

Pharmacy technicians and students preparing infusions in Intensive Care Units

Responding to COVID-19 workforce challenges

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Introduction

COVID-19 surge workforce plans involved non-critically care trained nursing staff caring for Intensive Care Unit (ICU) patients, increasing likelihood of unfamiliarity with medicines and preparation processes. To increase nursing staff patient care time and reduce potential medication errors, it was proposed credentialed pharmacy support staff could prepare medication infusions.

Objective

To develop, implement and evaluate the introduction of pharmacy support staff preparing continuous and intermittent medication infusions within adult ICUs.

Action

Following observation and engagement with ICU nursing staff and their practices, pharmacists with expertise in ICU, education and aseptic compounding developed an education, training and credentialing package. Workflows were determined including checking requirements to comply with organisational policies for high risk medicines and medicines stored in the medication safe. Medicines for bolus administration and medicines required in emergency situations were excluded.

Pharmacy support staff were recruited from within the pharmacy department and COVID-19 vaccination clinics and undertook training and credentialing (Figure 1).

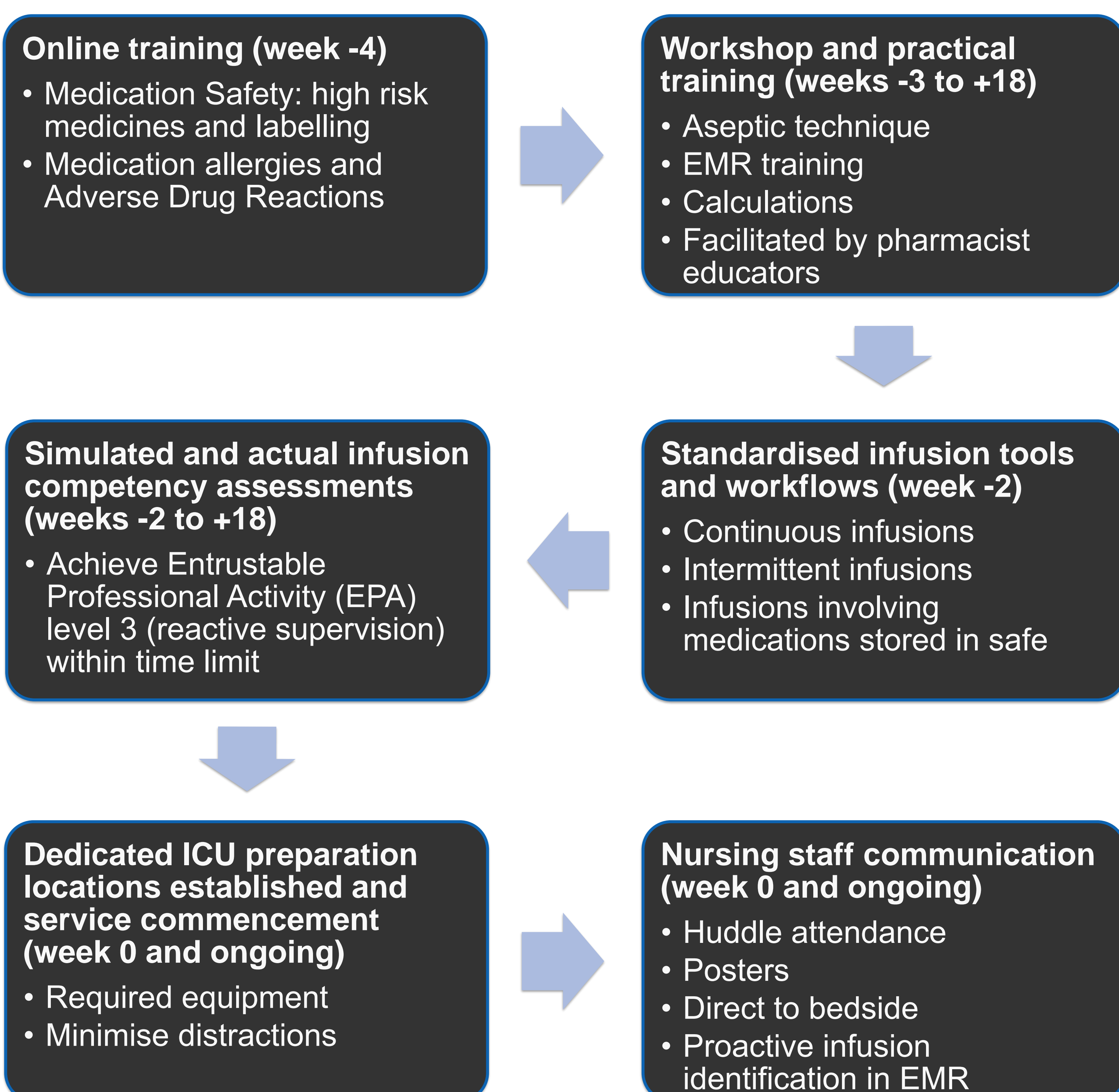


Figure 1: Content focus of credentialing program and implementation process. Week 0 = service commencement in ICU. EMR = Electronic Medical Record

Evaluation

A total of twenty credentialed pharmacy support staff prepared 6,703 infusions (2,813 continuous and 3,890 intermittent) involving 64 medicines over a 30 week period (Figure 2). The service operated eight or 12 hours per day, seven days a week in two ICUs with an additional service provided to a dedicated COVID-19 ICU for seven weeks. Pharmacist educators worked five days a week in one ICU supporting and assessing pharmacy support staff for the first 18 weeks of operation.

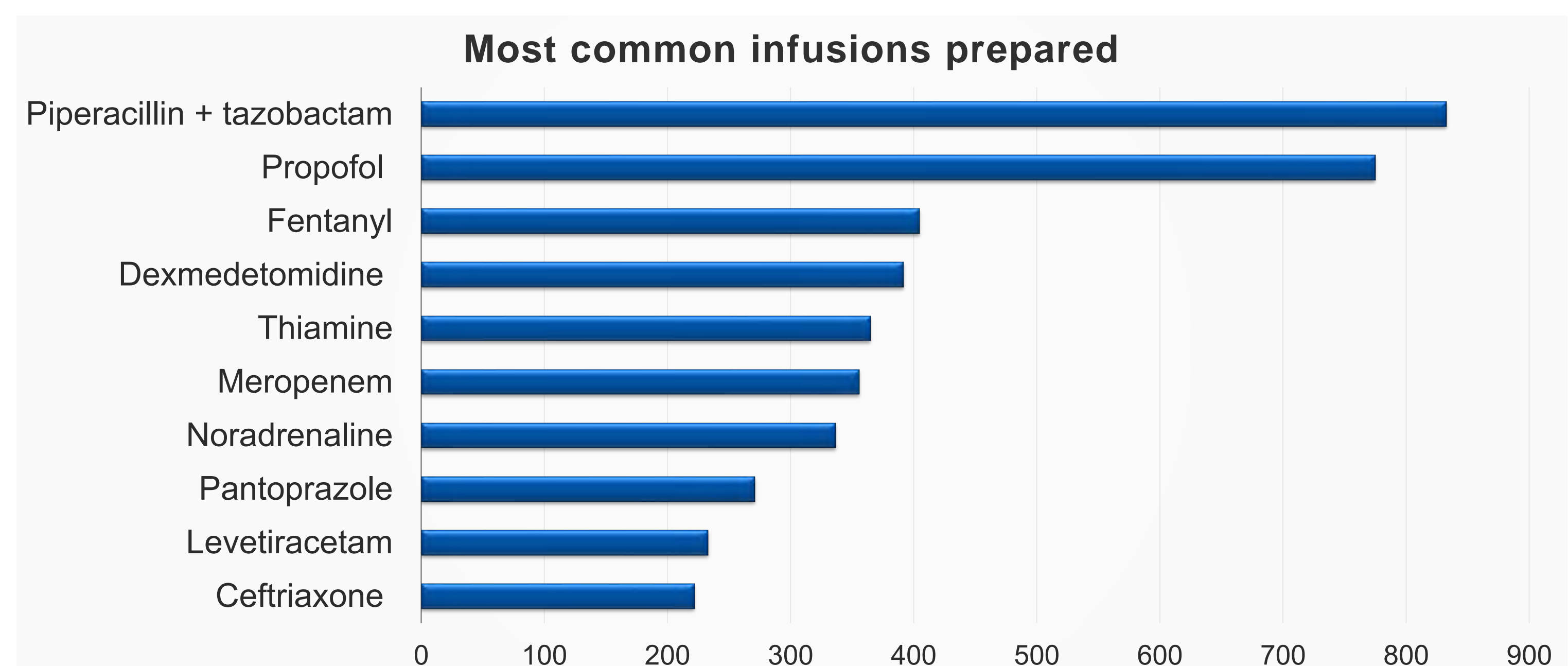
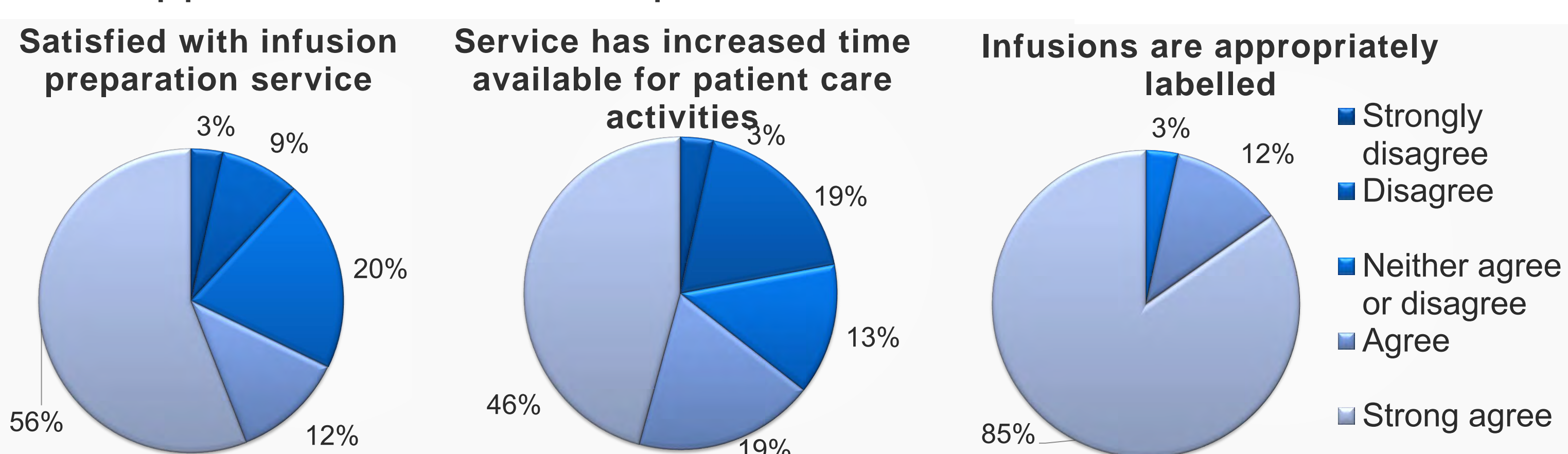


Figure 2. Most common infusions prepared by pharmacy support staff

An audit of labelling standards demonstrated labels prepared by pharmacy staff were 93% compliant (14/15) compared to 6% (1/17) prepared by nurses in the same period. Nil incidents involving pharmacy staff prepared infusions were reported compared to nine incidents involving nurse prepared infusions during the 30 weeks.

Wastage of infusions was minimal with 58 of 2,527 (2.3%) infusions prepared being discarded during the first 22 weeks of service, most commonly due to cessation of infusion following preparation.

Nursing staff were surveyed for their satisfaction to the service (Figures 3 to 5). Respondents (n=59) provided additional feedback related to time to prepare opioid infusions resulting in process improvements. Pharmacy support staff feedback revealed 100% (17/17) were satisfied with their role and 88% (15/17) agreed nursing staff appreciated the service provided.



Figures 3 to 5. Nursing staff feedback survey results (n=59)

Discussion

The rapid development and implementation of this novel and advanced pharmacy support staff role within a critical care environment successfully supported nursing colleagues during a COVID-19 surge. There is learning applicability across advanced scope of practice role development, credentialing and interdisciplinary collaborations.

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