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Epinephrine auto-injectors for acute asthma as well as anaphylaxis

Would the three children described by Mark Levy *et al*¹ and many others who died have survived if they'd had multiple epinephrine (adrenaline) intramuscular (IM) injections? Former President Obama legislated in 2013 for epinephrine auto-injectors in educational establishments for acute asthma attacks, as well as anaphylaxis,² with a Good Samaritan clause. The National Review of Asthma Deaths recommended auto-injectors for asthmatics who survived a first life-threatening attack. In the thunderstorm epidemic in Victoria, Australia, in November 2016, paramedics gave IM epinephrine repeatedly to enable patients to survive until hospital arrival. UK paramedics will also give IM epinephrine to life-threatened patients with asthma.³

Available auto-injectors are EpiPen®, Jext® (same manufacturer), and Emerade®; the former have doses and needle lengths of 0.15 mg (13 mm) and 0.3 mg (16 mm). After firing EpiPen, 1.85 mg (ml) and 1.7 mg (ml) remain in the internal syringe. A YouTube EpiPen wilderness medicine technique demonstrates obtaining additional doses. Emerade has 0.15 (16 mm), 0.3, and 0.5 mg (23 mm), the largest dose and length; no drug remains after firing. Natasha Ednan-Laperouse, who died after eating a baguette containing an allergen, received two EpiPen 0.3 mg injections to no avail (auto-injectors were invented for low-thigh fat astronauts) and her coroner⁴ asked for longer needles, larger doses, and wondered if use-by dates could be extended (confirmed years ago).⁵

Other manoeuvres for life-threatened patients with asthma and anaphylaxis sufferers are mouth-to-mouth breathing, cardiac compressions, and speedy hospital delivery, but with no guarantee of survival. For patients with asthma in hospital, a combination of intravenous (IV) magnesium sulfate, IV salbutamol, and IV epinephrine (titrated carefully), may avoid tracheal intubation and lung ventilation.⁶ In many hospitals in the Netherlands, the selective phosphodiesterase inhibitor and smooth muscle relaxant IV enoximone, is successfully used in status asthmaticus.⁷ When evidence

to treat is not available, common sense, case reports, and experience must guide therapy.

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REFERENCES

1. Levy ML, Fleming L, Warner JO, Bush A. Paediatric asthma care in the UK: fragmented and fatally fallible. *Br J Gen Pract* 2019; DOI: <https://doi.org/10.3399/bjgp19X704933>.
2. Rainbow J, Browne GJ. Fatal asthma or anaphylaxis? *Emerg Med J* 2002; **19(5)**: 415–417.
3. Joint Royal Colleges Ambulance Liaison Committee. *UK ambulance services clinical practice guidelines 2016*. Bridgwater: Class Publishing, 2016.
4. Cummings S. *Regulation 28: report to prevent future deaths*. 2018. www.judiciary.uk/wp-content/uploads/2018/10/Natasha-LAPEROUSE-2018-0279.pdf [accessed 8 Nov 2019].
5. Simons FE, Gu X, Simons KJ. Outdated EpiPen and EpiPen Jr autoinjectors: past their prime? *J Allergy Clin Immunol* 2000; **105(5)**: 1025–1030.
6. Sellers WF. Inhaled and intravenous treatment in acute severe and life-threatening asthma. *Br J Anaesth* 2013; **110(2)**: 183–190.
7. Beute J. Emergency treatment of status asthmaticus with enoximone. *Br J Anaesth* 2014; **112(6)**: 1105–1108.

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Should we continue pairing the term 'anecdotal' with evidence?

In my role as a consultant in public health medicine with a focus on health intelligence and public health, I have often heard primary care clinicians quote what they term 'anecdotal evidence' in support of their viewpoint. This got me thinking about whether we should continue to use this term, in view of the importance of following evidence-based practice.

Four types of evidence have been described.¹ Anecdotal evidence comprises

a particular occurrence, whereas statistical evidence consists of an arithmetic summary of a series of instances. Causal evidence involves an explanation for the occurrence of an effect; finally, expert evidence comprises the opinion of one or more experts. Generally, anecdotal evidence is recognised as being based on personal experience, with anecdotes consisting of short stories or narratives that aim to make a point.

A 2005 review of the different evidence types found that anecdotal evidence is the least persuasive type of evidence.¹ However, despite the findings of this review and also not appearing in the hierarchy of evidence,² it has been argued that anecdotal evidence wields a disproportionately potent influence on clinical reasoning and behaviour.³

The words that we employ reflect our personal attitudes, and influence the mindsets of others. Pairing the word 'anecdotal' with the word 'evidence' implies that anecdote is a form of evidence when it is not, and also gives credence to any argument using it. For this reason, I would suggest that we detach the word 'evidence' from 'anecdotal' and replace it with the non-judgemental word 'information'.

I am not arguing that we should not use anecdotal information, only that we should use it in its non-evidential context. Anecdotes can assist with clinical teaching, as well as help to influence professional or public opinion by relaying information in appealing, familiar, and personalised ways.³

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REFERENCES

1. Hornikx J. A review of experimental research on the relative persuasiveness of anecdotal, statistical, causal, and expert evidence. *Studies in Communication Sciences* 2005; **5(1)**: 205–216.
2. Murad MH, Asi N, Alsawas M, Alahdab F. New evidence pyramid. *Evid Based Med* 2016; **21(4)**: 125–127.
3. Enkin MW, Jadad AR. Using anecdotal information in evidence-based health care: heresy or necessity? *Ann Oncol* 1998; **9(9)**: 963–966.

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