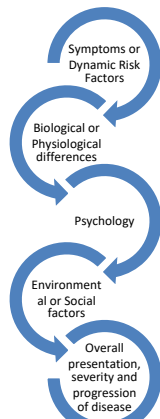


# Assessment of abdominal pain in the Elderly: a quality improvement project in the emergency department

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## Introduction



- The cause of acute abdominal pain can hold great uncertainty
- In older people this is further complicated by co-existent disease, delays in presentation and physical/social barriers

- Risk of serious and rapidly progressive pathology
- That is associated with a 6–8-fold increase in mortality in comparison to younger patients.<sup>1</sup>

Reference <sup>1</sup> Royal College of Emergency Medicine. RCeM Safety Alert. October 2016. <https://rcem.ac.uk/safetyalerts>

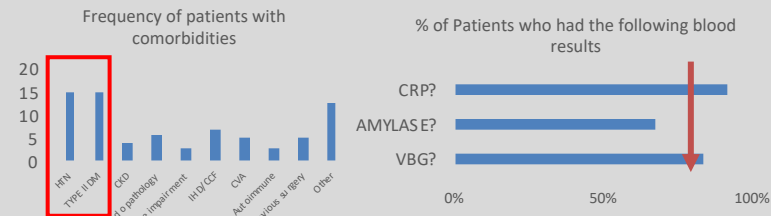
**Aim:** At present, there is no defined pathway in the assessment of older patients with acute abdominal pain. This QIP aims to look at the assessment of older patients presenting with abdominal pain to St Mary's Hospital London Emergency Department.

## Method

- Older patients over the age of 70 years presenting with abdominal pain were retrospectively selected
- Data was collected on baseline demographics, comorbidities, investigations/imaging, senior review assessment and referral to speciality.
- After the initial audit, we presented a slide detailing triage investigations daily at morning handover, and held a teaching session for doctors assessing these patients
- We then re-audited in two subsequent cycles to assess the efficacy of these interventions.

## Results

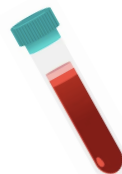
Total Sample  
**n = 45**



- Between 1–17 October 2021 45 patients over the age of 70 presented with abdominal pain
- Overall, the majority of patients were men (62%), the median age was 80.3 years and 20% of patients had four or more comorbidities
- Hypertension (15%) and type II diabetes mellitus (15%) being the most common
- Only 5–6% of patients had previous surgery or existing abdominal pathology
- 92% of patients had a C-reactive protein (CRP) test, 68% had an amylase and 84% had a venous blood gas lactate test
- 49% had a CT imaging and 35% had an X-ray (chest or abdomen). The average time to X-ray was 260 minutes; average time to CT imaging was 324 minutes. A digital rectal examination was documented in 24% of patients
- 49% of patients had a medical or surgical referral

## Post-teaching to nurses and junior doctors improvements

### Venous Blood Gas



**100% vs 84%**

CRP (100% vs 92%) and amylase (80% vs 64%)

### Time to X-ray



**110 minutes**

### Time to CT Imaging



**313 minutes**

### Senior Review



**90%**

- Abdominal pain in older people is a common presentation to the emergency department, with nearly half of patients requiring referral to either a medical or surgical speciality
- Of note, over half of patients underwent CT imaging, yet this formed the main cause of delay
- In this population, a high degree of diagnostic uncertainty and a relatively low radiation risk may prompt the question whether CT imaging can be warranted prior to X-ray.

**Conclusion:** Our Quality Improvement Project has demonstrated that simple teaching for doctors and nurses can improve the rates of important investigations of these patients. We plan to develop a pathway to bring about timely assessment and management for older adults presenting with abdominal pain in the hope of further improving their care.