

Introduction

A large proportion of patients presenting for elective surgery undergo a barrage of investigations for little to no indication with follow up on results being tenuous at best. We carried out an audit on pre-operative investigations performed prior to elective surgery and their impact on peri-operative management in a university teaching hospital. We compared the results of our data with the National Institute for Health and Clinical Excellence (NICE) guidelines and recommendations.[1]

Methods

This was a retrospective study to investigate our current process for booking investigations and identifying any excessive investigations. Electronic records were examined to ascertain ASA status of the patient and surgical grade of the procedure. The pre-operative investigations were also analysed for both the indications and results. This data was compared to the NICE guidelines to calculate the amount of unnecessary investigations. Figures for costs of investigations were obtained from the Finance Department of the hospital.

Results

A period of one week was selected with a total of 103 patients undergoing elective surgery in this timeframe. In this cohort of patients, a total of 348 investigations were carried out. 259 (74%) of these investigations were deemed to be unnecessary or not required as per the NICE guidelines. We examined the findings of the 259 unnecessary investigations. We ascertained that none of these results altered the management of the patients throughout the perioperative period.

Savings	FBC	UE	COAG	ECG	CXR	Total
Surplus	56	68	63	51	50	
COST €	3.16	1.41	6.7	40	42	
Weekly	€176.96	€95.88	€422.10	€2,040	€2,100	€4834.94
Yearly	€9,201.92	€4985.76	€21,949.20	€106,080	€109,200	€251,416.90

Discussion

This audit revealed that there is a serious issue with overuse of pre-operative blood tests, chest x-rays and electrocardiograms. Instead of tailoring our preoperative investigations to fit each patient our current approach is to use a blunderbuss approach on all patients in the hopes it will identify a relevant issue. The use of rainbow testing may also increase the risk of having a missed incidental finding.[2] This could be potentially improved with the implementation of single site-based guidelines. This could lead to a decrease in the financial burden on the HSE with a maximum possible saving of €251,416.90 in one year and significantly reduce potential harm to patients. We are currently working to introduce an electronic version of these guidelines to improve our current practice.

References

1. Routine preoperative tests for elective surgery: summary of updated NICE guidance, BMJ.
2. An observational cohort study on pre-operative investigations and referrals: How far are we following recommendations? IJA.