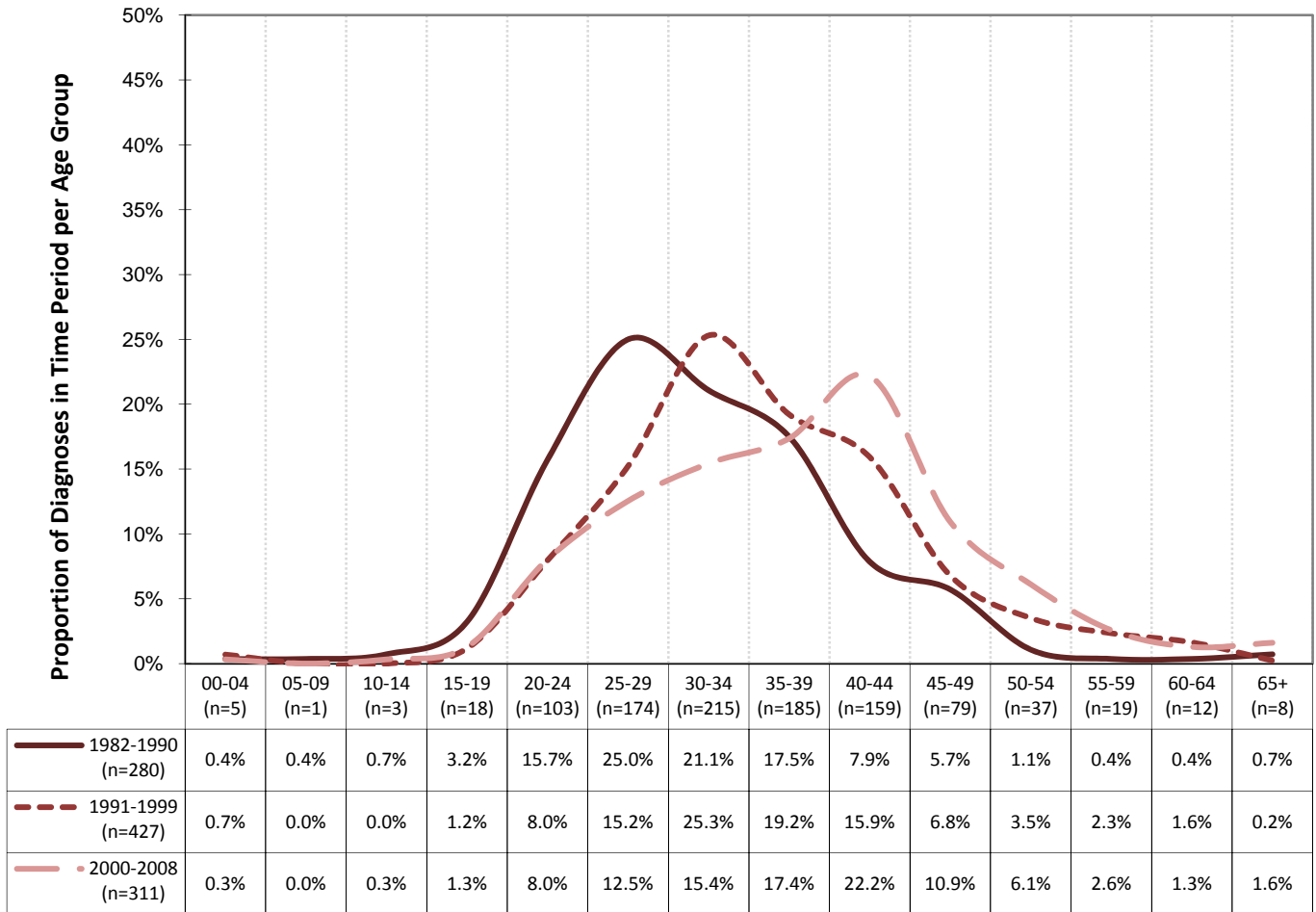
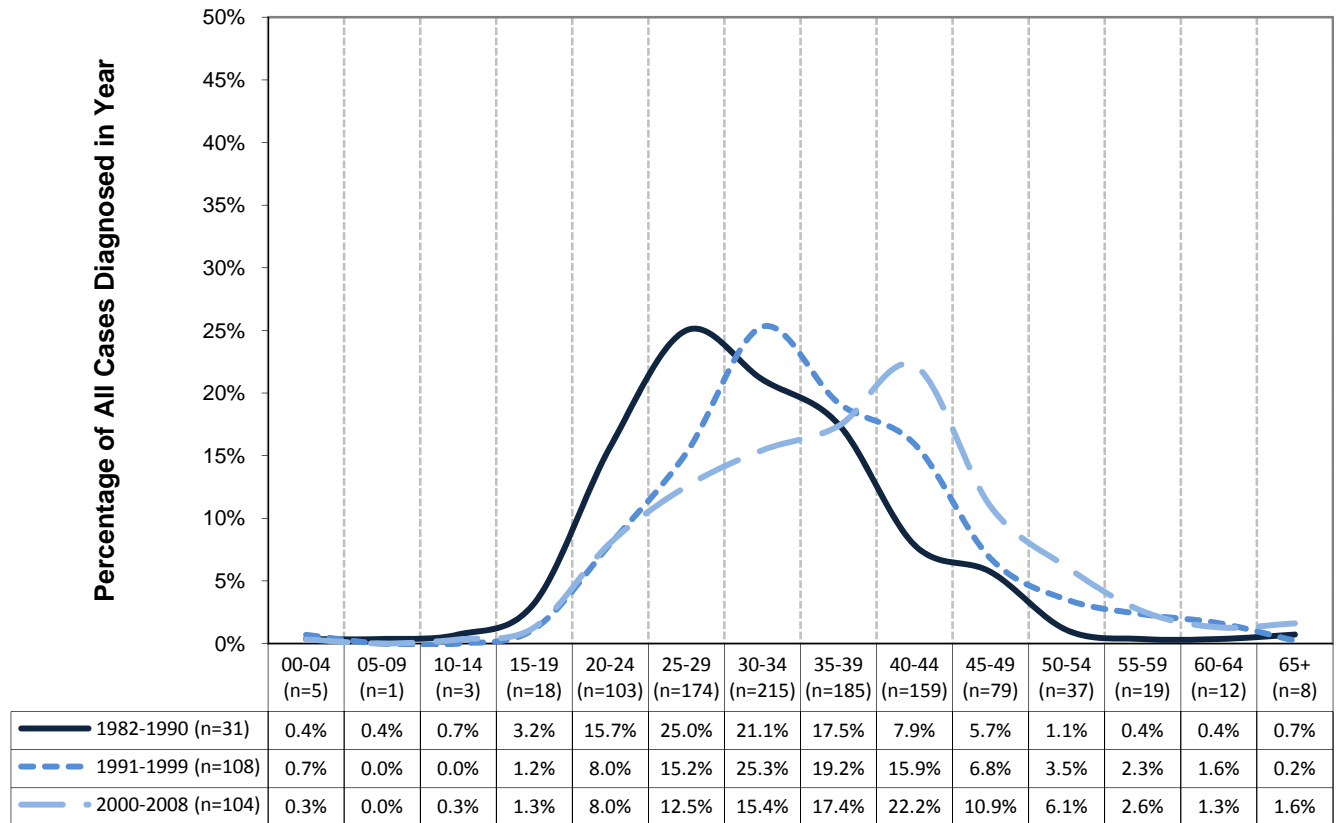


Figure 8 shows age data for all 1,018 cases among males reported in Alaska between January 1, 1982 and December 31, 2008, by nine-year time period. From 1982-1990 (n=280), the mean age at infection was **31.61** years (95% CI=30.57, 32.65; median=30; mode=27; sd=8.86; range=66); from 1991-1999 (n=427), the mean age at infection was **35.58** years (95% CI=34.67, 36.48; median=35; mode=33; sd=9.53; range=70); from 2000-2008 (n=311), the mean age at infection was **37.83** years (95% CI=36.65, 39.00; median=38; mode=42; sd=10.53; range=73). All differences between means were found to be statistically significant at the 0.05 level.

Figure 9 shows age data for all 243 cases reported among females in Alaska between

January 1, 1982 and December 31, 2008, by nine-year time period. From 1982-1990 (n=31), the mean age at infection was **31.48** years (95% CI=26.93, 36.03; median=27; mode=22; sd=12.40; range=58); from 1991-1999 (n=108), the mean age at infection was **32.32** years (95% CI=30.24, 34.40; median=32; mode=34; sd=10.90; range=66); from 2000-2008 (n=311), the mean age at infection was **35.06** years (95% CI=32.80, 37.32; median=35; mode=40; sd=11.62; range=62). No differences between any means were found to be statistically significant at the 0.05 level, though, so these data should not be interpreted as indicative of any trend toward an aging population of females becoming infected with HIV

Figure 9. HIV/AIDS Diagnoses by Age Group, Females – Alaska, 1982-2008 (N=243)



Category of Exposure

This section details the contribution of each transmission category to the epidemiology of HIV/AIDS in Alaska, breaking down all 1,261 cases of HIV/AIDS reported to the Alaska Division of Public Health since January 1, 1982 according to the exposure identified or reported as having given rise to infection.

Figure 10 presents the percentage of all cases diagnosed in a given year among a particular category of exposure, and illustrates the relative contribution over time using a three-year average trendline, a

simple means to prevent the interpretation of a one- or two-year rise or decline in numbers as representative of a trend¹⁵. Note that exposure categories are condensed into three types: 1) all MSM (n=700), incorporating both MSM and MSM/IDU and denoted by blue circles, 2) all other (n=401), incorporating perinatal transmission, transmission via transplant or transfusion, injection drug use, heterosexual contact, and injection drug use and concurrent heterosexual contact, and denoted by red diamonds, and 3) NIR/NRR cases, denoted

¹⁵ See p. 12 for a discussion of the rationale behind employing a moving average.

by green squares. These categories have been collapsed for clarity of presentation, and to highlight the change in the relative contribution of all male-male-sexual contact to the HIV epidemic in Alaska since 1982.

One can see the change in the relative contribution of male-to-male sexual contact from 1982 through 2008. For instance, 100% of cases diagnosed in 1982 were attributed to MSM; as the epidemic began to spread to women, and began to spread among injection drug users, heterosexual contact and injection drug use began to contribute a higher percentage of diagnoses per year. Male-to-male sexual contact contributed to a steadily smaller percentage of diagnoses in Alaska until roughly 2001, when the percentage of diagnoses among MSM began to rise slightly. Note that this does not indicate an increase in the *number* of cases diagnosed per year among MSM; the number of cases diagnosed among MSM and MSM/IDU remained below that diagnosed between 1991-1999¹⁶.

NIR/NRR cases are not redistributed. Case counts are too small to allow for the use of multiple imputation (CDC's recommended method for case redistribution in ascribing

¹⁶ Some might be tempted to see the rise in the percentage of cases diagnosed in MSM after 2001 as evidence of "HIV fatigue," that is, a lull in concern about HIV among the gay and bisexual community as memories of the first days of the epidemic began to fade, antiretrovirals made HIV a treatable condition, and a consequent loosening of restrictions on risk behavior. "HIV fatigue" has received much attention in the academic literature and in the media, and while it is certainly a concern in HIV prevention (a concern not limited to MSM), to interpret epidemiologic data in this light without solid qualitative data assessing beliefs and practices surrounding risk behavior among MSM is inadvisable. At a minimum, the fact that no increase in the absolute number of diagnoses among MSM was seen during 2000-2008 would indicate that the picture may not be so black-and-white as one might initially think.

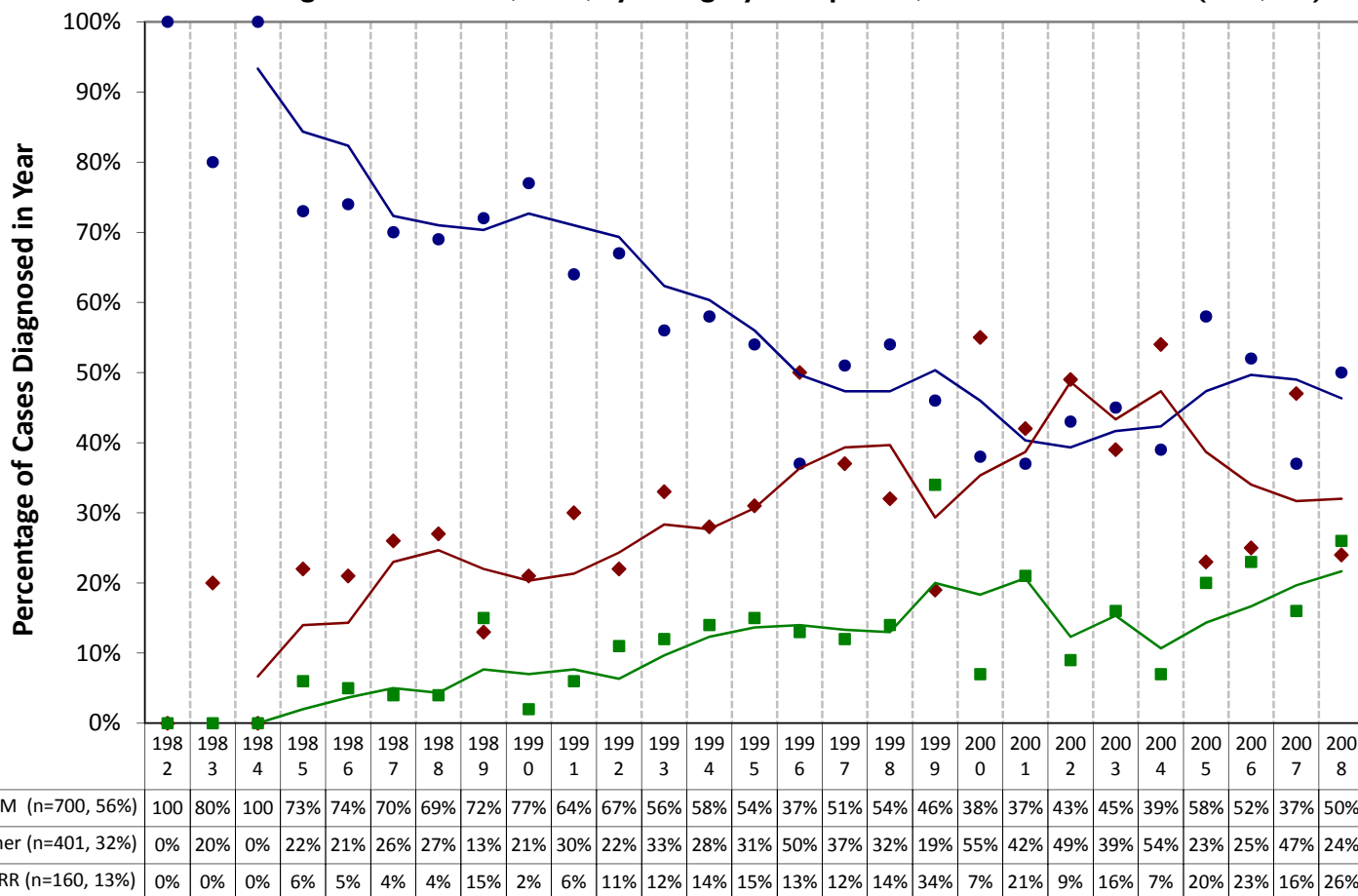
risk to NIR/NRR cases), and a simple redistribution of NIR/NRR cases according to the observed distribution of cases in other risk categories (e.g. assigning ~48% of NIR/NRR cases to MSM, ~14% to IDU, etc.) is only justified if one is confident that the distribution of actual exposure categories among NIR/NRR cases matches the distribution of cases with already-identified exposure categories.

100% of cases diagnosed in 1982 were attributed to male-to-male sexual contact; as the epidemic began to spread to women, and began to spread among injection drug users, heterosexual contact and injection drug use began to contribute a higher percentage of diagnoses per year.

As discussed further below, these data are summarized in Figure 11, and tabulated according to gender and nine-year time periods in Figures 12-14.

Figure 11 summarizes the distribution of all 1,261 cases of HIV/AIDS infection reported to the Alaska Division of Public Health since January 1, 1982, according to the exposure category identified or reported as the most likely to have resulted in infection for each case. **Male-to-male sexual contact (MSM)** was indicated in 48% (n=605) of all cases reported since 1982; **injection drug use (IDU)** was the identified or reported exposure category in 14% (n=179) of all cases reported; **male-to-male sexual contact and concurrent injection drug use (MSM/IDU)** was indicated in 8% (n=95) of all cases; **heterosexual contact** was indicated in 15% of all diagnoses (n=194);

Figure 10. Three-Year Moving Averages, Cumulative HIV/AIDS Diagnoses Reported through December 31, 2008, by Category of Exposure, Both Sexes – Alaska (N=1,261)

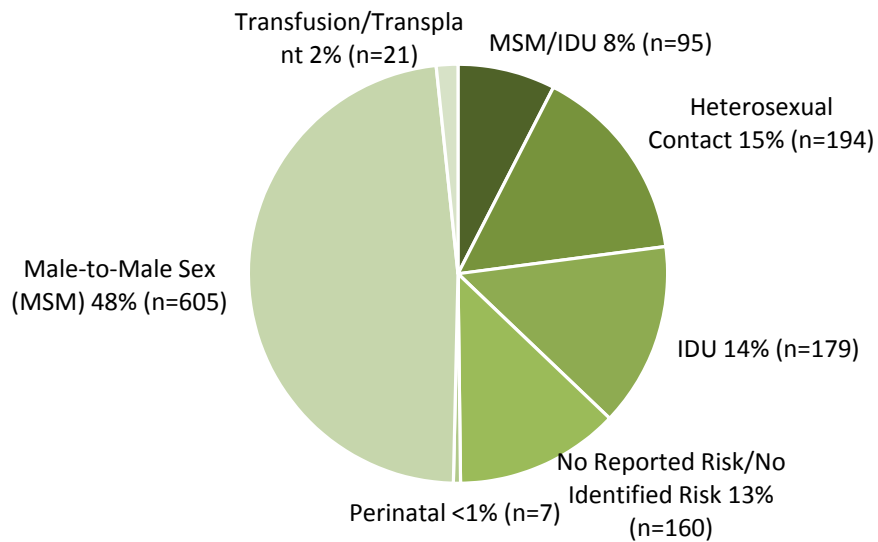


perinatal transmission, transfusion or transplant was responsible for 2% (n=28) of all cases, and cases for which **no risk was identified or reported (NIR/NRR)** constituted 13% (n=160) of all cases. These numbers are broken down by gender and nine-year time periods in the three figures that follow.

As Figure 12 (below) shows, though **male-to-male sexual contact** today contributes to a smaller percentage of diagnoses than it did in the first years of the epidemic, it is still identified or reported as the exposure category for more cases than any other. This highlights both the importance of men who have sex with men as partners in HIV prevention efforts, and the fact that at the

same time, HIV is a disease that can affect anyone. Male-to-male sex was identified or reported as the exposure category in 63% (n=195) of all diagnoses made from 1982-1990, 47% (n=252) of all diagnoses reported in Alaska from 1991-1999, and 38% (n=158) of all diagnoses made from 2000-2008. **Injection drug use** was responsible for 9% (n=29) of all diagnoses made from 1982-1990, 17% (n=90) of all diagnoses made from 1991-1999, and 14% (n=60) of all diagnoses made from 2000-2008. **Male-to-male sexual contact with concurrent injection drug use (MSM/IDU)** was responsible for 11% (n=33) of all diagnoses made from 1982-1990, 7% (n=38) of all diagnoses made from 1991-1999, and 6%

Figure 11. Cumulative HIV/AIDS Diagnoses Reported through December 31, 2008, by Category of Exposure, Both Sexes – Alaska (N=1,261)



(n=24) of all diagnoses made from 2000-2008. **Heterosexual contact** was identified or reported as the exposure category for 7% (n=21) of all diagnoses made from 1982-1990, 12% (n=65) of all diagnoses made from 1991-1999, and 26% (n=108) diagnoses made from 2000-2008. The increase in the proportion of cases contracted via heterosexual contact is in part a result of the increased percentage of cases diagnosed in women, who constituted 10% of cases diagnosed from 1982-1990 and 25% of cases diagnosed from 2000-2008. **Perinatal transmission, transfusion or transplant** was responsible for 5% (n=16) of all diagnoses made from 1982-1990, 2% (n=11) of all diagnoses made from 1991-1999, and <1% (n=1) of all diagnoses made from 2000-2008. Cases for which **no risk was identified or reported (NIR/NRR)** constituted 5% (n=17) of all diagnoses made from 1982-1990, 15% (n=79) of all diagnoses made from 1991-1999, and 15%

(n=64) of all diagnoses made from 2000-2008¹⁷.

¹⁷ As noted elsewhere, NIR/NRR cases are not redistributed. Case counts are too small to allow for the use of multiple imputation in ascribing risk to NIR/NRR cases, CDC's recommended method for case redistribution, and we cannot assume that the distribution of transmission categories among NIR/NRR cases is the same as that among cases with identified transmission category, which would allow NIR/NRR cases to simply be redistributed proportionally.

Figure 12. HIV/AIDS Diagnoses by Category of Exposure , Both Sexes – Alaska, 1982-2008 (N=1,261)

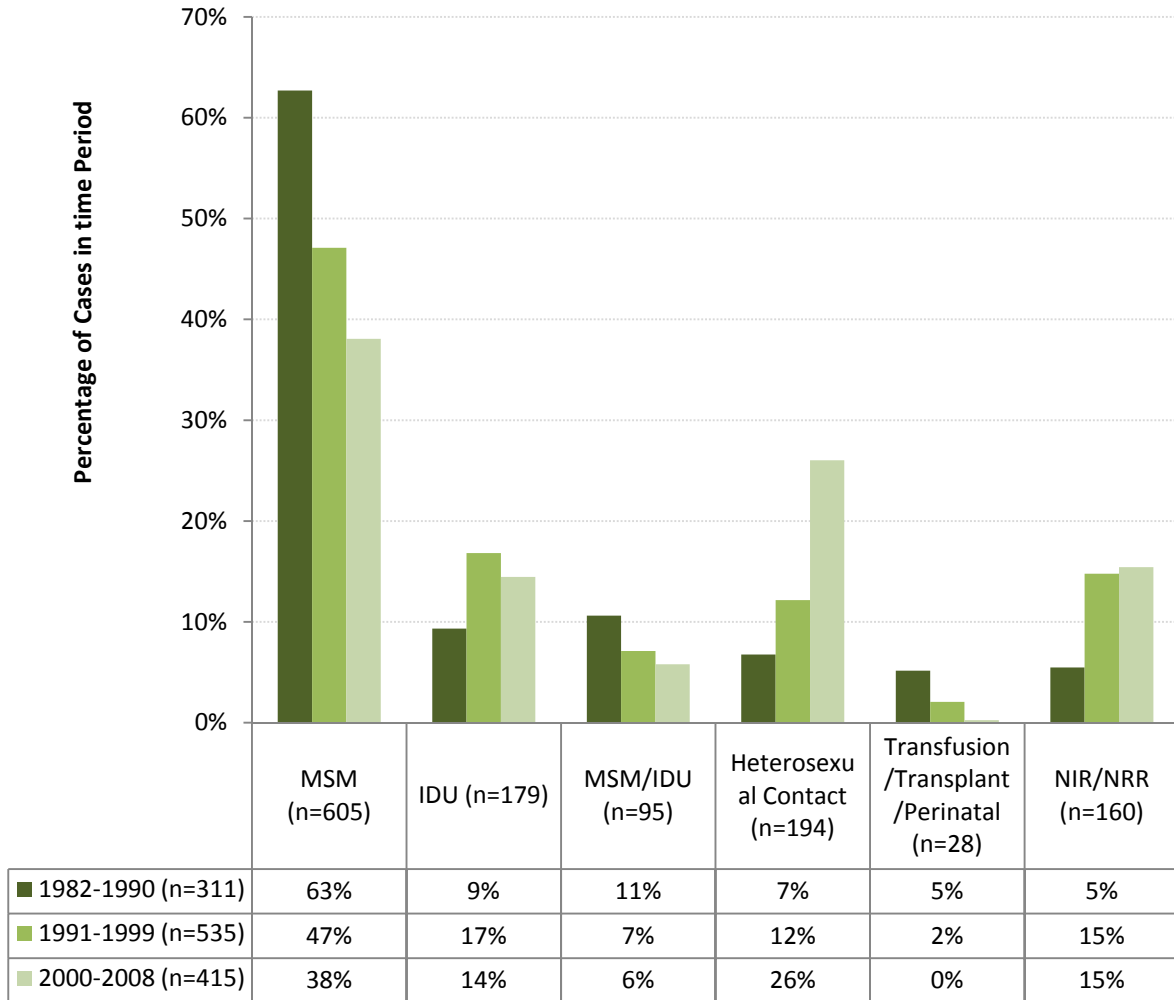


Figure 13. HIV/AIDS Diagnoses by Category of Exposure, Males – Alaska, 1982-2008 (n=1,018)

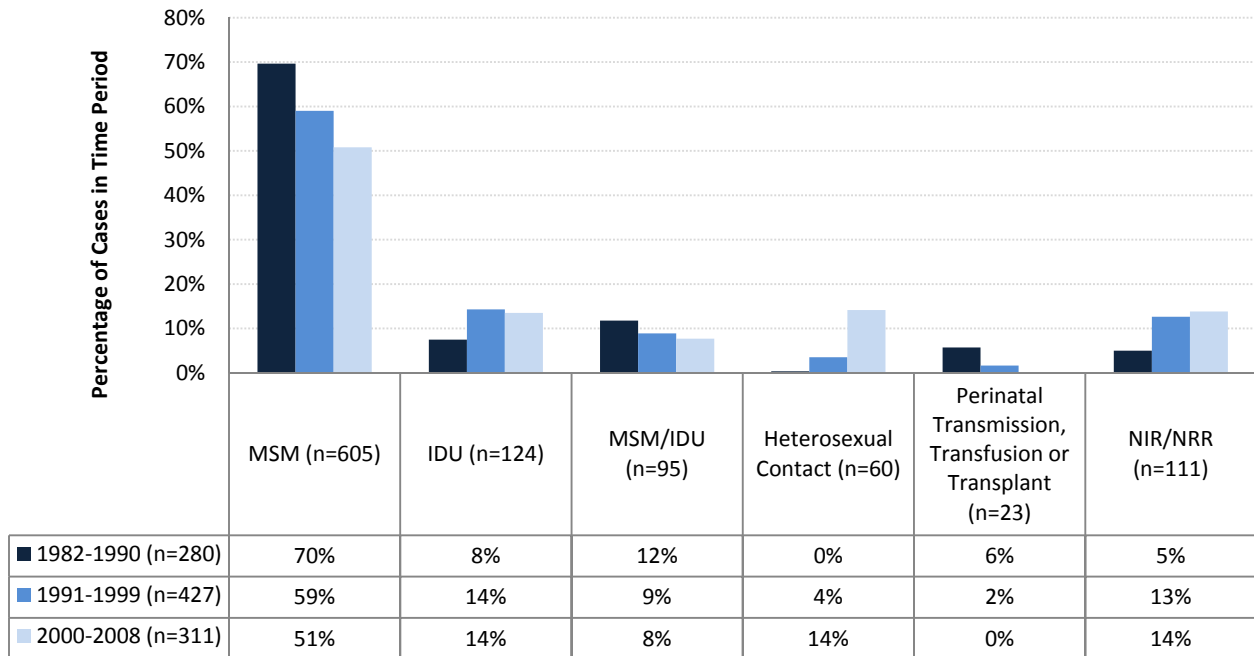


Figure 13 details the contribution of each exposure category to HIV/AIDS diagnoses in males in Alaska since January 1, 1982. Among males, the highest percentage of cases is seen among MSM (including both men who have sex with men exclusively, and MSMW, men who have sex with both men and women). As seen in Figure 12, though **male-to-male sex** today contributes to a smaller percentage of diagnoses than it did in the first years of the epidemic, it is still identified or reported as the exposure category for more cases than any other: it contributed to 59% (n=605) of all cases ever reported in males, to 70% (n=195) of all cases diagnosed in males from 1982-1990, 59% (n=252) of all cases diagnosed in males from 1991-1999, and 51% (n=158) of all cases diagnosed in males from 2000-2008. **Injection drug use** was responsible for 12% (n=124) of all cases ever reported in males, for 8% (n=21) of all cases diagnosed in males from 1982-1990, 14% (n=61) of all

cases diagnosed in males from 1991-1999, and 14% (n=42) of all cases diagnosed in males from 2000-2008. **Male-to-male sexual contact with concurrent injection drug use (MSM/IDU)** was responsible for 9% (n=95) of all cases ever reported in males, 12% (n=33) of all cases diagnosed in males from 1982-1990, 9% (n=38) of all cases diagnosed in males from 1991-1999, and 8% (n=24) of all cases diagnosed in males from 2000-2008. **Heterosexual contact** was identified or reported as the exposure category for 6% (n=60) of all cases ever reported in males, <1% (n=1) of all cases diagnosed in males from 1982-1990, 4% (n=15) of all cases diagnosed in males from 1991-1999, and 14% (n=44) of all cases diagnosed in males from 2000-2008. **Perinatal transmission, transfusion or transplant** was responsible for 2% (n=23) of all cases ever reported in males, 6% (n=16) of all cases diagnosed in males from 1982-1990, 2% (n=7) of all cases diagnosed

in males from 1991-1999, and 0% (n=0) of all cases diagnosed in males from 2000-2008. Cases for which **no risk was identified or reported (NIR/NRR)** constituted 11% (n=111) of all cases ever reported in males, 5% (n=14) of all cases

diagnosed in males from 1982-1990, 13% (n=54) of all cases diagnosed in males from 1991-1999, and 14% (n=43) of all cases diagnosed in males from 2000-2008.

Figure 14. HIV/AIDS Diagnoses by Category of Exposure, Females – Alaska, 1982-2008 (n=243)

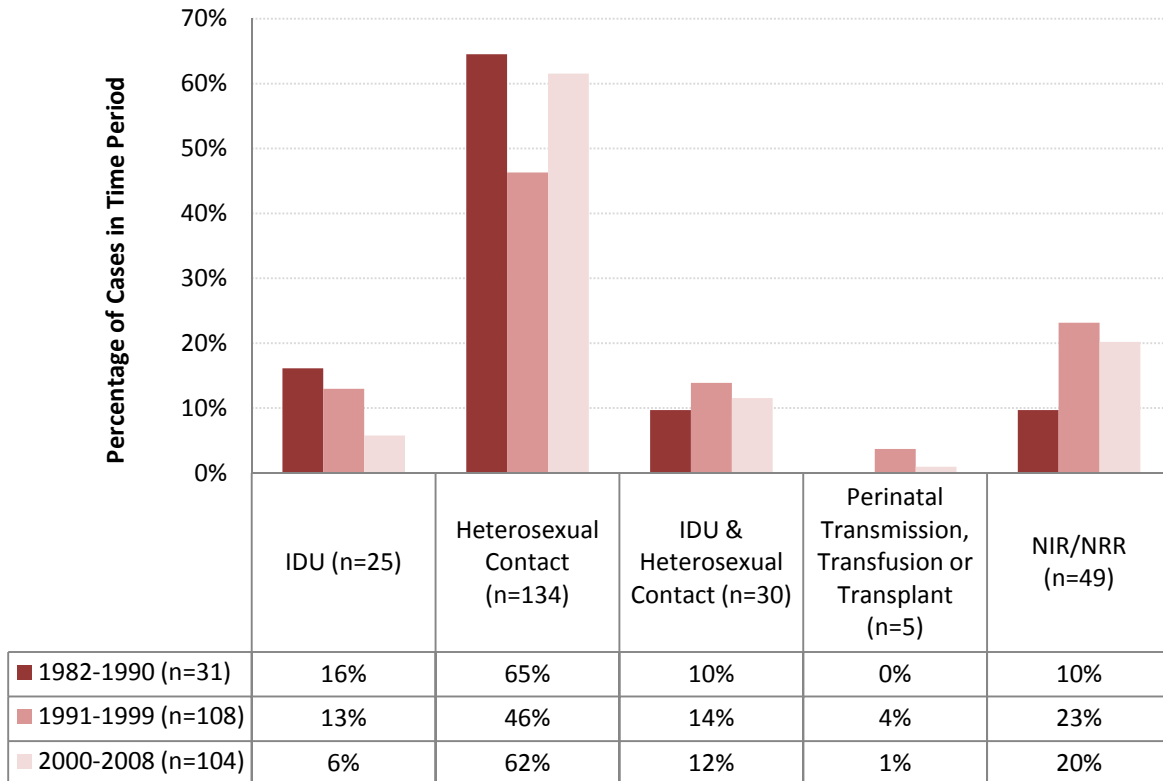


Figure 14 details the contribution of each exposure category to HIV/AIDS diagnoses in females in Alaska since January 1, 1982. **Heterosexual contact** has consistently been the most significant transmission category among women, contributing to 65% (n=20) of diagnoses in females from 1982-1990, 46% (n=50) of diagnoses in females from 1991-1999, and 62% (n=64) of diagnoses from 2000-2008. **Injection drug use** contributed to 16% (n=5) of diagnoses among females from 1982-1990, 13% (n=14) of diagnoses among females from 1991-1999, and 6% (n=6) of diagnoses

among females from 2000-2008. **Injection drug use with co-occurring high-risk heterosexual contact** accounted for 10% (n=3) of diagnoses among females from 1982-1990, 14% (n=15) of diagnoses in females from 1991-1999, and 12% (n=12) of diagnoses from 2000-2008. **Perinatal transmission, transfusion or transplant** was identified or reported in 0% (n=0) of diagnoses among females from 1982-1990, 4% (n=4) of diagnoses among females from 1991-1999, and 1% (n=1) of diagnoses among females from 2000-2008. Cases for which **no risk was identified or reported**

(NIR/NRR) constituted 10% (n=3) of all cases diagnosed in females from 1982-1990, 23% (n=25) of all cases diagnosed in females from 1991-1999, and 20% (n=21) of all cases diagnosed in females from 2000-2008.

Race and Ethnicity

Percentages

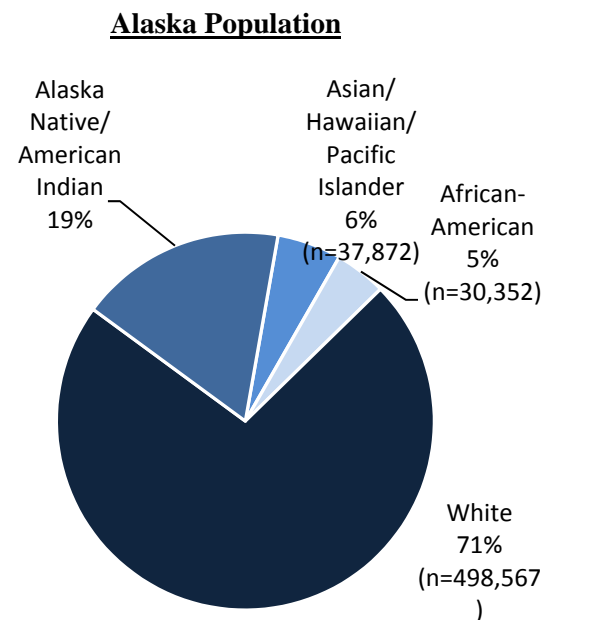
No racial or ethnic group in Alaska has been unaffected by HIV/AIDS. In recent years, as the absolute number of cases in white persons has decreased, the proportion of HIV/AIDS cases in persons of racial or ethnic minority groups in Alaska has increased. Of the 1,261 cases reported through December 31, 2008, 729 (58%) were in white persons, 282 (22%) in Alaska Native/American Indian persons, 138 (11%) in African-American and other black persons, 88 (7%) in Hispanic persons¹⁸, and 24 (2%) in Asian/Pacific Islander persons.

As Figure 15 shows, minority populations are, on the whole, over-represented in the HIV data. That is, they make up a greater proportion of the population of persons reported with HIV in Alaska than they do the general population: whereas Alaska Natives and American Indians make up 19% of Alaska's population (bottom chart), they make up 22% of all cases of HIV/AIDS reported in Alaska since 1982 (top chart), and though African-American and other black persons make up just 5% of Alaska's population (bottom chart), they constitute 11% of all reported cases (top chart). At the same time, white persons are under-represented in the data; that is, they make up

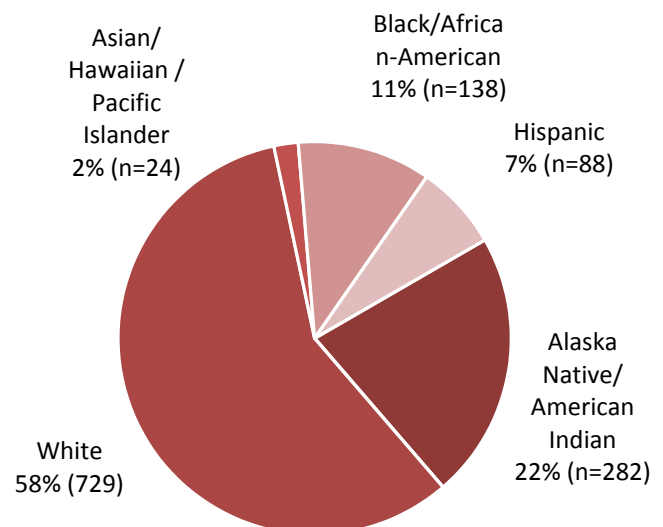
¹⁸ While HIV case data classify individuals of Hispanic ethnicity as a separate racial/ethnic category, Alaska population data distribute individuals of Hispanic ethnicity across racial categories.

a smaller proportion of reported cases of HIV than they do the general population: white persons make up 58% of reported HIV cases, but 72% of the state's population.

Figure 15. Cumulative HIV Cases (with and without AIDS) by Race/Ethnicity through December 31, 2008 (N=1,261) and 2008 Alaska Population Data (source: Alaska Department of Labor and Workforce Development, 2008 Race Bridged Smooth Series)*



Percentage of all HIV Cases Diagnosed



* Owing to rounding, totals may not sum to 100%.

The three figures below (16-18) detail the percentage of diagnoses within a given time period among racial, ethnic and gender subgroup. As elsewhere, figures are broken into nine-year blocks for the purpose of comparison between time periods.

Please note that these graphs depict proportional data: the fact that the *percentage* of female cases diagnosed among Alaska Native females doubled from the period 1982-1990 through the period 2000-2008 does not mean that the actual number of diagnoses doubled. In fact, 6 cases were diagnosed in Alaska Native females during 1982-1990, and 40 cases from 2000-2008, meaning that almost seven times as many, not twice as many, cases were diagnosed among Alaska Native females from 2000-2008 as from 1982-1990. This is because the overall number of diagnoses increased among females from 1982 through 2008. If the overall number of diagnoses during a given time period drops (e.g. from 1991-1999, 427 cases were diagnosed in males, and 311 cases from 2000-2008), then, even if a greater *proportion* of cases are diagnosed among a particular group, an equal, or even smaller, *number* of cases might be diagnosed among this group: for instance, though the proportion of cases diagnosed in Alaska Native and American Indian males during the period 2000-2008 was higher than from 1991-1999 (24% vs. 19%), a smaller number of cases were diagnosed from 2000-2008 than from 1991-1999 (80 vs. 76). Thus it is important to use proportional data as a complement, not a substitute, for case counts and rates.

One special note: While it might be desirable to break down data according to

gender and category of exposure, this has not been done in order to avoid inadvertently identifying individual persons.

Figure 16 depicts HIV/AIDS diagnoses by race and ethnicity for both sexes since 1982. Of all 1,261 cases reported to the Alaska Section of Epidemiology **from January 1, 1982 through December 31, 2008**, 57.8% (n=729) were among white persons; 10.9% (n=138) were among African-American and other black persons; 7.0% (n=88) were among Hispanic persons; 1.9% (n=24) were among Asian and Pacific Islander persons; and 22.4% (n=282) were among Alaska Native and American Indian persons. **From 1982-1990** (n=311 diagnoses), 73.6% (n=229) of all cases diagnosed were among white persons; 6.1% (n=19) were among African-American and other black persons; 5.5% (n=17) were among Hispanic persons; 0% (n=0) were among Asian and Pacific Islander persons; and 14.8% (n=46) were among Alaska Native and American Indian persons. **From 1991-1999**, (n=535 diagnoses), 56.1% (n=300) of all cases diagnosed were among white persons; 11.0% (n=59) were among African-American and other black persons; 8.8% (n=47) were among Hispanic persons; 1.7% (n=9) were among Asian and Pacific Islander persons; and 22.4% (n=120) were among Alaska Native and American Indian persons. **From 2000-2008**, (n=535 diagnoses), 48.2% (n=200) of all cases diagnosed were among white persons; 14.5% (n=60) were among African-American and other black persons; 5.8% (n=24) were among Hispanic persons; 3.6% (n=15) were among Asian and Pacific Islander persons; and 28.0% (n=116) were among Alaska Native and American Indian persons.

Figure 16. HIV/AIDS Diagnoses by Race and Ethnicity, Both Sexes – Alaska, 1982-2008 (n=1,261)

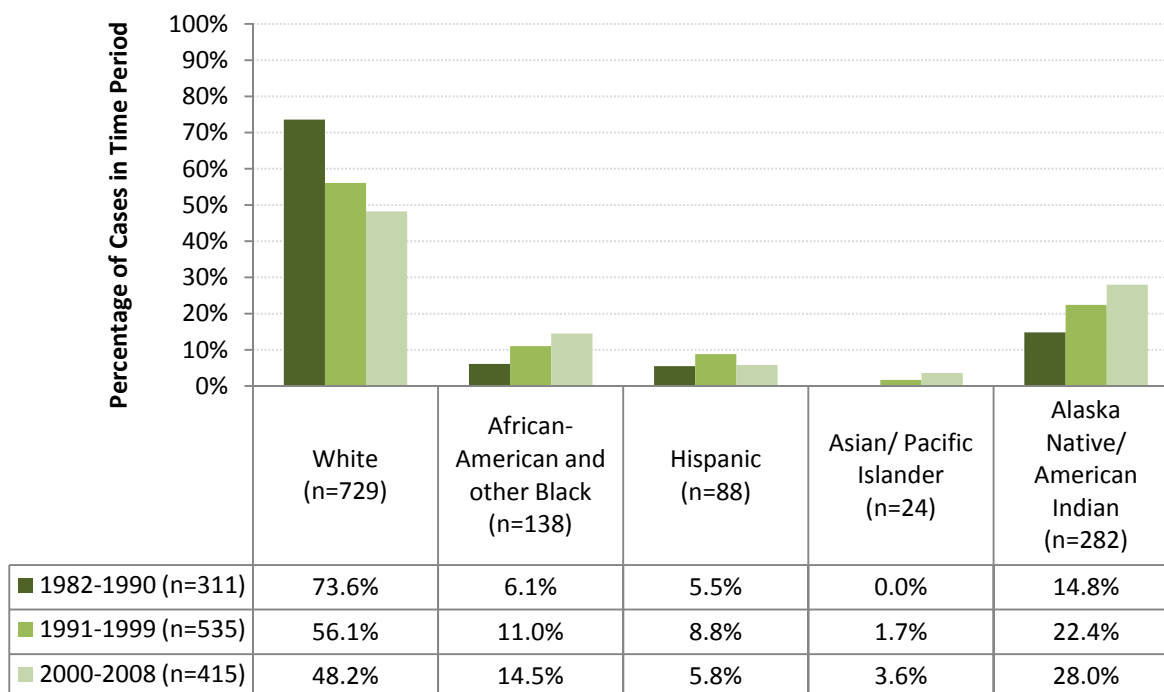


Figure 17 shows HIV/AIDS diagnoses among males by race and ethnicity since 1982. Of all 1,018 cases reported among males to the Alaska Section of Epidemiology from January 1, 1982 through December 31, 2008, 61.5% (n=626) were among white males; 10.2% (n=104) were among African-American and other black males; 7.4% (n=75) were among Hispanic males; 1.7% (n=17) were among Asian and Pacific Islander males; and 19.3% (n=196) were among Alaska Native and American Indian males.

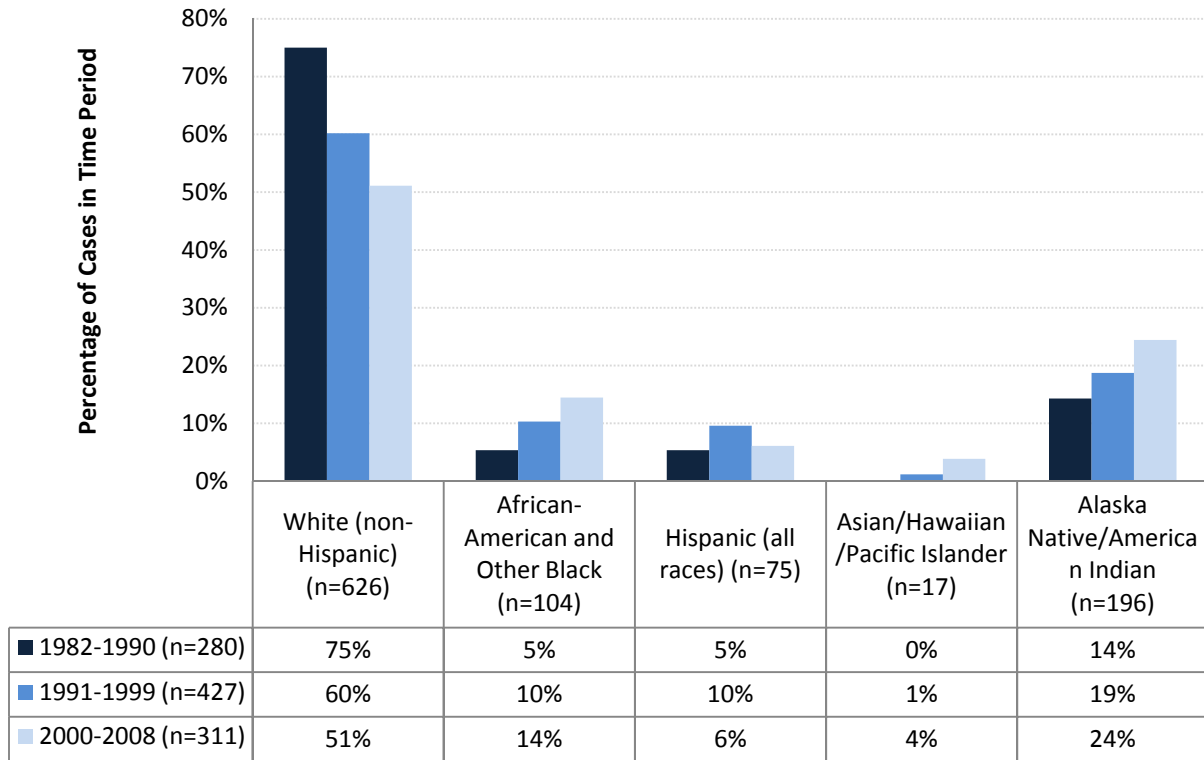
The percentage of HIV diagnoses in male racial and ethnic minorities has increased since 1982. From 1982-1990 (n=280 diagnoses), 75% (n=210) of all cases diagnosed in males were among white males; 5% (n=15) were among African-American and other black males; 5% (n=15) were among Hispanic males; 0% (n=0) were among Asian and Pacific Islander males;

and 14% (n=40) were among Alaska Native and American Indian males.

From 1991-1999, (n=427 diagnoses), 60% (n=257) of all cases diagnosed in males were among white males; 10% (n=44) were among African-American and other black males; 10% (n=41) were among Hispanic males; 1% (n=5) were among Asian and Pacific Islander males; and 19% (n=80) were among Alaska Native and American Indian males.

From 2000-2008, (n=311 diagnoses), 51% (n=159) of all cases diagnosed in males were among white males; 14% (n=45) were among African-American and other black males; 6% (n=19) were among Hispanic males; 4% (n=12) were among Asian and Pacific Islander males; and 24% (n=76) were among Alaska Native and American Indian males.

Figure 17. HIV/AIDS Diagnoses by Race and Ethnicity, Males – Alaska, 1982-2008 (N=1,018)



As Figure 18 shows, the picture is much the same for females. Of all 243 cases reported among females to the Alaska Section of Epidemiology from January 1, 1982 through December 31, 2008, 42.4% (n=103) were among white females; 14.0% (n=34) were among African-American and other black females; 5.3% (n=13) were among Hispanic females; 2.9% (n=7) were among Asian and Pacific Islander females; and 35.4% (n=86) were among Alaska Native and American Indian females.

From 1982-1990 (n=31 diagnoses), 61% (n=19) of all cases diagnosed in females were among white females; 13% (n=4) were among African-American and other black females; 6% (n=2) were among Hispanic females; 0% (n=0) were among Asian and Pacific Islander females; and 19% (n=6)

were among Alaska Native and American Indian females.

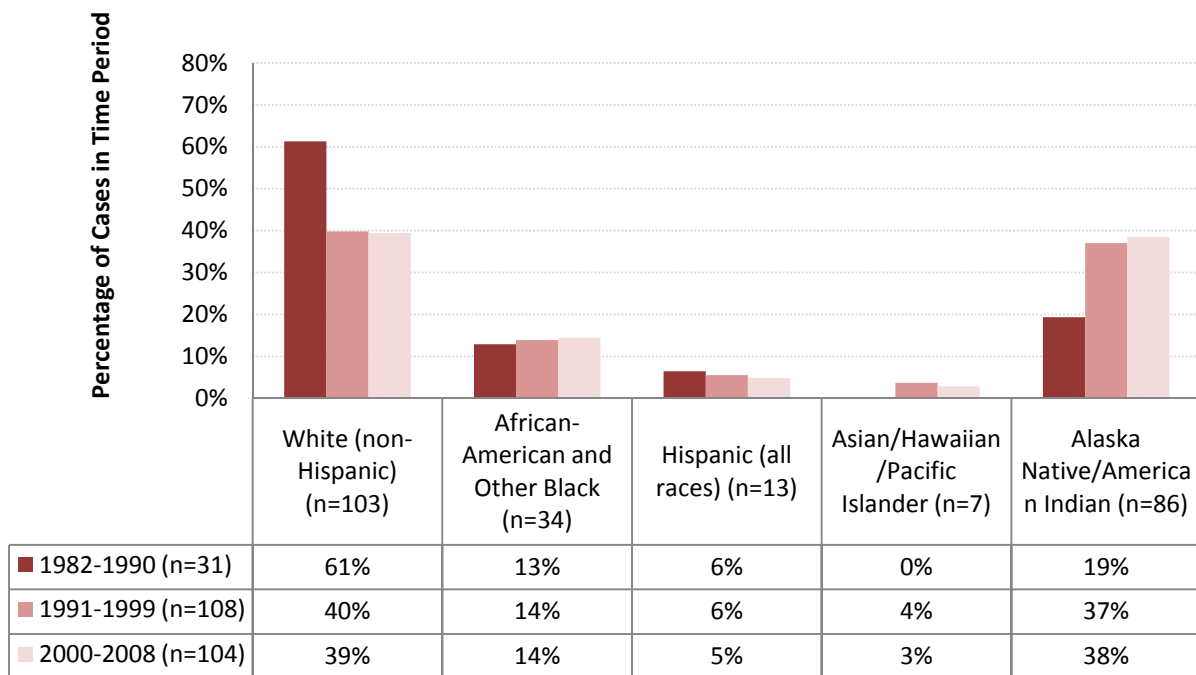
Alaska Native and American Indian females are over-represented in the demographics of HIV/AIDS infection in Alaska.

From 1991-1999, (n=108 diagnoses), 40% (n=43) of all cases diagnosed in females were among white females; 14% (n=15) were among African-American and other black females; 6% (n=6) were among Hispanic females; 4% (n=4) were among Asian and Pacific Islander females; and 37% (n=40) were among Alaska Native and American Indian females.

From 2000-2008, (n=104 diagnoses), 39% (n=41) of all cases diagnosed in females were among white females; 14% (n=15) were among African-American and other black females; 5% (n=5) were among Hispanic females; 3% (n=3) were among Asian and Pacific Islander females; and 38% (n=40) were among Alaska Native and American Indian females. Given that Alaska

Native and American Indian females constitute just 21% of Alaska's female population, but constituted 38% of its female HIV/AIDS diagnoses in 2008, it is clear that Alaska Native and American Indian females are over-represented in the demographics of HIV/AIDS diagnoses in Alaska.

Figure 18. HIV/AIDS Diagnoses by Race and Ethnicity, Females – Alaska, 1982-2008 (N=243)



While the preceding figures have been included primarily to give CBOs concrete numbers to work with, Figures 19-21 tell the same story somewhat differently: they map the percentage of all cases diagnosed (for both sexes, for males, and for females) among racial and ethnic groups in every year from 1982-2008, with a polynomial trendline drawn through each cloud of datapoints to illustrate the overall trend since 1982. The trendlines do not depict averages; they depict the overall direction of movement. The rationale behind these

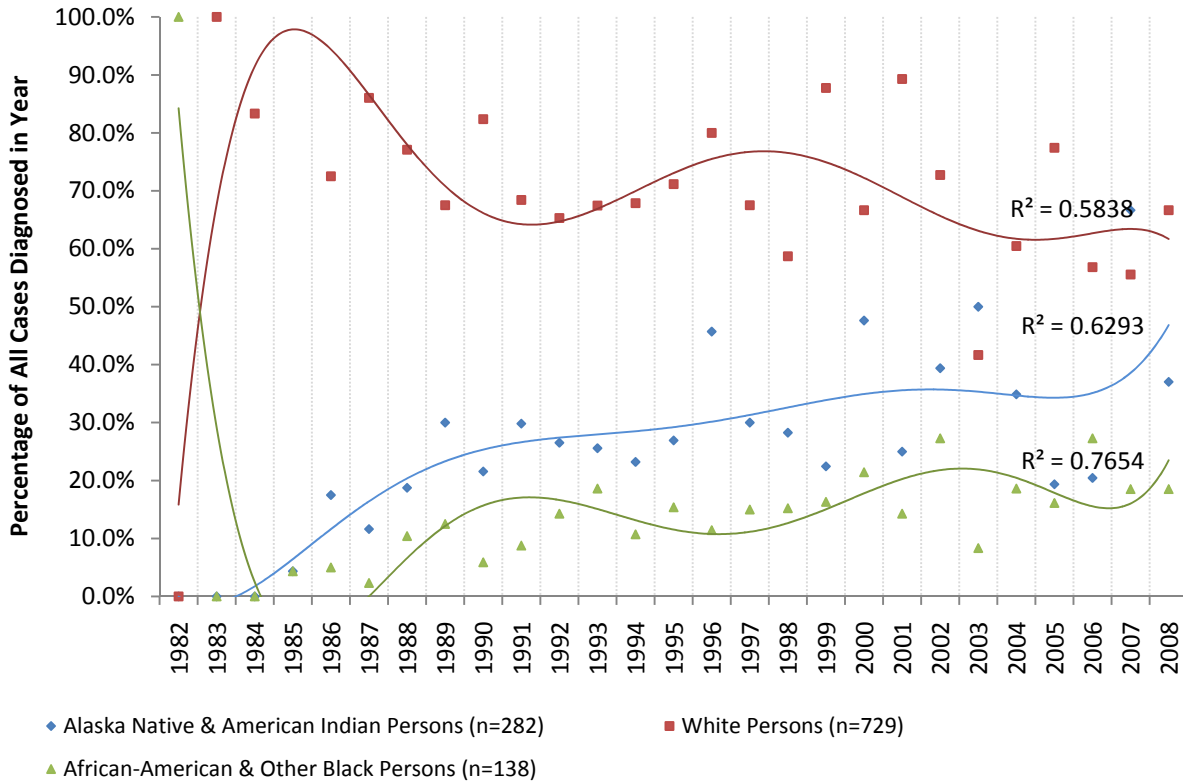
graphs is threefold. First, the scattering of datapoints makes clear how overdispersed the data are, and how wildly percentages can fluctuate from year to year when dealing with small sample sizes. Second, these graphs offer as precise a picture of year-to-year data on diagnoses according to race and ethnicity as possible without potentially revealing personal identifiers; for added caution, percentages for Hispanic persons and Asian and Pacific Islander persons are not reported, because very small case counts in these groups exacerbate the worry of

compromising persons' confidentiality (both groups contributed less than 10% of cases in all years since 1982, with no discernible trends). Third, the trendline is a simple, direct way to make sense of wildly fluctuating data, i.e. data impacted by small sample sizes. Note that the very low R^2 (which reports the percentage of variation captured by the line of best fit, with 1 denoting a perfect fit) for females—any R^2 below 0.7, in fact—indicates a weak relationship, and no predictions should be made with these data.

Figure 19 depicts the percentage of all cases diagnosed in a given year among white persons (n=729), Alaska Native and American Indian persons (n=282), and African-American and other black persons (n=138) for every year between 1982 and 2008. As noted above, Asian and Pacific Islander persons and Hispanic persons are not included owing to low case counts. Figure 19 shows the overall increase in the percentage of cases diagnosed in Alaska

Native and American Indian persons since 1982, the increase in the percentage of cases diagnosed in African-American and other black persons since the mid-1980s, and the change in percentage of cases diagnosed in white persons that occurs in tandem with decreases in the percentage of cases diagnosed in African-American and other black persons: though a higher percentage of all cases reported in Alaska are diagnosed in white persons than among any other group, because these are proportional data, an increase in the percentage of cases diagnosed in one racial or ethnic group is always offset by a decrease in the percentage of cases diagnosed in another racial or ethnic group. For instance, a dip in the trendline for white males between roughly 1989-1992 was matched by a rise in the trendline for African-American and other black males, and vice versa during the period from 1992-1999. The highly dispersed nature of the datapoints, and low r-squared values, should be borne in mind: the trends are weak at best.

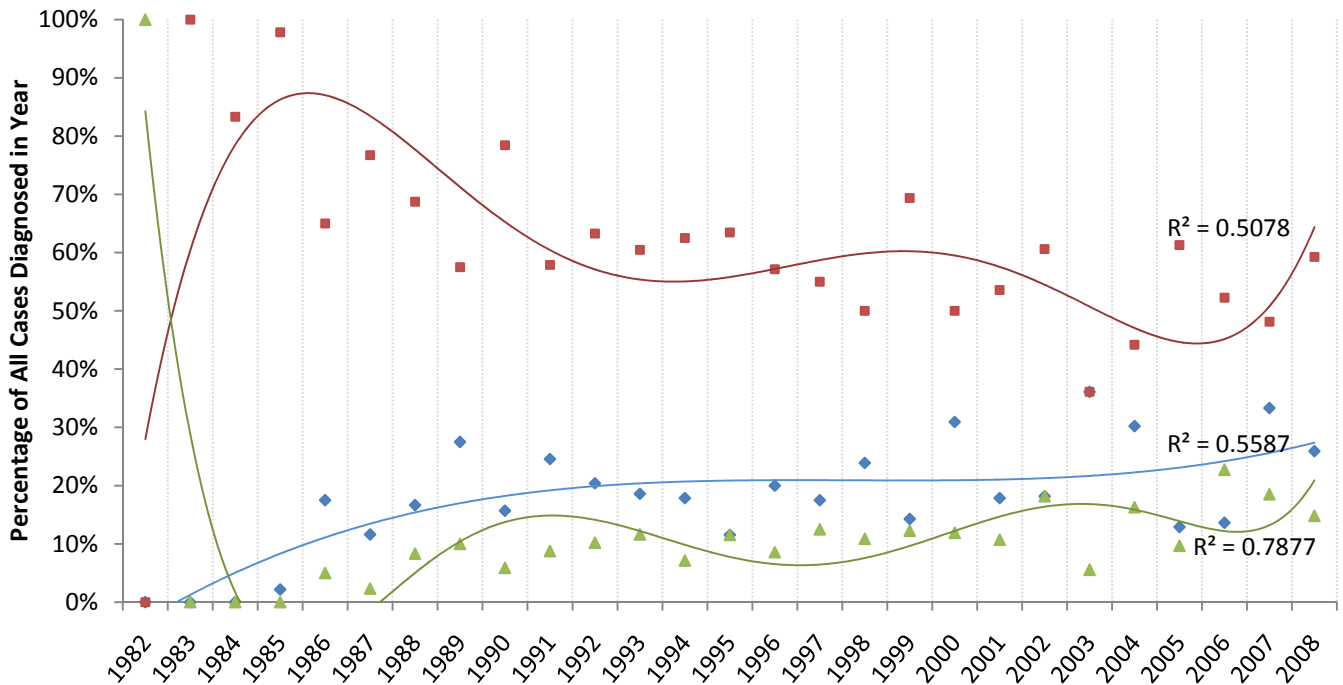
Figure 19. Percentage of HIV/AIDS Diagnoses per Year by Race/Ethnicity, Both Sexes, 1982-2008 – Alaska (n=1,018)



The picture is much the same for males, as shown in Figure 20: on the whole, the highest percentage of cases diagnosed per year since 1982 has been in white males, but this is offset by decreases during years in

which the percentage of African-American and other black males increases, and by a steady increase in the percentage of cases diagnosed among Alaska Native and American Indian males since 1982.

Figure 20. Percentage of HIV/AIDS Diagnoses per Year by Race/Ethnicity, Males, 1982-2008
 – Alaska (n=1,018)

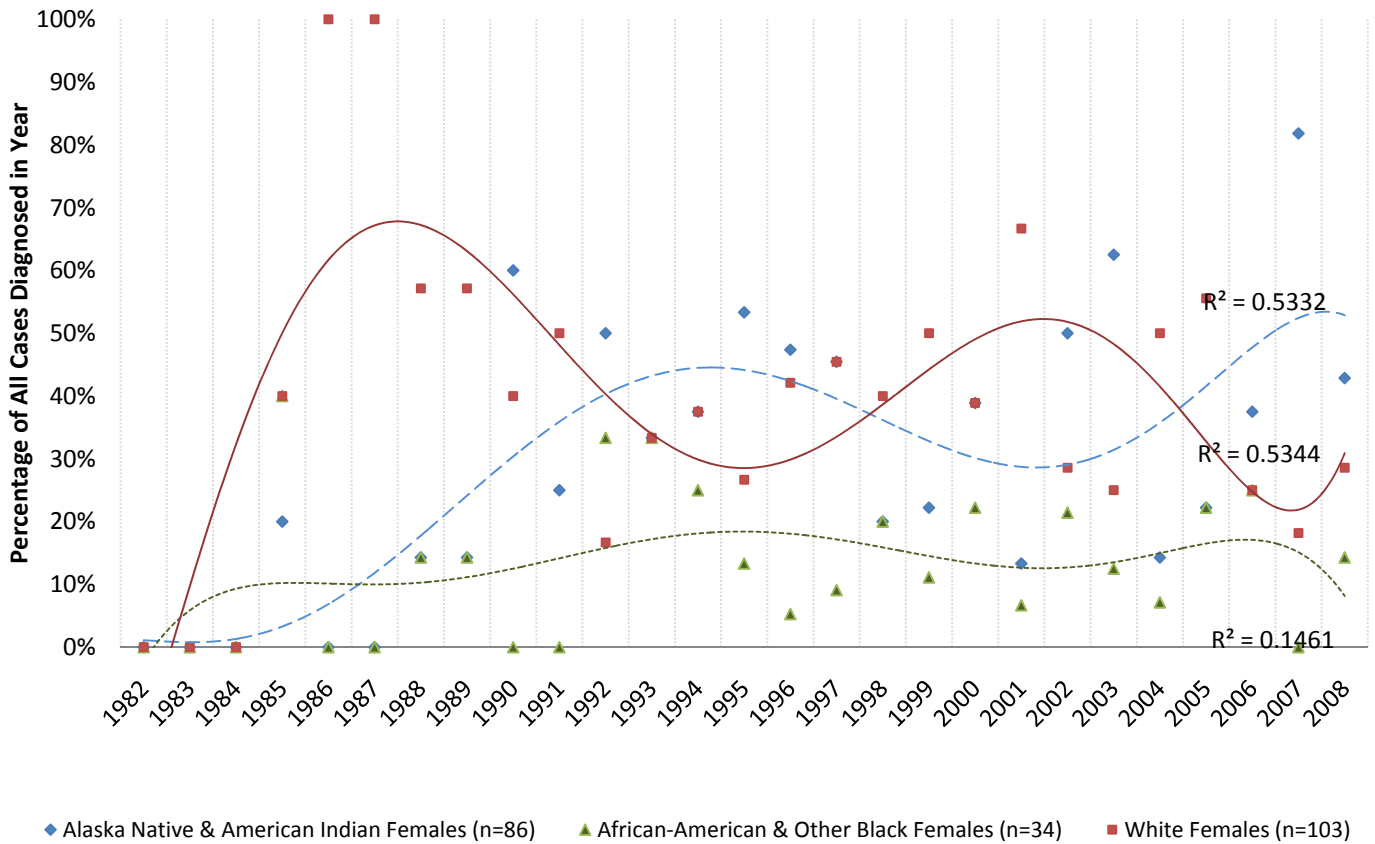


◆ Alaska Native & American Indian Males (n=282) ■ White Males (n=626) ▲ African-American & Other Black Males (n=104)

Among females, as shown in Figure 21, the situation is somewhat different: the disparity in the percentage of cases diagnosed among white females and Alaska Native and American Indian females is greater than that between white males Alaska Native and American Indian males. Though r-squared values of roughly 0.5 indicate a very weak trend, one can see that the percentage of cases diagnosed in white females and the percentage of cases diagnosed in Alaska Native and American Indian females oscillates in tandem, with some years seeing a higher percentage of cases diagnosed in

one group and some years seeing a higher percentage of cases diagnosed in the other group. Again, though this trend is weak—indeed, precisely because it is weak—it is inadvisable to take one, two, or even three years of data to be indicative of trends, because the numbers show a high degree of variation from year to year. Furthermore, it bears repeating that Figures 19-21 do not show either an increase in the number of cases diagnosed in a given subgroup, much less the incidence rate in a given subgroup, and do not represent an increase or a decrease in actual diagnoses.

**Figure 21. Percentage of HIV/AIDS Diagnoses per Year by Race/Ethnicity, Females, 1982-2008
– Alaska (n=243)**



Rates, Percentages and Small Sample Sizes Revisited

Percentages, of course, have their shortcomings. For instance, as we will see below, though Alaska Native and American Indian persons have constituted contributed a steadily greater *percentage* of all cases diagnosed in a given year since 1982 (as shown in Figures 19-21), *rates* of infection—bearing in mind the caveats regarding wide confidence intervals and small sample sizes—in Alaska Native and American Indian persons have not shown the same increase. Looking at either percentage data or rate data in isolation, one gets only a limited view of the HIV/AIDS epidemic in Alaska.

As one would expect in looking at proportional data, a rise in the percentage of

cases diagnosed in a given racial or ethnic group always occurs in tandem with a drop in the percentage of cases diagnosed in one or more other racial or ethnic groups. That is, if 50% of new diagnoses are in white persons one year, and 75% the next, then the percentage of cases diagnosed in persons of other racial and ethnic groups in the second will necessarily be lower, since just 25% rather than 50% of cases will be distributed among these groups. What is perceived as a huge “spike” in cases among a given subgroup in one year may be simply be an increase in the percentage, not the number, of cases diagnosed in a given subgroup. That is, if one diagnoses 15 cases one year with 5 of those cases among AN/AI females, and 10 cases the next year with 5 of those cases among AN/AI females, then one might be inclined to think that there has been an

increase in the number of cases among AN/AI females, even if there has been no increase in the number of cases.

The typical solution to these issues is to calculate rates, which allow for a valid comparison of incidence across populations of different sizes, with varying case counts. In many cases, the analysis of rates is the preferred means of assessing the epidemiologic characteristics of a given condition: while absolute numbers and proportions have their place, truly robust analysis can occur only when the size and characteristics of the population as a whole, and the distribution of a given condition among the population across a given period of time, are considered. However, in dealing with small sample sizes, rates tend to be less informative than when dealing with large sample sizes, owing to exceptionally wide confidence intervals (as shown in the figures below).

When we compare data from multiple years, if we are not sufficiently confident that a given change is not simply due to random fluctuation, then we say that there has not been a *statistically significant* change in incidence. It is important to note that when epidemiologists and public health officials say that something is not “statistically significant” they do not mean that it is “unimportant.” For instance, the fact that there has been no statistically significant shift in incidence rates among black males, or Alaska Native and American Indian males, from 2000-2008 does not diminish the fact that these two groups display much higher rates of HIV infection than white males. It simply means that we cannot detect any trend in these data that is not overly-influenced by random fluctuations. If anything, the absence of a clear decline in rates argues for continuing concern and

continued prevention efforts among these populations.

As noted earlier in this chapter, some of the most vexing issues in the analysis of epidemiologic data from low-prevalence settings center on the uncertainty and instability of rates and measures of comparison derived from small case counts and small populations. Uncertainty and instability are compounded further when data are broken down into racial and ethnic subgroups, and even more so when broken down further by gender, since case counts and population size grow progressively smaller as one does so.

Five-Year Incidence¹⁹ Rates, 1994-2008

One way to deal with this is to group cases into five-year intervals, and calculate rates on that basis: that is, in a *five-year period*, for every 100,000 persons of a given gender and race or ethnicity, there were X number of new HIV cases. Figures 22-24 present five-year incidence rates by racial/ethnic category and gender. Rates were calculated only for groups for which ten or more cases were counted in a five-year period, as below this level, rates become extremely unstable and subject to random fluctuation to an unacceptable degree²⁰. Because of this, rates for Hispanic persons, Asian and Pacific Islanders and African-American and other black women are not included.

¹⁹ Note again that “incidence rates” are calculated using the date of diagnosis as a proxy for the date of infection, and are subject to reporting delays and a range of other constraints that preclude these rates from indicating the true onset of infection, i.e. the true incidence of HIV/AIDS.

²⁰ The residual standard error (RSE), the standard error divided by the rate, is one criterion used to determine whether rates are stable enough to be reported. RSEs below 30% are considered acceptable; any rate with a greater RSE is too subject to random variation to be reliable, and epidemiologists discourage reporting any such rates. All rates in Figures 22-24 have RSEs below 30%.

Denominators were calculated using persons aged 15-plus years.

Incidence rate ratios (IRRs) are also reported for African-American and other black persons and Alaska Native and American Indian persons. IRRs presented here are simply the ratio of the incidence rate among members of a racial and ethnic minority group to the incidence rate among white persons, whether male, female, or both sexes. For instance, the IRR of 3.79 reported for African-American and other black persons from 1994-1998 means that the

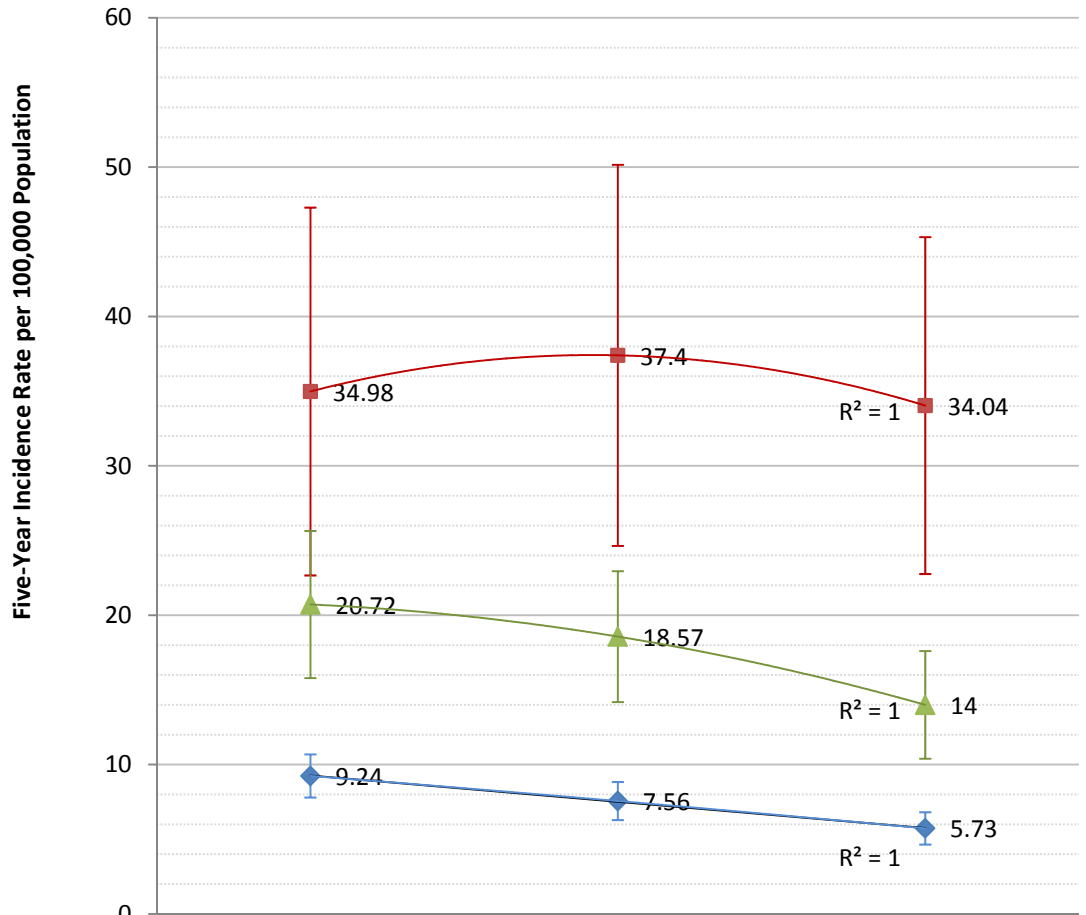
It is difficult to overstate the importance of wide confidence intervals and small sample sizes in interpreting the data on HIV/AIDS in Alaska.

incidence rate among African-American and other black persons during this time period was 3.79 times greater than that among white persons in this time period; the IRR of 6.70 reported for Alaska Native and American Indian females from 2004-2008 means that the incidence rate among Alaska Native and American Indian females during this time period was 6.70 times greater than that among white females during this time period—bearing in mind the caveats regarding wide confidence intervals and small sample sizes. Indeed, it is difficult to

overstate the importance of these two issues—wide confidence intervals and small sample sizes—in interpreting the data on HIV/AIDS in Alaska. Rates for African-American and other black persons show especially wide confidence intervals, owing to the small population of African-American and other black persons in Alaska. Though it may appear that, on the whole, HIV incidence rates have declined slightly in the past fifteen years, this interpretation should be made only with great caution, as the rates themselves are fairly unstable.

As shown in Figure 22, the five-year incidence rate for white persons from 1994-1998 was 9.24 per 100,000 population [95%CI=7.80–10.68]; from 1999-2003, 7.56/100,000 population [95%CI=6.29–8.84], and from 2004-2008, 5.73/100,000 population [95%CI=4.65–6.81]. The five-year incidence rate for African-American and other black persons from 1994-1998 was 34.98/100,000 population [95%CI=22.67–47.29; IRR= 3.79]; from 1999-2003, 37.40/100,000 [95%CI=24.64–50.16; IRR= 4.95]; and from 2004-2008, 34.04/100,000 [95%CI=22.76–45.32; IRR=5.94]. For Alaska Native and American Indian persons, the five-year incidence rate from 1994-1998 was 20.72 per 100,000 population [95%CI=15.60–25.64; IRR=2.24]; from 1999-2003, 18.57/100,000 population [95%CI=14.19–22.95; IRR= 2.46]; and from 2004-2008, 14.00/100,000 population [95%CI=10.40–17.60; IRR=2.44].

Figure 22. Five-Year Incidence Rates, African-American & Other Black, Alaska Native & American Indian, and White Persons, 1994-2008 (N=694)

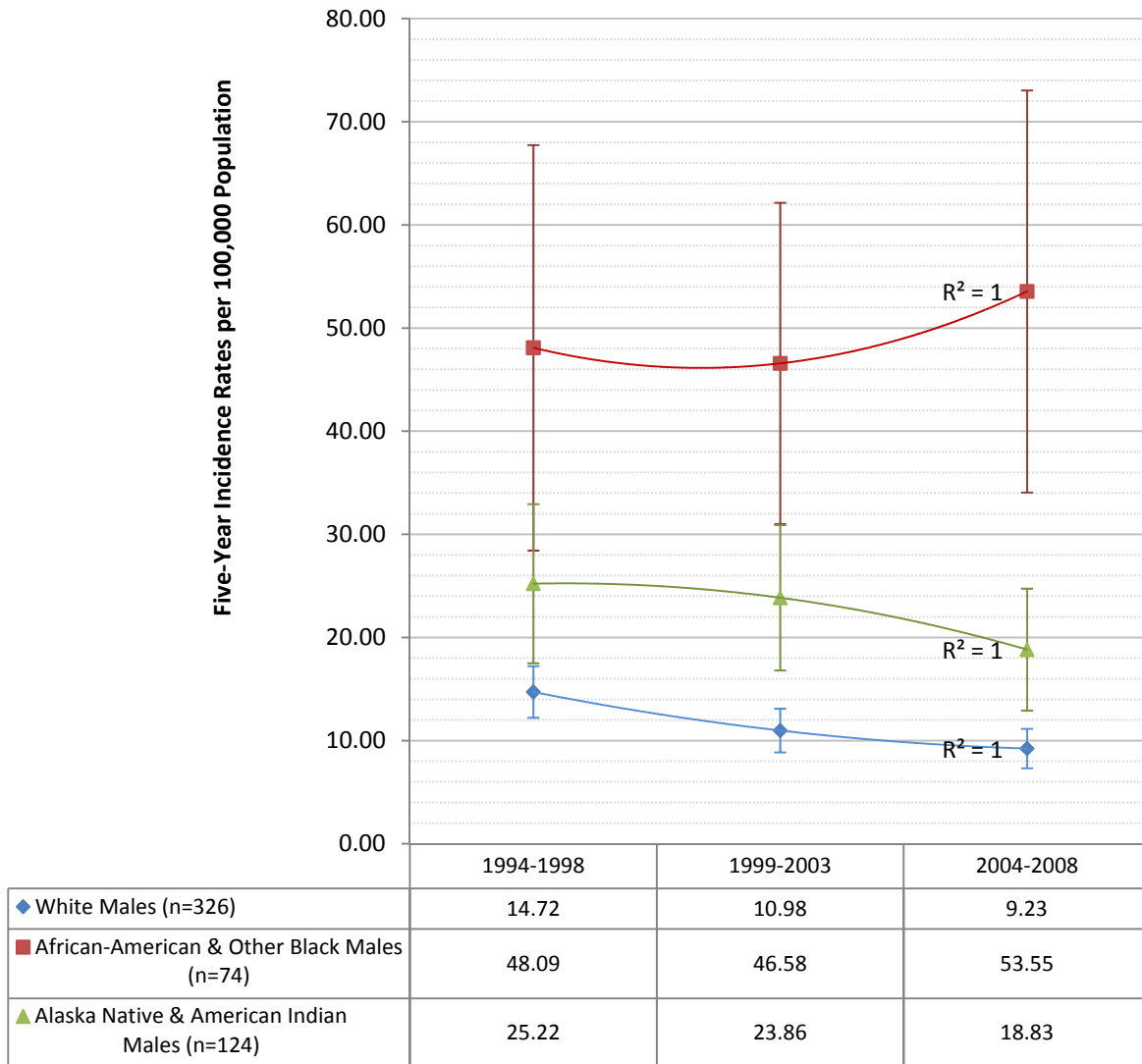


	1994-1998 (n=256)	1999-2003 (n=237)	2004-2008 (n=201)
◆ White Persons (n=400)	9.24	7.56	5.73
■ African-American & Other Black Persons (n=104)	34.98	37.4	34.04
▲ Alaska Native & American Indian Persons (n=195)	20.72	18.57	14

As shown in Figure 23, the five-year incidence rate for white males from 1994-1998 was 14.72 per 100,000 population [95%CI=12.22–17.22]; from 1999-2003, 10.98/100,000 population [95%CI=8.86–13.10], and from 2004-2008, 9.23/100,000 population [95%CI=7.33–11.14]. The five-year incidence rate for African- American and other black males from 1994-1998 was 48.09/100,000 population [95%CI=28.44–67.74; IRR= 3.27]; from 1999-2003,

46.58/100,000 [95%CI=27.11–66.04; IRR= 4.24]; and from 2004-2008, 53.55/100,000 [95%CI=34.06–73.04; IRR= 5.80]. For Alaska Native and American Indian males, the five-year incidence rate from 1994-1998 was 25.22 per 100,000 population [95%CI=17.50–32.94; IRR=1.71]; from 1999-2003, 23.86/100,000 population [95%CI=16.81–30.90; IRR= 2.17]; and from 2004-2008, 18.83/100,000 population [95%CI=12.92–24.74; IRR=2.04].

Figure 23. Five-Year Incidence Rates, African-American & Other Black, Alaska Native & American Indian, and White Males, 1994-2008 (N=524)



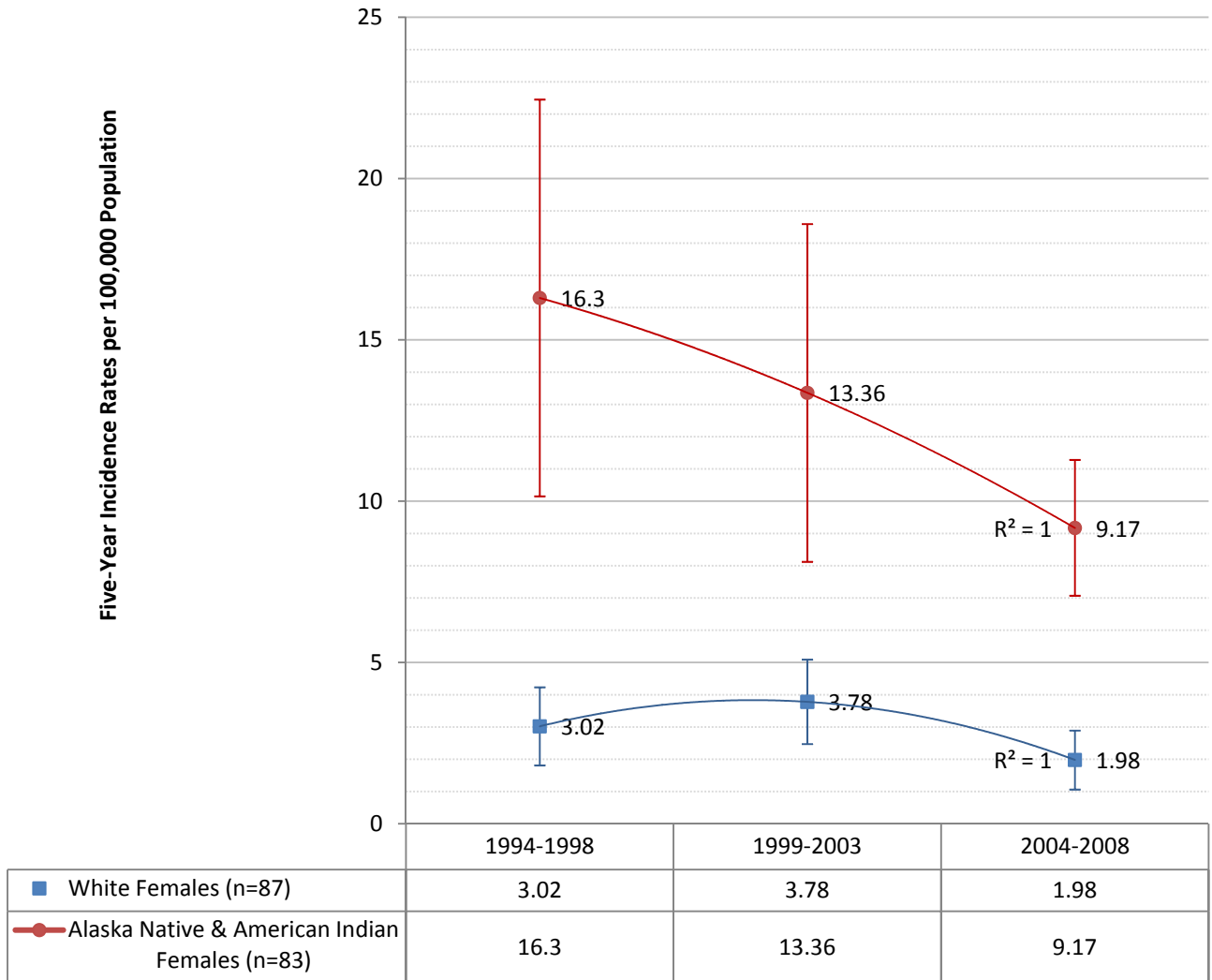
As shown in Figure 24, the five-year incidence rate for white females from 1994-1998 was 3.02 per 100,000 population [95%CI=1.81–4.23]; from 1999-2003, 3.78/100,000 population [95%CI=2.47–5.09], and from 2004-2008, 1.98/100,000 population [95%CI=1.06–2.89]. For Alaska Native and American Indian females, the five-year incidence rate from 1994-1998 was 16.30 per 100,000 population [95%CI=10.15–22.45; IRR=5.61]; from 1999-2003, 13.36/100,000 population [95%CI=8.12–18.59; IRR= 3.29]; and from

2004-2008, 9.17/100,000 population [95%CI=7.07–11.28; IRR=6.70]. As can be seen through a comparison of IRRs for Alaska Native and American Indian males with those of Alaska Native and American Indian females, the disparity in rates between white persons and Alaska Native and American Indian persons is much more pronounced among females. As noted above, because of very low case counts (<10 diagnoses in a five-year period), rates were not calculated for African-American and other black females. Note also that the scale

of this graph (the y-axis values range from 0 to 25/100,000) is much smaller than that of the previous two graphs, in which the y-axis values range from 0 to 60 and 0 to

80/100,000). Consequently, changes that would not show up on a scale similar to that of the previous two graphs may be overemphasized here.

Figure 24. Five-Year Incidence Rates, Alaska Native & American Indian and White Females, 1994-2008 (n=170)



2000-2008 Rates: Highlighting the impact of year-to-year fluctuations

Small sample sizes are not the only factor that can make it difficult or impossible to detect any sort of a trend. To drive home this point, Figures 25-29 depict incidence rates for each year from 2000-2008 for selected subgroups with 95% Poisson confidence intervals, a type of CI calculated for very small ($n < 20$ or so) occurrences. Again, these CIs are very wide, and one can see the fluctuation in rates from year to year: up one year and down the next. As in Figures 22-24, population denominators are calculated using persons aged 15-plus years. Again,

rates for African-American and other black females, Hispanic persons, and Asian and Pacific Islander persons are not calculated owing to very low case counts.

Figure 25 displays incidence rates per 100,000 population for Alaska Native and American Indian males, which ranged from a high of 35.5/100,000 in 2000 to a low of 9.8/100,000 in 2005, with a rate of 16.3/100,000 in 2008. Again, year-to-year variation is significant, and the trendline emphasizes the peaks and valleys in the data, with an r-squared value of 0.8846, indicating a good fit to the data

Figure 25. Incidence Rates per 100,000 Population, Alaska Native/American Indian Males – 2000-2008 (With 95% Poisson CIs)

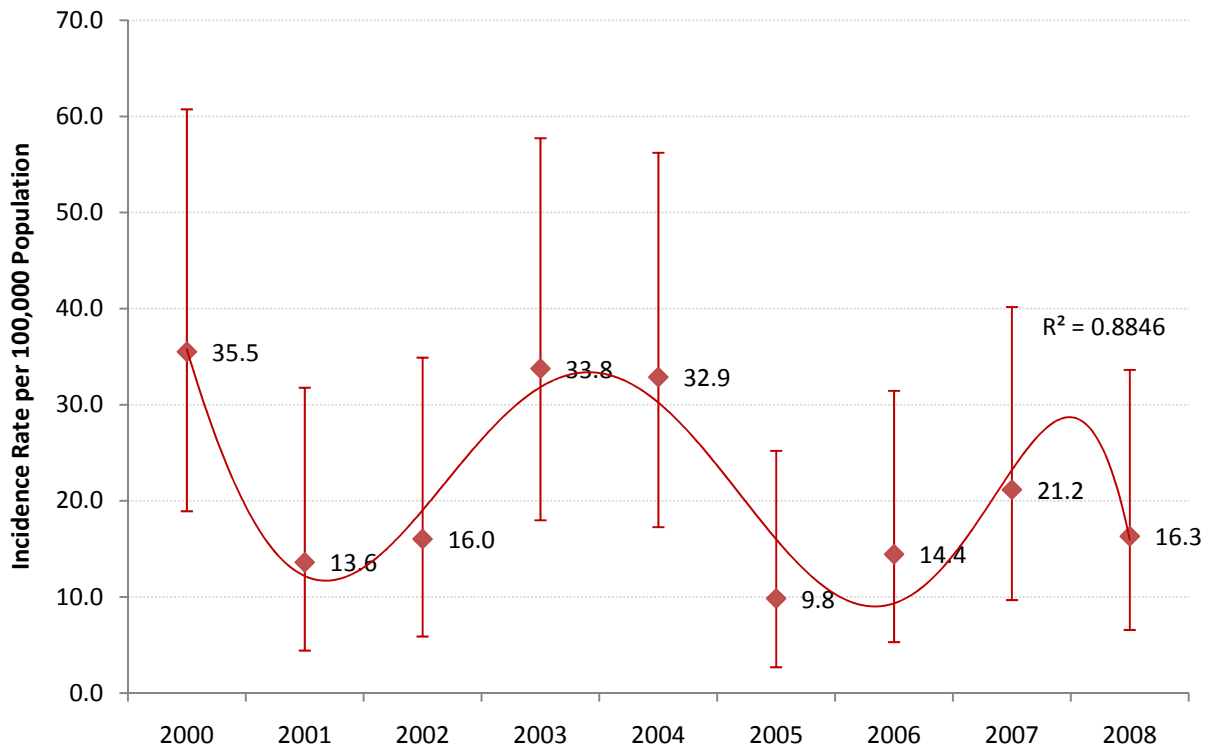


Figure 26 displays incidence rates per 100,000 population for Alaska Native and American Indian females, which ranged from a high of 21.25/100,000 in 2007 to a

low of 4.90/100,000 in 2005, with a rate of 7.05/100,000 in 2008. As with Alaska Native and American Indian males, year-to-year variation is significant, and the

trendline again emphasizes the peaks and valleys in the data, with an r-squared value

of 0.8846, indicating a very good fit to the data.

Figure 26. Incidence Rates per 100,000 Population, Alaska Native/American Indian Females– 2000-2008 (With 95% Poisson CIs)

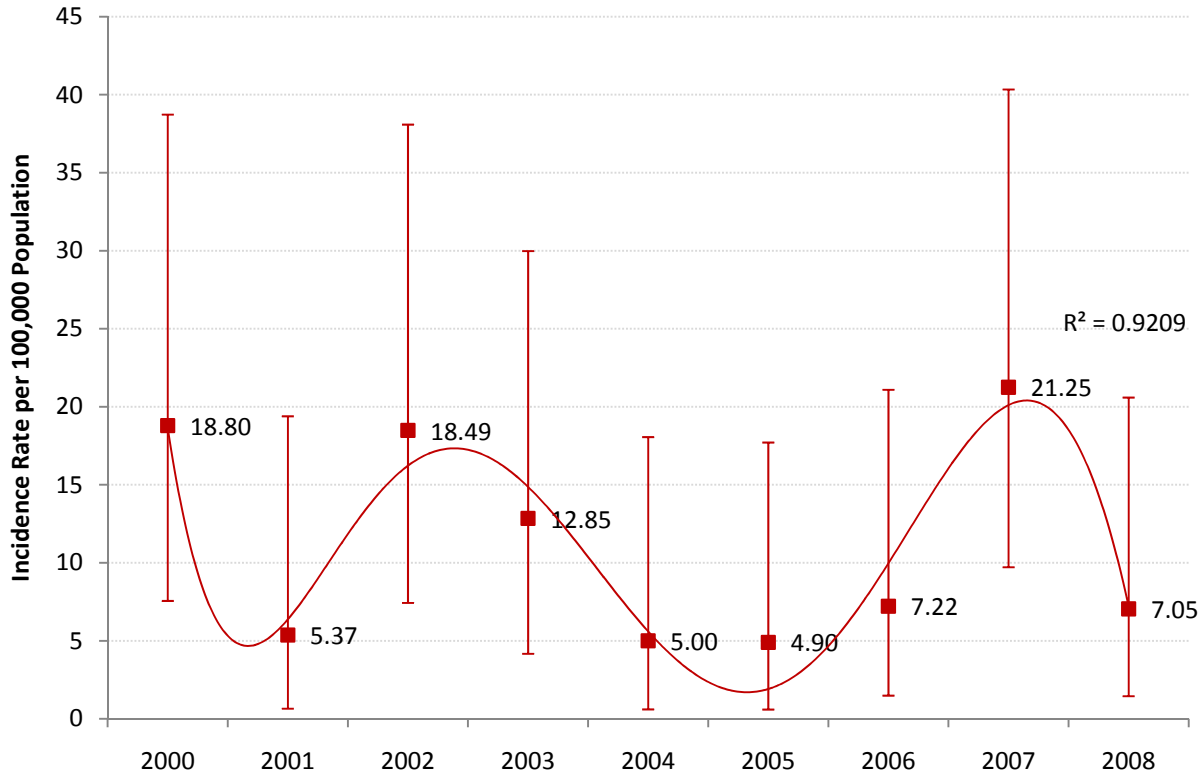


Figure 27 displays incidence rates per 100,000 population for white males, which ranged from a high of 11.78/100,000 in 2006 to a low of 6.65/100,000 in 2007, with a rate of 8.17/100,000 in 2008. Year-to year

variation is significant, though less pronounced than among Alaska Native and American Indian persons; an r-squared value of 0.7655, indicates a decent fit of the trendline to the data.

Figure 27. Incidence Rates per 100,000 Population, White Males – 2000-2008 (With 95% Poisson CIs)

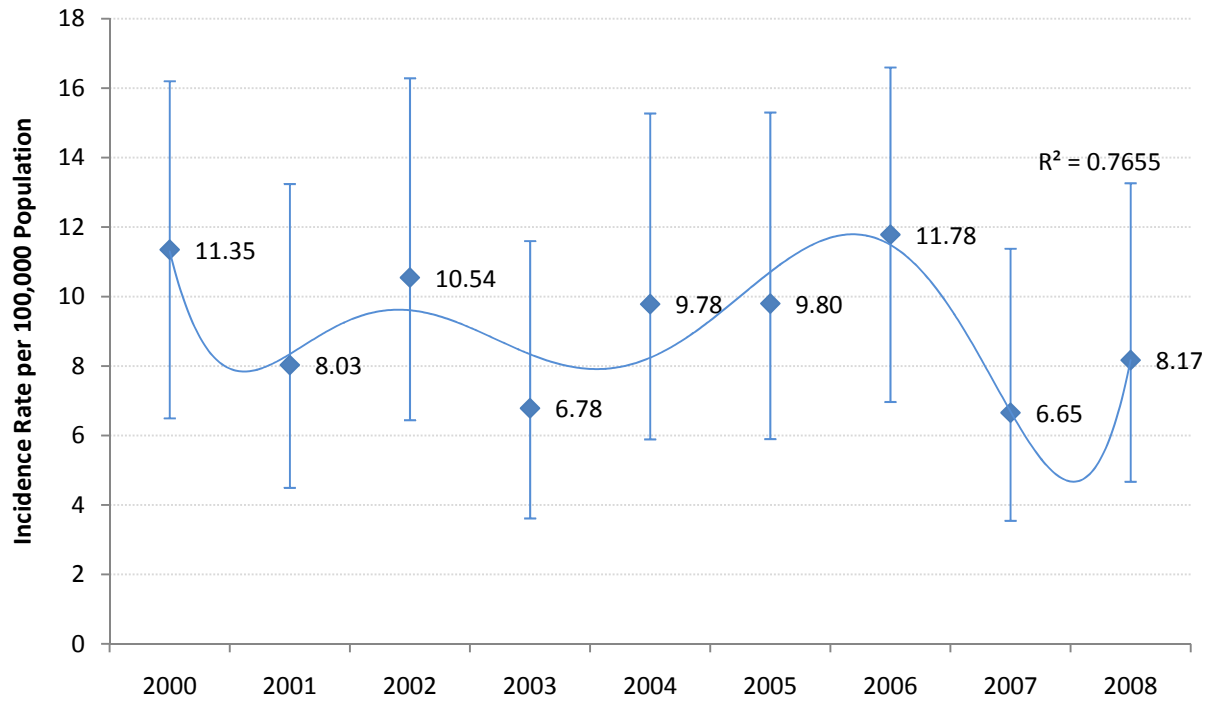


Figure 28 displays incidence rates per 100,000 population for white females, which ranged from a high of 5.90/100,000 in 2001 to a low of 1.08/100,000 in 2008. Year-to-year variation is significant and rates show a slight decline from 2000-2008, though low

case counts, small sample sizes and wide confidence intervals make this interpretation tenuous. An r-squared value of 0.9586 indicates a very good fit of the trendline to the data.

**Figure 28. Incidence Rates per 100,000 Population, White Females – 2000-2008
(With 95% Poisson CIs)**

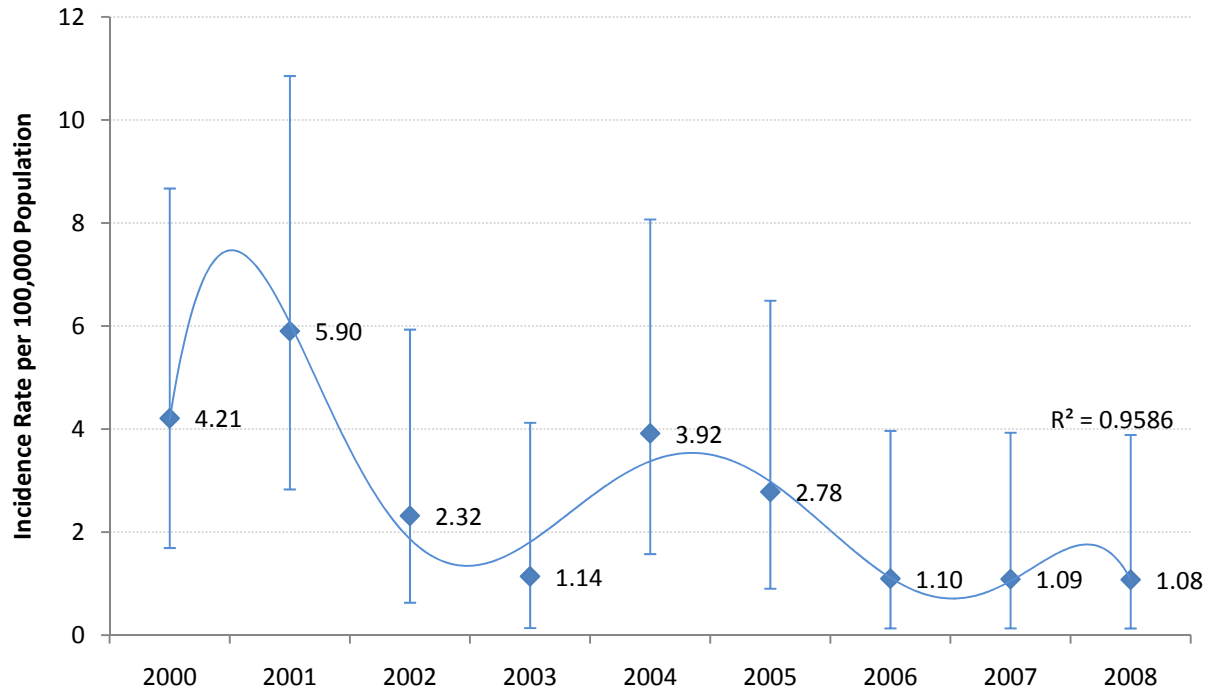
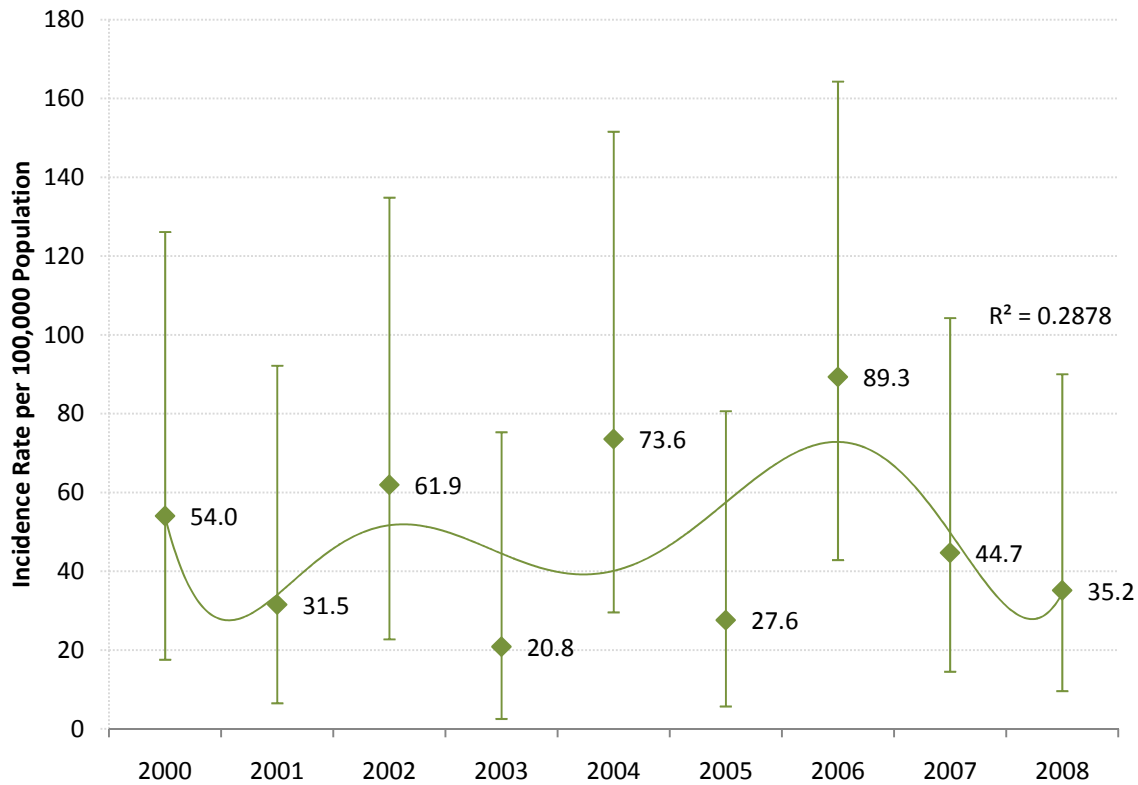


Figure 29 displays incidence rates per 100,000 population for African-American and other black males, which ranged from a high of 89.3/100,000 in 2006 to a low of 20.8/100,000 in 2003, with a rate of 35.2/100,000 in 2008. Year-to-year variation is extremely significant and confidence

intervals are extremely wide. An r-squared value of 0.2878 indicates an extremely poor fit of the trendline to the data, and emphasizes the difficulty of drawing any solid conclusions regarding trends in incidence from year-to-year data.

Figure 29. Incidence Rates per 100,000 Population, African-American & Other Black Males – 2000-2008 (With 95% Poisson CIs)

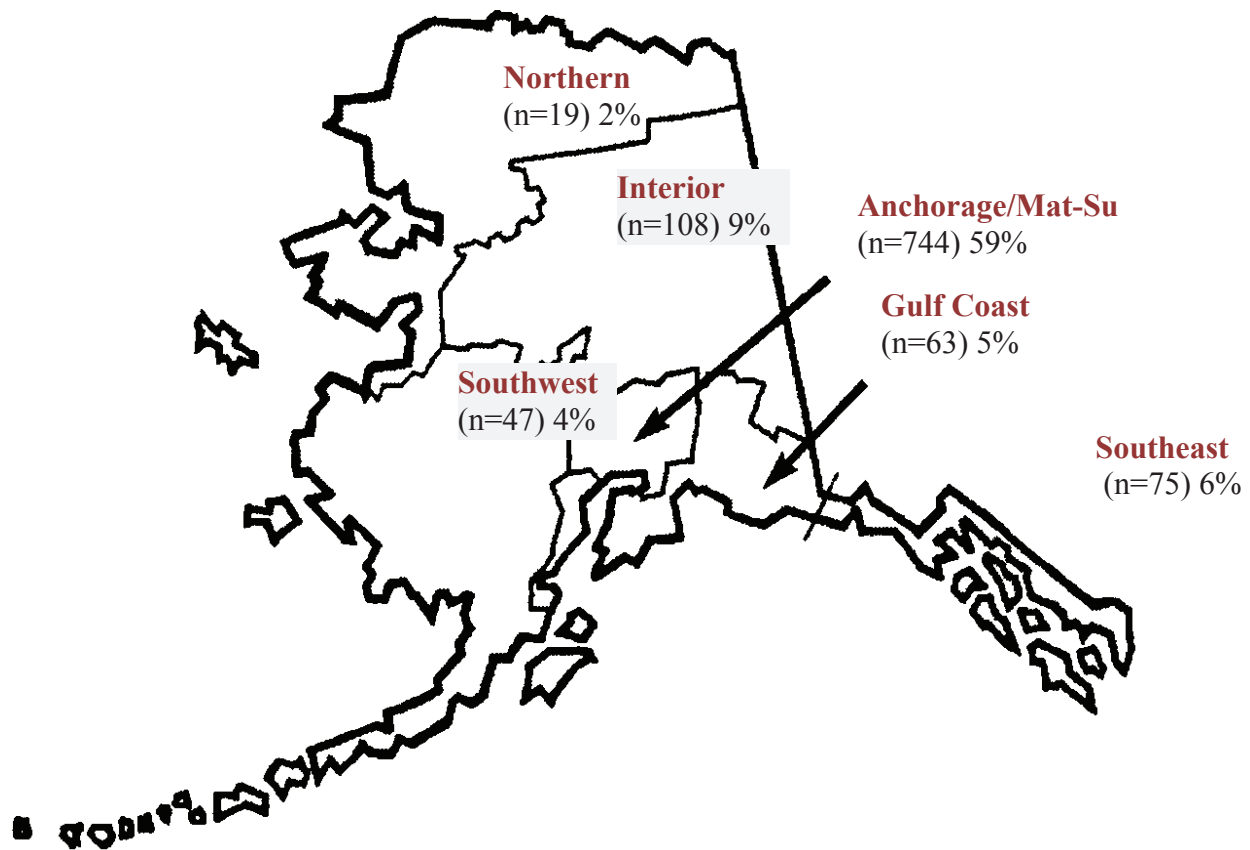


These figures have been included here to emphasize variation rather than trends. When looking at year-to-year data over short time spans, one tends to see fluctuations rather than trends. Indeed, that is the case here.

As noted elsewhere, observations based on one or two years of data should not be taken to represent any trends owing to small sample sizes, rates, percentages and proportions may vary dramatically from year to year, but that these fluctuations should not themselves be taken to represent trends. Furthermore, one should not equate an increase in the *percentage* of cases diagnosed in a given subgroup as an increase in the *number*, much less the *rate*, of cases diagnosed in that subgroup.

While the *incidence rate* of HIV infection among a number of subgroups have remained constant or have appeared to decline slightly in recent years, the *percentage* of all new cases diagnosed among members of racial and ethnic minority groups has not. When rates are highly unstable, as when dealing with small sample sizes, the percentage of cases in a given subgroup—as presented in Figures 19-21—can be a useful substitute as a means for assessing the distribution of infection across different subgroups. It is important to use these different measures to complement each other, rather than looking at one or the other exclusively. Each has advantages, and each has shortcomings, as is the case for all statistical measures.

Residence at First HIV Diagnosis in Alaska, 1982-2008



* Region of residence is defined as region of residence at first HIV diagnosis, when known, the region of residence at first AIDS diagnosis when the residence at HIV diagnosis is unknown, and the region of first case report when residence at HIV and AIDS diagnosis are unknown

Residence at First HIV Diagnosis in Alaska

Economic Regions

The geographic region of residence for diagnoses of HIV/AIDS with a defined region of residence (N=1,056, in-state diagnoses; N=1,258, all diagnoses) is presented in Figures 30-33. It bears repeating that the gap between a person's actual date of infection and his or her date of diagnosis can span several years, and that Alaska's population is highly mobile: consequently, region of residence at the time of diagnosis does *not* necessarily indicate

where an individual was infected, or whether that individual was still living in his or her region of residence at the time of diagnosis as of December 31, 2008.

With this in mind, as Figure 30 illustrates, every region of the state has been affected by HIV. From January 1, 1982 through December 31, 2008, 744 cases (59% of all reported cases) were diagnosed in persons reporting Anchorage or the Matanuska-Susitna (Mat-Su) Valley as their region of residence at the time of diagnosis; 63 cases (5%) were diagnosed among persons reporting the Gulf Coast as their region of

residence at the time of diagnosis; 108 cases (9%) were diagnosed in persons reporting the Interior as their region of residence at the time of diagnosis; 75 cases (6%) among persons reporting Southeast Alaska as their region of residence at the time of diagnosis; 47 cases (4%) among persons reporting Southwest Alaska as their region of residence at the time of diagnosis; and 19 cases (2%) among persons reporting Northern Alaska as their region of residence at the time of diagnosis. These data are broken down by gender and nine-year time period in Figures 31-33, below.

As shown below in Figure 31, of the 311 diagnoses of HIV/AIDS reported to the Alaska Section of Epidemiology with a date of diagnosis between January 1, 1982 through December 31, 1990 (24.6% of all cases ever reported), 203 of these (65.3%) were among persons reporting Anchorage or the Matanuska-Susitna (Mat-Su) Valley as their region of residence at the time of diagnosis; 18 cases (5.8%) were among persons reporting the Gulf Coast as their region of residence at their time of diagnosis; 26 cases (8.4%) were diagnosed among persons reporting the Interior as their region of residence at the time of diagnosis; 2 cases (0.6%) were among persons reporting the Northern region as their region of residence at the time of diagnosis; 20 cases (6.4%) were among persons reporting the Southeast region as their region residence at the time of diagnosis; 4 cases (1.3%) were among persons reporting the Southwest region as their region of residence at the time of diagnosis; 36 cases (11.6%) were among persons reporting an out-of-state residence at the time of their diagnosis, and 2 cases not shown in Figure 31 (0.7%) were diagnosed in persons with an unknown region of residence at the time of diagnosis.

Of the 535 diagnoses of HIV/AIDS reported to the Alaska Section of Epidemiology with a date of diagnosis between January 1, 1991 through December 31, 1999 (42.4% of all cases ever reported), 327 of these (61.1%) were among persons reporting Anchorage or the Matanuska-Susitna (Mat-Su) Valley as their region of residence at the time of diagnosis; 31 cases (5.8%) were among persons reporting the Gulf Coast as their region of residence at their time of diagnosis; 42 cases (7.9%) were diagnosed among persons reporting the Interior as their region of residence at the time of diagnosis; 7 cases (1.3%) were among persons reporting the Northern region as their region of residence at the time of diagnosis; 28 cases (5.2%) were among persons reporting the Southeast region as their region residence at the time of diagnosis; 15 cases (2.8%) were among persons reporting the Southwest region as their region of residence at the time of diagnosis; 84 cases (15.7%) were among persons reporting an out-of-state residence at the time of their diagnosis, and 1 case not shown in Figure 31 (0.2%) was diagnosed in a person with an unknown region of residence at the time of diagnosis.

Of the 415 diagnoses of HIV/AIDS reported to the Alaska Section of Epidemiology with a date of diagnosis between January 1, 2000 through December 31, 2008 (32.9% of all cases ever reported), 214 of these (51.6%) were among persons reporting Anchorage or the Matanuska-Susitna (Mat-Su) Valley as their region of residence at the time of diagnosis; 14 cases (3.4%) were among persons reporting the Gulf Coast as their region of residence at their time of diagnosis; 40 cases (9.6%) were diagnosed among persons reporting the Interior as their region of residence at the time of diagnosis; 10 cases (2.4%) were among persons reporting the Northern region as their region

of residence at the time of diagnosis; 27 cases (6.5%) were among persons reporting the Southeast region as their region of residence at the time of diagnosis; 28 cases (6.7%) were among persons reporting the Southwest region as their region of

residence at the time of diagnosis; 82 cases (19.8%) were among persons reporting an out-of-state residence at the time of their diagnosis, and 0 cases (0.0%) were diagnosed in persons with an unknown region of residence at the time of diagnosis.

Figure 31. HIV/AIDS Diagnoses by Region of Residence, Both Sexes – Alaska, 1982-2008 (N=1,261)

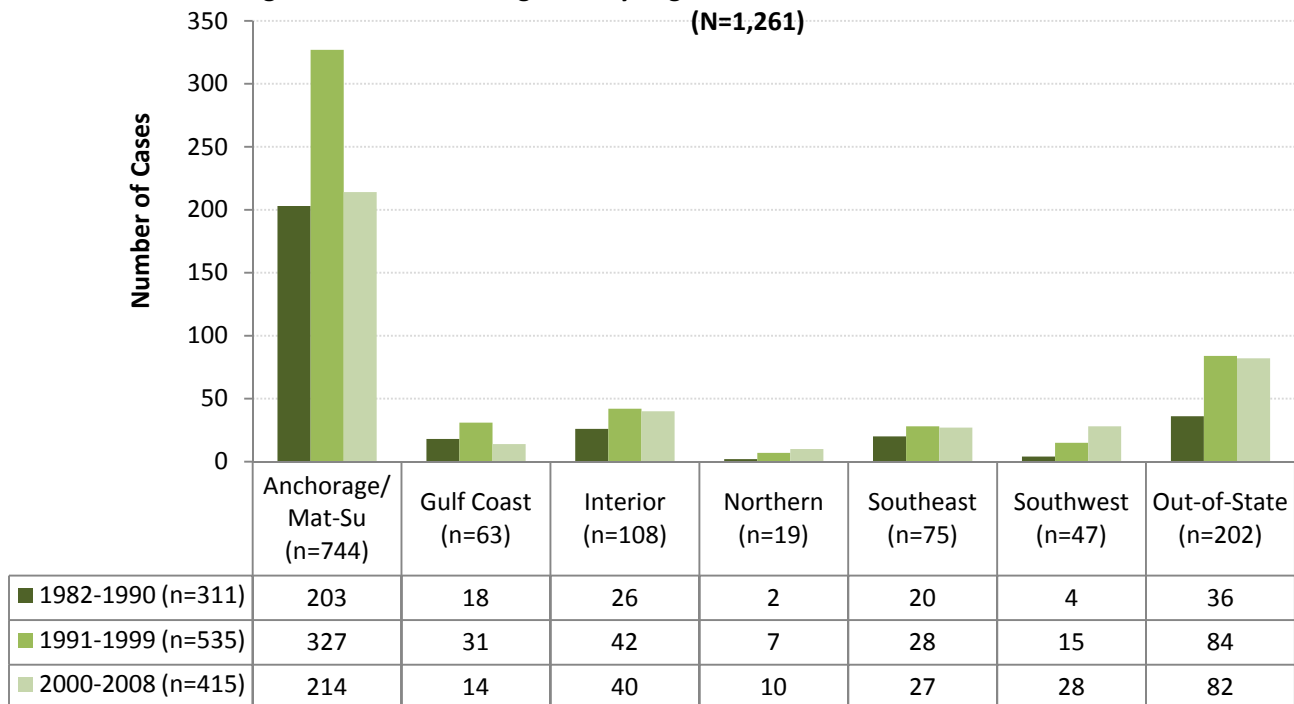


Figure 32 tabulates all cases of HIV/AIDS among females (n=243) reported to the Alaska Section of Epidemiology from January 1, 1982 through December 31, 2008, according to region of residence at the time of diagnosis. One hundred thirty-one cases (53.9% of all cases reported in females) were diagnosed in females reporting Anchorage or the Matanuska-Susitna (Mat-Su) Valley as their region of residence at the time of diagnosis; 15 cases (6.2%) were diagnosed in females reporting the Gulf Coast as their region of residence at the time of diagnosis; 27 cases (11.1%) among females reporting the Interior as their

region of residence at the time of diagnosis; 7 cases (2.9%) among females reporting the Northern region as their region of residence at the time of diagnosis; 19 cases (7.8%) among females reporting Southeast Alaska as their region of residence at the time of diagnosis; 12 cases (4.9%) among females reporting Southwest Alaska as their region of residence at the time of diagnosis; 32 cases (13.2%) were among females reporting an out-of-state residence at the time of their diagnosis, and 0 cases (0.0%) were diagnosed in females with an unknown region of residence at the time of diagnosis.

Of the 31 cases of HIV/AIDS diagnosed in females between January 1, 1982 through December 31, 1990 (12.8% of all cases ever reported in females), 16 cases (51.6% of all cases diagnosed in females from 1982-1990) were diagnosed in females reporting Anchorage or the Matanuska-Susitna (Mat-Su) Valley as their region of residence at the time of diagnosis; 4 cases (12.9%) were diagnosed in females reporting the Gulf Coast as their region of residence at the time of diagnosis; 4 cases (12.9%) among females reporting the Interior as their region of residence at the time of diagnosis; 1 case (3.2%) among females reporting the Northern region as their region of residence at the time of diagnosis; 1 case (3.2%) among females reporting Southeast Alaska as their region of residence at the time of diagnosis; 2 cases (6.5%) among females reporting Southwest Alaska as their region of residence at the time of diagnosis; 3 cases (9.7%) were among females reporting an out-of-state residence at the time of their diagnosis, and 0 cases (0.0%) were diagnosed in females with an unknown region of residence at the time of diagnosis.

Of the 108 cases of HIV/AIDS diagnosed in females between January 1, 1991 through December 31, 1999 (44.4% of all cases ever reported in females), 62 cases (57.4% of all cases diagnosed in females from 1982-1990) were diagnosed in females reporting Anchorage or the Matanuska-Susitna (Mat-Su) Valley as their region of residence at the time of diagnosis; 7 cases (6.5%) were diagnosed in females reporting the Gulf Coast as their region of residence at the time of diagnosis; 12 cases (11.1%) among females reporting the Interior as their region of residence at the time of diagnosis; 2 cases

(1.9%) among females reporting the Northern region as their region of residence at the time of diagnosis; 6 cases (5.6%) among females reporting Southeast Alaska as their region of residence at the time of diagnosis; 5 cases (4.6%) among females reporting Southwest Alaska as their region of residence at the time of diagnosis; 14 cases (13.0%) were among females reporting an out-of-state residence at the time of diagnosis, and 0 cases (0.0%) were diagnosed in females with an unknown region of residence at the time of diagnosis.

Of the 104 cases of HIV/AIDS diagnosed in females between January 1, 2000 through December 31, 2008 (42.8% of all cases ever reported in females), 53 cases (51.0% of all cases diagnosed in females from 1982-1990) were diagnosed in females reporting Anchorage or the Matanuska-Susitna (Mat-Su) Valley as their region of residence at the time of diagnosis; 4 cases (3.8%) were diagnosed in females reporting the Gulf Coast as their region of residence at the time of diagnosis; 11 cases (10.6%) among females reporting the Interior as their region of residence at the time of diagnosis; 4 cases (3.8%) among females reporting the Northern region as their region of residence at the time of diagnosis; 12 cases (11.5%) among females reporting Southeast Alaska as their region of residence at the time of diagnosis; 5 cases (4.8%) among females reporting Southwest Alaska as their region of residence at the time of diagnosis; 15 cases (14.4%) were among females reporting an out-of-state residence at the time of diagnosis, and 0 cases (0.0%) were diagnosed in females with an unknown region of residence at the time of diagnosis.

Figure 32. HIV/AIDS Diagnoses by Region of Residence, Females – Alaska, 1982-2008 (n=243)

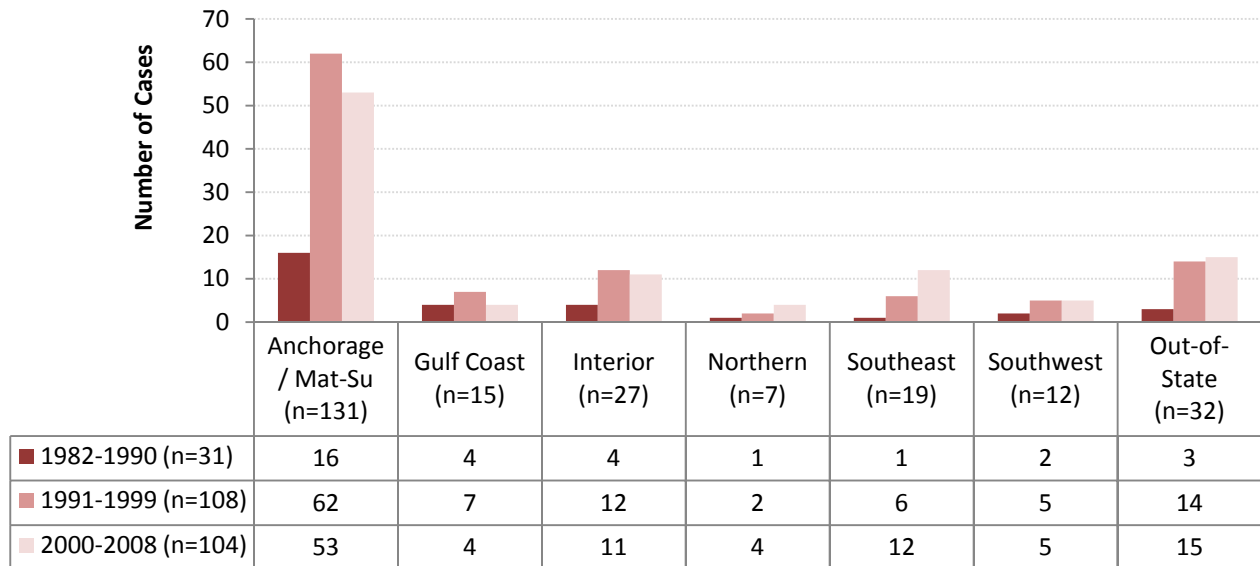


Figure 33 tabulates all cases of HIV/AIDS among males (n=1,018) reported to the Alaska Section of Epidemiology from January 1, 1982 through December 31, 2008, according to region of residence at the time of diagnosis. Six hundred and thirteen cases (60.2% of all cases reported in males) were diagnosed in males reporting Anchorage or the Matanuska-Susitna (Mat-Su) Valley as their region of residence at the time of diagnosis; 48 cases (6.2%) were diagnosed in males reporting the Gulf Coast as their region of residence at the time of diagnosis; 81 cases (11.1%) among males reporting the Interior as their region of residence at the time of diagnosis; 12 cases (2.9%) among males reporting the Northern region as their region of residence at the time of diagnosis; 56 cases (7.8%) among males reporting Southeast Alaska as their region of residence at the time of diagnosis; 12 cases (4.9%) among males reporting Southwest Alaska as their region of residence at the time of diagnosis; 32 cases (13.2%) were among males reporting an out-of-state residence at the time of their

diagnosis, and 0 cases (0.0%) were diagnosed in males with an unknown region of residence at the time of diagnosis.

Of the 280 cases of HIV/AIDS diagnosed in males between January 1, 1982 through December 31, 1990 (27.5% of all cases ever reported in males), 187 cases (66.8% of all cases diagnosed in males from 1982-1990) were diagnosed in males reporting Anchorage or the Matanuska-Susitna (Mat-Su) Valley as their region of residence at the time of diagnosis; 14 cases (5.0%) were diagnosed in males reporting the Gulf Coast as their region of residence at the time of diagnosis; 22 cases (7.9%) among males reporting the Interior as their region of residence at the time of diagnosis; 1 case (0.4%) in a male reporting the Northern region as his region of residence at the time of diagnosis; 19 cases (6.8%) among males reporting Southeast Alaska as their region of residence at the time of diagnosis; 2 cases (0.7%) among males reporting Southwest Alaska as their region of residence at the time of diagnosis; 33 cases (11.8%) were

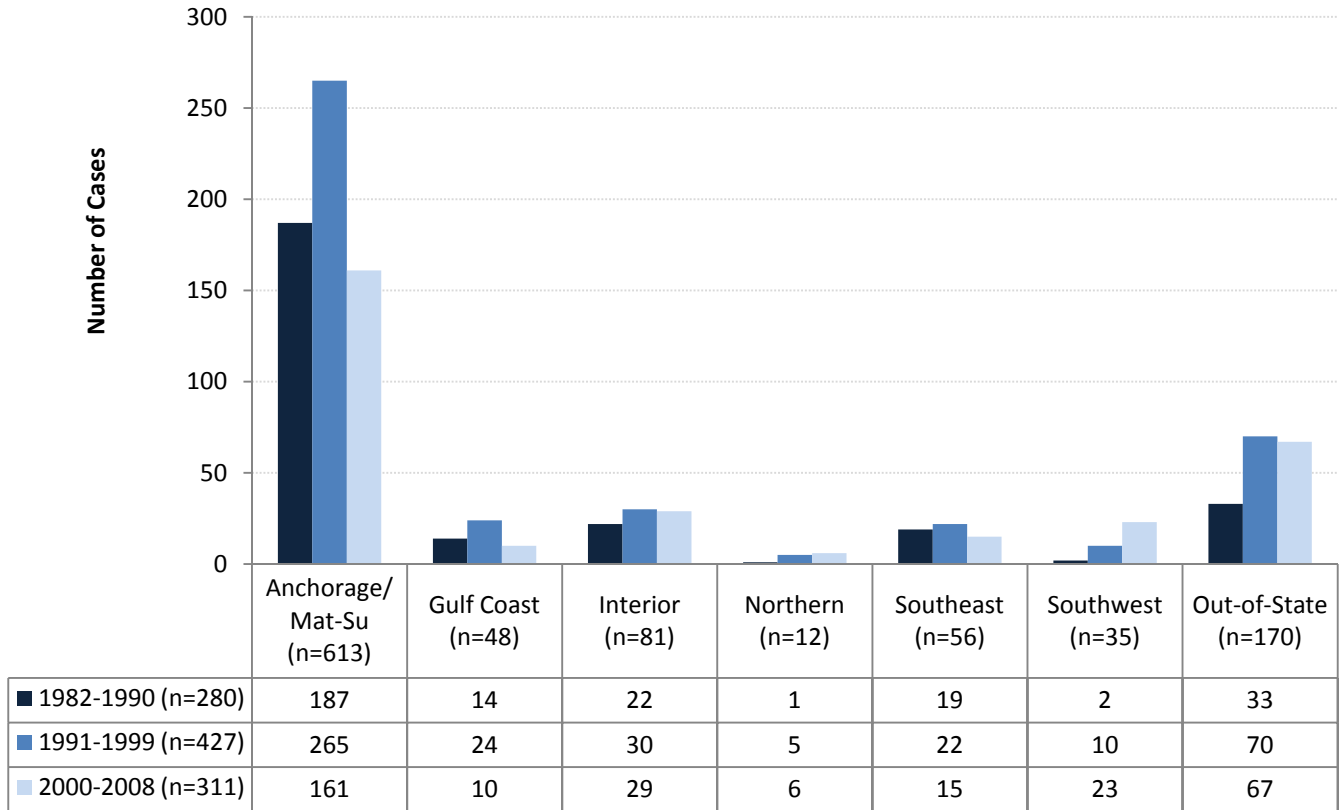
among males reporting an out-of-state residence at the time of their diagnosis, and 2 cases (0.7%) were diagnosed in males with an unknown region of residence at the time of diagnosis.

Of the 427 cases of HIV/AIDS diagnosed in males between January 1, 1991 through December 31, 1999 (41.9% of all cases ever reported in males), 265 cases (62.1% of all cases diagnosed in males from 1982-1990) were diagnosed in males reporting Anchorage or the Matanuska-Susitna (Mat-Su) Valley as their region of residence at the time of diagnosis; 24 cases (5.6%) were diagnosed in males reporting the Gulf Coast as their region of residence at the time of diagnosis; 30 cases (7.0%) among males reporting the Interior as their region of residence at the time of diagnosis; 5 cases (1.2%) in males reporting the Northern region as their region of residence at the time of diagnosis; 22 cases (5.2%) among males reporting Southeast Alaska as their region of residence at the time of diagnosis; 10 cases (2.3%) among males reporting Southwest Alaska as their region of residence at the time of diagnosis; 70 cases (16.4%) were among males reporting an out-of-state residence at the time of their diagnosis, and 1 case (0.2%) was diagnosed

in a male with an unknown region of residence at the time of diagnosis.

Of the 311 cases of HIV/AIDS diagnosed in males between January 1, 2000 through December 31, 2008 (30.6% of all cases ever reported in males), 161 cases (51.8% of all cases diagnosed in males from 1982-1990) were diagnosed in males reporting Anchorage or the Matanuska-Susitna (Mat-Su) Valley as their region of residence at the time of diagnosis; 10 cases (3.2%) were diagnosed in males reporting the Gulf Coast as their region of residence at the time of diagnosis; 29 cases (9.3%) among males reporting the Interior as their region of residence at the time of diagnosis; 6 cases (1.9%) in males reporting the Northern region as their region of residence at the time of diagnosis; 15 cases (4.8%) among males reporting Southeast Alaska as their region of residence at the time of diagnosis; 23 cases (7.4%) among males reporting Southwest Alaska as their region of residence at the time of diagnosis; 67 cases (21.5%) were among males reporting an out-of-state residence at the time of their diagnosis, and 0 cases (0.0%) were diagnosed in males with an unknown region of residence at the time of diagnosis.

Figure 33. HIV/AIDS Diagnoses by Region of Residence, Males – Alaska, 1982-2008 (n=1,018)



Urban/Rural Residence

As described elsewhere in this document, to better characterize the geographic distribution of HIV/AIDS in Alaska, this section presents the region of residence at the time of diagnosis for all of the 1,261 cases of HIV/AIDS reported in Alaska since 1982, according to the four geographic categories discussed earlier. Again these are: (1) Urban Centers, combining Anchorage, Fairbanks, and Juneau; (2) Sub-urban Areas, combining the Matanuska-Susitna and Kenai

Peninsula Boroughs and excluding villages not connected to Anchorage on the road system; (3) Rural Hubs, including the 14 economic and transportation centers in the rural regions of Alaska and Southeast Alaska with populations over 2,000; and (4) Rural Communities, including the 260 incorporated and unincorporated cities, census designated places, and villages outside of the other categories, as well as persons living outside of any communities.

Figure 34. Urban vs. Rural Residence at Time of Diagnosis, Three-Year Moving Averages, 1982-2008 (N=1,258; Three Cases with Unknown Region of Residence not Included)

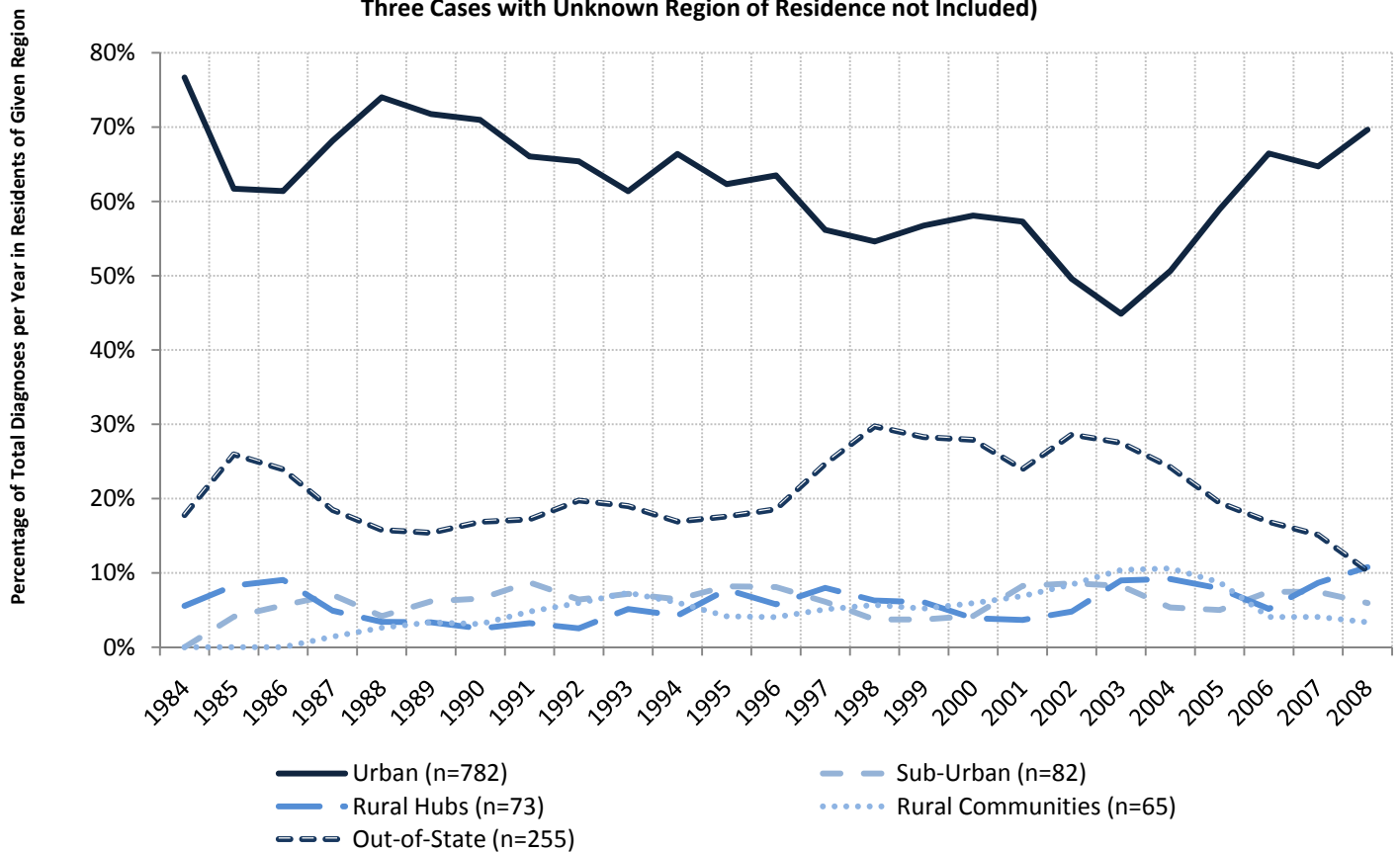


Figure 34 presents three-year moving averages of the percentage of cases diagnosed among urban and rural residents from 1982-2008. The moving average allows for a visual representation of year-to-year changes in data while a) smoothing out aberrant spikes in the data and b) avoid the potential identification of individuals living in low-prevalence areas and small communities across the state by obscuring precise annual numbers. Each data point indicates the average percentage of cases diagnosed in a given year among residents of a particular region over the most recent three-year period: thus the first data-point in

the “Urban” series—the entry for the year 1984— indicates that, on average, 76% of all cases diagnosed from 1982-1984 were diagnosed among persons claiming residence in an in-state urban area at the time of their diagnosis; the second data point in the series indicates that, on average, roughly 60% of all cases diagnosed from 1983-1985 were diagnosed among persons claiming residence in an in-state urban area at the time of their diagnosis, and so on. Exact numbers, broken down by gender, are given below for nine-year periods from 1982-1990, 1991-1999 and 2000-2008.

As Figure 34 shows, the bulk of HIV/AIDS cases reported in Alaska since 1982 were diagnosed in persons reporting an in-state urban center as their region of residence, followed by persons reporting an out-of-state residence at the time of their diagnosis. Since roughly 2002, the percentage of reported cases diagnosed in persons living out-of-state has declined, from roughly 30% of cases per year on average to roughly 10%. At the same time, the percentage of cases diagnosed in persons residing in in-state urban centers has increased from roughly 45% on average to roughly 70%. Cases diagnosed in persons residing in urban satellites, rural hubs and rural areas have, on average, constituted less than 10% of all diagnoses since 1982.

Figure 35 categorizes all 1,261 cases of HIV/AIDS reported to the State of Alaska Section of Epidemiology from January 1, 1982 through December 31, 2008 according to area of residence at the time of HIV/AIDS diagnosis. Eight hundred twenty-eight of these (65.7%) were among persons reporting an urban area as their residence at the time of diagnosis; 87 cases (6.9%) were among persons reporting a sub-urban area as their residence at their time of diagnosis; 76 cases (6.0%) were among persons reporting a rural hub as their residence at their time of diagnosis; 65 cases (5.2%) were among persons reporting a rural community as their residence at the time of diagnosis; 202 cases (16.0%) were among persons reporting an out-of-state residence at the time of their diagnosis, and 3 cases (<1%; not shown in figure) were among persons with an unknown residence at the time of diagnosis.

Of the 311 diagnoses of HIV/AIDS made from January 1, 1982 through December 31, 1990 (24.7% of all cases ever reported,) 233 of these (74.9%) were among persons reporting an urban area as their residence at

the time of diagnosis; 21 cases (6.8%) were among persons reporting a sub-urban area as their residence at their time of diagnosis; 12 cases (3.9%) were among persons reporting a rural hub as their residence at their time of diagnosis; 7 cases (2.3%) were among persons reporting a rural community as their residence at the time of diagnosis; 36 cases (11.6%) were among persons reporting an out-of-state residence at the time of their diagnosis, and 2 cases (<1%) were among persons with an unknown residence at the time of diagnosis.

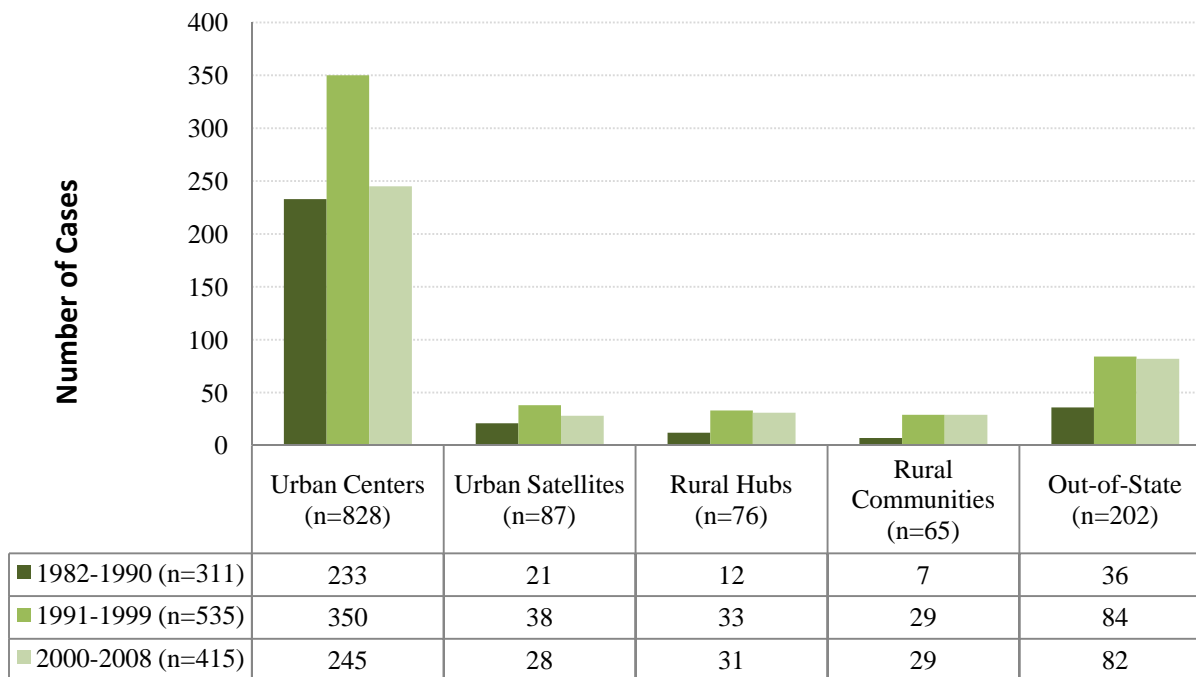
Of the 535 diagnoses of HIV/AIDS made from January 1, 1991 through December 31, 1999 (42.4% of all cases ever reported,) 350 of these (65.4%) were among persons reporting an urban area as their residence at the time of diagnosis; 38 cases (7.1%) were among persons reporting a sub-urban area as their residence at their time of diagnosis; 33 cases (6.2%) were among persons reporting a rural hub as their residence at their time of diagnosis; 29 cases (5.4%) were among persons reporting a rural community as their residence at the time of diagnosis; 84 cases (15.7%) were among persons reporting an out-of-state residence at the time of their diagnosis, and 1 case (<1%) was diagnosed in a person with an unknown residence at the time of diagnosis.

Of the 415 diagnoses of HIV/AIDS made from January 1, 2000 through December 31, 2008 (32.9% of all cases ever reported,) 245 of these (59.0%) were among persons reporting an urban area as their residence at the time of diagnosis; 28 cases (6.7%) were among persons reporting a sub-urban area as their residence at their time of diagnosis; 31 cases (7.5%) were among persons reporting a rural hub as their residence at their time of diagnosis; 29 cases (7.0%) were among persons reporting a rural community as their residence at the time of diagnosis; 82 cases

(19.8%) were among persons reporting an out-of-state residence at the time of their diagnosis, and 0 cases (0.0%) were among

persons with an in-state residence but with no data on geographic category.

Figure 35. Urban vs. Rural Residence at First HIV/AIDS Diagnosis, Alaska – Both Sexes (N=1,261)



As shown in Figure 36, of the 1,018 cases reported among males in Alaska between January 1, 1982, and December 31, 2008, 684 of these (67.2%) were among males reporting an urban area as their residence at the time of diagnosis; 65 cases (6.4%) were among males reporting a sub-urban area as their residence at their time of diagnosis; 53 cases (5.2%) were among males reporting a rural hub as their residence at their time of diagnosis; 43 cases (4.2%) were among males reporting a rural community as their residence at the time of diagnosis; 170 cases (16.7%) were among males reporting an out-of-state residence at the time of their diagnosis, and 3 cases not shown in Figure 25 (0.3%) were among males with no known residence at the time of diagnosis. Because

of small sample sizes, it is not advisable to read the data presented here as indicative of any trends.

Of the 280 HIV/AIDS diagnoses among males in Alaska from January 1, 1982 through December 31, 1990 (27.5% of all cases ever reported in males), 213 cases (76.1% of male cases reported from 1982-1990) were among males reporting an urban area as their residence at the time of diagnosis; 17 cases (6.1%) were among males reporting a sub-urban area as their residence at their time of diagnosis, 9 cases (3.2%) were among males reporting a rural hub as their residence at their time of diagnosis; 6 cases (2.1%) were in males reporting a rural community as their

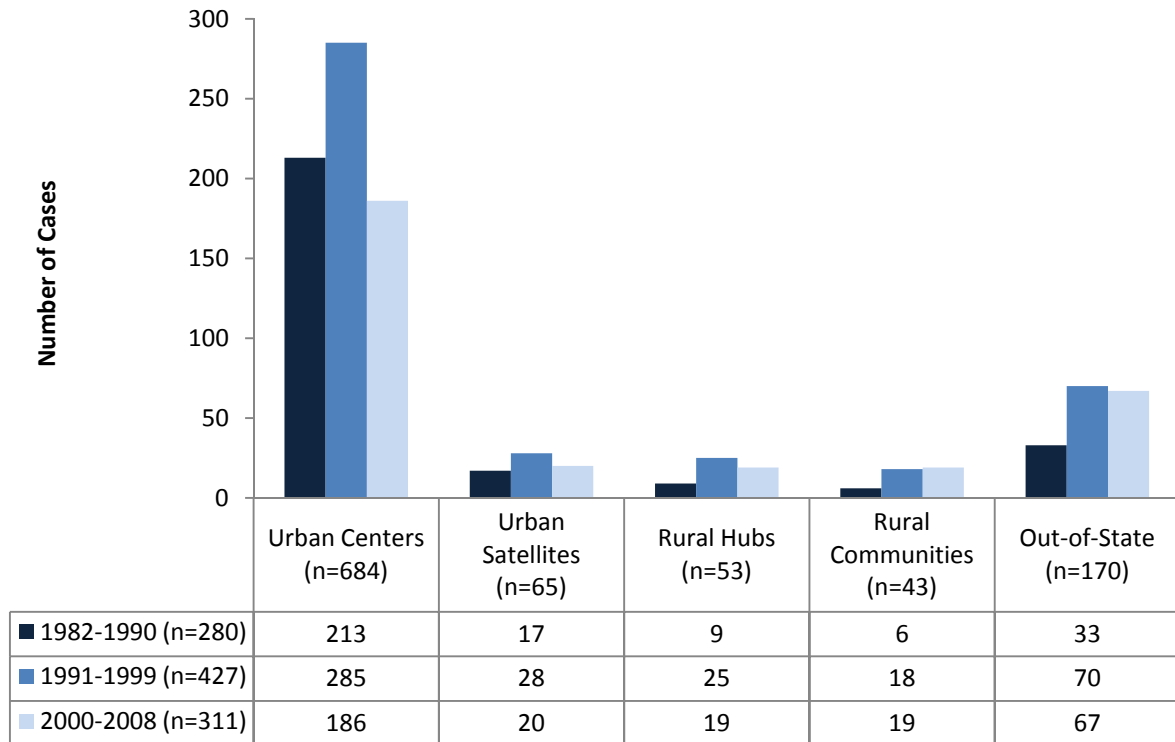
residence at the time of diagnosis; 33 cases (11.8%) were among males reporting an out-of-state residence at the time of their diagnosis; and 2 cases (0.7%) were among males with no known residence at the time of diagnosis.

Of the 427 HIV/AIDS diagnoses among males in Alaska from January 1, 1991 through December 31, 1999 (41.9% of all cases ever reported in males in Alaska), 285 cases (66.7% of cases reported from 1991-1999) were among males reporting an urban area as their residence at the time of diagnosis; 28 cases (6.6%) were among males reporting a sub-urban area as their residence at their time of diagnosis, 25 cases (5.9%) were among males reporting a rural hub as their residence at their time of diagnosis, 18 cases (4.2%) were in males reporting a rural community as their residence at the time of diagnosis; 70 cases (16.4%) were among males reporting an out-of-state residence at the time of their diagnosis, and 1 case (0.2%) was diagnosed

in a male with no known residence at the time of diagnosis.

Of the 311 HIV/AIDS diagnoses among males in Alaska from January 1, 2000 through December 31, 2008 (30.6% of all cases ever reported in males in Alaska), 186 cases (59.8% of cases reported from 2000-2008) were among males reporting an urban area as their residence at the time of diagnosis; 20 cases (6.4%) were among males reporting a sub-urban area as their residence at their time of diagnosis; 19 cases (6.1%) were among males reporting a rural hub as their residence at their time of diagnosis; yet another 19 cases (6.1%) were in males reporting a rural community as their residence at the time of diagnosis; 67 cases (21.5%) were among males reporting an out-of-state residence at the time of their diagnosis, and zero cases (0.0%) were among males with no known residence at the time of diagnosis.

Figure 36. Urban vs. Rural Residence at First HIV Diagnosis, Male HIV/AIDS Cases (N=1,018)



As shown in figure 37, of the 243 cases reported among females in Alaska between January 1, 1982, and December 31, 2008, 144 of these (59.3%) were among females reporting an urban area as their residence at the time of diagnosis; 22 cases (9.1%) were among females reporting a sub-urban area as their residence at their time of diagnosis; 23 cases (9.5%) were among females reporting a rural hub as their residence at their time of diagnosis; 22 cases (9.1%) were among females reporting a rural community as their residence at the time of diagnosis, and 32 cases (13.2%) were among females reporting an out-of-state residence at the time of their diagnosis. Again, because of small sample sizes, it is not advisable to read the data presented here as indicative of any trends.

Of the 31 HIV/AIDS diagnoses among females in Alaska from January 1, 1982

through December 31, 1990 (12.8% of all cases ever reported in females in Alaska), 20 cases (64.5% of cases reported from 1982-1990) were among females reporting an urban area as their residence at the time of diagnosis, 4 cases (12.9%) were among females reporting a sub-urban area as their residence at their time of diagnosis, 3 cases (9.7%) were among females reporting a rural hub as their residence at their time of diagnosis, 1 case (3.2%) was in a female reporting a rural community as her residence at the time of diagnosis, and 3 cases (9.7%) were among women reporting an out-of-state residence at the time of their diagnosis.

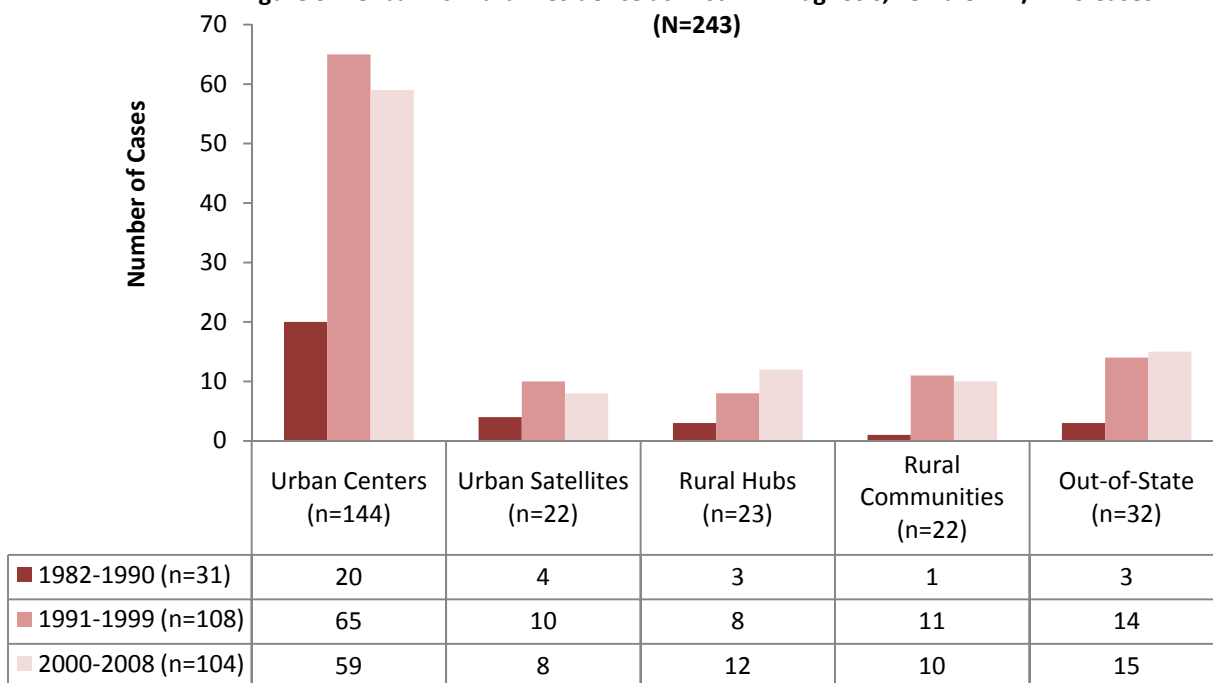
Of the 108 HIV/AIDS diagnoses among females in Alaska from January 1, 1991 through December 31, 1999 (44.4% of all cases ever reported in females in Alaska), 65 cases (60.2% of cases reported from 1991-1999) were among females reporting an

urban area as their residence at the time of diagnosis, 10 cases (9.3%) were among females reporting a sub-urban area as their residence at their time of diagnosis, 8 cases (7.4%) were among females reporting a rural hub as their residence at their time of diagnosis, 11 cases (10.2%) were in females reporting a rural community as their residence at the time of diagnosis , and 14 cases (13.0%) were among women reporting an out-of-state residence at the time of their diagnosis.

Of the 104 HIV/AIDS diagnoses among females in Alaska from January 1, 2000 through December 31, 2008 (42.8% of all

cases ever reported in females in Alaska), 59 cases (56.7% of cases reported from 2000-2008) were among females reporting an urban area as their residence at the time of diagnosis, 8 cases (7.7%) were among females reporting a sub-urban area as their residence at their time of diagnosis, 12 cases (11.5%) were among females reporting a rural hub as their residence at their time of diagnosis, 10 cases (9.6%) were in females reporting a rural community as their residence at the time of diagnosis , and 15 cases (14.4%) were among women reporting an out-of-state residence at the time of their diagnosis.

Figure 37. Urban vs. Rural Residence at First HIV Diagnosis, Female HIV/AIDS Cases (N=243)



HIV Cases Presumed to Be Living

The numbers presented below are the most current estimate of prevalent HIV/AIDS cases in Alaska, but for several reasons, they should not be taken as an exact measure of prevalent cases. They might be either underestimates or overestimates: existing

cases may not yet be diagnosed²¹, there may be a gap between diagnosis and reporting,

²¹ For instance, the CDC estimates that 21% of infected persons are unaware of their status, i.e. they have not yet been diagnosed. See also <http://www.cdc.gov/hiv/topics/surveillance/resources/factsheets/prevalence.htm>.

cases may have moved out-of-state, and some out-of-state deaths among Alaska cases may not be captured in the data. HIV surveillance has a very specific purpose; it does not track individuals but rather cases. Personal data that would allow for closer tracking of persons simply is not collected, as that is not the purpose of surveillance. Given these limitations, the best measure of HIV prevalence in Alaska is the number of reported cases not known to have died, referred to below as “cases presumed living” in the absence of evidence to the contrary.

Table 4 details the gender of cases presumed living and cases known to have died as of December 31, 2008. Of the 1,261 cases of HIV/AIDS reported in Alaska since January 1, 1982, 1,018 (81%) were reported in males; 370 (36%) of these males are known to have died, and 648 (64%) are not known to have died. Of the 1,261 reported cases in Alaska, 243(19%) were reported in females; of these females, 63 (26%) are known to have died, and 180 (74%) are not known to have died. Of all 828 cases presumed living, 160 (22%) are females and 648 (78%) are males; of all 433 cases known to have died, 63 (15%) are females, and 370 (85%) are males.

Accessed Sept. 13, 2009.

Table 4 Gender of HIV/AIDS Cases Presumed Living and Known to be Dead as of December 31, 2008, Alaska (N=1,261)

Gender	Cases Presumed Living		Cases Known to Have Died		Total HIV/AIDS Cases	
	Number	Column %	Number	Column %	Number	Column %
Male	648	78%	370	85%	1018	81%
Female	180	22%	63	15%	243	19%
Total	828	100%	433	100%	1,261	100%

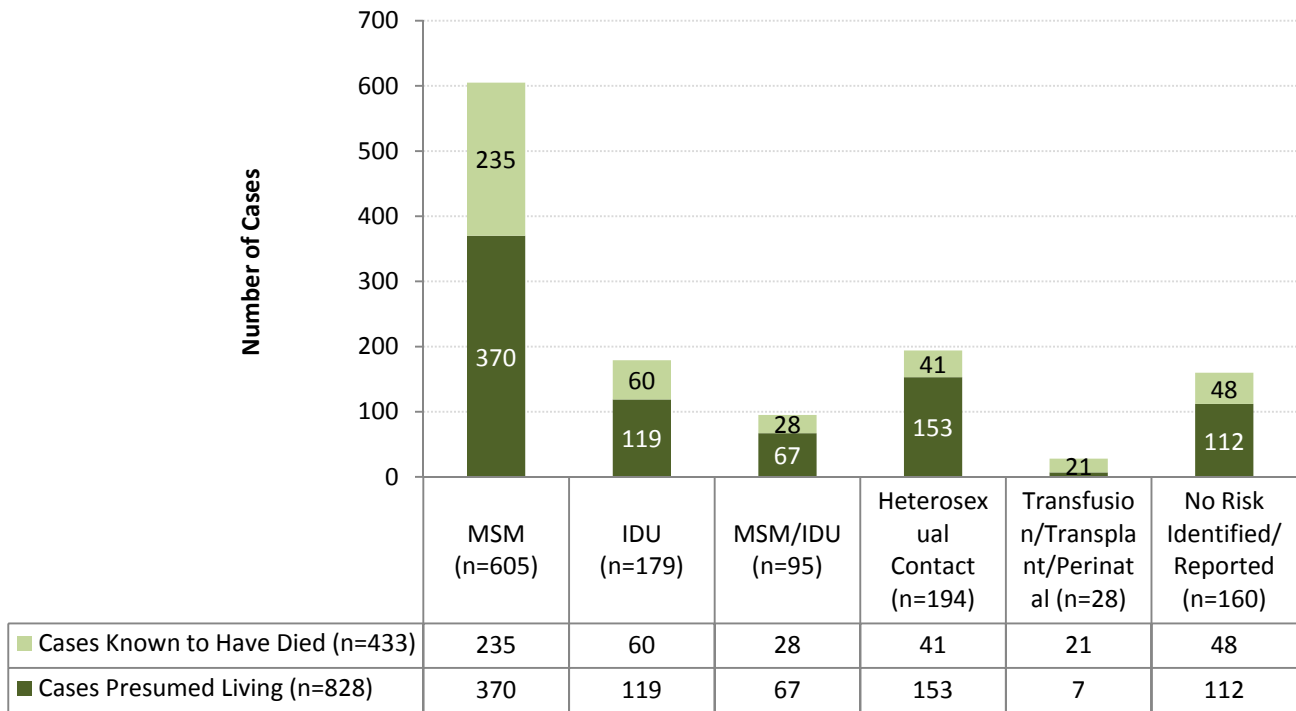
Transmission Category

This section describes the breakdown of cases known to have died and presumed to be living according to transmission category. Figure 38 presents data for both sexes combined, while figures 39 and 40 present data for males and females, respectively.

As shown in Figure 38, of the 1,261 HIV/AIDS cases reported in Alaska since January 1, 1982, 433 (34.3%) are known to have died, and 828 (65.7%) are not known to have died. Of these 1,261 reported cases, 622 (49.3%) were among **MSM**; of these 622 cases, 239 (38.4%) are known to have died, and 383 (61.6%) are not known to have died. Male-to-male sex accounts for 55.2% of all cases known to have died, and 46.3% of all cases not known to have died. Seventy-eight cases (6.2% of all diagnoses) have been reported among **MSM/IDU**; 24 of these (30.8%) are known to have died, and 54 (69.2%) are not known to have died. **MSM/IDU** accounts for 5.5% of all cases known to have died, and 6.5% of all cases not known to have died. One-hundred seventy-nine cases (14.2% of all diagnoses) have been reported among **IDU**; of these, 60 (33.5%) are known to have died, and 119 (66.5%) are not known to have died. **IDU**

accounts for 13.9% of all cases known to have died, and 14.4% of all cases not known to have died. One-hundred ninety-four cases (15.4% of all diagnoses) for which **heterosexual contact** is the most likely route of transmission have been reported; of these, 41 (21.1%) are known to have died, and 153 (78.9%) are not known to have died. Heterosexual contact accounts for 9.5% of all cases known to have died, and 18.5% of all cases not known to have died. Twenty-nine cases (2.3% of all diagnoses) have been reported as a result of **transfusions, transplants and perinatal transmission**; 21 (72.4%) of these cases are known to have died, and 8 (27.6%) are not known to have died. Transfusions, transplants and perinatal transmission account for 4.8% of all cases known to have died, and 1.0% of all cases not known to have died. One hundred fifty-nine cases (12.6% of all cases reported) have been reported for which no risk was identified or reported (**NIR/NRR**); 48 (30.2%) of these are known to have died, and 111 (69.8%) are not known to have died. **NIR/NRR** cases account for 11.1% of all cases known to have died, and 13.4% of all cases not known to have died.

Figure 38. Transmission Category for HIV/AIDS Cases Presumed Living and Those Known to Have Died through December 31, 2008 – Both Sexes, Alaska (N=1,261)



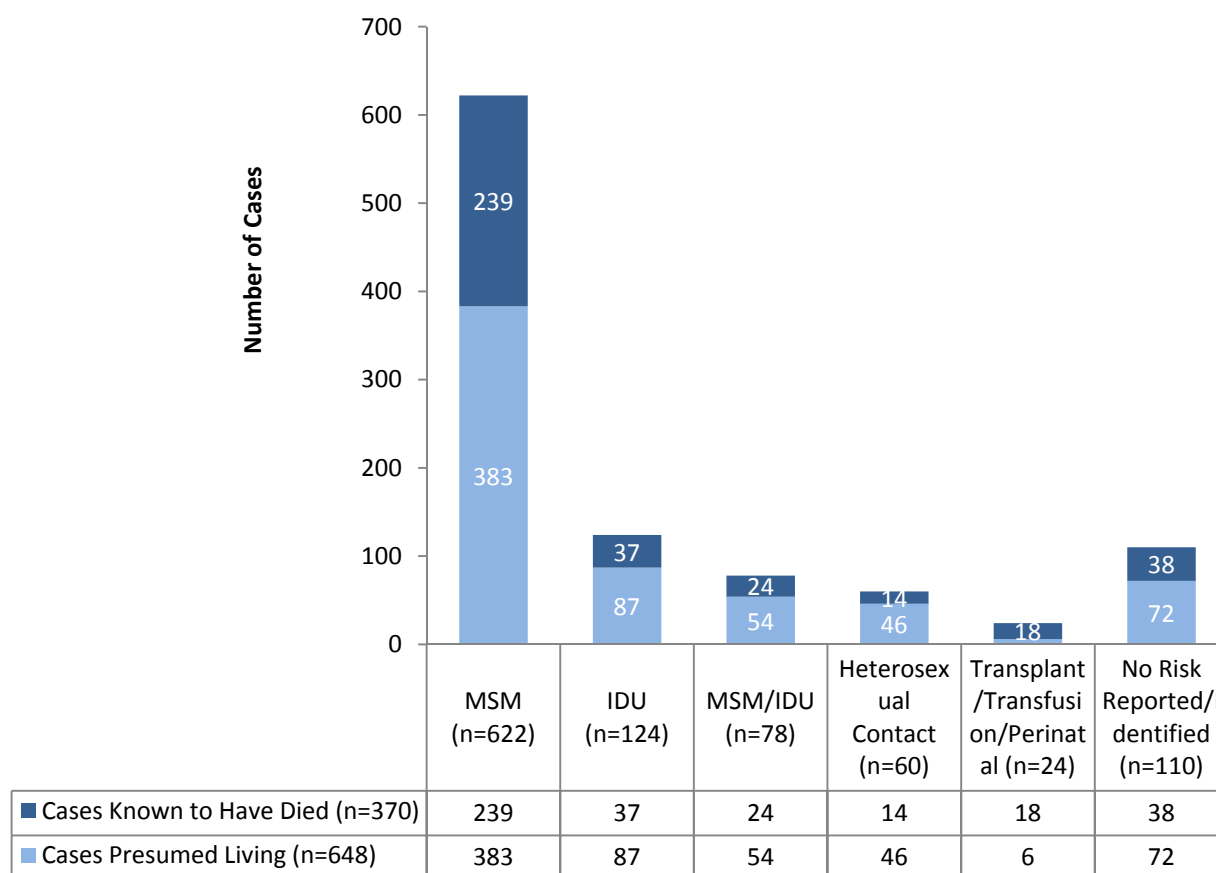
As shown below in Figure 39, of the 1,018 cases of HIV/AIDS reported in males in Alaska since 1982, 370 (36.3%) are known to have died, and 648 (63.7%) are not known to have died. **Male-to-male sex (MSM)** was the reported or identified route of transmission in 622 of these 1,018 cases (61.1%); of these 622 cases, 239 (38.4%) are known to have died and 383 (61.6%) are not known to have died. Male-to-male sex accounts for 64.6% of all male cases known to have died, and 59.1% of all male cases not known to have died. **Male-to-male sex and concurrent injection drug use (MSM/IDU)** was the reported or identified route of transmission in 78 cases (7.7% of all cases reported in males); of these 78 cases, 24 (30.8%) are known to have died, and 54 (69.2%) are not known to have died. MSM/ISU accounts for 6.5% of all male cases known to have died, and 8.3% of all

cases not known to have died. One hundred twenty-four cases (12.2% of all cases in males) were reported among **IDUs**; of these 124 cases, 37 (29.8%) are known to have died, and 87 (70.2%) are not known to have died. Injection drug use accounts for 10.0% of all male cases known to have died, and 13.4% of all male cases not known to have died. Sixty cases (5.9% of all cases in males) have been reported among males for which **heterosexual contact** is the most likely route of infection; of these 60 cases, 14 (23.3%) are known to have died, and 46 (76.7%) are not known to have died. Heterosexual contact accounts for 3.8% of all male cases known to have died, and 7.1% of all male cases not known to have died. Twenty-four cases (2.4% of all cases in males) have been reported in males as a result of **transfusion, transplant or perinatal transmission**; of these 24 cases,

18 (75.0%) are known to have died, and 6 (25.0%) are not known to have died. Transfusion, transplant and perinatal transmission accounts for 4.9% of all male cases known to have died, and 0.9% of all male cases not known to have died. One hundred and ten cases (10.8% of all reported cases in males) for which no risk was

identified or reported (**NIR/NRR**) have been reported among males in Alaska; 38 (34.5%) of these cases are known to have died, and 72 (65.5%) are not known to have died. NIR/NRR cases account for 10.3% of all male cases known to have died, and 11.1% of all male cases not known to have died.

Figure 39. Transmission Category for HIV/AIDS Cases Presumed Living and Those Known to Have Died through December 31, 2008 – Males , Alaska (n=1,018)



As shown below in Figure 40, of the 243 cases of HIV/AIDS reported in females in Alaska since 1982, 63 (25.9%) are known to have died, and 180 (74.1%) are not known to have died. Fifty-five of these 243 cases (22.6%) were reported among **IDUs**; of these 55 cases, 23 (41.8%) are known to

have died, and 32 (58.2%) are not known to have died. Injection drug use accounts for 36.5% of all female cases known to have died, and 17.8% of all female cases not known to have died. One hundred thirty-four cases (55.1% of all cases in females) have been reported among females for which

heterosexual contact is the most likely route of infection; of these 134 cases, 27 (20.1%) are known to have died, and 107 (79.9%) are not known to have died. Heterosexual contact accounts for 42.9% of all female cases known to have died, and 59.4% of all female cases not known to have died. Five cases (2.1% of all cases in females) have been reported in females as a result of **transfusion, transplant or perinatal transmission**; of these 5 cases, 3 (60%) are known to have died, and 2 (40%) are not known to have died. Transfusion,

transplant and perinatal transmission accounts for 4.8% of all female cases known to have died, and 1.1% of all female cases not known to have died. Forty-nine cases (21.7% of all reported cases in females) for which no risk was identified or reported (**NIR/NRR**) have been reported among females in Alaska; 10 (20.4%) of these cases are known to have died, and 39 (79.6%) are not known to have died. NIR/NRR cases account for 15.9% of all female cases known to have died, and 21.7% of all female cases not known to have died.

Figure 40. Transmission Category for HIV/AIDS Cases Presumed Living and Those Known to Have Died through December 31, 2008 – Females, Alaska (N=1,261)

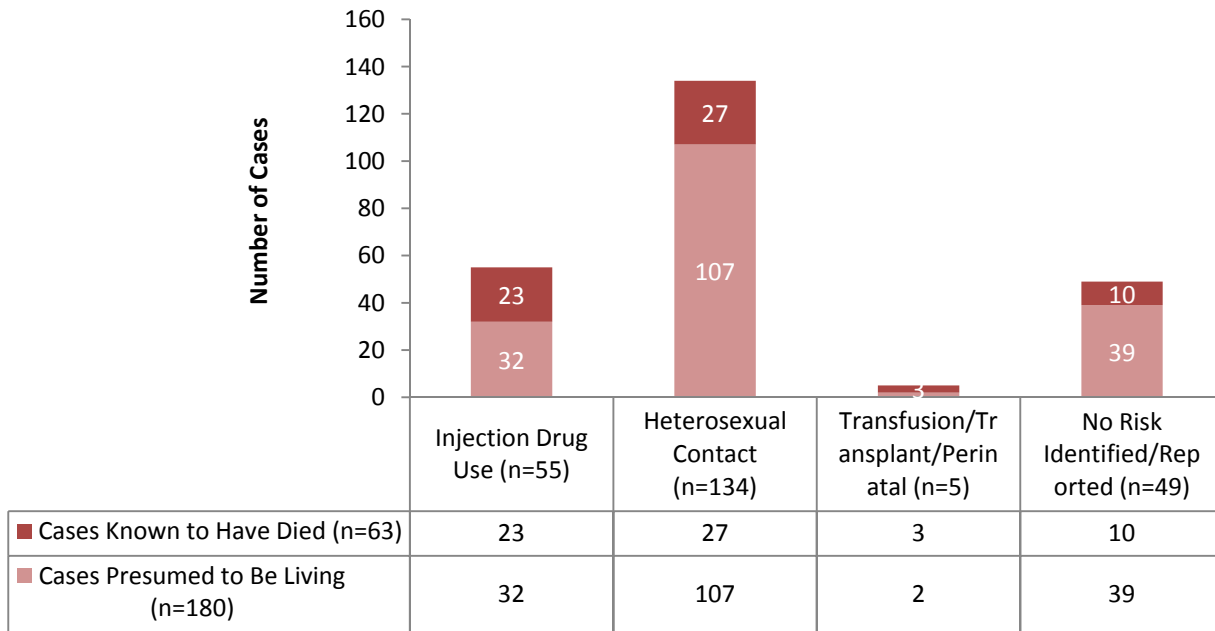


Figure 41 describes the race and ethnicity of reported HIV/AIDS cases known to have died, and those presumed to be living, in Alaska as of December 31, 2008. Seven hundred twenty-nine cases of HIV or AIDS in white persons have been reported to the Section of Epidemiology since January 1, 1982; 103 of these cases (14.1%) were among females and 626 (85.8%) among males. Twenty-two (21.4%) of these females

are known to have died, and 81 (78.6%) are not known to have died; 236 males (37.7%) are known to have died, and 390 (62.3%) are not known to have died. Overall, 35.4% (n=258) of all persons reported with HIV or AIDS in Alaska are known to have died. One hundred thirty-eight cases of HIV or AIDS in black and African-American persons have been reported to the Section of Epidemiology since January 1, 1982; 34 of

these cases were among females and 104 among males. Eight of these females (23.5%) are known to have died, and 26 (76.5%) are not known to have died; 31 HIV or AIDS in Alaska are known to have died.

Eighty-eight cases of HIV or AIDS in Hispanic persons have been reported to the Section of Epidemiology since January 1, 1982; 13 (14.8%) of these cases were among females and 75 (85.2%) among males. Two of these females (15.4%) are known to have died, and 11 (84.6%) are not known to have died; 22 (29.3%) males are known to have died, and 53 (70.6%) are not known to have died. Overall, 27.3% (n=88) of all Hispanic persons reported with HIV or AIDS in Alaska are known to have died.

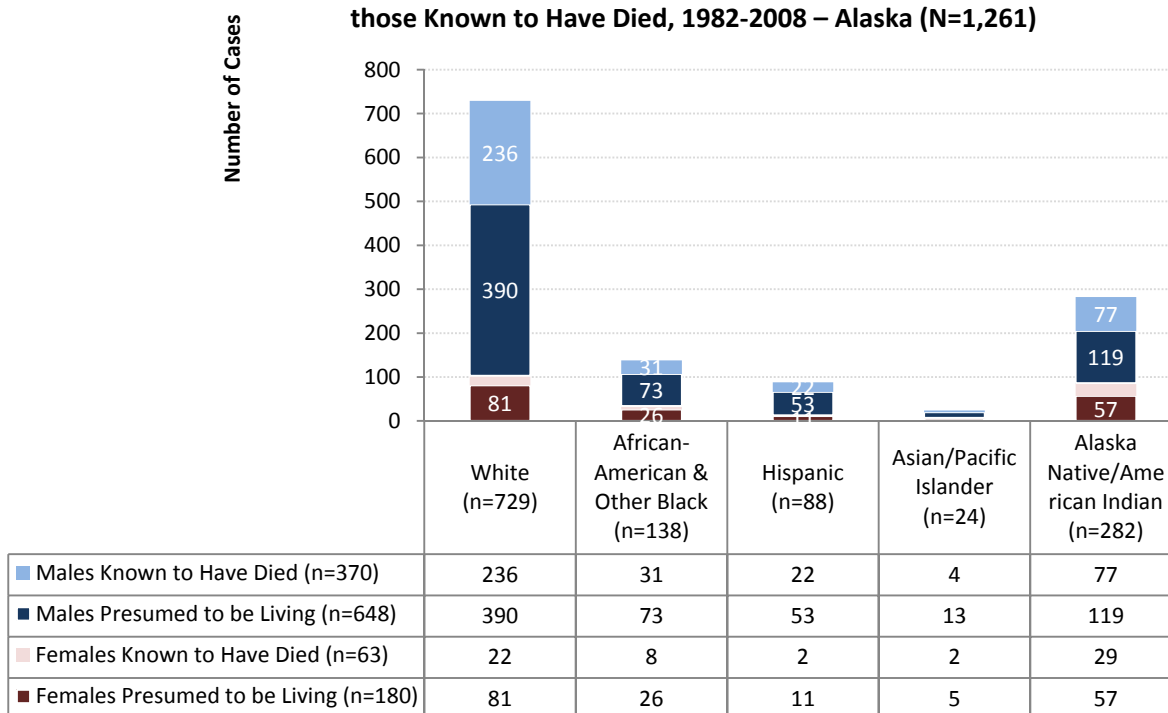
Twenty-four cases of HIV or AIDS in Asian or Pacific Islander persons have been reported to the Section of Epidemiology since January 1, 1982; 7 (29.2%) of these cases were among females and 17 (70.8%) among males. Two of these females (28.6%) are known to have died, and 5 (71.4%) are not known to have died; 4 (23.5%) males are known to have died, and 13 (76.5%) are not known to have died. Overall, 25.0% (n=6) of all Asian or Pacific Islander persons reported with HIV or AIDS in Alaska are known to have died.

Two hundred eighty-two cases of HIV or AIDS in Alaska Native or American Indian persons have been reported to the Section of

males (29.8%) are known to have died and 73 (70.2%) are not known to have died. Overall, 28.3% (n=138) of all black and African-American persons reported with Epidemiology since January 1, 1982; 86 (30.5%) of these cases were among females and 196 (69.5%) among males. Twenty-nine of these females (33.7%) are known to have died, and 57 (66.3%) are not known to have died; 77 (39.3%) males are known to have died, and 119 (60.7%) are not known to have died. Overall, 37.6% (n=106) of all Alaska Native or American Indian persons reported with HIV or AIDS in Alaska are known to have died.

A preliminary explanation for the disparity in the proportion of males vs. females known to have died is just that in the early days of the epidemic—before the advent of antiretrovirals—HIV infection occurred primarily among men; being infected early, at a time when treatment to extend the lives of PLWHA was unavailable, would lead to a higher proportion of males than females known to have died. Whether the racial and ethnic differences in the proportion of persons known to have died reflects underlying disparities, or is an artifact of small sample sizes, is a topic that deserves further investigation; the Section of Epidemiology is currently analyzing the most current Alaska HIV/AIDS mortality data; statistically significant conclusions will be disseminated in future publications.

Figure 41. Race/Ethnicity and Gender of HIV/AIDS Cases Presumed Living and those Known to Have Died, 1982-2008 – Alaska (N=1,261)

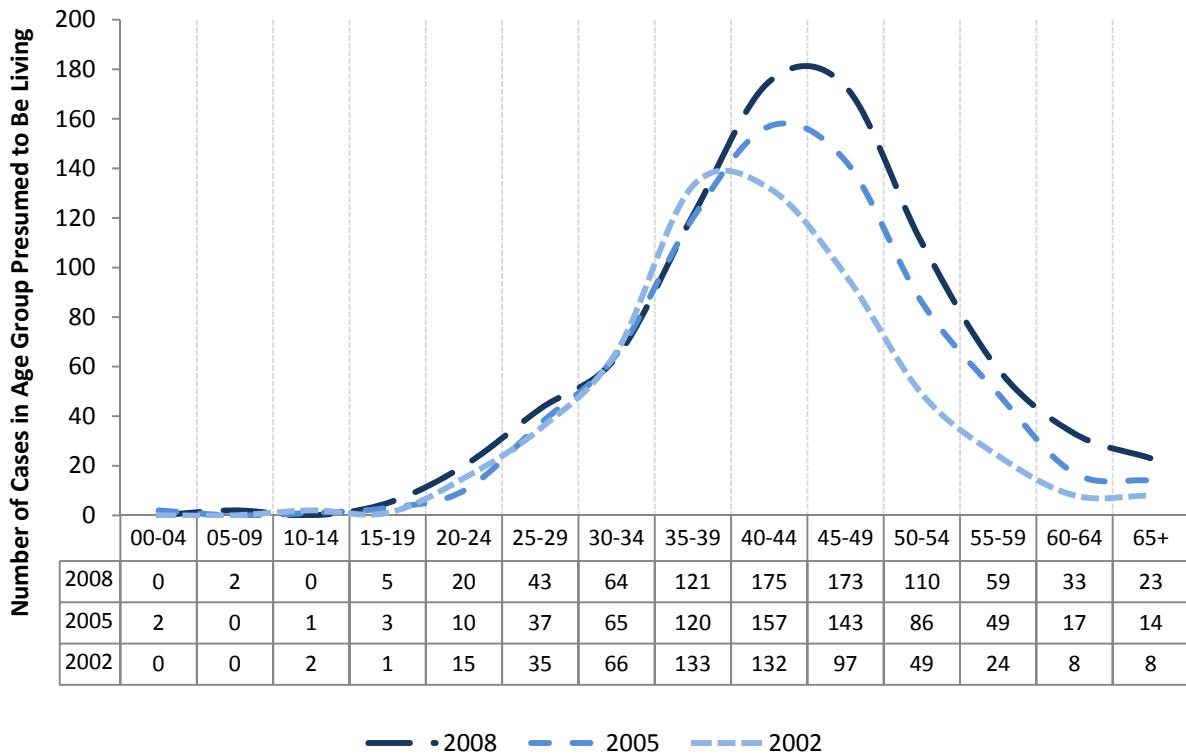


Age Distribution of Cases Presumed to be Living

One of the most significant issues to have emerged in HIV care in recent years is the aging of PLWHA. As positive persons live longer, fuller lives, providers—and patients—find typical issues surrounding aging and geriatric medicine to be complicated by the physiological and psychological impacts of HIV infection, and

vice versa. For instance, as described below in Figure 42, in 2002, 186 PLWHA in Alaska were aged 45 years and over; 16 of these 186 PLWHA were aged 60 years and over, and 8 of these 16 PLWHA were aged 65 years and over. In 2008, 398 PLWHA in Alaska were aged over 45 years; 56 of these 398 PLWHA were over 60 years of age, and 23 of these 56 PLWHA were aged 65 years and over.

Figure 42. Age Distribution of Cases Presumed to Be Living, 2002, 2005 & 2008



HIV Care Services Use

The State of Alaska receives federal funding under Part B of the Ryan White HIV/AIDS Treatment Modernization Act of 2006 to purchase HIV care services for low income persons with HIV and their families as well as HIV medications. Other in-state organizations including the Alaska Native Tribal Health Consortium, Anchorage Neighborhood Health Center, and the Yukon-Kuskokwim Health Corporation also receive federal funding, under different parts of the Act.

In 2008, a total of 291 HIV-positive individuals received one or more services provided or purchased by one of the two

State grantee organizations with Ryan White HIV/AIDS Treatment Modernization Act funds. These organizations have offices in Anchorage, Fairbanks, and Juneau and also serve individuals in other areas of the state. Of these 291 individuals, 44 (15%) were clients new to the service organizations during 2008. Males constituted 71% (n=207) and females 29% (n=84) of the client population. Ninety individuals participated in the AIDS Drug Assistance Program.

Demographic characteristics of individuals receiving services funded with Part B Treatment Modernization Act funds are presented below.

Table 5 Demographic Characteristics of Part B Ryan White Treatment Modernization Act Clients – 2008

Characteristic	Part B Service Clients, 2008 (N=291)
Gender	
Male	71%
Female	29%
Transgender	0%
Race	
White—non-Hispanic	48%
Alaska Native/ American Indian—non-Hispanic	22%
Black—non-Hispanic	10%
Asian—non-Hispanic	2%
Native Hawaiian/ Pacific Islander—non-Hispanic	<1%
More than one Race	2%
Hispanic Ethnicity	15%
Age Range	
0-12 years	0%
13-24 years	3%
25-44 years	45%
45+ years	48%
65+ years	4%
Unknown	0%

HIV Testing in Alaska: BRFSS and PRAMS Data

Behavioral Risk Factor Surveillance System (BRFSS).

BRFSS is a national survey developed by CDC to monitor state-level prevalence of the major behavioral risks among adults. The BRFSS has been conducted yearly in Alaska since 1990 by the Alaska Division of Public Health. Health interviews are conducted by phone with adults 18 years and older. Data

are statistically weighted to be representative of the state’s population.

In 2008, BRFSS data indicated that 45% of Alaskans aged 18-64 years reported ever having had an HIV test²².

²² Section of Chronic Disease Prevention and Health Promotion, Alaska Department of Health and Social Services. June 2009.

Pregnancy Risk Assessment Monitoring Survey (PRAMS)

PRAMS is an ongoing national surveillance study conducted by states to collect information on maternal behaviors, attitudes, and experiences. The PRAMS includes a systematic, stratified random sample of mothers who have given birth to live infants.

Beginning in 1996, surveyed mothers were asked if their prenatal health care providers had (1) counseled them about HIV prevention and (2) discussed HIV testing with them. National PRAMS data indicate that discussion of HIV testing is highly correlated with the occurrence of testing. The question on counseling was dropped from the survey after 1999. Antiretroviral therapy is effective in reducing HIV transmission during pregnancy and delivery, and has helped reduce perinatal infection rates in Alaska and nationwide. The majority of pregnant females in Alaska received HIV screening as part of their prenatal care.

PRAMS data indicate that in 2004, 2005, 2006 and 2007, respectively, 76.2%, 74.9%, 75.2%, and 71.8% of females delivering live births in Alaska reported that their prenatal care providers discussed HIV testing with them (Table 6)²³.

²³ Memorandum, Maternal and Child Health Epidemiology Unit, Section of Women's, Children's and Family Health, Division of Public Health, Alaska Department of Health and Social Services. March 2009.

Table 6. Percentage of Females Delivering Live Births in Alaska Reporting That Their Prenatal Care Provider Discussed HIV Testing with Them

Response	2004	2005	2006	2007
Yes	76.23	74.89	75.22	71.84
No	22.28	20.95	22.75	24.68
Skip	0.96	1.02	0.83	0.93
Blank	0.53	3.15	1.19	2.55
Total Females	10,002	10,098	10,746	10,805

As shown in Table XXXX, in 2004, 2005, 2006 and 2007, respectively, 60.1%, 59.8%, 62%, and 58.1% of females delivering live

births in Alaska reported having an HIV test at any point during their pregnancy or delivery

Table 7. Percentage of Females Delivering Live Births in Alaska Reporting an HIV Test During Pregnancy

Response	2004	2005	2006	2007
Yes	60.09	59.84	61.93	58.08
No	24.72	23.38	24.68	26.84
Don't know	13.50	14.71	11.95	13.73
Blank	1.69	2.06	1.44	1.36
Total Females	10,002	10,098	10,746	10,805

²⁴ *Loc. cit.*

CHAPTER THREE: COMMUNITY SERVICES ASSESSMENT

A COMMUNITY SERVICES ASSESSMENT (CSA) describes the prevention needs of populations at risk for HIV infection, the prevention services available to address these needs, and any gaps between needs and existing services. The steps to conducting a CSA include:

- **Resource Inventory** – current HIV prevention and HIV-related resources and activities, including information regarding HIV prevention activities or other education and prevention activities, regardless of funding source, that are likely to contribute to HIV risk reduction.
- **Needs Assessment** – information on the current status and service needs of a defined population or geographic area. Needs that may be identified include indications of risk behaviors, service utilization and barriers to services.
- **Gap analysis** – an assessment of any unmet HIV prevention needs; that is, any shortfalls between available resources and existing needs.

These three steps were an integral aspect of the *2010-2012 Alaska HIV Prevention Plan*'s development, with the aim of projecting what service gaps might exist in the 2010-2012 period, and should therefore

be addressed in recommendations in the Plan. The outcome of the process is described for each priority population (HIV-positive persons, MSM, IDU, heterosexual women at increased risk and heterosexual men at increased risk; see Chapter Four for further detail) under the “Population-Specific Indications of Need, Resources and Gaps” subheading below.

Funding for HIV Prevention in Alaska

HIV prevention in Alaska is funded by four principal sources:

1. **State HIV prevention grants and contracts using federal funds from the CDC HIV Prevention Cooperative Agreement** are federally-funded, but administered and awarded on a competitive basis by the HIV/STD Program. They are typically funded on a three-year cycle, with annual review and renewal. The current grant cycle runs through the end of the state fiscal year 2010 (June 30, 2010); the next grant cycle will run from July 1, 2010 through June 30, 2012.
2. **HIV-specific Services Directly Funded by Federal Agencies** include HIV prevention or care programs for which funds are awarded directly by agencies such as CDC and HRSA to implementing organizations.
3. **State-funded Services** include prevention-related activities, such as substance abuse treatment programs, that are incorporated into state agencies' efforts, but that do not receive HIV prevention-specific funds under the CDC HIV Prevention Cooperative Agreement.
4. **Non-public Funding Sources** include private foundations and fund-raising activities conducted by community-

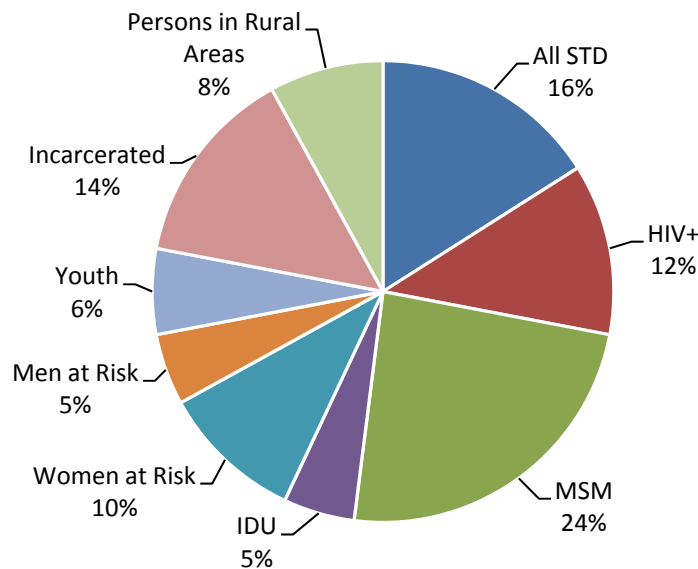
based organizations. HIV prevention services funded through non-public means are quite limited in Alaska.

All State of Alaska HIV prevention grants and contracts are federally-funded, under the CDC HIV Prevention Cooperative Agreement. No State of Alaska general funds are allocated specifically for HIV prevention.

The period of the current cooperative agreement with CDC is January 1, 2004 through December 31, 2009. In 2009, the annual award was \$1,473,229; the State does not anticipate any increase in federal funding over the next three years. Of the \$1.5 million in HIV prevention funds, 47% goes to grants and contracts for prevention interventions for the priority populations identified in the *2007-2009 Alaska HIV*

Prevention Plan; approximately 13% goes to HIV partner services and HIV counseling and testing provided by State public health personnel; and 40% covers program administration, planning and evaluation. In state fiscal year 2009, of the 47% in grants and contracts, 12% was allocated to prevention activities for HIV-positive persons; 24% for prevention programs for MSM, 10% for females at increased risk, especially females of racial and ethnic backgrounds overrepresented among HIV diagnoses in Alaska; 8% for persons in rural areas, 5% for injection drug users; 6% for high-risk youth, and 14% for incarcerated persons in community residential centers (halfway houses). An additional 16% of prevention funds were allocated for STD partner services for persons diagnosed with a reportable STD (chlamydia, gonorrhea, or syphilis) and their sex partners.

Figure 43. FY 2009 Grants and Contracts for HIV Prevention by Intended Population



Grants and contracts are awarded on a competitive basis for a three year period with annual review and renewal. The 2007 through 2010 grant cycle ends on June 30,

2010; in early 2010, the HIV/STD Program will issue a new request for funding proposals (RFP) from community-based organizations and other prevention

providers. The RFP will solicit applications for HIV prevention programs that target the priority populations and interventions recommended in the *2010-2012 Alaska HIV Prevention Plan*. Grant awards to successful RFP applicants will constitute the state-funded interventions to be carried out by community organizations for the period July 1, 2010 through June 30, 2012.

HIV Prevention Resources in 2009-2010 by Agency

Table 7 describes the HIV prevention interventions conducted by community organizations under grants or contracts with the State of Alaska awarded for the three-year period from July 1, 2007 through June 30, 2010.

Table 8 HIV/STD Program-funded HIV Prevention Interventions by Agency—July 1, 2007 through June 30, 2010

Agency	Target Population	Intervention Model	Intervention Type(s)
Alaskan AIDS Assistance Association (Four A's)	HIV-Positive Persons	<i>Healthy Relationships</i>	<ul style="list-style-type: none"> Group HE/RR Multi-Session
		Anchorage Wellness Center	<ul style="list-style-type: none"> Group HE/RR Single Session
			<ul style="list-style-type: none"> Outreach
	Men Who Have Sex With Men	<i>Mpowerment</i>	<ul style="list-style-type: none"> Outreach Social Marketing Group HE/RR Single Session
		HIV Counseling and Testing	<ul style="list-style-type: none"> Rapid HIV Counseling and Testing through Social Networks
	Injection Drug Users	HIV Counseling and Testing	<ul style="list-style-type: none"> Rapid HIV Counseling and Testing in Non-Clinical Settings Rapid HIV Counseling and Testing through Social Networks
	Heterosexual Females and Men at Increased Risk	Juneau Outreach	<ul style="list-style-type: none"> Outreach
		HIV Counseling and Testing	<ul style="list-style-type: none"> Rapid HIV Counseling and Testing through Social Networks
Incarcerated Individuals	Incarcerated Groups in conjunction with HIV counseling & testing in Anchorage & Juneau	<ul style="list-style-type: none"> Group HE/RR Single Session 	
Alaska Native Tribal Health Consortium (ANTHC)	HIV Positive Persons	Incorporating HIV Prevention into the Medical Care of Persons Living with HIV	<ul style="list-style-type: none"> Individual HE/RR

Agency	Target Population	Intervention Model	Intervention Type(s)
	Men Who Have Sex With Men	<i>Mpowerment</i>	<ul style="list-style-type: none"> • Outreach • Social Marketing • Group HE/RR Single Session
Alaska Youth and Parent Foundation (AYPF)	Youth at Increased Risk	Targeted Outreach	<ul style="list-style-type: none"> • Peer Outreach
		<i>Making Proud Choices</i>	<ul style="list-style-type: none"> • Group HE/RR Multi Session
Interior AIDS Association (IAA)	Injection Drug Users	Targeted Outreach	<ul style="list-style-type: none"> • Outreach
		HIV Counseling and Testing	<ul style="list-style-type: none"> • HIV Counseling and Testing in Non-Clinical Settings • HIV Counseling and Testing through Social Networks
	Heterosexual Females and Men at Increased Risk	<i>Partners in Prevention</i>	<ul style="list-style-type: none"> • Group HE/RR Multi Session
		Targeted Outreach	<ul style="list-style-type: none"> • Outreach
		HIV Counseling and Testing	<ul style="list-style-type: none"> • HIV Counseling and Testing in Non-Clinical Settings • HIV Counseling and Testing through Social Networks
Youth at Increased Risk	<i>Making Proud Choices</i>	<ul style="list-style-type: none"> • Group HE/RR Multi-Session 	
Municipality of Anchorage Reproductive Health Clinic (MOARHC)	Men Who Have Sex with Men	HIV Counseling and Testing	<ul style="list-style-type: none"> • Rapid HIV Counseling and Testing in Non-Clinical Settings
	Heterosexual Men and Females at Increased Risk		
	Injection Drug Users		
	Incarcerated Persons	HIV Counseling and Testing	<ul style="list-style-type: none"> • Rapid HIV Counseling and Testing in Community Release Centers
	Partners of STD patients	Partner Services/Disease Intervention	<ul style="list-style-type: none"> • HIV/STD Partner Services
Rural Alaska Community Action Program (RurAL CAP)	Persons in Rural Areas or in Ethnic/Language Minority Populations	Media-based Health Communication/Public Information	<ul style="list-style-type: none"> • Health Communications/ Public Information (HC/PI)

The following summary describes additional resources for HIV prevention in Alaska funded over some portion of the 2010-2012 period, including state- and federally-funded projects addressing HIV prevention directly,

as well as projects that incorporate an HIV prevention component into their client services and address risk factors associated with HIV infection, such as substance abuse or sexual activity.

Alaska Native Tribal Health Consortium (ANTHC) – HIV Prevention Program

Funding Source: CDC direct funding to Community Based Organizations

Funding Cycle: July 1, 2004 through June 30, 2010

Funding: \$338,222 annually

Project Contact: Michael Covone 907 724-8211

Project Description: The goal of this project is to reduce unprotected sex and increase HIV/STD testing for Alaska Native females aged 21-35 in the Anchorage area through an adaptation of the Community PROMISE intervention.

Alaska Native Tribal Health Consortium (ANTHC) – STD Prevention Program

Funding Source: Indian Health Service STD Program

Funding Cycle: 2009 (one time funding)

Funding: \$140,000

Funding Source: Indian Health Service HIV Program

Funding Cycle: 09/2009 - 08/2011

Funding: \$85,000

Funding Source: Substance Abuse and Mental Health Services Administration (SAMHSA)

Funding Cycle: 10/2008 - 3/2009

Funding: \$189,000

Funding Source: HRSA, Office of Women's Health

Funding Cycle: 09/2009 - 08/2012

Funding: \$75,000

Program Contact: Jessica Leston 907 274-8104

Program Description: The ANTHC STD program is working with Johns Hopkins University on a home-based self-collected specimen project for CT/GC screening for Alaskan residents. The program has also developed a youth-focused, internet-based STD education website to promote sexual health and STD testing (www.iknowmine.org). It has also been

working with the Center for Health Training (Seattle, WA) and Eastern Aleutian Tribes on a HIV Integration project for Alaska Native persons residing within the Eastern Aleutian Tribes Health Service Area. Activities include site visits to discuss and assess current practices regarding the integration of HIV prevention into reproductive and/or primary health care clinics and the development and implementation of a training and technical assistance plan. The program will also conduct training for Community Health Aides regarding HIV screening and testing, focusing on HIV/STD 101 and use of the Sister to Sister Intervention. Lastly, the ANTHC STD Program is working on promoting CDC recommended guidelines for HIV/STD screening and treatment within the Tribal Health System to increase routine HIV/STD testing for Alaska Native and American Indian persons.

State of Alaska, Department of Education and Early Development

Source of Funding: CDC Division of Adolescent and School Health (DASH), HIV prevention co-operative agreement.

Funding Cycle: March 2008 through February 2012

Funding: \$232,000 annually

Program Contact: Terri Campbell Terri_Campbell@eed.state.ak.us 907 465-8719

Program Description: This program funds the administration of the Youth Risk Behavior Survey and the School Health Education Profile, a survey for Principals and Lead Health Teachers about the health program content in their schools, their training and their expertise. The remainder of the program funds goes to state trainings and leadership activities for teachers, including a targeted initiative for Alaska's high risk youth in Alternative Schools settings, and incorporating a focus on health

issues through the Healthy Reading initiative.

Crisis Pregnancy Center – Let’s Talk Program

Funding Source: HRSA Special Projects of Regional and National Significance – Community Based Abstinence Education (SPRANS – CBAE)

Funding Cycle: September 30, 2008 through September 30, 2013

Funding: \$352,926 annually

Project Contact: Liana Fuentes 907 868-5033

Project Website: www.letstalkalaska.com

Project Description: The goal of Crisis Pregnancy Center’s Let’s Talk program is to educate, empower, and encourage youth throughout Alaska to apply the information they receive about the significance of building healthy relationships and the benefits of abstaining from sexual relations until marriage. The program has four foci: 1) School Outreach - to lead abstinence until marriage education for youth aged 12-18 year in the Anchorage School District, Wrangell, and Ketchikan, 2) Urban Community Partnership - to further empower and educate local organizations to incorporate abstinence until marriage education into their services, 3) Rural Partner Programs – to assist adults and youth in Aniak, Anaktuvuk Pass, Hooper Bay, Mekoryuk, and Nuiqsut, who have a vision to bring the traditional values, including abstinence until marriage and healthy marriages and to break the pattern of dysfunctional behaviors, and 4) State Network Coalition - to expand the abstinence education statewide network to continue the unified effort that expedites acquisition of materials, reduces costs, and strengthens abstinence until marriage programs within Alaska.

Comprehensive Behavioral Health Treatment Programs

Source of Funding: Alaska Division of Behavioral Health

Funding Cycle: July 1, 2009 through June 30, 2010

Funding: Approximately \$43.7 million to 59 grantees

Program Contact: Vicki Wells, AK DBH 907 269-3794

Program Description: Grants are intended to support integrated treatment across the spectrum of behavioral health services. Funded programs are statewide and serve all ages. Priority target populations eligible for mental health treatment include: individuals needing psychiatric emergency services; services to adults with serious mental illness; services to youth with serious emotional disturbance and individuals with co-occurring substance use disorders. Priority target populations eligible for substance abuse treatment include: pregnant injection drug users, pregnant females, injection drug users, females with dependent children, persons and families whose presenting problem is addiction to, dependency on, or chronic disabling use/abuse of alcohol and other drugs, including prescribed and over-the-counter medications and household/general use products that contain inhalant chemicals and substances and individuals with co-occurring mental health disorders. Funded substance abuse treatment programs are required to have staff trained in, and all clients provided, hepatitis, TB, HIV and Fetal Alcohol Spectrum Disorder risk assessment, education, early intervention and risk reduction counseling. There are two Opioid Treatment Programs providing medication assisted treatment (Methadone maintenance) in the state: the Narcotic Drug Treatment Center in Anchorage and Project Special Delivery in Fairbanks with a combined total of 100 treatment slots. The

Alaska Commission for the Accreditation of Behavioral Health Professionals requires training in HIV prevention and early intervention.

Comprehensive Behavioral Health Prevention and Early Intervention

Source of Funding: Alaska Division of Behavioral Health

Funding Cycle: July 1, 2009 through June 30, 2010

Funding: Approximately \$4.1 million to 53 grantees

Program Contact: L. Diane Casto, AK DBH 907- 465-3033

Program Description: The goal of this grant program is to provide integrated behavioral health prevention and early intervention services related to substance use and abuse, suicide, fetal alcohol spectrum disorders, youth development and resiliency, and promotion of wellness in Alaska. The 39 grants awarded for FY2010 range from \$15,500 to \$375,000, with an average award of \$120,000. Grants fund a variety of projects, some single-issue programs such as suicide prevention, and others address multiple behavioral health issues. Grantees include school districts, community-based organizations, hospitals and community clinics, Alaska Native health corporations, tribal entities, and rural city governments. The intended target populations of the programs include youth, adults, elders, individuals and family units.

Reproductive Health Services

Source of Funding: Maternal and Child Health Services Block Grant

Funding Cycle: October 1, 2009 – September 30, 2010

Funding: Approximately \$18,000

Program Contact: Stephanie Birch, Section of Women's, Children's and Family Health 907 334-2400

Program Description: Professional services contracts are administered with two private Advanced Nurse Practitioners to provide reproductive health services at the Kodiak Public Health Center and the Juneau Douglas High School Health Centers. Comprehensive clinical family planning and reproductive health services include initial and annual medical and social history, preventive health examinations, health risk assessment, risk reduction counseling, lab testing as indicated, diagnosis and treatment of minor primary care needs including minor gynecological abnormalities and STIs, referral and follow up.

Reproductive Health Services

Source of Funding: US DHSS Temporary Assistance for Needy Families (TANF) Block Grant Funds

Funding Cycle: July 1, 2009 - June 30, 2010

Funding: Approximately \$395,000

Program Contact: Stephanie Birch, Section of Women's, Children's and Family Health 907 334-2400

Program Description: Funds are used for training, presentations, media campaigns, youth development activities, and education on teen and non-marital pregnancy prevention, adolescent sexuality, infectious disease prevention (including HIV/AIDS), and healthy relationship promotion.

Alaska Section of Public Health Nursing, Health Centers

Source of Funding: Alaska Division of Public Health

Funding Cycle: ongoing

Program website:

www.hss.state.ak.us/dph/nursing/locations.htm

Program Description: State public health nursing provides services at 20 public health centers across the state, and itinerant services to 250 communities. In addition, the

Section of Public Health Nursing provides oversight for public health nursing services in the Municipality of Anchorage, Norton Sound, Northwest Arctic/Maniilaq, and the North Slope Borough. Public Health Centers are located in Anchorage, Bethel, Cordova, Craig, Delta Junction, Dillingham, Fairbanks, Fort Yukon, Galena, Glennallen, Haines, Homer, Juneau, Kenai, Ketchikan, Kodiak, Kotzebue (contract with Maniilaq), Wasilla, Barrow (contract with North Slope Borough), Nome (contract with Norton Sound Health Corp.), Petersburg, Seward, Sitka, Tok, Wrangell, and Valdez. Public health nurses provide HIV counseling and testing, STD diagnosis and treatment and HIV/STD partner services. Other services include: immunizations, family planning, pregnancy testing, prenatal monitoring, postpartum home visits, senior clinics, chronic disease services, well child exams, Early and Periodic Screening, Diagnostic, and Treatment Services (EPSDT), outreach, screening, and referral, clinics for special needs children, Females, Infants, and Children (WIC) and Infant Learning Program (ILP) referrals, school screenings, audiograms, tuberculosis screening, epidemiological investigations, parenting education, health education, community assessment, and participation in community partnerships in response to public health concerns. There is no cost for any services to children. There is a small cost for adults. However, no one is denied service due to an inability to pay.

HIV Prevention Resources by Target Population and Geographic Distribution

The majority of HIV prevention resources in Alaska are centered in the three urban centers of Anchorage, Fairbanks, and Juneau, where 60% of the population resides; the majority of HIV/AIDS cases

diagnosed in Alaska since 1982 have also been diagnosed in persons who resided in one of these cities at the time of diagnosis. HIV infection has historically been, and continues to be, more prevalent in the more populous areas of Alaska, although all geographic areas of the state are affected to some degree.

The bulk of HIV prevention interventions with evidence of effectiveness are feasible only in settings where there are sufficient numbers of persons in the intended population. The size of the priority population with demographic and behavioral risk factors in common, for example, injection drug users, men who have sex with men, and females with identifiable risk factors, and their concentration in identifiable locations, make certain interventions like targeted outreach and group sessions feasible in urban settings but infeasible in rural settings.

Urban centers may also have concentrations of target populations whose members interact with sufficient frequency to make it possible to help shape community norms about HIV risk reduction, through targeting especially influential individuals or groups. The three urban centers also have sufficient populations of persons affected by HIV to have dedicated AIDS service organizations that offer a continuum of HIV care and prevention services and can employ staff who specialize in HIV prevention.

Mid-sized rural hubs, and some boroughs adjacent to urban centers, have health and social service resources that can incorporate HIV prevention into existing services that reach persons at risk, e.g. persons in substance abuse treatment facilities, public health clinics, and correctional facilities. Alaska Native regional health corporations based in rural hubs provide the health

infrastructure to incorporate prevention into the care of beneficiaries living with HIV; they provide HIV counseling and testing, reproductive health care, including STD diagnosis and treatment, and in some instances, they conduct projects dedicated specifically to HIV prevention.

However, in less populous areas of the state, smaller population size—particularly the smaller number of individuals within priority populations, e.g. IDU or MSM and lower HIV prevalence often preclude the establishment of HIV/AIDS-specific initiatives. In these areas, partner notification and prevention case management for HIV-positive persons can be provided for the small number of persons for whom they are appropriate, but other HIV prevention activities generally must rely heavily on agencies and organizations with broader missions that can integrate HIV prevention into counseling or health education services for their clients and communities, and prevention messages must be designed to reach a broad audience rather than specific risk populations.

Population-Specific Indications of Need, Resources and Gaps

This section details the needs, resources and gaps for each priority population in the *2010-2012 Alaska HIV Prevention Plan*. Prevention services are organized by funding source; all services described are those in effect as of late 2009.

HIV-Positive Persons

Indication of Need

The Statewide Coordinated Statement of Need (SCSN) of the State of Alaska's 2009 Ryan White grant identifies four overarching issues for persons living with HIV in Alaska:

1. The changing nature of HIV disease. New therapies and medical technologies have prolonged health and life for many persons living with HIV and AIDS (PLWHA), making HIV a long term, chronic illness. These changes have also made HIV a very complex illness for providers and patients to manage.
2. The changing populations affected by HIV. Individuals with HIV are increasingly drawn from socially and economically marginalized populations, and many PLWHA have complex co-existing medical and social needs.
3. The increasing cost of services. The cost of therapies and medical technologies is increasing as new medications are developed and PLWHA need an ever-increasing number of medications. Many individuals are entering care late in the disease process requiring more complex care and services.
4. Many potential barriers to effective participation in HIV care exist. Comprehensive care is unevenly available in different geographic areas of the state and within different care systems. Some services are not fully integrated and various services have different eligibility requirements. Barriers posed by high costs of care, geographic distances, differences in culture, differences in language, competing family or other demands, and real or perceived stigma impede some individuals from accessing services.

Insofar as a lower HIV viral load reduces the risk of HIV transmission, adherence to HIV medications helps prevent new infections. The 2009 SCSN notes that adherence to prescribed medication regimens is difficult for many, if not all PLWHA, due to the

nature of the medications (timing, with/without food, drug interactions, sheer quantities of pills, etc.) and these medications' many toxicities. Individuals with substance abuse or mental health problems may have additional difficulties with adherence or providers may be reluctant to prescribe certain HIV medications for them at all. Programs to support adherence are limited. Currently, the private pharmacy that provides AIDS Drug Assistance Program (ADAP) services and the ANHC and ANTHC Part C projects all assist patients with adherence. Additional efforts to support adherence (including opportunities for monitored or directly observed therapy as medication regimens are simplified) are needed. Advancements in applied knowledge about "what works" to assist PLWHA with medications management are also needed to guide such efforts.

As mentioned above, mental health issues affect adherence and a person's ability to adopt and maintain safer behaviors. According to the 2009 SCSN, PLWHA with co-existing mental health problems face special challenges. Part B and Part C providers estimate that anywhere from 55% to 80% of PLWHA in care are in need of some level of mental health services. Not all individuals will seek services. The stigma surrounding mental health problems may be perceived as more damaging than that related to HIV. This may be especially true for some rural residents who need to access itinerant providers for mental health services. To make mental health counseling more accessible and normalize mental health services, the lead agency for one Part B consortium offers counseling at its office. Persons with more severe mental health problems have more subsidized service options available to them, but continuity of care may be an issue. Persons with mental

illness who also exhibit disruptive behaviors have limited service options.

Clients with substance abuse problems face special challenges in following medical care schedules and medication regimens. Alcohol is the most prevalent drug of abuse for Alaska PLWHA. Treatment services are available in most areas of the state, although the different levels and types of treatment are not uniformly available in all areas. Some individual factors may not be well accommodated; for example, lengths of stay may be prescribed rather than individually established, services may not be perceived as culturally sensitive, and child care may be unavailable to those who need it. Furthermore waiting lists exist for both inpatient and outpatient services. Access to treatment is problematic for substance abusing individuals with HIV dementia, to those who have disruptive behaviors, and for those who are convicted of a sexual offense.

Part B and C providers report that alcohol detoxification centers are not available or only available to a very few individuals. Also, substance abuse may render other support services inaccessible, and may indirectly complicate medical care (for example, public housing has a zero-tolerance policy for substance abuse; hence abusers may be evicted). Many clients need supportive aftercare and ongoing counseling after substance abuse treatment to assist them in controlling their substance abuse, and special services may be needed to support adherence to HIV (and other) medical regimens. Individuals facing delays in admission to substance abuse treatment face especially difficult challenges to remaining in care.

HIV positive persons who are not accessing medical care are not likely to be accessing prevention services. Factors that contribute

to avoidance of care, identified by Part B and C providers, include:

- **Perceived stigma associated with disclosing HIV status,**
- **Residence in areas where services are not readily available, necessitating travel that is complicated by cost and competing needs, and**
- **Substance abuse issues or disruptive behaviors.**

PLWHA released from incarceration in Anchorage receive logistic and financial assistance to access medical care and medications, as well as other supportive services upon release. However, this pre-release case management is not routinely available in correctional facilities elsewhere in the state.

CDC estimates that 25% of persons infected with HIV have not been tested and are thus unaware of their HIV status. Diagnosis as early as possible is critical for initiating care, both to prevent disease progression and to decrease disease transmission.

Additionally, HIV and STD co-morbidity can increase the risk of HIV transmission. Low-cost, accessible services for STD diagnosis and treatment make an important contribution to HIV prevention by (a) reducing STD morbidity, which is a risk factor for HIV transmission, and (b) reaching persons for whom HIV counseling and testing may be appropriate, but who might not otherwise seek out these services.

Prevention Services

State-funded Interventions under the CDC Cooperative Agreement

Partner services, including field-based HIV counseling and testing, carried out by the HIV/STD Program are funded under the

CDC Cooperative Agreement through 2010. In Anchorage, the Four A's has implemented an adaptation of the MPowerment model with outreach and single group sessions for PLWHA. ANTHC receives prevention funding to provide individual health education/risk reduction (HE/RR) in the context of medical care. The Municipality of Anchorage Reproductive Health Clinic is funded under the CDC Cooperative Agreement to conduct HIV counseling and testing in community settings and to conduct STD partner services and testing. HIV prevention funds also partially support public health nursing positions (historically in Fairbanks, Juneau and Bethel) to provide HIV counseling and testing and HIV/STD partner services.

HIV-specific Services Directly Funded by Federal Agencies

The Ryan White HIV/AIDS Treatment Modernization Act of 2006 authorizes federal funding to (1) increase the availability of primary health care and support services, (2) reduce utilization of more costly inpatient care, (3) increase access to care for underserved populations, and (4) improve the quality of life for persons living with HIV disease. Several entities in Alaska receive Ryan White funding under different parts of the Act. Part B of the Act funds the State of Alaska's purchase of medical services, medications, and supportive services such as case management that help to enable low income PLWHA to participate in medical care. The Four A's, with offices in Juneau and Anchorage, receives Part B Act funds to serve clients statewide, except for Fairbanks and surrounding Interior communities, which are served by the Interior AIDS Association in Fairbanks. Ryan White services include a prevention counseling component and other support services that

help HIV-positive persons reduce their risk of transmission.

There are two recipients of Ryan White Part C Early Intervention Services (EIS) funding in Alaska: the Anchorage Neighborhood Health Center (ANHC) and the Alaska Native Tribal Health Consortium (ANTHC). ANHC provides comprehensive primary health care for individuals living with HIV disease. Part C services include: risk-reduction counseling, antibody testing, medical evaluation, and clinical care; antiretroviral therapies; protection against opportunistic infections; and ongoing medical, oral health, nutritional, psychosocial, and other care services for HIV-infected clients; case management to ensure access to services and continuity of care for HIV-infected clients; and attention to other health problems that occur frequently with HIV infection, including tuberculosis and substance abuse.

ANTHC receives Ryan White Part C funding for Early Intervention Services to develop and provide HIV/AIDS case management, and treatment for Alaskan Natives and rural Alaskans. A centralized clinical team is located in Anchorage, and hub site coordinators in Anchorage, Bethel, Fairbanks, Juneau, and Sitka provide regional case management. The EIS team provides program services, such as consultation, collaborative patient case management, and HIV clinics. Case management for HIV-positive patients includes prevention counseling in addition to coordination and referrals for medical and counseling services.

State-funded Services

The State Virology Laboratory provides HIV antibody and confirmatory tests at no cost to public and private providers. HIV counseling and testing, and STD diagnosis

and treatment, are provided at most state-funded Public Health Nursing Centers and by public health nurses at tribal health clinics under PL93-638 contracts with the state. Public health nurses also work closely with HIV/STD Program staff to carry out partner notification activities in rural communities.

Service Gaps

Long-term supportive services to help PLWHA adopt and maintain healthy behaviors that prevent transmission of HIV and prevent progression to AIDS are needed. Behavioral intervention models specifically designed for HIV-positive persons are currently only available in Anchorage.

Outside of Anchorage, group interventions are infeasible due to low HIV/AIDS prevalence and consumer concerns regarding disclosure of their serostatus to others in the community. Client-centered individual prevention counseling is needed. Individual risk reduction counseling for HIV positive persons in the context of Ryan White services is available in Fairbanks and Juneau, and in two rural hubs (Sitka and Bethel) served by the Alaska Native Tribal Health Consortium Early Intervention Services.

Continued funding—more importantly, increased funding—is needed for HIV and STD partner services statewide.

The 2007-2009 *Alaska HIV Prevention Plan* emphasized the importance of soliciting input for the 2010-2012 *Plan* from three groups in particular: men who have sex with men (MSM), at-risk females, and people living with HIV/AIDS (PLWHA). Having successfully concluded surveys among the first two groups, the Section turned to PLWHA, so that their insights, suggestions

and comments can be incorporated into the State of Alaska’s overall HIV prevention strategy for the next three years and beyond. As the first step in this process, the Program conducted a series of focus groups with PLWHA, HIV care providers (i.e. physicians, physicians’ assistants and nurses), and HIV case managers.

Prevailing opinion has long been that individuals who know their status will alter their behavior so as to avoid spreading HIV to non-infected persons²⁵. Evidence to the contrary also exists, however, and evidence from Alaska suggests that whatever positive impact knowing one’s status might have on reducing risk behavior, it is insufficient for all positive persons: partner services interviews reveal that newly-diagnosed persons continue to report unprotected sex with previously-diagnosed individuals who often had not disclosed their serostatus.

Approaches to prevention with positive persons generally fall into two broad categories. The first is to focus on behavioral interventions, i.e. discouraging PLWHA from engaging in risky behaviors such as unprotected sex with HIV-negative persons. The second is to provide care sufficient to ensure that positive persons’ viral loads are reduced as much as possible, leading to a low probability of transmission. In order to determine barriers and opportunities for both sorts of approaches, the needs assessment addressed itself to just these topics, with a particular focus on unmet need.

The needs assessment found the following areas of unmet need:

²⁵ Weinhardt LS, Carey MP, B T Johnson BT, Bickham NL. 1999. Effects of HIV counseling and testing on sexual risk behavior: a meta-analytic review of published research, 1985-1997. Am J Public Health 89: 1397-1405.

- **Mental health services**, along with effective substance abuse treatment, were cited as the most important hurdle to helping PLWHA care for themselves and engage in fewer high-risk behaviors. Issues cited included depression, loneliness and isolation connected to stigma and rejection by potential partners and by society as a whole, as well as a lack of life skills and job skills, and historical and personal trauma. The spectrum of needs is wide and varied; it runs from persons with fetal alcohol spectrum disorder (FASD) in need of special assistance to adhere to medication regimens and engage in self-care, to high-functioning persons who fully understand the risks of behaviors that compromise their own health and put others at risk of contracting HIV, but nevertheless continue to engage in these behaviors. Effective mental health services therefore cannot be reduced to a one-size-fits all approach, and the issue deserves special—and sustained—attention from all stakeholders in HIV prevention efforts.

- **Substance abuse treatment.** Respondents pointed out that a positive diagnosis itself can lead persons to substance abuse in order to deal with the heavy blow imposed by learning that they are positive. Both persons with a pre-existing history of substance abuse and those without such a history may therefore face challenges with substance abuse after diagnosis. The transition from substance abuse treatment, or aftercare, was given special emphasis: lacking life skills or job skills, many persons go through a “revolving door” from treatment centers, to the street, to homeless shelters, to incarceration, and back again. Without addressing underlying issues regarding the ability to

make a livelihood for oneself, and the formation of new support networks, the cycle will continue.

- **Lack of “routinization” of testing.** Undiagnosed positive persons unaware of their status would benefit greatly from HIV becoming a routine part of medical care; however, numerous respondents noted that providers (not HIV specialists) claim that doing so is “not very valuable,” despite the fact that state lab services are free. The importance of provider education was emphasized. Making HIV testing a routine part of medical care would reduce the overall stigma of testing, result in a greater number of positive persons knowing their status, and thus, it is hoped, provide incentive motivation to engage in fewer behaviors that risk transmitting HIV to others.
- **Lack of education, outreach, and public service announcements.** Respondents indicated their concern over this issue in urban areas, but especially emphasized the lack of education regarding HIV in rural areas. Some persons described encounters with individuals who lacked even a basic understanding of how HIV is transmitted, including persons among their own friends and family. Schools, media outlets, and public venues were all cited as locales to be targeted with relevant interventions.
- **Transportation challenges** in both urban areas (involving bus travel) and rural areas (involving a lack of confidentiality, especially in small villages, where travel to regional hubs and urban centers without disclosing the reason for travel to family and friends is suspect). Without access to

transportation that does not involve undue difficulty, PLWHA are unlikely to adhere to care as best they can.

- **A lack of support services tailored to females.** The feeling among female respondents is that CBO clientele is overwhelmingly male, and that they have a hard time fitting in to groups and services. Providers also stated that females tend to put the needs of their families and households before their own needs, de-prioritizing their own care for the care of others.
- **Difficulties with housing and income.** Respondents indicated that SSI benefits are often slow in coming or not forthcoming at all; furthermore, housing in which they are placed by CBOs can be subject to foreclosure, making it necessary for them to move from place to place more often than they would like.
- **Challenges communicating with care providers.** Respondents indicated that providers are often unwilling to listen to their concerns regarding the side effects of medications. At the same time, providers emphasized the importance of clients realizing that their relationships with providers should not be one-sided, and that clients should take an active role in treatment decisions and relevant consultations. Pain management was said to be a particularly contentious area of discussion; one respondent stated explicitly that he turned to alcohol and marijuana owing to the refusal of providers to prescribe pain medication, owing to his past history of intravenous drug use.
- **Life skills and job skills training,** with a particular need for an inter-generational perspective. Providers

stressed the importance of beginning health education, job- and life-skills, including coping skills, training early in the lifespan. If such training is held off until adulthood, when individuals are already set in their ways and beginning to have children themselves, the inter-generational trauma that plays such a significant role in mental health and socioeconomic vulnerability will be perpetuated.

- **Low institutional priority of reproductive and sexual health in the state system.** Providers indicated that these areas seem to be of minimal importance within the hierarchy of the Department of Health and Social Services, creating a significant unmet need for education and outreach in schools, and from Public Health Nursing.

Men Who Have Sex With Men

Indication of Need

The number of new diagnoses of HIV among MSM in recent years (see Chapter 2) indicates that unprotected sex continues to be a significant risk factor for HIV infection in Alaska. The high number of new diagnoses who name as partners positive persons who knew their status prior to engaging in unprotected sex indicates that either not all positive persons disclose their status to their partners, or that complacency regarding transmission risk is widespread. Male-to-male sexual contact continues to account for a greater number of new HIV cases than any other route of transmission.

Partner notification activities conducted by the HIV/STD Program indicate that a number of HIV-positive MSM and the men they name as sex partners do not identify as

gay, highlighting the importance of targeting prevention messages appropriately.

In June of 2006, the HIV/STD Program participated in a CDC Behavioral Assessment Project to conduct an anonymous survey of men who have sex with men in Anchorage. The purpose of this rapid behavioral assessment was to better understand risk behaviors and attitudes toward HIV testing and disclosure of HIV status. The survey employed handheld computers and was conducted by CDC and HIV/STD Program personnel and community volunteers. The survey was fielded over the course of several days during Pride week events in Anchorage, Alaska. HIV testing was provided by the Municipality of Anchorage Reproduction Health Clinic in conjunction with these events. Ninety men between the ages of 18 and 60 completed the survey. Of these, 73 (81%) reported that they had at least one male sex partner in the past 12 months or they self-identified as gay or bisexual. Of these MSM, 55 reported having anal sex with one or more partners during the past 12 months. Sixty-four (88%) of the 73 MSM reported having even been tested for HIV and 36 (49%) had been offered an HIV test in the past 12 months. Eight (11%) of the 73 MSM reported being diagnosed with an STD in the past 12 months. Twenty-two (34%) of 64 respondents without a recently diagnosed STD had been tested for syphilis in the past 12 months.

Rural MSM Strategic Plan

In 2009, the HIV/STD Program contracted with the Department of Health Sciences at the University of Alaska Anchorage (UAA) for the development of a strategic HIV prevention plan for rural MSM²⁶. Though the 2007-2009 and 2010-2012 *HIV*

²⁶ The plan is available on the HPPG website, at <http://www.epi.alaska.gov/hivstd/hppg/>.

Prevention Plans target a number of risk populations, and though a significant proportion of prevention interventions in Alaska are targeted toward MSM, the bulk of services and activities are based in urban areas, potentially leaving rural populations underserved. With this in mind, UAA initiated a needs assessment and surveyed stakeholders across the state to inform the development of the strategic plan.

The key recommendations of the plan are as follows:

- **Promote an integrated model of care**, where health care service providers conduct testing, counseling and education and administer hepatitis vaccinations as needed while the patient is being seen for any health care concern, thus “routinizing” testing.
- **Provide a wide range of HIV testing options** and availability of products and/or services. Universal testing is recommended, in that it would normalize testing and reduce stigmatization.
- **Support health care professionals** in tailoring prevention efforts with case management for individuals diagnosed with HIV.
- **Tailor HIV prevention and related health message strategies** in a broad context and to a general audience, *never* specifically targeting the MSM population.
- **Continue and expand the use of electronic and digital communication** for dissemination of health and HIV prevention messages for health information, testing events,

counseling and support services, appointment reminders.

- **Conduct further studies**, including online studies, to better understand possible HIV prevention interventions in challenging populations and environments.

Prevention Services

State-funded Interventions under the CDC Cooperative Agreement

The Four A’s in Anchorage provides HIV prevention services to young adult MSM in Anchorage through an intervention based on the MPowerment model developed by the UCSF Center for AIDS Prevention Studies (listed in the CDC *Compendium of Interventions with Evidence of Effectiveness*). MPowerment is a peer-led program that seeks to address the needs of young gay and bisexual men by providing HIV prevention services within the context of social activities, formal and informal outreach, a safe community center or gathering spot, and small group sessions. Peer program coordinators conduct outreach in bars, public sex environments, and through Internet chat rooms, reaching MSM including those who do not identify as gay.

The Municipality of Anchorage, Four A’s and Interior Aids Association conduct targeted HIV counseling and testing in non-clinical settings readily accessible to men. The Alaska Native Tribal Health Consortium provides an adaptation of the MPowerment model for HIV prevention for Alaska Native MSM in Anchorage.

HIV partner services, offered by public health personnel from the HIV/STD program, provide prevention counseling and care referrals to newly-diagnosed MSM, and follow-up notification and HIV counseling

and testing for named partners. This service is available statewide.

Service Gaps

MSM-specific behavioral interventions and MSM-targeted HIV testing in community settings are only available in Anchorage and Fairbanks. With the exception of limited private funding to one of the Anchorage CBOs, all funding for these interventions is from the State under the CDC cooperative agreement and expires mid-2010. Prevention interventions for MSM are needed in other communities besides Anchorage.

Injection Drug Users

Indication of Need

Users of illicit drugs need prevention interventions that address the risk of HIV transmission through both injection practices and unsafe sexual practices. Drug users who do not identify as MSM may have a low perception of risk of sexual transmission and are not likely to avail themselves of interventions designed for MSM, and heterosexual men and women at increased risk may not consider themselves to be at risk, or take action to reduce their risk.

In interviews and focus groups with female drug users conducted in Anchorage between 2001 and 2002, respondents reported infrequent use of condoms with casual partners or when exchanging sex for money or goods. Women were even less likely to use condoms with their main male partners, even knowing of their male partner's drug use. Women also indicated a relationship between their partner's substance abuse and coercive sex. The research concluded that there is a need to increase the availability of HIV testing, condoms and educational material, and awareness-raising interventions for female drug users and women with drug-using partners.

In 2002, focus group input from active IDUs in Anchorage indicated knowledge of the HIV and viral hepatitis transmission risk from sharing injection equipment. Most participants agreed that paraphernalia sale laws were not a major obstacle to purchasing needles and syringes. However, stigma and individual pharmacy policies and practices discourage purchase at pharmacies, leading participants to express interest in a syringe exchange program. Fortunately, 2007 saw the launch of the Anchorage Syringe Exchange, the Four A's needle exchange program, which has met with a strong response from IDUs. Also, Four A's has recently received a \$12,000 grant from the National AIDS Fund to expand syringe exchange to Juneau.

During the 2010-2012 period, the HIV/STD Program will conduct a needs assessment among IDUs in order to update the 2002 assessment, and to inform program priorities regarding this important population.

Prevention Services

State-funded Interventions under CDC Cooperative Agreement

The Municipality of Anchorage, Alaskan AIDS Assistance Association and Interior AIDS Association are funded to provide counseling, testing and referral services for IDU; IAA is also funded to carry out targeted street outreach.

State-funded Services

The Alaska Division of Behavioral Health (DBH) requires that all individuals entering substance abuse treatment have access to infectious disease screening, risk reduction education, counseling, and medical services, including diagnosis and treatment for HIV. Since 1997, notices of grant awards for funding for substance abuse treatment programs have contained the following HIV-related requirements: (a) referrals for

counseling, testing, and treatment; (b) staff member trained in risk reduction; and (c) HIV issues addressed in client education and treatment plans. Furthermore, requirements state that IDUs have priority access to treatment, must be admitted no later than 120 days after requesting treatment, and must receive interim services (e.g., counseling and education about HIV and TB, referrals for HIV and TB testing, referrals for prenatal care for IDUs who are pregnant) while awaiting treatment.

DBH funds two methadone treatment programs, one in Anchorage and one in Fairbanks (co-located with Interior AIDS Association). The STOP AIDS Project, within Anchorage-based Center for Drug Problems (CDP), offers individual risk reduction counseling to all CDP clients and provides anonymous HIV counseling and testing to clients and the public.

Non-public Funding

Northern Exchange, funded by private foundations and donations, provides clean syringes, condoms, and referral information about HIV prevention and drug treatment resources to active IDU in Fairbanks and Anchorage. Northern Exchange relies heavily on secondary exchange whereby primary exchangers pick up new syringes and return used syringes for other IDU in their social networks. Because of stigma and confidentiality concerns, and dispersed rather than concentrated networks, this approach has proven more acceptable to users than requiring them to interact individually with the program. In Fairbanks, Northern Exchange distributes approximately 20,000 clean syringes each year and collects about 95% of these for safe and appropriate disposal.

The Anchorage Syringe Exchange (ASE), operated by the Four A's, opened in 2007.

Fiscal Year 2008 saw 2087 exchanges with 405 unique exchangers at the ASE; 65,482 syringes were disseminated and 29,945 returned, for a return rate of 45.73%, and 87 HIV tests were conducted. During the first half of FY 2009, 2140 exchanges were conducted with 138 unique exchangers; 59,216 syringes were disseminated and 31,056 returned, for a return rate of 52.45%, and 65 HIV tests were conducted. The bulk of ASE funding comes from unrestricted funds raised by the Four A's during fundraisers; total operating costs for materials and staff time total roughly \$12,000 per year. As noted above, the Four A's recently received funding from the National AIDS Fund to initiate syringe exchange in Juneau.

Service Gaps

IDU-specific interventions are most feasible in the larger cities – Anchorage, Fairbanks, and Juneau. Due to stigma and confidentiality concerns, recruitment and retention of active drug users for interventions that involve group sessions is problematic. Individual-level interventions that rely on social networks may have greater success in engaging active drug users both in urban settings and in areas where users are more widely dispersed. Harm reduction programs providing sterile syringes and opioid substitution therapies are needed; there is no IDU outreach in less populous areas of the state, and methadone maintenance programs exist only in Anchorage and Fairbanks.

Heterosexual Women at Increased Risk

Indication of Need

Epidemiologic data for Alaska indicate that minority females, especially Alaska Native females, are disproportionately affected by STD and HIV. Low-cost, accessible

services for STD diagnosis and treatment make an important contribution to HIV prevention by (a) reducing STD morbidity, which is a risk factor for HIV transmission and (b) reaching women for whom HIV counseling and testing may be appropriate but who might not otherwise seek out HIV testing and risk reduction counseling.

AIDS service organizations report that many females whose sole risk is heterosexual contact and who test HIV-positive, or who are named as a partner of an HIV-positive male, are unaware of their risk and of their partner's status. Because women often do not perceive themselves or their sexual partners to be at risk for HIV, partner notification services are particularly important for early detection of HIV in positive women, and for providing risk reduction counseling to HIV-negative females at high risk.

HIV prevention efforts should be incorporated into services reaching women at increased risk, including STD clinics, substance abuse treatment programs, correctional facilities and community residential centers (pre-release programs), and programs for homeless and victimized females.

Routine, voluntary HIV testing of pregnant females during prenatal care, in addition to facilitating prevention of perinatal transmission, is a mechanism for reaching females who do not perceive themselves at risk or who have deferred testing for other reasons. Routine prenatal HIV testing appears to be well accepted by providers and pregnant females in Alaska. As noted in Chapter Three, PRAMS data indicate that in 2004, 2005, 2006 and 2007, respectively, 76.2%, 74.9%, 75.2%, and 71.8% of females delivering live births in Alaska reported that their prenatal care providers discussed HIV

testing with them²⁷. During the same time period, 60.1%, 59.8%, 62%, and 58.1% of females delivering live births in Alaska reported having an HIV test at any point during their pregnancy or delivery²⁸.

From December 2006 through March 2007, the HIV/STD Program surveyed 232 women to assess their needs and preferences for HIV prevention services. The purpose of the project was to inform the efforts of the HPPG and the HIV/STD Program, its grantees, and other state agencies and community partners that provide health and social services for women. Women surveyed were very knowledgeable about HIV transmission, risk reduction, and HIV testing resources. They also indicated high levels of social support for HIV concerns, and confidence in their ability to talk about and negotiate safer behaviors with sex partners. These high levels of knowledge, self-efficacy, and social support contrasted with a relatively low level of perceived vulnerability, a key component of behavior change.

Many of the women with a low perception of risk in fact reported a constellation of behavioral risk factors and a lack of prophylactic use, even with male partners whose HIV status was unknown, and despite these partners' known, or suspected, risk factors. Inaction about HIV risk reduction and testing is a logical consequence of believing one is not at risk for HIV. The challenge is how to motivate women to realistically evaluate their risks and to support their decisions to adopt safer behaviors.

²⁷ Memorandum, Maternal and Child Health Epidemiology Unit, Section of Women's, Children's and Family Health, Division of Public Health, Alaska Department of Health and Social Services. March 2009.

²⁸ *Loc.cit.*

To that end, community organizations and providers of health and social services can help make risk reduction and voluntary HIV testing a routine part of the lives of females. Women in the survey indicated an interest in attending presentations about sexual health and HIV/STD prevention. Women with children can be motivated to attend forums focused on educating their children on these topics.

Women in the survey were receptive to having their health care providers talk with them about sexual health and HIV/STD prevention; this is compatible with recent recommendations by the Centers for Disease Control and Prevention on routine HIV testing of adults, adolescents, and pregnant females in health-care settings. HIV education is best coupled with individualized risk assessment and motivational enhancement when feasible. This can take place in the context of routine reproductive health care, in association with HIV testing, and can also be incorporated into treatment plans for women in substance abuse treatment and pre-release counseling for incarcerated women. All agencies and community organizations can participate in routinizing HIV prevention and testing by displaying educational materials and resource information, thereby sending a clear message that all women should think about HIV prevention.

Prevention Services

State-funded Interventions under the CDC Cooperative Agreement

The Four A's is funded to conduct single-session group presentations in connection with counseling, testing and referral services (CTRS) in correctional facilities, and is also funded for targeted outreach in Juneau. The Interior AIDS Association (IAA), in Fairbanks, conducts street outreach among females, as well as multi-session health

education/ risk reduction groups for females in substance abuse treatment programs and shelters. The Municipality of Anchorage Reproductive Health Clinic, Four A's, and IAA are funded to conduct HIV counseling and testing in community venues. The Municipality is also funded to provide STD and HIV partner services in Anchorage. The HIV/STD Program provides HIV partner services for all persons with a new diagnosis of HIV/AIDS and their sexual and needle-sharing partners. The HIV/STD Program provides STD partner services for persons with a newly diagnosed STD in the Anchorage Bowl, including persons incarcerated in correctional facilities.

The Alaska Youth and Parent Foundation, in Anchorage, is funded to conduct the Peer Outreach Worker Education and Referral (POWER) Program, which hires and trains teenagers to provide community referrals, HIV/STD education, information, and mentoring to youth in Anchorage. Group HE/RR sessions using the *Making Proud Choices (Be Proud/Be Responsible!)* curriculum are offered by CBOs at agencies serving youth at increased risk in Anchorage and Fairbanks. Group health education/risk reduction sessions using a curriculum with evidence of effectiveness are available in substance abuse treatment programs and youth detention facilities conducted mostly by staff, but augmented by sessions conducted by CBOs funded by the state under the CDC cooperative agreement.

HIV-specific Services Directly Funded by Federal Agencies

ANTHC is funded through 2010 to conduct an adaptation of the Community PROMISE (Peers Reaching Out and Modeling Intervention Strategies for HIV/AIDS Risk Reduction in their Community), intervention, included in the CDC's *Compendium*, among Alaska Native females

in the Anchorage area aged 21-35 years. Community PROMISE employs peer volunteers to disseminate role model stories via a range of media, detailing community members' effective adoption of risk-reducing behaviors. ANTHC incorporates messages of cultural pride in its materials, thus targeting not only risk behaviors, but the internalized messages of cultural shame and inferiority that can themselves lead to low self-valuation and a lack of incentive to reduce high-risk behaviors. The goal of the project is to reduce unprotected sex and increase HIV/STD testing.

State-funded Services

Women in substance abuse treatment programs statewide receive HIV information and access to HIV and STD testing. The Division of Behavioral Health (DBH), which includes the former Division of Alcoholism and Drug Abuse (ADA), requires that all individuals entering substance abuse treatment have access to infectious disease screening, risk reduction education, counseling, and medical services, including diagnosis and treatment for HIV.

Public Health Clinics statewide provide women's reproductive health care including STD testing and partner follow-up and HIV counseling and testing on request.

In 2009, RuralCAP is in the third year of a three-year funding cycle to develop a social marketing campaign targeting rural Alaskans, including heterosexual women.

Service Gaps

Health education/risk reduction group sessions for women at increased risk are available only in Fairbanks, through the Interior AIDS Association, which is receiving state funds under the CDC cooperative agreement through mid-2010. HIV counseling and testing for women in

community settings is provided by the Four A's, IAA and Municipal of Anchorage Reproductive Health Clinic. These activities are currently funded only through mid-2010. STD partner services are not available in all areas of the state, and culture- and gender-specific programming and materials are needed for ethnic minority women in both urban and rural communities. Street and community outreach for at-risk youth is available only in Anchorage and Fairbanks.

Heterosexual Men at Increased Risk

Indication of Need

Fourteen percent of HIV cases reported in Alaska with a date of diagnosis from 2000-2008 were among men for whom the only disclosed risk factor was sexual contact with an HIV-positive woman, or who came from a country with a high prevalence of heterosexually transmitted HIV. Men in minority ethnic populations, especially Alaska Natives and African-American and other black persons, are overrepresented in HIV and STD case rates in Alaska. Since some STDs are often asymptomatic in men, STD partner notification is an important service for men exposed to an STD who are not aware of their infection. STD partner notification also facilitates prevention counseling and HIV testing for those for whom it is appropriate. Men who do not identify as MSM or IDU appear to have a low perception of HIV risk and are unlikely to seek out prevention interventions including HIV counseling and testing. Rather, HIV prevention efforts must be incorporated into services reaching men at increased risk such as STD clinics, substance abuse treatment programs, correctional facilities and community residential centers (pre-release programs), and services for homeless men.

State-funded Interventions under the CDC Cooperative Agreement

Funded interventions targeting other priority populations reach heterosexual men at increased risk, though they may not target them specifically. The Municipality of Anchorage, Four A's and IAA conduct HIV counseling and testing of incarcerated persons in community release centers and testing in community venues to reach MSM also reach men who identify as heterosexual. The Four A's is funded to conduct single-session group presentations in connection with counseling, testing and referral services (CTRS) in correctional facilities, and also for targeted outreach in Juneau. IAA conducts targeted street outreach as well. HIV and STD partner services conducted by the HIV/STD Program and by the Municipality of Anchorage are an essential mechanism for bringing HIV and STD testing and risk reduction counseling to high-risk men with a low perception of risk.

The Alaska Youth and Parent Foundation in Anchorage is funded to conduct the Peer Outreach Worker Education and Referral (POWER) Program, which hires and trains teenagers to provide community referrals, HIV/STD education, information, and mentoring to youth in Anchorage. Group HE/RR sessions using the *Making Proud Choices (Be Proud/Be Responsible!)* curriculum are offered by CBOs at agencies serving youth at increased risk in Anchorage and Fairbanks. Group health education/risk reduction sessions using a curriculum with evidence of effectiveness are available in substance abuse treatment programs and youth detention facilities conducted mostly by staff, but augmented by sessions conducted by CBOs funded by the state under the CDC cooperative agreement.

HIV-specific Services Directly Funded by Federal Agencies

None.

State-funded Services

Men in substance abuse treatment programs statewide receive HIV information and access to HIV and STD testing. The Division of Behavioral Health (DBH), which funds substance abuse treatment programs statewide, requires that all individuals entering substance abuse treatment have access to infectious disease screening, risk reduction education, counseling, and medical services, including diagnosis and treatment for HIV.

In 2009, RuralCAP is in the third year of a three-year funding cycle to develop a social marketing campaign targeting rural Alaskans, including heterosexual men.

Gaps

There are currently no HIV prevention activities specifically targeting men who identify as heterosexual. There is a need to increase awareness of HIV risk related to high-risk sexual behavior associated with substance abuse in Alaska, as well as among men who may be at increased risk due to drug use and sexual activity but who, because of their sexual identity, have a low perception of risk. As in the case of heterosexual females, street and community outreach for at-risk youth is available only in Anchorage and Fairbanks; funding for this program expires in mid-2010. STD partner services help identify persons with risk behaviors for whom HIV testing is appropriate, but STD partner services are not available in all areas of the state.

Supplement: Incarcerated Persons Needs Assessment

During the 2007-2009 planning cycle, the HIV/STD Program commissioned Behavioral Health and Research Services, at the University of Alaska–Anchorage, to conduct an assessment of the prospects for expanding HIV prevention services for correctional populations in Alaska. The goals of the report were to:

- Address the need for HIV/AIDS prevention activities for people involved in the criminal justice system in Alaska
- Describe evidence-based approaches to addressing HIV/AIDS-prevention within the context of the criminal justice system
- Describe opportunities to address HIV/AIDS-prevention for people involved in the criminal justice system in Alaska.

The report identified the following **barriers** to implementation of HIV prevention activities among correctional populations:

- **Low priority.** Just as people being released from prison or jail view HIV-prevention as a low priority in comparison to immediate needs for housing, employment, family reunification, drug and alcohol treatment, and avoiding reincarceration, people who work within the correctional system or with recently-released offenders view HIV-prevention as a low priority.
- **Lack of resources.** With the correctional population growing

steadily and resources for institutional treatment programs shrinking, with the caseload for institutional and field probation and parole officers growing, and with offenders presenting with complex needs (e.g., mental illness, addiction, FASD), correctional employees and administrators do not see the need to allocate scarce resources to a problem that, given the low prevalence of HIV in Alaska, is not seen as immediate and pressing.

- **The geographic diversity, sparse population, resource scarcity, and absence of roads** in rural and remote areas of the state. Services are available in the major urban areas of the state (Anchorage, Fairbanks, Juneau, and the Mat-Su Valley), somewhat available in hub communities, and sparse and largely unavailable in villages and smaller communities. This greatly complicates discharge planning and criminal justice supervision for people on probation or parole.

The report also identified the following **opportunities**:

- **Embedding HIV-prevention interventions into drug and alcohol treatment programs** offered through the Alaska Department of Corrections (DOC). These interventions have evidence of effectiveness and Alaska is currently building a new, coordinated and evidence-based system of treatment using community agencies as contractors. The specific interventions could be selected from the range of options described in this report and tailored to the needs of

people in the treatment programs and resources and staffing available in the community agencies contracted to provide treatment.

- **Identifying community agencies, including tribal health and social service entities, to train to conduct the Project START intervention.** Project START is the only DEBI for correctional populations. It can be adapted for specific correctional populations, such as females, people with special needs (e.g., FASD, mental illness, people in rural and remote areas).
- **Transitional interventions** – those that occur immediately prior to release and transition into the community after release – have the strongest evidence base. Several brief interventions (e.g., Brief Negotiation Intervention and a brief gender- and race-matched DVD-administered intervention) were described in this report. These interventions have enough supporting evidence to consider implementing them at the point of release in Alaska DOC facilities, as a substitute for HIV-counseling and testing activities.
- **Peer-led interventions.** There is currently a movement toward peer-led interventions, which provide credible and culturally appropriate “messengers” for HIV prevention information. Peer-led interventions have ranged from HIV-orientation for people entering the criminal justice system, to delivering interventions at the point of release, to providing support in the

community after release. It would take time and effort to work with the Alaska DOC to implement a peer-led intervention. However, this is an avenue to work toward.

- **Investigate the potential for collaboration with ANTHC and the Tribal Health and Social Services System.** Interest in the potential role of drug, wellness, and specialty courts in HIV prevention for people in the criminal justice system is increasing. These courts operate to divert individuals from incarceration through a court-supervised program of rehabilitation and therapy, with the option of criminal justice sentencing if the offender does not succeed in diversion activities. Given the association between alcohol and drug abuse and HIV risk, these courts, which combine court supervision and treatment for alcohol and drug dependence and mental illness, could provide the opportunity to incorporate HIV prevention activities into treatment and supervision.
- **Investigate the potential for collaboration with one of the ten Drug, Wellness, and Specialty Courts in Alaska.** The tribal health system in Alaska is a potentially important collaborator in enhancing HIV prevention for people in the criminal justice system. Each regional corporation has a health system and a social services system that could be mobilized for more intensive HIV prevention activities, such as case management interventions for individuals after release from prison or individuals on probation and parole. Case management interventions (e.g.,

Project START) are showing promise in reducing HIV risk in criminal justice populations but these interventions require collaboration with community agencies that are capable of providing case management and are familiar with local resources. Other entities, such as the Alaska Native Justice Center (ANJC) provide volunteer case management services for some women being released from the Hiland Mountain Correctional Facility in Eagle River. Approaching entities that provide case management and expanding their scope of services to include HIV prevention would enhance availability of HIV prevention services in criminal justice settings.

CHAPTER FOUR: PRIORITY POPULATIONS

THE CDC'S *HIV PREVENTION Community Planning Guidance* states that, "Target populations should include populations in which the most HIV infections are occurring or populations with the highest HIV incidence," and should consider "the risk behaviors and prevention needs of People Living with HIV/AIDS (PLWHA)." Through an evidence-based process, using data from the epidemiologic profile (see Chapter Two) and the community services assessment (see Chapter Three) and their knowledge of Alaskan communities, the HPPG determined the highest-priority populations for prevention services in Alaska. This brief chapter summarizes the key data on these priority populations, and justifies their prioritization. Appendix A presents tables showing the factors used by the HPPG to prioritize populations.

The five priority populations for the 2010-2012 planning period, in order, are:

- 1. HIV-Positive Persons;**
- 2. Men who have Sex with Men (MSM);**
- 3. Injection Drug Users (IDU);**
- 4. Heterosexual women at increased risk;**
- 5. Heterosexual men at increased risk.**

No. 1 HIV-Positive Persons

The CDC wisely mandates that all community planning groups make HIV-positive persons their number-one priority population. The availability of increasingly effective therapies for HIV disease has contributed significantly to longer, healthier lives for persons with HIV, giving new importance to prevention work among PLWHA. It is critical to increase the proportion of infected individuals who are aware of their HIV status and who participate in medical care, treatment, and other services supportive of primary and secondary prevention. Primary prevention refers to helping persons avoid contracting HIV infections and secondary prevention refers to reducing or alleviating adverse consequences among persons who are living with HIV disease. Though a significant proportion of persons who know that they are positive adopt safer sex behaviors reduce the likelihood of transmitting HIV, data from national studies and HIV partner notification services conducted by the state HIV/STD Program indicate that a number of positive persons who know their status continue to expose others to HIV through unsafe behaviors.

No. 2 Men who have Sex with Men

Cases transmitted through male-to-male sexual contact, whether among MSM or MSMW, constituted 48% (n=605) of all cases reported in Alaska since 1982, 63% (n=195) of all diagnoses made from 1982-1990, 47% (n=252) of all diagnoses reported in Alaska from 1991-1999, and 38% (n=158) of all diagnoses made from 2000-2008. Male-to-male sexual contact with concurrent injection drug use (MSM/IDU) was responsible for 8% (n=95) of all cases reported in Alaska since 1982, 11% (n=33) of all diagnoses made from 1982-1990, 7% (n=38) of all diagnoses made from 1991-

1999, and 6% (n=24) of all diagnoses made from 2000-2008. Male-to-male sexual contact remains the most significant transmission category for males of all races and ethnicities; furthermore, notable racial and ethnic disparities in new infections have emerged in recent years, with diagnoses in Alaska Native and American Indian, and in African-American and other black males outpacing those in white males. HIV-positive MSM and their partners continue to be diagnosed with a range of sexually transmitted infections, indicating a need for prevention services within the MSM community.

No. 3 Injection Drug Users (IDU)

Not counting MSM/IDUs, injection drug use was responsible for 14% (n=179) of all cases reported in Alaska since 1982, 9% (n=29) of all diagnoses made from 1982-1990, 17% (n=90) of all diagnoses made from 1991-1999, and 14% (n=60) of all diagnoses made from 2000-2008. Syringe exchange and access continue to be important prevention needs among IDUs; despite the opening of the Anchorage Syringe Exchange in 2007 and its slated expansion to Juneau, and the ongoing work of Northern Exchange in Fairbanks, a need for prevention services targeting IDUs persists.

No. 4 Heterosexual Women at Increased Risk

Heterosexual contact is the most significant transmission category among women, contributing to 55% of all cases in females reported in Alaska from 1982-2008, 65% (n=20) of diagnoses in females from 1982-1990, 46% (n=50) of diagnoses in females from 1991-1999, and 62% (n=64) of diagnoses in females from 2000-2008. Again, racial and ethnic disparities are significant: 38% of cases diagnosed in

females from 2000-2008 were among Alaska Native and American Indian females, though they constituted roughly 10% of Alaska's population during this period. Similarly, 14% of diagnoses in females from 2000-2008 were among African-American and other black females, though they constituted roughly 3% of Alaska's population. HIV/AIDS diagnoses among females for which heterosexual contact was identified or reported as the category of exposure accounted for 10.6% (n=134) of all HIV/AIDS diagnoses (N=1,261) reported in Alaska since 1982.

No. 5 Heterosexual Men at Increased Risk

Though not as significant a transmission category in men as in females, heterosexual contact continues to contribute to infection in males. Though heterosexual transmission was identified or reported as the category of exposure for just 6% (n=60) of diagnoses in males from 1982-2008, <1% (n=1) of all cases diagnosed in males from 1982-1990, and 4% (n=15) of all cases diagnosed in males from 1991-1999, it accounted for 14% (n=44) of all cases diagnosed in males from 2000-2008. Men who do not identify as MSM or IDU appear to have a low perception of HIV risk and are unlikely to seek prevention interventions including HIV counseling and testing. Rather, HIV prevention efforts must be incorporated into services reaching men at increased risk such as STD clinics, substance abuse treatment programs, correctional facilities and community residential centers (pre-release programs), and services for homeless men. HIV/AIDS diagnoses among males for which heterosexual contact was identified or reported as the category of exposure accounted for 4.8% (n=60) of all HIV/AIDS diagnoses (N=1,261) reported in Alaska since 1982.

CHAPTER FIVE: INTERVENTIONS

Information on Effective Interventions

THE AIM OF INTERVENTIONS SELECTED by the HPPG is to identify as many cases of previously undiagnosed HIV infection, and to prevent as many new infections, as possible. This chapter details a range of interventions that have been evaluated by the CDC and its Prevention Research Synthesis Project (PRS) for evidence of effectiveness in reducing risk behaviors associated with HIV transmission, including those considered for recommendation in the *2010-2012 Alaska HIV Prevention Plan*. Interventions with a sound basis in social and behavioral science theory and demonstrated effectiveness in influencing behavior change, or those recommended by CDC as an essential component of a comprehensive HIV prevention program, were emphasized in consideration for recommendation.

“The set of prevention interventions or activities for prioritized target populations should have the potential to prevent the greatest number of new infections.”

CDC, 2003

The purpose of this chapter is to acquaint readers with the full portfolio of HIV prevention interventions from which the HPPG could choose in deciding upon recommended interventions (Chapter Six).

Behavioral Interventions: Core Theories of Behavior Change

To date, the bulk of domestic HIV prevention efforts have focused on behavioral interventions inspired by a range of theories regarding behavior change, particularly what personal and environmental factors influence behavior, and how these factors can be modified by public health efforts. Theories used in HIV prevention are drawn from several disciplines, including psychology, sociology and anthropology. A theory becomes formalized when it is carefully tested, when the results of these trials are found to be repeatable in a number of different settings, and the theory is found to be generalizable to various communities^{29,30}.

Behavioral HIV prevention interventions are informed by theories that include the Social Cognitive Theory/Social Learning Theory, Information Theory, Motivation Theory, Behavioral Skills, Stages of Change/Transtheoretical Model, Theory of Gender and Power, Diffusion of Innovation Theory, Social Action Theory, Theory of Reasoned Action, Health Belief Model, and Social Network Theory. Behavioral science research (*ibid.*) has shown that a person is more likely to lower his or her risk of HIV infection if he or she:

- Believes that the advantages of making a change in behavior are greater than the disadvantages;
- Has formed a strong intention to change;

²⁹ Goldman K, Schmalz K. 2001. Theoretically speaking: overview and summary of key health education theories. *Health Promotion Practice* 2: 277-281.

³⁰ Goldman K, Schmalz K. 2001. Theoretically speaking: overview and summary of key health education theories. *Health Promotion Practice* 2: 277-281.

- Has the skills to perform the behavior;
- Believes he or she can make a change;
- Believes that the changed behavior will more likely produce a more positive than negative emotional response;
- Believes that the performance of the new behavior is consistent with his or her self-image;
- Perceives that there is social support for the behavior change; and
- Experiences no environmental barriers blocking the behavior change.

Though they are the best-studied, behavioral interventions are not the only type of intervention in the repertoire of HIV prevention efforts. Additional types of interventions include structural interventions and biomedical interventions, both discussed below. These latter two types of intervention are presented not as recommendations for CBOs reading this plan (biomedical interventions, for instance, are largely still in the planning and evaluation stages), but simply to broaden the reader's perspective on current and future directions in HIV prevention.

Structural Interventions

Interest in structural interventions, driven largely by a growing body of research in health disparities and social epidemiology, has increased greatly in recent years³¹. In

³¹For useful overviews of structural interventions, see Sumartojo E. 2000. Structural factors in HIV prevention: Concepts, examples, and implications for research. *AIDS* 14: S3-S10; see also Blankenship KM, Friedman SR, Dworkin S & Mantell JE. 2006. Structural interventions: Concepts, challenges and opportunities for research. *Journal of Urban Health* 83(1): 59-72. The UCSF Center for AIDS Prevention Studies also has a useful factsheet on structural

short, structural interventions look to impact the social, economic and political context in which individuals find themselves situated, so as to alter the constraints on choices impacting health behaviors; examples include the repeal of laws requiring individuals possessing syringes to have a prescription for them, and providing housing for homeless PLWHA. Discrimination, poverty, and homelessness, among many structural factors, constitute the targets of structural interventions.

On this view, the behavioral paradigms listed above—especially the health belief model—all share one major shortcoming: they do not take proper account of the macroscale constraints on people's choices and are therefore of limited use. Choices are not made by generic, interchangeable individuals in a vacuum, devoid of external influence. Rather, a person's socioeconomic context constrains the range of choices available to him or her, and can raise the cost of making healthy decisions that one might otherwise consider highly desirable. For instance, while a commercial sex worker might not actively desire to have multiple episodes of unprotected sex every day, she may have no other realistic option for her livelihood. Advocates of structural interventions argue that, though behavior change theories might pay lip service to the importance of "environmental barriers" to behavior change, when the scope of "environmental barriers" is widened to include the social and political factors mentioned above, establishing any situation in which the eight criteria for effective behavior change actually hold becomes much more difficult.

Structural interventions highlight the importance of multi-disciplinary approaches

interventions, available online at <http://www.caps.ucsf.edu/pubs/FS/structural.php>.

to public health practice, and collaboration with the fields of social work, sociology, public policy and law, among others. Indeed, a number of CBOs across the country, and in Alaska, have already recognized this, through efforts including the provision of housing and other support services to persons living with HIV and AIDS (PLWHA), reducing their socioeconomic vulnerability and placing them in a stronger position to care for themselves and engage in less risky behaviors³².

Biomedical Interventions

Another set of interventions that has received considerable attention in recent years is biomedical interventions, including large-scale, population-level dissemination of antiretroviral treatment, male circumcision, pre-exposure prophylaxis (PrEP), and—though still in the experimental phase, and showing discouraging results—the use of microbicides.

The rationale behind large-scale antiretroviral treatment is the same as that behind efforts to get positive persons into care and to help them adhere to their treatment regimens: with treatment, PLWHAs' viral loads are reduced, and they are therefore less likely to transmit HIV when engaging in unsafe sex and other behaviors that pose a risk of transmission³³.

³² Wolitski RJ, Kidder DP, Pals SL, Royal S, Aidala A, Stall R, Holtgrave DR, Harre D, Courtenay-Quirk C et al. 2009. Randomized trial of the effects of housing assistance and the health and risk behaviors of homeless and unstably housed people living with HIV. *AIDS and Behavior* (online, Dec. 1, 2009). Available online at <http://www.springerlink.com/content/8n461h526418863g/>.

³³ De Cock KM, Gilks CF, Lo YR, Guerma T. 2009. Can Antiretroviral Therapy Eliminate HIV Transmission? *Lancet* **373**:7–9; Granich RM, Gilks CF, Dye C, De Cock KM, Williams BG. 2009.

A number of studies³⁴ have found that circumcision reduces the risk of acquiring HIV in heterosexual males, but evidence regarding any impact of male circumcision on the transmissibility of HIV to females, and of the risk of HIV acquisition by MSM, is weak at best³⁵. The efficacy of circumcision is thought to work through several routes: a higher density of target cells for HIV is found in the foreskin; the area between the unretracted foreskin and the head of the penis is thought to be favorable for viral survival; there is a risk of the foreskin tearing during sex, providing a route of entry for HIV; and a higher incidence of ulcerative STDs is observed in uncircumcised men³⁶. The bulk of evidence

Universal voluntary HIV testing with immediate antiretroviral therapy as a strategy for elimination of HIV transmission: a mathematical model. *Lancet* **373**: 48–57; Lima VD, Johnston K, Hogg RS et al. 2008. Expanded access to highly active antiretroviral therapy: A potentially powerful strategy to curb the growth of the HIV epidemic. *Journal of Infectious Diseases* **198**:59-67.

³⁴ See, for instance, Bailey RC, Moses S, Parker CB, Agot K, Maclean I, Krieger JN, et al. 2007. Male circumcision for HIV prevention in young men in Kisumu, Kenya: a randomised controlled trial. *Lancet* **369**:643-656; Gray RH, Kigozi G, Serwadda D, Makumbi F, Watya S, Nalugoda F, et al. 2007. Male circumcision for HIV prevention in men in Rakai, Uganda: a randomised trial. *Lancet* **369**:657-666; Auvert B, Taljaard D, Lagarde E, Sobngwi-Tambekou J, Sitta R, Puren A. 2005. Randomized, controlled intervention trial of male circumcision for reduction of HIV infection risk: the ANRS 1265 Trial. *PLoS Med*; **2**:e298.

³⁵ Weiss HA, Hankins CA, Dickson K. 2009. Male circumcision and risk of HIV infection in women: a systematic review and meta-analysis. *Lancet Infectious Diseases* **9**: 669-677; Millett GA, Flores SA, Marks G, Reed JB, Herbst JH. 2008. Circumcision status and risk of HIV and sexually transmitted infections among men who have sex with men: A meta-analysis. *Journal of the American Medical Association* **300**: 1674-1684.

³⁶ “Male Circumcision and Risk for HIV Transmission and Other Health Conditions: Implications for the United States.” CDC Factsheet. Available online at

regarding the effectiveness of circumcision comes from international trials, and CDC has made no recommendations regarding its potential use as a population-level prevention strategy.

There is no consensus on the efficacy of pre-exposure prophylaxis in preventing HIV transmission; however, it has received a great deal of interest from researchers, prevention planners, and a range of other actors in HIV prevention. The CDC is currently leading three large-scale trials of pre-exposure prophylaxis in Botswana, Thailand and the United States, and CDC is also planning for potential implementation strategies with stakeholders across the country, should the PrEP trials yield favorable results³⁷.

In the absence of encouraging results from HIV vaccine trials, much attention has turned to microbicides—gels, creams, suppositories and similar media with antiviral properties, applied rectally or vaginally to prevent infection with HIV. Microbicides would eliminate the need to negotiate condom usage, though they would not protect against other STIs, and the absence of contraceptive effect could make them palatable to those uncomfortable with the use of contraceptives. Unfortunately, microbicides have met with little success in experimental trials³⁸. CDC remains involved in research into microbicides, but has made no recommendations regarding their potential for use as a prevention strategy.

<http://www.cdc.gov/hiv/resources/factsheets/circumcision.htm#ref1>. Accessed June 11, 2009.

³⁷ “CDC’s Clinical Studies of Pre-Exposure Prophylaxis for HIV Prevention.” Available online at <http://www.cdc.gov/hiv/prep/resources/qa/index.htm>. Accessed September 12, 2009.

³⁸ Morris GC, Lacey CJN. 2010. Microbicides and HIV prevention: lessons from the past, looking to the future. *Current Opinion in Infectious Diseases* **23**: 57-63.

Though biomedical interventions do promise to circumvent many of the challenges posed by behavioral interventions—particularly the fact that many individuals simply are not willing to change their risk behaviors, no matter how many prevention messages they are exposed to, or how grievous the risk to their health—biomedical interventions are not a magic bullet; they suffer from considerable logistical challenges, and themselves might impact sexual risk behavior, as individuals using them perceive themselves to be at lower risk and adjust, or fail to adjust, their behavior accordingly. The evidence on this last point is mixed, though³⁹; what is clear is that biomedical, structural and behavioral interventions should all be considered in planning for comprehensive HIV prevention efforts in years to come.

As noted above, biomedical interventions are still in the planning and evaluation stages, and this discussion is meant simply for informative purposes. However, as evidence of efficacy and the feasibility of implementation of biomedical interventions grows, and CDC recommendations and guidance are issued, the HIV/STD Program will be ready to integrate these interventions into its prevention repertoire.

Characteristics of Effective Interventions

The HPPG has distilled the lessons of years of prevention research and program experience into the following “Characteristics of Effective Interventions.” All interventions should incorporate these

³⁹ Crepaz N, Hart TA, Marks G. 2004. Highly Active Antiretroviral Therapy and Sexual Risk Behavior: A Meta-analytic Review. *Journal of the American Medical Association* **292**:22, 224-236.

characteristics in both design and implementation.

Interventions should be designed so as to:

- have a clearly defined target population;
- have clearly defined objectives and implementation plan;
- be accessible and affordable to the target population, preferably taking the intervention to the intended population in the community or institutional settings;
- be based on sound behavioral science theory, focusing on factors that affect behavior change (skills, self-efficacy, expectation of positive response, consistency with self-image, perceived social norms, and reduction of external barriers);
- be based on intervention models with demonstrated evidence of effectiveness, or that can show evidence to support the expectation of effectiveness;
- be culturally competent and relevant to the targeted populations (i.e., consistent with norms, values, and traditions of the community);
- be appropriate for the developmental, age, and educational level of the intended population;
- be tailored to the gender and sexual orientation of the intended population;
- involve members of the target population in program design, implementation and evaluation;
- employ personnel who reflect the cultural and linguistic characteristics of the intended audience to deliver the intervention; employ members of the target population as peer educators;

- provide materials and deliver interventions in the primary language of the intended audience;
- focus on building and practicing skills (information alone is not enough), including harm reduction practices and communication, identifying triggers and coping with risk situations;
- provide, directly or by referral, risk reduction materials—i.e., at a minimum, condoms
- have sufficient duration and frequency to promote lasting behavior change (one time only interventions have limited effectiveness);
- be client-focused and tailored to client’s stage of readiness, be non-judgmental, and be supportive of incremental change, recognizing that lapses are an expected part of the process of behavior change;
- be incorporated into services reaching persons at risk (e.g., drug and alcohol treatment, STD treatment); and
- have a mechanism in place for referring HIV-positive individuals to health care and support services.

For interventions to be implemented successfully, HIV prevention programs should:

- have an established relationship with the target population(s);
- have sufficient resources to accomplish their objectives;
- have flexibility to make mid-course modifications as necessary;
- be operated by an agency with adequate management capability, and administrative and board support for the interventions;

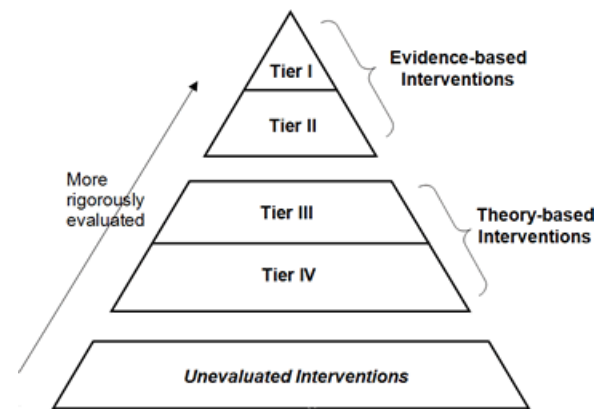
- provide ongoing training and development of staff and volunteers;
- provide support and supervision of staff and volunteers, including field-based observation;
- develop linkages with services reaching the same target populations to promote referrals; and
- evaluate interventions to ensure that they are being implemented as proposed and are meeting objectives.

The CDC “Tiers of Evidence” Framework

The CDC employs a four-tier “tiers of evidence” framework to categorize interventions, as depicted below in Figure 44⁴⁰. The top two tiers, Tiers I and II, make up the *evidence-based* interventions, those interventions that have been rigorously evaluated by the CDC’s Prevention Research Synthesis Project and that have demonstrated effectiveness in reducing the incidence of HIV and sexually transmitted infections or the frequency of risk behaviors associated with transmission. Tier I encompasses the *best-evidence* interventions, those that meet the highest standards of evidence of efficacy⁴¹. Tier II encompasses the *promising-evidence* interventions, which do not meet the highest standards of evidence, but still show “significant and positive” evidence of

efficacy⁴². Interventions from Tiers I and II constitute the *Compendium of Evidence-Based HIV Prevention Interventions*; some of these are also packaged for dissemination to state and local health departments and CBOs by the CDC’s Replicating Effective Interventions (REI) Project, through the Diffusion of Effective Behavioral Interventions (DEBI) Project, discussed further in the next section.

Figure 44. The CDC’s Tiers of Evidence Framework.



From <http://www.cdc.gov/hiv/topics/research/prs/tiers-of-evidence.htm>. Accessed November 7, 2009.

Tiers III and IV include the *theory-based* interventions, which have some basis in social science theory—including the theories mentioned above under the “Behavioral Interventions” subheading—and some outcome (if Tier III) or process (if Tier IV) monitoring data, but have not been evaluated with sufficient rigor to merit status as best-evidence or promising-evidence intervention.

⁴⁰ This discussion draws from a portion of the 2009 *Compendium of Evidence-Based HIV Prevention Interventions*, available online at <http://www.cdc.gov/hiv/topics/research/prs/tiers-of-evidence.htm>.

⁴¹ For a detailed list of the best-evidence PRS efficacy criteria for individual-level and group-level interventions, see: http://www.cdc.gov/hiv/topics/research/prs/efficacy_best-evidence_ILIs-GLIs.htm; for community-level interventions, see: http://www.cdc.gov/hiv/topics/research/prs/efficacy_best-evidence_CLIs.htm.

⁴² For a detailed list of the promising-evidence PRS efficacy criteria for individual-level and group-level interventions, see: http://www.cdc.gov/hiv/topics/research/prs/efficacy_promising-evidence_ILIs-GLIs.htm; for community-level interventions, see: http://www.cdc.gov/hiv/topics/research/prs/efficacy_promising-evidence_CLIs.htm.

The bulk of “home-grown” interventions, those developed by CBOs and other local entities, typically fall into one of these two tiers, or into the even larger category of unevaluated interventions, for which there are simply no monitoring data or evidence of effectiveness. CDC recommends that any entities undertaking “home-grown” interventions do their best to move these interventions into Tier III, though it is recognized that the necessary monitoring and evaluation capacity may be a challenge. These issues are of particular concern in Alaska, where a sparse geographic distribution of the population, low overall population size, and high diversity prevent many interventions disseminated through the DEBI Project from being tailored effectively to the local context.

CDC's Diffusion of Effective Behavioral Interventions (DEBI) Project

Attaining DEBI status does not mean that an intervention has met a higher standard of evidence of effectiveness than a Tier I or Tier II intervention; it simply denotes a Tier I or Tier II intervention that has been packaged for dissemination to CBOs and other prevention providers so as to facilitate widespread implementation and—as necessary—adaptation to local contexts that retains the core elements of the intervention^{43,44}.

⁴³ Lyles CM, Crepaz N, Herbst JH, Kay LS, for the HIV/AIDS Prevention Research Synthesis (PRS) Team. Evidence-based HIV Behavioral Prevention from the Perspective of CDC's HIV/AIDS Prevention Research Synthesis Team. *AIDS Educ Prev.* 2006;18(suppl A):21-31.

⁴⁴ Lyles CM, Kay LS, Crepaz N, Herbst JH, Passin WF, Kim AS, Rama SM, Thadiparthi S, DeLuca JB, Mullins MM, for the HIV/AIDS Prevention Research Synthesis Team. Best-evidence interventions: Findings from a systematic review of HIV behavioral

The Diffusion of Effective Behavioral Interventions (DEBI) Project began in 1999 when the CDC published the *Compendium of HIV Prevention Interventions with Evidence of Effectiveness* to respond to prevention service providers who requested science-based interventions that work (CDC, 2001). The DEBI Project was designed to bring science-based, community- and group-level HIV prevention interventions to state and local health departments and community-based service providers. The goal of the DEBI Project is to enhance the capacity to implement effective interventions at the state and local levels, to reduce the spread of HIV and STDs, and to promote healthy behaviors. DEBIs have been proven effective through rigorous studies that showed positive behavioral and/or health outcomes (e.g., use of condoms, reducing the number of one's partners; a decrease in the number of new STD infections). With researchers' input, the materials necessary to implement the interventions have been packaged into user-friendly kits for dissemination to CBOs and other organizations, and standardized training is available from CDC-funded capacity-building providers. The following are brief summaries of the twenty-six DEBI interventions at the time this *Plan* was written, drawn in most cases verbatim from <http://effectiveinterventions.org/go/interventions>:

CLEAR (Choosing Life: Empowerment! Action! Results!) is an evidence-based, health promotion intervention for males and females ages 16 and older living with HIV/AIDS or at high-risk for HIV. **CLEAR** is a client-centered program delivered one-on-one using cognitive behavioral

interventions for U.S. populations at high risk, 2000-2004. *Am J Public Health.* 2007;97(1):133-143.

techniques to change behavior. The intervention provides clients with the skills necessary to be able to make healthy choices for their lives. The Centers for Disease Control and Prevention's (CDC's) guidelines on Comprehensive Risk Counseling and Services (CRCS), formerly known as Prevention Case Management (PCM), identify **CLEAR** as a structured intervention that may be integrated into CRCS programs.

Connect is a six session, relationship-based intervention that teaches couples techniques and skills to enhance the quality of their relationship, communication, and shared commitment to safer behaviors. The program is based on the AIDS Risk Reduction Model, which organizes behavior change into three phases-recognizes risk, commit to change, and act on strategies-and on the Ecological Perspective which emphasizes the personal, relational, and societal influences on behavior. Connect integrates techniques commonly used in family therapy, which will allow couples to work together to solve shared problems.

d-up: Defend Yourself! is a community-level popular opinion leader (POL)-based intervention designed for and developed by black men who have sex with men (MSM). *d-up!* is designed to promote social norms of condom use and assist Black MSM to recognize and handle risk related racial and sexual bias. The *d-up!* intervention mantra is: *Brothers Keeping Brothers Safe*. *Brothers Keeping Brothers Safe* refers to black MSM influencing one another to practice safer sex and stop transmission. When the social norm is shifted in a social network of black MSM the behavior of every individual in the network is impacted. *Brothers Keeping Brothers Safe* indicates that brothers are the most effective and far-reaching agents of behavior change for themselves that exists in the world.

Focus on Youth + ImPACT (FOY) is a community-based, eight session group intervention that provides youth with the skills and knowledge they need to protect themselves from HIV and other STDs. The curriculum, founded on the Protection Motivation Theory, uses fun, interactive activities such as games, role plays and discussions to convey prevention knowledge and skills. FOY targets African American youth, ages 12-15. There is also a short component for parents, Informed Parents and Children Together (ImPACT), that assists them in areas such as parental monitoring and effective communication.

Healthy Relationships is a five-session, small-group intervention for men and females living with HIV/AIDS. It is based on Social Cognitive Theory and focuses on developing skills and building self-efficacy and positive expectations about new behaviors through modeling behaviors and practicing new skills.

Holistic Health Recovery Program (HHRP) is a 12-session, manual-guided, group-level program for HIV-positive and HIV-negative injection drug users. The primary goals of HHRP are harm reduction, health promotion, and improved quality of life.

Many Men, Many Voices (3MV) is a six- or seven-session, group level STD/HIV prevention intervention for gay men of color. The intervention addresses behavioral influencing factors specific to gay men of color, including cultural/social norms, sexual relationship dynamics, and the social influences of racism and homophobia.

MIP (Modelo de Intervención Psicomédica) MIP is a holistic behavioral intervention for reducing high-risk behaviors for infection and transmission of HIV

among intravenous drug users (IDUs). The intervention is theory-driven and intensive, combining individualized counseling and comprehensive case management over a 3-6-month period. The strategies of motivational counseling, self efficacy, and role induction are used.

Mpowerment is a community-level intervention for young men who have sex with men. The intervention uses a combination of informal and formal outreach, discussion groups, creation of safe spaces, social opportunities, and social marketing to reach a broad range of young gay men with HIV prevention, safer sex, and risk reduction messages.

Nia is a six hour, two to four session, video-based, small group level intervention. The goals of this intervention are to educate African American men about HIV/AIDS and its effect on their community, bring groups of men together, increase motivation to reduce risks, and help men learn new skills to protect themselves and others by promoting condom use and increasing intentions to use condoms. Nia is based on the Information-Motivational-Behavioral Skills (IMB). The IMB model assumes that people need information, motivation, and behavioral skills to adopt preventive behaviors. The target population for Nia is African American men (ages 18 and over) who have sex with females.

Partnership for Health is a safer-sex intervention delivered by providers in HIV outpatient clinics. Partnership for Health (PfH) uses message framing, repetition, and reinforcement during patient visits to increase HIV positive patients' knowledge, skills, and motivations to practice safer sex. The program is designed to improve patient-provider communication about safer sex, disclosure of HIV serostatus, and HIV

prevention. Implementation of PfH includes development of clinic and staff "buy-in" and training.

Popular Opinion Leader (POL) is a community-level intervention designed to identify, enlist, and train key opinion leaders to encourage safer sexual norms and behaviors within their social networks of friends and acquaintances through risk-reduction conversations.

Project START is an individual-level, multi-session intervention for people being released from a correctional facility and returning to the community. It is based on the conceptual framework of Incremental Risk Reduction, and focuses on increasing clients' awareness of their HIV,STI, and hepatitis risk behaviors after release and providing them with tools and resources to reduce their risk.

PROMISE (Peers Reaching Out and Modeling Intervention Strategies; also known as Community PROMISE) is a community-level HIV prevention intervention that relies on peer advocates to distribute role model stories of positive behavior change to members of the target population. The intervention is based on Stages of Change and other behavioral theories, and can be implemented with various populations including IDUs, MSM, sex workers, and partners of high-risk individuals.

Real AIDS Prevention Project (RAPP) is a community mobilization program, designed to reduce risk for HIV and unintended pregnancy among females in communities at high risk by increasing condom use. This intervention relies on peer-led activities, including: stage based encounters, role model stories and brochures, community networking, referrals,

safer sex discussions and condom distribution. RAPP is based on the transtheoretical model of behavior change.

RESPECT is an individual, client-focused HIV prevention counseling intervention, designed to support risk reduction behaviors by increasing the client's perception of his/her personal risks and by emphasizing incremental risk-reduction strategies. Core elements of the intervention are to conduct one-on-one counseling using the RESPECT protocol, utilize a "teachable moment" to motivate clients to change risk-taking behaviors, explore circumstances and context of a recent risk behavior to increase perception of susceptibility, negotiate an achievable step which supports the larger risk reduction goal, and implement and maintain quality assurance procedures. The intervention uses a structured protocol that guides the provider/counselor throughout the sessions.

Safe in the City is a single-session, video-based intervention for diverse STD clinic patients. The intervention involves the presentation of a 23-minute STD/HIV prevention video to patients in an STD clinic waiting room. The video contains key prevention messages aimed at increasing knowledge and perception of STD/HIV risk, promoting positive attitudes toward condom use, and building self-efficacy and skills to facilitate partner treatment, safer sex, and the acquisition, negotiation, and use of condoms. The video contains three interwoven vignettes that model negotiating safer sexual behaviors among young couples of diverse racial/ethnic backgrounds and sexual orientations. Animated segments demonstrate proper condom use and the variety of condoms available. Movie-style posters in the waiting room and exam rooms direct patients' attention to the video and reinforce key messages. Condoms and

educational pamphlets on STD prevention are made available to patients in the clinics. It is based on the Information-Motivation-Behavioral Skills (IMB) Model, Social Cognitive Theory, and the Theory of Planned Behavior.

Safety Counts is a client-centered intervention for users of illicit drugs that aims to reduce risk of becoming infected with or transmitting HIV and hepatitis viruses. It is a behaviorally focused, seven-session intervention, which includes both structured and unstructured psycho-educational activities in group and individual settings over four to six months.

SHIELD (Self-Help in Eliminating Life-threatening Diseases) is based on several theories; Social Cognitive Theory, Social Identity Theory, Cognitive Dissonance (or inconsistency) Theory, and Social Influence Theory. In the SHIELD model of HIV prevention, one individual (a Peer Educator) is taught strategies to reduce HIV risk associated with drug use and sex behavior. In addition, Peer Educators are taught effective communication skills in order to talk with people in their social networks about HIV prevention information. Peer Educators are trained to be leaders within their social networks and communities. They use their communication skills to have conversations about prevention to help stop the spread of HIV. The target population for the SHIELD intervention is male and female adults (18 years older) who are current or former "hard" drug users (heroin, cocaine, and crack) who interact with other drug users. The intervention can be delivered with clients who are HIV positive and HIV-negative.

SIHLE (Sisters Informing, Healing, Living, and Empowering): A group level intervention, SIHLE is a peer-led, social-

skills training intervention aimed at reducing HIV sexual risk behavior among sexually active, African American teenage females, ages 14-18. An adaptation of the SISTA intervention, SIHLE emphasizes ethnic and gender pride, and enhances awareness of HIV risk reduction strategies such as abstaining from sex, using condoms consistently, and having fewer sex partners. It consists of four 3-hour sessions, delivered by two peer facilitators (ages 18-21) and one adult facilitator in a community-based setting. The sessions are designed for 10-12 African American teenage females. The sessions are gender-specific, culturally relevant and include behavioral skills practice, group discussions, lectures, role-playing, and take-home exercises.

Sisters Informing Sisters on Topics about AIDS (SISTA) is a group-level, gender- and culturally- relevant intervention, is designed to increase condom use with sexually active Black females. Five peer-led group sessions are conducted that focus on ethnic and gender pride, HIV knowledge, and skills training around sexual risk reduction behaviors and decision making. The intervention is based on Social Learning theory as well as the theory of Gender and Power.

Sister to Sister is a brief (20-minute), one-on-one, skill-based HIV/sexually transmitted disease (STD) risk-reduction behavioral intervention for sexually active African American females 18 to 45 years old that is delivered during the course of a routine medical visit. The purpose of Sister to Sister is to: provide intensive, culturally sensitive health information to empower and educate females in a clinical setting; help females understand the various behaviors that put them at risk for HIV and other STDs; and enhance women's knowledge, beliefs, motivation, confidence, and skills to help

them make behavioral changes that will reduce their risk for STDs, especially HIV. The target population for Sister to Sister is sexually active African American females 18-45 years old who have male partners and are attending primary health care clinics (e.g., family planning, women's health and reproductive care, etc.).

Street Smart is a multi-session, skills-building program to help runaway and homeless youth, ages 11 to 18, to practice safer sexual behaviors and reduce substance use. Sessions address improving youths' social skills, assertiveness and coping through exercises on problem solving, identifying triggers, and reducing harmful behaviors. Agency staff also provide individual counseling and trips to community health providers.

Together Learning Choices (TLC) (also known as Teens Linked to Care) is an intervention for young people, aged 13 to 29, living with HIV, delivered in small groups. TLC helps young people living with HIV identify ways to increase use of health care, decrease risky sexual behavior and drug and alcohol use, and improve quality of life. Participants set goals regarding their health sexual relationships, drug use, and daily peace related to their daily habits and social routines. It emphasizes how contextual factors influence the ability to respond effectively to stressful situations, solve problems, and act effectively to reach goals. TLC is based on Social Action Theory.

VOICES/VOCES (Video Opportunities for Innovative Condom Education & Safer Sex) is a group-level, single-session video-based intervention designed to increase condom use among heterosexual Black and Hispanic men and females who visit STD clinics. Participants, grouped by

gender and ethnicity, view an English or Spanish video on HIV risk behaviors and condom negotiation, take part in a facilitated discussion on barriers to and negotiation of condom use, and receive samples of condoms.

WILLOW (Women Involved in Life Learning from Other Females) is a social-skills building and educational intervention for adult females living with HIV. It consists of 4 four-hour sessions which are delivered by two trained adult female facilitators, one of whom is a woman living with HIV. The small group sessions consist of 8-10 females living with HIV and are conducted in a community-based setting. An adaptation of the SISTA intervention, WILLOW emphasizes gender pride, informs females how to identify and maintain supportive social networks, teaches coping strategies to reduce life stressors, enhances awareness of STD transmission and HIV reinfection risk behaviors, teaches communication skills for negotiating safe sex, reinforces proper and consistent condom use, distinguishes between healthy and unhealthy relationships, and defines types of abusive relationships and their effect on a woman's ability to negotiate safer sex practices. The target population for WILLOW is heterosexual females, regardless of race or ethnicity, living with HIV/AIDS who are 18-50 years of age and who have known their HIV serostatus for at least 6 months.

Provisional Procedural Guidance for Community-Based Organizations

The CDC's *Procedural Guidance for Community-Based Organizations*⁴⁵ was

⁴⁵ Updated August 2009; for full text, see http://www.cdc.gov/hiv/topics/prev_prog/AHP/resouces/guidelines/pro_guidance/pdf/ProceduralGuidance.pdf

developed to help community-based organizations design prevention programs and deliver interventions, including the DEBIs discussed above. Significantly, the *Procedural Guidance* spells out the steps that CBOs should take in adapting interventions to their local context through a process of “formative evaluation.” This is especially important given the challenges faced in implementing DEBIs here in Alaska (see “Advantages and Drawbacks of DEBIs,” below). The *Procedural Guidance* (p.10) notes that only the “key characteristics,” not the “core elements,” of interventions can be modified by CBOs; these are explained for each intervention. Interested CBOs are referred to pp. 9ff. in the *Procedural Guidance* for further details. The *Procedural Guidance* provides an outline for each strategy under the following subheadings: description of intervention; core elements, key characteristics, and procedures; adapting; resource requirements; recruitment; policies and standards; quality assurance; monitoring and evaluation; key articles and resources; and references.

The *Procedural Guidance* also discusses activities, services, and strategies other than DEBIs, including the following:

Comprehensive Risk Counseling and Services (CRCS) for Persons at Very High Risk for HIV, formerly Prevention Case Management (PCM), aims to help clients who have multiple, complex psychosocial challenges and risk-reduction needs adopt and maintain risk-reduction behaviors. It provides intensive and ongoing client-centered HIV risk-reduction counseling, support, and it helps clients access other services. It helps clients initiate and maintain behavior change to prevent acquisition of HIV while addressing competing needs that may make HIV

prevention a lower priority. CRCS for persons at very high risk informs and screens clients, helps them develop prevention strategies, delivers counseling sessions, and coordinates and follows up with other services provided to CRCS clients.

Comprehensive Risk Counseling and Services (CRCS) for Persons Living with HIV is a set of CRCS (see above) in which priority is given to HIV-infected persons who are having, or are likely to have, difficulty initiating or sustaining practices that reduce or prevent the transmission of HIV while addressing competing needs that may make HIV prevention a lower priority. It addresses the relationship between HIV risk and other issues (e.g., substance abuse, mental health, social and cultural factors, and physical health).

HIV Counseling, Testing, and Referral (CTR) is a collection of activities designed to inform clients of their HIV status; encourage and support risk reduction; and secure needed referrals for appropriate medical, prevention, and partner counseling and referral services. HIV CTR can be anonymous (client's name is neither known nor solicited) or confidential (client provides name). Clients can refer themselves or be referred to CTR, which can be accessed through clinics, dedicated sites, outreach, and other services.

Incorporating HIV Prevention into the Medical Care of Persons Living with HIV is a set of recommendations for using outpatient clinics and care providers to screen for HIV transmission risk behaviors and STDs, provide brief behavioral prevention interventions, and facilitate partner notification and counseling. The objectives are to reach a large number of HIV-infected persons, implement a safer-sex program, integrate HIV prevention into

routine medical care, and involve clinic staff in HIV prevention counseling. These objectives are accomplished by screening patients; providing brief behavioral risk-reduction interventions in the office and referring clients, if needed; and facilitating notification and counseling of sex partners and drug-using partners.

Rapid HIV Testing in Nonclinical Settings is HIV testing that can be performed in selected nonclinical settings and can provide results in 20 minutes, takes advantage of the benefits of outreach testing, increases the likelihood that tested persons receive their results, and requires confirmation if test results are positive. Rapid HIV testing in nonclinical settings aims to increase awareness of HIV status across a range of groups. By bringing testing into the community and providing test results quickly, rapid HIV testing can be used to reach groups in which HIV infection has been under diagnosed. Testing programs in nonclinical settings are more likely to reach persons who do not tend to seek care.

Routine HIV Testing of Inmates in Correctional Facilities is a service in which inmates are informed of the availability of free voluntary rapid HIV counseling and testing. The goal is to identify HIV infection among inmates who are unaware of their status or who have previous negative test results. Prevention and care services can then be provided to those who need them, during incarceration and after release. Especially for those incarcerated for fewer than 30 days, routinely providing rapid HIV testing will increase the proportion of the correctional population tested and notified of their results before release.

Universal HIV Testing of Pregnant Women is an intervention to reduce perinatal transmission of HIV in the United

States. It identifies pregnant women for whom antiretroviral and obstetric interventions can reduce the risk of having a HIV-infected baby. There are two approaches to offering HIV testing to pregnant women: 1) opt-in, in which pregnant women are given pretest counseling and must specifically consent, usually in writing, to an HIV test, and 2) opt-out, in which pregnant women are notified that a HIV test will be included in the standard battery of prenatal tests and that they may decline testing.

2009 Compendium of HIV Prevention Interventions with Evidence of Effectiveness

The 2009 *Compendium of HIV Prevention Interventions with Evidence of Effectiveness* was compiled by CDC's HIV/AIDS Prevention Research Synthesis Project in August of 2009, as an update to the August 2001 Compendium, itself an update of the original *Compendium* of November 1999. The *Compendium* provides the most current summary of interventions with evidence of effective risk reduction. The newest *Compendium* includes 69 interventions; as with its predecessors, all interventions included are behavioral interventions evaluated through studies employing rigorous methods for the assessment of positive behavioral or health outcomes. The full text of the *Compendium* can be found online⁴⁶; interested parties can find the full list of best-evidence and promising-evidence interventions there.

Two interventions in the *Compendium*, Street and Community Outreach and Be Proud! Be Responsible/Making Proud Choices!, are not EBIs, but they have been

⁴⁶<http://www.cdc.gov/hiv/topics/research/prs/evidence-based-interventions.htm>.

successfully implemented in Alaska in the past. They are described below.

Street and Community Outreach was considered by the HPPG because it is grounded in behavior change theory, scientifically evaluated, and shown to be effective. Street and Community Outreach aims to reduce HIV infection through decreasing unsafe sexual behaviors, increasing condom use, and delaying sexual activity. It also aims to reduce the sharing of injection equipment, to increase clean syringe access and bleach cleaning, and to increase HIV counseling and testing. Paid or volunteer peer outreach workers, who are cultural and linguistic representatives of the target population, provide a sustained and regular presence in the community. Efforts are focused on specific areas of a community frequented by persons who engage in risk behavior. Outreach workers provide risk reduction information and supplies, such as condoms and lubricant, injection harm reduction equipment as applicable, and information on HIV Health Education and Risk Reduction (HE/RR) and HIV Counseling and Testing (CT) resources. Outreach workers facilitate personal risk perception and risk assessment and provide skills training to outreach contacts. Messages of peer and community support for safer behaviors, and specific referrals to more intensive risk reduction resources are provided as appropriate.

Making Proud Choices! is an adaptation and extension of the original *Be Proud! Be Responsible!* curriculum that integrates STD, HIV and pregnancy prevention. It is an eight-module curriculum that provides young adolescents with the knowledge, confidence, and skills necessary to reduce their risk of sexually transmitted diseases (STDs), HIV, and pregnancy by using

condoms if they choose to have sex. The goal of Making Proud Choices! is to empower young adolescents to change their behavior by drawing upon three theories: Social Cognitive Theory, the Theory of Reasoned Action and its extension, the Theory of Planned Behavior.

Additional HIV Prevention Interventions/Activities

The HPPG also considered HIV prevention interventions and activities not covered by the DEBI Project, *Procedural Guidance*, or the *Compendium*. These interventions and activities meet at least one of three criteria: 1) they have been evaluated in the peer-reviewed academic literature, and shown evidence of effectiveness, but have not gone through the DEBI or PRS process; 2) they are grounded in behavior change theory; or 3) they are recommended by CDC as an important component of comprehensive HIV prevention services.

Targeted Health Communication/Public Information (HC/PI) is an intervention designed for any specified target population. There are four prevention goals: 1) encourage persons at risk to seek HIV counseling and testing; 2) raise awareness and dispel myths about HIV/AIDS; 3) influence community norms in support of safer behavior; and 4) support individual efforts for personal risk reduction. Culturally-, linguistically-, and community-appropriate messages are used to raise awareness, educate about risk reduction, and to influence community norms. Messages are dispersed through the use of broadcast (television, radio), electronic (websites, email, listservs) and print media, and hotlines that can be accessed by target populations.

Cohen et al.⁴⁷, in a cost-effectiveness study, found that the optimal allocation of HIV prevention activities involved a combination of intensive interventions for high-prevalence populations and inexpensive large-scale interventions for lower-prevalence populations. The latter finding is especially significant given Alaska's low prevalence and widely distributed population, making HC/PI worthy of investigation. In a review of HIV/AIDS mass communication campaigns from 1998 through 2007, Noar⁴⁸ (2009) found that 8 of 10 recent, well-controlled media campaigns demonstrated statistically significant pretest-posttest effects on behavior or behavioral intention (35). Key components of effective campaigns included:

- (1) targeting defined audiences developed through audience segmentation procedures;
- (2) designing campaign themes around behavior change (rather than solely knowledge or attitude change);
- (3) using behavioral theories to inform campaign design;
- (4) achieving higher message exposure to campaign messages;
- (5) using stronger quasi-experimental designs with control groups for outcome evaluation (although still far too few studies use these stronger designs); and
- (6) including measures of behavior change (or behavioral intentions) in outcome assessments.

Noar concludes with a call for multi-component campaigns, more rigorous

⁴⁷ Cohen DA, Wu SY, Farley TA. 2005. Cost-effective allocation of government funds to prevent HIV infection. *Health Affairs* **24**: 915-926.

⁴⁸ Noar S 2009. A 10-year Systematic Review of HIV/AIDS Mass Communication Campaigns: Have We Made Progress? *Journal of Health Communication* **14**:15-42.

evaluation and study design, and greater attention to theory-based message design.

Syringe exchange and access is an intervention designed for injection drug users (IDU) that aims to reduce sharing of injection equipment, reduce unsafe sexual behaviors, and increase HIV counseling and testing. The HPPG recognizes that syringe exchange and access is an intervention that cannot yet be supported with federal funds, and that CDC does not include syringe exchange and access programs in PRS efficacy reviews, but the HPPG still regards it as an intervention with evidence of effectiveness in light of numerous published studies to this effect.

Syringe exchange and access involves paid or volunteer peer outreach workers who are cultural and linguistic representatives of the target population and who have a sustained and regular presence in the community. Volunteers provide clean new syringes, needles, and other sterile injection drug equipment in exchange for used needles, as well as referrals to drug treatment, methadone maintenance programs, and other services to help users reduce their drug use. Volunteers may also provide risk reduction information and supplies, such as condoms, lubricant, and information on HIV counseling and testing facilitates. Syringe exchange and access addresses two factors affecting HIV risk behavior – perceived social norms for safer behavior and reduced environmental barriers. Evidence of the effectiveness of syringe exchange and access in reducing the incidence of HIV and hepatitis is considerable⁴⁹.

⁴⁹ National Research Council, Institute of Medicine. 1995. Preventing HIV Transmission: The Role of Sterile Needles and Bleach. Washington, D.C.: National Academy Press. See also Des Jarlais DC 2008. Data and Public Health Decision Making on HIV Prevention in Injection Drug Users. *J Urban Health*. 85(3): 303–305.

Linkage to Care involves getting newly-diagnosed positive persons, and positive persons lost to care, into care and supportive services, and providing all possible resources to ensure that they remain in care and continue to use support services as needed⁵⁰. Where prevention is integrated into the routine care of PLWHA, persons in care have access to regular prevention services, are more attentive to their health, and, if they do engage in risk behaviors, have lower viral loads, thus reducing the probability of HIV transmission to uninfected partners or fellow injection drug users. HIV/STD Program DIS activity and recidivism data show that some HIV-positive individuals regularly appear in HIV and STD investigations, indicating continued unsafe sex practices and emphasizing the importance of lowering viral load.

HIV Partner Services is a public health strategy to control and prevent the spread of HIV and other STDs. Partner services is the practice of informing current and past partners that a person who is HIV-infected has identified them as a partner at risk (sex partner or injection-drug-equipment-sharing partner). These partners are advised to undergo HIV counseling and testing. For partners who are not infected with HIV, partner services provides an opportunity for intervention to prevent them from becoming infected; for partners who are found to be infected, it provides an opportunity to link them to medical evaluation, treatment, and other services and an opportunity for risk reduction counseling to prevent transmission to others. In Alaska, HIV partner services

⁵⁰ For further detail, see “Outreach: Engaging People in HIV Care: Summary of a HRSA/HAB 2005 Consultation on Linking PLWH Into Care.” Available online at <ftp://ftp.hrsa.gov/hab/HIVoutreach.pdf>. Accessed November 1, 2009.

have proven to be the most effective mechanism for identifying previously undiagnosed cases of HIV. Partner notification and the offer of immediate, field-based HIV counseling and testing can facilitate earlier diagnosis of HIV infection in conjunction with prevention counseling for those at risk of transmitting HIV. While the HIV/STD Program is not encouraging CBOs to undertake this intervention, it is important to be aware of the crucial role played by partner services in HIV prevention.

Sexually Transmitted Disease (STD) Testing, Treatment, and Partner Services

is an intervention designed to test and treat STDs as an effective approach to reducing the likelihood of HIV transmission, if an exposure were to occur. Consistent efforts to locate, counsel, test, and treat exposed sexual partners are critical to reducing STD transmission, especially since STD symptoms may be absent or ignored. Infection with STD indicates unprotected sexual intercourse, which is also a risk behavior for HIV infection. Studies have shown that persons infected with some STDs are more likely to transmit HIV, if infected, and more susceptible to HIV infection, if exposed and uninfected⁵¹.

Because having an STD indicates risk behavior (unprotected sex, multiple partners), persons with STDs and their partners are candidates for prevention counseling and potentially for HIV testing. Because some STDs are so common, because STD infection facilitates HIV transmission, and because the number of persons living with HIV increases each year

⁵¹ Rottingen JA, Cameron DW, Garnett GP. A systematic review of the epidemiologic interactions between classic sexually transmitted disease and HIV: How much really is known? *Sexually Transmitted Diseases* 2001; 28:579-597.

(since infection is lifelong), activities to reduce STDs infection rates play a significant role in overall efforts to reduce HIV transmission.

HIV Counseling and Testing through Social Networks is a programmatic, peer-driven, recruitment strategy to reach high-risk persons who may be infected but unaware of their status. The primary goal of a social network strategy is to identify persons with undiagnosed HIV infection within various networks and link them to medical care and prevention services⁵² by taking advantage of individuals' social networks. Newly- and previously-diagnosed HIV-positive and high-risk-negative persons are recruited on an ongoing basis to provide HIV CTR to people in their networks. The strategy is based on the concept that individuals are linked together to form large social networks, and that infectious diseases often spread through these networks.

Single-Session Group Presentations Connected to Testing: Single-session group presentations provide risk assessment and risk reduction strategies to persons in settings that reach those at highest risk (i.e. correctional facilities, substance prevention and treatment programs, including methadone maintenance programs, and mental health facilities). This intervention aims to increase HIV counseling, testing, and referral services to individuals at increased risk.

⁵² Centers for Disease Control and Prevention. 2006. Social Networks Testing: A Community-Based Strategy for Identifying Persons with Undiagnosed HIV Infection. Available online at <http://www.cdc.gov/hiv/resources/guidelines/snt/>. (Accessed January 6, 2009).

In adapting any of these interventions for implementation in Alaska, programs should tailor the model, curriculum and materials to the intended target population and location. However, adaptations must retain the essential components of the model and fidelity to the underlying theory, and extensive re-adaptation is generally not advisable.

Selecting Interventions

In selecting specific interventions for recommendation in the *2010-2012 Alaska HIV Prevention Plan*, the HPPG reviewed interventions that have attained Tier I or Tier II status, that have shown evidence of effectiveness but have not been packaged into DEBIs, that are grounded in behavior change theory, or that are strongly recommended by CDC. Based on the recent experience of the state health department and local CBOs in implementing interventions, HIV/STD Program staff also provided an assessment of the advantages and drawbacks of DEBI-packaged and other CDC-recommended interventions. The HIV/STD Program identified general advantages and drawbacks of the DEBI interventions in general, and then reviewed the particular challenges to implementation of each EBI (effective behavioral intervention) in Alaska. These challenges, and the drawbacks to which they relate, are shared by a number of other low-prevalence states—a small, sparsely distributed population, a relatively low HIV prevalence, and limited resources for HIV prevention. The advantages and drawbacks of DEBI-packaged interventions are discussed in further detail below.

Advantages and Drawbacks of EBIs

Advantages

- Interventions are based on behavior change theory;
- Interventions have evidence of effectiveness from rigorous evaluation research;
- Essential core elements are clearly identified;
- Packaged materials and curriculum are available; and
- Standardized, nationally-available training for facilitators has been developed.

Drawbacks

The drawbacks of EBIs center on two major issues: (1) their applicability to Alaska, and the feasibility of implementing them here with current levels of funding; and (2) the availability of training and curricula.

1. Applicability and Feasibility

- Each EBI was developed for a specific target population defined by risk factor and/or demographics; **adapting an EBI for a different population takes considerable resources and expertise.**
- EBIs were **developed as research projects with far greater resources for implementation than are available to CBOs.** The research projects had more staff, more highly trained staff, higher pay for staff, and higher incentives for participants than can be replicated locally.
- **EBIs were developed and tested in cities with specific community features (for example, gay bars, housing projects, concentrated**

ethnic neighborhoods), with larger populations, and with higher HIV prevalence than Alaska. Recruiting the intended population and achieving fidelity to the model are challenging where the conditions of the original model are not present.

- Many EBIs involve multi-session groups. It is more **difficult to recruit and retain participants for multi-session groups** than for briefer, more spontaneous and less intensive interventions such as outreach.
- The time lag between research and diffusion of a model intervention results in **models and materials being out of date by the time they are ready for implementation**. Updating interventions takes resources and expertise.

2. Training and Materials

- The national **trainings and distribution of packaged materials have lagged behind the promotion of EBI models**, although trainings have become more accessible in recent years.
- National **trainings are conducted in the contiguous United States**. Sending staff from Alaska is costly; CBO staff turnover adds to the cost of training and interrupts implementation.
- Slots in the national trainings have been limited and **health departments and their grantees have been a lower priority than CBOs** funded directly by CDC.

- When implementing an EBI that relies heavily on volunteers, **CBOs must have the resources to support frequent training** in the intervention due to volunteer turnover.
- **Evaluation metrics used for the original research projects are too comprehensive for CBO use**; brief evaluation metrics for EBIs have yet to be developed.

Additional Considerations in Selecting Interventions

Based on the local experience with implementing EBIs and other CDC-recommended interventions in Alaska, the HIV/STD Program recommends the following:

- Recommend specific intervention models: after years of local experience with implementing EBIs, and with increased availability of DEBI materials, there is a stronger basis on which to make specific recommendations than in previous years.
- Recommend a mix of interventions that maximize the impact of available (and declining) resources (see the mention of Cohen et al. 2005, in *Additional HIV Prevention Interventions/Activities*, above).
- Emphasize interventions that reach individuals most likely to have HIV or be at highest risk, with targeted one-on-one interventions. Experience has shown that recruitment and retention of sufficiently large groups of persons from priority populations is difficult, and that more generalized groups,

such as females in substance abuse treatment, often include many persons not necessarily at high risk.

- Recommend a smaller portfolio of interventions—that is, do less, but do it better. Whereas the HIV/STD Program has been an enthusiastic “early adopter” of EBIs because of the advantages of interventions with well-researched evidence of effectiveness, six to eight years of experience with EBIs has provided a better understanding of the challenges of implementing these interventions in a low HIV prevalence state with relatively small and dispersed priority populations. With fewer intervention models to support, the HIV/STD Program can better meet the training needs for grantees, thus reducing CBOs’ costs and providing better, more consistent quality assurance and technical assistance to grantees.
- Include language in the recommendations that leaves the door open for other interventions with evidence of effectiveness beside those specified so as to accommodate:
 - An applicant for state prevention funding that presents a good justification and work plan for doing an evidence-based intervention not specified in the Plan;
 - Other EBIs or CDC-recommended interventions that are disseminated during the three years covered by the *2010-2012 Alaska HIV Prevention Plan*; and

- Organizations seeking funding from other sources that require reference to the *Plan*

CHAPTER SIX: RECOMMENDATIONS

HIV Prevention Goals

THIS CHAPTER RECOMMENDS A combination of evidence-based prevention activities and interventions for each priority population, followed by overall recommendations for capacity building, needs assessment, evaluation, and other health department activities necessary to a comprehensive HIV prevention program. All recommendations are made in support of the following HIV prevention goals:

1. **Increase the number of HIV-infected persons who know their serostatus** by offering HIV testing and partner notification services to persons potentially exposed to HIV; providing HIV testing services in sites reaching persons at increased risk; encouraging HIV testing, when indicated, as part of routine medical care; and supporting the use of testing technologies acceptable to clients and appropriate to settings in which testing is conducted, including non-clinical settings.
2. **Reduce HIV transmission to prevent new infections** through early case identification, by providing notification, testing, and prevention counseling for sexual and needle-sharing partners of infected persons; facilitating the diagnosis and treatment of STDs in persons with HIV infection; providing targeted behavior change interventions

for persons with HIV infection and their partners; facilitating HIV-positive persons' participation in medical care and use of supportive services; and encouraging the incorporation of prevention efforts into routine medical care for HIV-positive persons.

3. **Reduce HIV risk behavior and co-factors** by providing targeted behavior change interventions for HIV-negative persons and persons of unknown HIV status at behavioral risk for HIV infection, promoting community norms for adopting safer behaviors, and providing STD partner services.
4. **Reduce the number of HIV-positive persons who develop AIDS** by linking persons with HIV infection to medical care and support services, and offering all possible assistance to ensure that they remain in care and make continued use of support services.

HIV Prevention Recommendations

The Alaska HIV Prevention Planning Group recommends that the full range of comprehensive HIV prevention program activities set forth in CDC guidelines, including surveillance, research, evaluation and policy development, and prevention interventions and capacity building⁵³ be conducted in Alaska. The HPPG recommends the implementation of evidence-based interventions, with evidence of effectiveness for the priority populations specified, whenever possible.

⁵³ See CDC's *Essential Components of a Comprehensive Strategy to Prevent Domestic HIV*, 2006, p.7 (available online at http://www.cdc.gov/hiv/resources/reports/comp_hiv_prev/pdf/comp_hiv_prev.pdf).

Interventions recommended for each priority population, and the prevention goals to which they correspond, are listed in the five tables below, followed by a single table summarizing recommended interventions for each priority population. The characteristics of effective interventions described in Chapter Five apply to all interventions listed here. Populations are listed in order of priority.

HIV-Positive Persons
Interventions Recommended in the <i>2010-2012 Alaska HIV Prevention Plan</i>
Partner Services (PS)
STD Testing and Partner Services
Individual Prevention Counseling in Conjunction with Medical Care
Partnership for Health
Comprehensive Risk Counseling Services (CRCS)
Linkage to Care—getting newly-diagnosed or lost-to-care positive persons into care and supportive services, and helping to ensure that they remain in care and continue to use support services as needed
Healthy Relationships
Media-based and electronic interventions, including health communication and public information campaigns
Homegrown interventions of at least Tier III PRS status (see Chapter 5), with clear, documented indicators and protocols for outcome monitoring and evaluation
Other interventions with evidence of effectiveness recommended by CDC or identified by the HIV/AIDS Research Synthesis Project, whether promising-evidence, best-evidence, or DEBI-packaged interventions, that are designed for HIV-positive persons, and for which there are curricula, guidelines, materials and nationally available training for facilitators.

Men who have Sex with Men (MSM)

Interventions Recommended in the *2010-2012 Alaska HIV Prevention Plan*

Partner Services (PS)

Rapid HIV Testing in Non-Clinical Settings

HIV Counseling and Testing through Social Networks

STD Testing and Partner Services

Mpowerment

Street and Community Outreach, including distribution of condoms and referral to testing

Media-based and electronic interventions, including health communication and public information campaigns

Homegrown interventions of at least Tier III PRS status (see Chapter 5), with clear, documented indicators and protocols for outcome monitoring and evaluation

Other interventions with evidence of effectiveness recommended by CDC or identified by the HIV/AIDS Research Synthesis Project, whether promising-evidence, best-evidence, or DEBI-packaged interventions, that are designed for men who have sex with men, and for which there are curricula, guidelines, materials and nationally available training for facilitators.

Injection Drug Users

Interventions Recommended in the *2010-2012 Alaska HIV Prevention Plan*

Partner Services (PS)

Rapid Testing in Non-Clinical Settings

HIV Counseling and Testing through Social Networks

STD Testing and Partner Services

Syringe Exchange and Access

Street and Community Outreach, including distribution of condoms and referral to testing

Project START (correctional settings)

Single-session group presentations in connection with HIV counseling and testing in settings that reach those at highest risk (i.e. correctional facilities, substance prevention and treatment programs including methadone maintenance, and mental health facilities).

Media-based and electronic interventions, including health communication and public information campaigns

Homegrown interventions of at least Tier III PRS status (see Chapter 5), with clear, documented indicators and protocols for outcome monitoring and evaluation

Other interventions with evidence of effectiveness recommended by CDC or identified by the HIV/AIDS Research Synthesis Project, whether promising-evidence, best-evidence, or DEBI-packaged interventions, that are designed for injection drug users, and for which there are curricula, guidelines, materials and nationally available training for facilitators.

Heterosexual Females at High Risk

Interventions Recommended in the *2010-2012 Alaska HIV Prevention Plan*

Partner Services (PS)

Rapid Testing in Non-Clinical Settings

HIV Counseling and Testing through Social Networks

Street and Community Outreach, including distribution of condoms and referral to testing

STD Testing and Partner Services

Making Proud Choices! (for youth)

Single-session group presentations in connection with HIV counseling and testing in settings that reach those at highest risk (i.e. correctional facilities, substance prevention and treatment programs including methadone maintenance, and mental health facilities).

Project START (correctional settings)

Safe in the City

Media-based and electronic interventions, including health communication and public information campaigns

Homegrown interventions of at least Tier III PRS status (see Chapter 5), with clear, documented indicators and protocols for outcome monitoring and evaluation

Other interventions with evidence of effectiveness recommended by CDC or identified by the HIV/AIDS Research Synthesis Project, whether promising-evidence, best-evidence, or DEBI-packaged interventions, that are designed for heterosexual females at increased risk, and for which there are curricula, guidelines, materials and nationally available training for facilitators.

Heterosexual Men at High Risk

Interventions Recommended in the 2010-2012 Alaska HIV Prevention Plan

Partner Services (PS)

Rapid Testing in Non-Clinical Settings

HIV Counseling and Testing through Social Networks

Street and Community Outreach, including distribution of condoms and referral to testing

STD Testing and Partner Services

Making Proud Choices! (for youth)

Single-session group presentations in connection with HIV counseling and testing in settings that reach those at highest risk (i.e. correctional facilities, substance prevention and treatment programs including methadone maintenance, and mental health facilities).

Project START (correctional settings)

Safe in the City

Media-based and electronic interventions, including health communication and public information campaigns

Homegrown interventions of at least Tier III PRS status (see Chapter 5), with clear, documented indicators and protocols for outcome monitoring and evaluation

Other interventions with evidence of effectiveness recommended by CDC or identified by the HIV/AIDS Research Synthesis Project, whether promising-evidence, best-evidence, or DEBI-packaged interventions, that are designed for heterosexual men at increased risk, and for which there are curricula, guidelines, materials and nationally available training for facilitators.

Table 9. Recommended Interventions by Priority Population

	HIV Positive Persons	MSM	IDU	Heterosexual Females at Increased Risk	Heterosexual Men at Increased Risk
Partner Services	√	√	√	√	√
Rapid HIV Testing in Non-Clinical Settings		√	√	√	√
HIV CT through Social Networks		√	√	√	√
Single Session Group Presentations With Testing			√	√	√
STD Testing and Partner Services	√	√	√	√	√
Street and Community Outreach			√	√	√
Targeted Outreach		√			
Comprehensive Risk Counseling Services (CRCS)	√				
Linkage to Care	√				
Syringe Exchange & Access			√		
Prevention Counseling with Medical Care, or Partnership for Health	√				
Project START			√	√	√
Making Proud Choices!				√	√
Safe in the City				√	√
Healthy Relationships	√				
Mpowerment		√			
Media-based & electronic HC/PI	√	√	√	√	√
Homegrown interventions of at least Tier III PRS status (see text)	√	√	√	√	√
Other Interventions*	√	√	√	√	√

* Other interventions with evidence of effectiveness recommended by CDC or identified by the HIV/AIDS Research Synthesis Project, whether promising-evidence, best-evidence, or DEBI-packaged interventions, that are designed for or can be adapted to one or more categories of persons with increased risk, and for which there are curricula, guidelines, materials and nationally available training for facilitators.

Recommendations for Viral Hepatitis Prevention

Populations prioritized for HIV prevention services are often affected by viral hepatitis, as the same risk behaviors can transmit both HIV and hepatitis. Like HIV, hepatitis viruses are transmitted through sexual activity and sharing of drug injection equipment or other implements contaminated with blood. As with HIV, hepatitis B virus (HBV) can also be transmitted perinatally from a woman who is a hepatitis B carrier.

Injection drug use is a major risk factor for HBV and HCV infection: the CDC estimates that 50% to 80% of IDUs become infected with HBV, HCV, or both viruses within 5 years of beginning injection, and CDC data indicate injection drug use as the primary risk factor for 12% of acute hepatitis B cases and 60% of acute hepatitis C cases⁵⁴.

MSM are disproportionately affected by both hepatitis A and B: roughly 10% of all new HAV infections, and 20% of all new HBV infections, in the U.S. are among MSM⁵⁵. Furthermore, approximately 15% of persons with chronic HBV infection and 39% of persons with chronic hepatitis C virus infection have a history of incarceration, making correctional populations an especially important focus for prevention efforts⁵⁶.

⁵⁴ “Viral Hepatitis Integration for HIV Prevention Community Planners,” CDC factsheet. Online at http://www.cdc.gov/hepatitis/Resources/PDFs/hiv_co_mm_planners.pdf. (accessed October 2008).

⁵⁵ “Viral Hepatitis: Information for Gay and Bisexual Men.” CDC Publication #21-1090). Online at http://www.cdc.gov/hepatitis/Populations/PDFs/Hep_Gay-FactSheet-BW.pdf. (accessed December 30, 2009).

⁵⁶ *Loc. cit.*

Vaccines exist for both hepatitis A and B, including the Twinrix vaccine, a three-dose series that is protective against both A and B. Medical treatments can help many persons with HCV, and encouraging cure rates are routinely reported. Under State of Alaska law, new diagnoses of hepatitis A, B and C must be reported within five days of diagnosis. CDC recommends the following prevention and testing measures⁵⁷:

Injection Drug Users (IDU)

- Hepatitis A and hepatitis B vaccinations
- Hepatitis C counseling, testing and referral
- Services for HCV-positive persons
- Substance abuse treatment

Heterosexuals at Increased Risk

- Hepatitis A and B vaccination
- Counseling to reduce infection risk and drug and alcohol abuse

Men Who Have Sex with Men (MSM)

- Hepatitis A and hepatitis B vaccinations
- Testing for hepatitis B
- Counseling to reduce infection risk and drug and alcohol abuse

HIV-Positive Persons

- Hepatitis A and hepatitis B vaccinations
- Hepatitis C counseling, testing and referral

Incarcerated Persons

- Hepatitis A and hepatitis B vaccinations

⁵⁷ See CDC’s *Viral Hepatitis Integration for HIV Prevention Community Planners* (available online at http://www.cdc.gov/hepatitis/Resources/PDFs/hiv_co_mm_planners.pdf).

- Counseling to reduce infection risk
- Substance abuse treatment

The HPPG recommends that HIV interventions include screening for risk factors for acquiring viral hepatitis, information regarding the benefits of vaccination for hepatitis A and hepatitis B, education regarding risk behaviors and transmission, and, for HIV-positive persons and IDUs, referrals for HCV counseling and testing. The HPPG further recommends that persons with hepatitis C receive HIV counseling and testing, and any necessary service referrals.

The State of Alaska maintains an active hepatitis surveillance database; further details concerning this program, as well as a comprehensive overview of hepatitis in Alaska and the U.S. as a whole, links to the CDC's Arctic Investigations Program, ANTHC and the Alaska Veterans Affairs Healthcare System (all of which are active in hepatitis work), and a collection of educational materials and information on patient assistance programs, can be found at <http://www.epi.hss.state.ak.us/id/hepatitis/default.htm>. CBOs or other service providers interested in integrating hepatitis prevention efforts into their programs are encouraged to follow up on the resources available there.

Recommendations for Capacity Building

Capacity building is a process in which individuals, organizations, and communities are helped to develop skills and abilities to enhance and sustain HIV prevention efforts. Capacity building may include, but is not limited to, training, technical assistance, quality assurance guidance, recommendations for intervention materials, models and curricula, assistance in grant writing, and support for organizational and

infrastructural development. Capacity building may be offered by a range of providers, including the health department, national HIV prevention capacity building providers, and public or private local, state or national organizations with relevant expertise.

The HIV Prevention Planning Group recommends:

- **For community-based organizations funded for HIV prevention, other HIV prevention providers, and organizations with ties to priority populations:** capacity building activities in the areas of design, implementation, and evaluation of HIV prevention interventions, grant writing, and organizational development.
- **For agencies and institutions serving priority populations,** such as correctional facilities, substance abuse treatment programs, social service agencies, mental health services, women's shelters, local government agencies, Alaska Native tribal organizations, and programs serving youth: capacity building activities to foster and support the incorporation of HIV prevention into their programs and services.
- **For public health and private sector health care providers:** training in HIV counseling for use of rapid HIV testing technologies, and promotion of HIV testing in clinical settings.
- **For the Alaska HIV Prevention Planning Group:** capacity building activities to support the prevention planning process, and to support

HPPG members' collaboration with their respective communities. The HPPG is particularly concerned with emerging research on effective interventions, and on adapting proven interventions to fit the cultural and geographic diversity of Alaska.

- **For HIV/STD Program staff:** training opportunities to ensure that the health department has the capacity to manage and support all components of a comprehensive HIV prevention program.

Recommendations for Needs Assessment

From 2007-2009, the HIV/STD Program, upon the recommendation of the HPPG, conducted needs assessments addressing heterosexual females at increased risk, HIV positive persons, and MSM. To ensure the acceptability, feasibility and proper targeting of HIV prevention interventions, needs assessments among the following populations are recommended in 2010-2012:

- **Injection drug users**

This list is flexible and need not be considered exhaustive, as the need for input from other affected communities and populations not listed here may emerge over the time period covered by the 2010-2012 *Plan*. If so, the HIV/STD Program and HPPG will adapt their plans accordingly.

Recommendations for Evaluation

The HPPG supports the use of HIV Prevention funds to evaluate both the community planning process and the HIV prevention activities carried out by the HIV/STD Program, its grantees and its

contractors. The activities below are recommended for the 2010-2012 period.

Annual HPPG self-evaluation. Following longstanding practice, the HPPG conducts an annual self-evaluation to assess its progress in achieving the five core objectives⁵⁸ of community planning.

HPPG evaluation of health department efforts. The HPPG also examines data provided by the HIV/STD Program regarding the allocation of HIV prevention resources, and the HIV/STD Program's annual grant application to CDC, to assess whether the Program's resource allocation and application statements correspond with the 2010-2012 *Plan*.

Process evaluation data. The HIV/STD Program requires process evaluation data on all funded interventions that are carried out by grantees, contractors, or Program staff.

⁵⁸ These five core objectives are as follows (see *Evaluating CDC-Funded Health Department HIV Prevention Programs: Supplemental Handbook*, available online at http://www.cdc.gov/hiv/topics/evaluation/health_dept_s/guidance/supp-handbook/process-eval.htm#tab_2-1):

1. Foster the open and participatory nature of the community planning process.
2. Ensure that the community planning group(s) reflects the diversity of the epidemic in the jurisdiction, and that experts in epidemiology, behavioral science, health planning, and evaluation are included in the process.
3. Ensure that priority HIV prevention needs are determined based on an epidemiologic profile and a needs assessment.
4. Ensure that interventions are prioritized based on explicit consideration of priority needs, outcome effectiveness, cost effectiveness, social and behavioral science theory, and community norms and values.
5. Foster strong, logical linkages between the community planning process, plans, applications for funding, and the allocation of CDC HIV prevention resources.

Process data provide information on the reach and retention of the intervention and the demographic characteristics of participants. The HIV/STD Program uses these data to monitor the implementation of funded activities and presents summary data to the HPPG in support of the planning process. Grantee organizations use these data to monitor their programs' progress toward their objectives and to inform their program planning. . Given its importance to so many HIV prevention stakeholders, the HPPG recommends continued attention to the collection of high-quality process monitoring data.

Outcome monitoring data. The HIV/STD Program will seek assistance from CDC and capacity-building assistance (CBA) providers to initiate pilot projects for robust monitoring and evaluation of grantee outcome data from 2010-2012.

Other Health Department Activities Carried Out Under the CDC Cooperative Agreement

The HPPG endorses the use of HIV prevention funds under the CDC cooperative agreement to ensure that the HIV/STD Program retains all staff and infrastructure needed to implement all components of a comprehensive HIV prevention program. In addition to the health department's responsibilities regarding community planning, HIV prevention and capacity building discussed throughout this *Plan*, the HIV/STD Program must have the ability to: prepare grant applications and reports; manage grants to CBOs and other agencies; implement quality assurance systems; respond to the surveillance data needs of the HPPG, prevention programs, and providers; oversee a material review panel for ongoing review of educational materials; collaborate

and coordinate with other state and community agencies, health department programs, and Alaska Native tribal organizations that serve priority populations as defined in the Plan; and provide guidance on policy issues related to HIV/AIDS for the State of Alaska.

CHAPTER SEVEN: OVERVIEW OF THE COMMUNITY PLANNING PROCESS

HIV Prevention Community Planning

SINCE JANUARY 1994, STATE, TERRITORIAL, and local health departments receiving HIV prevention funds through the CDC have conducted community planning activities to develop comprehensive HIV prevention plans. In Alaska, a statewide Alaska HIV Prevention Planning Group (HPPG) was organized in 1994 to guide the planning process. It is the joint responsibility of the HPPG members and the health department to implement HIV prevention community planning. This collaborative planning process aims to improve the effectiveness of HIV prevention programs through the participation of individuals who are affected by HIV/AIDS and who are knowledgeable about HIV prevention and Alaska communities. Persons who reflect the perspective of the populations most affected by HIV, as well as epidemiologists, social scientists, providers, and state HIV/STD Program staff, work together to develop a statewide prevention plan that best represents the needs of populations at risk for, or infected with, HIV/AIDS.

Goals of HIV Prevention Community Planning

The CDC has defined three major goals to provide an overall direction to HIV prevention community planning⁵⁹:

Goal One — Community planning supports broad-based community participation in HIV prevention planning.

Goal Two — Community planning identifies priority HIV prevention needs (a set of priority target populations and interventions for each identified target population) in each jurisdiction.

Goal Three — Community planning ensures that HIV prevention resources target priority populations and interventions set forth in the comprehensive HIV prevention plan.

Guiding Principles for HIV Prevention Community Planning

To ensure that the HIV prevention community planning process is carried out in a participatory manner, the CDC has specified the following Guiding Principles of HIV Prevention Community Planning⁶⁰:

1. The health department and community planning group must work collaboratively to develop a comprehensive HIV prevention plan for the jurisdiction.
2. The community planning process must reflect an open, candid, and participatory process, in which differences in cultural

⁵⁹ From the CDC's *2003-2008 Community Planning Guidance* (still the most current guidance as of early 2010), Section II, Part C. Available online at: <http://www.cdc.gov/hiv/topics/cba/resources/guidelines/hiv-cp/section2.htm>. Accessed Sept. 15, 2008.

⁶⁰ *Ibid.* Section II, Part D.

and ethnic background, perspective, and experience are essential and valued.

3. The community planning process must involve representatives of populations at greatest risk for HIV infection and people living with HIV/AIDS (PLWHA).
4. The fundamental tenets of community planning are parity, inclusion, and representation:

Parity is the condition whereby all members participate equally in the planning process and have equal voice in voting and other decision-making activities.

Inclusion is the assurance that the views, perspectives, and needs of all affected communities are included and involved in a meaningful manner in the community planning process.

Representation means that members reflect the perspective of a specific community and that they understand that community's values, norms, and behaviors. Representatives must also be able to participate as group members in objectively weighing the overall priority prevention needs of the State.

5. An inclusive community planning process includes representatives of varying races and ethnicities, genders, sexual orientations, ages, and other characteristics such as varying educational backgrounds, professions, and expertise.
6. The community planning process must actively encourage and seek out community participation.

7. Nominations for membership should be solicited through an open process and candidates' selection should be based on criteria established by the health department and the community planning group.
8. An evidence-based process for setting priorities among target populations should be based on the epidemiologic profile and the community services assessment.
9. Priority setting for target populations must address populations for which HIV prevention will have the greatest impact.
10. The set of prevention interventions and activities for prioritized target populations should have the potential to prevent the greatest number of new infections.

Current Alaska HIV Prevention Group Members

Members of the Alaska HPPG are volunteers, selected for their knowledge and personal experience related to HIV and risk behaviors, as well as their technical expertise in program planning, evaluation, epidemiology, behavioral science, and other fields related to prevention. Members are diverse in race/ethnicity, serostatus, socioeconomic level, sexual orientation, education, and areas of expertise. The HPPG's Membership Committee reviews HPPG composition and membership needs, and suggests which populations to target recruitment efforts to address these needs. HPPG member nominations are solicited from consumers and HIV prevention providers throughout the state representing both governmental and non-governmental agencies. Dr. Joe McLaughlin, Chief of the Alaska Division of Public Health's Section of Epidemiology, in which the HIV/STD

Program is based, appoints members upon the recommendation of the HPPG.

The HPPG is guided by a charter describing the purpose, duties, liaisons, membership, records, and governance of meetings. Meetings are generally held semi-annually; additional meetings or teleconferences are scheduled if deemed necessary by the co-chairs. Three HPPG members, two of whom are community members and one of whom represents the Alaska Department of Health and Social Services, serve as co-chairs of the Alaska HPPG and rotate the chairpersonship of meetings. At the time that the *2010-2012 Alaska HIV Prevention Plan* was drafted, the HPPG was composed of the following members:

- Alex Barros, Community Co-chair, Anchorage
- Scott Bailey, Anchorage
- Hugh Brown, III, Anchorage
- Victor Carlson, Anchorage
- Mollie Rosier, Health Department Co-chair, Anchorage
- Gloria Eldridge, Anchorage
- Tim (Sigvold) Juliussen, Community Co-chair, Anchorage
- Elizabeth Lee, Bethel
- Ebony McClain-Owens, Anchorage
- Brenda Reichenberg, Fairbanks
- Inna Rivkin, Fairbanks
- Golga Sakar, Anchorage
- Simon Tony-Abraham, Toksook Bay

The HIV/STD Program strives to organize a diverse planning group, guided by the fundamental tenets of HIV prevention community planning: parity, inclusion and representation.

Community Input Process

In addition to the HPPG's membership, the prevention planning process includes multiple activities to seek input from

populations at increased risk, service providers to these populations, experts in related fields, and interested others. HPPG meetings are open to the public and each full meeting includes a public comment period. Meeting dates are posted at <http://www.epi.hss.state.ak.us/hivstd/hppg> and advertised through listserv announcements.

Other specific individuals and agency representatives are specially invited to participate in HPPG meetings where their expertise or interest is particularly relevant. Prevention provider teleconference participants, which include over 50 providers statewide, and other individuals or agencies known to be interested and involved in HIV prevention are regularly advised of the HPPG's meeting dates.

The Alaska HPPG and the Alaska Ryan White Consortia and lead agencies share information and mutual participation in their respective activities through several mechanisms. Since the Alaska HIV/STD Program supports both groups, communication about prevention and care activities is easily facilitated by HIV/STD Program staff. Generally there is some overlapping membership between the HPPG and one or more HIV Consortia. Data from Ryan White Act activities are shared with the HPPG and included in the needs assessment process, and the *Plan* is shared with the Ryan White Consortium. Prevention and care providers and HPPG members receive epidemiologic data in Section of Epidemiology *Reports and Recommendations* and *Epidemiology Bulletins*. Since 2001, with the implementation of more prevention activities for HIV-positive persons, interaction between the HPPG and Ryan White services has increased.

Since 2000, HPPG information has been available online through the Section of Epidemiology website, at

<http://www.epi.hss.state.ak.us/hivstd/hppg>.

Upcoming meeting dates and agendas, a list of current HPPG members and their areas of residence, and applications for HPPG membership are posted on the website. The current *Alaska HIV Prevention Plan* is posted on the website and public comment is

welcome; contact information for relevant HIV/STD Program staff can be found there.

We hope that the 2010-2012 *Alaska HIV Prevention Plan* proves useful to community-based organizations, other prevention providers, and members of the public. We welcome your comments and suggestions regarding the *Plan's* content, and on HIV prevention in Alaska in general.

APPENDIX A:

TABLES USED BY

THE ALASKA

HPPG IN

PRIORITIZING

POPULATIONS

Table 10. Target Populations by Risk Factor; HIV/AIDS cases through 2008

Target Pop by Surveillance Category	Factor	Data	Scale	Rating	Weight	Score
	HIV/AIDS 2008 Prevalence #		1: 0 – 49 2: 50 – 99 3: 100 – 199 4: 200 – 299 5: 300 - 399		3	
	HIV 5 year Incidence #		1: 0 – 9 2: 10 – 19 3: 20 – 29 4: 30 – 39 5: 40 - >50		3	
	Relative Risk of Primary Risk Behavior		1: Heterosexual contact with person of unknown status and risk 2: Heterosexual contact with HIV positive or high risk partner 3: male with male sexual contact 4: Injection drug use 5: male with male sexual contact and injection drug use		1	
	Total Score					

Table 11. Target Populations by Demographics; HIV/AIDS cases through Dec. 31, 2008

Target Pop	Factor	Data	Scale	Rating	Weight	Score
	HIV/AIDS 2008 Prevalence #		1: 0 – 49 2: 50 – 99 3: 100 – 199 4: 200 – 299 5: 300 - 399		3	
	HIV/AIDS 2008 Prev. Rate/100,000		1: 0 – 99/100,000 2: 100 - 199/100,000 3: 200 – 299/100,000 4: 300 – 399/100,000 5: 400 - \geq 499/100,000		3	
	HIV 5 year Incidence #		1: 1 – 9 2: 10 – 19 3: 20 – 29 4: 30 – 39 5: 40 - \geq 50		3	
	HIV Incidence Rate/100,000 5 yr average		1: 0 – 4/100,000 2: 5 – 9/100,000 3: 10 – 14/100,000 4: 15 – 19/100,000 5: 20 - \geq 25/100,000		3	
Total Score						



State of Alaska

Sean Parnell, Governor

Department of Health and Social Services

William H. Hogan, Commissioner

Division of Public Health

Ward B. Hurlburt, MD, MPH, Chief Medical Officer and Director

P.O. Box 240249

Anchorage, Alaska 99524-0249

907-269-8000

February 2010