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This report is prepared under contract to the Section of Community Health & Emergency Medical Services, Division of Public Health, Alaska Department of Health & Social Services, under the direction of David Thomson, Project Officer.

Alaska Helmet Observational Surveys May 2000 to May 2001

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This project documented helmet usage of bicyclists, ATV riders and snow machine riders in various locations across Alaska. The report will be divided into three sections to deal with each sport individually.

I. Bicycle Helmet Observations

Observations of bicyclists' helmet usage were conducted during the months of May -September, 2000 by 16 surveyors in 11 different communities. The observations were conducted by driving along a prescribed route, at defined time periods, on predetermined days of the week. A representative sample was needed of the bicycle riders in each community, using a variety of times on both weekends and weekdays. The communities surveyed were Anchorage, Fairbanks, Juneau, Sitka, Kenai/Soldotna, Wasilla/Palmer, Bethel, Kodiak, and Dillingham. The results can be seen in Appendix A.

The total number of observations was 6,615. Of these, 31% were wearing a bicycle helmet at the time they were observed. The lowest usage rates were found in rural Alaska with Bethel, Dillingham, and Kodiak having 11%, 14%, and 17% respectively. The highest rates were in Kenai/Soldotna, Anchorage, and Juneau with 38%, 37%, and 37% respectively.

Of the 6,615 observations, 68% were male and 32% female, yet females wore their helmets 39% of the time compared to males at 28%. The biggest difference in helmet usage by gender was found in Kenai/Soldotna with female wearing their helmets 52% of the time and males wearing theirs 29% of the time.

Age group breakdowns showed that adults were observed wearing their helmets 38% of the time, teens 16%, and children 34% of the time. Sitka had the highest child usage rate at 74%,

Anchorage and Juneau had the highest teen usage at 20%, and Kenai/Soldotna had the highest adult usage at 52%.

There were certain locations within communities that had higher helmet usage patterns, such as the Glen Highway bike trail in Anchorage with a helmet usage rate of 71%, while low socioeconomic neighborhoods a few miles away had rates of only 8-9%.

Bicycle Helmet Analysis - SUMMER 2000

CITY	# Observed	HELMETS WORN			AGE GROUP			SEX		%Male
		Yes	No	%yes	Adult	Teen	Child	M	F	
Anchorage	2428	910	1518	37%	1255	397	776	1601	827	66%
Bethel	123	13	110	11%	25	46	52	85	38	69%
Dillingham	162	22	140	14%	29	18	115	118	44	73%
Fairbanks	1222	308	914	25%	559	326	337	827	395	68%
Juneau	1054	390	663	37%	253	253	548	687	387	65%
Kenai/Soldotna	274	103	171	38%	75	141	58	161	113	59%
Kodiak	436	73	363	17%	57	*	379	349	87	80%
Sitka	556	172	384	31%	314	116	126	442	114	79%
Wasilla/Palmer	360	87	273	24%	82	172	106	236	124	66%
	6615	2078	4536	31%	2649	1469	2497	4506	2129	68%

HELMETS WORN

CITY	# Observed	SEX	Yes	No	%yes
Anchorage	1601	M	530	1071	33%
	827	F	380	447	46%
Bethel	85	M	8	77	9%
	38	F	5	33	13%
Dillingham	67	M	14	53	21%
	30	F	8	22	27%
Fairbanks	827	M	179	648	22%
	395	F	129	266	33%
Juneau	697	M	255	442	37%
	357	F	135	221	38%
Kenai/Soldotna	161	M	46	115	29%
	109	F	57	56	52%
Kodiak	349	M	57	292	16%
	87	F	16	71	18%
Sitka	442	M	126	316	29%

	114	F	46	68	40%
Wasilla/Palmer	236	M	50	186	21%
	124	F	37	87	30%
	4465	M	1265	3200	28%
	2081	F	813	1271	39%

HELMETS WORN

CITY	# Observed	AGE	Yes	No	%yes
Anchorage	1255	Adult	586	669	47%
	397	Teen	80	317	20%
	776	Child	244	532	31%
Bethel	25	Adult	2	23	8%
	46	Teen	7	39	15%
	37	Child	4	33	11%
Dillingham	29	Adult	6	23	21%
	18	Teen	1	17	6%
	115	Child	15	100	13%
Fairbanks	559	Adult	173	386	31%
	326	Teen	31	295	10%
	337	Child	104	233	31%
Juneau	253	Adult	95	158	38%
	253	Teen	50	203	20%
	549	Child	246	303	45%
Kenai/Soldotna	75	Adult	39	36	52%
	141	Teen	27	114	19%
	58	Child	37	21	64%
Kodiak	57	Adult	10	47	18%
	0	Teen	0	0	#####
	379	Child	63	316	17%
Sitka	314	Adult	61	253	19%
	116	Teen	18	98	16%
	126	Child	93	33	74%
Wasilla/Palmer	82	Adult	31	51	38%
	172	Teen	15	157	9%
	106	Child	37	65	35%
	2649	Adult	1003	1646	38%
	1469	Teen	229	1240	16%
	2483	Child	843	1636	34%

HELMETS WORN

CITY # Observed Site Yes No %yes

Anchorage	862	Coastl trail	462	400	54%
	286	ER-Glen	204	82	71%
	494	Loop	175	319	35%
	253	Fairview	19	234	8%
	533	Mtn View	50	483	9%
Bethel	123	town	13	110	11%
Dillingham	180	Kanak.Rd	22	158	12%
Fairbanks	573	Neighbrhds	119	454	21%
	649	trails	189	460	29%
Juneau	65	Douglas	29	36	45%
	143	downtown	46	97	32%
	176	Lemon crk	35	141	20%
	669	Mendenhal	281	388	42%
Kenai/Soldotna	135	Kenai	58	77	43%
	139	Soldotna	45	94	32%
Kodiak	436	route	73	363	17%
Sitka	556	town	172	384	31%
Wasilla	162	Palmer	47	115	29%
	23	Lucille	1	22	4%
	133	Wondrland	28	105	21%
	41	Tanaina	11	30	27%

II. All-Terrain Vehicle (ATV) Observations

All-Terrain Vehicles (ATVs) are sometimes referred to as "4-wheelers". These machines are often used for recreation or hunting by the urban population and as a common means of local transportation for rural Alaskans. A total of 12 communities had observations completed for helmet use by riders and passengers on ATVs between the months of June - October, 2000. See Appendix B.

The average helmet usage for the 1,276 ATV observations was 13%, with a range from 0% in Aniak and 1% in Kotzebue to 62% in Sitka and Soldotna. In general males(19%) wore their helmets more than females (5%). Teens(18%) and children (17%) were seen wearing helmets more than the adults (10%).

When comparing rural and urban riders, the urban group had higher usage at 59%, while the rural riders had 18% helmet usage. Another interesting comparison was that of passengers and drivers, with 9% of the passengers seen wearing a helmet and 18% of the drivers.

It was difficult to find ATV riders during the observational periods at some locations, however the communities of Kotzebue, and Point Hope documented hundreds of riders but only 1-5% were observed wearing helmets. This means that the population with the greatest exposure or risk, are the ones least likely to be wearing a helmet.

ATV Helmet Use Analysis - SUMMER 2000

CITY	# Observed	HELMETS WORN			AGE GROUP			SEX		%Male
		Yes	No	%yes	Adult	Teen	Child	M	F	
Aniak	19	0	19	0%	9	0	10	10	9	53%
Dillingham	36	17	19	47%	17	11	8	30	6	83%
Fairbanks	76	43	33	57%	31	23	22	67	9	88%
Glenallen	19	8	11	42%	8	2	9	7	12	37%
Homer	18	4	14	22%	7	10	1	16	2	89%
Kenai	31	17	14	55%	14	17	0	28	3	90%
Kotzebue	588	8	580	1%	413	93	82	304	284	52%
North Pole	15	8	7	53%	7	6	2	14	1	93%
Palmer	61	27	34	44%	33	15	13	49	12	80%
Pt. Hope	379	19	360	5%	167	106	106	196	183	52%
Sitka	21	13	8	62%	13	4	4	17	4	81%
Soldotna	13	8	5	62%	9	3	1	11	2	85%
1276		172	1104	13%	728	290	258	749	527	59%

HELMETS WORN

CITY	# Observed	SEX	Yes	No	%yes
Aniak	10	M	0	10	0%
	9	F	0	9	0%
Dillingham	30	M	16	14	53%
	6	F	1	5	17%
Fairbanks	67	M	41	26	61%
	9	F	2	7	22%
Glenallen	7	M	5	2	71%
	12	F	3	9	25%

Homer	16	M	3	13	19%
	2	F	1	1	50%
Kenai	28	M	16	12	57%
	3	F	1	2	33%
Kotzebue	304	M	7	297	2%
	284	F	1	283	0%
North Pole	8	M	0	8	0%
	7	F	6	1	86%
Palmer	49	M	25	24	51%
	12	F	2	10	17%
Pt. Hope	196	M	11	185	6%
	182	F	7	175	4%
Sitka	17	M	11	6	65%
	4	F	2	2	50%
Soldotna	11	M	8	3	73%
	2	F	0	2	0%
	743	M	143	600	19%
	532	F	26	506	5%

HELMETS WORN

CITY	# Observed	AGE	Yes	No	%yes
Aniak	9	Adult	0	9	0%
	0	Teen	0	0	#####
	10	Child	0	10	0%
Dillingham	17	Adult	7	10	41%
	11	Teen	7	4	64%
	8	Child	3	5	38%
Fairbanks	31	Adult	19	12	61%
	23	Teen	13	10	57%
	22	Child	11	11	50%
Glenallen	8	Adult	2	6	25%
	2	Teen	1	1	50%
	9	Child	5	4	56%
Homer	7	Adult	1	6	14%
	10	Teen	3	7	30%
	1	Child	0	1	0%
Kenai	14	Adult	10	4	71%
	17	Teen	7	10	41%
	0	Child	0	0	#####
Kotzebue	413	Adult	6	407	1%
	93	Teen	1	92	1%
	82	Child	1	81	1%

North Pole	7	Adult	6	1	86%
	6	Teen	1	5	17%
	2	Child	1	1	50%
Palmer	33	Adult	11	22	33%
	15	Teen	8	7	53%
	13	Child	8	5	62%
Pt. Hope	167	Adult	2	165	1%
	106	Teen	6	100	6%
	106	Child	11	95	10%
Sitka	13	Adult	8	5	62%
	4	Teen	1	3	25%
	4	Child	4	0	100%
Soldotna	9	Adult	4	5	44%
	3	Teen	3	0	100%
	1	Child	1	0	100%
	728	Adult	76	652	10%
	290	Teen	51	239	18%
	258	Child	45	213	17%

III. Snow Machine Observations

The snow machine rider observations were conducted in January-April, 2001. It was difficult to obtain adequate numbers of observations because the winter of 2000-2001 was the second warmest on record for Alaska, and the snow cover was very poor in many parts of the state.

There were a total of 1,101 observations of snow machiners for helmet usage. The average usage rate across the state was 46%. The greatest disparity in helmet usage by urban and rural riders was among the snow machine users. The average observed helmet usage for riders in the areas around Anchorage and Fairbanks was 86% as compared to the rural average (Bethel, Kotzebue, Dillingham) of 27%. The Anchorage area had the highest average usage at 92%, with 194 observations from Hatcher Pass, Big Lake, and Turnagan Pass. See Appendix C.

It is interesting to note that 79% of the riders observed were male, but when looking at helmet usage, males (47%) and females (41%) were evenly divided. The highest helmet usage for females (97%) and males (90%) was seen in the areas near Anchorage. The lowest usage by females (0%) and males (11%) was in Kotzebue.

Age group difference were also extreme, with the lows being in Kotzebue with 0% helmet use by teens and children, to a high of 100% usage by children in Anchorage. The statewide averages showed adults at 38%, teens at 61%, and children at 54%. Surprisingly teens had the highest usage of the three age groups in Bethel (38%) and in Dillingham (75%).

Snow Machine Helmet Use Analysis - WINTER 2001

CITY	# Observed	HELMETS WORN			AGE GROUP			SEX		
		Yes	No	%yes	Adult	Teen	Child	M	F	%Male
Anchorage	194	178	16	92%	112	47	35	136	58	70%
Bethel	424	54	370	13%	304	68	52	343	81	81%
Dillingham	127	75	52	59%	38	52	37	97	30	76%
Fairbanks	238	189	49	79%	128	82	28	201	37	84%
Kotzebue	118	10	108	8%	85	23	10	93	25	79%
	1101	506	595	46%	667	272	162	870	231	79%

HELMETS WORN

CITY	# Observed	SEX	Yes	No	%yes
Anchorage	136	M	122	14	90%
	58	F	56	2	97%
Bethel	343	M	51	292	15%
	81	F	3	78	4%
Dillingham	97	M	62	35	64%
	30	F	13	17	43%
Fairbanks	201	M	167	34	83%
	37	F	22	15	59%
Kotzebue	93	M	10	83	11%
	25	F	0	25	0%
	870	M	412	458	47%
	231	F	94	137	41%

HELMETS WORN

CITY	# Observed	AGE	Yes	No	%yes
Anchorage	112	Adult	102	10	91%
	47	Teen	41	6	87%
	35	Child	35	0	100%
Bethel	304	Adult	15	289	5%
	68	Teen	26	42	38%
	52	Child	13	39	25%
Dillingham	38	Adult	14	24	37%
	52	Teen	39	13	75%

	37	Child	22	15	59%
Fairbanks	128	Adult	111	17	87%
	82	Teen	61	21	74%
	28	Child	17	11	61%
Kotzebue	85	Adult	10	75	12%
	23	Teen	0	23	0%
	10	Child	0	10	0%
	667	Adult	252	415	38%
	272	Teen	167	105	61%
	162	Child	87	75	54%

SUMMARY

A great deal of information was gleaned from the helmet use surveys conducted across Alaska. A total of at least 28 individuals helped conduct the observations in at least 19 different communities. Hopefully this baseline survey effort will be used for years to come in comparing previous usage levels and developing and targeting interventions.

For example, Anchorage needs to target low socioeconomic neighborhoods for bicycle helmet usage, rather than the bike trail users. Also, the safety focus for snowmobilers around Anchorage should probably be avalanche training rather than helmet usage, due to the dramatic increase in avalanche deaths in SouthCentral Alaska in recent years.