

Introducing a new role: Critical Care Infection Specialist Nurse



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Abstract

As a tertiary centre that uses the clinical laboratories based at a different NHS trust, we have previously relied on contracted microbiology input from them. These rounds happened 3 days a week, which meant that we were not compliant with GPICS version 2 guidelines stating that there should be microbiology input for patients five days a week

To address this, we created the role of Critical Care Infection Specialist Nurse. The role aims to ensure 5 days per week of microbiology input for patients on antibiotics and assist in cascading antimicrobial stewardship information to the rest of the team.

Responsibilities of the role

The role encompasses multiple areas associated with infection

Microbiology

- Liaise with the laboratories and feedback advice to the ITU team
- review patients with existing or suspected infections 5 days a week
- Audit antimicrobial use and identify areas for improvement in conjunction with pharmacy

Sepsis

- Promoting the trust Sepsis Policy and providing education for new staff
- Provide direct feedback to sepsis first responders as part of a quality improvement project

Infection Prevention and Control

- Review all bacteraemias within the critical care area and report back on these to the Matron and IPC team
- Initiate central line and Peripheral Vascular access surveillance as part of a quality improvement project

My background and feedback from other staff members

I graduated from the University of Liverpool in 2014 with a MBiolSci (Genetics) and subsequently gained healthcare experience working at Liverpool Heart and Chest Hospital as a Healthcare Assistant. I was then given the opportunity to complete my nurse training through trust sponsored secondment at Liverpool John Moores University and graduated in 2018.

I began working in Critical Care at Liverpool Heart and Chest Hospital in September of 2018 and continued to develop myself as a nurse here. In mid-April 2021, I began my role as Critical Care Infection Specialist Nurse and the initial response to the role has been extremely positive.

The majority of the feedback that I have received is that people feel that they have a dedicated person on site to come to with queries about infection and antimicrobial use.

I have also been told that my role has freed up time for the ITU medical team as I can liaise with the laboratory during office hours.

The Consultant Microbiologist has also felt that my role on site has allowed him to get a better understanding of the patients. I can report back any problems daily and provide a detailed history before ward rounds so that he can make a better informed decision for care plans.

In order to become a more autonomous practitioner and provide even better support to both the ITU and Microbiology teams, I have been supported by the trust to commence the MSc Clinical Microbiology (Distance Learning) course provided by the University of Nottingham. This is providing me with more confidence in my understanding of infection.

Impacts

Over the last 7 months I have been involved with multiple projects.

SOFA score adjustment trial

As part of our Sepsis Improvement plan, we identified that there may be a risk of missing Sepsis in our long stay patients. We currently use SOFA as part of an early warning system. This identifies a risk of sepsis in those with a score of 2 or more above the admission baseline.

However, often our patients are admitted to the Critical Care area with a high SOFA score due to the acuity of their condition. This then improves over time. However, if a patient then begins to deteriorate again the SOFA score may not rise above the original high baseline score. And so, these patients may not be identified as at risk.

We have begun to trial an adjustment to the SOFA score trigger within our unit. We now compare the current score to the lowest recorded score. This should make the system more sensitive and reduce the chances of patients becoming septic.

DRIPPS trial

I am currently involved in the DRIPPS collaborative line infection surveillance project, which has been organised by the Royal Wolverhampton NHS Trust. The aim of this is to trial a standardized method of reporting line infections to allow areas to identify trends and compare rates of infection between NHS Trusts to enable patient safety improvement.

So far this has been a great help in identifying key areas of practice to review in order to reduce the number of line related/associated bacteraemias within our Critical Care Area, and we are now hoping to expand this to the ward areas within the trust to cover those inpatients on the wards with Midlines/PICC lines.

World Sepsis Day

The 13th September each year is World Sepsis Day. As a trust we aim to use this day to promote sepsis awareness to all out staff, both clinical and non-clinical, as sepsis can occur both inside and outside of the hospital. It was my first year assisting the Critical Care Outreach Team and the Antimicrobial Pharmacist to promote the day.

This year we visited each ward to answer any questions that staff had about Sepsis and the policy within the trust. We also set up a stall at the main entrance to provide information to non-clinical staff and visitors to the trust.



World Sepsis Day 2021

Conclusions

I believe that my role has made a real difference to the care of our Critical Care patients. Particularly our complex infection patients that then continue to receive reviews by myself and the Consultant Microbiologists once they leave critical care.

Through conversations with Microbiologists in other parts of the country, I understand that the situation prior to the implementation of my role is not unique to our trust. I would therefore recommend other hospitals explore the idea of implementing a role similar to mine in order to support the microbiology team when they cannot have a five day on-site service available.

In the future, I am keen to develop links with other Cardiothoracic Centres to enable sharing of learning and discussion about trends in cardiothoracic infections.

References

DAVIS, E. & MCKEE, R. 2019. Section 3.5 Interaction with Other Services: Microbiology, Pathology, Liaison Psychiatry and Radiology in GUIDELINES FOR THE PROVISION OF INTENSIVE CARE SERVICES (online) Available at: https://www.ics.ac.uk/ICS/ICS/Pdfs/GPICS_2nd_Edition.aspx [Accessed 22/5/21]