

# AN AUDIT OF COPD RELATED MORTALITY - STATISTICS OR LIES?

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# Story Begins...

**Mater Hospital  
had unexpected  
outcomes from  
our mortality data  
for COPD/  
Bronchiectasis  
2015**



# Background



- National Audit of Hospital Mortality (NAHM)
  - Individual hospital mortality patterns are analysed and displayed in the context of the national mortality patterns
- Hospital Standardised Mortality Ratio (HSMR)
  - The SMR is the ratio between the observed number of patients who die and the number that would be expected to die in hospital on the basis of the overall national rate
  - **Does not allow hospitals to compare outcomes against one another**, but rather against a national average, set at 100
- Each hospital has an overall SMR and also an SMR for each particular diagnosis group e.g COPD/Bronchiectasis

# COPD

A common progressive lung disease and is the most prevalent respiratory disease in adults

Characterised by progressive airflow limitation

Caused by a mixture of small airways disease (obstructive bronchiolitis) and parenchymal destruction (emphysema)

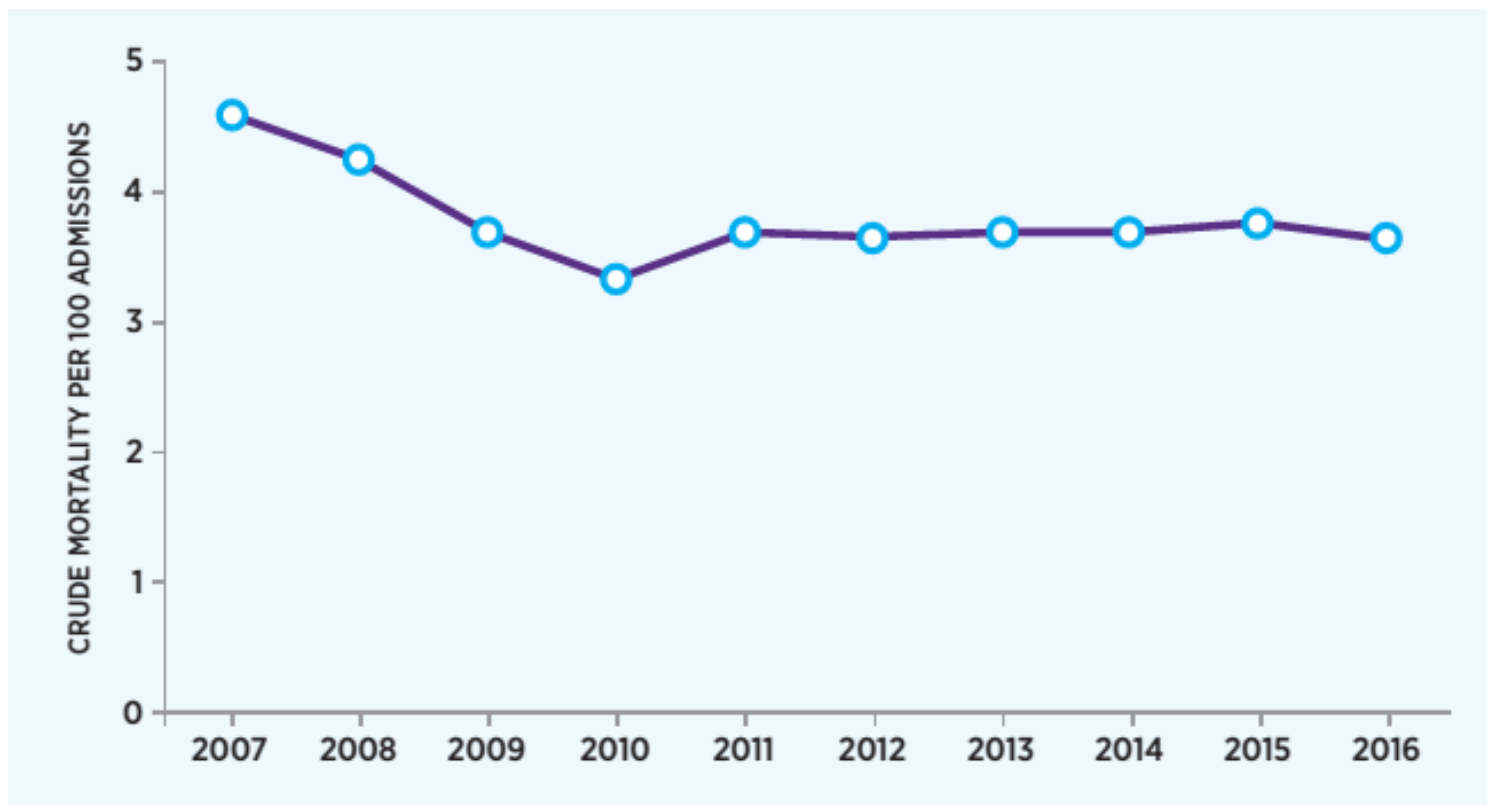


# National Picture of COPD

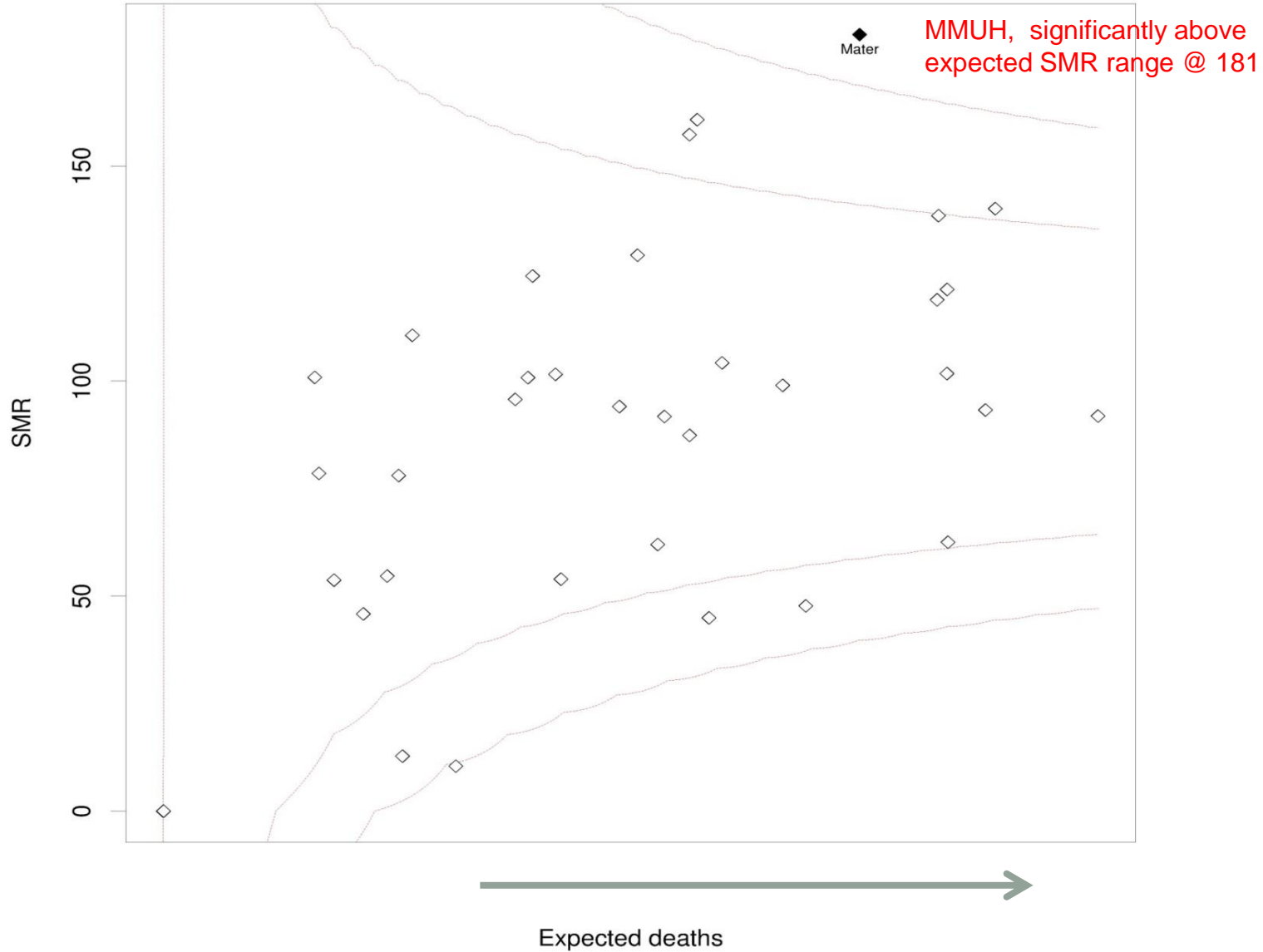


- COPD/Bronchiectasis inpatient discharges (live & dead) in 2015 range 136-772 Nationally
  - MMUH recorded the highest rate at 772
  - Other Category 4 hospital (*St Vincent's, Beaumont, St James, Galway, Cork*), ranged from 398-706
- National COPD discharges by county have a 4-6 fold variation (Ref: Sexton & Bedford, 2016, Irish Journal Medical Science)

# National In-Hospital Mortality For COPD



# All hospitals – 2015 – Respiratory, COPD & bronchiectasis



# MMUH Audit Concerns 2015



- Was this data correct?
- Did we have issues with our clinical management of COPD patients?
- Was this a reflection of the Mater catchment population
- Concerns were raised that inaccurate interpretation of the data could lead to
  - Distress to our patients
  - Reputational damage to the hospital
  - Create unhelpful media attention
- However MMUH engaged in discussions with NOCA
- From this initial engagement with the NOCA, we could see the value in having our data reproduced in a format that could enable us to analyse our mortality rates



# Audit Question



“Is there a clinical issue with the management of a diagnosis of COPD/Bronchiectasis?”

- Internal chart reviews at consultant level
- As part of systematic review we developed our own ‘Mortality Screening Tool’ to enable consistency in our approach

# Actions:

Patient Identification Sticker

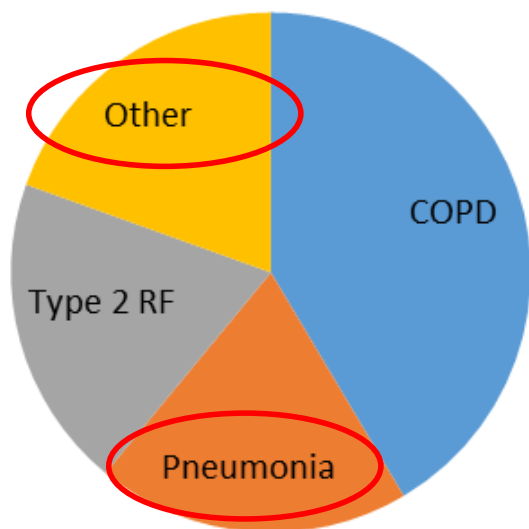


MMUH Mortality Screening Tool					
<b>S1: Admission Details</b>					
Admitted from	Home	Transfer from another hospital	Nursing Home	Other	
Reason for admission e.g Acute Rx, Social					
Admitted Diagnosis					
Admitting speciality					
Discharge Diagnosis					
Discharge Speciality					
Readmission within 28 days	Yes	No	Did admitting and discharge diagnosis match	Yes	No
<b>S2: Screening Criteria</b>			<b>S3: End of Life Criteria</b>		
Care following out of hospital Cardiac/Resp arrest	Yes	No	Palliative care/ NFR	Yes	No
Unexpected transferred to ICU	Yes	No	Ceiling of care established	Yes	No
Life limiting co morbidities e.g Long term O <sub>2</sub> , Stroke, HF	Yes	No	Discussed Plan of care with Family/Carer	Yes	No
Invasive procedure – e.g Angio, bronchoscopy, long line insertion	Yes	No	<b>S4: Screening Outcome</b>		
Evidence of treatment delay.	Yes	No	Anticipated death due to disease prognosis		
Evidence of Clinical Error	Yes	No	Unexpected death despite appropriate clinical intervention		
HCAI (note the type)	Yes	No	Death is unrelated to the natural course of the illness and unexpected		
In hospital Fall	Yes	No	Death as a result of clinical intervention		
VTE	Yes	No	Insufficient information to form an opinion.		
Elements of this case require further review	Yes	No	<b>S5: Follow up Recommendations</b>		
<i>(include who should complete the recommended actions)</i>					
Signature:			Date:		

# Chart review 2015 Data

- 41 charts

## Primary Diagnosis



- 18 on home oxygen
  - Further 6 due to commence
- 15 under Respiratory Consultant
  - Further 17 had Respiratory Consult
- 18 were coded Palliative care
  - Further 14 not coded as Palliative had ceiling of care identified and discussed with family

# Findings



- Issues around coding...
  1. The interpretation of coding of the principal diagnosis from the clinical notes can be challenging
  2. Specifically the appropriate application of the Primary admitting diagnosis as COPD/Bronchiectasis versus that of Pneumonia
  3. Specialist Palliative care coding was under represented despite 'ceilings of care' and end of life discussions with family

# Improvements required



1. Discharge summary for RIP patients required
2. Improvements to documentation by clinicians as to principal diagnosis
3. Clarification around Resp sepsis, Pneumonia or LRTI
4. Use of Palliative care code to be clarified nationally to enable benchmarking
5. Cohort patients under specialist services so that respiratory conditions are under the care of respiratory physicians

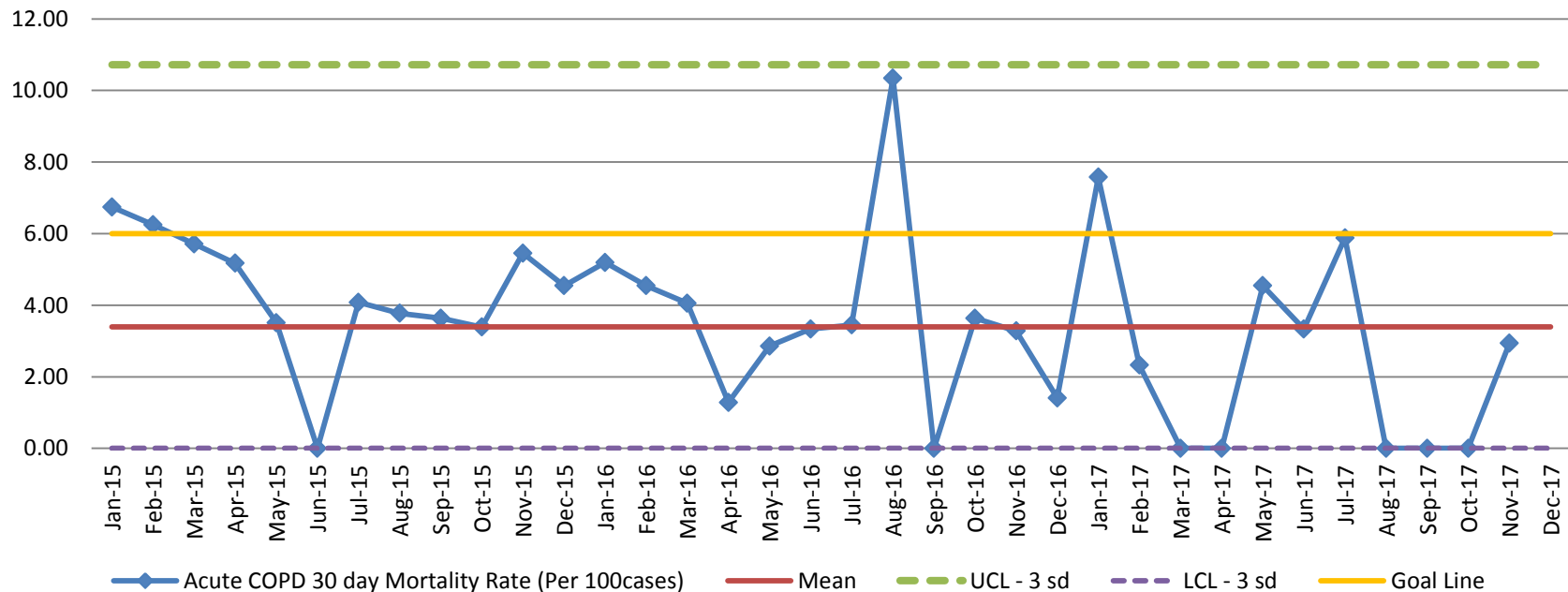
# Actions:



## Deceased Patient Discharge Summary

S1: Admission Details					
Admitted from <i>Tick as Relevant</i>	Home	Transfer from another hospital	Nursing Home	Other	
Primary Reason for admission <i>Acute Rx, Social</i>					
Primary Consultant					
Diagnosis leading to death.				Date of death	
Post Mortem (PM) <i>Tick as Relevant</i>	No	Coroner informed No PM required	Coroner informed PM required	Hospital PM requested	
Primary Diagnosis for admission					
Secondary Diagnosis					
Procedures/ Intervention					
S2: Summary of Episode					
S3: Charlson Co-Morbidities Score					
<i>Quantifies the impact that certain co-morbidities have on patient and predicts 12 month survival</i>					
<i>Circle all relevant Co-Morbidities and add for total score</i>					
Acute Myocardial infarction	5	Congestive Heart Failure	13	Liver Disease	8
Cancer	8	Metastatic Cancer	14	Dementia	14
Cerebral vascular accident	11	Peripheral vascular Disease	6	Connective Tissue Disorder	4
Renal Disease	10	Peptic Ulcer	9	HIV	2
Diabetes	3	Diabetic Complications	-1	Liver Disease- Severe	18
Paraplegia	1	Pulmonary Disease	4	<b>Total Score</b>	
S4: End of Life					
<i>Tick as Relevant</i>					
Ceiling of care established/DNAR		Discussed Plan of care with Family/Carer		Specialist Palliative care	
Consultant Signature:	IMC Number		Date:		

## Mortality Rate 2015 -2017 in 65 yrs from Acute COPD 30 Day



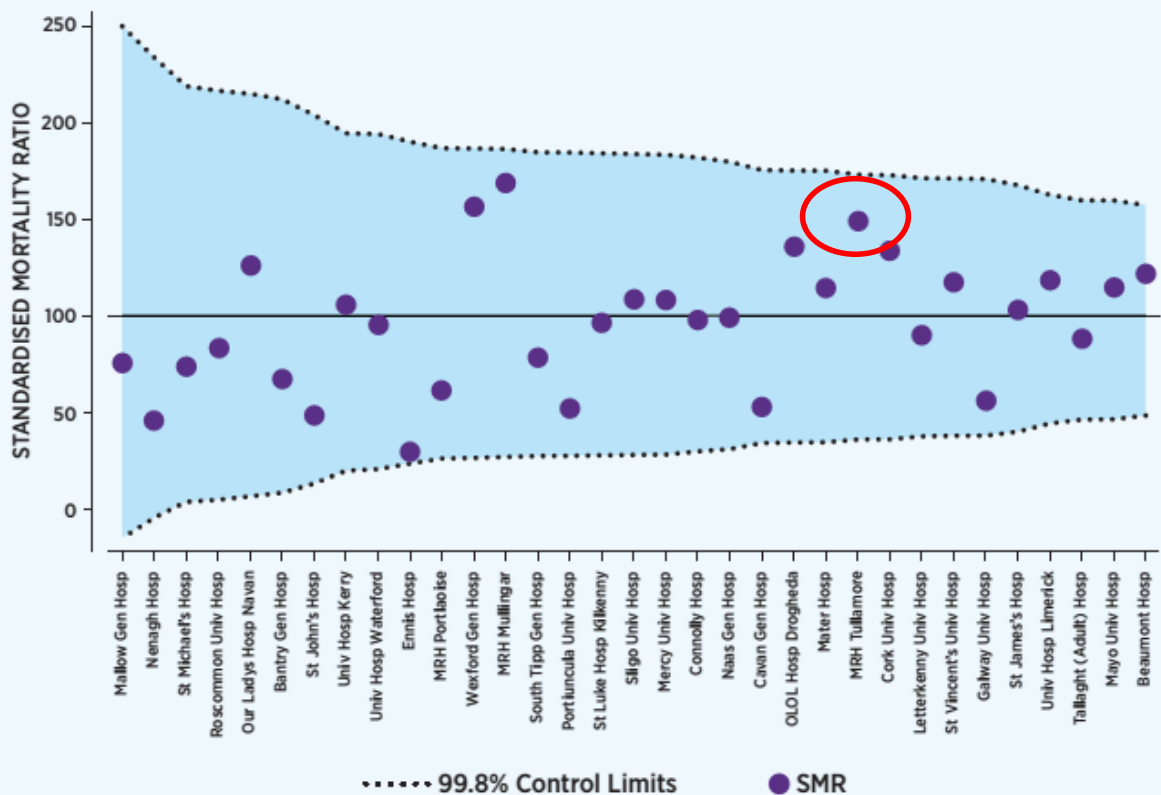
30-day mortality rates range from 3%-9% (Faustini et al, 2008; Fruchter & Yigla, 2008). The above is a crude benchmark and will require further analysis over 3 year period

**November 2017 Data:** Rate was 2.94 equating to 1 deaths within 30 days out of 34 cases associated with COPD

# NOCA report 2016



**FIGURE 15: NATIONAL IN-HOSPITAL SMR FOLLOWING ADMISSION WITH PRINCIPAL DIAGNOSIS OF COPD IN 2016**





# Take home points



- Monitoring mortality rates in our hospitals is one of many important quality assurance measures
- Analysing this data is crucial for hospital self appraisal and ultimately patients safety and wellbeing
- These mechanisms will help us to continue to deliver the highest possible care to our patients
  
- However...
- We need to record appropriate data that answers specific questions
- The data we record needs to be accurate

**Write it clear to get it right**

# Special Thanks to:



- Ruth Buckley, Quality Manager,
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