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Palau Youth Tobacco Survey 2001

Executive Summary

Palau's first national Youth Tobacco Survey shows that....

- **58%** of middle school students and **71%** of high school students are current* users of *any* tobacco product (smoking cigarettes, chewing smokeless tobacco, or chewing any form of tobacco with betelnut).

- **54%** of middle school students and **68%** of high school students currently chew betelnut with tobacco.

- **72%** of middle school students and **87%** of high school students report that one or more of their closest friends chew betelnut with cigarettes or smokeless tobacco.

- Among middle school students, boys were significantly more likely than girls to report that they thought chewing betelnut with tobacco made young people look cool or fit in.

- **18%** of middle school students and **23%** of high school students currently smoke cigarettes.

- **6%** of middle school students and **25%** of high school students who had *never* smoked said they would "definitely" or "probably" smoke a cigarette if offered one by a close friend.

- Boys were significantly more likely than girls to have ever tried smoking pipe tobacco, smoking bidi or kretek cigarettes, or chewing smokeless tobacco in both middle and high schools.

- Palauan high school students are smoking at rates very close to those for American teens; **Palauan middle school students are *more* likely to be current smokers than their American counterparts.**

- The proportion of students using tobacco products increases significantly by grade through middle school and high school years: **49%** of students in 6th grade currently use any form of tobacco, compared to **84%** of students in 12th grade.

- Palauan youth are using tobacco at overwhelmingly higher rates than American youth, due largely to the practice of chewing betelnut with tobacco.

- **48%** of middle school students who use tobacco with betelnut, started using tobacco *(mengeech)* by age10; and **54%** of high school students, who use tobacco with betelnut, started using tobacco *(mengeech)* by age12.

- **49%** of middle school students and **35%** of high school students, who attempted to get cigarettes or smokeless tobacco for either smoking or chewing betelnut, got the tobacco from a family member.

- **83%** of middle school students and **70%** of high school students who were current users got their *elaus* from friends or family members.

- **75%** of middle school students and **72%** of high school students live with someone who chews betelnut with tobacco.

- **47%** of middle school students and **42%** of high school students live with someone who smokes cigarettes, cigars or pipe tobacco.

- **90%** of middle school students and **94%** of high school students are aware that the smoke from other people's cigarettes, cigars or pipe is harmful to their health.

- **11%** of middle school students had used smokeless/chewing tobacco, and **37%** had used betelnut with or without tobacco, and **6%** had smoked cigarettes on school property in the past 30 days.

- **10%** of high school students had used smokeless/chewing tobacco, and **43%** had used betelnut with or without tobacco, and **7%** had smoked cigarettes on school property in the past 30 days.

- From **8%** to **43%** of middle school students reported having seen adult role models (police officers, sports coaches, health providers, educators, faith community leaders) chew betelnut with or without tobacco, at their place of work or in their professional roles in the past 30 days. The percentage was different for each of the professions.

- From **14%** to **65%** of high school students reported having seen adult role models (police officers, sports coaches, health providers, educators, faith community leaders) chew betelnut with or without tobacco, at their place of work or in their professional roles in the past 30 days. The percentage was different for each of the professions.

- **19%** of middle school students and **24%** of high school students who have never chewed betelnut are susceptible* to chewing betelnut with tobacco.

- **2%** of middle school students and **5%** of high school students who have never smoked are susceptible* to smoking cigarettes.

- **73%** of middle school students and **65%** of high school students who attempted to buy cigarettes or smokeless tobacco in the past 30 days were NOT refused because of their age.

- **69%** of middle school students and **73%** of high school students who attempted to buy elaus with tobacco in the past 30 days were NOT refused because of their age.

- **43%** of both middle school and high school students had been asked, in the past 30 days, to go to the store and buy cigarettes or tobacco by an adult.
- **94%** of both middle and high school students have occasionally or frequently seen actors on television or in movies using tobacco products.

- **56%** of middle school students and **69%** of high school students who smoke cigarettes report that Marlboro is their usual brand.

- **29%** of middle school students and **32%** of high school students say they would "definitely" or "probably" use or wear an item that had a tobacco company brand, picture or logo. Current smokers in both middle and high school are significantly more likely to be receptive to using promotional items from tobacco companies.

- **67%** of middle school students and **75%** of high school students who use tobacco in any form report that they would be interested in joining a program to help them quit.

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* *'current tobacco use' is defined as using tobacco on one or more of the 30 days preceding the survey.*

* *'susceptible' is defined as those who answered definitely/probably yes when asked if they would*

1) chew betelnut with tobacco in the next year OR take a betelnut chew with tobacco if offered by a close friend;
2) smoke a cigarette in the next year OR take a cigarette if offered by a close friend.

Introduction

Everyday, approximately 80-100,000 young people around the world become addicted to tobacco. If current trends continue, 250 million children alive today will die from tobacco-related diseases. Currently, about 80% of the world's tobacco users live in developing countries. By 2030, 70% of all deaths from tobacco will occur in developing countries, up from approximately 50% today. Tobacco will soon become the leading cause of death worldwide, causing more deaths than HIV, maternal mortality, automobile accidents, homicide and suicide combined.

The Republic of Palau's first nationwide comprehensive survey on youth tobacco use – Youth Tobacco Survey 2001 – reveals that Palau is not immune from the tobacco epidemic and tobacco's global toll. For instance, over half of the students surveyed are current tobacco users, and Palauan youth are using tobacco at overwhelmingly higher rates than American youth, due largely to the practice of chewing betelnut with tobacco.

The Palau Youth Tobacco Survey (PYTS) was developed by the Tobacco Use Prevention and Control Program, Ministry of Health, and the Coalition for a Tobacco Free Palau, with assistance from the Centers for Disease Control and Prevention (CDC), and implemented with the collaboration of the Ministry of Education. The Youth Tobacco Survey (YTS) instrument was prepared by the CDC, and additional questions, specific to Palau, were added (eg. questions regarding the use of betelnut, etc). Detailed information on the CDC's Youth Tobacco Surveillance and Evaluation System is available from the Tobacco Use Prevention and Control Program.

The purpose of the YTS is to improve the capacity of states, territories or jurisdictions to design, implement, and evaluate their own comprehensive tobacco prevention and control programs, curricula, and policies. The survey is essential for measuring current levels of tobacco use in its various forms, and for future measurement of the effectiveness of tobacco prevention and education programs. This tool is important for Palau to obtain baseline data on knowledge, attitudes and behaviors relating to tobacco use. It is also a useful assessment of other influences that make youth more susceptible to future tobacco use.

The PYTS was given to all students in grades 6-12 in the Republic of Palau, in both private and public schools. All students in these grades were eligible to participate, and were invited to complete an anonymous and confidential self-administered questionnaire comprising of 77 questions. The survey was conducted in all schools in January 2001. Teachers and principals were briefed on the survey methods prior to administration of the survey, and with the cooperation of school officials, one class period was used to deliver the survey to participating students.

The Centers for Disease Control and Prevention's *Best Practices for Comprehensive Tobacco Control Programs* recommends that states and territories participating in the Youth Tobacco Survey establish tobacco control programs that are comprehensive, sustainable and accountable. Data from the YTS can be used to monitor and evaluate six of the components outlined in the *Best Practices*. These components are:

- Surveillance and evaluation
  - Prevalence of tobacco use
  - Knowledge and attitudes
- Community programs to reduce tobacco use
  - Exposure to environmental tobacco smoke
- School programs
  - Tobacco-related school curriculum
- Enforcement
  - Minor's access to tobacco products
- Counter-marketing
  - Role of media and advertising
- Cessation programs

Results from the Youth Tobacco Survey 2001 are presented under these general headings, to facilitate comparison of the present data with future YTS results in measuring specific objectives.

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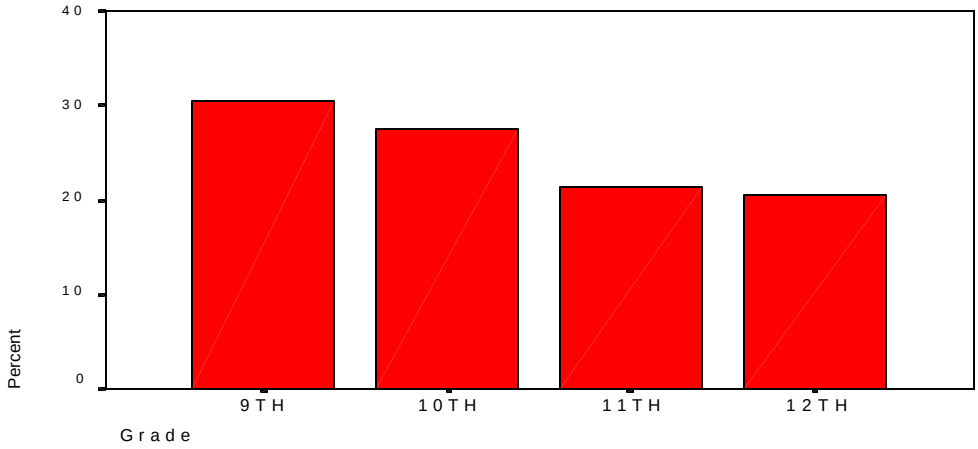
High Schools

In Palau's schools, 1129 students in grades 9-12 were eligible and 1013 participated in the Youth Tobacco Survey, for a response rate of 89.73%. Because all schools participated in the survey and all students were eligible to complete questionnaires, the response rate in Palau compares very favorably with those reported by U.S. states.

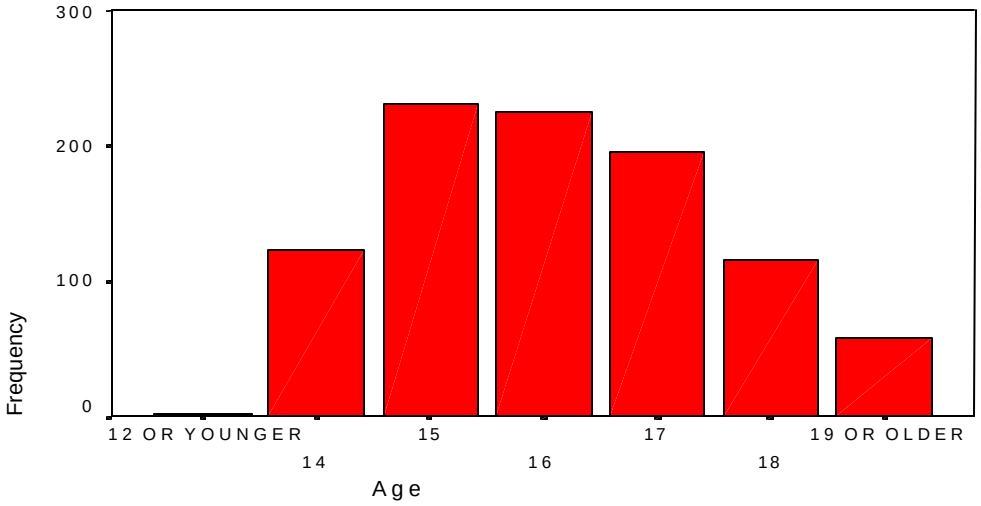
The numbers of students participating in the survey decline as grades increase, reflecting the smaller enrollments in upper grades in Palau's high schools.

Figure 1: Grade Distribution of Respondents



Responses were evenly divided along gender lines: 49.8% of respondents were female and 50.2% were male. The mean age of high school students who completed the survey was 16. Two students were 12 or younger; none were 13 at the time of the survey.

Figure 2: Age Distribution of Respondents



Most of the students who took part in the survey (87%) describe themselves as Palauan. Four percent are from other Pacific Islands, and almost 6% are Asian (including Filipinos). The remaining 3% are Caucasian, Black/African-American, or of "Other" ethnic origin.

I. Surveillance and Evaluation

Tobacco use is a preventable health risk and in many countries it is the leading preventable cause of death. Most tobacco users first experiment with tobacco products in adolescence and many become regular users before age 18. Smoking tobacco is responsible for heart disease, cancers of the lung, larynx, mouth, esophagus and bladder; stroke; and chronic obstructive pulmonary disease. Chewing tobacco alone or in betelnut is associated with leukoplakia, oral cancers, tooth and gum disease, and cardiovascular disease.

To monitor the extent and nature of youth tobacco use, it is neccessary to measure prevalence, as well as knowledge and attitudes.

Prevalence of Tobacco Use Among Young People

A. Use of Any Tobacco Product

Lifetime use:

Almost all (**92.0%**) of Palauan high school students have tried using some form of tobacco (in betelnut, smoking, or chewing smokeless tobacco) in their lives. Exposure to tobacco products in various forms is clearly very common.

Current use:

Literature on tobacco and other substance use defines a "current user" as someone who has used a product on one or more of the past 30 days. Seventy-one percent (**71.0%**) of students in grades 9 through 12 are current users of some form of tobacco. There is no significant difference in the proportion of boys and girls who are current users of any form of tobacco, but the proportion of students who report currently using any form of tobacco increases significantly as grade increases ($\chi^2 = 24.793$, $\mathbf{p<0.001}$).

Frequent use:

43.3% of all students are frequent tobacco users, defined as having used a tobacco product on 20 or more of the past 30 days. There is no significant difference in the proportion of boys and girls who are frequent users of any form of tobacco. The same trend, an increasing proportion of frequent users as grade increases, is apparent in students who frequently use any form of tobacco ($\chi^2 = 36.879$, $\mathbf{p<0.001}$).

B. Betelnut Use

Lifetime use:

The overwhelming majority (**82.0%)** of high school students in Palau have tried chewing betelnut with or without tobacco. There was not a significant difference in the proportions of males and females who had ever tried betelnut. However, students of Palauan origin were significantly more likely to have ever tried betelnut than students of other ethnic backgrounds ($\chi^2 = 46.006$; $\mathbf{p < 0.001}$)

Current use:

The survey asked students about how much they chewed in the past 30 days. **68.3%** of high school students are 'current users' of betelnut, defined as having chewed betelnut on one or more of the past 30 days.

There is a significant increase in the proportion of current users as grade increases ($\chi^2 = 15.263$, $\mathbf{p = 0.002}$). By their senior year, almost 80% of high school students are currently using betelnut.

Table 1: Current Betelnut Users by Grade

Grade	**9th**	**10th**	**11th**	**12th**
Proportion Currently Using Betelnut	62.3%	66.3%	68.5%	78.9%

Frequency/amount of betelnut use:

A very large proportion (**40.7%**) are 'frequent users', chewing betelnut on 20 or more of the previous 30 days. There was no significant difference in the proportion of males and females who were frequent betelnut users.

Most students who currently use betelnut (**83.9%**) chewed 10 or fewer prepared betelnut chews (*elaus*) per day. However, a substantial fraction (**7.2%**) reported that in the previous 30 days, they had chewed more than 25 elaus per day.

Age of initiation:

Of the youth who answered that they had ever tried chewing betelnut, almost 2/3 (**63.0%**) had first chewed betelnut (with or without tobacco) by age 12.

Table 2: Age at First Betelnut Use

Age Category	Percent
5 or younger	13.0
6 to 8 years old	17.1
9 to 10 years old	14.8
11 to 12 years old	18.1
13 to 14 years old	21.0
15 to 16 years old	12.7
17 or older	3.3

C. Betelnut Use with Tobacco:

Lifetime use:

The YTS question about adding tobacco to betelnut (Question 19) does not distinguish between lifetime and current use. The majority (**68.9%**) of high school students answered that they usually added tobacco to their betelnut chew. **67.5%** usually added cigarettes; **1.4%** answered that they usually added smokeless tobacco.

Current use:

About 2/3 of high school students (**67.7%**) are current users of betelnut with tobacco, adding cigarettes or smokeless tobacco to their chew on 1 or more of the previous 30 days. There is some discrepancy in reporting among high school seniors, but it is apparent that almost all students who are chewing betelnut are doing so with tobacco.

Table 3: Current Tobacco Users in Betelnut by Grade

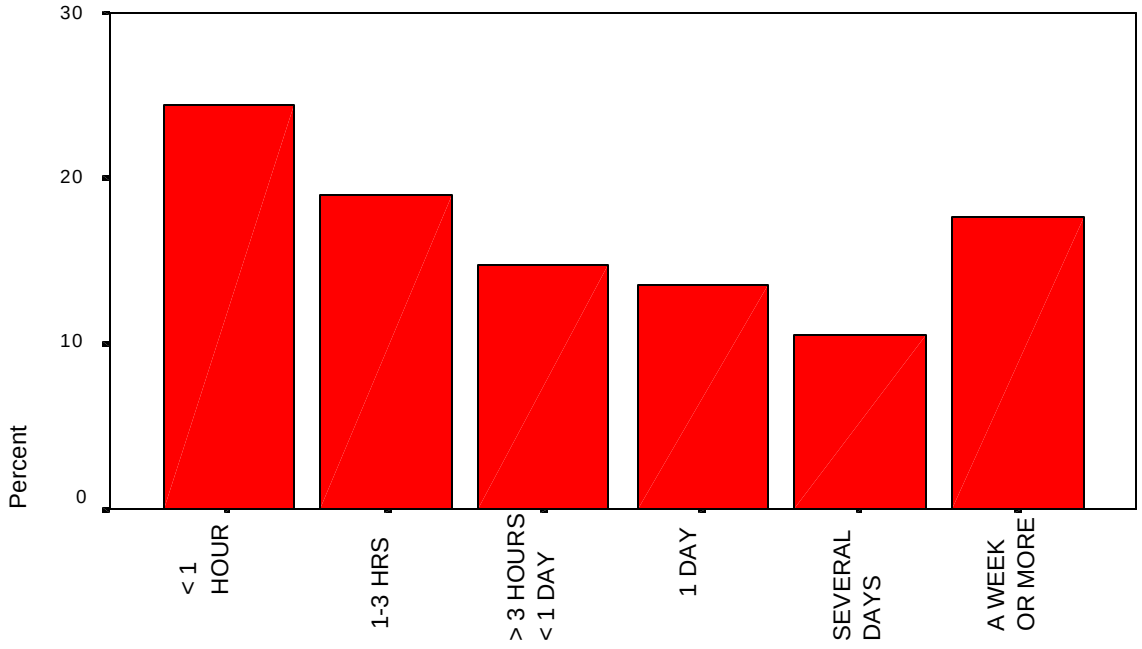
Grade	**9th**	**10th**	**11th**	**12th**
Proportion Currently Using Betelnut With Tobacco	59.9%	64.0%	67.0%	80.4%

Frequency/amount of use:

41.8% of high school students are frequent users of tobacco with betelnut, adding cigarettes or smokeless tobacco to their betelnut chew on 20 or more of the previous 30 days. About ten percent (**9.9%**) of students were consuming half a pack or more (11 or more cigarette sticks), on the days they chewed betelnut with cigarettes.

Of the students who chewed betelnut with cigarettes or smokeless tobacco, almost half (**43.4%**) reported that they experienced cravings in less than 3 hours.

Figure 3: Time to Experiencing Craving



Age of Initiation:

Most youth who used tobacco in their betelnut started doing so at an early age. More than half (**53.9%**) had started using tobacco in their mengeech before age 12.

Table 4: Age at First Tobacco Use in Betelnut

Age Category	Percent
5 or younger	5.0
6 to 8 years old	13.1
9 to 10 years old	15.1
11 to 12 years old	20.7
13 to 14 years old	26.3
15 to 16 years old	15.5
17 or older	4.3

D. Other Tobacco Use

Lifetime use:

More than 2/3 of high school students have ever tried smoking cigarettes. Reported below are the proportions of students who have ever tried smoking and using various forms of tobacco.

Table 5: Types of Tobacco Products Ever Tried

Type of Tobacco	Proportion Ever Tried
Cigarettes	69.7%
Cigars, cigarillos or little cigars	39.0%
Smokeless/chewing tobacco	23.5%
Smoking pipe tobacco	13.4%
Smoking bidis or kreteks	5.9%

Gender difference in tobacco experimentation:

Males were significantly more likely than females to have ever tried cigars (χ^2=20.97, **p<0.001**); ever smoked tobacco in a pipe (χ^2=24.613, **p<0.001**); ever tried smokeless tobacco (χ^2=29.402, **p<0.001**); and to have ever tried bidis and/or kretek cigarettes (χ^2=11.151, **p=0.001**). There was no difference in the proportion of boys and girls who had ever tried smoking cigarettes.

Current use:

Current smokers are defined as those who have smoked cigarettes on 1 or more of the past 30 days. **23.1%** of high school students are current smokers. Even though this is not the primary form of tobacco use among Palauan high school students, the level of current smoking is comparable to many U.S. states. The 1999 State Youth Tobacco Surveys report rates of current cigarette smoking ranging from **25.2%** to **38.6%**. The national prevalence of current smoking among high school students in the United States was measured at **28.5%** in 1999.

8.3% of Palauan high school students currently use smokeless/chewing tobacco (not in betelnut). This compares to 6.6% in the U.S. See *MMWR* 49: SS-10 (October 13, 2000) for complete details of the 1999 National and State Youth Tobacco Surveys.

Frequency/amount of use:

1.9% of high school students are frequent smokers, smoking cigarettes on 20 or more of the previous 30 days. Most (**62.0%**) smoke 1 cigarette or less on the days they smoke; **4.7%** of current smokers smoke half a pack or more per day.

About one quarter (**24.8%**) of current smokers reported that they could last less than 3 hours before they experienced cravings for a cigarette.

Age of initiation:

Almost half of high school students (**44.3%**) report that they have never smoked a whole cigarette. However, **42.8%** of those who had smoked a whole cigarette reported doing so by the time they were 12 years old.

Table 6: Age at First Whole Cigarette Smoked

Age Category	Percent
8 or younger	13.4
9 to 10 years old	12.8
11 to 12 years old	16.6
13 to 14 years old	25.1
15 to 16 years old	24.9
17 or older	27.3

Tobacco-Related Knowledge and Attitudes

Susceptibility to tobacco use:

Only **4.0%** of students who had never chewed betelnut with tobacco reported that they would DEFINITELY or PROBABLY use betelnut with cigarettes or tobacco in the next 12 months. However, **3.5%** of those who had never chewed betelnut with tobacco said that they would DEFINITELY or PROBABLY take a betelnut chew prepared with tobacco (*elaus* with tobacco) if offered by a close friend.

Surprisingly, Palauan high school students seem to be more susceptible to cigarette smoking. **24.6%** of those who had never smoked said they would DEFINITELY or PROBABLY smoke a cigarette in the next year. A similar proportion, **20.7%**, said they would DEFINITELY or PROBABLY smoke a cigarette if offered one by a close friend.

Males who had never chewed elaus with tobacco were no more likely to report that they would take a chew from a friend than females. However, males who had never smoked were significantly more likely than females to answer that they would smoke a cigarette if offered one by a good friend (χ^2=16.692, **p<0.001**).

Image of tobacco users:

When asked if chewing betelnut with tobacco makes young people look cool or fit in, **14.6%** said "definitely yes" or "probably yes". **9.7%** thought that smoking cigarettes "definitely" or "probably" makes young people look cool. There were no significant differences in attitudes between males and females, or across grades.

Knowledge of health risks:

Most students have had a parent or caregiver tell them about the health risks of tobacco use in any form. **83.4%** of students reported that a parent, grandparent or guardian had discussed the dangers of using tobacco in betelnut, and **84.7%** had been told about the dangers of smoking cigarettes or chewing smokeless tobacco.

Students were asked whether they thought tobacco was addictive, like cocaine or heroin. The vast majority of students were fully aware of the addictive properties of tobacco.

Table 7: Perception of Addiction Risk from Tobacco

Type of Tobacco Use	Definitely/probably addictive	Definitely/probably NOT addictive
Chewing betelnut with cigarettes or smokeless tobacco	92.3%	7.7%
Smoking cigarettes or chewing smokeless tobacco	91.1%	8.9%

However, **42.0%** of students thought that chewing elaus with tobacco was probably or definitely less harmful than smoking cigarettes or chewing smokeless tobacco. Another **33.3%** did not know whether using tobacco in elaus was less harmful.

Students were asked about their perceptions of the risk from using tobacco in small amounts or for a short time.

Table 8: Perception of Risk from Limited Tobacco Use

Type of Tobacco Use	Definitely/probably harmful	Definitely/probably NOT harmful
Chewing betelnut with 1-5 cigarettes/day	89.2%	10.8%
Smoking 1-5 cigarettes/day	88.6%	11.4%
Chewing betelnut with cigarettes or smokeless tobacco for only a year or two	68.0%	32.0
Smoking cigarettes for only a year or two	82.2%	17.8%

Even though students are well aware of the addictiveness of tobacco, they may be overly confident of their ability to use tobacco in limited amounts or for a brief period and then quit.

Approval of tobacco use:

Adolescent perception of the desirability and acceptibility of using tobacco is closely tied to what they see their peers and community leaders doing. The Youth Tobacco Survey asked students about their closest friends' tobacco use and who else they have seen using tobacco.

Table 9: Use of Tobacco in Peer Group

How many of your four closest friends..	None	One or more
Chew betelnut with cigarettes or smokeless tobacco?	12.6%	87.4%
Smoke cigarettes, cigars or pipe?	56.2%	43.8%
Chew smokeless tobacco?	70.4%	29.6%

A substantial proportion of students reported that their closest friends smoked or chewed smokeless tobacco. The vast majority of high school students have one or more friends who chew betelnut with some form of tobacco, which tends to make this behavior more acceptable, even desirable. Students were also asked about adults whom they had seen, in the 30 days prior to the survey, chewing betelnut (with or without tobacco) at their place

of work or in their professional roles. Students could answer yes to as many categories as applicable.

Table 10: Use of Betelnut (with or without tobacco) by Adults in Leadership Roles

Adults seen chewing betelnut in past 30 days	Proportion of students who have seen them
Police Officers	62.5%
Sports Coaches	42.9%
Doctors/Nurses/Dentists	43.2%
Teachers/Principals	65.3%
Pastors/Priests/Nuns	14.3%
None of the above	12.3%

It is noteworthy that the adults high school students see almost daily, i.e. their teachers and principals, are frequently seen to be using betelnut either with or without tobacco. Almost 2/3 of students (**65.3%**) said they had seen a teacher or principal chewing betelnut in school in the 30 days before the survey. However, students are much more likely to have seen their teachers than any other adults in the past 30 days.

II. Community Programs

Environmental Tobacco Smoke

Monitoring exposure to environmental tobacco smoke (ETS) is one of the goals of the Youth Tobacco Survey, because ETS exposure in youth is strongly linked to lung cancer, heart disease, asthma, respiratory and ear infections, adverse reproductive outcomes, and suddent infant death syndrome (SIDS).

Exposure:

Student were asked about their exposure to second hand smoke in the past 7 days. **40.3%** of students reported that they had been in the same room with someone who was smoking cigarettes, cigars or a pipe on one or more days in the past week. **34.8%** said that they had ridden in a car on one or more days of the past week with someone who has smoking cigarettes, cigars or a pipe.

Perception of harm from ETS:

94.1% of high school students answered "definitely yes" or "probably yes" when asked if they thought that the smoke from other people's cigarettes, cigars, or pipe was harmful to them.

However, many youth are exposed to second-hand smoke in their own homes: **42.2%** reported that they live with someone who currently smokes cigarettes, cigars or a pipe. Students also see other forms of tobacco use in their own homes: **21.7%** live with someone who chews smokeless tobacco, and the majority of students, **78.2%**, report that they live with someone who chews betelnut, with or without tobacco.

III. School Programs

Tobacco-Related School Curriculum

Because most tobacco users start before age 18, school programs designed to prevent the initiation of tobacco use are a crucial component of a tobacco control program. Youth who have not tried tobacco should be enabled to continue abstaining, and youth who have experimented or become regular users of tobacco should have help quitting.

Learning refusal skills in school:

Students were asked if they had practiced ways to say 'no' to tobacco use in school via role playing or other programs. Many students are unsure whether they have discussed this issue in school, and only **37%** reported that they had practiced ways to say no to tobacco use in elaus.

Table 11: Proportion of Students Who Have Practiced Refusal Skills in School

Type of Tobacco Use	Yes	No	Not sure
Cigarettes or smokeless tobacco	51.0%	30.1%	18.9%
Cigarettes or smokeless tobacco in betelnut	36.8%	38.7%	24.5%

Tobacco use on school property:

To enable schools to prevent tobacco use among youth, it is also necessary to measure and monitor adherence to school policies prohibiting tobacco use on school property.

Seven percent (**7.0%**) of students had smoked cigarettes on school property on one or more of the past 30 days. **10.2%** had used smokeless/chewing tobacco, and **42.9%** had used betelnut with or without tobacco on school property in the past 30 days.

IV. Enforcement

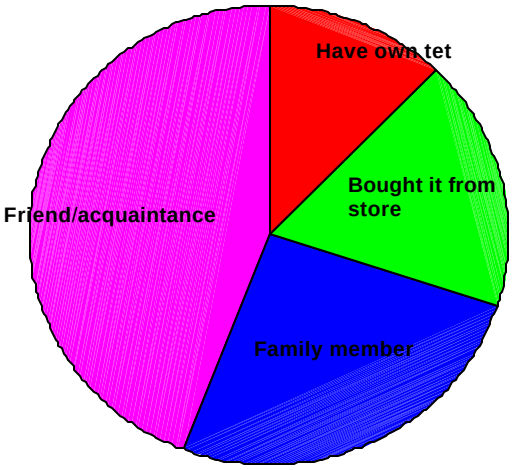
Minor's Access to Tobacco Products

Palau has and enforces laws regarding youth access to tobacco and conducts annual inspection surveys to measure the effectiveness of enforcement efforts. Reducing sales to minors from commercial sources can reduce tobacco use, as well as related health problems.

Access to betelnut:

Most high school students get elaus from non-commercial sources. **69.9%** of high school students who were current users (in the past 30 days) got their elaus from friends or family members.

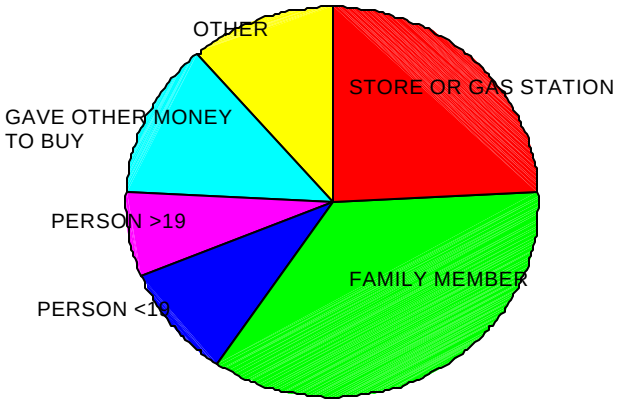
Figure 4: Usual Source of Betelnut



Source of tobacco for smoking or chewing:

Student were asked where they usually got cigarettes or smokeless tobacco for smoking or chewing betelnut in the previous 30 days. Of those who attempted to get either type of tobacco, the most common source was a family member (**35.1%**). Another **24.3%** usually got tobacco from a store or gas station.

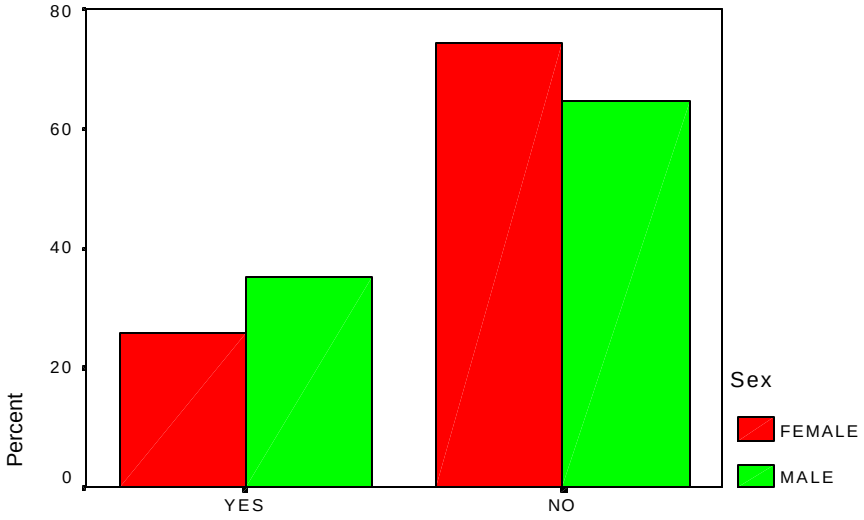
Figure 5: Usual Source of Cigarettes/Tobacco



Vendor compliance:

Only **31.2%** of students who bought or tried to buy cigarettes or smokeless tobacco in a store in the past 30 days were asked to show proof of age. Female students were significantly less likely to be asked for proof of age when they attempted to buy cigarettes or tobacco (χ^2=4.309, **p= 0.038**).

Figure 6: Proportion of Students Asked to Show Proof of Age for Tobacco Purchase in Past 30 Days



Vendor refusals:

35.1% of students who tried to buy cigarettes for smoking or smokeless tobacco in a store in the previous 30 days were refused because of their age. Only **26.7%** of students who attempted to buy elaus with cigarettes or smokeless tobacco in the previous 30 days were refused because of their age.

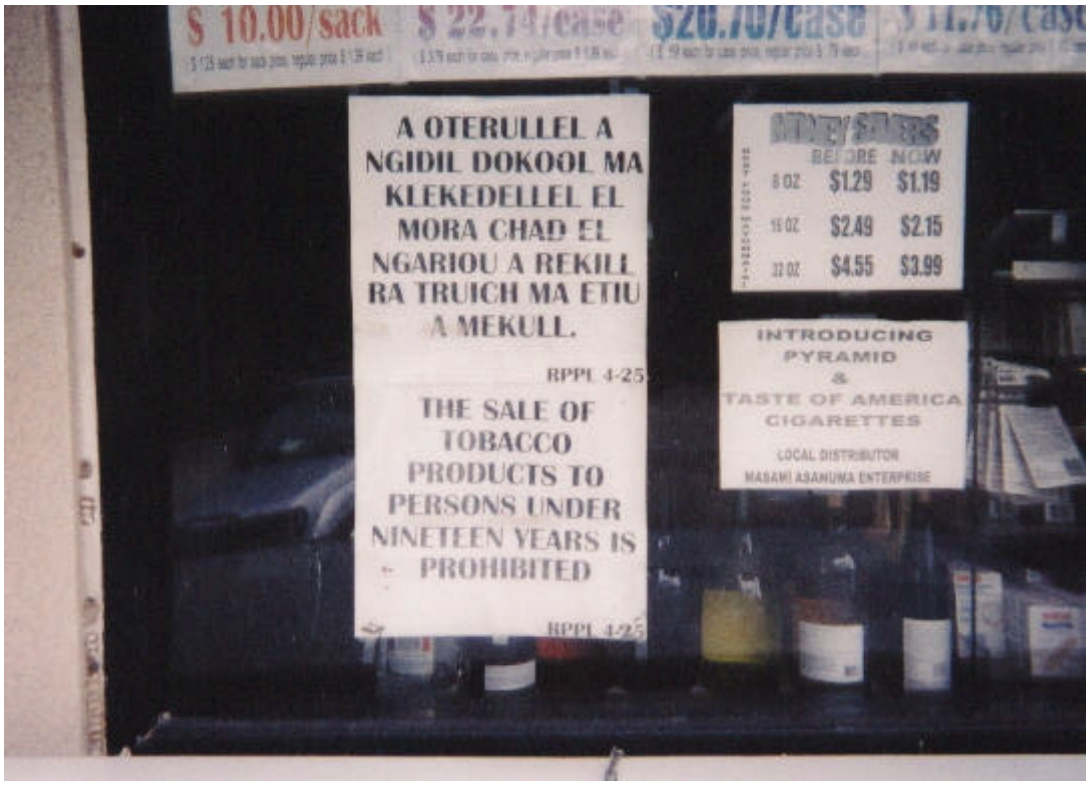
Tobacco purchases for others:

42.8% of high school students had been asked, in the previous 30 days, to go to the store to purchase tobacco or cigarettes by an adult. For those who were asked to purchase tobacco for an adult, the breakdown of who asked them most often is presented below.

Table 12: Persons >19 Asking Youth to Purchase Tobacco for Them

Adult who asked most often	Proportion
Mother +/or father	27.2%
Grandma +/or grandfather	9.9%
Aunt +/or uncle	19.1%
Brother +/or sister	5.7%
Other person over age 19	38.1%

A large proportion of students were asked to buy tobacco for a parent and over a third (**38.1%**) were asked by an adult outside their immediate family.



V. Counter-Marketing

Role of Media and Advertising

Tobacco advertising and promotion appear to stimulate adult consumption and increase the likelihood of youth initiation. Research shows that children tend to buy the most heavily advertised brands. Popular images, advertising, and promotions create a "friendly familiarity" for tobacco products.

The YTS asked several questions about students' exposure to tobacco advertising and promotions, as well as their exposure to counter-marketing efforts to promote cessation of tobacco use and decrease the risk of initiation. Comprehensive tobacco programs that combine media, school-based, and community-based activities can postpone or prevent tobacco use among adolescents.

Exposure to popular images and advertising

Students were asked how often, in the past 30 days, they saw popular images of tobacco use or advertising in various entertainment media.

Table 13: Media Images of Tobacco Use

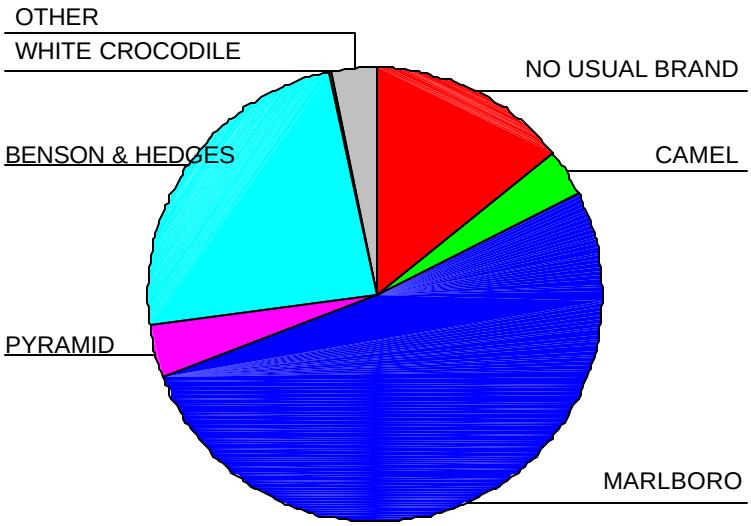
Exposure to Ads/Images	Some/most of the time	Hardly ever/never
Actors on TV/ in movies using tobacco	94.3%	5.7%
Athletes on TV/in movies using tobacco	34.0%	66.0%
Internet advertising for tobacco products	38.8%	61.2%

Entertainment media to which youth are frequently exposed, i.e. television and movies, appear to frequently show characters using tobacco, promoting a glamorous and normative image of tobacco use.

Students were also asked about what brands of tobacco they used for smoking, chewing or in elaus. Brand choice may indicate how receptive youth are to tobacco marketing by specific companies.

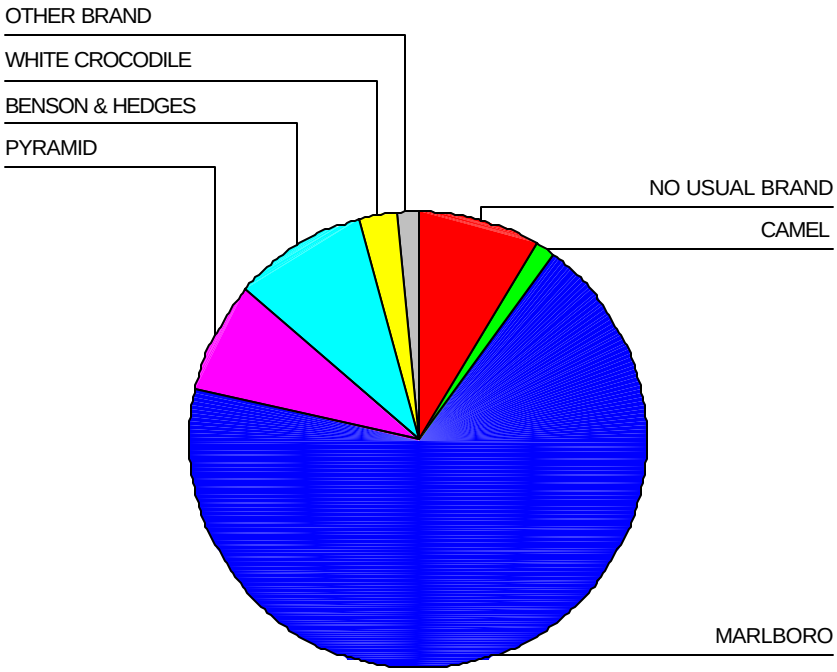
Question 49 of the Youth Tobacco Survey asked students which brand of cigarettes they usually smoked, in the past 30 days.

Figure 7: Preferred Brand of Cigarettes for Smoking



Two additional questions asked students what brand of cigarettes or what brand of smokeless tobacco they usually added to their betelnut chew during the past 30 days.

Figure 8: Preferred Brand of Cigarettes for Elaus



Brand preferences for smoking and elaus were not identical, but Marlboro products were most commonly used in both cases. **51.5%** of those who smoked in the past 30 days reported Marlboro to be their usual brand and **68.6%** of those who chewed betelnut with cigarettes usually added Marlboro cigarettes.

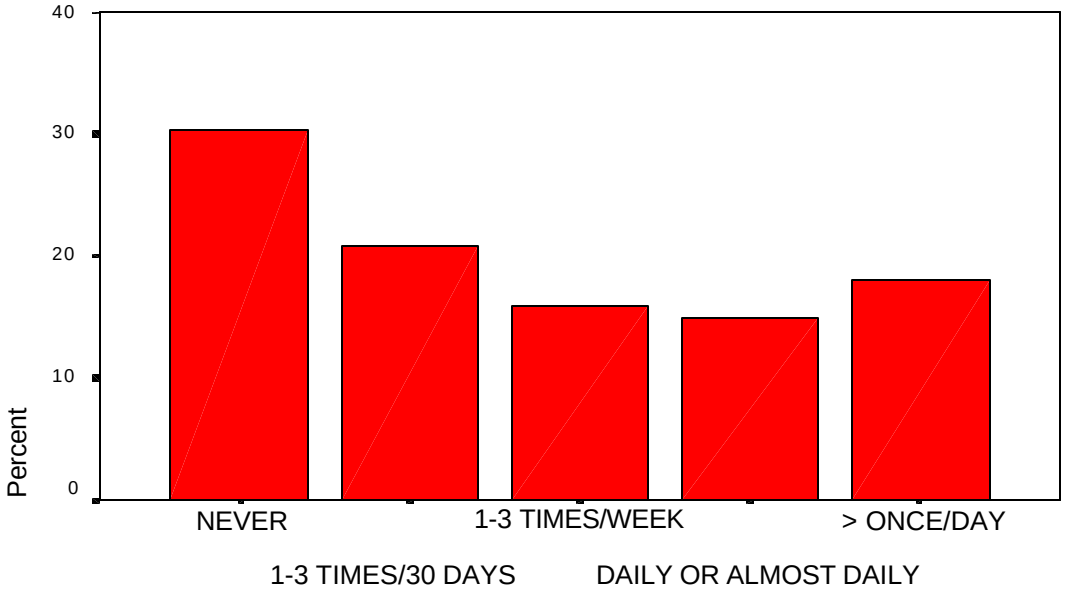
Among students who added smokeless tobacco to their elaus in the past 30 days, the most popular brands are presented below. Students who used smokeless/chewing tobacco in their elaus did not have an overwhelmingly preferred brand like those who used cigarettes.

Table 14: Preferred Brand of Smokeless Tobacco in Elaus

Brand	Proportion
Other brand	46.0%
No usual brand	30.2%
Redman	16.6%
Skoal	5.1%
Copenhagen	2.1%

Exposure to counter-marketing is also an important measure in assessing how aware students are of anti-tobacco messages. Students were asked how often, in the past 30 days, they had seen commercials on TV or the Internet about the dangers of tobacco use.

Figure 9: Frequency of Exposure to Anti-Tobacco Advertising



Participation in community activities to prevent tobacco use:

27.8% of high school students reported that they had taken part in community activities to discourage young people from using tobacco in any form. However, **45.3%** had NOT participated in any such activities and **26.9%** didn't know about any community activities to prevent or discourage youth tobacco use.

Receptiveness to product-related marketing

25.9% of high school students said that they had bought or received something that had a cigarette brand or a tobacco company name or picture on it in the previous 12 months.

32.0% of high school students said they would 'definitely' or 'probably' use or wear an item that had a cigarette brand or tobacco company name or picture on it. Current smokers were significantly more likely to say that they would use a promotional tobacco item than non-smokers ($\chi^2 = 4.70$, **p = 0.03**). Current users of tobacco with betelnut were no more likely than non-users to be receptive to using promotional items from tobacco companies.

VI. Cessation Programs

The youth component of a comprehensive tobacco control program must focus not only on prevention but also cessation. Quitting early has significant individual and public health benefits. Many youth who are regular tobacco users want to quit but find it difficult. Public-health based alternatives are needed when youth are caught breaking school or community rules on tobacco use or purchase. The Youth Tobacco Survey measures students' attitudes towards, beliefs about, and experience with cessation.

Desire to quit:

High school students who chew betelnut with cigarettes or smokeless tobacco reported that they overwhelmingly want to quit using tobacco and many want to quit using betelnut completely.

Table 15: Desire to Quit Among Students Who Use Tobacco in Elaus

Response	Proportion
NO, I don't want to stop adding cigarettes or smokeless tobacco to my betelnut chew	22.1%
YES, I want to stop adding cigarettes or smokeless tobacco to my betelnut chew	22.7%
YES, I want to stop chewing betelnut altogether	55.1%

Among students who smoke cigarettes, **73.9%** say that they want to quit.

71.2% of students who chew betelnut with cigarettes or smokeless tobacco answered that they could quit now if they wanted to. Similarly, **77.7%** of those who currently smoke cigarettes believe that they would be able to quit now if they wanted to.

Efforts to quit:

About **60%** of students who chew betelnut with cigarettes or smokeless tobacco have tried to quit at least once in the past year.

Table 16: Efforts to Quit Among Students Who Use Tobacco in Elaus

Number of Efforts in Past 12 Months	Proportion
None	39.5%
1 time	11.8%
2 times	13.5%
3 to 5 times	15.0%
6 to 9 times	3.8%
10 or more times	16.4%

Exactly half (**50.0%**) of students who smoke have tried to quit at least once in their lifetimes.

Table 17: Efforts to Quit Among Students Who Smoke Cigarettes

Number of Efforts Ever	Proportion
None	50.0%
1 time	24.1%
2 times	6.8%
3 to 5 times	5.6%
6 to 9 times	0.9%
10 or more times	12.7%

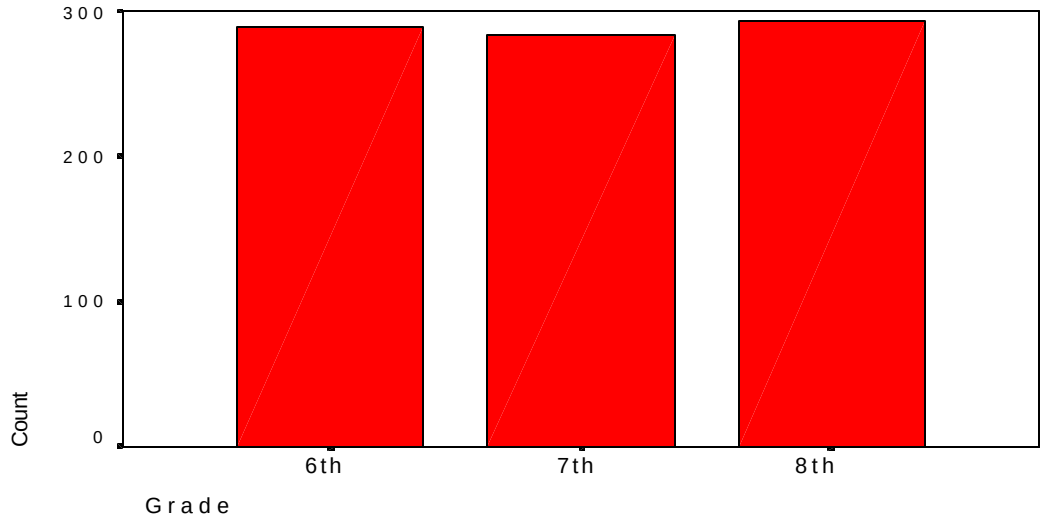
Interest in cessation programs:

As the numbers above indicate, stopping tobacco use is difficult, even for youth who are strongly motivated to quit. **75.4%** of high school students said that they would be interested in joining a program to help them quit smoking, quit chewing smokeless tobacco, or quit chewing betelnut with any form of tobacco.

Middle Schools

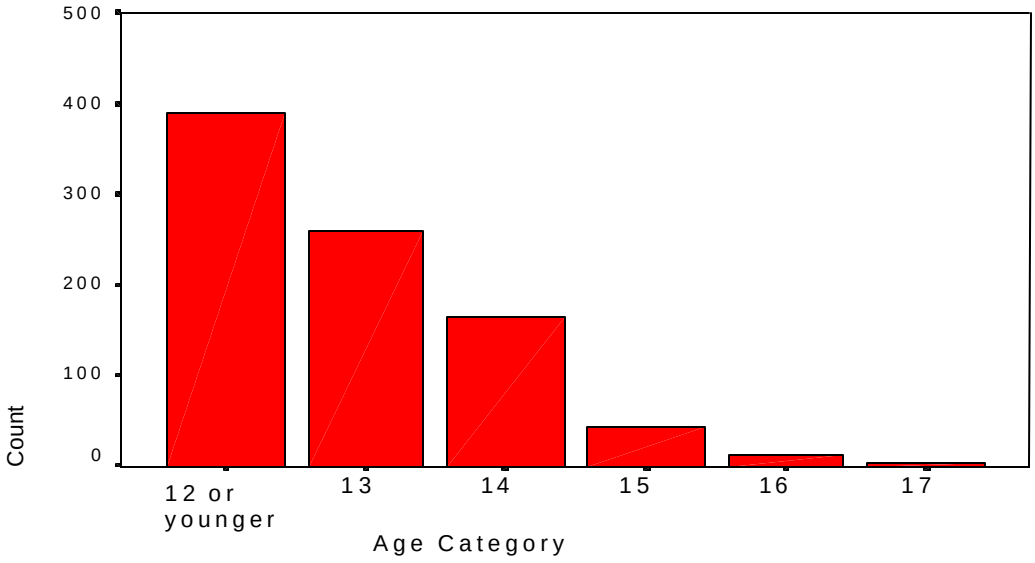
In Palau's middle schools, 956 students in grades 6-8 were eligible and 876 participated in the Youth Tobacco Survey, for a response rate of 91.63%. Because all 18 eligible schools participated in the survey and all students were asked to complete questionnaires, the response rate in Palau compares very favorably with those reported by U.S. states.

Figure 10: Grade Distribution of Respondents



There were almost equal numbers of respondents in each of the three middle school grades: 289 in 6th, 285 in 7th, and 293 in 8th. There were 9 students who did not answer this question.

Figure 11: Age Distribution of Respondents



Responses were evenly divided along gender lines: 51.3% of respondents were female and 48.7% were male. Most middle school students are 14 and under. The median age of middle school students who completed the survey was 13.

Most of the students who took part in the survey (92.7%) describe themselves as Palauan. 2.9% are from other Pacific Islands, and 2.4% are Asian (including Filipinos). Only 0.3% describe themselves as Caucasian, Black/African-American, or of "Other" ethnic origin.

VII. Surveillance and Evaluation

Tobacco use is a preventable health risk and in many countries, it is the leading preventable cause of death. Most tobacco users first experiment with tobacco products in adolescence and many become regular users before age 18. Smoking tobacco is responsible for heart disease, cancers of the lung, larynx, mouth, esophagus and bladder; stroke; and chronic obstructive pulmonary disease. Chewing tobacco alone or in betelnut is associated with leukoplakia, oral cancers, tooth and gum disease, and cardiovascular disease.

To monitor the extent and nature of youth tobacco use, it is neccessary to measure prevalence, as well as knowledge and attitudes.

Prevalence of Tobacco Use Among Young People

E. Use of Any Tobacco Product

Lifetime use:

More than 2/3 (**70.7%**) of Palauan middle school students have tried using some form of tobacco (in betelnut, smoking, or chewing smokeless tobacco) in their lives. Exposure to tobacco products in various forms is clearly very common.

Current use:

Literature on tobacco and other substance use defines a "current user" as someone who has used a product on one or more of the past 30 days. Almost fifty-eight percent (**57.9%**) of students in grades 6 through 8 are current users of some form of tobacco. There is no significant difference in the proportion of boys and girls who are current users of any form of tobacco, but the proportion of students who report currently using any form of tobacco increases significantly as grade increases ($\chi^2 = 16.341$, $\mathbf{p<0.001}$).

Frequent use:

22.3% of all students are frequent tobacco users, defined as having used a tobacco product on 20 or more of the past 30 days. There is no significant difference in the proportion of boys and girls who are frequent users of any form of tobacco. The same trend, an increasing proportion of frequent users as grade increases, is apparent in students who frequently use any form of tobacco ($\chi^2 = 27.188$, $\mathbf{p<0.001}$).

F. Betelnut Use

Lifetime use:

Abput 3/4 (**74.7%)** of middle school students in Palau have tried chewing betelnut. There was not a significant difference in the proportions of males and females who had ever tried betelnut. However, students of Palauan origin were overwhelmingly more likely to have ever tried betelnut than students of other ethnic backgrounds ($\chi^2 = 24.149$; **p < 0.001**)

Current use:

The survey asked students about how much they chewed in the past 30 days. **56.8%** of middle school students are 'current users' of betelnut, defined as having chewed betelnut on one or more of the past 30 days.

There is a significant increase in the proportion of current users as grade increases ($\chi^2 = 7.542$, **p = 0.023**). By grade 8, almost 2/3 (**62.8%**) of students are currently using betelnut.

Table 18: Current Betelnut Users by Grade

Grade	**6th**	**7th**	**8th**
Proportion Currently Using Betelnut	51.6%	56.5%	62.8%

Frequency/amount of betelnut use:

A substantial proportion (**21.1%**) of middle school students are 'frequent users', chewing betelnut on 20 or more of the previous 30 days. There was no significant difference in the proportion of males and females who were frequent betelnut users.

Most students who currently use betelnut (**86.2%**) chewed 10 or fewer prepared betelnut chews (*elaus*) per day. However, a substantial fraction (**6.7%**) reported that in the previous 30 days, they had chewed more than 25 elaus per day.

Age of initiation:

Of the youth who answered that they had ever tried chewing betelnut, more than half (**61.3%**) had first chewed betelnut (with or without tobacco) by age 10.

Table 19: Age at First Betelnut Use

Age Category	Percent
5 or younger	13.4
6 to 8 years old	22.6
9 to 10 years old	25.4
11 to 12 years old	28.8
13 to 14 years old	8.0
15 to 16 years old	0.9

G. Betelnut Use with Tobacco:

Lifetime use:

The YTS question about adding tobacco to betelnut (Question 19) does not distinguish between lifetime and current use. More than half (**53.7%**) of middle school students answered that they usually added tobacco to their mengeech. **51.5%** usually added cigarettes; **2.2%** answered that they usually added smokeless tobacco.

Current use:

More than half of middle school students (**53.7%**) are current users of betelnut with tobacco, adding cigarettes or smokeless tobacco to their chew on 1 or more of the previous 30 days. It is apparent that almost all students who are chewing betelnut are doing so with added tobacco. The proportion of students who are chewing betelnut with added tobacco increases significantly as grade increases ($\chi^2 = 19.606$; $\mathbf{p < 0.001}$)

Table 20: Current Tobacco Users in Betelnut by Grade

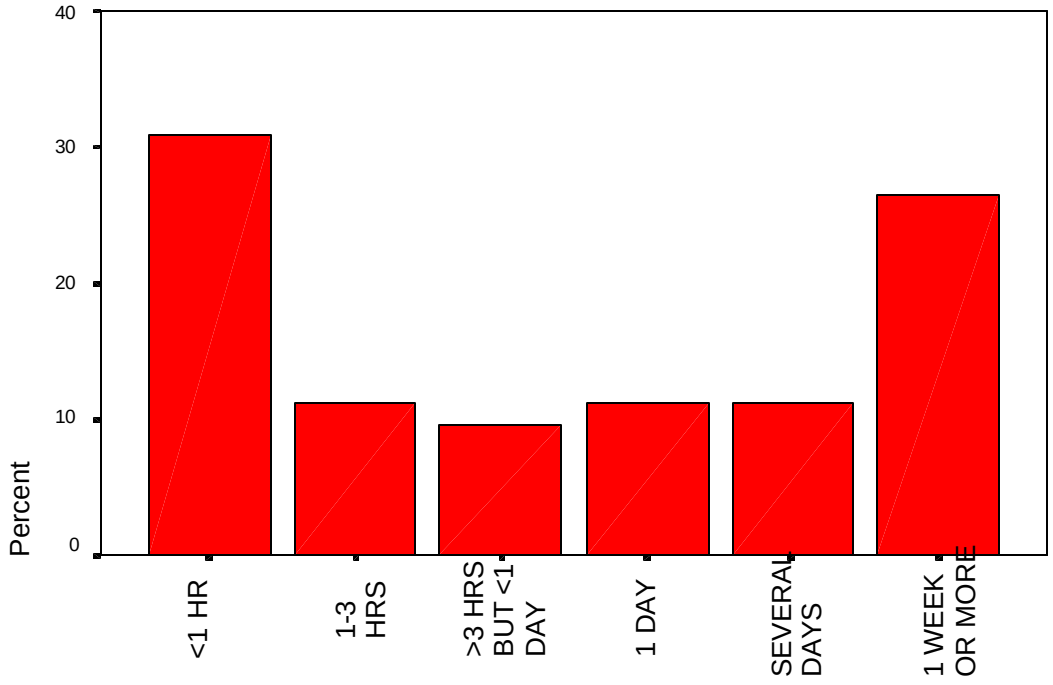
Grade	**6th**	**7th**	**8th**
Proportion Currently Using Betelnut with Tobacco	43.6%	55.4%	63.0%

Frequency/amount of use:

21.6% of middle school students are frequent users of tobacco with betelnut, adding cigarettes or smokeless tobacco to their elaus on 20 or more of the previous 30 days. Almost five percent (**4.7%**) of students were consuming half a pack or more (11 or more cigarette sticks), on the days they chewed betelnut with cigarettes.

Of the students who chewed betelnut with cigarettes or smokeless tobacco, more than 1/3 (**41.9%**) reported that they experienced cravings in less than 3 hours.

Figure 12: Time to Experiencing Craving



Age of Initiation:

Most youth who use tobacco in their betelnut started doing so at an early age. Almost half (**47.9%**) had started using tobacco in their betelnut chew by age 10.

Table 21: Age at First Tobacco Use in Betelnut

Age Category	Percent
5 or younger	7.2
6 to 8 years old	18.2
9 to 10 years old	22.4
11 to 12 years old	38.6
13 to 14 years old	10.9
15 to 16 years old	1.5

H. Other Tobacco Use

Lifetime use:

More than 1/3 of middle school students have ever tried smoking cigarettes. Reported below are the proportions of students who have ever tried smoking and using various forms of tobacco.

Table 22: Types of Tobacco Products Ever Tried

Type of Tobacco	Proportion Ever Tried
Cigarettes	43.3%
Cigars, cigarillos or little cigars	26.1%
Smokeless/chewing tobacco	8.6%
Smoking pipe tobacco	9.2%
Smoking bidis or kreteks	1.8%

Gender difference in tobacco experimentation:

Among middle school students, males were significantly more likely than females to have ever smoked tobacco in a pipe (χ^2=4.939, **p=0.026**); ever tried smokeless tobacco (χ^2=6.372, **p=0.012**); and to have ever tried bidis and/or kretek cigarettes (χ^2=6.896, **p=0.009**). There was no difference in the proportion of boys and girls who had ever tried smoking cigarettes or cigars.

Current use:

Current smokers are defined as those who have smoked cigarettes on 1 or more of the past 30 days. **18.3%** of middle school students are current smokers. Even though this is not the primary form of tobacco use among Palauan middle school students, the level of current smoking is higher many U.S. states, and much higher than the national average. The 1999 State Youth Tobacco Surveys report rates of current cigarette smoking among middle school students ranging from **10.0%** to **23.4%**. The national prevalence of current smoking among middle school students in the United States was measured at just **9.2%** in 1999.

6.4% of Palauan middle school students currently use smokeless/chewing tobacco (not in betelnut). This compares to just 2.7% in the U.S. See *MMWR* 49: SS-10 (October 13, 2000) for complete details of the 1999 National and State Youth Tobacco Surveys.

Frequency/amount of use:

1.5% of middle school students are frequent smokers, smoking cigarettes on 20 or more of the previous 30 days. Most (**77.9%**) smoke 1 cigarette or less on the days they smoke; **3.4%** of current smokers smoke half a pack or more per day.

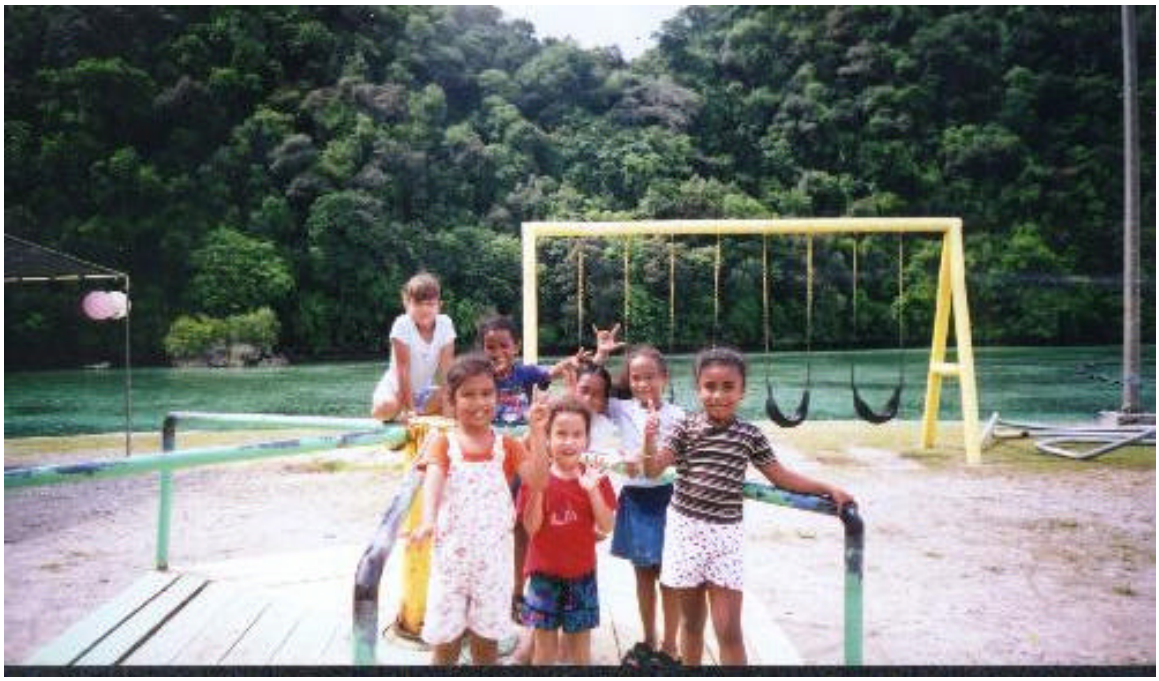
More than a third (**37.9%**) of current smokers in grades 6-8 reported that they could last less than 3 hours before they experienced cravings for a cigarette.

Age of initiation:

Almost 2/3 of middle school students (**63.8%**) report that they have never smoked a whole cigarette. However, **40.6%** of those who had smoked a whole cigarette reported doing so by the time they were 10 years old.

Table 23: Age at First Whole Cigarette Smoked

Age Category	Percent
8 or younger	19.4
9 to 10 years old	21.2
11 to 12 years old	38.1
13 to 14 years old	20.5
15 to 16 years old	0.7



Tobacco-Related Knowledge and Attitudes

Susceptibility to tobacco use:

A substantial proportion of middle school students are susceptible to using tobacco with betelnut. **9.4%** of students who had never chewed betelnut with tobacco reported that they would DEFINITELY or PROBABLY use betelnut with cigarettes or tobacco in the next 12 months. **7.3%** of those who had never chewed betelnut with tobacco said that they would DEFINITELY or PROBABLY take elaus with tobacco if offered by a close friend.

Palauan middle school students are less susceptible to cigarette smoking than their high school counterparts. **6.6%** of those who had never smoked said they would DEFINITELY or PROBABLY smoke a cigarette in the next year. A similar proportion, **6.1%**, said they would DEFINITELY or PROBABLY smoke a cigarette if offered one by a close friend.

There was no difference in the susceptibility of males and females to using tobacco in betelnut, in the next year or if offered by a close friend. Males who had never smoked were significantly more likely than females to be susceptible to smoking a cigarette in the next year (χ^2=9.745, **p=0.002**). Males in middle school who had never smoked were also much more likely to smoke a cigarette if offered one by a good friend (χ^2=19.574, **p<0.001**).

Image of tobacco users:

When asked if chewing betelnut with tobacco makes young people look cool or fit in, **15.1%** said “definitely yes” or “probably yes”. **10.4%** thought that smoking cigarettes “definitely” or “probably” makes young people look cool. Boys were significantly more likely than girls to think that chewing betelnut with tobacco looked cool (χ^2=6.672, **p<0.010**).

Knowledge of health risks:

Most students have had a parent or caregiver tell them about the health risks of tobacco use in any form. **85.7%** of students reported that a parent, grandparent or guardian had discussed the dangers of using tobacco in betelnut, and **82.4%** had been told by at least one parent or a guardian about the dangers of smoking cigarettes or chewing smokeless tobacco.

Students were asked whether they thought tobacco, whether chewed or smoked, was addictive, like cocaine or heroin. The vast majority of students were fully aware of the addictive properties of tobacco. Surprisingly, middle school students did not seem to

think that smoking cigarettes or chewing smokeless tobacco was as seriously addictive as using tobacco with betelnut.

Table 24: Perception of Addiction Risk from Tobacco

Type of Tobacco Use	Definitely/probably addictive	Definitely/probably NOT addictive
Chewing betelnut with cigarettes or smokeless tobacco	82.0%	18.0%
Smoking cigarettes or chewing smokeless tobacco	68.2%	31.8%

However, **39.2%** of students thought that chewing elaus with tobacco was probably or definitely less harmful than smoking cigarettes or chewing smokeless tobacco. Another **35.0%** did not know whether using tobacco in elaus was less harmful.

Students were asked about their perceptions of the risk from using tobacco in small amounts or for a short time.

Table 25: Perception of Risk from Limited Tobacco Use

Type of Tobacco Use	Definitely/probably harmful	Definitely/probably NOT harmful
Chewing betelnut with 1-5 cigarettes/day	81.3%	18.7%
Smoking 1-5 cigarettes/day	66.7%	33.3%
Chewing betelnut with cigarettes or smokeless tobacco for only a year or two	70.9%	29.1%
Smoking cigarettes for only a year or two	84.4%	15.6%

Even though students are well aware of the addictiveness of tobacco, they may be overly confident of their ability to use tobacco in limited amounts or for a brief period and then quit. Middle school students also appear to underestimate the health risks of smoking even a few cigarettes a day.

Approval of tobacco use:

Adolescent perception of the desirability and acceptibility of using tobacco is closely tied to what they see their peers and community leaders doing. The Youth Tobacco Survey asked students about their closest friends' tobacco use and who else they have seen using tobacco.

Table 26: Use of Tobacco in Peer Group

How many of your four closest friends..	None	One or more
Chew betelnut with cigarettes or smokeless tobacco?	27.8%	72.2%
Smoke cigarettes, cigars or pipe?	70.1%	29.9%
Chew smokeless tobacco?	77.2%	22.8%

A substantial proportion of students reported that their closest friends smoked or chewed smokeless tobacco. The vast majority of middle school students have one or more friends who chew betelnut with some form of tobacco, which tends to make this behavior more acceptable, even desirable. Students were also asked about adults whom they had seen, in the 30 days prior to the survey, chewing betelnut (with or without tobacco) at their place of work or in their professional roles. Students could answer yes to as many categories as applicable.

Table 27: Use of Betelnut (with or without tobacco) by Adults in Leadership Roles

Adults seen chewing betelnut in past 30 days	Proportion of students who have seen them
Police Officers	37.6%
Sports Coaches	29.0%
Doctors/Nurses/Dentists	27.9%
Teachers/Principals	43.4%
Pastors/Priests/Nuns	8.4%
None of the above	14.2%

It is noteworthy that the adults middle school students see almost daily, i.e. their teachers and principals, are frequently seen to be using betelnut either with or without tobacco. More than 1/3 of students (**43.4%**) said they had seen a teacher or principal chewing betelnut in school in the 30 days before the survey. The adults whom school-age children see most often in their professional roles are, of course, teachers, which partially explains the responses to this question. This series of questions was placed at the end of the Youth Tobacco Survey and a large proportion of middle school students may have been unable to complete these questions in the allotted time. There were numerous missing responses to this question.

VIII. Community Programs

Environmental Tobacco Smoke

Monitoring exposure to environmental tobacco smoke (ETS) is one of the goals of the Youth Tobacco Survey, because ETS exposure in youth is strongly linked to lung cancer, heart disease, asthma, respiratory and ear infections, adverse reproductive outcomes, and suddent infant death syndrome (SIDS).

Exposure:

Student were asked about their exposure to second hand smoke in the past 7 days. **30.4%** of students reported that they had been in the same room with someone who was smoking cigarettes, cigars or a pipe on one or more days in the past week. **38.5%** said that they had ridden in a car on one or more days of the past week with someone who has smoking cigarettes, cigars or a pipe.

Perception of harm from ETS:

90.3% of middle school students answered "definitely yes" or "probably yes" when asked if they thought that the smoke from other people's cigarettes, cigars, or pipe was harmful to them.

However, many youth are exposed to second-hand smoke in their own homes: almost half, **46.7%**, reported that they live with someone who currently smokes cigarettes, cigars or a pipe. Students also see other forms of tobacco use in their own homes: **25.9%** live with someone who chews smokeless tobacco, and the majority of middle school students, **74.6%**, report that they live with someone who chews betelnut, with or without tobacco.

IX. School Programs

Tobacco-Related School Curriculum

Because most tobacco users start before age 18, school programs designed to prevent the initiation of tobacco use are a crucial component of a tobacco control program. Youth who have not tried tobacco should be enabled to continue abstaining, and youth who have experimented or become regular users of tobacco should have help quitting.

Learning refusal skills in school:

Students were asked if they had practiced ways to say 'no' to tobacco use in school via role playing or other programs. Many students are unsure whether they have discussed this issue in school, and only about half of middle school students (**55.5%**) reported that they had practiced ways to say no to tobacco use in elaus.

Table 28: Proportion of Students Who Have Practiced Refusal Skills in School

Type of Tobacco Use	Yes	No	Not sure
Cigarettes or smokeless tobacco	62.4%	19.6%	18.0%
Cigarettes or smokeless tobacco in betelnut	55.5%	22.7%	21.7%

Tobacco use on school property:

To enable schools to prevent tobacco use among youth, it is also necessary to measure and monitor adherence to school policies prohibiting tobacco use on school property.

6.3% of students in grades 6-8 had smoked cigarettes on school property on one or more of the past 30 days. **10.9%** had used smokeless/chewing tobacco, and **37.0%** had used betelnut with or without tobacco on school property in the past 30 days. These numbers are very similar to those reported by high school students, suggesting that even in middle schools, prohibitions on tobacco and betelnut use on school property are not being communicated or enforced.

X. Enforcement

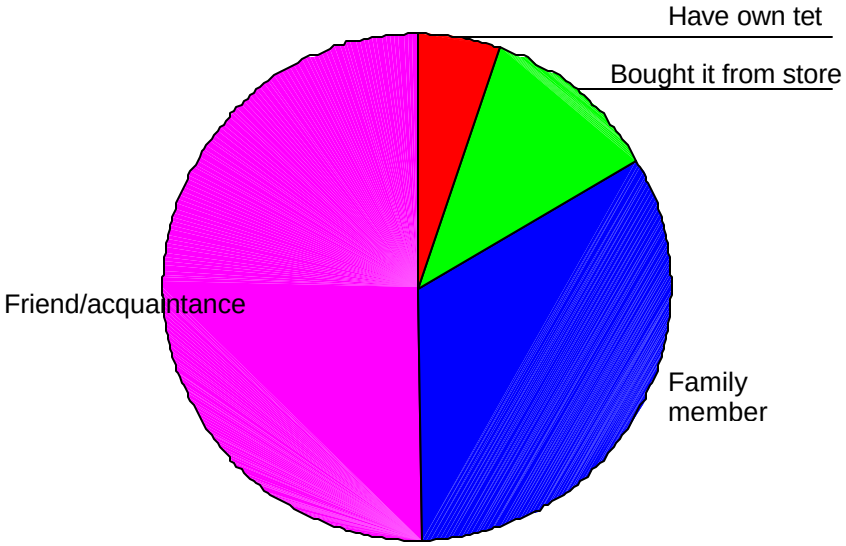
Minor's Access to Tobacco Products

Palau has and enforces laws regarding youth access to tobacco and conducts annual inspection surveys to measure the effectiveness of enforcement efforts. Reducing sales to minors from commercial sources can reduce tobacco use, as well as related health problems.

Access to betelnut:

Almost all middle school students who chew betelnut get elaus from non-commercial sources. **83.3%** of middle school students who were current users (in the past 30 days) got their elaus from friends or family members.

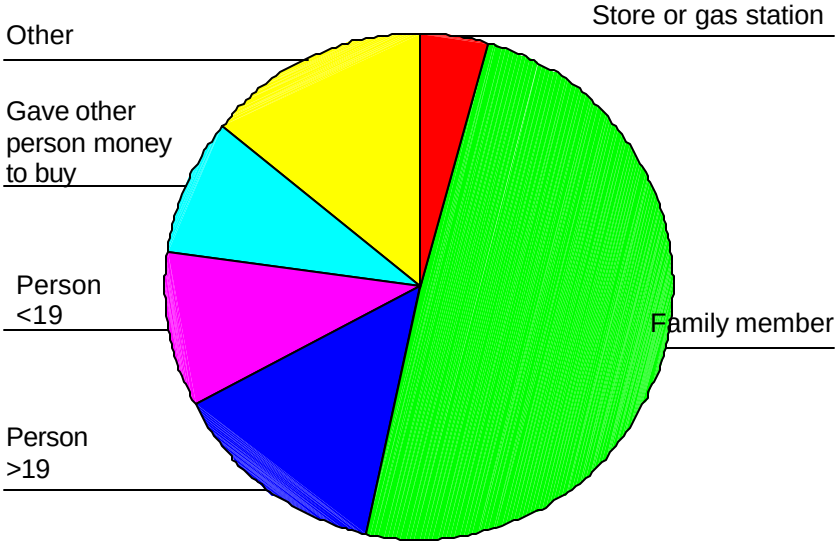
Figure 13: Usual Source of Betelnut



Source of tobacco for smoking or chewing:

Student were asked where they usually got cigarettes or smokeless tobacco for smoking or chewing betelnut in the previous 30 days. Of those who attempted to get either type of tobacco, the most common source was a family member (**48.8%**). Another **23.9%** usually got tobacco from someone else they knew, either an adult or under 19 years of age. Only **4.5%** of middle school students said they usually got cigarettes or tobacco from a store or gas station.

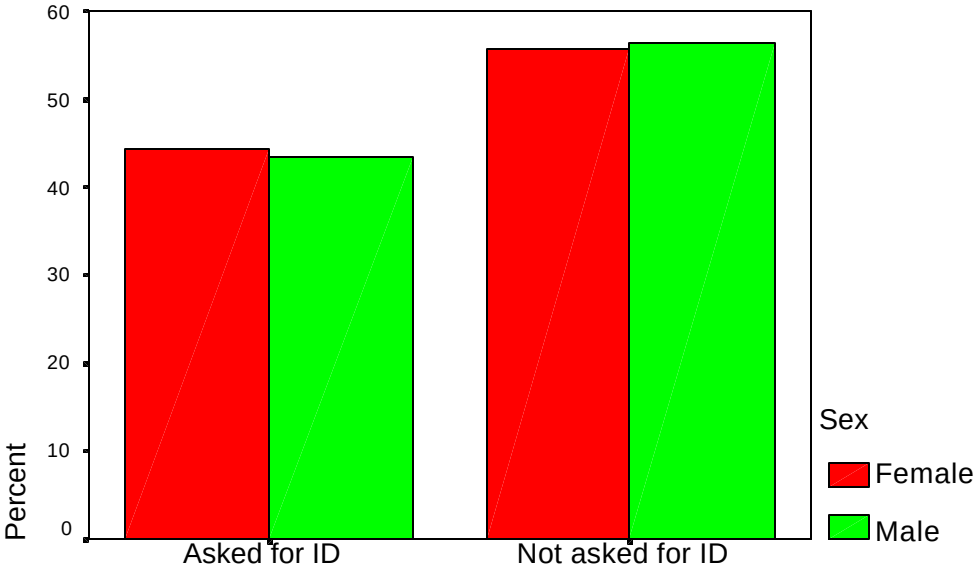
Figure 14: Usual Source of Cigarettes/Tobacco



Vendor compliance:

Fewer than half (**44.1%**) of middle school students who tried to buy cigarettes or smokeless tobacco in a store in the past 30 days were asked to show proof of age. There was no difference in the proportion of boys and girls asked to show ID for tobaco purchases.

Figure 15: Proportion of Students Asked to Show Proof of Age for Tobacco Purchase in Past 30 Days



Vendor refusals:

Only **26.6%** of students who tried to buy cigarettes for smoking or smokeless tobacco in a store in the previous 30 days were refused because of their age. **31.0%** of students who attempted to buy elaus with cigarettes or smokeless tobacco in the previous 30 days were refused because of their age. These refusal rates are as low as those for high school students, suggesting that vendors may assume that young people are not buying tobacco products for their own use, and fail to refuse a tobacco sale even when the purchaser is clearly underage.

Tobacco purchases for others:

43.4% of middle school students had been asked, in the previous 30 days, to go to the store to purchase tobacco or cigarettes by an adult. For those who were asked to purchase tobacco for an adult, the breakdown of who asked them most often is presented below.

Table 29: Persons >19 Asking Youth to Purchase Tobacco for Them

Adult who asked most often	Proportion
Mother +/or father	38.6%
Grandma +/or grandfather	14.0%
Aunt +/or uncle	18.3%
Brother +/or sister	6.3%
Other person over age 19	22.8%

The largest proportion (**38.6%**) of students who were asked to buy tobacco products for an adult were asked to buy tobacco for a parent and **22.8%** were asked by an adult outside their immediate family.

XI. Counter-Marketing

Role of Media and Advertising

Tobacco advertising and promotion appear to stimulate adult consumption and increase the likelihood of youth initiation. Research shows that children tend to buy the most heavily advertised brands. Popular images, advertising, and promotions create a "friendly familiarity" for tobacco products.

The YTS asked several questions about students' exposure to tobacco advertising and promotions, as well as their exposure to counter-marketing efforts to promote cessation of tobacco use and decrease the risk of initiation. Comprehensive tobacco programs that combine media, school-based, and community-based acitivities can postpone or prevent tobacco use among adolescents.

Exposure to popular images and advertising

Students were asked how often, in the past 30 days, they saw popular images of tobacco use or advertising in various entertainment media.

Table 30: Media Images of Tobacco Use

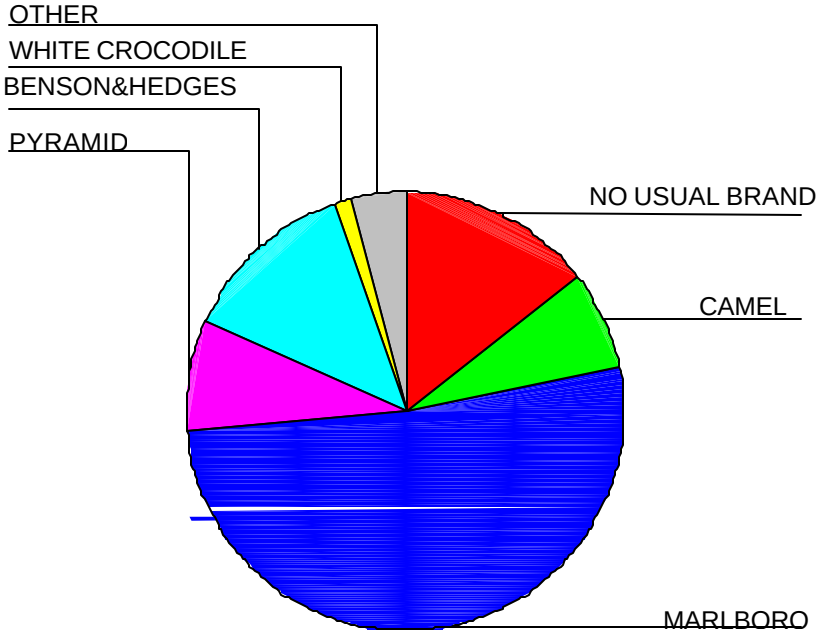
Exposure to Ads/Images	Some/most of the time	Hardly ever/never
Actors on TV/ in movies using tobacco	94.2%	5.8%
Athletes on TV/in movies using tobacco	47.1%	52.9%
Internet advertising for tobacco products	41.8%	58.2%

Entertainment media to which youth are frequently exposed, i.e. television and movies, appear to show characters using tobacco often, promoting a glamorous and normative image of tobacco use. 64.6% of middle school students reported that they do not use the Internet, so the numbers who are actually exposed to tobacco advertising in this form are small.

Students were also asked about what brands of tobacco they used for smoking, chewing or in elaus. Brand choice may indicate how receptive youth are to tobacco marketing by specific companies.

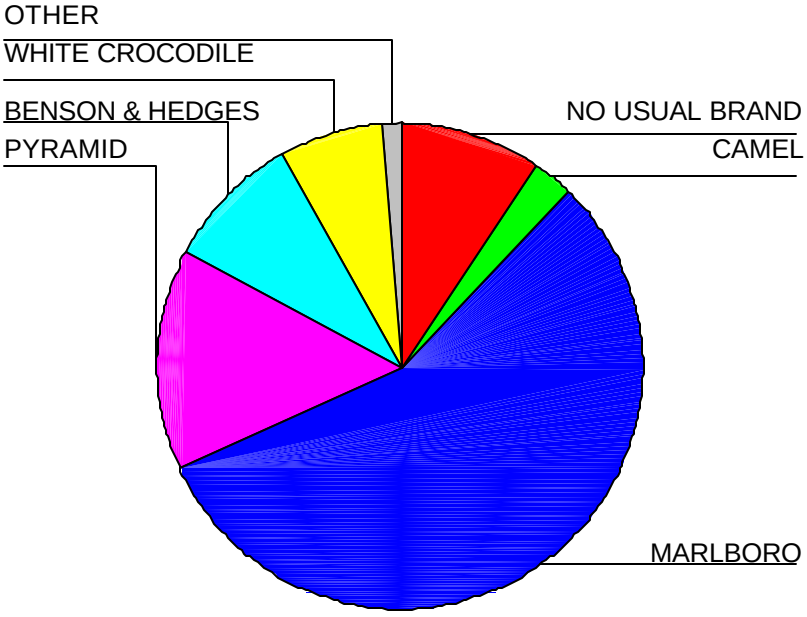
Question 49 of the Youth Tobacco Survey asked students which brand of cigarettes they usually smoked, in the past 30 days.

Figure 16: Preferred Brand of Cigarettes for Smoking



Two additional questions asked students what brand of cigarettes or what brand of smokeless tobacco they usually added to their betelnut chew during the past 30 days.

Figure 17: Preferred Brand of Cigarettes for Elaus



Brand preferences for smoking and elaus were not identical, but Marlboro products were most commonly used in both cases. **52.0%** of those who smoked in the past 30 days reported Marlboro to be their usual brand and **55.9%** of those who chewed betelnut with cigarettes usually added Marlboro cigarettes.

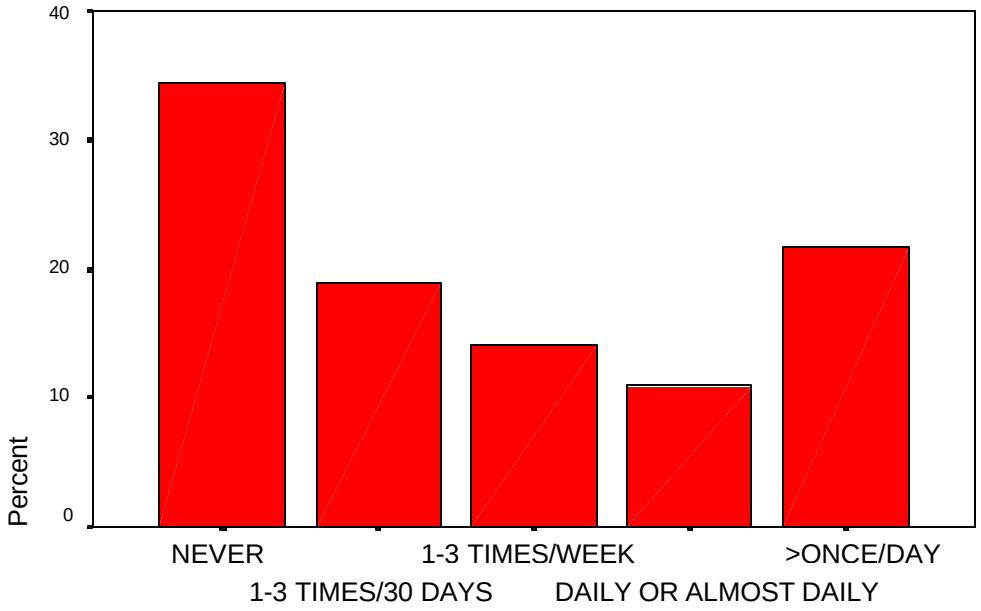
Among students who added smokeless tobacco to their elaus in the past 30 days, the most popular brands are presented below. Most middle school students who used smokeless/chewing tobacco in their elaus did not have an overwhelmingly preferred brand, like those who used cigarettes. Among the specific brand choices, Redman was most commonly used.

Table 31: Preferred Brand of Smokeless Tobacco in Elaus

Brand	Proportion
Other brand	39.6%
No usual brand	33.9%
Redman	22.9%
Skoal	0.9%
Copenhagen	2.6%

Exposure to counter-marketing is also an important measure in assessing how aware students are of anti-tobacco messages. Students were asked how often, in the past 30 days, they had seen commercials on TV or the Internet about the dangers of tobacco use.

Figure 18: Frequency of Exposure to Anti-Tobacco Advertising



Participation in community activities to prevent tobacco use:

29.4% of middle school students reported that they had taken part in community activities to discourage young people from using tobacco in any form. However, **45.2%** had NOT participated in any such activities and about a quarter of middle school students, **25.4%**, didn't know about any community activities to prevent or discourage youth tobacco use.

Receptiveness to product-related marketing

25.5% of middle school students said that they had bought or received something that had a cigarette brand or a tobacco company name of picture on it in the previous 12 months.

28.5% of middle school students said they would 'definitely' or 'probably' use or wear an item that had a cigarette brand or tobacco company name or picture on it. Current smokers were significantly more likely to say that they would use a promotional tobacco item than non-smokers ($\chi^2 = 16.174$, $\mathbf{p > 0.001}$). Current users of tobacco with betelnut were also significantly more likely than non-users to be receptive to using promotional items from tobacco companies ($\chi^2 = 8.661$, $\mathbf{p = 0.003}$).

XII. Cessation Programs

The youth component of a comprehensive tobacco control program must focus not only on prevention but also cessation. Quitting early has significant individual and public health benefits. Many youth who are regular tobacco users want to quit but find it difficult. Public-health based alternatives are needed when youth are caught breaking school or community rules on tobacco use or purchase. The Youth Tobacco Survey measures students' attitudes towards, beliefs about, and experience with cessation.

Desire to quit:

Middle school students who chew betelnut with cigarettes or smokeless tobacco reported that many want to quit using tobacco and even more want to quit using betelnut completely.

Table 32: Desire to Quit Among Students Who Use Tobacco in Elaus

Response	Proportion
NO, I don't want to stop adding cigarettes or smokeless tobacco to my betelnut chew	36.0%
YES, I want to stop adding cigarettes or smokeless tobacco to my betelnut chew	22.4%
YES, I want to stop chewing betelnut altogether	41.6%

Among students who smoke cigarettes, **84.1%** say that they want to quit.

69.6% of students who chew betelnut with cigarettes or smokeless tobacco answered that they could quit now if they wanted to. Similarly, **68.6%** of those who currently smoke cigarettes believe that they would be able to quit now if they wanted to.

Efforts to quit:

About **64%** of students who chew betelnut with cigarettes or smokeless tobacco have tried to quit at least once in the past year.

Table 33: Efforts to Quit Among Students Who Use Tobacco in Elaus

Number of Efforts in Past 12 Months	Proportion
None	36.0%
1 time	18.5%
2 times	9.8%
3 to 5 times	13.1%
6 to 9 times	3.9%
10 or more times	18.7%

More than 2/3 (**68.5%**) of students who have ever smoked have tried to quit at least once in their lifetimes. A surprising proportion, **20.5%**, have tried to quit ten or more times.

Table 34: Efforts to Quit Among Students Who Smoke Cigarettes

Number of Efforts Ever	Proportion
None	31.5%
1 time	32.7%
2 times	8.7%
3 to 5 times	3.9%
6 to 9 times	2.8%
10 or more times	20.5%

Interest in cessation programs:

As the numbers above indicate, stopping tobacco use is difficult, even for youth who are strongly motivated to quit. **67.4%** of middle school students who have used tobacco said that they would be interested in joining a program to help them quit smoking, quit chewing smokeless tobacco, or quit chewing betelnut with any form of tobacco.

High Schools

Data Tables

Percentage of students in Grades 9-12 using tobacco products by type of product, frequency of use, sex and grade.

Tobacco Product	Female	Male	9th Grade	10th Grade	11th Grade	12th Grade	Total
Overall Use[1]							
Lifetime[2]	94.5%	89.5%	89.3%	91.6%	92.6%	95.9%	92.0%
Current[3]	69.5%	72.2%	64.0%	69.7%	68.5%	84.5%	71.0%
Frequent[4]	44.3%	42.5%	33.2%	37.9%	49.3%	58.8%	43.3%
Betelnut with Tobacco							
Lifetime[5]	69.1%	67.4%	61.2%	67.0%	70.4%	77.3%	68.9%
Current	66.8%	68.6%	59.9%	64.0%	67.0%	80.4%	67.9%
Frequent	43.6%	40.2%	32.2%	36.4%	48.8%	55.7%	41.8%
Cigarettes							
Lifetime	70.3%	69.1%	59.9%	68.2%	75.4%	80.9%	69.7%
Current	17.6%	28.4%	21.1%	21.8%	21.2%	29.4%	23.2%
Frequent	0.8%	3.8%	2.8%	2.3%	1.0%	3.6%	1.9%
Smokeless Tobacco							
Lifetime	16.7%	29.7%	19.7%	16.1%	22.7%	39.2%	23.5%
Current	3.0%	13.3%	6.9%	6.5%	6.9%	12.9%	8.3%
Frequent	0.6%	1.9%	2.4%	0.0%	0.5%	1.5%	1.3%
Cigars, cigarillos, little cigars[6]							
Lifetime	32.4%	45.7%	34.9%	36.0%	40.9%	47.4%	39.0%
Smoking pipe tobacco[6]							
Lifetime	8.1%	18.7%	14.2%	15.3%	9.4%	13.9%	13.4%
Bidis or kreteks[6]							
Lifetime	3.2%	8.2%	7.3%	5.7%	4.4%	5.2%	5.9%

1. See Definitions for description of variables.
2. Lifetime use includes betelnut with tobacco; cigarettes; cigars, cigarillos or little cigars; pipe smoking; bidis or kreteks; or smokeless tobacco
3. Current use includes betelnut with tobacco; cigarettes; or smokeless tobacco.
4. Frequent use includes betelnut with tobacco; cigarettes; or smokeless tobacco.
5. Question 19 of the YTS does not clearly distinguish between 'ever' and 'current' use of tobacco in elaus, which may explain some of the discrepancy in reported numbers in this category.
6. Students were not asked about current use for these products.

Middle Schools

Data Tables

Percentage of students in Grades 6-8 using tobacco products by type of product, frequency of use, sex and grade.

Tobacco Product	Female	Male	6th Grade	7th Grade	8th Grade	Total
Overall Use[1]						
Lifetime[2]	70.0%	72.0%	59.9%	71.9%	80.5%	70.7%
Current[3]	58.6%	57.4%	49.1%	59.3%	65.5%	57.9%
Frequent[4]	21.5%	23.3%	13.5%	21.4%	31.4%	22.3%
Betelnut with Tobacco						
Lifetime[5]	56.8%	50.1%	41.2%	56.5%	62.8%	53.3%
Current	56.6%	50.8%	43.6%	55.4%	63.0%	53.7%
Frequent	20.0%	21.6%	12.4%	20.4%	30.7%	21.6%
Cigarettes						
Lifetime	40.7%	46.4%	35.6%	43.9%	50.2%	43.3%
Current	18.1%	18.6%	18.0%	17.2%	19.8%	18.3%
Frequent	0.9%	1.6%	1.0%	1.1%	1.7%	1.5%
Smokeless Tobacco						
Lifetime	6.3%	11.1%	8.3%	7.7%	9.9%	8.6%
Current	4.3%	8.7%	6.2%	8.1%	4.8%	6.4%
Frequent	0.2%	1.6%	0.7%	1.8%	0.3%	1.1%
Cigars, cigarillos, little cigars[6]						
Lifetime	23.5%	29.2%	21.5%	26.7%	31.1%	26.1%
Smoking pipe tobacco[6]						
Lifetime	7.2%	11.5%	9.3%	9.1%	9.6%	9.2%
Bidis or kreteks[6]						
Lifetime	0.7%	3.1%	2.8%	0.7%	2.0%	1.8%

1. See Definitions for description of variables.
2. Lifetime use includes betelnut with tobacco; cigarettes; cigars, cigarillos or little cigars; pipe smoking; bidis or kreteks; or smokeless tobacco.
3. Current use includes betelnut with tobacco; cigarettes; or smokeless tobacco.
4. Frequent use includes betelnut with tobacco; cigarettes; or smokeless tobacco.
5. Question 19 of the YTS does not clearly distinguish between 'ever' and 'current' use of tobacco in elaus, which may explain some of the discrepancy in reported numbers in this category.
6. Students were not asked about current use for these products.

Definitions

Overall tobacco use includes chewing betelnut with any form of tobacco added; smoking cigarettes; smoking cigars, cigarillos or little cigars; smoking bidis or kreteks; smoking tobacco in a pipe; or chewing smokeless tobacco (not in betelnut).

Lifetime users of cigarettes, cigars, pipes, or bidis/kreteks were defined as students who had ever smoked (even one or two puffs). Lifetime users of smokeless tobacco were students who had ever chewed smokeless tobacco. Lifetime users of betelnut with tobacco were defined as students who "usually" added either cigarettes or smokeless tobacco to their betelnut.

Current users were defined as students who reported using a product on one or more of the 30 days preceding the survey (regardless of amount used).

Frequent users were defined as students who reported using a product on 20 or more of the 30 days preceding the survey (regardless of amount used).

Elaus is a betelnut, usually split and prepared for chewing with the addition of powdered lime, and wrapped in a pepper leaf. Tobacco may or may not be added to the betelnut package.

Susceptible respondents were students who had never smoked a cigarette/chewed betelnut with tobacco (as applicable) who answered "definitely yes" or "probably yes" to any of the following questions:

1) Do you think you will chew betelnut with cigarettes or smokeless tobacco at anytime during the next year?
2) If one of your best friends offered you betelnut with cigarettes or smokeless tobacco, would you chew it?
3) Do you think you will smoke a cigarette at anytime during the next year?
4) If one of your best friends offered you a cigarette, would you smoke it?