Starting on the right track!

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have **emergency laparotomy** after an emergency admission to hospital

undergoing **emergency laparotomy** are admitted via the Emergency Department


WRONG WAY
RIGHT WAY

My ED

- Random day
- 13/174 (7.5%) presented with abdo pain
- 4/13 (31%) admitted
- 1 NELA cases – ischaemic small bowel







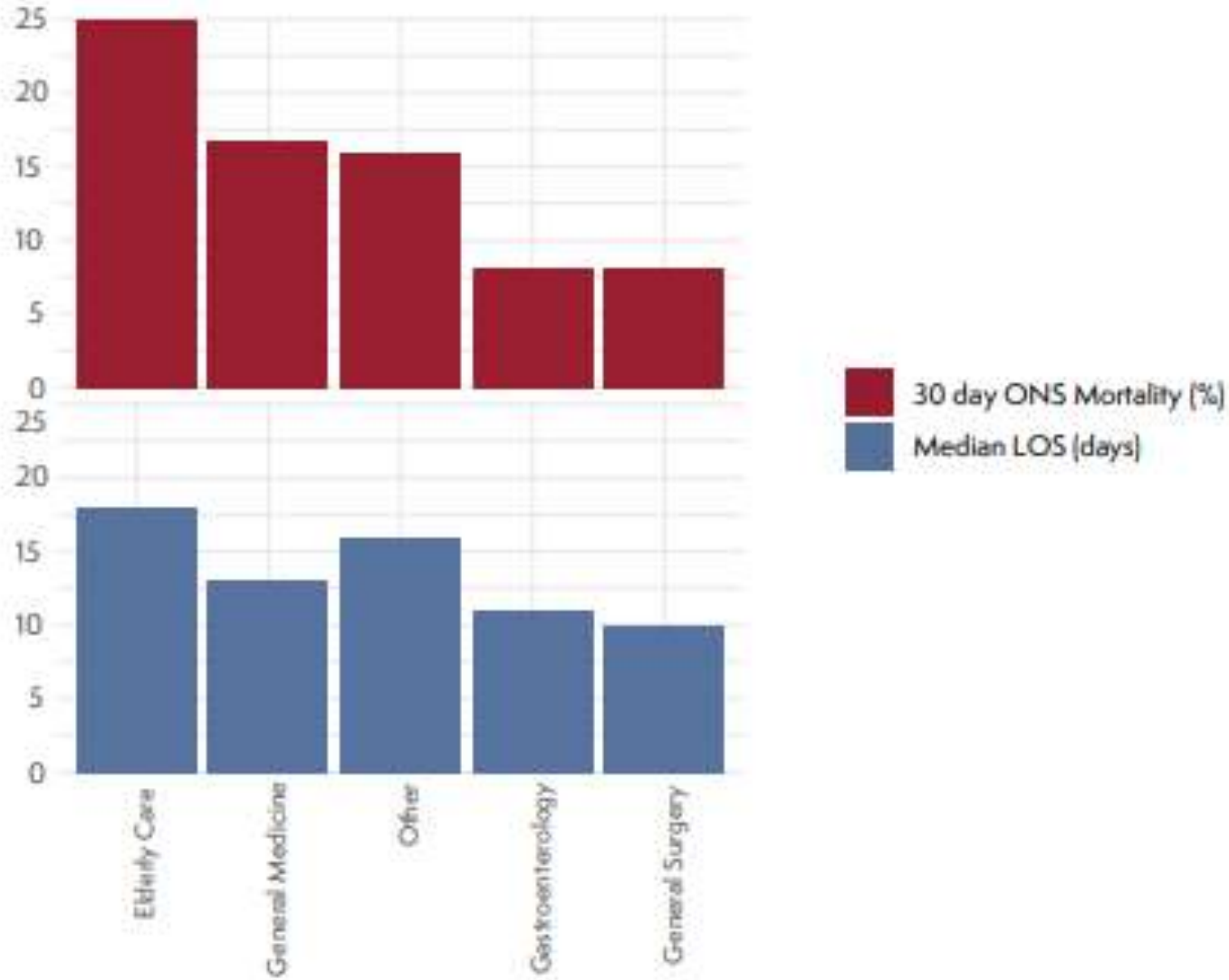
85 yr F

- 13:55 arrived in ED
- 13:57 Triaged
  - Sudden onset of abdo pain 10/10, gripping pain, urgency to BO. P/U ok, vom x2 & feeling nauseous. On ambulance episode of confusion, clammy & sweaty. Nil CP, known AF, taken apixaban. Nil pain relief. Staying with daughter.
  - Triage cat 3/yellow
- 14:01 FBC, U&E, LBP, Amylase, CRP, venous gas, ECG
  - Triage cat 2/orange (lactate 5.9)
- 14:12 ED cons – iv fluids, analgesia
- 15:22 Gp&S, coag
- 15:48 CT
- 16:19 CT report
  - Closed loop small bowel obstruction with slight distension of ischaemic looking bowel…
- 16:57 C19 swab
- 17:08 Ward c/o Surgeons
- 00:00-01:00 Theatre
  - 1m ischaemic small bowel, division of adhesion band, gut viable, washout…

- Dept fully staffed
- No bed holds
- 22 pts in the dept
- 12 in the last hr
  - 3 cat 2/orange
  - 2 cat 3/yellow
  - 7 cat 4/green
  - Age range 12/52 to 83
  - SOB, CP, ?CES, rash, epistaxis, elderly falls, limb injuries, diarrhoea, fever
  - 7 admitted, x1 streamed to ACU, x1 home with CO@H

- We don’t always get it right!

Figure 4.1.2 Association between admitting specialty and outcomes for patients undergoing emergency laparotomy

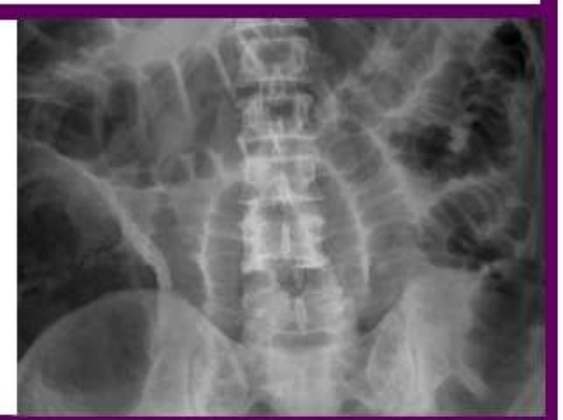


- Why the disparities in mortality & LOS?
  - Admitted with other pathologies traditionally managed non-surgically which progress and require surgical intervention?
  - Failed to recognise a patient's surgical abdomen?
  - Making EoL decisions?
- The most common non-surgical admission specialty is elderly care
  - The 30-day mortality in this subgroup is 25%
  - More non-classical presentations, more diagnostic uncertainty
  - RCEM recommends senior sign-off for patients ≥ 70 years with abdominal pain
- Without local interrogation of your own data, it is impossible to know how to improve this.

The Royal College of Emergency Medicine

October 2016

Safety Alert: Abdominal Pain



Abdominal pain in the ED is a significant cause of diagnostic uncertainty and error. Perforations, AAA, obstruction and ischaemic bowel all being missed and leading to patient death.

Elderly and diabetic patients often have vague, nonspecific symptoms and atypical presentations of potentially life-threatening conditions.

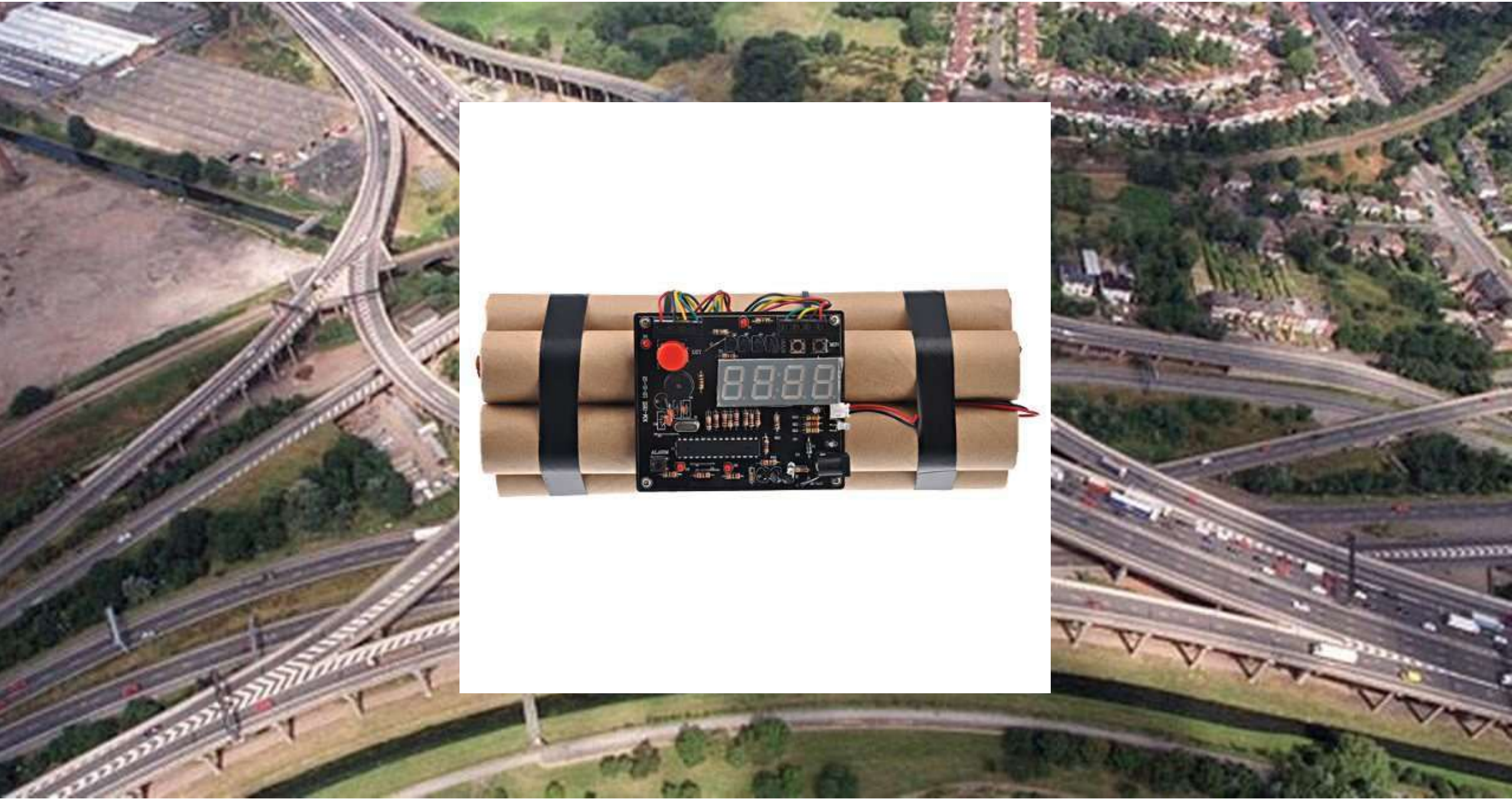
Older patients with abdominal pain have a 6-8 fold increase in mortality compared to younger patients. This group require more investigations and are more likely to require admission.

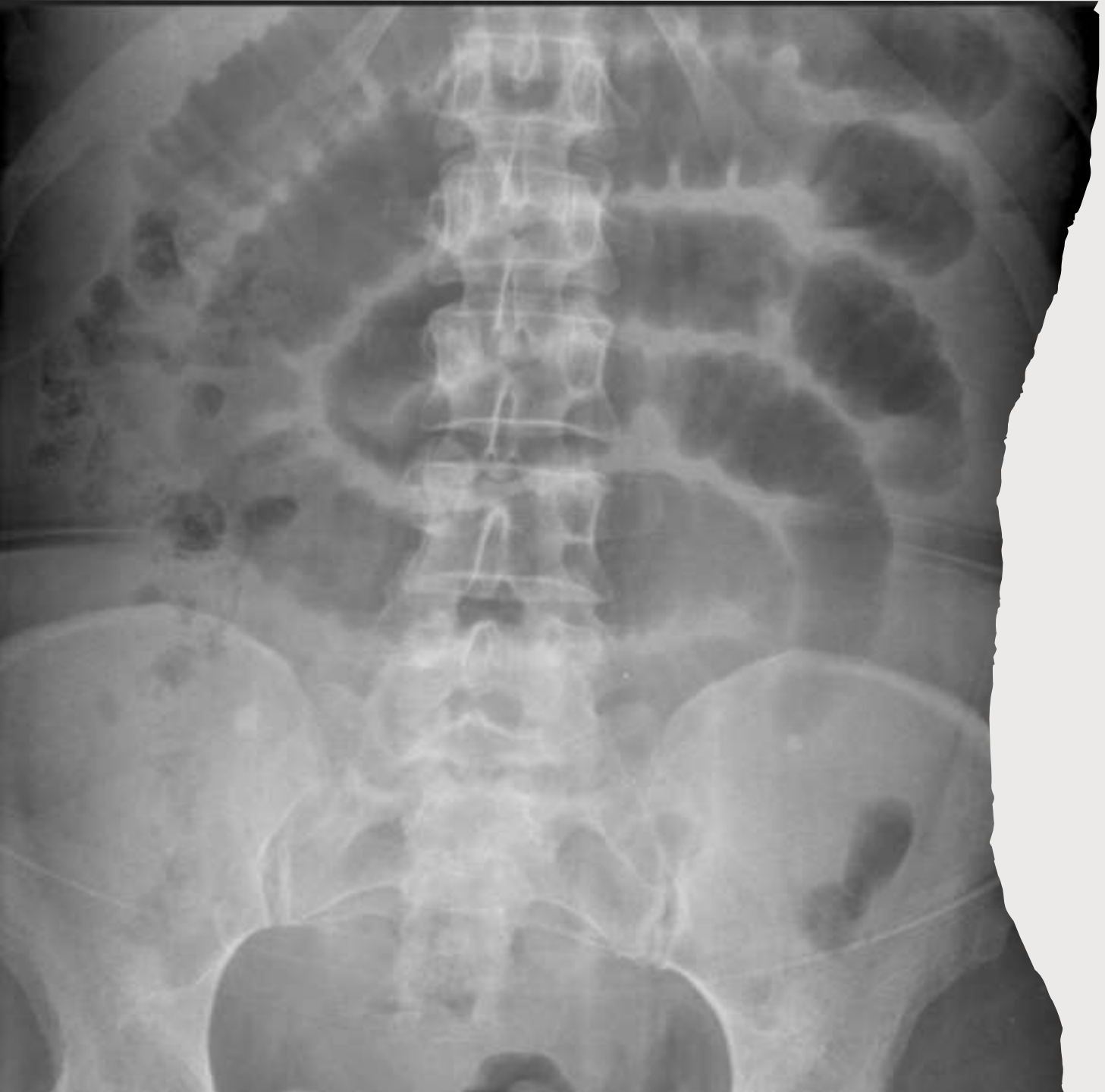
For patients with peritonitis (requiring urgent surgery), for every 1 hour delay in administration of antibiotics, there is a 10% increase in mortality. (NELA data)

For other RCEM issued Safety Alerts and Safety Newsflashes see:
www.rcem.ac.uk/safetyalerts

41 yr M

- 22:29 arrived in ED (day 0)
- 23:04 Triage
  - Gastroenteritis for 3-4/7, D&V, today bld in vomit
  - Pain score – moderate, NEWS2 0
  - Triage cat 3/yellow
- 23:32 FBC, U&E, LBP, Coag, Gp&S, VBG
- 07:01 (day 1) seen by FY2
  - Upper abdo pain since Sun 4/7, x2 episodes of vomiting Mon, diarrhoea 1-2 episodes/day – watery to pellet like, no mucus or bld. Yest started vom bld, multiple episodes, bld stained then brown in colour. Slight dizziness
  - OE – abdo tender in all quadrants, esp upper
  - wcc 14.29
  - Gastroenteritis
- 07:59 C19 swab
- 10:17 Ward – c/o Medics



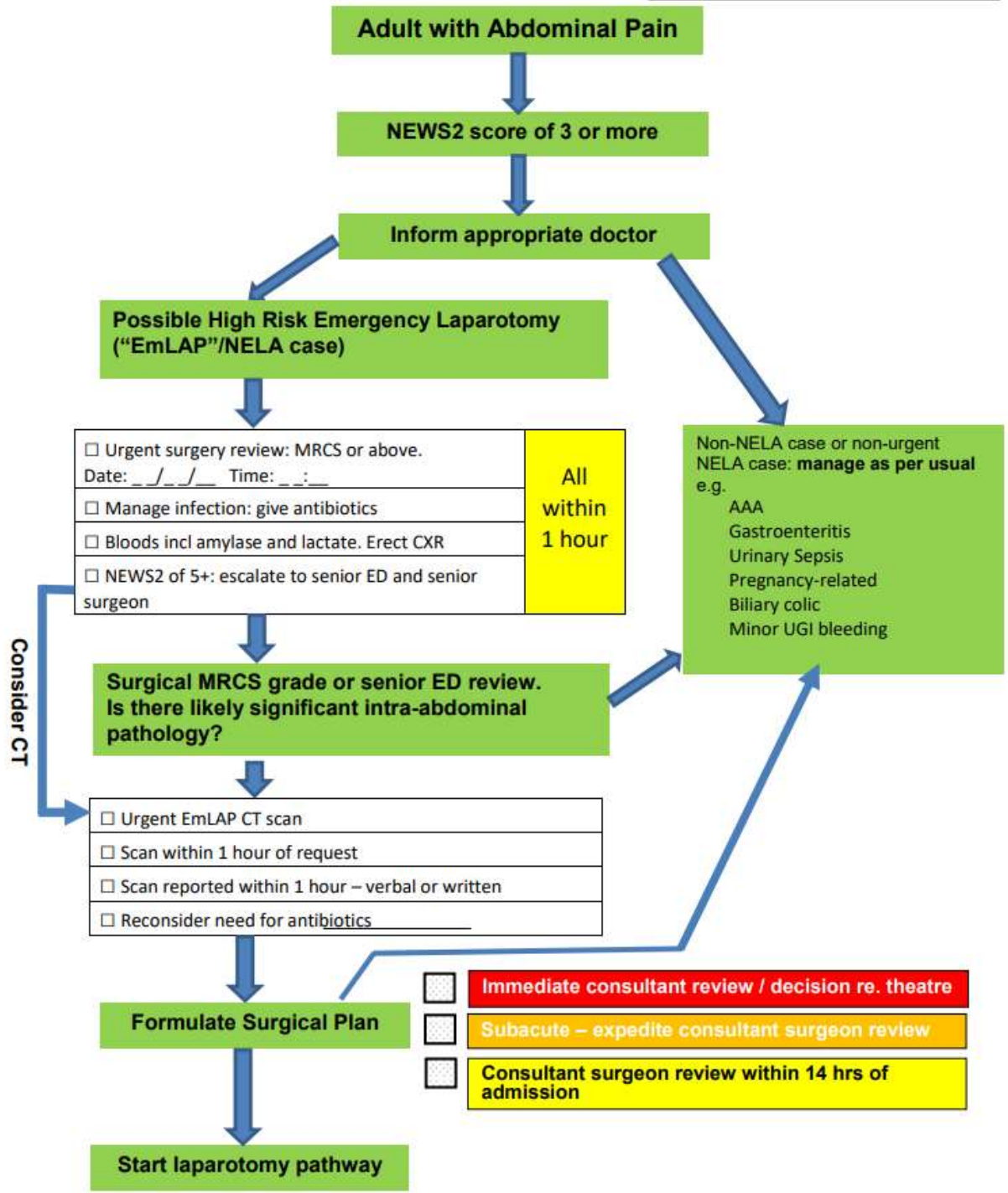


- Day 1 17:42 CXR, AXR
  - SBO
- Day 2 07:06 CT abdo
  - Reported 09:00
  - Severe dilatation of prox small bowel, suspected internal herniation
- Day 2 16:25-17:25 theatre
  - Distended fluid filled bowel, likely band adhesion to mesentery, released. 500mls serous fluid. Bowel decompression into NGT 2l
- Discharged day 12
- Readmitted day 15, discharged day 17, multiple contacts with GP


QUEEN
UNDER PRESSURE

The role of pathways

Entry criteria are key!


Adult with Abdominal Pain
NEWS2 score of 3 or more
Inform appropriate doctor
Possible High Risk Emergency Laparotomy ("EmLAP"/NELA case)
☐ Urgent surgery review: MRCS or above.
Date: _ _/_ _/__ Time: _ _:__
☐ Manage infection: give antibiotics
☐ Bloods incl amylase and lactate. Erect CXR
☐ NEWS2 of 5+: escalate to senior ED and senior surgeon
All within 1 hour
Non-NELA case or non-urgent NELA case: manage as per usual
e.g.
AAA
Gastroenteritis
Urinary Sepsis
Pregnancy-related
Biliary colic
Minor UGI bleeding
Surgical MRCS grade or senior ED review. Is there likely significant intra-abdominal pathology?
Consider CT
☐ Urgent EmLAP CT scan
☐ Scan within 1 hour of request
☐ Scan reported within 1 hour – verbal or written
☐ Reconsider need for antibiotics
Formulate Surgical Plan
Immediate consultant review / decision re. theatre
Subacute – expedite consultant surgeon review
Consultant surgeon review within 14 hrs of admission
Start laparotomy pathway

Sepsis

- 6 cases of ‘sepsis’ NELA
- 5 admitted via ED, 1 via telemed
- 1 admitted 1st to medics
- 0/5 triggered on NEWS2
- 1 CT’d, perf, ward at 8 hrs, theatre 8.5 hrs

Acute Abdominal Pain Pathway

NHS Airedale NHS Foundation Trust

Aim: *To identify patients who may requires urgent operative intervention*

Exclusion criteria:

Age < 18 years
Suspected AAA (refer vascular on-call CHFT/BTHFT)
Suspected Renal Colic (renal colic pathway)
Suspected GI bleed
Suspected gynae cause
Chronic pain

Patient's name
DOB
MRN
NHS number

Date_____ **Time of Arrival**_____

Initial assessment Time Completed_____ Signed_____

Tick once completed	
NEWS2	
iv access	
FBC	
Clotting	
U&Es, LBP, CRP, Amylase	
Gp&S	
VBG	
Blood cultures (if septic)	
ECG	
Urinalysis	
Pregnancy test (Female <60yrs)	
Pain score	

Early escalation to ED senior doctor
NEWS2 ≥5,
Lactate ≥2,
***OR* clinical concern**

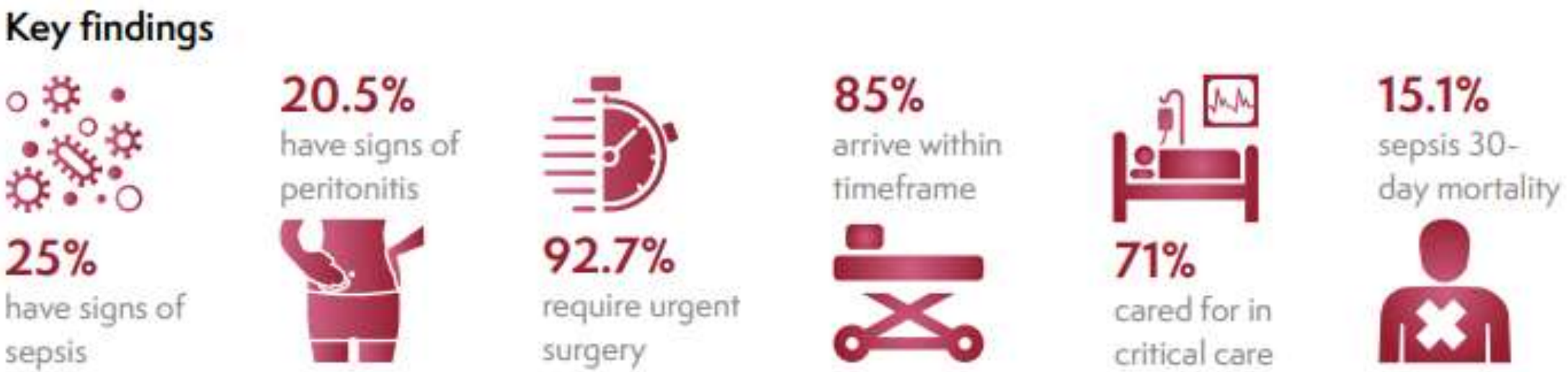
Clinical assessment Time Completed_____ Signed_____

Pain score	
Analgesia	
iv fluid	
Antibiotics within an hour of arrival for sepsis	Time:
Radiological investigation*	
Referral to on-call surgeon – to the MG if an emergency laparotomy is likely *or* NEWS2 ≥5	Time:

BEWARE:

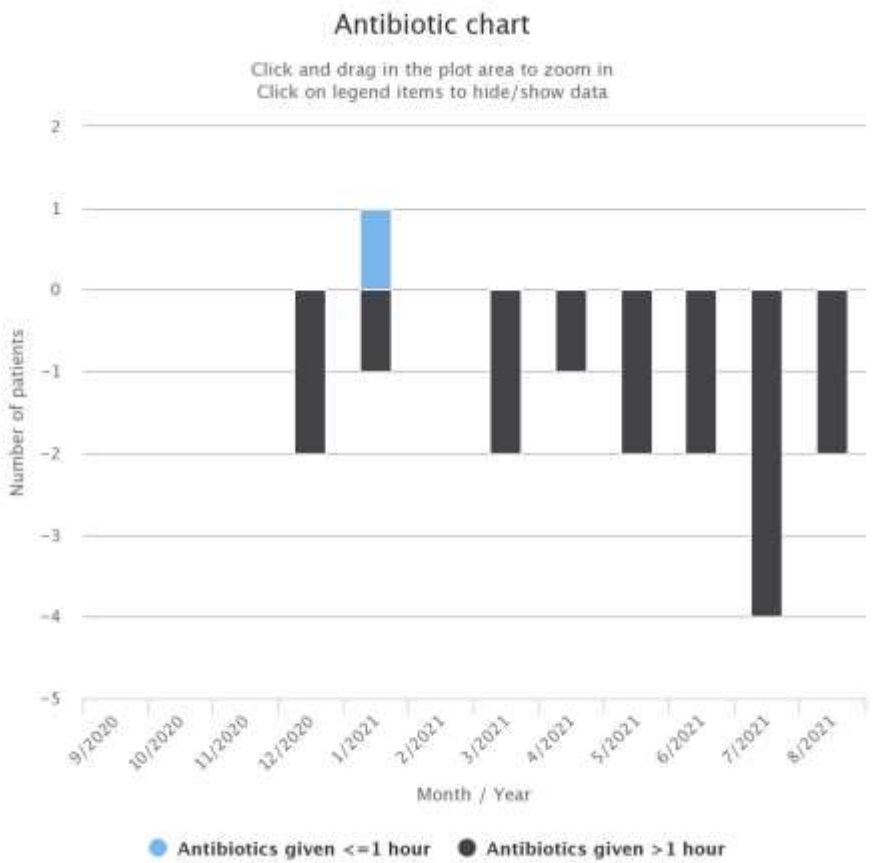
Elderly patient & patients on long term steroids or immunosuppressants, may have fewer clinical signs.

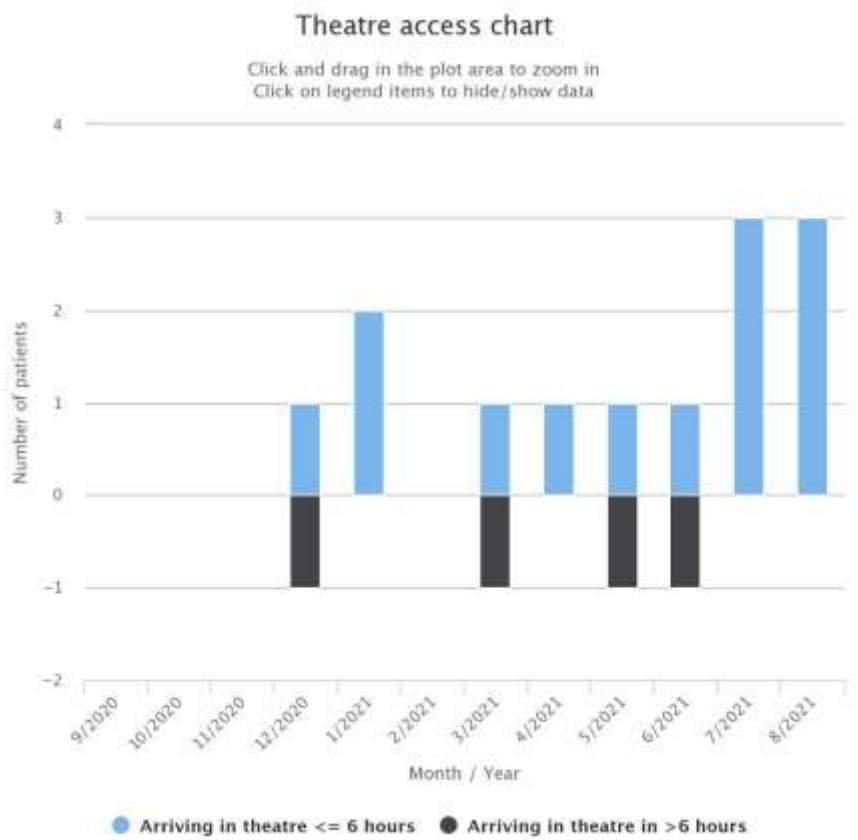
*An **erect CXR & AXR** as indicated.
CT abdomen requires discussion with the consultant radiologist, preferably by the surgical consultant or MG, however if this introduces significant delays to patient care, the ED consultant or MG may discuss.



…yet only ~ 20% of these patients are receiving antibiotics within an hour of arrival

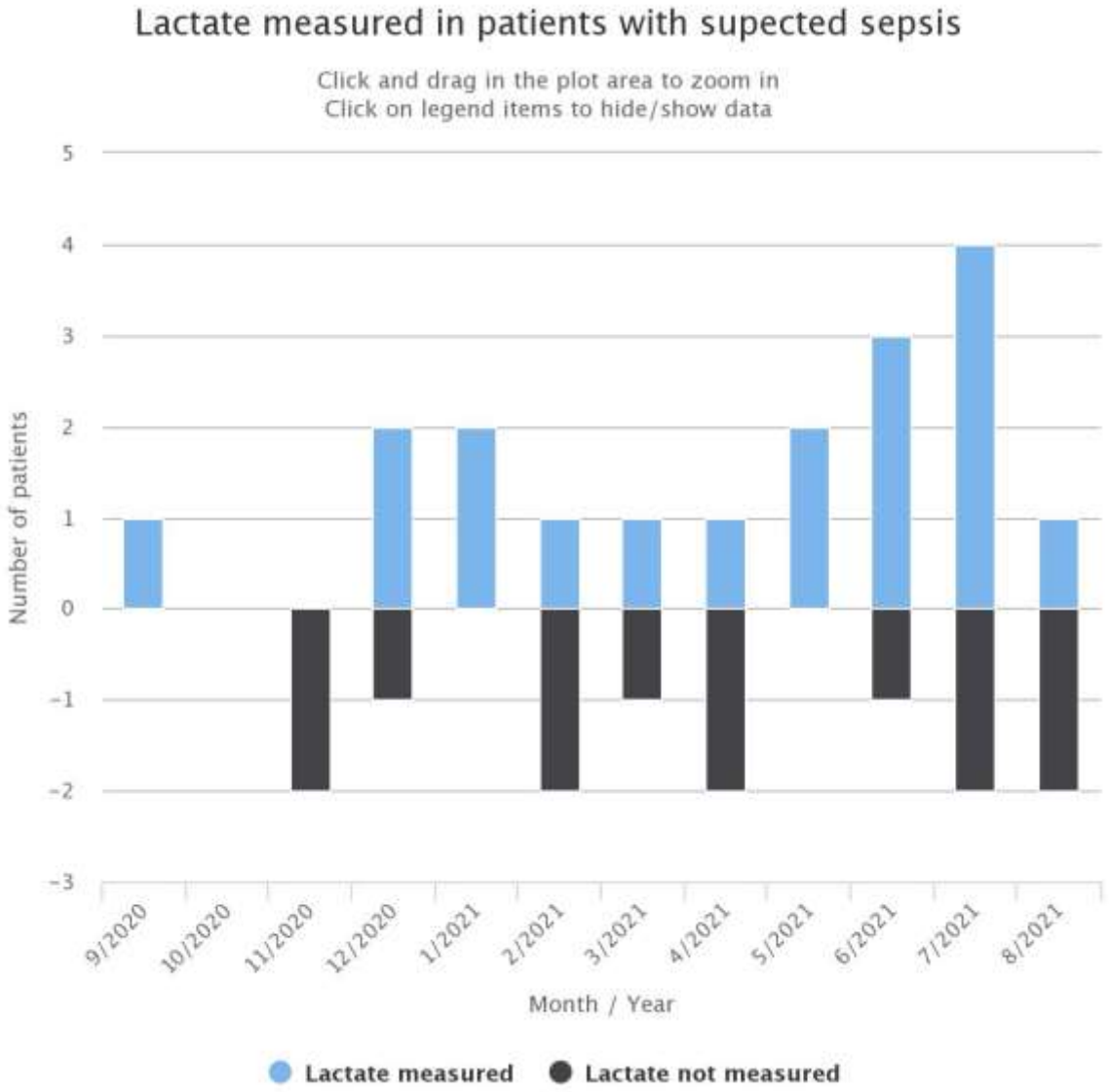
Antibiotics and Source Control





Diagnostic aids

- Understanding your data…
- Accurate picture?



When is it sepsis?

- NEWS2
- Peritonism
- Intra-abdominal infection (pre red flag sepsis)
- CT/intra-operative findings
- ***NEWS2 >= 5 or >= 3 in any one variable*** *or* ***another diagnosis requiring urgent antibiotics***
- *'patients who did not have a suspicion of sepsis indicated on admission or decision to operate, but who subsequently had* ***operative findings consistent with sepsis****'*

- ***When is time zero?***

Key Recommendation #1 – All about the ED

- NELA leads for Emergency Medicine should be appointed with job planned time to work with Anaesthetic, Surgical and Radiology NELA leads. https://www.rcem.ac.uk/docs/Local%20Guidance/Final%20position%20statement%20NELA%20lead.pdf

- Pathways should be designed *and followed* to facilitate early triage, assessment, investigation and surgical review of patients with acute abdominal pathology. These should be evaluated regularly, supported by use of NELA data.

NELA
National Emergency Laparotomy Audit


Where are
we now?

Local audit/QI

- Local MDT
- Local data
- Shared understanding and aims
- Use a structured approach to problem solve e.g. Achieving Behaviour Change (ABC)
  - Chose the target behaviour
  - Ask staff: Questionnaire, focus group – blend of both
  - https://www.improvementacademy.org/tools-and-resources/abc-for-patient-safety-toolkit.html

- **Sepsis**
  - NELA are having a free webinar on the 12th October 12:30-13:30. Ron Daniels will be speaking about sepsis, and the NELA data will be used to highlight the importance of early recognition and management of sepsis in the context of acute abdominal pain.

NELA
National Emergency Laparotomy Audit

Conclusions

- Understand your local data
- No silos!
- Appreciate the complexity and pressures in the ED
- Use RCEM and NELA recommendations
- Start one step at a time to understand the problem, so you can effectively fix it!

NELA
National Emergency Laparotomy Audit