

# HKU Faculty of Dentistry researcher urges school teachers to learn dental first-aid

Many Hong Kong teachers do not know the best way of dealing with dental injuries that could happen in their primary or secondary schools, indicating a need for teacher-training to include dental first-aid, according to a study team that included [Prof Lim K Cheung](#) from the HKU Faculty of Dentistry.

Of about 600 teachers who were questioned, only 1 in 3 correctly said that a dental injury needs to be treated by a dentist. Furthermore, only 1 in 6 knew that they should reinsert a knocked-out permanent tooth, and 1 in 5 understood that they could store it in a suitable liquid before seeking professional help. Most of the teachers had never received any training in how to handle dental emergencies.

“Knowledge regarding emergency management of dental trauma of primary and secondary school teachers in Hong Kong is insufficient”, conclude the researchers, writing in the *Hong Kong Medical Journal*. “An educational campaign dedicated to this topic is recommended,” they add.

Noting that a quarter of school children worldwide experience dental injuries, the researchers wanted to assess local teachers’ knowledge of first-aid for dental trauma due to incidents such as falls and collisions at school. In 2011, they mailed a questionnaire to 3000 randomly selected members of the Hong Kong Professional Teachers’ Union, which comprises most (70,000) of the city’s primary and secondary school teachers.

A total of 594 teachers returned completed surveys. Most of the respondents were women (71%) and aged 31 to 50 years (66%). The average teaching experience was about 17 years.

Roughly half of the teachers (51%) had taken a first-aid course, but only a small proportion (8%) had learnt about the management of dental injuries in such a course. The researchers remark that the St John’s Ambulance first-aid course introduced dental trauma management in the previous year, in 2010. About a tenth (11%) of the teachers said they had gained relevant knowledge from elsewhere.

The general lack of training in dental first-aid was reflected by the replies to a quiz of 7 multiple-choice questions on handling dental emergencies.

Although roughly three-quarters (73%) of the teachers knew that dental injuries should be cared for immediately, only a third (33%) correctly said that the injured person should be taken to a dentist. In addition, only a third (33%) knew that a fractured tooth fragment should be quickly put into liquid before seeking professional help, and roughly a quarter (23%) knew that a tooth that has shifted out of position should be moved back and the person should carefully bite down if possible.

Regarding what to do if teeth have been completely knocked out of the gum, three-quarters (75%) of the teachers correctly cited that a deciduous tooth (also known as a baby, primary, temporary, or milk tooth) should not be put back. On the other hand, only about a sixth (16%) knew that a knocked-out permanent tooth should be put back, and a fifth (20%) correctly identified one of the three liquids that a knocked-out tooth could be temporarily stored in—namely, cold milk, physiological saline (a salt solution matching the concentration of body fluids), or saliva.

When the researchers gave a score of 1 for each correct answer but subtracted 1 for each incorrect answer, they found that the average total quiz score was negative (-0.4). Statistical analysis showed that teachers who had learnt about emergency management of dental injuries through first-aid training or other information sources achieved higher quiz scores than those who had not.

The researchers hope that their findings will spur the Hong Kong Education Bureau to offer “resources to equip school teachers with appropriate knowledge”. In particular, they add, because only 30% of the teachers said they could distinguish between deciduous and permanent teeth, training material on putting back knocked-out teeth should state: “Replant the tooth if one feels able to do so and confident that it is not deciduous, and if not—put it in milk, physiological saline, or saliva”.

The study team also urges dental professionals to help train teachers about dental emergencies, and suggests that training be included in the degree and continuing education curricula of Hong Kong’s medical and nursing schools. Furthermore, because a quarter of the teachers thought that an ambulance is needed for dental accidents, the team recommends that first-responders in the ambulance service should receive training in dental first-aid, too.

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*Source: Young C, Wong KY, Cheung LK. Emergency management of dental trauma: knowledge of Hong Kong primary and secondary school teachers. Hong Kong Med J 2012;18:362-70.*

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