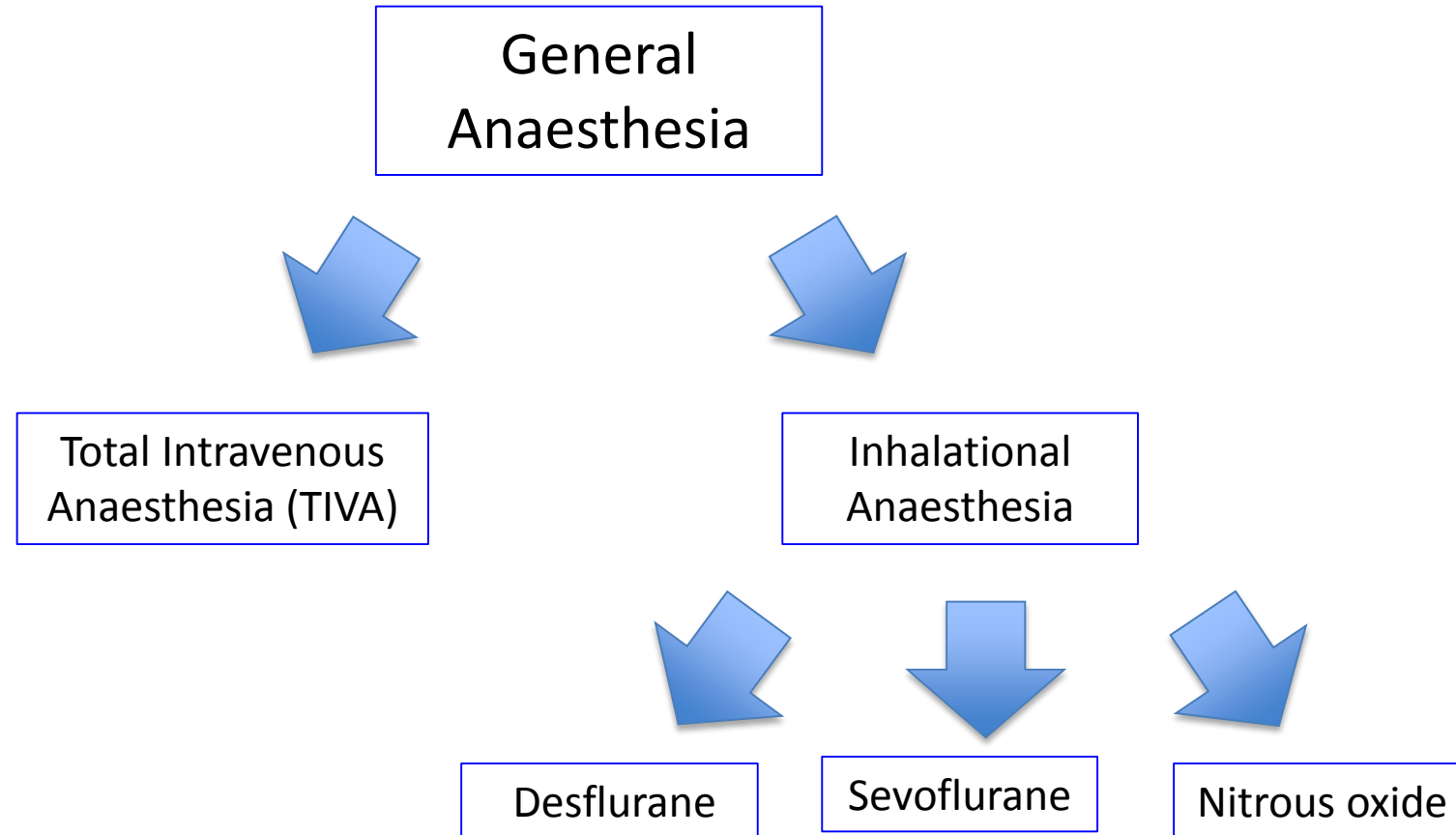


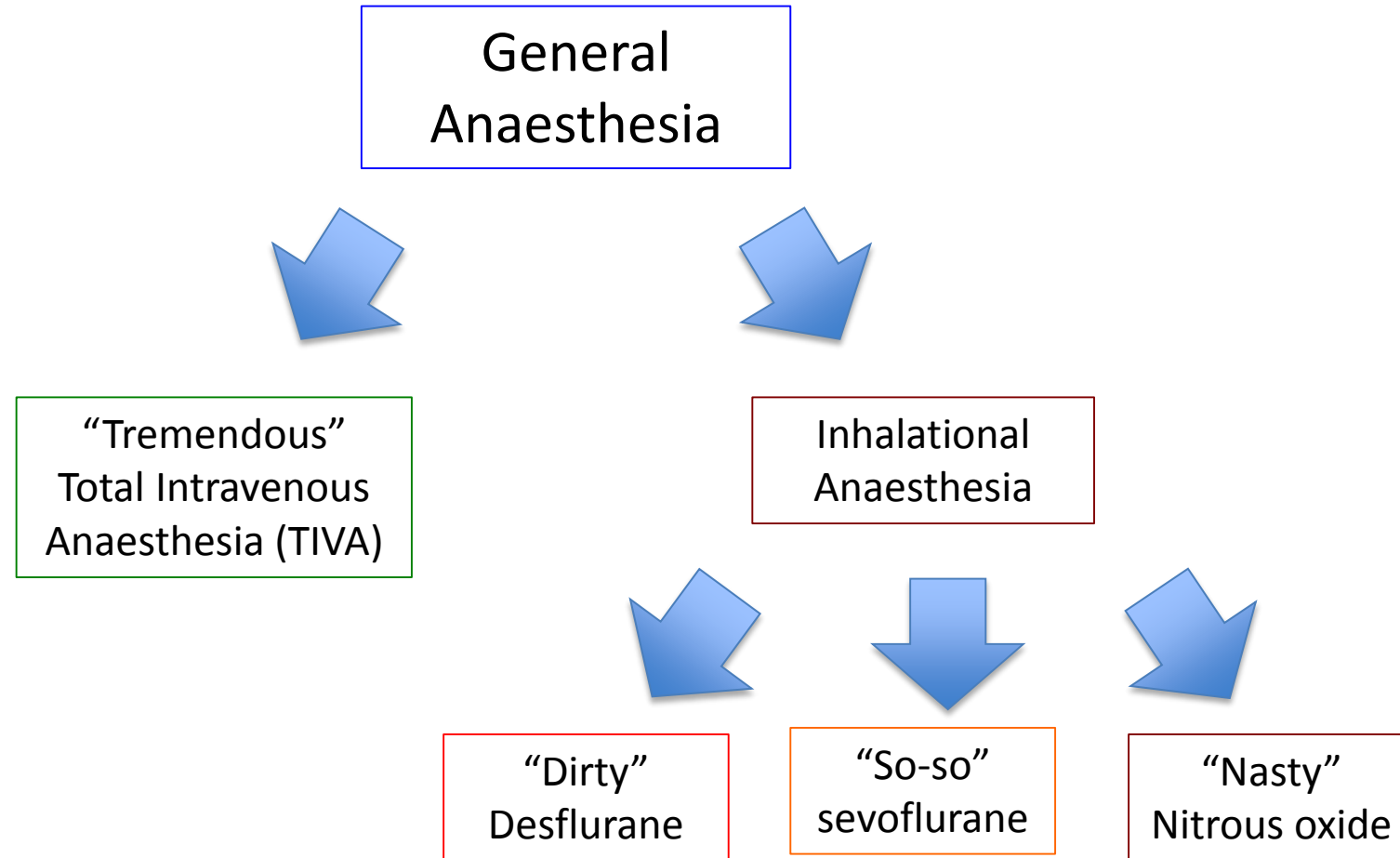
Anaesthesia and the Environment

Dr Andrew Grant

Background



Background



Why does anyone use desflurane?

- Desflurane: physical properties mean faster wake-up from GA
- Nitrous – faster wake-up, analgesic properties
- TIVA – awareness risk; hassle-factor
- Cultural, experience, education and habits important

Green anaesthesia plan

- Quality Improvement approach
- Behaviour change targets:
 - Desflurane → sevoflurane
 - Inhalational → total intravenous
 - Ditch nitrous

Actions taken

- Education: departmental talk & poster

Think Green

Want to minimise anaesthesia's impact on the environment?

Segregate your waste: **Clinical** and Non-Clinical

Think TIVA – a tiny impact of even the cleanest inhalational GA

Don't be Blue

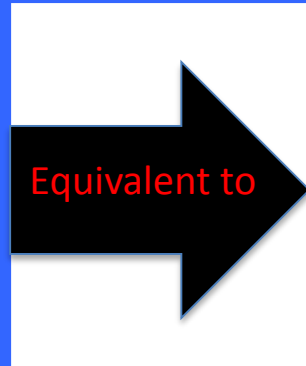
Desflurane and Nitrous Oxide are potent greenhouse gases. They are *extremely harmful* to the environment.

St Johns used **451** bottles of desflurane from April 2018 – March 2019

1 bottle of desflurane =

886kg

CO₂ equivalent



A passenger on a transatlantic flight



Did you know? 1 hour of N₂O at 500ml/min is equivalent to 16.8kgCO₂

Go

Yellow

If all St Johns desflurane cases had used sevoflurane instead, last year would have saved:

- £30,512
- 393,657kgCO₂e
- The same as driving over 4 million km...
- ..or round the world over 103 times!



Did you know?

Adding **N₂O** to a sevoflurane anaesthetic can increase its carbon footprint by **900%**



Actions taken

- Education: departmental talk & poster
- Network: whatsapp groups & local enthusiasts
- Data collection: drug usage from pharmacy
- Become “official” – involve trainee groups; QI registration; divisional recognition
- Survey of anaesthetists on intravenous anaesthesia – motivations and barriers

Future plans

- Survey: design targeted interventions
- Monitor usage of anaesthesia drugs and update department
- “Sustainability week” tentatively planned...