C O P D
State of the Art

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Conflicts of Interest

COPD Clinical Lead, National COPD Audit

Payment to my Department and to me for educational activity and advisory work, from pharmaceutical companies that make medicines to treat COPD
Five Key Messages

- There is new NICE Guidance for COPD
- The National COPD Audit is transforming outcomes
- Get the basics right, this time and every time: real ‘Triple’ therapy
- Use of inhaled steroids is now, in part, guided by blood eosinophils – including use of new ‘fixed triple’ inhalers
- Endobronchial valves can be an effective treatment for emphysema
NICE, thrice

https://www.nice.org.uk/guidance/ng115
Antibiotics for Exacerbations

1. Not for all exacerbations
2. Usually given in hospital
3. Sputum MCS not routine
4. Guide antibiotics by...
   1. SPUTUM Change
   2. Hospitalisation
   3. Risk of complications
   4. Previous MCS
5. Oral first line ‘if possible’
6. First line, 5 days of Amoxicillin / Doxycycline / Clarithromycin

https://www.nice.org.uk/guidance/ng114
Corticosteroids for Exacerbations (consultation)

1. “In the absence of significant contraindications, use oral corticosteroids in conjunction with other therapies in all people admitted to hospital with a COPD exacerbation”. [2004]

2. “Offer oral prednisolone 30 mg daily for up to 7 days. Be aware that there is no benefit from taking corticosteroids for more than 7 days”. [2019]

3. “Give people (particularly people discharged from hospital) clear instructions on why, when and how to stop their corticosteroid treatment”. [2004]

https://www.nice.org.uk/guidance/indevelopment/gid-ng10128
How do we measure Exacerbation ‘Severity’

- MILD: Additional Bronchodilators
- MODERATE: Oral Steroid / Abx
- SEVERE: Hospital
Exacerbation Severity

Exacerbation_{Severity} = COPD_{Severity} \times \text{Insult}_{Severity} \times \text{Co-Morbidity}
Management of an Exacerbation

1999
- Increased dose and/or Frequency of BRONCHODILATORS

2009
- Oral CORTICOSTEROIDS
- ANTIBIOTICS if change in sputum
- Additional Therapies eg theophylline

2019
- Assess and Manage Co-Morbidities
- Implement Appropriate Exacerbation Prevention

O₂ +/- NIV
Message 1

You are NICE compliant if using

- 5 days of amoxicillin / doxycycline / clarithromycin
- ‘Up to’ 7 days of corticosteroids, and considering safe stop
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Hospitalised Exacerbations

4 25 3

% in hospital mortality

% readmission in 30 days

% mortality at 30 days

Data from 2014 National COPD Audit

https://www.rcplondon.ac.uk/projects/national-asthma-and-copd-audit-programme-nacap
The National COPD Audit

- COPD audit started continuous data collection 1st February 2017
- First report published April 2018
- Included patients discharged between 1/2 and 13/9/17.

36,431 hospital admissions
By 182 hospitals in England and Wales

https://www.rcplondon.ac.uk/projects/national-asthma-and-copd-audit-programme-nacap
BPT and Real Time Data Capture

Updated every 15 minutes from data entered into the audit

Hospital level data benchmarked against the national average
# Real Time Improvements

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Message 2

Use real-time NACAP data to support local QI
Spirometric confirmation
Smoking cessation support
Attention to multi-morbidity – recent change to dataset
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“Triple Therapy”

Fundamentals of COPD care
- Offer treatment and support to stop smoking
- Offer pneumococcal and influenza vaccinations
- Offer pulmonary rehabilitation if indicated
- Co-develop a personalised self-management plan
- Optimise treatment for comorbidities

These treatments and plans should be revisited at every review

https://www.nice.org.uk/guidance/ng115

London Respiratory “Value Pyramid”
Message 3

This time, and every time, get the basics right in COPD
Accurate Diagnosis
Smoking Cessation, Vaccines, Pulmonary Rehabilitation
Assess and manage co-morbidities
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ICS in COPD

Used primarily to reduce exacerbations (with LABA+/−LAMA)
Previous guidance had advised use in those with severe airflow obstruction
Safety concerns, including pneumonia

→ how can we better target these drugs?

“Frequent Exacerbators”
Biomarkers
Identifying the ‘Frequent Exacerbator’

“How many courses of antibiotics and/or steroids did you need for you chest over the last year?”

Better targeting (personalised / stratified medicine).

Hurst JR et al. NEJM 2010;363:1128-1138
Guiding ICS use in COPD using blood eosinophils

TOP PANEL:
Annual exacerbation rate with 95%CI for ICS-LABA versus LABA alone by blood eosinophils.

Eosinophil-guided biologic therapy in COPD

COPD is heterogeneous

Patients with ‘eosinophilic COPD’ benefit from ICS/biologics

Patients WITHOUT ‘eosinophilic COPD’ can be stepped down to LABA-LAMA

‘Fixed Triple’ Inhalers: IMPACT

- Rates of moderate or severe exacerbations were significantly lower with Trelegy than with Relvar (ICS/LABA) or Anoro (LABA/LAMA) using the same DPI device.

Greater reductions in exacerbation rate were observed with Trelegy vs Relvar or Anoro in patients with baseline eosinophil levels of ≥150 cells/μL.

Importance of the DEVICE

Right device for the right patient
Single device associated with improved concordance, and clinical outcomes
“Triple Therapy”

Eosinophil cut? “Higher”.

https://www.nice.org.uk/guidance/indevelopment/gid-ng10128
“Triple Therapy”

Eosinophil cut? “Higher”.

https://www.nice.org.uk/guidance/indevelopment/gid-ng10128
Message 4

ICS can be better targeted using clinical features and biomarkers and are not standard of care for all.

ICS are now available as ‘Fixed Triple’ combinations.

As always in respiratory medicine, it’s not just about the drug – think DEVICE.
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Survival advantage in upper-lobe emphysema and low baseline exercise capacity.

8% 90 day mortality with surgery

New: Endobronchial Valves

New: Endobronchial Valves

New: Endobronchial Valves

Message 5

Endobronchial volume reduction is now NICE-approved for people with breathlessness, hyperinflation and heterogeneous emphysema.

Quantitative CT is used to assess eligibility and guide therapy.

Local MDTs are being established to assess eligibility.
COPD Exacerbations: have your say

British Lung Foundation / James Lind Alliance (NIHR) Priority Setting Partnership

“Unanswered research questions on COPD exacerbations”

www.blf.org.uk/support-for-you/copd/survey
#COPDhaveyoursay
@CopdPsp
Conclusions

- There is new NICE Guidance for COPD
- NACAP is a useful tool to drive quality improvement
- Get the basics right; this time and every time

Accurate Diagnosis

**Smoking Cessation, Vaccines, Pulmonary Rehabilitation**

Assess and manage co-morbidities

- ICS can be better targeted using eosinophils and are available as ‘Fixed Triple’ combinations
- Endobronchial intervention can be an effective treatment for selected people with breathlessness and hyperinflation – find your local MDT
Thank You
Comments and Questions

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