Rates of anaphylaxis are increasing
Hospital admissions for anaphylaxis have increased five- to sevenfold, with an increase in food-induced anaphylaxis (most frequently peanuts, shellfish and tree nuts). Nonsteroidal anti-inflammatory drugs, antibiotics (specifically β-lactams), neuromuscular blocking agents and chemicals are the most commonly reported iatrogenic triggers. Reactions related to chemotherapeutic or immunomodulator agents are also increasing.

Epinephrine should be given immediately on recognition of anaphylaxis
Epinephrine is the first-line treatment for anaphylaxis. Delays in administration are associated with poorer outcomes, including respiratory or cardiac arrest.

Intramuscular epinephrine should be used for initial treatment
The recommended dose and route for epinephrine is 0.5 mg intramuscularly for adults and 0.01 mg/kg intramuscularly in children weighing 30 kg or less, to a maximum of 0.3 mg in prepubertal children and 0.5 mg in adolescents. Intramuscular epinephrine is administered into the deltoid or the vastus lateralis muscle of the mid-outer thigh and can be repeated within 5–15 minutes. Autoinjectors are effective, single-use, pre-filled syringes, available in doses of 0.3 mg for adults and for children and adolescents weighing more than 30 kg and 0.15 mg for children weighing 15–30 kg. A hold of 3 seconds against the skin during and after deployment allows the contents to discharge fully.

Medication errors with epinephrine are common and can be dangerous
Wrong-route errors, where intramuscular epinephrine is mistakenly given intravenously, and wrong-dose errors, with intravenous delivery of epinephrine, are frequently reported. These errors can cause severe hypertension, angina, myocardial infarction, cardiogenic shock, stroke and potentially fatal tachyarrhythmias.

Intravenous infusions of epinephrine should be used only for refractory anaphylaxis
Refractory anaphylaxis is defined as ongoing symptoms despite 2 doses of intramuscular epinephrine and occurs in about 1% of patients with severe anaphylaxis. Along with critical care consultation, a low-dose infusion of intravenous epinephrine should be started. Mixing 1 mg of epinephrine in 1000 mL of crystalloid creates a 1 µg/mL solution, infused at 5–20 µg per minute (5–20 mL/min).