Do you know what they are doing with povidone-iodine in the operating theatre?

Joe-Anne Bendall; Amy Bisson; Jane McArthur (Intern UNSW); Dr Kate Clezy; Tracy Clarke; Dr Paul Curtis
Clinical Excellence Commission (CEC), NSW, Australia

Introduction

NSW Health encompasses a complex hospital system with over 220 public hospitals and health services ranging from large metropolitan tertiary referral centres to small multipurpose rural and remote facilities.

The CEC Healthcare Associated Infection (HAI) program aims to assist local health districts and speciality health networks to improve systems to manage and monitor the prevention and control of HAIs.

The NSW Health Safety Alert Broadcast System (SABS) provide a systematic approach to the distribution and management of patient safety information to NSW health services. Each alert specifies action to be taken by health services, the timeframe in which such action must occur, and specific responsibility for the actions.

The SABS includes three tiers of notifications to provide NSW health services with early warnings of issues, namely:

- Safety Alert
- Safety Notice
- Safety Information

How does the CEC identify potential risks?

In October 2016 an issue was raised with the CEC regarding a supply shortage of a brand of Povidone-Iodine (PVI) pre-operative skin antiseptic on NSW State Contract. The alternate product on contract was not registered with the Therapeutic Goods Administration (TGA) for use as a pre-operative skin antiseptic.

A Safety Notice (SN011/16) was sent to all relevant health services regarding the disruption to supply.

HAI Program Contact
Joe-Anne Bendall
HAI Program Manager - CEC
HAI-CEC@health.nsw.gov.au
Ph. 02 9269 5614

What were they doing with PVI in OR?

- Following the release of the *Safety Notice (SN011/16) PVI-Disruption to Supply*, healthcare facilities immediately reported intraoperative use of PVI that included:
  - intra-cavity lavage
  - wound irrigation eg joint replacements
  - soaking or rinsing of implantable items e.g. breast implants, hernia/gynaecological mesh and central-venous access devices (CVAD) prior to insertion
- OR staff assumed that all antiseptic solutions were ‘sterile’

What did the CEC do in response to the off-label use of PVI?

✓ **Survey of operating theatres within NSW to understand the extent of off-label use**

- 11 surgical specialities using PVI for lavage
- 68% of respondent hospitals reported using non-sterile PVI for lavage
- 5 types of implantable items being rinsed in PVI before insertion
- 94% of respondent hospitals reported using non-sterile PVI prior to inserting implantable items
- 9 other antiseptic solutions and antibiotics were also being used off-label eg Chlorhexidine w/v Cetrimide and hydrogen peroxide.

✓ **Undertake a literature review**

Evidence is weak, non-existent or contradictory

✓ **Write a discussion paper**

The discussion paper was written to explore the practice of intraoperative use of povidone-iodine (PVI) and the evidence that supports this practice.

✓ **Convene a working party of experts from CEC, operating theatre nurses, surgeons, infection prevention and control, pharmacy, clinical governance and Agency for Clinical Innovation (ACI)**

Recommendations from the working party:
- PVI is not recommended for internal use
- Consult with the Society of Plastic Surgeons on their 14 point plan which advocates the rinsing of breast implants prior to insertion (PVI or triple antibiotic therapy)
- Communicate with Healthshare NSW on the Tender process for pre-operative surgical antiseptic solutions

✓ **Release a second Safety Notice (005/17) in April 2017 with the working party recommendations**

Evaluation: Did the recommendations from the working party and Safety Notice change practice?

An evaluation survey was sent to all Local Health Districts (LHDs) and Speciality Health Network (SHNs) 29/9/17. These are the results

Responses received from all 16 LHDs/SHNs (89 responses from 66 hospitals)

74% (n=66) hospitals have changed practice. Their off-label PVI use has ceased.

94% (n=66) hospitals have changed to alternate an solution for internal use eg normal saline

Communication of the Safety Notice was extensive using multiple methods: email, inservice education, poster display and meeting agenda item

2 hospitals have submitted applications to their Drug and Therapeutics Committees to seek approval to continue use of PVI off-label

Acknowledgements
Ronald Govers, Iain Crawford, Vanessa Brooks and all NSW Local Health Districts /Speciality Health Networks