

Clinical Audit Presentation

1 April 2019

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Agenda Item No: 11.5.1

NEUTROPENIC SEPSIS - DOOR TO NEEDLE AUDIT

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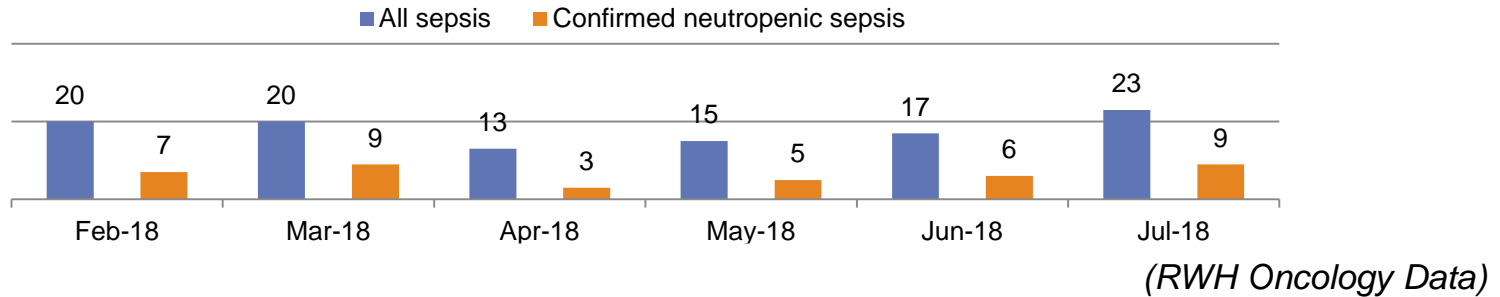
Audit completed - September 2018



Background



- Neutropenic Sepsis
 - Oncological emergency – mortality risk
 - *Global prevalence is unknown – lack of epidemiology data (NICE 2012)*



- Changes needed to be made to practice as we had significantly worrying “door to needle time” compliance
 - 2016 - 2.6%
 - 2017 - 8.8%
- Following 2016 audit:-
 - Placed on Directorate risk register
 - Neutropenic sepsis working group was launched (March 2017)

Background cont.

- 2017 Trust Agenda for Sepsis Management
 - Appointment of two Sepsis Lead Clinicians
 - Reviewing practice around sepsis for all area (In-patient/emergency portals)
 - Implementing Trust Screening Tool (Adult/Maternity/Paeds)
 - Education promotion of Sepsis throughout the organisation

THIS WAS PERFECT TIMING FOR US!



Action Plan following 2017 Audit

- Invited to attending ED sepsis work group – sharing practice.
 - *Pivotal moment!! (Collaborative working)*
- Educational drive
 - E-Learning package – all trained nurses within the directorate
 - Academic Meeting – Medical staff (March & Sept 2017)
 - Grand Round (Oct 2017)
 - ED Nurse training (August 2017)
 - Specific inclusion at local induction training (nurses/medics)
- Implementation of Trust Adult Screening Tool
- Patient Group Directive for 1st dose antibiotic administration
- Development of competency base framework for blood culture collection

2018 Audit - 2 Key Aims



1. To re-evaluate compliance for the management of neutropenic sepsis within the Trust
2. To evaluate changes made following 2017 audit action plan

Standards applied:-

- Trust Policy – P17 Neutropenic Fever Policy
- Acute Oncology Service Quality Surveillance Programme (QPS) Measures
- NICE Guidance for Neutropenic Sepsis
- National SEPSIS 6 guidance
- Mortality Rates for Neutropenic Sepsis (NICE 2012)

Methods

- Retrospective audit using an in-house designed audit template
- Audit data period of 1st February to 31st July 2018
 - 6 months of data reflecting QPS measures requirements
- Methodology
 - Cohort identified using in-house AOS database
 - Data collected by reviewing medical records (CWP), TD web results and AOS assessment log sheets
- Inclusion criteria
 - All oncology patients having received SACT within the last 6 weeks who were admitted with signs of sepsis.
 - Neutrophils ≤ 0.5

Findings

- Cohort

- Database found 108 patients admitted having received SACT with the last 6 months who were febrile (*110 in 2017*)
- 39 patients were found to had a ANC ≤ 0.5 (36%)
(34 (31%) patients in 2017)

	2018	2017	2016
Male	9 (23%)	13 (38%)	12 (29%)
Female	30 (77%)	21 (62%)	29 (71%)

Mean Age

62 years
(61yrs 2017)

Findings



Admission portals

ED 20 (51%) Vs Durnall 19 (49%)

84% of patients were transferred to/cared for in an oncology bed

(67% in 2017)

Length of stay (median) = 5 days

(4 days in 2017)

Findings

Adult Sepsis Screening & Action Tool

54 % of all cases reviewed had evidence this pathway was used to screen for sepsis

(15% in 2017)

Blood Cultures

Blood cultures taken within an hour of admission = 55%

(20% in 2017)

Taken prior to Abx being given = 76%

(47% in 2017)

Findings

Antibiotic Prescribing

41% treatment sheets had missing data.

(Limitations of retrospective data collection)

Median average time = 55 mins

(2 hours 55 mins in 2017)

Prescribing to Administration Times

Difficult to produce meaningful data

- Missing abx prescribing times

Median average time = 45 mins

(2hrs 55 mins in 2017)

Findings



Door to Needle Times

Antibiotics administered
within 60 mins of
presenting to hospital =
46%

8.8% in 2017

Median average time = 1
hours 8 mins

3 hours 15 mins in 2017

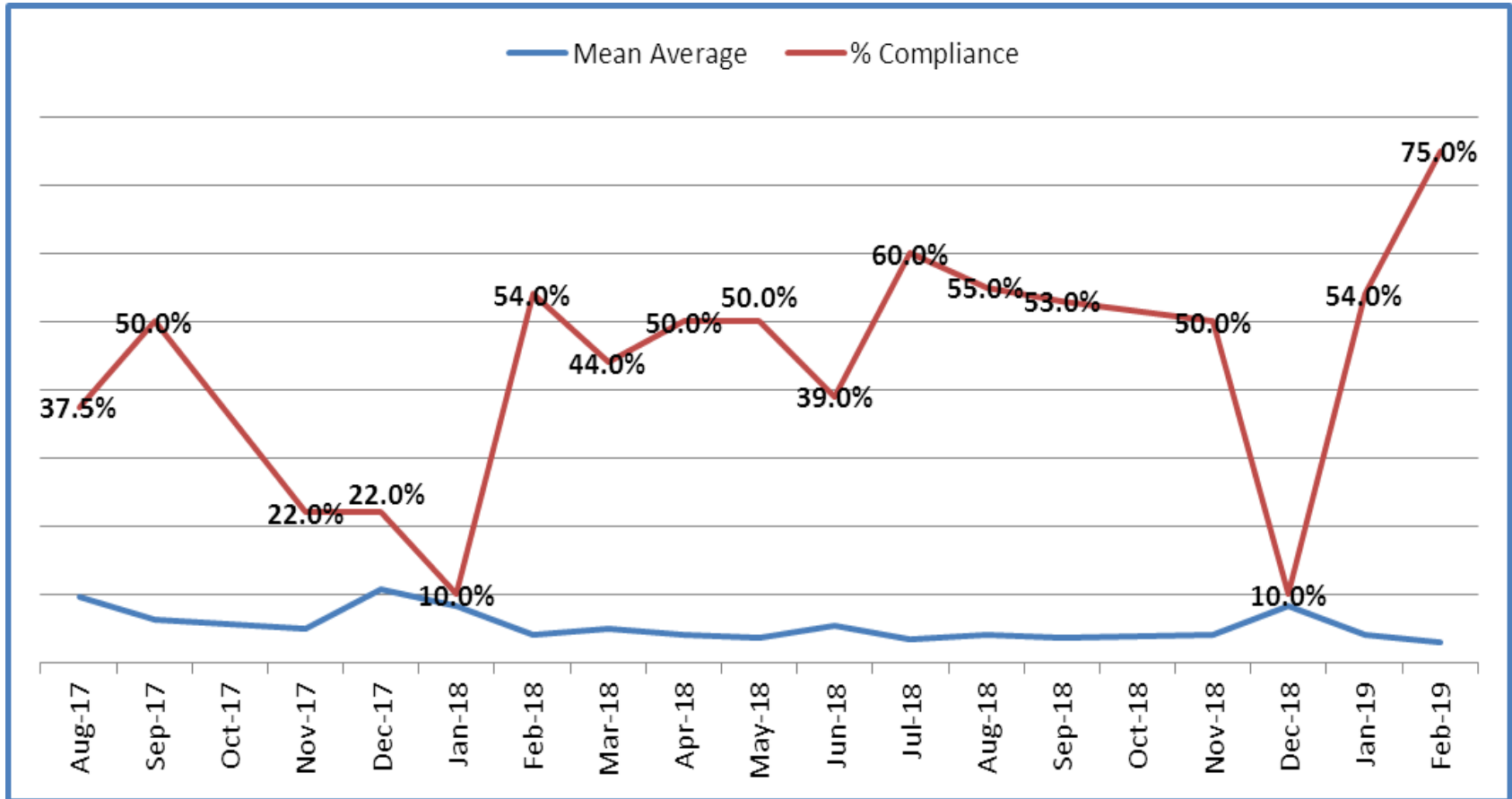
Mortality Rates

Mortality Rate = 2.5%

Last years data (3%)

(NICE mortality rates = 2 to
21%)

Sepsis Working Group Door to Needle Compliance



This includes **all sepsis** admissions through ED & Durnall

Conclusion



There is consistent and steady improvement in ALL areas of the neutropenic sepsis pathway compliance

- Thanks to collaborative working with ED.

There remains more work to be done (all areas) to achieve the CQUINs Sepsis requirements of 90% for door to needle compliance

Working groups will continue to evaluate compliance/practice:-

- Impact the introduction of PGDs & blood culture practice will have?
- Use of pre-filled Abx syringes?
- Implementation of NEWS2 (help to identify patients specifically at risk of sepsis)