

https://dspace.org/

A review of adult resuscitative fluid purchasing and usage trends at an academic tertiary hospital in Johannesburg

Jacobs, Kelly Amy

2022

https://hdl.handle.net/10539/35208

Downloaded from a DSpace repository. https://dspace.org/

A REVIEW OF ADULT RESUSCITATIVE FLUID PURCHASING AND USAGE TRENDS AT AN ACADEMIC TERTIARY HOSPITAL IN JOHANNESBURG

ABSTRACT

Introduction:

Intravenous fluid administration is a vital component in the resuscitation of critically ill patients. In recent years, there have been many studies to help guide which fluids should be used for resuscitation. Currently, it appears the international trend is away from the use of colloids and unbalanced crystalloids and towards the use of balanced crystalloids. The aim of our study was to determine whether evolving international evidence has impacted resuscitative fluid practices in the Emergency Department and the Intensive Care Unit in a tertiary hospital in South Africa.

Material and methods:

Study design was two-fold: a cross-sectional physician survey and a retrospective longitudinal observational study of the pharmacy fluid purchase records from the combined Emergency Department and Intensive Care Unit.

Results:

Cross-sectional survey: In 2020 a doctor was 8.3 times more likely to choose a balanced crystalloid for resuscitation regardless of the clinical scenario over any other fluid (CI 5.0 – 13.8). 55% of doctors surveyed agreed that their resuscitation fluid of choice had changed for a variety of reasons with the most popular reason cited as post-graduate education.

Retrospective Longitudinal Observational Study: Throughout the study period, balanced crystalloids were the majority fluid purchased, although in ED lactated Ringers was the preferred balanced crystalloid and in ICU PlasmaLyte was preferred. Minimal colloids were purchased over the study period in declining amounts.

Conclusions:

Doctors working in a tertiary hospital in South Africa are following the trend of current evidence by using a balanced crystalloid as their resuscitation fluid of choice.