

# Evaluation of ward preparedness for anaphylaxis management in a tertiary paediatric and women's hospital

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## Background

- Anaphylaxis should be promptly recognised and managed
- The Women's and Children's hospital in Adelaide is a tertiary paediatric and women's hospital
- There have been reported incidents within the hospital where anaphylaxis has not been appropriately recognised and managed
- A range of protocols and management strategies are available within the hospital however this lack of clarity causes confusion for attending staff
- Availability of two strengths of adrenaline (1:1000 and 1:10,000) on the wards can cause confusion as to the agent of choice
- There is a need to standardise the Anaphylaxis management resources in the hospital

## Aims

1. To audit hospital wards for preparedness of anaphylaxis management, in terms of medications and resources available
2. To develop strategies to standardise management of anaphylaxis in the hospital

## Methods

The Pharmacy Intern and Allergy Nurse Practitioner audited all hospital wards for -

1. Availability of Anaphylaxis management medication on the ward, including on emergency trolleys
2. What strengths of adrenaline was available on the wards
3. Resources available on the wards to guide management
4. Visibility of these medications and resources on the wards
5. If these items were not easily visible, it was acceptable to discuss with a staff member e.g. Nurse unit manager/coordinator

## Results

A total of 18 wards were audited.

- ALL wards held **Adrenaline 1:1000 strength** in their medication rooms.
  - 7 wards ALSO had adrenaline 1:10,000 available
- ONLY 10 wards (56%) had adrenaline on their emergency trolleys.
- Other wards did not keep medicines on emergency trollies to minimise risk of accidental patient access, as trollies were stored in unlocked ward areas
- ONLY 4 wards had visible protocols and guidelines readily available to assist in anaphylaxis management. These included -
  - ASCIA guideline – Acute Management of Anaphylaxis
  - Local perinatal practice guideline referring to ASCIA guideline – Acute management of anaphylaxis in pregnancy
  - Iron Infusion protocol (with section on anaphylaxis management related to side effects)
- Staff suggested “they would look at hospital intranet” for guidance as required.

Results were presented to the organisational “Resuscitation Committee” and the “Drugs and Therapeutics Committee”

## Limitations

- The storage of emergency trollies in the ward corridor or unlocked clinical area limits the storage of medications on it
- The current aging infrastructure creates some storage limitations
- In some areas it is important to have both strengths of adrenaline

## Discussion

- All wards had the correct medication (Adrenaline 1:1000) for treatment of Anaphylaxis
- Having both strengths of Adrenaline (1: 1000 and 1:10,000) available in ward medication rooms and emergency trollies could cause a selection error and confusion among staff regarding the correct formulation to use
- Emergency trolley management was sub-optimal, with inconsistent contents and many not keeping any medications on them
- There were inconsistencies in resources used in the hospital. Staff were unsure of resource to use which could be problematic in emergencies
- A staff knowledge survey about “Anaphylaxis management” was conducted at the same time (poster 309). Staff unanimously wanted a simple pictorial resource.
- There is a need to develop/adapt a standardised flowchart, suitable for women and children, and have it easily visible on all wards

## Moving forward

Strategies for effective anaphylaxis management suggested were -

- Adoption of “Emergency Treatment of Anaphylaxis algorithm” by APLS (fig 1) as a standardised resource
- Implementation of an “anaphylaxis kit”, containing the required medications and administration equipment, similar to that suggested in the Australian Immunisation Handbook (fig 2)
- Storage of this kit in all medication rooms in a standardised manner
- Conduct staff education and awareness for the above

Figure 1: APLS Anaphylaxis management flowchart

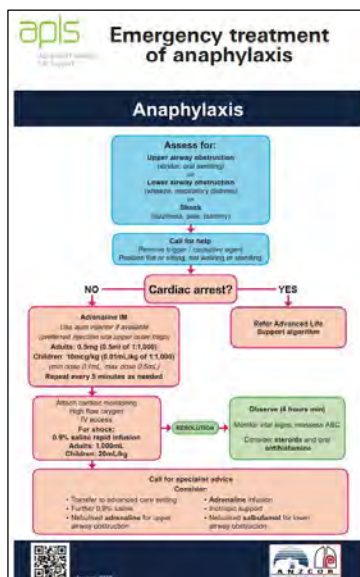
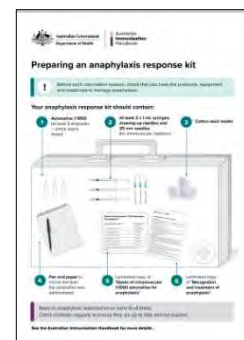


Figure 2: AIH suggested Anaphylaxis response Kit and its ingredients



- adrenaline 1:1000 (at least 3 ampoules)
- at least 3 x 1 mL syringes and 25 mm needles (for intramuscular injection)
- cotton wool swabs
- pen and paper to record the time the adrenaline was administered
- laminated copy of ‘Doses of intramuscular 1:1000 adrenaline for anaphylaxis
- a laminated copy of ‘Recognition and treatment of anaphylaxis’ guideline

## Conclusions

- Anaphylaxis management in the hospital was found to be inconsistent, which could lead to patient harm in case of emergencies.
- Steps need to be taken as above to improve the current status

## Acknowledgements

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