

# Kitted out for **blood cultures**



## Introduction

To reduce blood culture contamination rates at Campbelltown Hospital, a blood culture kit was introduced to the adult departments.

The key to treatment of sepsis is early detection of the causative organism and commencement of appropriate antibiotics. To ensure only the causative organism is cultured, it is imperative aseptic technique with the correct equipment is used to collect the blood sample.

A false positive blood culture may result in the prescription of inappropriate and possibly ineffective antibiotics. Potential causes of contamination focused on equipment, procedural knowledge and aseptic technique. The innovation of the kit addressed these issues by providing the equipment and a ten step procedure leaflet for collecting a blood culture.

Obtaining accurate culture results has improved patient outcomes. The simplicity of the blood culture kit innovation has resulted in positive outcomes, which have been reliably sustained since April 2012, with an overall 20 per cent reduction of contamination.

## Key activities

Overuse or inappropriate use of antibiotics can result in development of multi drug resistance.

This program reduced the number of contaminated blood cultures at Campbelltown Hospital, by identifying the causal factors of contaminates in blood cultures in the facility and creating a standardised blood culture kit that enabled the solution to the problems identified.

The kit contains a specimen bag containing a safety blood collection cannula, a vacutainer, a pack of three chlorhexidine and alcohol swabsticks, sterile gauze, disposable

tourniquet, and blood culture bottles with a ten step instruction leaflet *'How to Take a Blood Culture'*, detailing when hand hygiene must be performed and adherence to aseptic technique plus a kit contents list.

## Key achievements

The innovation has improved clinicians awareness and compliance to aseptic technique and has resulted in effectively decreasing the blood culture contamination rates; in 2011-2012 it was 44.4 per cent (229), while in 2013-2014 the rate decreased to 30.5 per cent (167).

The simplicity of the blood culture kit innovation has resulted in subsequent positive outcomes which have been reliably sustained since April 2012.

