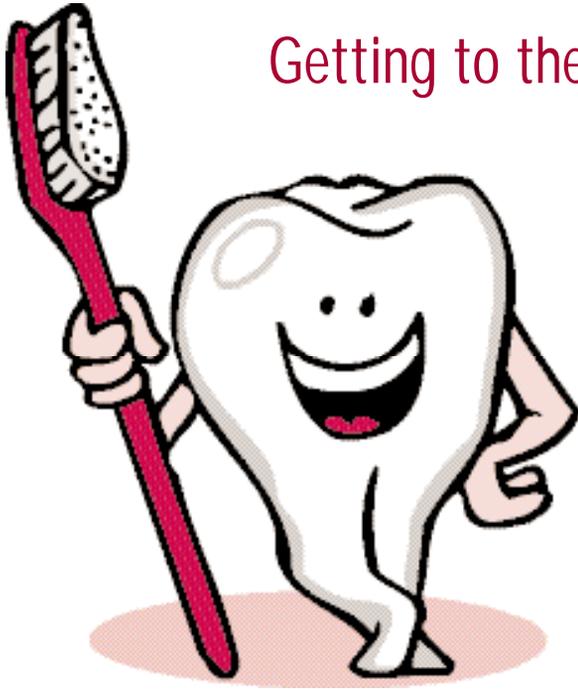


Getting to the Root of the Problem by Teaching Children Proper Dental Hygiene

BY KATHRYN UTAN

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the top priorities our Russian partners wished to target,” says Jeri B. Hertzman, US project coordinator of AIHA’s Sarov/Los Alamos partnership, noting that community surveys and assessments revealed an almost universal need for dental restoration among the adult population

of Sarov. “Ultimately, we decided the most effective way to deal with the problem in the long-run would be to implement some type of prevention program aimed at children,” Hertzman explains.

A similar situation was faced by Snezhinsk/Livermore partners, according to Sergey Skorobogatov, head of Central Medical Sanitary Unit No. 15. De-

spite a significant number of dental clinics offering a wide range of services and payment options, many people in the Snezhinsk community have untreated dental problems. “At the beginning of the partnership we conducted a community survey that included questions about dental health and, after analyzing the results, concluded that even the purchase of new equipment wouldn’t solve our population’s dental problems.” With more than 90 percent of children between the ages of 6 to 8 exhibiting dental disease—a figure that reflects the broader population as well—it was obvious that a comprehensive treatment and prevention plan, focusing on the city’s school-age children, was called for.

Sarov’s dental health campaign has

Four 6-year-old boys stand shoulder-to-shoulder in a line at the front of a school room in Sarov, Russia. One of their classmates—a small girl with white bows in her long brown hair—helps a woman gently pull a towel back and forth between each pair of boys, making sure to maneuver the cloth through all the nooks and crannies. The boys try to remain serious; this is a very important demonstration, after all. Yet they can barely contain their giggles. The other children sitting in the class smile and break into laughter as well.

For the clinicians staging this presentation, the children’s laughter and bright-eyed interest is a good thing. It means they are listening—and hopefully learning—about proper oral hygiene. The four boys, you see, represent teeth, and the girl and woman are “flossing” them.

Finding Long-term Solutions by Targeting Youth

“Dental health was identified as one of



Students in Sarov take part in an interactive demonstration on flossing—the four boys are the “teeth” being flossed by a classmate and clinician.

Photo: Jeri Hertzman.

Los Alamos dentist Joseph Matthews tapped into Russian culture, promoting dental self-care by weaving healthy messages into two well-known children's fairy tales: "Ivan and the Firebird" and "Vassilissa the Wise." His versions of these two stories reinforce the patient education and outreach lessons that are an integral part of his partnership's dental program.

"IVAN AND THE TOOTHBRUSH"

Ivan was a brave and wise son. His father was especially proud of him because he was so obedient, always taking care to brush his teeth after each meal.

Ivan's father had valuable fruit trees at his dacha and Ivan carefully helped his father tend them. The most valuable fruit tree was the golden apple tree that stood in the middle of the garden.

Each fall, Ivan and his family would anxiously wait for the golden fruit to ripen. They watched closely so the birds wouldn't steal the delicious apples before it was time to pick them.

One evening at dusk, Ivan was alone in the garden when a large and beautiful bird flew to the branches of the golden apple tree. Ivan tried in vain to frighten the bird away but, to his dismay, the bird completely ignored him and began to nibble at one of the nearly ripe apples.

Ivan tried to find a stick that he could throw at the bird to scare it away, but there was nothing to be found. Just then, Ivan remembered the secret weapon in his pocket . . . his toothbrush! Ivan always carried his toothbrush with him when he and his family visited the dacha for the weekend.

Without hesitation, Ivan drew the toothbrush from his pocket and threw it at the bird. The brush hit the branch beside the big bird, frightening it. It spread its magnificent wings and flew quickly away.

As the bird soared out of sight in the dusky sky, a long, glossy feather fell at Ivan's feet. He found his toothbrush and, taking the feather along with him, went inside for the night with a story to tell his father.



A group of Snezhinsk school children wait to be examined.

Photo courtesy of Carol Golden.

been operating for the past year and reaches all children in the community, according to Ludmila Tourovets, head of the Pediatric Dental Department at Sarov's Central Medical Unit No. 50. Services are provided at a dental polyclinic, as well as four area schools and one kindergarten, which are equipped with dental examination rooms. "At the polyclinic, we use models to teach the children how to properly care for their teeth. Then they perform a teeth-cleaning exercise so we can determine their hygienic index and discuss ways of improving their skills," Tourovets explains. The educational exercises are followed by a clinical examination that includes an application of fluorine lacquer and the treatment of any problems.

"The biggest dental health concerns for the children of Sarov are caries (decay) and gingivitis (gum disease)," says Los Alamos dentist Joseph Matthews, who traveled to the Russian city in April 2000 on a partnership exchange. Explaining that an efficient infrastructure of dental care was already in place at the polyclinic and in some of the schools, Matthews adds, "The Sarov dentists are incredibly resourceful

and it is apparent they have provided a higher level of care than I have observed in most of my Russian patients in the United States. I believe, however—with our own care—that there is room for improvement, especially in the areas of primary prevention and early treatment of dental disease."

This philosophy of prevention and early treatment resulted in a systematic approach to community education and outreach that began with training nearly 500 dentists, nurses, pediatricians, and teachers to effectively convey the principles of oral hygiene to local children. Those trained then started to teach children and their parents about proper brushing and flossing, as well as how nutrition affects dental health, Tourovets says.

To tackle the widespread problem in Snezhinsk, partners also decided to launch a long-term prevention program aimed at the city's school children. "We enlisted the support of the Russian Dental Association, the Snezhinsk City Council, and the local school administration, and developed a program that includes examinations, the application of sealants for all children aged 6-8, water fluoridation, and a specialized dental curriculum for nurses that results in certification from the Ministry of Health," Skorobogatov explains.



Photo courtesy of Carol Golden.

Dr. Nina Melnichuk and Carol Golden perform a dental examination at a school in Snezhinsk.

According to Carol Golden, dental hygiene program director at Chabot College in Hayward, California, schools in Snezhinsk were already equipped with a modest area for examining the dental needs of the children. “They also have a healthcare curriculum that includes a dental component. Our goal is to modify the existing program and how it is taught to maximize overall effectiveness,” Golden says, noting that the school administration is very committed to making these changes and to the welfare of the city’s children.

Concurring with Golden’s comments, Skorobogatov explains, “Physician/nurse teams work in the city’s schools, overseeing immunizations, monitoring general health conditions, providing first aid as needed, and conducting health promotion and disease prevention lessons. Additionally, dental teams comprised of a dentist and a nurse make regular visits to each school to examine the children and refer them to an area polyclinic for treatment as needed.”

The partners are preparing to install nurse-hygienists in three Snezhinsk schools. These nurses will perform primary dental examinations, apply sealants, and make referrals, Skorobogatov continues. “They will be in charge of teaching children the rudiments of caries prevention and will also travel to other schools in their assigned district to promote dental care.”

The Snezhinsk dental curriculum stresses the important role proper oral hygiene plays in overall well-being and encourages children to take responsibility for maintaining healthy teeth and gums, according to Nina Melnichuk, head of the treatment department of the dental outpatient clinic at Central Medical Sanitary Unit No. 15. “In our classes for 6- to 8-year-olds, nurses, physicians, and teachers work together to teach children brushing and flossing techniques, how many times a day they should brush, and when it is best to brush—before going to sleep, for example,” she explains. “We are also starting to work with even younger children, performing examinations, applying sealants, and providing instruction.”

For preventive programs to be successful, Golden stresses, it is necessary to begin when children are very young. “The reason we are targeting children who are 6 or 8 or even younger is so we can protect their permanent teeth. If we are able to eliminate dental disease, there is no reason for the children to experience pain or suffering.”

Using Games and Stories to Reinforce the Message of Self-care

Discussing her experiences during partnership exchanges in Snezhinsk,

“VASSILISSA VISITS THE DENTIST”

Vassilissa was a wise, young girl. She loved her parents and was always obedient.

Vassilissa’s doll was her best friend. She would tell all of her secrets to her doll, who would never think of telling them to anyone else. And Vassilissa’s doll always reminded her to brush her teeth.

Because of her doll, Vassilissa was especially careful to take good care of her teeth. She ate healthy foods, avoided eating sugary snacks between meals, and always brushed her teeth and gums after eating. She used a soft toothbrush and fluoride toothpaste. Then Vassilissa made sure to clean between her teeth with dental floss.

One day, Vassilissa’s parents told her it was time for her to see the dentist. Although she was always obedient, Vassilissa was sad because she had heard many frightening stories about the dentist.

Vassilissa tried to be brave as she went to see the dentist at her school. Her doll told her that there was no reason to be afraid because she had always taken good care of her teeth.

The dentist was very kind and explained exactly what she was doing as she looked at Vassilissa’s teeth, checking each one for signs of decay.

Then the dentist gently cleaned Vassilissa’s teeth. Next the dentist placed some sealant in the grooves of Vassilissa’s teeth to help prevent cavities. Finally, the dentist put fluoride on Vassilissa’s teeth to help keep them strong and healthy.

As she left the clinic, Vassilissa turned to the dentist and smiled. “Thank you,” she said. “That wasn’t bad at all.” The dentist looked pleased and said, “That is because you always take such good care of your teeth.”

Vassilissa’s doll just smiled.





Left, Middle—Vera Masolova, deputy chief physician of the dental outpatient clinic at Sarov's Central Medical Sanitary Unit No. 50, uses dental models to demonstrate proper brushing and flossing techniques to a group of children. Right—After taking part in the educational sessions, children practice what they have learned about oral hygiene.

Golden states, “The children were a little fearful at first, which is natural because we were strangers . . . but I am very fortunate that one of my students [at Chabot College] is from Ukraine and she translated many children’s posters and dental games into Russian. I brought these with me and gave them to the children we examined. I think this helped make their encounter a positive one.”

Developing culturally appropriate techniques for capturing the interest and appealing to the imagination of Sarov’s children was a major concern for both the NIS and US partners. “It occurred to us that what makes caring for one’s teeth the ‘cool’ thing to do may be different for children from different cultures,” Matthews explains. “I find that in the United States, the American Dental Association’s “Dudley the Dinosaur” cartoons work well in our culturally diverse schools but, in Russia, a more powerful imagery already exists in the form of fairy tales.”

Matthews harnessed that imagery, writing two short fairy tales of his own and blending the message of proper oral hygiene and regular self-care into traditional Russian stories such as “Ivan and the Firebird,” which became “Ivan and the Toothbrush,” an anecdote that en-

courages children to take along their toothbrushes on weekend visits to family gardens, and “Vassilissa the Wise,” now “Vassilissa Visits the Dentist,” a story that demystifies dental examinations (see sidebar). Matthews had the tales translated into Russian and presented them to the Sarov partners during his visit.

“My intent in writing the stories was to give examples to our Russian partners of how they might find [culturally-appropriate] solutions to the problem of reinforcing self-care,” Matthews explains. “Hopefully, when children hear or read “Ivan and the Firebird” they will also remember “Ivan and the Toothbrush.”

Although the Sarov/Los Alamos partnership’s dental program has only existed for little more than one year, those involved have already accomplished a great deal, according to Matthews. Tourovets agrees, noting that some 4,000 students have received training in dental hygiene; almost 5,000 have received fluoride treatments; and more than 2,200 cavities have been filled—all resulting in a nine percent decrease in the need for dental restoration since the implementation of the prevention measures. “While the reaction to the new treatment and education programs has been very positive so far, we realize that to success-

fully instill our children with good hygienic habits our work must be ongoing.”

The reaction in Snezhinsk has been similarly positive, according to Melnichuk. “This experience has been both pleasant and beneficial—not only for the children, but for me and my colleagues, as well,” she states, explaining that the children were curious about the specialists from the United States and were happy to receive new toothbrushes, toothpaste, and leaflets explaining how to care for their teeth.

“For us, it was very interesting and informative to watch the way the American physicians interacted with the students, treating them as they would an adult. By acknowledging that each child has opinions and the free will to choose to care for or neglect his or her teeth, the doctors developed a bond of trust and respect with the children. In Russia, we very often talk to children as if they have no free will and are dependent on their parents to make every little decision for them.” Hopefully, she concludes, as the children begin to learn the importance of taking proper care of their teeth, this knowledge will lead to a heightened sense of responsibility for other aspects of their health and well-being. ■