I work in general dental practice in Nottingham and we recently had a major medical emergency in which we had to use our recently purchased Automatic External Defibrillator (AED). The following is a case study to highlight the importance of having such a device in your practice.

**CASE STUDY:**

It was a normal working day in the practice but was extremely busy. Reception is usually staffed by three receptionists but due to illness was reduced to only two. As a consequence, queues were often forming and the staff were overwhelmed. It was at such a time that patient S arrived for his appointment; a long standing patient who is 84 years old was due for his check up and an appointment with the hygienist (case study author). The patient has a complex medical history and amongst other medications takes Warfarin and has a pace-maker fitted.

Whilst he was in the queue patient S collapsed and this was noticed by the reception team. The practice emergency protocol immediately swung into action and all patients waiting in the queue were politely moved into the waiting room and the patients’ examining GDP was called as he had no patients in the chair at this time. The reception team split up to collect emergency equipment, oxygen and our newly acquired AED as well as asking patients who were waiting for an appointment to leave the practice as there was an incident and that we would contact shortly to re-arrange.

A 999 call was made to summon the expert assistance of paramedics.

The patient was initially showing signs of life but these disappeared as time moved on; the decision was made, after assessment, that the patient required Basic Life Support and it was at this time that the further decision was made to attach the AED pads. After carrying out a few cycles of Cardio-Pulmonary Resuscitation (CPR) the pads of the AED were attached to the patient and switched on. The AED will automatically assess the patient and if the required, it will shock the patient and then reassess as well as give instructions on when to continue with CPR.

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After the first shock, the AED instructed the treating team to continue with CPR which they did and were, a short while later, instructed to stand clear...
as it sought to re-assess the patient to see if further shock was required. The AED administered a second shock to the patient and it was after this that a pulse returned. The team continued to monitor the patient and the paramedics arrived very soon after this.

The paramedics were full of praise for the team as they had felt that the patient had been well managed and the fact that he had a viable pulse and was breathing unassisted was testament to this.

Serious Event Analysis:
As a consequence of the incident the practice will carry out a Serious Event Analysis and subsequently audit the event.

This will allow those involved to see what (if any) mistakes were made and how the practice can avoid such mistakes in future. The analysis and subsequent audit will also allow all the good points to be noted and praised wherever due.

Defibrillators in practice
There is no requirement under Law for dental practices to have an AED but the Resuscitation Council UK do recommend them in their guidance as it had been well managed and the fact that he had a viable pulse and was breathing unassisted was testament to this.

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About the author
Shaun Howe
trained and qualified in the Royal Army Dental Corps in 1993. He works in the NHS and privately full time in Derbyshire and Nottinghamshire.

He is also a key Opinion Leader for Philips UK and is involved in the Resuscitation Council’s simulation team.

He is a Dental Protection Panel member for Dental Protection Ltd, he is also a key Opinion Leader for Philips Support and is currently a member of their Transitional Support Team.

He has written extensively on clinical governance and has delivered many presentations at conferences and meetings.

Mr Howe is a keen supporter of the Rota Approach to Dental Protection and has written extensively on this.

He has spoken widely to groups all across the U.K. drawing on his experiences on FtP and his work with Dental Protection.

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The patient had regained a viable pulse and was breathing unassisted.

This case study was previously published in the Dental Tribune, Nottingham in their simulation suite. The team had the opportunity to train using a Sim-Man model that directly interacts with those undergoing training, a valuable yet underutilised resource that, as far as we’re concerned, paid for itself.

The patient (at the time of writing) was still in hospital but was comfortable and recovering well.

There are no studies to show the uptake of AEDs in dental practice but the author currently works across three practices and only the where this incident occurred currently has one (with no plans on the others to buy it yet).