

## Short Communication

# Telephone Pre-Assessment Prior to Elective Surgery: The Potential Impact

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## Abstract

The aim of the Pre-anesthesia Assessment Clinic (PAC) is to minimize the risk of preventable complications in the peri-operative period. However as the number of surgical procedures increases, novel, collaborative care pathways are required for the service delivered by the PAC to remain sustainable. Telephonic pre-assessment could solve some of the issues faced by overwhelmed PACs. However there are no robust data on the potential benefit to patients or hospitals. A retrospective review of 126 consecutive patients undergoing day surgery was therefore performed to determine this. In this cohort 71 patients (56.3%) were identified as low risk and could have been pre-assessed by a nurse-led telephone service. Forty three patients (34.1%) were considered to be at moderate risk of complications. These patients would need to attend the PAC but telephonic screening may have saved time at the PAC. Thus 90.4% of patients referred to the PAC could have benefitted from telephonic screening. Only 12 patients (9.5%) were deemed high risk and unlikely to receive benefit from telephonic pre-anesthesia assessment. Thus telephonic assessment can triage patients to avoid unnecessary assessment of low-risk patients. This can release appointments to ensure that high-risk patients can attend the PAC. Besides reducing costs to the hospital this would also reduce patients' travel, the expenses associated with travel and minimize time off work.

**Keywords:** Surgery; PAC; Peri-operative period; Risk

## Introduction

Surgeons and, indeed, patients often believe that the role of the Pre-Anesthesia Assessment Clinic (PAC) is merely to label patients as either 'fit for elective surgery,' or 'not'. However patients attending the clinic do not simply 'pass' or 'fail' their assessment. The true purpose of the PAC is to minimize the risk of preventable complications in the peri-operative period. This requires careful assessment to detect those patients at highest risk of complications. Investigations may be required to better quantify risk and guide referrals or interventions to optimize these patients.

Outpatient PAC evaluation reduces length of hospital admission and minimizes the risk of cancellations on the day of the operation [1]. To achieve the maximum benefit from the pre-operative evaluation the patient must be evaluated several weeks prior to the planned day of surgery. As the number of operations performed in the United Kingdom is increasing year on year this places significant burdens on patients to attend clinic appointments and strains already limited hospital resources [2].

It has been suggested that telephone pre-assessment could reduce costs whilst also significantly improving patient experience and attendance [3]. However there are no robust data on the potential benefit to patients or hospitals. We therefore performed a retrospective review of medical notes to determine this for the service at Princess Alexandra Hospital (PAH), Harlow, Essex, England.

## Materials and Methods

This retrospective review of a convenience sample of 126 consecutive patients undergoing day surgery was classed as service evaluation by the research and audit office of PAH.

The medical records of 126 consecutive patients who attended the pre-assessment clinic at PAH, Harlow were reviewed. Patients were classified into one of three groups; low risk (green; i.e. suitable for telephone pre-assessment and potentially suitable for online pre-assessment), moderate risk (amber i.e. potentially suitable for telephone screening prior to face-to-face pre-assessment) and high risk (red).

Patients in the low risk group were American Society of Anesthesiologists (ASA) physical status category 1, under 50 years old, Body Mass Index (BMI)<35 and required no preoperative investigations. Patients in the moderate risk group were ASA physical status category 2, over 50 years old, BMI>35 and required preoperative investigations. Patients in the high risk group had complex medical problems (ASA physical status categories 3-5).

## Results

There were 71 low risk patients (56.3%). These patients could have been pre-assessed by a nurse-led telephone service or perhaps even online by completion of a questionnaire. There were 43 patients (34.1%) who were considered to be at moderate risk. These patients

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required face-to-face pre-assessment but screening by a nurse-led telephone service may have saved time at the pre-assessment clinic. Only 12 patients (9.5%) were deemed high risk and would therefore have had to attend a PAC regardless of whether they had a telephone pre-assessment.

## Discussion

The global outcomes after surgery study reported that the incidence of peri-operative complications is around 17% and the incidence of peri-operative death is 0.5% [4]. The aim of the PAC is to minimize the risk of preventable complications in the peri-operative period. However as the number of surgical procedures increases, novel, collaborative care pathways are required for the service delivered by the PAC to remain sustainable.

It has been suggested that telephonic pre-assessment could solve some of the issues faced by overcrowded PACs and already anxious patients [3]. Of the present cohort 56.3% were considered low risk and did not require any further pre-operative investigations. Telephonic pre-assessment would have been significantly more convenient for these patients and would have released onsite PAC visits for more complex patients.

A further 34.1% (moderate risk) could also have benefited from telephonic pre-assessment as this may have identified specific investigations (e.g. HbA1c, lung function tests or echocardiography) and referrals required before the patient's visit to the pre-assessment clinic. This could save patients' and healthcare professionals' time in the pre-assessment clinic and may even have reduced the number of visits these patients need. Thus a total of 90.4% of patients in this cohort could have potentially benefited from a telephonic pre-assessment service.

Telephonic pre-assessment of the highest risk group (9.5%) is unlikely to significantly reduce consumption of hospital resources. However, if a very high risk patient is scheduled for surgery on a list for which one of the authors is the named anesthetist; it is our routine practice to personally conduct a brief telephonic pre-assessment prior to the day of surgery, even if the patient has attended the PAC. This enables the development of a rapport with the patient and occasionally identifies additional interventions that may be required prior to the day of surgery. Thus even this high risk cohort may benefit from telephonic pre-assessment prior to attendance at the PAC.

## Conclusion

Online and telephone pre-operative assessment can triage patients and avoid unnecessary assessment of low-risk patients. This can release appointments to ensure that high-risk patients can attend the PAC before the day of surgery. The number of patients attending PAC could be streamlined so that patients and the hospital receive the maximum benefit from this service. Besides reducing costs to the hospital this would also reduce patients' travel, the expenses associated with travel and minimize days off work. These telephonic services could also confirm attendance, identify reasons for late cancellations and re-enforce pre-operative instructions.

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