may aim to avoid physical pain and the emotion of anxiety may guide the patient's interactions, while the dentist may be attempting to perform procedures in a way that is comfortable for the patient, driven by empathy. In the same way, the emotions of the dentist and patient will also differ and it is up to the dentist to appreciate that all patients experience emotions, and all dentists express emotions, but the signals are not always clear.

Whether it is desirable or undesirable, emotions are intrinsically part of the dentist-patient relationship, but the true extent of this emotional experience is not fully understood. However, appreciating that both dentists and patients have emotions, and understanding that these emotions influence thoughts¹⁷ and dental decisions, is a small step towards understanding patients and creating a happy dental experience. Awareness of emotional skills training for doctors is gradually developing.¹⁸ In view of the essential nature of emotion in care, creating evidence-based training for dentists in emotional skills may develop the quality of the dental experience and the decisions between dentists and patients.

References

 Fehr B, Russell JA. Concept of emotion viewed from a prototype perspective. *J Experiment Psychol* 1984; **113**: 464– 486.

- Parrott WG, ed. Emotions in Social Psychology: Essential Reading. Philadelphia: Taylor and Francis, 2001.
- Fridlund AJ. Evolution and facial action in reflex, social motive, and paralanguage. *Biol Psychol* 1991; **32**: 3–100.
- Plutchik R. A psychoevolutionary theory of emotion. In: Emotions in the Practice of Psychotherapy: Clinical Implications of Affect Theories. Washington, DC: American Psychological Association, 2000: pp59–79.
- Dolan RJ. Emotion, cognition, and behavior. *Science* 2002; Nov **298**: 1191– 1194.
- LeDoux JE. Emotion circuits in the brain. Ann Rev Neurosci 2000; 23: 155– 184.
- Russell JA, Bachorowski J-A, FernÄindez-Dols J-M. Facial and vocal expressions of emotion. *Ann Rev Psychol* 2003; **54**: 329–349.
- 8. Tomkins SS. *Affect, Imagery, Consciousness*. New York: Springer Publications, 1962.
- Scherer KR, Grandjean D. Facial expressions allow inference of both emotions and their components. *Cognition Emotion* 2008; 22: 789–801.
- Forgas JP. Emotion and Social Judgements. Oxford: Pergamon Press, 1991.
- 11. Forgas JP. Affect in social judgments

and decisions: a multiprocess model. In: *Advances in Experimental Social Psychology*. Mark PZ, ed. San Diego CA: Academic Press, 1992: pp227–275.

- 12. Goleman D. *Emotional Intelligence: Why It can Matter More than IQ.* London: Bloomsbury, 1996.
- Pau A, Rowland ML, Naidoo S, AbdulKadir R, Makrynika E, Moraru R *et al.* Emotional intelligence and perceived stress in dental undergraduates: a multinational survey. J Dent Educ 2007; **71**: 197–204.
- Wagner PJ, Moseley GC, Grant MM, Gore JR, Owens C. Physicians' emotional intelligence and patient satisfaction. *Family Medicine* 2002; 43: 750–754.
- Huynh T, Alderson M, Thompson M. Emotional labour underlying caring: an evolutionary concept analysis. J Adv Nurs 2008; 64: 195–208.
- Brotheridge CM, Grandey AA. Emotional labor and burnout: comparing two perspectives of "People Work". J Voc Behav 2002; 60: 17–39.
- 17. Frijda NH, Manstead ASR, Ben S, eds. Emotions and Beliefs; How Feelings Influence Thoughts. Cambridge: Cambridge Univerity Press, 2000.
- Satterfield JM, Hughes E. Emotion skills training for medical students: a systematic review. *Med Educ* 2007; **41**: 935–941.

Abstract

WOULD YOU DRINK THE WATER FROM YOUR DENTAL UNIT?

Water quality in water lines of dental units in the Public Dental Health Service in Göteburg, Sweden. Dahlén G, Alenäs-Jarl E & Hjort G. *Swedish Dent J* 2009; **33**: 161–172.

The presence of bacteria in high levels in the water lines of dental units is well known, but the authors of this paper suggest that the problem is not well studied. The results certainly indicate a failing and should encourage all practitioners to monitor their own units. Samples were taken from the air-water syringe in 405 dental units in 35 National Health Service Clinics for analysis in the laboratory for the presence of colony forming units per ml (CFU/ml). Seventyfive per cent of the units sampled were not found to have an acceptable water quality, and in fifteen per cent of units the micro-organism *Legionnaire pneumophila* was found, usually only in small CFU/ ml numbers, but nevertheless a very disturbing finding.

There is much discussion in the paper as to the variation of acceptable CFU/ml across Europe, and what might be an acceptable level for a dental unit. Quite how the level for a dental unit can be other than that accepted for a public water supply I am not sure and I do hope my own dentist would agree! The authors suggest that their findings are serious enough to warrant the introduction of immediate measures to assess and address this problem across Sweden. I hope that the same conclusion would be drawn in the UK.

Interestingly, a control sample was taken in each surgery from an adjacent cold water tap and this sample was not always found to conform to acceptable drinking water standards. It is postulated that the tap orifice and plastic washer may be contaminated by soiled fingers and this surface should become a routine part of anti-microbial wiping during surgery disinfection.

> Peter Carrotte Glasgow