Objectives

• Overview of Tayside stats

• Audit COVID and non COVID

• AMT
Overview

• 331 patients with SARS-CoV-2 came through Ninewells from 13\textsuperscript{th} March to 1\textsuperscript{st} May.
• 85 of these patients have died (at least)
• 247 positives presented through medical COVID assessment
  – 15 of these were negative on admission
  – 53 who presented through COVID assessment have died
• 82 positives came through alternative pathways
  – 32 who presented through alternative pathways have died
Assessed in COVID medicine wards/assessment area
N=874

Negative
N=642
NB 15 subsequently positive

Positive
N=232

Admission under 24 hours (n=72)
Median age: 57 (48, 63)
34 males, 39 females

Admission over 24 hours N = 160
Median age: 74 (63, 84)
34 males, 39 females

Survived 96 (73.2%) : Death 35 (26.8%)
HDU = 19
HDU Total ignoring admission route = 42
Survived 14 (48.3%) : Death 15 (51.7%)
ICU = 9
ICU Total ignoring admission route = 24
Survived 8 (33%) : Death 16 (77%)

Median age of admissions:
ISARIC: 72 (57, 82) M:F 3:2

Ninewells positive COVID swab via ICNet
Jan 2020 to May 13th 2020
N=326

Discharged = 231
Death = 66
Outcome awaited = 29
Overall COVID pathway

Total admissions
Age: 71 (58, 82)
Gender: 199 male, 132 female

Deaths
Age: 79 (71, 86)
Gender: 57 male, 28 female
COVID WARD
ANTIMICROBIAL AUDIT

• Included
  • All patients on Covid wards - 42, 18,19,11,12,CHDU (CITU not included) on 14/04/2020

• Data collected
  • Antimicrobial Prevalence
  • Compliance with NHST Antimicrobial Guidance
  • For IV therapy – review documented every 24 hours
  • For PO therapy – duration documented and as per guidance
  • Review of use of CRP/PCT
OVERALL RESULTS SUMMARY

• PREVALENCE
  – Patients audited = 50
  – Patients on antimicrobials = 15
  – Overall antimicrobial prevalence = 30%

Prevalence rate similar to audits pre Covid

• COMPLIANCE WITH POLICY
  – 100%
  ✓ Well done, great result!
OVERALL RESULTS SUMMARY

• IV ANTIMICROBIAL REVIEWS
  – 10/15 patients on IV antibiotics (some combined with PO)
  – 50% on IV had a documented review within the last 24 hours
  – 2 patients had been on IV >72 hours
    • 1 patient was suitable for IVOST

Good Practice Points:

☑ Please review all IV antimicrobials daily and document decision to continue/IVOST/stop

☑ No minimum time for IV duration – always good to consider IVOST
OVERALL RESULTS SUMMARY

• ORAL DURATION DOCUMENTED
  – 11/15 patients were on oral antimicrobials
  – 64% documented duration - 100% in line with guidance

Good Practice Points:
✓ Always document duration on TPAR and score off boxes not required
✓ Doxycycline
  • For non severe CAP/Exac COPD
    – 200mg stat then 100mg OD for 5 days
  • For severe CAP
    – 100mg bd – NO need for 200mg stat dose
  • Levels reduced significantly if given at the same time as multivalent ions e.g. Fe/Ca/Mg/antacids
    – Consider withholding/stopping while on doxycycline
    – If not possible then separate administration by at least 2 hours
    – Reducing the frequency of the supplement/antacid may be possible
OVERALL RESULTS SUMMARY

• CRP
  – 92% of all patients on COVID wards had CRP checked

• PCT
  – 1 patient (2%) had a PCT recorded
    • <0.5
    • antimicrobials not prescribed

Good Practice Points:
CRP tends to be moderately → significantly elevated in COVID-19 disease even in absence of secondary bacterial infection

☑️ Look for other evidence of bacterial infection (unilateral CXR changes, neutrophilia) - don’t be guided by CRP alone

☑️ Consider measuring procalcitonin if there is clinical uncertainty. See NHST poster!
Patients with suspected or confirmed COVID-19

Does my patient need antibiotics?

Most patients do not require antibiotics
- CRP can be raised in COVID-19 infection and does not necessarily indicate a bacterial infection
- Request a Procalcitonin (PCT) if considering antibiotics. 1 test authorised per patient in COVID-19 wards
- If in doubt ask a senior team member for advice
- Many patients have a prolonged fever with COVID-19

Factors that reduce the likelihood of bacterial infection
- CXR - bilateral symmetrical consolidation/ground glass change
- Bloods - lymphopenia without neutrophilia
- Symptoms - dry cough, clear sputum

Factors that increase the likelihood of secondary bacterial infection
- CXR – unilateral / asymmetrical consolidation
- Bloods - neutrophilia or increase in WCC
- PCT > 0.5
- Symptoms - purulent sputum

Hold off antibiotics
- Reconsider if patient deteriorates, COVID-19 testing is negative, or patient develops:
  - a neutrophilia or purulent sputum
- Send repeat microbiological investigations (blood cultures, sputum culture) and assess for an alternative source of infection.

Consider antibiotics
- Prescribe as per NHS Tayside Guidance
- Use IV therapy when oral route not available or if severe
- Review all antibiotics daily along with microbiology investigations/results
- Stop antibiotic treatment after 5 days unless microbiological results suggest a longer course is needed or the person is not clinically stable
- Check duration on Antibiotic Man. These patients should be discussed with ID/Micro

COVID-19 Poster
- Adapted from Lothian template
- Highlights where antibiotics can/should be used

Adapted from NHS Lothian template with kind permission.

Contact: Antimicrobial Stewardship Team: Tay-UHB.antibioticpharm@nhs.net
ID Team: Tay-UHB.id@nhs.net
Non COVID wards - Audit

- Audit carried out in all non COVID wards in NW and PRI:
- Prevalence:
  - 23.9% PRI
  - 35% in NW
- Compliance overall:
  - 77% NW
  - 95% in PRI
- Diff in compliance show the role of AMT/ID
- Within NW different specialties and staff were mixed together to create the non-COVID wards so could account for the reduced compliance
- Can this be maintained through winter months? Staff pulled to COVID areas
AMT

- Clinical role – ID ward → COVID assessment
  Out patient clinic area (HIV/ID) → COVID triage
- Moved to diff working patterns (evenings/weekends)- mirrored medical staff
- Stewardship work postponed – clinical role priority (same as other boards)
- AMG/ADTC – virtual
- E & T – no students in wards, maintained virtual session with medical students through blackboard
WHAT NEXT?