

## **Providing vital dental equipment to transform dental care in Lao**

Dentaid is seeking to supply eight modern and fully functioning dental clinics to install into the department of dentistry, faculty of medical sciences, Lao National University. The aim of this project is to fully equip this very needy department and significantly increase the clinical hours of training that the current and future students will receive. The school also provides important dental care for the poorest members of the population who would otherwise receive no vital treatment for what are very frequently serious oral health issues. Therefore the faculty also seeks to increase its capacity to treat needy patients.

This is one of the most ambitious and large scale projects that Dentaid has undertaken since supplying 8 surgeries to the Cameroon Baptist Convention in 2007.

The Peoples Democratic Republic of Lao is the one of the poorest countries in South Asia. One half the size of the United Kingdom and bordering China, Myanmar, Vietnam, Cambodia and Thailand, it has a population of 5.5 million, with a per capita GDP of just \$US 350 per annum. Untreated dental decay is a major problem in Lao (and South Asia generally), particularly in the child population, with the resultant oral pain regularly affecting the ability of children to eat, sleep and study at school. This problem is mainly caused by an increased consumption of refined sugar in diets, as a result of the influx of Western sugar products, which are causing a major deterioration in oral health.

Little research has been done in Lao to establish the exact oral health status (due to the under capacity of the dental industry and government to carry out such work, and the lack of investment from international NGOs up to this point). However, anecdotal evidence would suggest that oral health in Lao is generally similar to its neighbouring countries, which can be very poor. South Asia suffers from some of the worst decay rates in the world. In some areas, decay amongst children can be as much as 5 times the level of decay of children in both high income countries where oral hygiene is much better, and even children in the lowest income countries around the world where the traditional low sugar diet mean decay levels are currently still low.

As a result of this decay, the treatment needs of the population of Lao are very high. Unfortunately, the Lao Government and dental profession are ill equipped to meet this need at the present time. Lao has only 300 dentists to provide oral care to the people of Lao, being a ratio of 1 dentist: 18,333 population. (For comparison purposes, the UK ratio is 1 dentist: 2,100 population.) Much of the population of Lao still rely upon DIY or what we term "street" dentistry, provided by untrained workers like blacksmiths, usually with no

anaesthetic but more seriously inadequate cross infection control, risking the spread of life threatening diseases such as AIDS and hepatitis. While the neighbouring countries of Cambodia and Vietnam have received much assistance from foreign oral health organisations, Lao continues to be neglected.

For the last two years, Dentaïd and the French oral health NGO "Aide Odontologique Internationale" (AOI) have been working together to assist the Lao Government and dental professionals to begin to address this situation. Both organisations have now made a long-term commitment to assisting Lao in developing its own national oral health strategy, skills base, prevention programmes and treatment services. Between these two organisations this collaboration can offer skills, training and specialist resources in nearly every area of oral health development needed in Lao.

The faculty of Medical Sciences at the National University is the only dental training school in Lao and has a clear vision to produce dental health professionals to meet the oral health needs of the nation. Currently, 171 students are enrolled in a six-year course leading to a degree in Doctor of Dental Surgery (DDS). The annual intake of new students is 40. This level of enrolment will, over the next decade, double the number of dentists in Lao. However, there are some major challenges which need to be addressed in order to increase the effectiveness of the training faculty and the extent to which it can be used as a vital referral centre.

One of the major obstacles to the quality of dental training at present is the obsolete dental equipment, much of which was supplied in 1977. Of 18 dental chairs and units at the school, only around half are in any kind of working order. Thus there are 19 students per working dental unit, meaning the actual clinical teaching the students receive is severely limited. In addition, the dental school is the largest treatment centre in Lao (as well as being the main referral centre in Lao for complex dental procedures and surgery), so this lack of units severely restricts the ability of the centre to treat needy patients.

At least eight properly functioning dental chair units and accessory surgery equipment are urgently needed to replace the non-functioning ones and to expand the facilities in order to provide appropriate training of the dental students, with more to follow in future years. While the neighbouring countries of Cambodia and Vietnam have received much assistance from foreign oral health organisations, Lao continues to be neglected. However, sustainability of these units is crucial so training is required for the hospital technicians and engineers to service and maintain any new and existing units.

Dentaid is to supply onsite installation of dental units and to equip the university's hospital technicians and engineers to be able to service and maintain the newly provided equipment. A Dentaid engineer will visit the school to train, assist and oversee the hospital technician in the installation of the surgery equipment. There will be a comprehensive training course covering servicing, maintenance, fault diagnosis and repair of the new and existing equipment. A comprehensive tool kit for all technicians and engineers participating specially designed for servicing dental equipment will also be provided. There will also be ongoing support through e – mail to answer any problems or queries that arise.