



RCOA
Royal College of Anaesthetists

WINTER SYMPOSIUM
3-4 December 2020

Robotics Chair: Dr Helgi Johannson


Robotic Airway Surgery
Dr Ravi Bhagrath

The great Thailand Cave Rescue
Dr Brendan Sloan

Da Vinci and beyond
Mr Ben Challacombe







The Great Thailand Cave Rescue

Dr Brendan Sloan
BCRC Medical Officer

RCOA CPD codes 1102, 2A11, 2D06

Disclaimer

- I am not a diver
- I did not go to Thailand
- Views expressed are my own, and not necessarily those of the BCRC

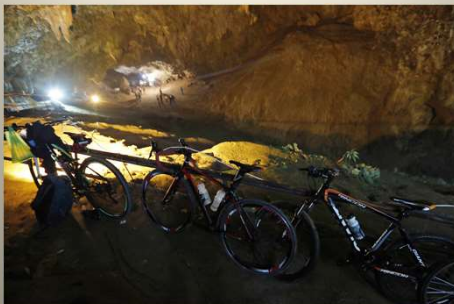
Essentials

- One of the most audacious cave rescues ever undertaken
- 17 people rescued in total
- 18 Days
- All dived out
- International attention throughout

Tham Luang



23rd June



24th - 26th June

Initial rescue efforts by Thai military, but unable to get beyond junction due to flooding

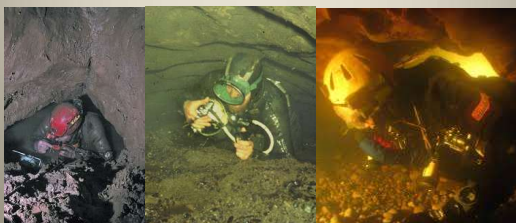
Navy SEAL team make initial dives but little progress

Vern Unsworth (British expatriate) recommends BCRC rescue divers

Cave diving conditions



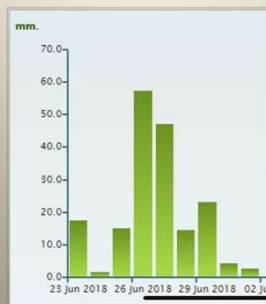
Cave diving in the UK



28th June



Ongoing rainfall



29-30th June



2nd July



2nd July



3rd July

Rescue efforts taken over by Thai military

Thai Navy SEAL divers get to boys, taking food and leaving 4 including medics in the chamber

Consideration of possible rescue methods but seems only option would be diving

Reluctance to undertake any risky options

4th July

Divers Jason Mallinson and Chris Jewell fly out
Surface team – Mike Clayton, Gary Mitchell, Martin Ellis



Preparations for diving



Preparations for diving



6th July – Saman Gunan



7th July

Dr Richard Harris and Craig Challon arrive from Australia

Divers Connor Roe, Josh Bratchley and Jim Warney fly from UK

Thai Cave Rescue Dr Richard Harris (lead anaesthetist)

Medical Plan:

Each boy sedated &
watertight whole-face
mask used to deliver
oxygen



Each boy administered:

Oral alprazolam premed 0.5mg

IM Ketamine 5mg/kg

(re-dosed by divers 2-4
times using half dose)

IM Atropine

To reduce salivation

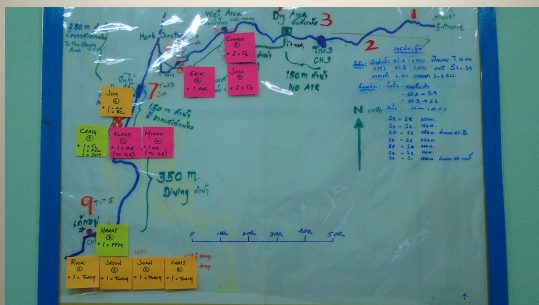
Extraction

Boys get into wetsuits in chamber, premed
IM ketamine once in water
Once unconscious, full facemask applied with
100% oxygen
Modified diving harness with back handle
Hands and feet bound to prevent struggling
Dived out under rescue diver, face down to
minimise aspiration risk

Diving out



Real time logistics



Onto the surface



8th June – 4 boys dived out

9th June - 4 boys dived out

10th June – Final 4 boys and coach dived out

One diver loses line on exit, resulting in longer dive and only hypothermic child

SEAL divers exit the cave

Once boys out, pumps fail and cave rapidly floods with ~100 people still underground

All 13 rescued successfully



International effort

BCRC divers
Australian diving doctor
Other divers from Canada, Denmark, Finland
US Military
Chinese military

Hundreds of Thai military, as well as local
volunteers

Thanks

Mike Clayton
Emma Porter
Gary Mitchell
Bill Whitehouse
