Project ECHO®
St. Vincent's Hospital, Melbourne
Australia

ST VINCENT'S HEALTH AUSTRALIA

Naloxone

August 28, 2019

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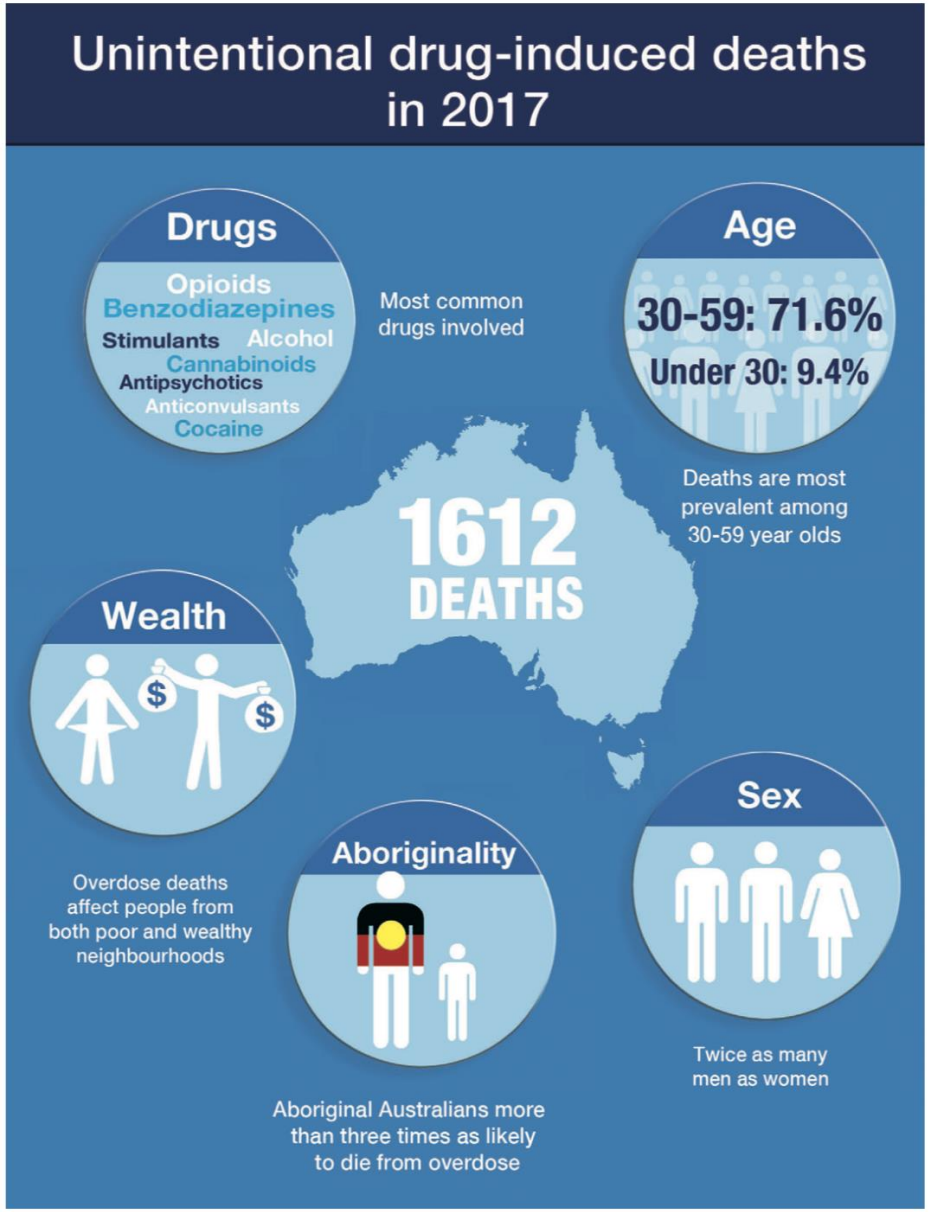
Primary Care Connect



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Australia's Annual Overdose Report 2019

Penington Institute

Opioid overdose

- Overdose now responsible for more deaths than road accidents. Opioids involved in most of those deaths – more than 904 in 2017.
- Pharmaceutical opioids involved in most opioid related deaths – 60%. (Penington 2019).
- Most accidental overdoses involve multiple drugs.
- Opioid overdose is opioid-induced respiratory depression (OIRD)
- Respiration is controlled by two complex systems: the chemical or metabolic control of breathing and the behavioural control system. **Opioids can affect both of these by suppressing the respiratory systems and by sedation**
- Death occurs usually from cardio-respiratory arrest followed by hypoxia.
- The primary drug treatment for OIRD is naloxone

Risk factors

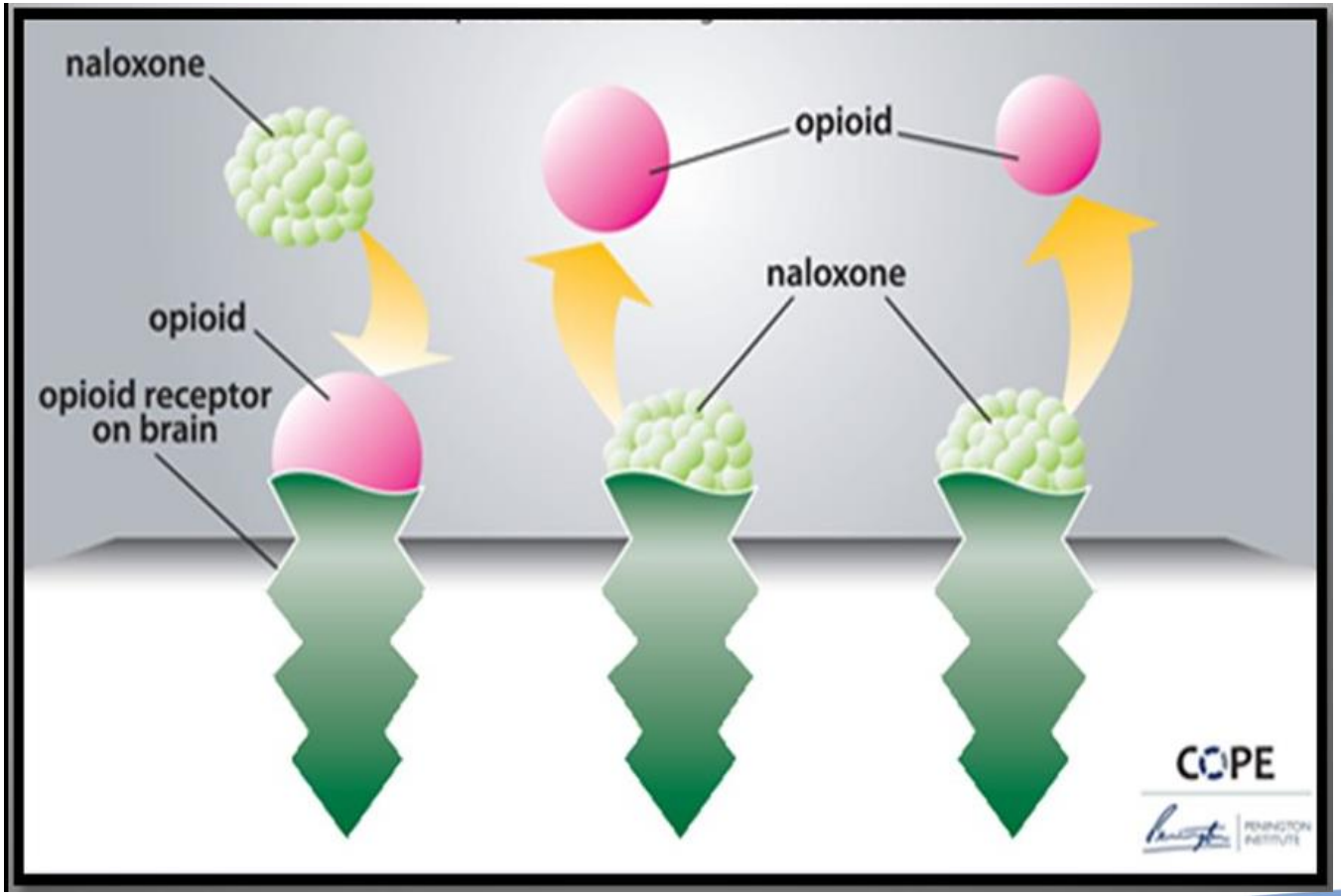
- Recent hospitalisation or other care, especially multiple, for:
  - Any substance use disorder
  - Bipolar disorder or schizophrenia
  - Stroke or cerebrovascular disease
  - Renal or liver disease with impaired function
  - Heart failure
  - Pancreatic disease
  - Chronic pulmonary disease
  - Sleep apnoea
  - Recurrent headache

- Consumes fentanyl, morphine, methadone, hydromorphone, benzodiazepines, antidepressants
- Consumes extended or delayed release form of any opioid
- >100mg morphine equivalent per day

What is Naloxone?

- Semi-synthetic, structurally similar to some semi-synthetic opioids
- Pure opioid antagonist – has no opioid agonist effect
- Non-selective antagonist – binds to mu, kappa and delta receptors
- Most affinity for the mu receptor which is responsible for analgesic effect as well as the most clinically important side effects – tolerance, constipation, euphoria, respiratory depression
- Has virtually no pharmacological effect in the absence of opioids.

How does naloxone work?



How is naloxone given?

- Can be administered intravenously, intramuscularly, subcutaneously or intranasally.
- Poorly absorbed orally but is compounded with oxycodone in Targin® to combat peripheral side-effect of constipation. Also compounded with buprenorphine in Suboxone® to prevent diversion.
- Onset of action within 1-2 minutes, a bit longer for IM/SC
- Duration of action 30-90 minutes – important!
- Dose used varies widely depending on the setting and route of administration eg: repeated 50mcg IV dose in adult acute care hospital, 1.6mg IM dose in some ambulance services, repeated 400mcg IM in community setting
- Should only be given after ensuring patency of airway

Side-effects/precautions

- In opioid-dependent person, can precipitate withdrawal – vomiting and aspiration
- May expose effects of other drugs in a poly-drug user
- Naloxone crosses the placenta and may cause foetal withdrawal and complications. Use with caution.

How is naloxone presented?

- Three presentations available in Australia
  - 400mcg/ml glass ampoules
  - 2mg/2ml pre-filled, incremented-dose syringe (Prenoxad ®)
  - Ready-to-use intranasal spray Nyxoid contains 1.8mg naloxone (as 2.2mg naloxone hydrochloride dihydrate) in a concentrated 0.1mL solution.
- All presentations can be used in any setting but Prenoxad and Nyxoid are designed for use in community settings.
- All can be bought over-the-counter but ~$75-$85.
- Ampoules and pre-filled syringes are PBS-listed –unrestricted 5 ampoules or 1 syringe. $6.40-$39.50

Community overdose prevention

Preventing Overdose Factsheet

Overdose Response Prenoxad

Overdose Response Nyxoid

Overdose Response Ampoules

Information for health professionals

Talking to Patients About Naloxone

Information for Police

Naloxone Information

Penington Institute, COPE Australia resources.

- regularly updated
- concise
- for everyone involved.

copeaustralia.com.au

Community overdose response

Signs of an overdose

- Limp body
- Heavy ‘nod’ of the head
- Snoring/gurgling noises
- Irregular/shallow breathing, or not breathing
- Possible vomiting
- Blue lips – if pale skinned
- Ashen look – if dark skinned
- unresponsive

Community overdose response

Response plan

- Check for danger – needles, angry bystanders
- Try to get a response from the person
- If no response, dial 000
- Place person in recovery position
- Tilt head back, ensure airway is clear and will remain clear
- Assemble and use naloxone, giving one 400mcg dose by injection, or one 1.8mg dose intranasally
- If person has pulse, apply rescue breathing
- If no signs of life, start CPR if able
- Repeat dose of naloxone if not breathing after 2-3 minutes and continue other measures.

Community overdose response

Aftercare

- Patient can be confused, angry, not wanting further care
- Naloxone wears off after 30-90 minutes –respiratory depression and overdose can recur.
- Re-emerging overdose more likely if patient has taken alcohol, benzodiazepines, certain long-acting opioids, certain dose forms (SR tabs), or could be simply a large quantity of opioids.
- Important that ambulance is called and someone remain with the patient to re-administer naloxone if needed.

Training and subsidies

COPE Australia can provide training in group sessions. Numerous local health organisations are accredited to provide training.

copeaustralia.com.au

Vic government Naloxone Subsidy Initiative aims to improve supply by making naloxone more accessible. Many community health organisations can fund the cost of naloxone under this initiative. Mixed success - heavily dependent on available resources.

Questions?