

# **OPAT FOR INFECTION IN BRONCHIECTASIS**

AN AUDIT EVALUATING THE USAGE OF OUTPATIENT ANTIBIOTIC THERAPY FOR  
INFECTIVE EXACERBATIONS OF BRONCHIECTASIS AGAINST CURRENT BRITISH  
THORACIC SOCIETY GUIDELINES

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# Background

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- ▶ Estimated 1000 people die from bronchiectasis every year
- ▶ 16000 people admitted to hospital in 2012 as a result of bronchiectasis<sup>1</sup>

## OPAT in UHNM

- ▶ OPAT service opened in 2009
- ▶ 1.8 specialist nurses supported by 2 ID consultants, consultant microbiologist, antimicrobial pharmacist
- ▶ Cover 9am-5pm 365 days a year

Equivalent of 578 bed days saved on treatment of bronchiectasis over two year period

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# Aims, Objectives and Standards

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## ▶ Aim

- ▶ Evaluate our OPAT service against BTS guidelines for non-CF bronchiectasis

## ▶ Objectives

- ▶ Retrospective study of OPAT service users and analysis of care received, measured against the current BTS guidelines.
- ▶ Analysing 4 parameters
  1. Pre treatment cultures and use of appropriate antibiotics
  2. Eligibility for nebulised antibiotics and correct usage
  3. Pre and post Pulmonary Function Tests
  4. Documentation of symptomatic improvement



# Methodology

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- ▶ A retrospective audit looking at all episodes of patient treatment in the following population:
  - ▶ All patients with previously diagnosed bronchiectasis
  - ▶ Who received intravenous antibiotic therapy as an outpatient
  - ▶ Over the two year period (2012-2014)
  - ▶ Treatment of infective exacerbations of bronchiectasis



# Methodology

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## ▶ **Data Collection**

- ▶ Patients were identified using the local OPAT database.
- ▶ Data was collected from:
  - ▶ Hospital case notes
  - ▶ OPAT hand held notes
  - ▶ Online clinic letters
  - ▶ ICM program – hospital results system

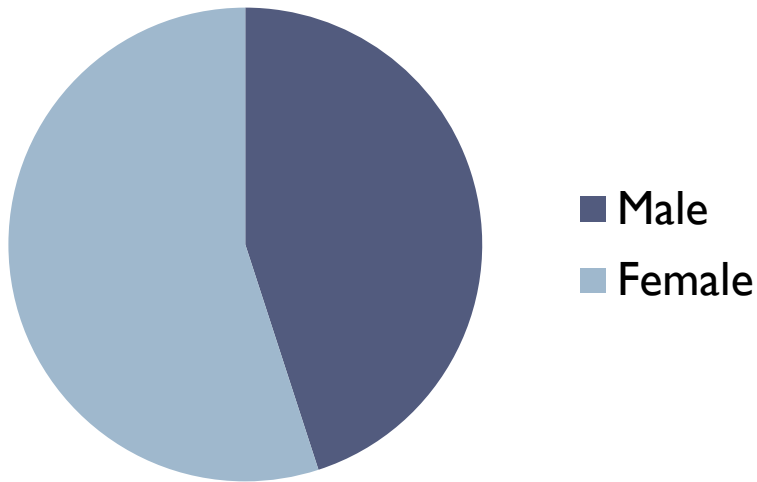


# Demographics

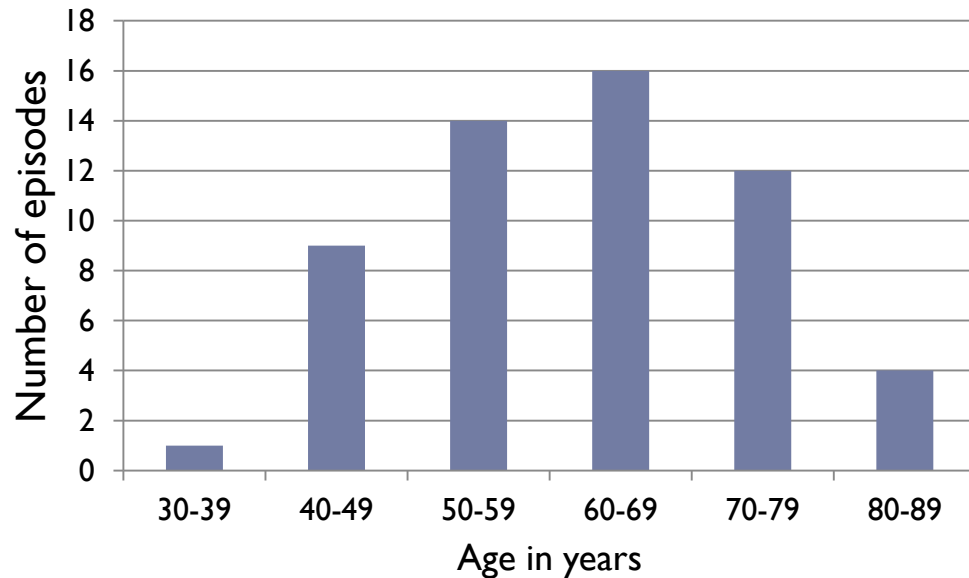
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- ▶ Patient episodes n=56
- ▶ Individual Patients 41

## Gender Distribution

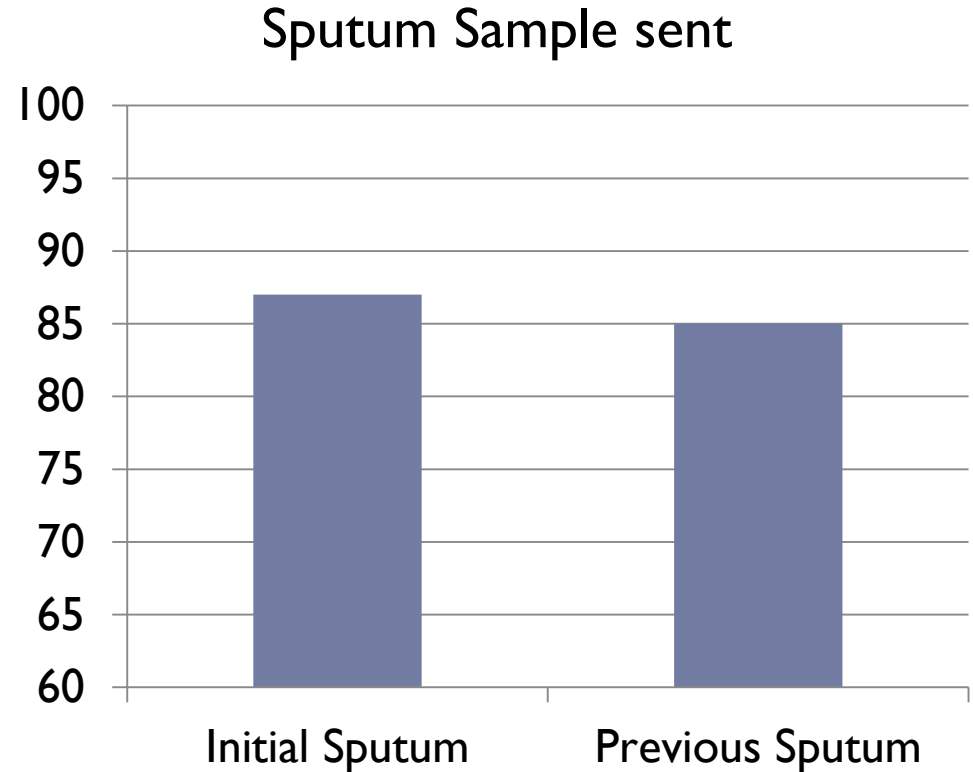


## Age Distribution



# 1. Pre-treatment Sputum Culture

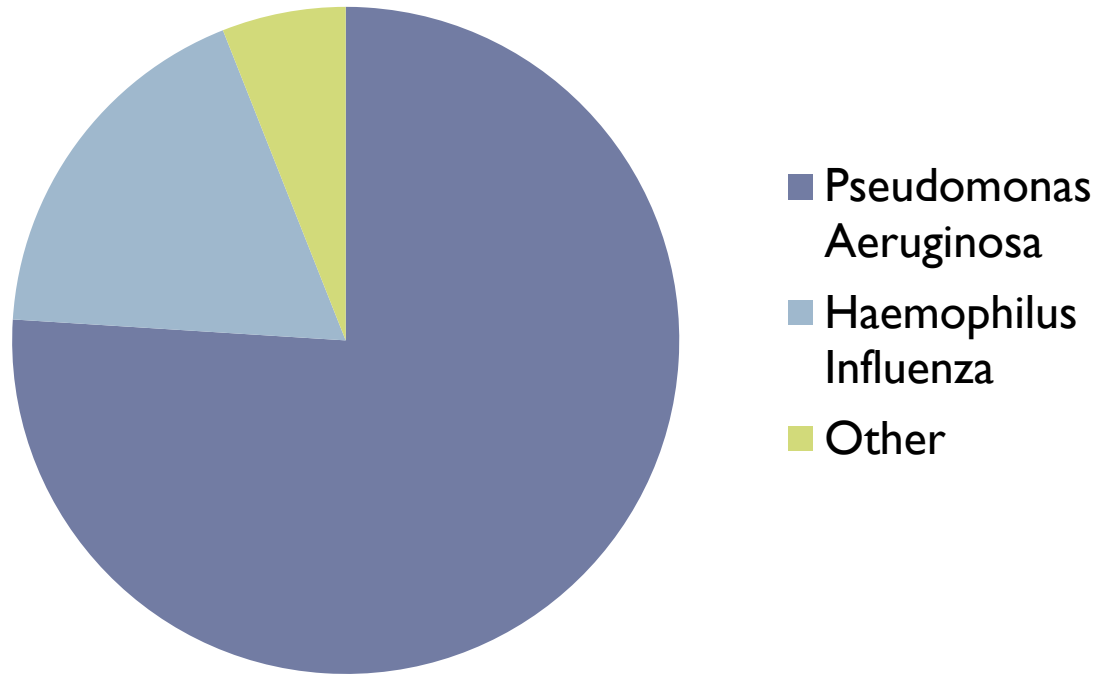
- ▶ Initial Sputum Sample sent
  - ▶ 87% sent
- ▶ Previous Sputum Sample sent (6months)
  - ▶ 85% sent
- ▶ One episode with no sample
  - ▶ Later found to be resistant



# Growth and sputum

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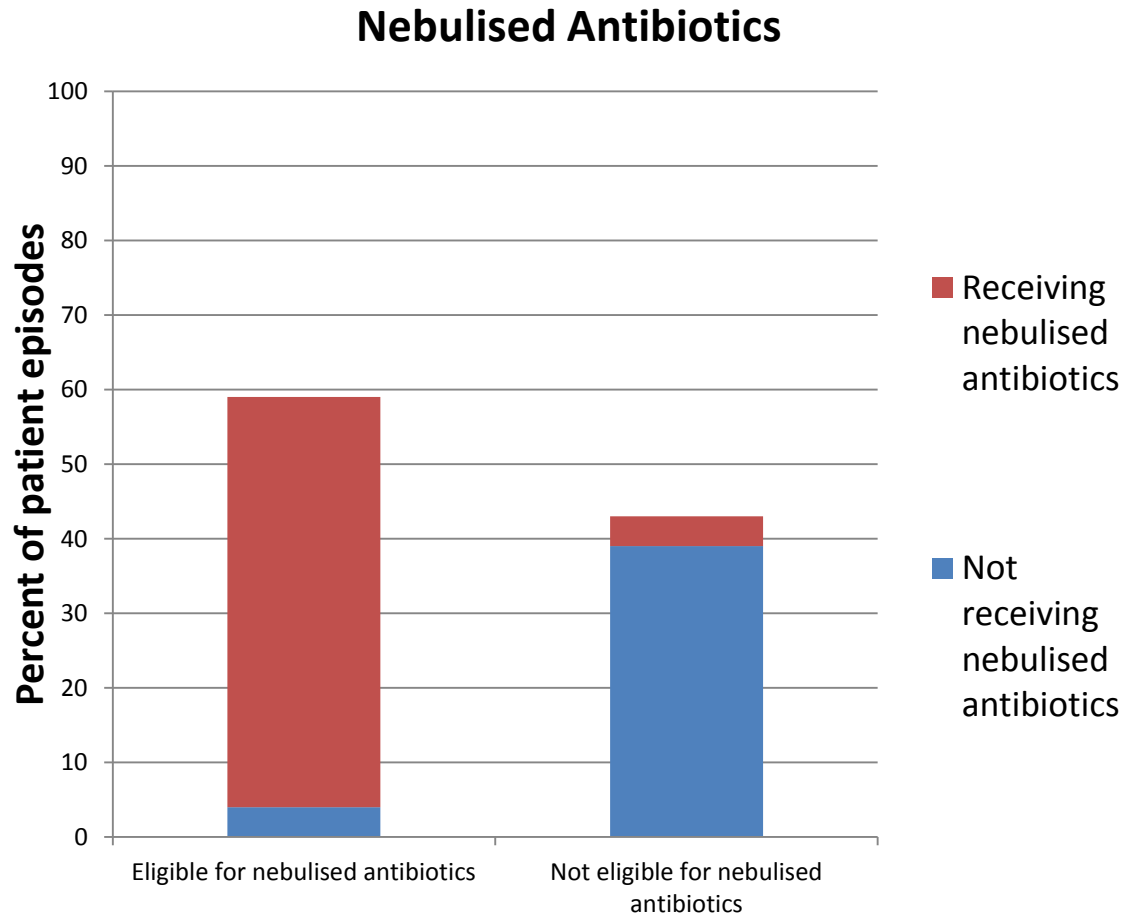
- ▶ 95% showed growth





## 2. Nebulised antibiotics

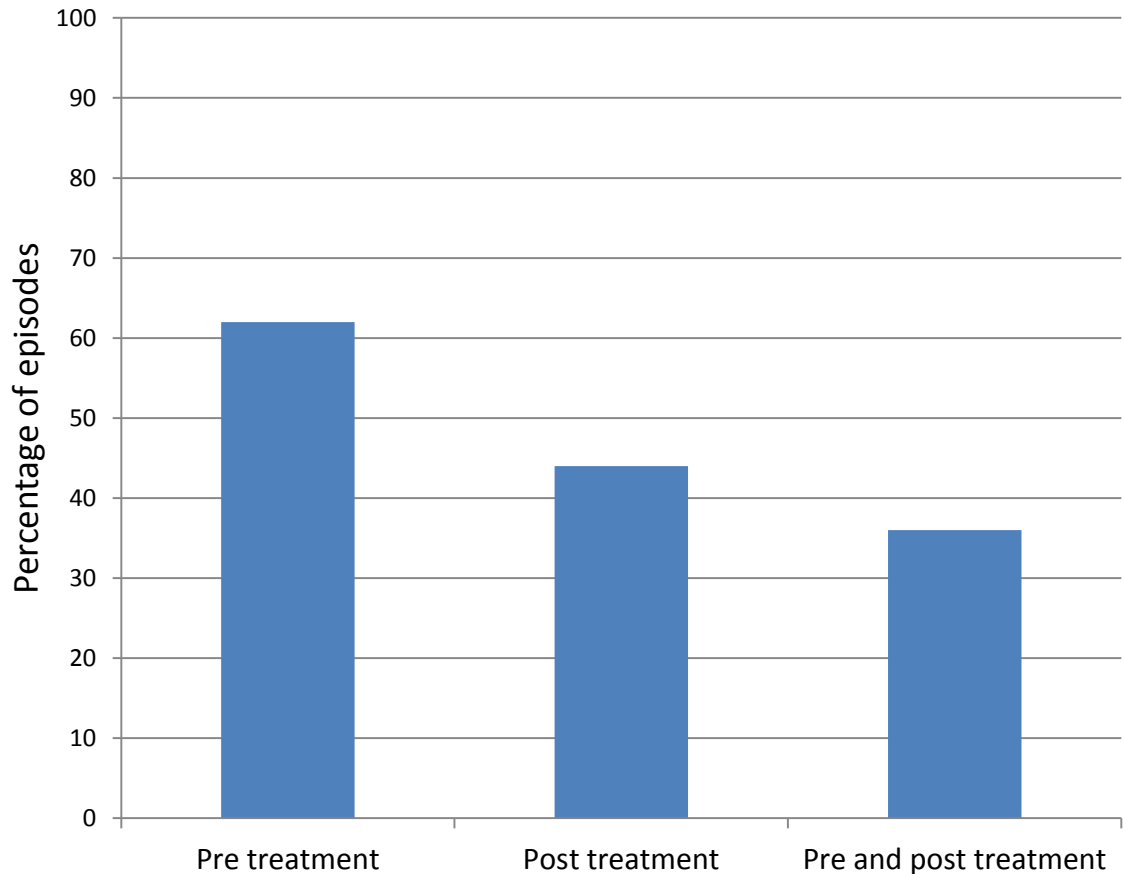
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# 3. Pulmonary Function Tests

- ▶ Poor usage of lung function tests
- ▶ Only 36% received both pre and post treatment tests
- ▶ All who did recorded some improvement

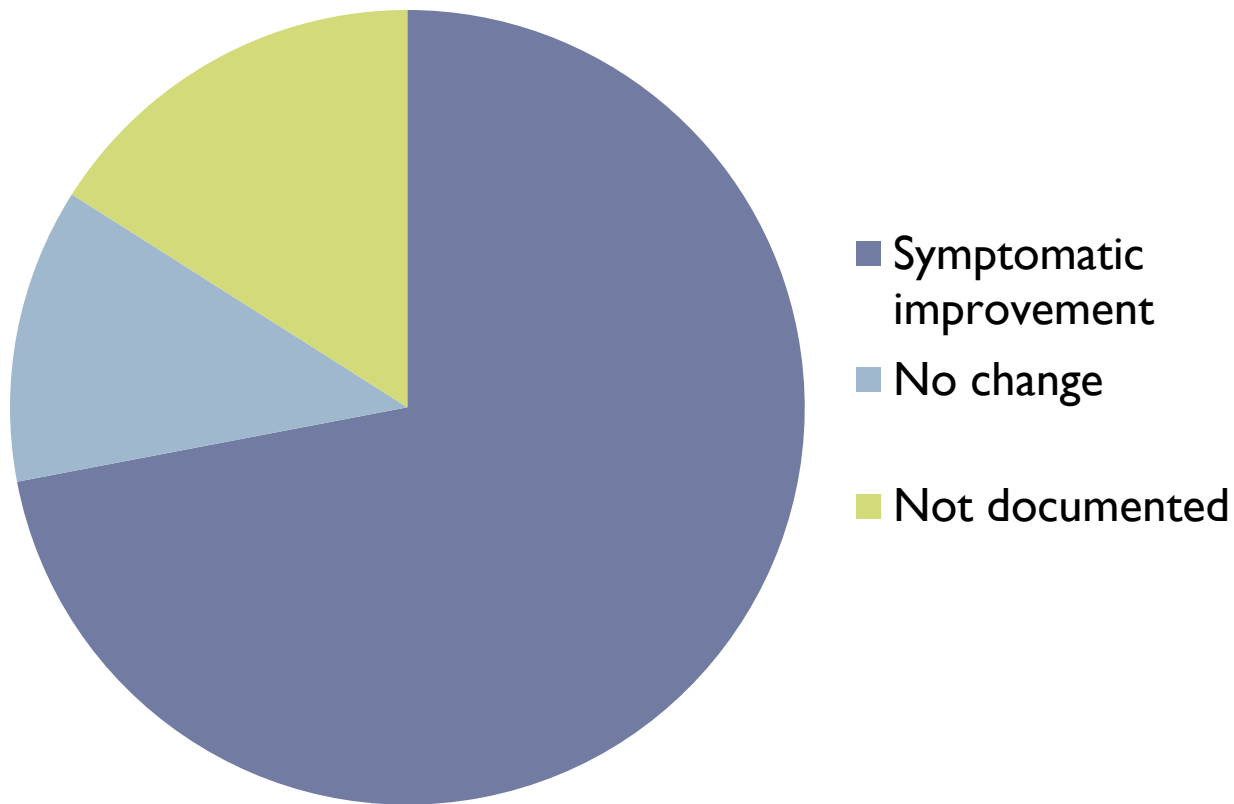
Pre and post lung function tests



# 4. Documentation of symptomatic improvement

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- ▶ 72% noted to have symptomatic improvement



# Discussion

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- ▶ The majority of patients had a timely sputum sample and appropriate antimicrobial treatment
- ▶ Adequate and reasonable usage of nebulised antibiotics in the treatment of bronchiectasis using national guidance
- ▶ Pre and post PFTs were not carried out in the majority to BTS standards.
  - ▶ However where they were carried out all patients demonstrated a measurable clinical improvement.
- ▶ The majority of patients had documented evidence of symptomatic improvement



# Actions following Audit

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- ▶ Presented at Respiratory and Infectious Diseases joint audit meeting
- ▶ Specific bronchiectasis proforma within OPAT handheld case notes
- ▶ Respiratory physiology department sent results of audit
- ▶ Plan to re-audit after service improvement



# Service Improvement

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- ▶ All patients with bronchiectasis referred to OPAT:
  - ▶ Undergo sputum microscopy and culture
  - ▶ Undergo pre PFTs requested by referrer or OPAT nurse
  - ▶ Have post PFTs and formal respiratory clinic follow up
  - ▶ Have clinical outcome documented within OPAT notes

**Extension of the role of the OPAT nurses**

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# Conclusion

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- ▶ Flexibility in the dynamic role of our OPAT nurses has enabled us to provide an effective, efficient and guideline adherent service for the management of infective exacerbations of bronchiectasis.



# References

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- ▶ **Guideline for non-CF Bronchiectasis (2010)** - British Thoracic Society, Bronchiectasis (non-CF) Guideline Group.
- ▶ **BTS Quality Standards for non-CF bronchiectasis in adults (2012)** - British Thoracic Society, Bronchiectasis (non-CF) Guideline Group.

