Dentists must always be prepared to manage medical emergencies, which are most likely to occur during and after local anaesthesia. Although studies have found that most of these complications are mild, around 10 per cent of all incidences should be considered serious. Recently, an updated list of emergency medications and equipment for dental providers, including an emergency preparedness checklist, was developed by Dr Morton Rosenberg of Tufts University School of Dental Medicine in the United States. Dental Tribune Asia Pacific spoke with Dr Rosenberg about the list and the importance of the training of dental staff.

Dental Tribune Asia Pacific: Medical emergencies in dental offices are rare but likely to happen at some point during a dentist’s career. Have the types of medical emergencies changed in the last couple of years?

Dr Morton Rosenberg: Although it is very difficult to gather data on this topic, the perception of most experts is that the incidence of medical emergencies is increasing in the dental office. The types of medical emergencies are still centred on the cardiovascular and respiratory systems.

What are the reasons for the increase?
We have an ageing population and we are now treating elderly patients with comprehensive dental needs using techniques that did not exist 15 years ago. Additional reasons include the growing use of prescription drugs, herbal supplements, and recreational drugs—all have the potential of interacting with each other and interacting with the many drugs dentists now administer, including the popularity and growth of all forms of sedation.

You recently published a new strategy guide on medical emergencies in dental offices. Do you consider the current knowledge outdated?

Rather than use the term outdated, it is important to understand that preparing for a medical emergency is an evolving standard of care. One of the major changes has been the availability and use of automated external defibrillators (AED), which should be present in every health-care environment. The American Heart Association 2005 guidelines have placed early defibrillation as an integral part of the Basic Life Support (BLS) ‘chain of survival’ for the treatment of cardiac arrest. The immediate availability of an AED has been demonstrated to increase the success of resuscitation.

In the US, some states (Florida, Washington, Illinois) have mandated the presence of an AED in dental offices.
Other changes include continuing education courses that incorporate task training and high-fidelity human simulators. These stress crisis management for lifelike practice in managing medical emergencies and are gaining popularity amongst dentists and their clinical staffs.

In your opinion, are dentists and dental staff today adequately prepared for most medical emergencies? Many offices have purchased basic emergency equipment, but it is the combination of a dentist and staff well trained and current in Basic Life Support for Healthcare Providers (BLS-HCP) that will make a difference in outcome. Every office should have the capability, at a minimum, of being able to deliver oxygen under positive pressure.

What medications should be available to manage the more common emergencies? Oxygen should be in stock, as well as epinephrine, diphenhydramine, nitroglycerine, a bronchodilator, glucose, aspirin and aromatic ammonia. These medications should also be checked regularly to ensure they have not passed their expiration dates.

Allergic reactions to certain types of medication are most medical emergencies? Adequately prepared for adequate and basic emergency equipment, at a minimum, of being a trigger for a host of allergic reactions. It is also important for the dentist to know that an increasing number of patients have allergic reactions to latex.

What types of equipment do you recommend? The equipment that should be readily available includes a portable cylinder of oxygen, oral pharyngeal airways, as well as devices for the administration of supplemental oxygen, including a bag-valve-mask. I further recommend Magill forceps, an AED, a stethoscope, a sphygmomanometer and a wall clock with a second hand.

Proper risk assessment and documentation could prevent many of these medical emergencies. What are the first indications that identify a high-risk patient? It is only through a detailed medical history, a thorough review of the positive responses by the dentist, focused physical examination and vital signs, and appropriate consultation that patients at high risk for medical issues during dental procedures can be identified.

What are the best strategies for prevention? The hallmarks of a well-prepared office are meticulous preoperative assessment, appropriate and basic emergency equipment, patients and staff current in BLS-HCP. Constant review and, most importantly, unannounced drills will make the office immediately able to recognize, call for help, and address the immediate needs of the dental patient with a medical emergency.

Thank you very much for the interview.