

## A Study of the Slot Wastage in a Sample Endoscopy Unit in United Kingdom: Analysis of the Causes

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### Abstract

**Background:** Patients who do not attend (DNA) or cannot attend (CNA) outpatient endoscopy procedure appointments can be a source of resource wastage. This study is an analysis of the DNA and CNA rates of an endoscopy unit in a sample district general hospital with the aim of finding reasons for any under or over-utilization. It recommends some solutions to solve the problem.

**Method:** Using the hospital computer records, all patients who did not attend (DNA) or could not attend (CNA) their appointment from 1st January 2014 to 30th June 2014 for endoscopy during weekdays and weekend were identified retrospectively.

**Results:** There were 116 points available per week on average. There was thus 25% wastage in point utilization.

**Conclusions:** This study has shown that common issue for wastage has been poor communication. This lack of communication may be between the doctor and the patient, the endoscopy manager and the patient, or the doctor and the endoscopy managers etc.

**Keywords:** Endoscopy; Slot utilisation; Wastage; DNA; CNA

### Introduction

There is not much published data to compare wastage of time slots in endoscopy units at different hospitals in the United Kingdom or even about the situation in individual units. Patients who do not attend (DNA) or cannot attend (CNA) outpatient endoscopy procedure appointments can be a source of resource wastage. This study is an analysis of the DNA and CNA rates of an endoscopy unit in a sample district general hospital with the aim of finding reasons for any under or over-utilization. It recommends some solutions to solve the problem.

### Method

Using the hospital computer records, all patients who were recorded to have DNA or CNA their appointment from 1st January 2014 to 30th June 2014 for endoscopy during weekdays and weekend were identified retrospectively. The lists included those done by gastroenterologists, surgeons, nurses, urologists and chest physicians. Diagnostic gastroscopy [1], cystoscopy or bronchoscopy is weighed as 1 point, diagnostic colonoscopy or therapeutic gastroscopy weighed as 2 points and therapeutic colonoscopy is allocated 3 points in the list. Average list has 10 to 12 points depending upon the endoscopist. This study measured the slot 'point's availability' and compared it with the actual 'point's utilization'. The difference between the two points was calculated as the 'wastage'. Then a root cause analysis was made for reasons of any wastage.

### Results

There were 116 points available per week on average. In this study it was shown that when the chest physicians, surgeons and urologists requested the endoscopy, patient attendance was more than 90%. However, when patients were booked through the gastroenterologists, the attendance dipped below 90% in three out of six months and averaged at 75%.

There was thus 25% wastage in point utilization. When root cause analysis was done multiple correctable reasons were identifiable. These included lack of availability of endoscopist to do the procedures (1-11%), theatre closure due to equipment failure (9%), changes in appointment not recorded (5-7%), dearth of necessary equipment (4%), poor patient preparation through inappropriate fasting or bowel preparation (2-3%), and clerical error by the receptionist (1%).

### Conclusions

This study has shown that an endoscopy unit is under-utilized almost by 25%. Many causes are identified but a common issue has been poor communication. This lack of communication may be between the doctor and the patient, the endoscopy manager and the patient, or the doctor and the endoscopy managers etc. Poor communication seems to be the most important factor in increased DNA and CNA rates. There are no studies to show that better communication will reduce DNA or CNA rates, but there does seem a potential in it to work as a single correctable factor

This study has shown that DNA and CNA rates were higher if patients were booked through gastroenterologists rather than the

surgeons, chest physicians or the urologists. Most bronchoscopies were done by chest physicians for suspected lung cancer. Likewise most colonoscopy done by surgeons was for suspected colorectal cancer. Urologists likewise were suspecting urinary bladder growths. Gastroenterologists on the other hand were doing endoscopy for a wide range of reasons including simpler and more benign conditions like dyspepsia (which is many times functional), gastro-esophageal reflux, acid peptic disease, inflammatory bowel disease and also gastro-intestinal cancers. This wider choice of reasons for endoscopy, including benign and functional diseases, could offer an explanation for higher DNA and CNA rates for Gastroenterologists. Furthermore, at present in the United Kingdom, there is a shortage of trained gastroenterologists who endoscope.

The DNA and CNA rates in clinical outpatients have been described in few studies but hardly any specifically relates to Endoscopy. National Health Service Highland Scotland have with appropriate actions been able to reduce their DNA rate from 8% down to 1% and the CNA rate from 5 % down to 2% Our study is unique in that it identifies the causes and recommends some solutions specific to endoscopy units.

Other solutions include; improving confirmation of endoscopy appointments through a follow up call by the receptionist, allowing patients to directly make appointments themselves for times that suit them, having enough trained gastroenterologists who can do endoscopy, back filling empty lists by appropriate holiday planning of the Endoscopists and ensuring minimal equipment or technical failure.

There are many Joint Advisory Group (JAG) accredited endoscopy units in the United Kingdom and our data pertains to one such busy unit in a district hospital. It would be useful to have data from other units as well, but one thing can easily be deduced based on our data, that the accumulative Endoscopy slot wastage in the UK would be very high. This causes a great financial burden to the NHS and if better communication looks to have a potential to improve the situation, then it is well worth it.

## References

1. <http://www.nhshighland.scot.nhs.uk/AboutUs/HQA/QualityInAction/Pages/EndoscopyServicesRaigmore.aspx>

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