

Infant Maltreatment Mortality

Alaska Surveillance of Child Abuse and
Neglect (Alaska SCAN)

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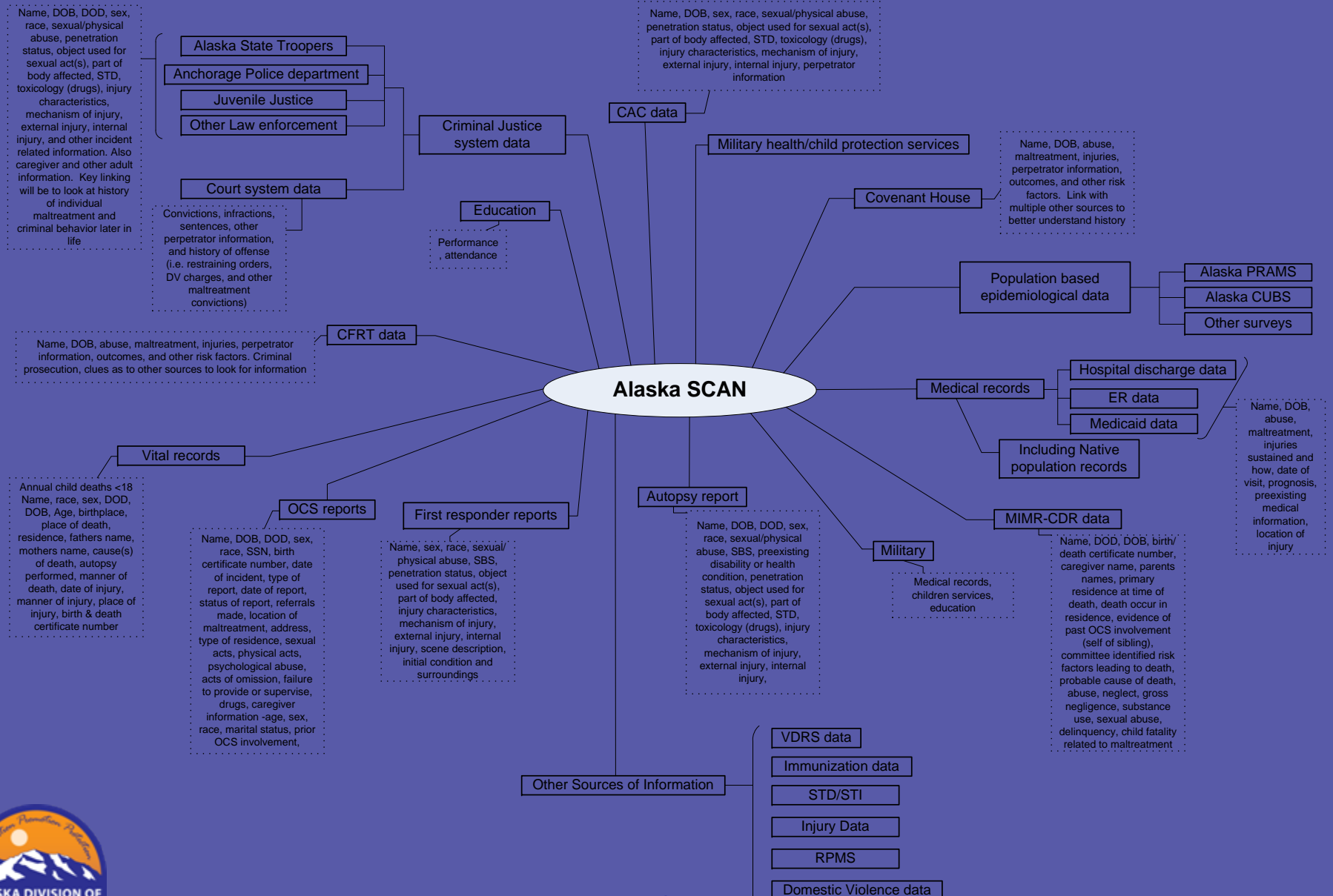
Methods

- Maltreatment related fatality case ascertainment:
 - Linkage of multiple data sources – standardized public health definition applied
 - (High Specificity) Death certificate with corresponding ICD code, MIMR-CDR committee identification, OCS indication, charges filed under Alaska's penal code, medical or other records indicating maltreatment
 - (High Sensitivity) Working definition of maltreatment based on combination of four factors: parent caregiver factors, incident factors, environmental & family factors, and child factors

Fatal Child Maltreatment Surveillance

Information Collection

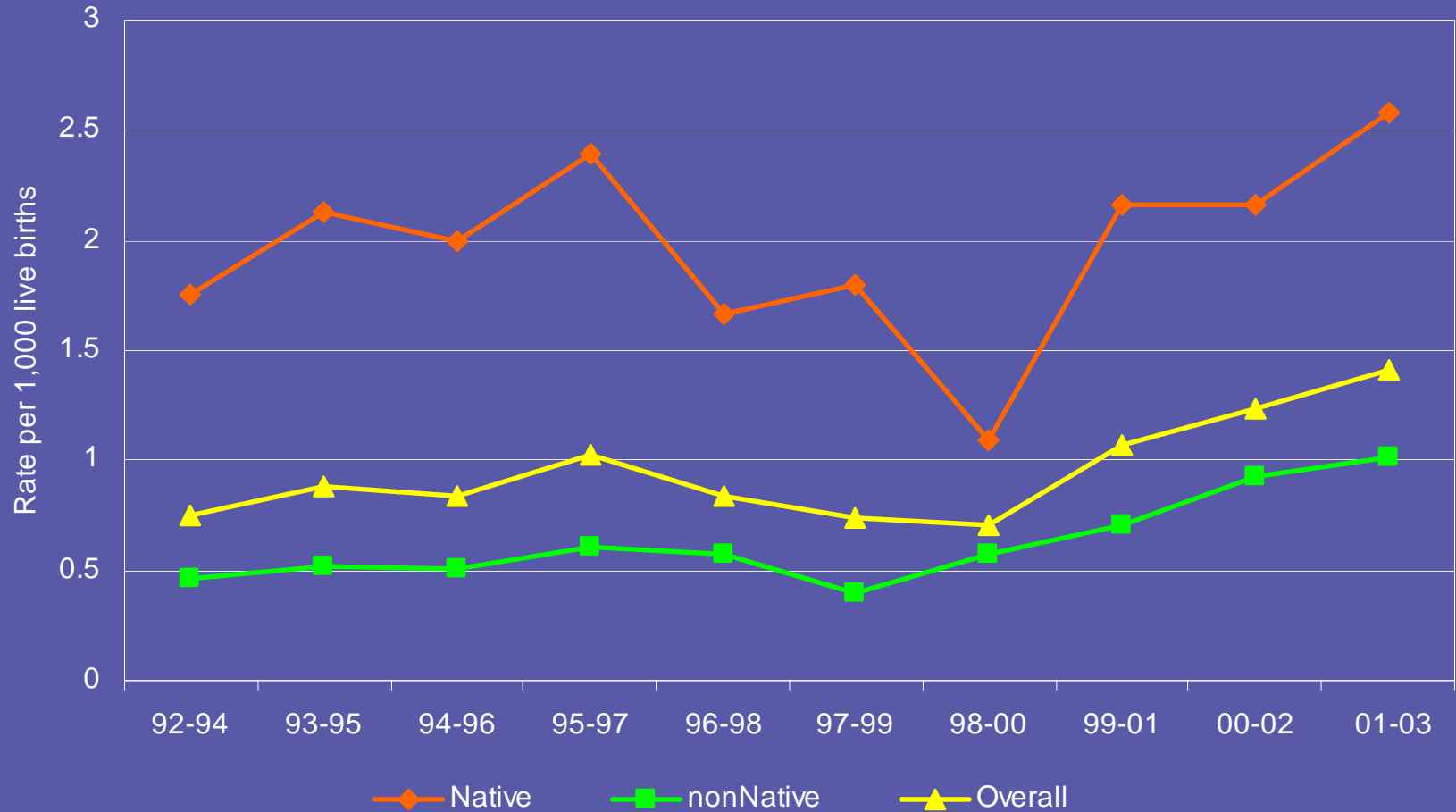
Data sources, with possible data elements or type of information that could be available through the identified agency



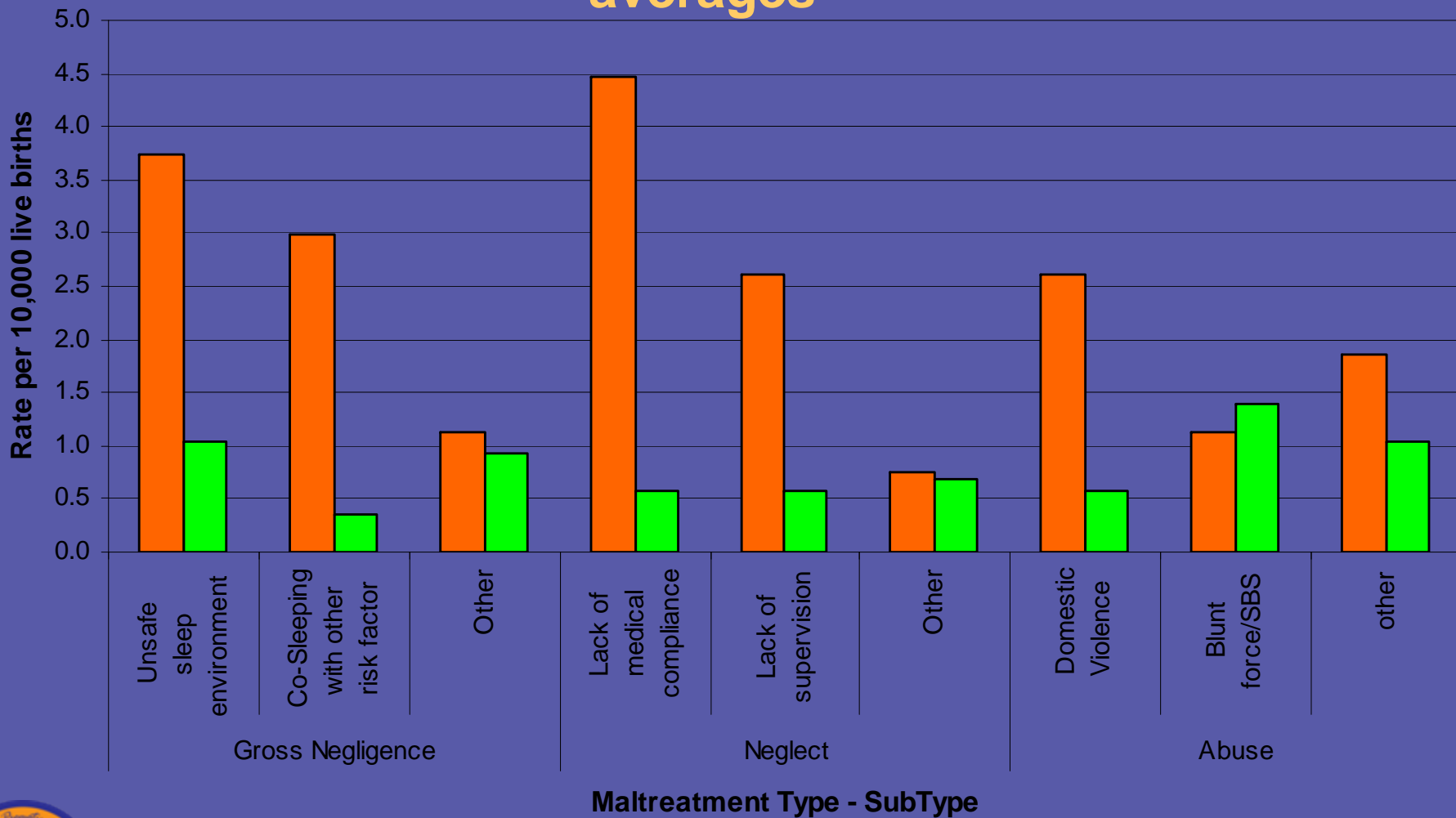
Methods: case definitions

- **MALTREATMENT:** Any act or series of acts of commission or omission by a parent or other caregiver that results in harm, potential for harm, or threat of harm to a child. (Commission – Child abuse, Omission – Child neglect, both without intentionality only applies to acts)
- **Abuse:** Deliberate and intentional words or overt actions that cause harm, potential harm, or threat of harm to a child (physical, sexual, and psychological)
- **Neglect:** The intentional failure to provide for a child's basic physical, emotional, or educational needs or to protect a child from harm or potential harm (failure to provide and failure to supervise)
- **Negligence:** The unintentional failure to exercise reasonable care that would be expected of any other person in a similar situation
- **Harm:** Any disruption caused by the threatened or actual acts of commission or omission to a child's physical or emotional health. Disruptions can affect the child's physical, cognitive, or emotional development.

Infant maltreatment mortality trends by Native status, 1992-2003 – based on three year moving averages



Infant maltreatment mortality by type and sub-type, Native status, 1992-2003 – based on three year moving averages



Associated factors for infant maltreatment among Alaska Native mothers, 1992 - 2003

Factor	Rate*	RR (95% CI)
Mothers education**		
<12	3.62	2.53 (1.35 - 4.62)
12 or more	1.43	1
Mothers age		
<=19	1.59	0.83 (0.36 - 1.66)
>19	1.94	1
Mothers marital status		
Unmarried	2.48	2.23 (1.24 - 4.25)
Married	1.11	1
Alcohol intake during pregnancy		
Yes	4.83	3.40 (1.81 - 6.09)
No	1.43	1
Smoking during pregnancy		
Yes	2.38	0.76 (0.44 - 1.31)
No	3.15	1
Kotelchuck index		
Not adequate	2.39	2.17 (1.21 - 4.03)
Adequate	1.1	1
Total living		
1 or more	2.34	3.28 (1.52 - 8.66)
None	0.68	1

*Rate is per 1,000 live births

**Stratified by age to exclude mothers 19 or younger



Birth Cohort multivariate analysis of fatal infant maltreatment, Alaska 1992 - 2003*

Factor	Odds Ratio	95% CI
Mothers education less than 12 years	1.33	0.81 - 2.17
Mothers age at birth 19 years or younger	1.93	1.02 - 3.64
Mothers marital status unmarried	3.37	2.02 - 5.61
Alcohol Intake during pregnancy	2.12	1.18 - 3.81
Smoking during pregnancy	1.86	1.17 - 2.95
Kotelchuck Index Less than adequate**	1.9	1.23 - 2.92
One or more previous pregnancy terminations	1.32	0.85 - 2.06
One or more children living	2.17	1.24 - 3.81
Native race	1.05	0.66 - 1.67
Previous child death	2.52	1.25 - 5.11

*Logistic regression used to identify independent associations

**Less than adequate = Inadequate and Intermediate scores



Birth Cohort multivariate analysis of fatal maltreatment stratified by Native nonNative, Alaska 1992 - 2003*

Factor	Native race		nonNative race	
	Odds Ratio	95% CI	Odds Ratio	95% CI
- Mothers education less than 12 years	1.96	1.03 - 3.75	0.78	0.37 - 1.66
- Mothers age at birth 19 years or younger	1.28	0.44 - 3.72	2.82	1.27 - 6.29
- Mothers marital status unmarried	1.96	0.97 - 3.97	4.38	2.21 - 8.68
- Alcohol Intake during pregnancy	2.50	1.22 - 5.12	1.96	0.69 - 5.63
- Smoking during pregnancy	0.95	0.50 - 1.83	3.35	1.80 - 6.24
- Kotelchuck Index Less than adequate**	1.71	0.91 - 3.22	2.05	1.15 - 3.66
- One or more pregnancy terminations	1.43	0.76 - 2.69	1.08	0.58 - 2.03
- One or more children living	3.46	1.16 - 10.03	1.79	0.90 - 3.57
- Previous child death	3.10	1.35 - 7.12	1.35	0.32 - 5.65

*Logistic regression used to identify independent associations

**Less than adequate = Inadequate and Intermediate scores



Summary

- Alaska Native infants have higher infant maltreatment mortality rates than nonNatives during all years examined (1992 – 2003)
- Among Native mothers:
 - Having a living child prior to birth, experiencing a previous child's death, alcohol use during pregnancy, and having less than 12 years education are independent risk factors for Native infant maltreatment
 - Factors associated with fatal infant maltreatment among Natives are largely unique from nonNatives – hence would require different interventions and messages for prevention
 - Differences in documentation on birth records should be considered a possible differential misclassification bias
- Reducing deaths from sleeping, medical compliance, and supervision related maltreatment would drastically impact the overall rate of fatal maltreatment among natives
 - These impacted through education related prevention efforts

Alaska SCAN - what's next

- Infant maltreatment death data through 2006 will be available shortly
- Child maltreatment death data starting with 2004 through 2006 will be available shortly
- Child maltreatment morbidity data collection development is currently in process
 - Key players are being contacted for input
- Alaska SCAN is a resource for statewide comprehensive maltreatment data
 - Use this program for program needs, analysis, and evaluations.

Thank you!

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