

# Routine Pre-operative Investigations for elective surgery

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## Introduction

- There are several benefits of preoperative investigations before elective surgery:
  - assess risk and reducing harm to patients
  - predict post-operative complications<sup>1</sup>
- However, the clinical value of testing apparently healthy individuals is uncertain:
  - risk of false positives
  - evidence that clinicians do not alter management even after true positive results<sup>2</sup>

## Aim

- Review routine preoperative investigations for elective patients and assess:
  - if essential investigations are performed
  - if non essential investigations are performed
  - if investigations are repeated

## Methods

- Prospective study over 2 week period in November 2021 with notes reviewed on day of surgery
- Analysis performed in previous 3 months against the pre-operative Investigations recommended by NICE as 'essential' and 'non-essential'

### Excluded

- Bariatrics
- Paediatrics
- LA cases +
- Ophthalmology
- Cardioversion

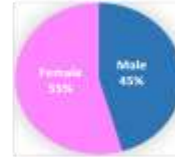
### Data recorded

- ASA grade
- Grade of surgery
- Co-morbidities
- Investigations in the last 4 months

## Results 1- Demographics

### Sex

- Male = 119
- Female = 143



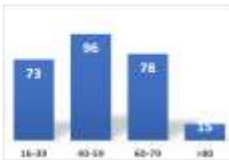
### ASA Grade

- I = 109
- II = 127
- III = 24
- IV = 2



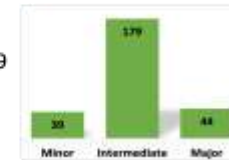
### Age Range

- 16-39 yrs = 73
- 40-59 yrs = 96
- 60-79 yrs = 78
- >80 yrs = 15



### Surgical Grade

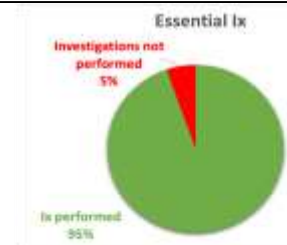
- Minor=39
- Intermediate=179
- Major=44



## Results 2-Percentage of Investigations performed as per NICE guidelines

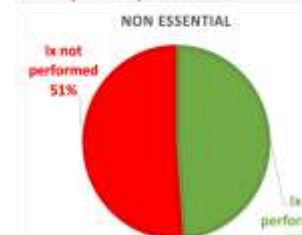
### Essential Investigations (number of patients)

- All essential Ix performed = 248 (95 %)
- Essential Ix not performed = 14 (5 %)
- ECG x 12, U&Es x1, FBC x1



### Non Essential Investigations (number of patients)

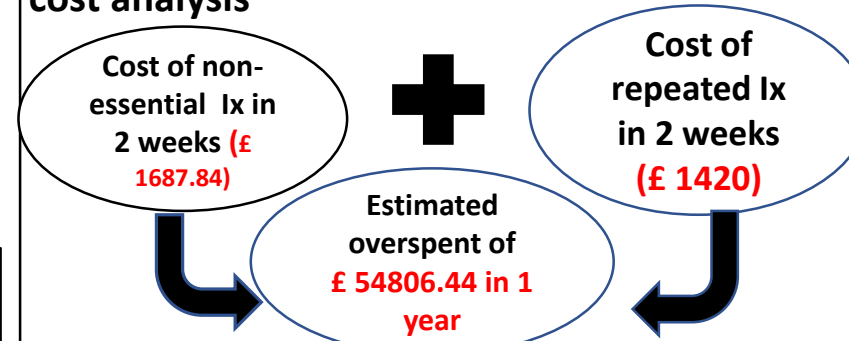
- No "non-essential" investigations performed = 128 (49%)
- "Non-essential" investigations performed = 134 (51%)
- FBC = 107, U+E = 54, LFT = 18
- Clotting = 17
- HBA1c = 9, ECG = 12
- Total = 217 investigations



## Results 3-Repeated Investigations

- Patients with essential Investigations repeated = 38 (15%)
- 72 repeated tests in total
  - FBC = 28    U+Es = 29    Clotting = 1
  - HbA1c = 3    TFT = 1    LFT = 1

## Results 4-Total Cost of additional tests and cost analysis<sup>1</sup>



## Conclusions

- We are over-investigating patients, especially ASA I + II
- We are repeating already performed investigations (some of which classes non-essential by NICE)
- This results in significant financial burden to the NHS and unnecessary investigations for the patients.

## Recommendation:

- Re-design pre-assessment tools in line with NICE guidelines

## References

- National Guideline Centre (UK). Preoperative Tests (Update): Routine Preoperative Tests for Elective Surgery. London: National Institute for Health and Care Excellence (NICE); 2016 Apr. PMID: 27077168.
- Munro J, Booth A, Nicholl J. "Routine preoperative testing: a systematic review of the evidence". *Health Technol Assess* 1997;1(12), i-iv\