



**Areca nut epidemic among  
school children in Mumbai,  
India**

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# Context

- Oral cancer accounts for over 30% of cancers in India ranking first among all cancer cases in males, and is the third most common among females
- Use of smokeless tobacco is very high in India. The prevalence among school children is also very high
- Areca nut or “supari” as it is commonly known in India, has since long been used as an ingredient of many smokeless tobacco products
- Over a period of time areca nut preparations marketed as “sweet or flavoured supari” in brightly coloured attractive sachets have become commercially available in the Indian market
- Many states in India are now banning the sale and marketing of tobacco especially the smokeless variety, resulting in a tussle between the tobacco industry on one hand, and the government and civil society organizations on the other



# Context

- Companies manufacturing areca nut products package and promote these lethal substances through innovative brand names of popular Indian film actors and cartoon images with eye-catching colors, all of which appeal to children
- Such display and sale through its visual appeal makes these products stand out as “harmless sweets meant for children”.
- What is considered casual areca nut use acts as a gateway to tobacco use very early in life. Like tobacco, areca nut is an equally deadly product which children are being fatally addicted to
- Very few studies attempt to find the pattern of areca nut use, especially among school children



# Objective

- The Study by Salaam Bombay Foundation (SBF) aimed to find areca nut prevalence among school children and examine association between areca nut use and students
- It attempted to find the pattern of areca nut use among school children, and identify “at risk” children through oral screening

## Pilot Intervention

July 2012

- Three Government run schools in Mumbai
- Grade 5<sup>th</sup> to 10<sup>th</sup>
- Oral screening and brief survey of 1,683

# Preparation

## Training:

The team was given training for oral screening and counseling



**मी तंबाखूमुक्त झाल्यावर**

- ✓ माझ्या कुटुंबीयांना माझा अभिमान वाटेल.
- ✓ माझे दात सफेद आणि हिरड्या निरोगी राहतील.
- ✓ तंबाखूमुळे विविध रोग होण्याची भीती कमी होईल.
- ✓ कुटुंबीयांना तसेच मित्रांना अपत्यक्ष धूम्रपानाचे बळी बनविणार नाही.
- ✓ माझ्या मुलांनाही मला तंबाखूपसून दूर ठेवता येईल.
- ✓ माझी शारीरिक ताकद आणि एकाम्यता वाढेल.
- ✓ जेवण चवदार लागेल: श्वासोच्छ्वासाची प्रक्रिया अधिक चांगल्याप्रकारे होईल.
- ✓ मी माझ्या पैसांचा सदुपयोग करू शकेन.
- ✓ मी माझ्या जीवनावर नियंत्रण ठेवू शकेन.

समुपदेशनासाठी संपर्क करा: ९८२००६६६६५

सलाम मुंबई  
आरोग्य संरक्षण

लाइफफर्स्ट  
आरोग्य संरक्षण

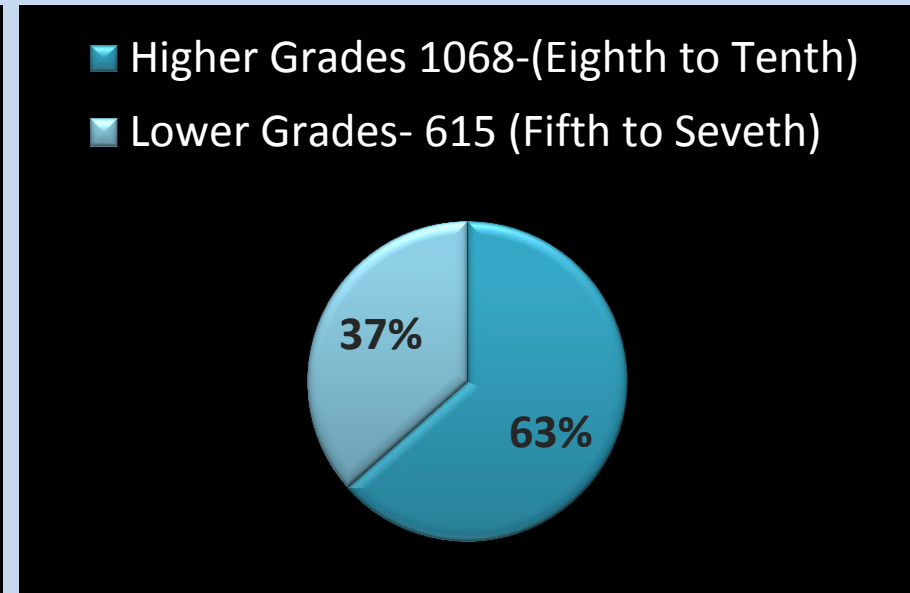
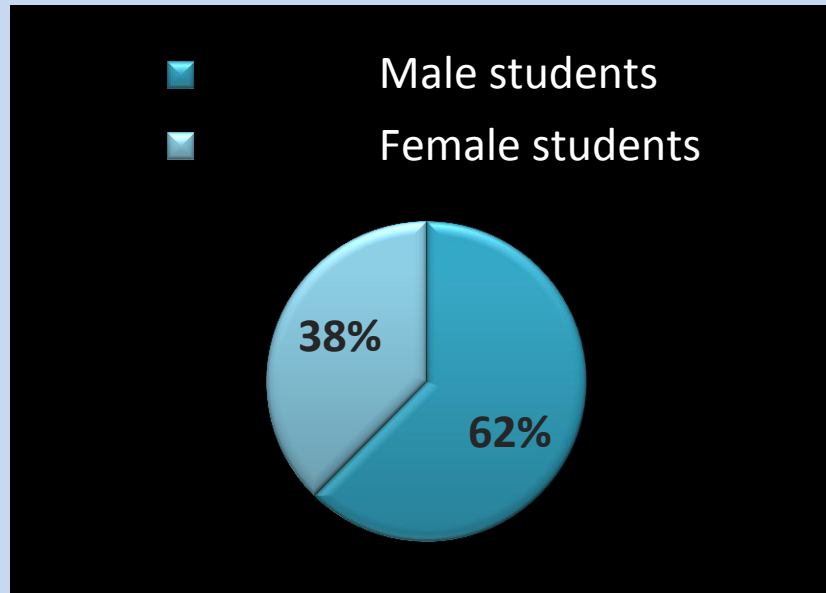
## Developing materials:

Booklet and leaflet on cessation were created

## Permission from schools:

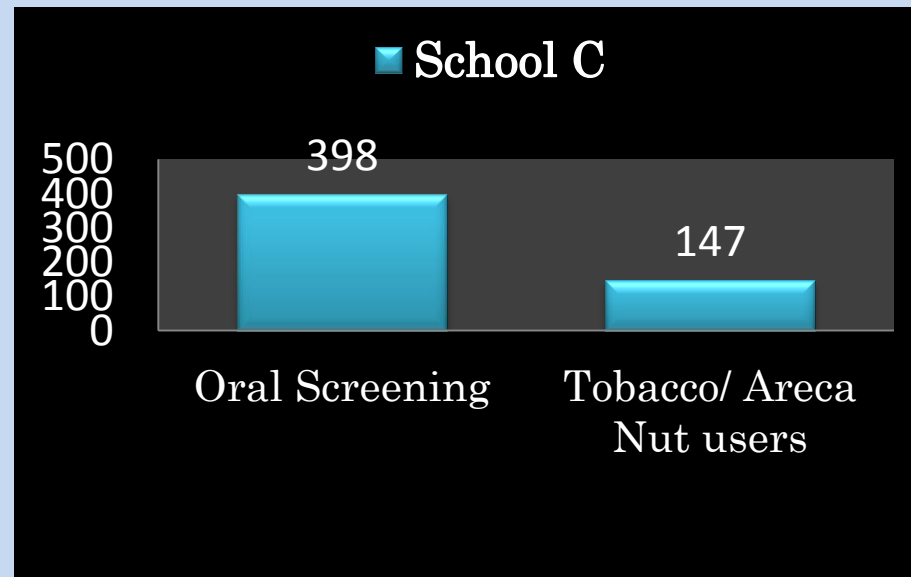
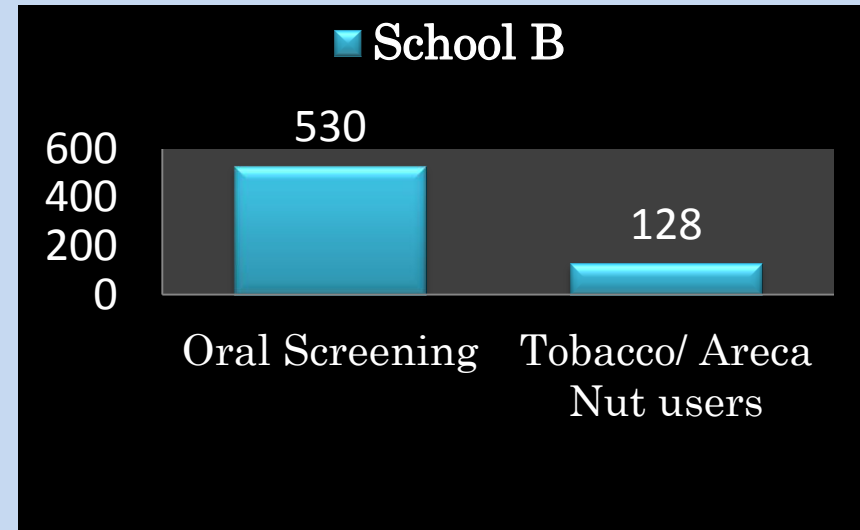
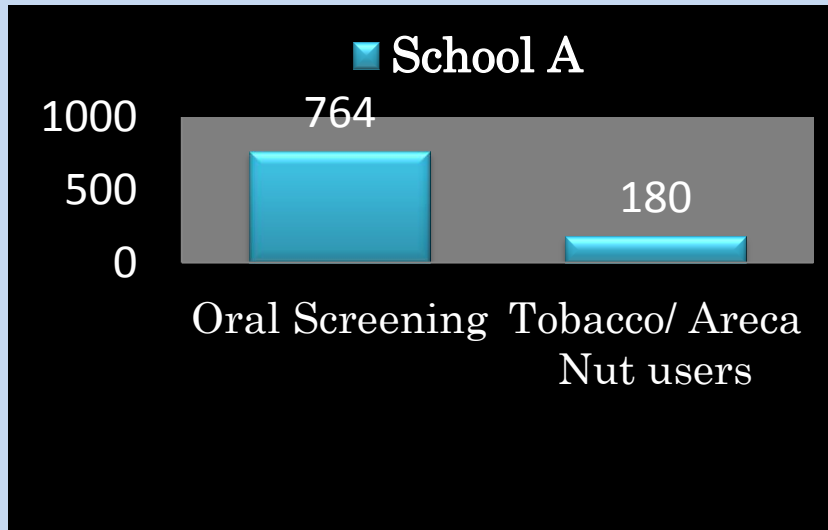
Meeting and Permission from respective school principals and teachers

## Students Screened



- The screening was accompanied by a short interviewer-administered survey having questions about tobacco and areca nut consumption patterns among the screened students
- The data was analyzed using Statistical Package for Social Sciences (SPSS) version 15.0.

# Survey Sample



# Findings

- 27.2% consumed any areca nut preparations (either sweet supari, or paan masala, or gutkha)
- 2.3% consumed any form of tobacco products (smoked or smokeless products, 0.8% consumed both)
- 0.6% consumed paan / paan masala
- “Ritik” and “Mogali” were popular areca nut brands. “Ritik” supari was used by 19.1% of the students, followed by “Mogali” supari, used by 6.3% students
- Areca nut use was higher among males compared to females (38.1% vs 9%)
- Areca nut use was higher in upper grades compared to lower grades (29% vs 23.9%)



# Findings

- 5.4% students cited peer pressure as reason for areca nut / tobacco use
- The numbers of students using areca nut in school A was 40.1%, in school B was 22.3%, and school C was 24%
- Oral screening revealed 4.2% students had oral and health problems



- 02.8% showed poor oral hygiene in the form of stained teeth,
- 0.3% showed difficulty in mouth opening,
- 0.7% showed oral lesions,
- 0.5% showed other dental and health problems such as bad breath, chest pain, throat pain, and difficulty in swallowing.

# Follow Up

- Follow up sessions were conducted for all the children in School A, B, and C
- These sessions used the technique of group counseling
- One to one counseling was offered to those who were regular users or needed more attention

Students who attended the sessions along with the number of children who quit the habit (Self reported)

School A

159

95

School B

120

85

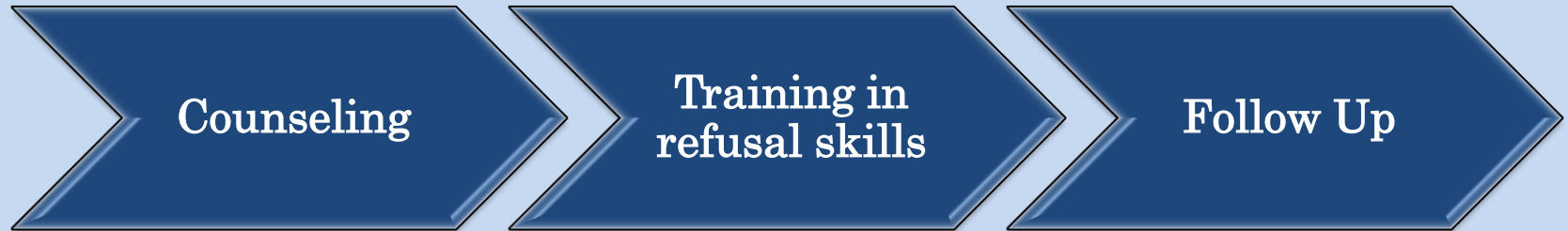
School C

138

93

# Follow Up- Lesion Found

- There was a follow up with the 14 students where lesion was found
- Cancerous or pre cancerous conditions were ruled out by Referral specialists
- After which, SBF team followed a three step strategy for these children



- Every student was followed up every month for the next six months
- The follow up rate was 71 % where 9 of the 14 children quit (self reported)

# Conclusion

- High areca nut use among children is a cause of concern
- Supari making companies are now marketing supari products to children and youth in colorful pouches with names and images of popular Indian cartoon characters and film personality
- There is an urgent need to curb this menace creating greater awareness about this new “supari epidemic” and advocating for a ban



Thank You