

Contrasting Smoking and Tobacco-Related Community Norms and Attitudes in Alaska: Patterns by Region and Alaska Native Race

Brief Report

Program Design and Evaluation Services

June 30, 2016

Barbara Pizacani, PhD

Kristen Rohde, MA

Erik Everson, MPH

Introduction

Prevention of secondhand smoke exposure represents one of the core elements of a comprehensive tobacco prevention and control program. (1) The guiding principle in such programs lies in the promotion of synergy between various programmatic elements. For example, prevention of secondhand smoke exposure through policy and systems change not only protects nonsmokers but also serves to lower the visibility of role models who smoke. (2) This changes community norms, reduces the social acceptability of smoking, and can encourage smokers to quit. (2)

The Alaska Tobacco Prevention and Control Program has been using these principles for over a decade. Efforts to promote smokefree policies and practices have been undertaken at the community level, and are reinforced through media campaigns. The goal is to establish smokefree community norms in schools, hospitals and health clinics throughout the state. As policies and practices are created and enforced, smoking in public will become less visible, and gradually, more socially unacceptable.

This report had three main objectives. The first was to examine how community norms varied by assessing how often smoking was observed in specific community settings. The second was to explore attitudes toward the prohibition of smoking in these settings. Third, we assessed whether trends in these community norms and attitudes have changed over time. We were specifically interested in patterns in the Alaska Native community and in different regions of Alaska. We chose this focus because Alaska Native people have a higher prevalence of smoking, and because they comprise a larger proportion of the population in rural areas of Alaska.

Methods

We used data from the Alaska Behavioral Risk Factor Surveillance System from 2011 to 2014 inclusive.

The following questions regarding community norms and attitudes were assessed:

1. In the last year, have you visited a school in your community? (*Responses were yes or no*)
2. In the last year, how often have you seen people (students, staff or visitors) smoking or using tobacco outside on school grounds during school hours? (*given a visit*) (*Responses were never, sometimes and always*)
3. In the last year, how often have you seen people (students, staff or visitors) smoking or using tobacco outside on school grounds but after school hours? (*given a visit*) (*Responses were never, sometimes and always*)
4. In the last year, how often have you seen people (students, staff or visitors) smoking or using tobacco inside school buildings but after school hours? (*given a visit*) (*Responses were never, sometimes and always*)
5. In the last year, how often have you seen people (students, staff or visitors) smoking or using tobacco at school sponsored events held off school grounds? (*Responses were never, sometimes and always*)

6. In the past year have you visited a hospital in your community? *(Responses were yes or no)*
7. In the last year, how often have you seen people smoking or using tobacco on hospital grounds, such as walkways or outside building entrances? *(given a visit) (Responses were never, sometimes and always)*
8. In the last year, have you visited a health clinic in your community? *(Responses were yes or no)*
9. In the last year, how often have you seen people smoking or using tobacco on clinic grounds, such as walkways or outside building entrances? *(given a visit) (Responses were never, sometimes and always)*
10. Tobacco use should not be allowed on school grounds during school hours *(Responses were strongly agree, agree, disagree, strongly disagree)*
11. Tobacco use should not be allowed on school grounds after school hours, including evening or weekend events *(Responses were strongly agree, agree, disagree, strongly disagree)*
12. Tobacco use should not be allowed at any school sponsored event even those held off school grounds *(Responses were strongly agree, agree, disagree, strongly disagree)*
13. Tobacco use should not be allowed on hospital grounds *(Responses were strongly agree, agree, disagree, strongly disagree)*
14. Tobacco use should not be allowed on health clinic grounds *(Responses were strongly agree, agree, disagree, strongly disagree)*
15. I prefer to spend time where people are not smoking *(Responses were strongly agree, agree, disagree, strongly disagree)*
16. Some communities have local groups that work on tobacco prevention. To your knowledge, has there been a local group doing tobacco prevention work in your community over the past few years *(Responses were yes or no)*.

For questions 2 through 5, 7 and 9, response options “sometimes” and “always” were combined. For questions 10 through 15, response options “strongly agree” and “agree” were combined; and “strongly disagree” and “disagree” were combined.

Additional measures

Region was characterized using the Census Bureau’s 2010 designation of urbanized areas, urban cluster areas, and rural areas. Urbanized areas have 50,000 or more people and urban clusters have at least 2,500 people but less than 50,000 people. According to the Census Bureau, “Rural” encompasses all population, housing, and territory not included in an urban or urbanized cluster area. (3)

Alaska Native status was defined by a respondent self-identifying as Alaska Native alone or in combination with any other race unless a race other than Alaska Native was selected by the respondent as his or her primary racial identity.

Analysis

Data were weighted using standard raking procedures. We used Stata to account for the complex survey design. For each community norm and attitude measure, crosstabulations were conducted to estimate percentages for Alaska Native and Non-Native respondents within each of the three region types. Logistic modeling was employed to generate adjusted odds ratios (by age, sex, and smoking status) for the association between each outcome measure and region. We examined the interaction between region and race, that is, we assessed whether the urban-urban cluster odds ratios were significantly different for the two race groups, and did the same for the urban-rural odds ratios. A significance level of $p < .05$ was used.

Trend testing was conducted using logistic regression models with year as the only covariate. A significant trend was identified if the p value for the coefficient for year was significant at the .05 level.

Results

See below for results for each measure overall and by region within categories of Alaska Native (AN) and non-Native (non-AN) respondents. Significant differences are based on calculated odds ratios within each group, adjusted for age, sex and current smoking status. In some cases the odds ratios for the association between region and the measure under study varied for the two race groups, i.e., there was a significant interaction between Alaska Native race and region. Please refer to the tables below each figure for these differences.

Smoking prevalence by region and by Alaska Native race:

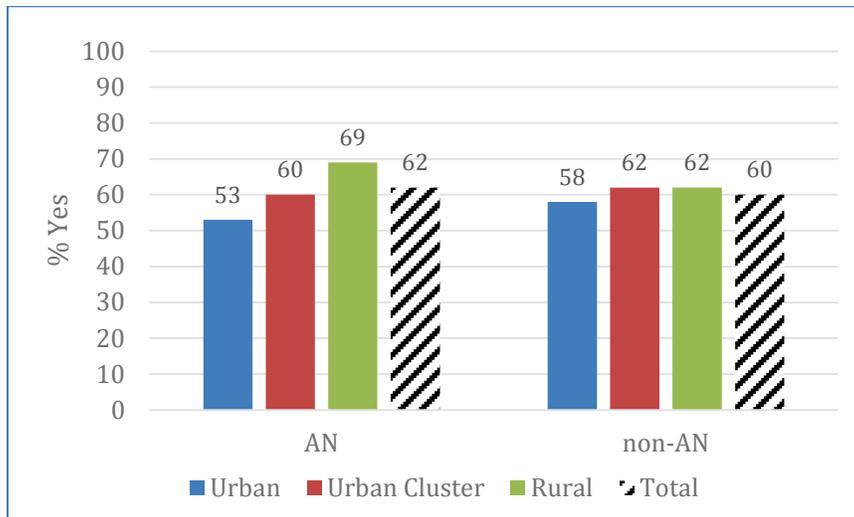
- For Alaska Native (AN) respondents, smoking prevalence was:
 - 32% in urban regions
 - 37% in urban cluster regions
 - 42% in rural regions

- For non-Native (non-AN) respondents smoking prevalence was:
 - 19% in urban regions
 - 17% in urban cluster regions
 - 21% in rural regions

The urban-rural and urban-urban cluster patterns for the two groups (Alaska Native and non-Native respondents) were very different for many of the outcomes. We have shown the patterns in a bar graph for each outcome. Results of a test for interaction to assess whether they were significantly different are presented each table.

Visits to schools

1. In the last year, have you visited a school in your community?



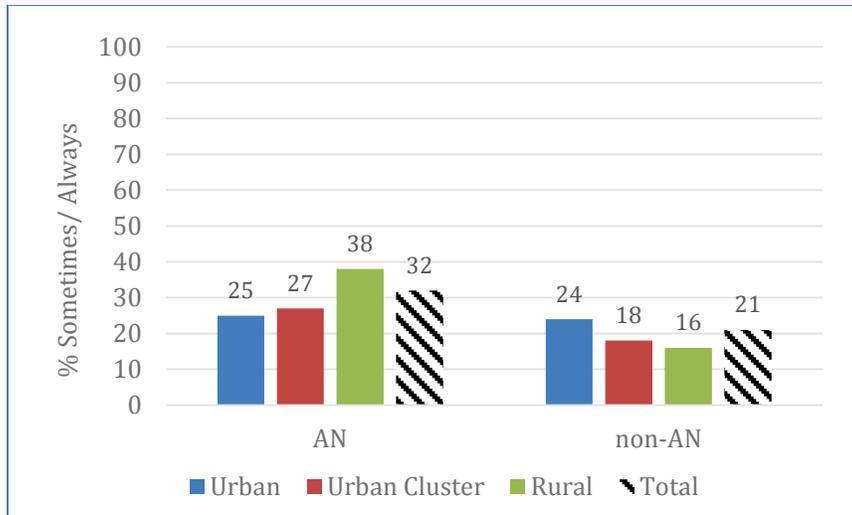
	AN				non-AN			
	N	% Yes	OR	95% CI	N	% Yes	OR	95% CI
Urban	388	53	Ref.		4301	58	Ref.	
Urban cluster	736	60	1.3	0.9-2.0	5004	62	1.2	1.04-1.4
Rural	1486	69	2.2	1.5-3.1	3565	62	1.3	1.1-1.5
Total	2610	62		(58.6-64.9)	12870	60		(58.5-61.4)

All odds ratios adjusted for age, sex and current smoking
Odds ratios for urban-rural comparison were significantly different for Alaska Native and non-Native respondents ($p < .01$ for interaction)

- A total of 62% of Alaska Native respondents visited a school in the last year, similar to the percentage of non-Native respondents (60%, $p = .31$).
- Alaska Native rural respondents were significantly more likely to have visited schools than urban Alaska Native respondents.
- For non-Native respondents, both urban cluster and rural respondents were significantly more likely to have visited a school compared to urban respondents.

Observation of smoking or tobacco use in school settings

2. In the last year, how often have you seen people (students, staff or visitors) smoking or using tobacco outside on school grounds during school hours?

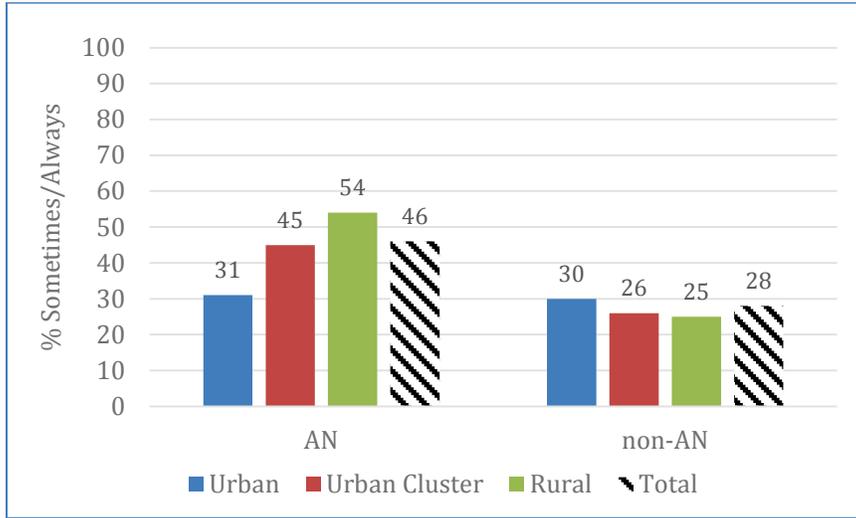


	AN				non-AN			
	N	% Sometimes/ Always	OR	95% CI	N	% Sometimes/ Always	OR	95% CI
Urban	219	25	Ref.		2345	24	Ref.	
Urban cluster	453	27	1.1	0.6-1.9	2960	18	0.7	0.6-0.9
Rural	1018	38	1.9	1.1-3.2	2167	16	0.6	0.5-0.8
Total	1690	32		(28.3-35.5)	7472	21		(19.1-22.5)

All odds ratios adjusted for age, sex and current smoking
Odds ratios for urban-rural comparison were significantly different for Alaska Native and non-Native respondents (p<.05 for interaction)

- A total of 32% of Alaska Native respondents saw smoking or tobacco use on school grounds during school hours, compared to 21% of non-Native respondents (p<.001).
- Alaska Native rural and urban cluster respondents were significantly more likely to have seen smoking or tobacco use on school grounds during school hours than Alaska Native urban respondents.
- Non-Native urban cluster and rural respondents were significantly less likely to have seen smoking or tobacco use in this setting than non-Native urban respondents.

3. In the last year, how often have you seen people (student, staff or visitors) smoking or using tobacco outside on school grounds, but after school hours?



	AN				non-AN			
	N	% Sometimes/ Always	OR	95% CI	N	% Sometimes/ Always	OR	95% CI
Urban	219	31	Ref.		2311	30	Ref.	
Urban cluster	452	45	1.8	1.03-3.1	2929	26	0.9	0.7-1.1
Rural	1002	54	2.7	1.7-4.4	2161	25	0.9	0.7-1.1
Total	1673	46		(42.3-50.1)	7401	28		(25.9-29.5)

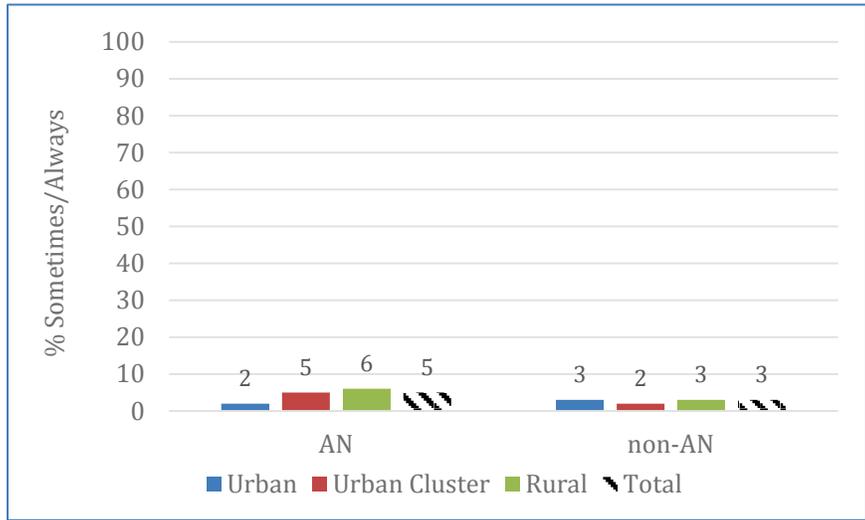
All odds ratios adjusted for age, sex and current smoking

Odds ratios for urban-urban comparison were significantly different for Alaska Native and non-Native respondents ($p < .05$ for interaction).

Odds ratios for urban-rural comparison were significantly different for Alaska Native and non-Native respondents ($p < .01$ for interaction)

- A total of 46% of Alaska Native respondents saw smoking or tobacco use on school grounds after school hours, compared to 28% of non-Native respondents ($p < .001$).
- Alaska Native rural and urban cluster respondents were significantly more likely to have seen smoking or tobacco use on school grounds after school hours than urban respondents.
- For non-Native respondents, there were no significant differences by region.

4. In the last year, how often have you seen people (students, staff, or visitors) smoking or using tobacco inside school buildings but after school hours?

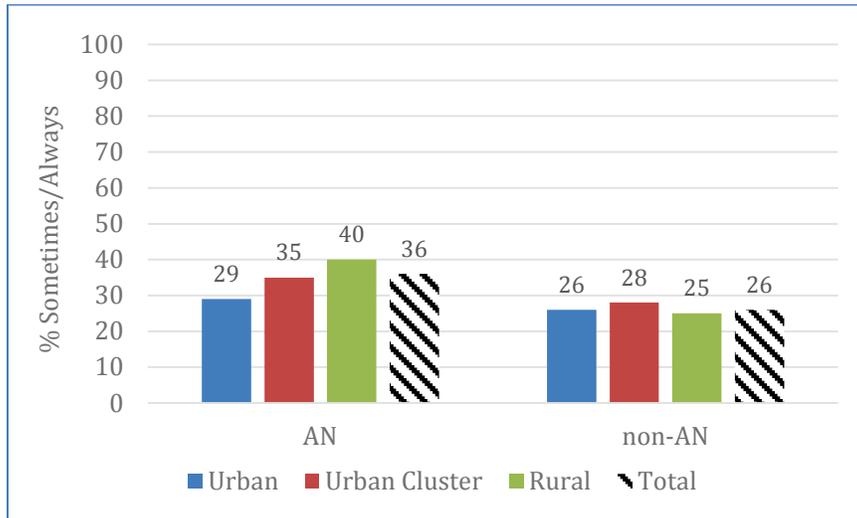


	AN				non-AK			
	N	% Sometimes/ Always	OR	95% CI	N	% Sometimes/ Always	OR	95% CI
Urban	216	2	Ref.		2355	3	Ref.	
Urban cluster	453	5	2.8	0.9-9.1	2963	2	0.8	0.4-1.4
Rural	1014	6	4.6	1.7-12.8	2188	3	0.8	0.5-1.6
Total	1683	5		(3.6-6.3)	7506	3		(2.2-3.8)

All odds ratios adjusted for age, sex and current smoking
Odds ratios for urban-urban comparison were significantly different for Alaska Native and non-Native respondents (p=.052 for interaction)
Odds ratios for urban-rural comparison were significantly different for Alaska Native and non-Native respondents (p<.01 for interaction)

- A total of 5% of Alaska Native respondents saw smoking or tobacco use inside school buildings after school hours, compared to 3% of non-Native respondents (p=.01).
- Alaska Native rural and urban cluster respondents were significantly more likely to have seen smoking or tobacco use in this setting than Alaska Native urban respondents.
- For non-Native respondents, there were no significant differences by region.

5. In the last year, how often have you seen people (students, staff or visitors) smoking or using tobacco at school-sponsored events held off school grounds?



	AN				non-AN			
	N	% Sometimes/ Always	OR	95% CI	N	% Sometimes/ Always	OR	95% CI
Urban	357	29	Ref.		3834	26	Ref.	
Urban cluster	679	35	1.3	0.8-2.0	4538	28	1.1	1.0-1.4
Rural	1403	40	1.7	1.2-2.4	3244	25	1	0.8-1.2
Total	2439	36		(32.5-38.7)	11616	26		(24.8-27.6)

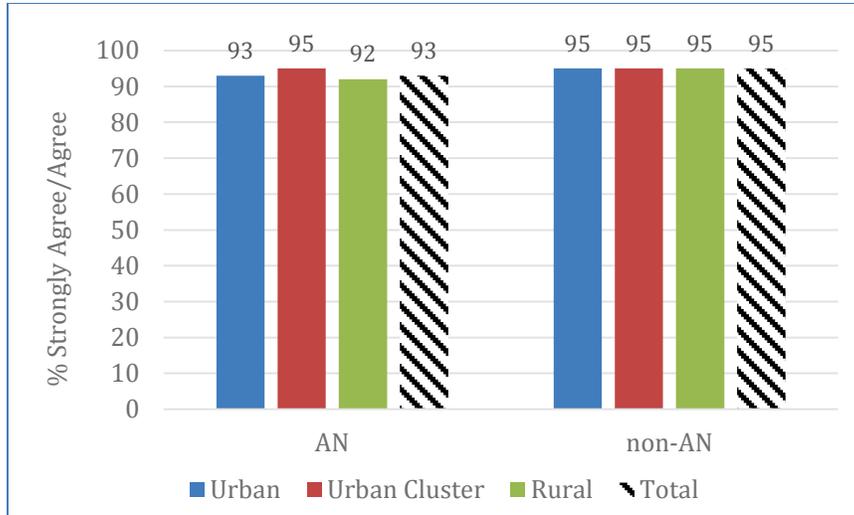
All odds ratios adjusted for age, sex and current smoking.

Odds ratios for urban-rural comparison were significantly different for Alaska Native and non-Native respondents ($p < .05$ for interaction).

- A total of 36% of Alaska Native respondents saw smoking or tobacco use at school-sponsored events that were held off school grounds, compared to 26% of non-Native respondents ($p < .001$).
- Alaska Native rural and urban cluster respondents were significantly more likely to see tobacco use in this setting compared to Alaska Native urban respondents.
- For non-Native respondents, there were no significant differences by region.

Attitudes toward tobacco use in school settings

6. Do you agree or disagree that tobacco should not be allowed on school grounds during school hours?

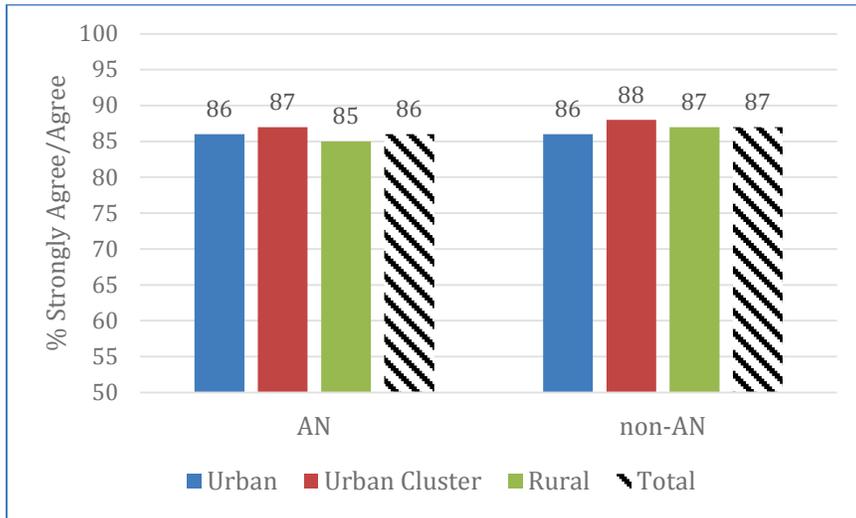


	AN				non-AN			
	N	% Strongly agree/Agree	OR	95% CI	N	% Strongly agree/Agree	OR	95% CI
Urban	388	93	Ref.		4289	95	Ref.	
Urban cluster	733	95	1.3	0.5-3.8	5004	95	1.0	0.7-1.4
Rural	1496	92	0.9	0.3-2.2	3561	95	1.1	0.7-1.7
Total	2617	93		(91.2-94.9)	12854	95		(94.2-95.6)

All odds ratios adjusted for age, sex and current smoking

- A total of 95% of Alaska Native respondents agreed that tobacco use should not be allowed on school grounds during school hours, similar to the percentage of non-Native respondents (93%, p=.07).
- There were no significant differences by region for either group.

7. Do you agree or disagree that tobacco use should not be allowed on school grounds after school hours, including evening or weekend events?

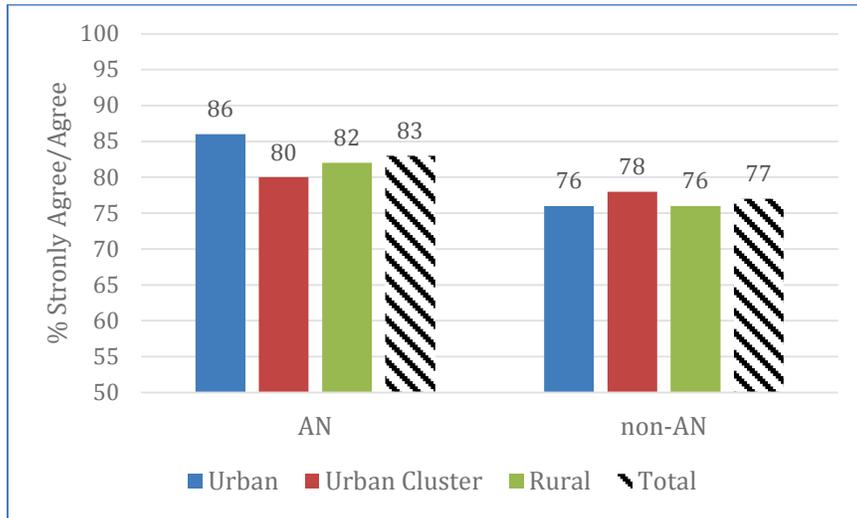


	AN				non-AN			
	N	% Strongly agree/Agree	OR	95% CI	N	% Strongly agree/Agree	OR	95% CI
Urban	386	86	Ref.		4292	86	Ref.	
Urban cluster	732	87	1.1	0.6-2.3	4992	88	1.2	1.0-1.5
Rural	1496	85	1.0	0.5-1.8	3557	87	1.1	0.8-1.4
Total	2614	86		(82.9-87.9)	12841	87		(85.6-87.8)

All odds ratios adjusted for age, sex and current smoking

- A total of 86% of Alaska Native respondents agreed that tobacco should not be allowed on school grounds after school hours, similar to the percentage of non-Native respondents (87%, $p=.39$).
- There were no significant differences by region for either group.

8. Do you agree or disagree that tobacco use should not be allowed at any school-sponsored event, even those held off school grounds?



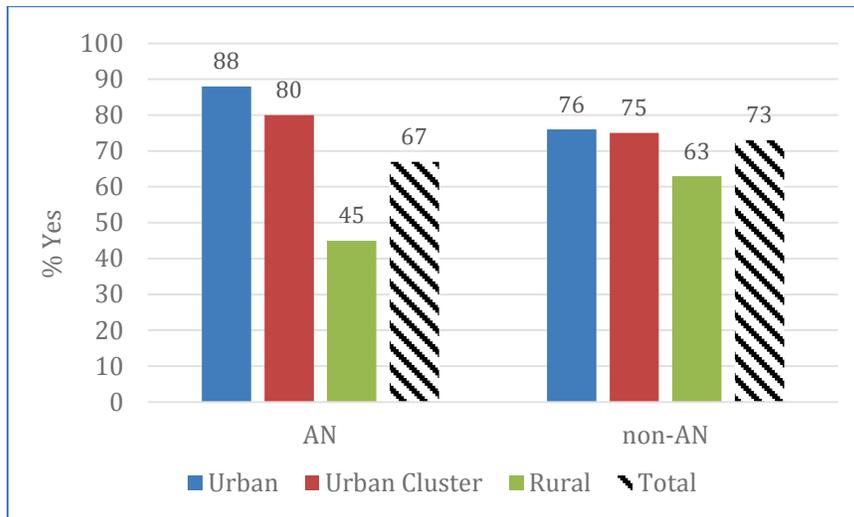
	AN				non-AN			
	N	% Strongly agree/Agree	OR	95% CI	N	% Strongly agree/Agree	OR	95% CI
Urban	387	86	Ref.		4282	76	Ref.	
Urban cluster	730	80	0.7	0.4-1.1	4983	78	1.1	0.9-1.3
Rural	1493	82	0.8	0.5-1.2	3547	76	1.0	0.9-1.2
Total	2610	83		(80.1-84.8)	12812	77		(75.4-78.1)

All odds ratios adjusted for age, sex and current smoking

- A total of 83% of Alaska Native respondents agree tobacco use should not be allowed at any school-sponsored event, compared to 77% of non-Native respondents ($p < .001$).
- There were no significant differences by region for either group.

Visits to hospitals

9. In the last year, have you visited a hospital in your community?



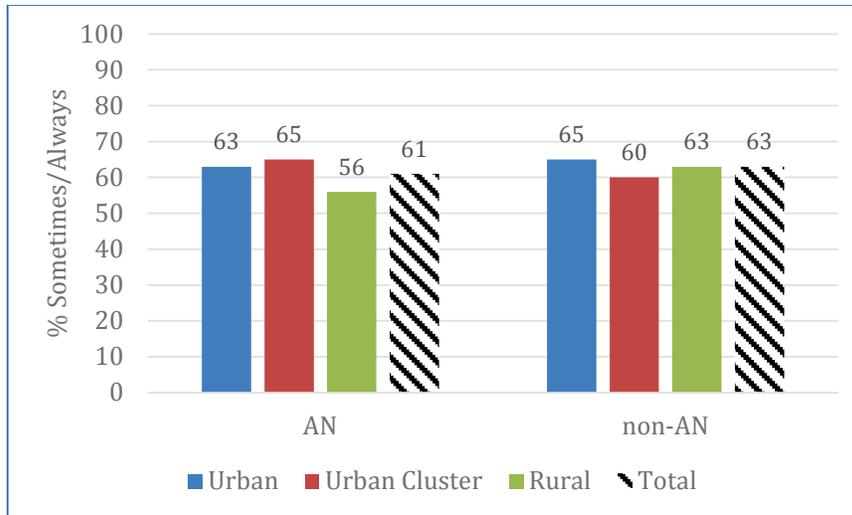
	AN				non-AN			
	N	% Yes	OR	95% CI	N	% Yes	OR	95% CI
Urban	386	88	Ref.		4301	76	Ref.	
Urban cluster	734	80	0.5	0.3-0.8	5006	75	0.9	0.8-1.1
Rural	1477	45	0.1	0.1-0.2	3560	63	0.5	0.4-0.6
Total	2597	67		(64.3-69.9)	12867	73		(71.9-74.6)

All odds ratios adjusted for age, sex and current smoking
Odds ratios for the urban-urban cluster comparison were significantly different for Alaska Native and non-Native respondents (p<.05 for interaction)
Odds ratios for the urban-rural comparison were significantly different for Alaska Native and non-Native respondents (p<.001 for interaction)

- A total of 67% of Alaska Native respondents have visited a hospital, compared to 73% of non-Native respondents (p<.001).
- Alaska Native rural and urban cluster respondents were significantly less likely to have visited a hospital in the last year than Alaska Native respondents living in urban areas.
- Non-Native rural respondents were also significantly less likely to have visited a hospital compared to non-Native urban and urban cluster respondents.

Observation of smoking or tobacco use on hospital grounds

10. In the last year, how often have you seen people smoking or using tobacco on hospital grounds, such as walkways, or outside building entrances?



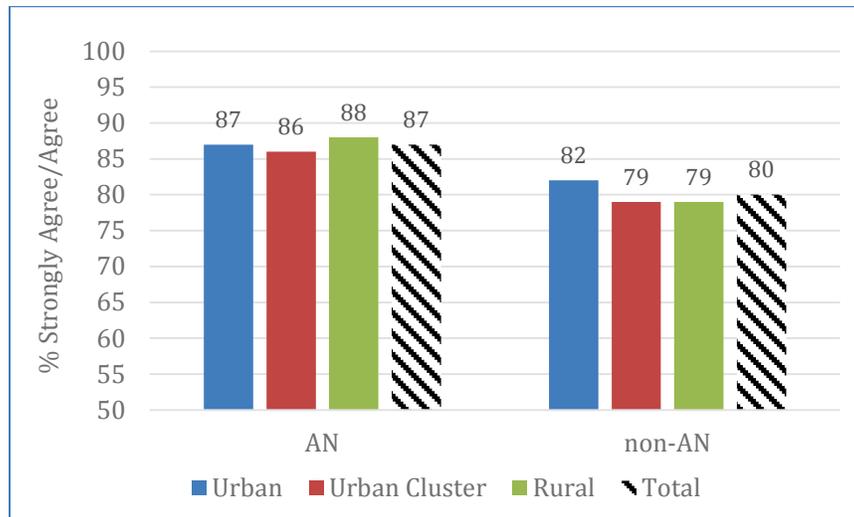
	AN				non-AN			
	N	% Sometimes/ Always	OR	95% CI	N	% Sometimes/ Always	OR	95% CI
Urban	321	63	Ref.		3219	65	Ref.	
Urban cluster	598	65	1.1	0.7-1.7	3811	60	0.8	0.7-0.9
Rural	661	56	0.8	0.5-1.1	2116	63	0.9	0.8-1.1
Total	1580	61		(57.3-65.5)	9146	63		(61.1-64.5)

All odds ratios adjusted for age, sex and current smoking

- A total of 61% of Alaska Native respondents saw tobacco use on hospital grounds, similar to the percentage of non-Native respondents (63%, $p=.55$).
- For Alaska Native respondents, there were no significant differences by region.
- Non-Native respondents from urban cluster areas were significantly less likely to see tobacco use on hospital grounds than those from urban areas.

Attitudes toward tobacco use on hospital grounds

11. Agree or disagree: Tobacco use should not be allowed on hospital grounds?



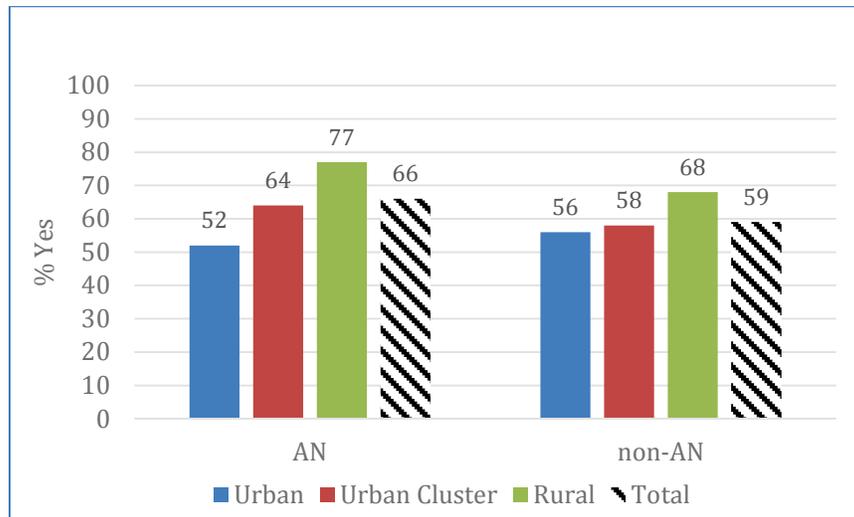
	AN				non-AN			
	N	% Strongly agree/Agree	OR	95% CI	N	% Strongly agree/Agree	OR	95% CI
Urban	388	87	Ref.		4292	82	Ref.	
Urban cluster	729	86	1.0	0.5-2.0	4989	79	0.8	0.7-0.9
Rural	1496	88	1.1	0.6-2.1	3558	79	0.8	0.7-1.0
Total	2613	87		(85.0-89.3)	12839	80		(79.1-81.6)

All odds ratios adjusted for age, sex and current smoking

- A total of 87% of Alaska Native respondents agreed tobacco use should not be allowed on hospital grounds, compared to 80% of non-Native respondents ($p < .001$).
- For Alaska Native respondents, there were no significant differences by region.
- Non-Native urban cluster respondents were significantly less likely to agree than non-Native urban respondents.

Visits to health clinics

12. Have you visited a health clinic in the past year?



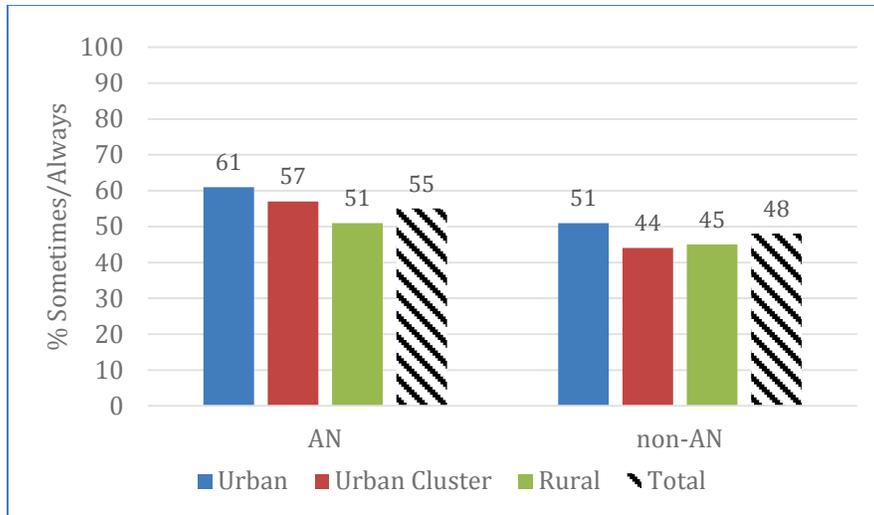
	AN				non-AN			
	N	% Yes	OR	95% CI	N	% Yes	OR	95% CI
Urban	385	52	Ref.		4297	56	Ref.	
Urban cluster	733	64	1.7	1.1-2.6	5001	58	1.1	0.9-1.2
Rural	1495	77	3.3	2.3-4.7	3568	68	1.7	1.4-2.0
Total	2613	66		(63.0-69.4)	12866	59		(57.5-60.5)

All odds ratios adjusted for age, sex and current smoking
Odds ratios for the urban-urban cluster comparison were significantly different for Alaska Native and non-Native respondents (p<.05 for interaction)
Odds ratios for the urban-rural comparison were significantly different for Alaska Native and non-Native respondents (p<.01 for interaction)

- A total of 66% of Alaska Native respondents visited a clinic in the past year, compared to 59% of non-Native respondents (p<.001).
- Alaska Native respondents from both rural and urban cluster areas were significantly more likely to have visited a health clinic in the past year than Alaska Native urban respondents.
- Non-Native respondents from rural areas were also significantly more likely to have visited a health clinic in the past year than non-Native urban respondents.

Observation of smoking or tobacco use on clinic grounds

13. In the last year, how often have you seen people smoking or using tobacco on clinic grounds, such as walkways or outside building entrances?



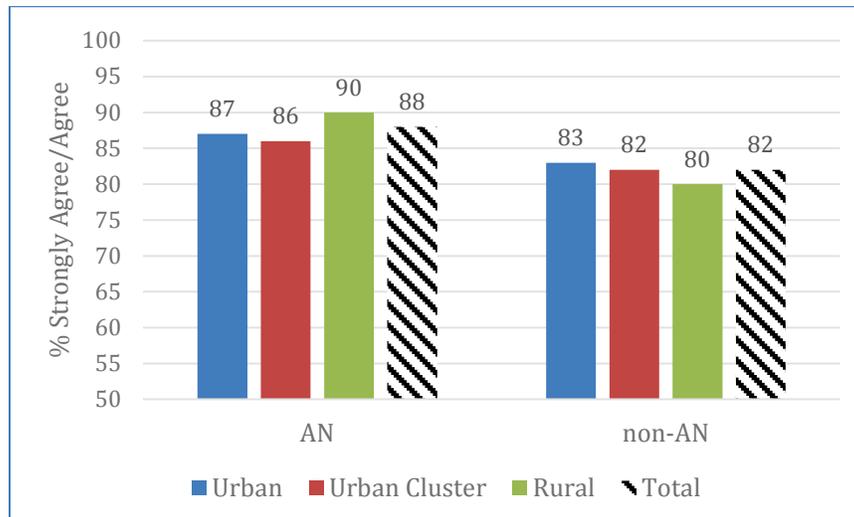
	AN				non-AN			
	N	% Sometimes/ Always	OR	95% CI	N	% Sometimes/ Always	OR	95% CI
Urban	225	61	Ref.		2673	51	Ref.	
Urban cluster	485	57	0.9	0.5-1.5	3009	44	0.8	0.6-0.9
Rural	1146	51	0.7	0.4-1.1	2414	45	0.8	0.7-1.0
Total	1856	55		(51.3-58.5)	8096	48		(45.7-49.4)

All odds ratios adjusted for age, sex and current smoking

- A total of 55% of Alaska Native respondents saw tobacco use on clinic grounds, compared to 48% of non-Native respondents ($p < .001$).
- For Alaska Native respondents, there were no significant differences by region.
- Non-Natives respondents from both rural and urban cluster regions were significantly less likely to have seen smoking or tobacco use on clinic grounds than non-Native respondents from urban areas.

Attitudes toward tobacco use in clinic settings

14. Agree or disagree: Tobacco use should not be allowed on health clinic grounds?



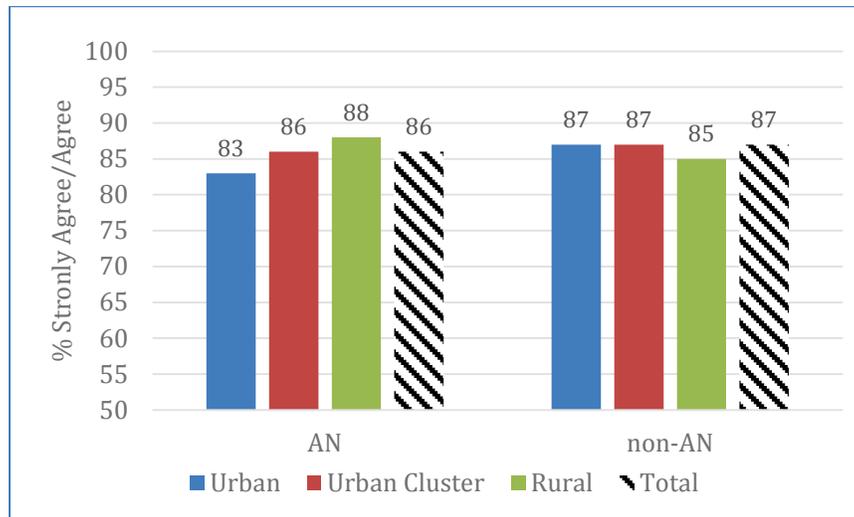
	AN				non-AN			
	N	% Strongly agree/Agree	OR	95% CI	N	% Strongly agree/Agree	OR	95% CI
Urban	377	87	Ref.		4203	83	Ref.	
Urban cluster	718	86	0.9	0.5-2.1	4888	82	0.8	0.7-1.0
Rural	1465	90	1.4	0.8-2.7	3481	80	0.8	0.7-1.0
Total	2560	88		(85.6-90.3)	12572	82		(81.3-83.7)

All odds ratios adjusted for age, sex and current smoking

- A total of 88% of Alaska Native respondents agreed that tobacco use should not be allowed on clinic grounds, compared to 82% of non-Native respondents ($p < .001$).
- There were no significant differences by region in either group.

Other measures

15. Agree or disagree: I prefer to spend time where people are not smoking?

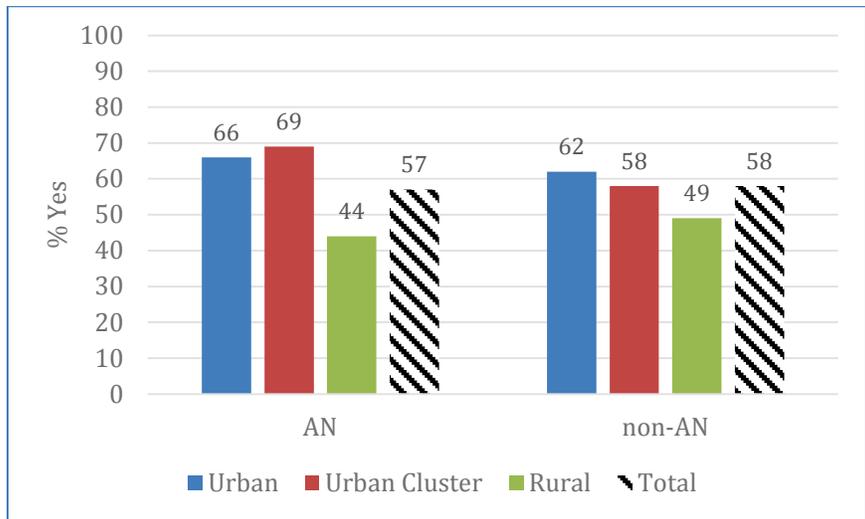


	AN				non-AN			
	N	% Strongly agree/Agree	OR	95% CI	N	% Strongly agree/Agree	OR	95% CI
Urban	371	83	Ref.		4142	87	Ref.	
Urban cluster	698	86	1.7	0.8-3.7	4828	87	0.9	0.7-1.1
Rural	1407	88	2.0	1.1-3.9	3412	85	0.8	0.6-1.0
Total	2476	86		(83.4-88.4)	12382	87		(85.5-87.8)

All odds ratios adjusted for age, sex and current smoking
Odds ratios for the urban-rural comparison were significantly different for Alaska Native and non-Native respondents ($p < .05$ for interaction)

- A total of 86% of Alaska Native respondents agreed that they would prefer to spend time where people are not smoking, similar to the percentage of non-Native respondents (87%, $p = .65$).
- Alaska Native rural respondents were more likely to agree than those living in an urban area.
- For non-Native respondents, there were no significant differences by region.

16. Some communities have local groups that work on tobacco prevention. To your knowledge, has there been a local group doing tobacco prevention work in your community over the past few years?



	AN				non-AN			
	N	% Yes	OR	95% CI	N	% Yes	OR	95% CI
Urban	300	66	Ref.		3116	62	Ref.	
Urban cluster	603	69	1.2	0.7-1.9	3645	58	0.9	0.7-1.0
Rural	1222	44	0.4	0.3-0.6	2756	49	0.6	0.5-0.7
Total	2125	57		(53.4-60.2)	9517	58		(56.5-60.0)

- A total of 57% of Alaska Native respondents knew of a local group doing tobacco prevention work in their community, similar to the percentage of non-Native respondents (58%, $p=.45$).
- Alaska Native respondents in rural areas were significantly less likely to know about a tobacco control program compared to those in urban cluster areas or urban areas.
- For non-Native respondents, the pattern was similar; significantly fewer respondents from rural areas were aware of a program compared to those from urban areas.

Trends

The analyses for a significant linear trend between 2011 and 2014 were conducted within the two populations (Alaska Native (AN) and non-Native (non-AN)), without regard to region. Results are summarized in Table 2.

Table 2: Trends in community norms and attitudes regarding secondhand smoke for Alaska Natives and non-Natives, 2011- 2014, Alaska BRFSS		
	Alaska Native respondents	Non-Native respondents
School visits	Increased	Increased
Seeing tobacco use outside on school grounds during or after school hours or inside building after school hours	No change	No change
Seeing tobacco use at school sponsored events held off school grounds	No change	Increased (Worsened)
Agreement that tobacco use should not be allowed on school grounds during and after school hours	No change	No change
Agreement that tobacco use should not be allowed at school sponsored events even those held off school grounds	No change	Increased (Improved)
Hospital visits	No change	No change
Seeing tobacco use on hospital grounds	No change	Decreased (Improved)
Agreement that tobacco use should not be allowed on hospital grounds	No change	Increased (Improved)
Clinic visits	No change	Increased
Seeing tobacco use on clinic grounds	No change	No change
Agreement that tobacco use should not be allowed on clinic grounds	No change	No change
Preference to spend time where people are not smoking	No change	No change
Awareness of local tobacco prevention program	No change	No change

Discussion

This report contrasted community norms related to tobacco use among Alaska Native and non-Native adults with a focus on regional differences among the two groups.

Schools

In school settings, Alaska Native people as a group were more likely to have observed tobacco use than non-Natives on school grounds and at school events. Specifically, the Alaska Native respondents living in rural areas of Alaska were more likely to observe tobacco use in these settings their non-rural counterparts. Trends for Alaska Native respondents for these indicators did not change over the study period, except for an increase in the likelihood of visiting a school. These findings are of some concern because school settings likely represent an important community venue for rural Alaska Native people, elevating the importance of restricting tobacco use in that setting. The results also suggest a community norm that tolerates smoking in school settings, and may also reflect a lack of enforcement of tobacco-free policies in specific venues – on school grounds, especially after-hours, and at school-sponsored events. It is likely that community norms and enforcement practices are closely related, and though it is difficult to disentangle the two, increased enforcement efforts could be useful.

Though non-Native people were less likely than their Alaska Native counterparts to have observed tobacco use in school settings, a sizeable percentage (between 20% and 30%, except for school buildings) did so. In addition, the trend for seeing tobacco use at school sponsored events held off school grounds worsened. There were few urban-rural differences for non-Natives. Though the overall picture was better for non-Native respondents, there does remain work to be done to improve tobacco-free community norms and practices in school-related areas.

Interestingly, attitudes regarding prohibition of tobacco use in school settings were very high among both Alaska Native and non-Native respondents. Trends in agreement that that tobacco use should not be allowed at school sponsored events even increased among non-Native respondents, and though trends in other indicators relating to school venues did not change, levels were fairly high. These findings represent community strengths that could act as a good foundation for programmatic work.

One important note is that the venues we asked about are likely to be the last to go smokefree after the institution of a comprehensive smokefree policy. We did not ask about observation of tobacco use inside school buildings during school hours as we assume that policies have taken hold in that venue. Indeed, observation of smoking in school buildings *after* school hours was very low (5% and 3% for Alaska Native and non-Native people, respectively). Although the overall picture appears discouraging, it does appear as though the initial efforts to create smokefree environments have been successful.

Hospitals and clinics

There were no overall differences by race group regarding observation of tobacco use in hospital settings. However, both Alaska Native and non-Native respondents were quite likely to have observed tobacco use in this setting - over 60% for each group. Alaska Native respondents were more likely to have seen tobacco use than non-Native respondents in clinic settings, although the levels were high for both groups - 55% for Alaska Native respondents and 48% for non-Native respondents. There were no urban-rural differences except that urban cluster non-Native respondents were somewhat less likely to have seen smoking or tobacco use in both clinic and hospital settings compared to their urban counterparts. Trends showed no change among Alaska Native respondents, although there was an improving trend for non-Native respondents regarding observation of tobacco use on hospital grounds.

The high levels of tobacco use seen on hospital and clinic grounds probably reflect patient and visitor cooperation with tobacco-free policies for indoor health care settings, a positive development. However, one area for programs to explore could be the enhancement of policies to create additional restrictions on tobacco use in outdoor areas of health care settings.

Approval of prohibition of tobacco use in health care settings was higher among Alaska Native respondents compared to non-Native respondents, though levels for both groups were over 80%. There were no urban-rural differences in support for these policies among Alaska Native respondents, and only slightly less support by non-Native respondents from urban cluster areas. As was the case for school settings, the relatively high levels of support for smokefree venues are encouraging.

Other indicators

Awareness of local tobacco prevention efforts was lowest in rural communities, with rural Alaska Native respondents reporting the lowest awareness of any group. Trends did not change over the study period. This finding further emphasizes the need for additional programmatic efforts in Alaska Native rural communities.

Limitations

This study had a number of limitations. First, we used the observation of smoking as a proxy for community norms, implying that because smoking is observed by Alaska Native respondents more often in rural areas, it is therefore more easily accepted. This may not be the case, in fact, the observation of smoking may merely reflect heightened awareness of smoking among rural Alaska Native people, not an acceptance of the behavior. Indeed, Alaska Native respondents did not report a more permissive attitude about smoking in these settings than others. Also, for the school settings, we do not know whether the smokers observed were mostly students or adults. Smoking in school settings may reflect community norms among youth, rather than adults.

A second limitation relates to social desirability. While respondents may be unbiased about the amount of smoking they see in school, hospital, and clinic settings, they may overstate their support of prohibition of smoking in these settings because they perceive such a response to be more socially desirable.

Recommendations

- Conduct more investigation of community norms and practices in rural Alaska, especially for school settings in Alaska Native communities.
- Assess school policies in rural areas, especially for language covering school-sponsored events.
- Assess smokefree policies on clinic grounds for urban communities.
- Assess programmatic efforts in rural areas.

References

1) CDC Best

Practices http://www.cdc.gov/tobacco/stateandcommunity/best_practices/pdfs/2014/sectionA-I.pdf

2) U.S. Department of Health and Human Services. *The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

<http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>
and Tobacco Free Kids <https://www.tobaccofreekids.org/research/factsheets/pdf/0198.pdf>

3) <https://www.census.gov/geo/reference/ua/urban-rural-2010.html>