

# **C'è qualcosa di nuovo per la broncopneumopatia cronica ostruttiva**

**C'è qualcosa di nuovo per la  
broncopneumopatia cronica  
ostruttiva?**

## Qualcosa di nuovo

Despite extensive research, the medical management of COPD exacerbations has **not changed** substantially over the past **25 years**.

**CHEST**

To: Federico Germini

Reply-To: Elsevier Journals

COPD Awareness Month Article Collection

7 November 2016 at 06:55

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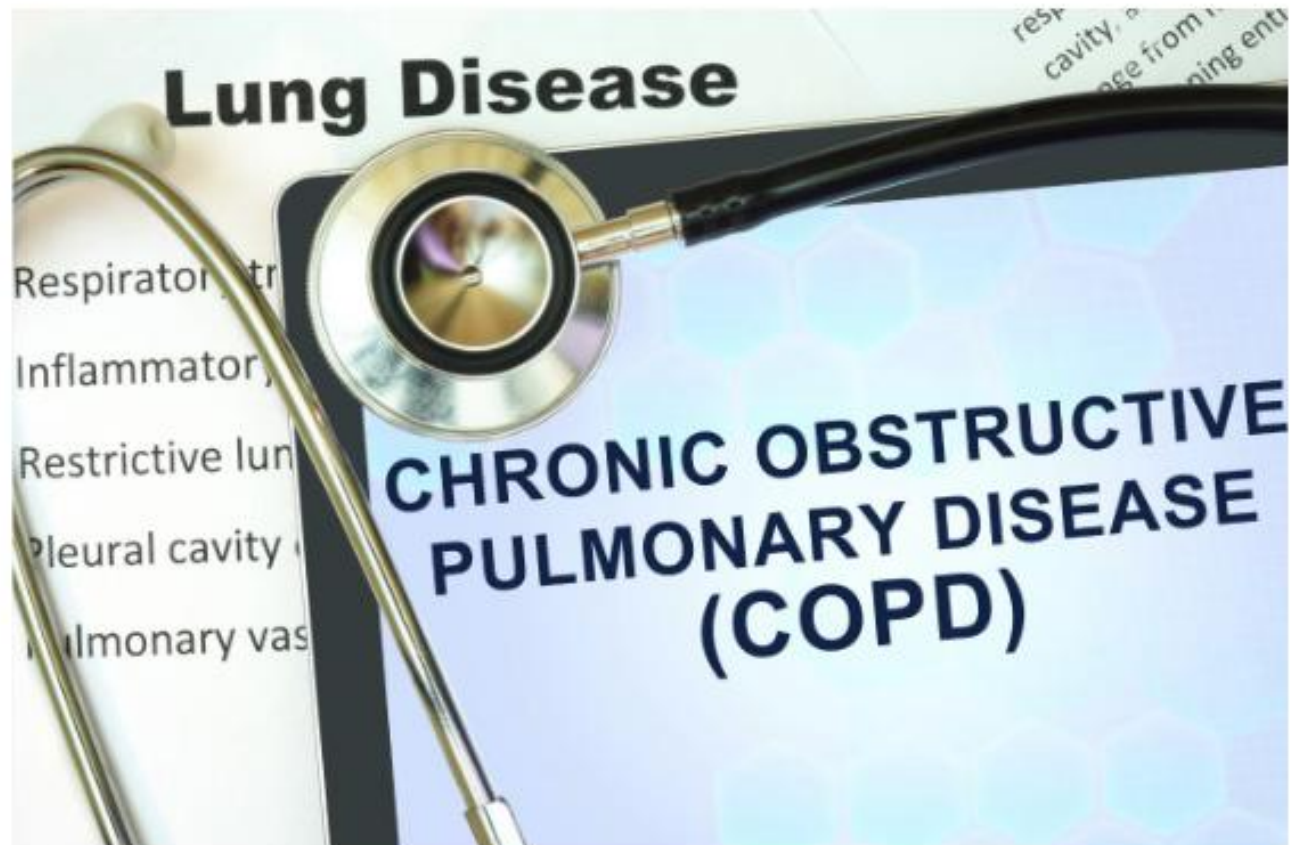


**CHEST**<sup>®</sup> JOURNAL

Official Publication of the American College of Chest Physicians

Special Article Collection

**COPD Awareness Month**



We are pleased to present a new Special Article Collection focused on COPD,

# BPCO & SIMEU

Gestione delle riacutizzazioni di BPCO  
in Pronto Soccorso: studio retrospettivo  
multicentrico del gruppo studi SIMEU

Federico Germini, Giacomo Veronese, Deborah Ardemagni, Giulia Belloni, Giulia Maria Azin, Massimo Zacchino, Maura Marcucci, Daniele Coen, Andrea Fabbri, and the SIMEU Study Group

## Definizione

Evento acuto caratterizzato da un peggioramento dei sintomi respiratori (dispnea, tosse e/o espettorazione) che va oltre la variabilità quotidiana degli stessi.

## Obiettivi

- Descrivere la gestione delle riacutizzazioni di BPCO nei pronto soccorso italiani.
- Validare lo score BAP-65 per la predizione della mortalità intraospedaliera e del ricorso alla ventilazione invasiva.

## BAP-65

**B**UN > 25 mg/dL

**A**ltered mental status

**P**ulse > 109 beats/min

Age > **65** years





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Ungheri

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Roma

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# Popolazione

| Caratteristiche demografiche | n (%)     |
|------------------------------|-----------|
| Centri partecipanti          | 33        |
| Pazienti inclusi             | 4260      |
| Femmine                      | 1650 (40) |
| Età                          | 74 (11)   |

# Popolazione

| Charlson Comorbidity Index n (%)  |               |
|-----------------------------------|---------------|
| 0                                 | 1,194 (28.03) |
| 1 - 2                             | 1,827 (42.89) |
| 3 - 4                             | 820 (19.25)   |
| ≥ 5                               | 419 (9.84)    |
| <b>Polmonite</b>                  | 440 (11.2)    |
| <b>Insufficienza respiratoria</b> | 1215 (30.8 )  |

## Terapia - domicilio

|                           | n (%)        |
|---------------------------|--------------|
| Broncodilatatori          | 2,377 (59,0) |
| Beta agonisti inalatori   | 2,054 (48,8) |
| Anticolinergici inalatori | 1,442 (35,7) |
| Teofillina                | 309 (7,7)    |
| Steroidi inalatori        | 1,817 (46,7) |
| Steroidi sistemici        | 709 (17,6)   |
| Ossigeno                  | 1,020 (24,9) |
| CPAP                      | 86 (2,1)     |
| NIV                       | 111 (2,7)    |
| Antibiotici               | 641 (15,8)   |

# Terapia

Broncodilatatori inalatori

Steroidi sistemici

Antibiotici

NIV



**2,5      10**

**4 - 8**

**1 - 4**

**0,5**

**2 - 4**











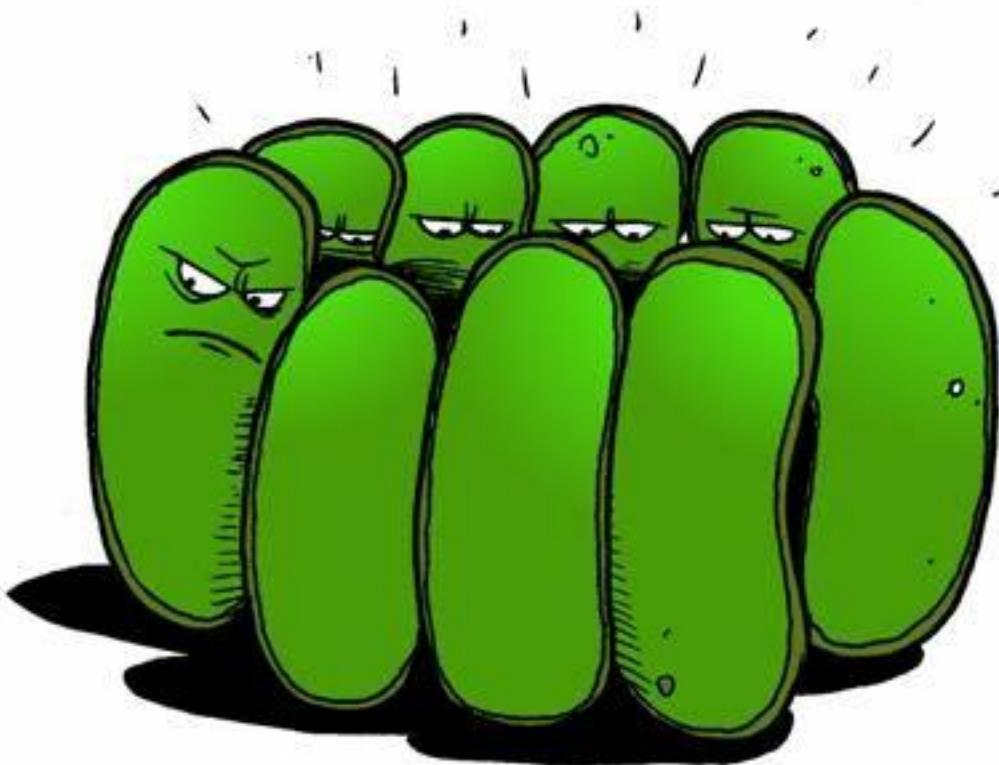
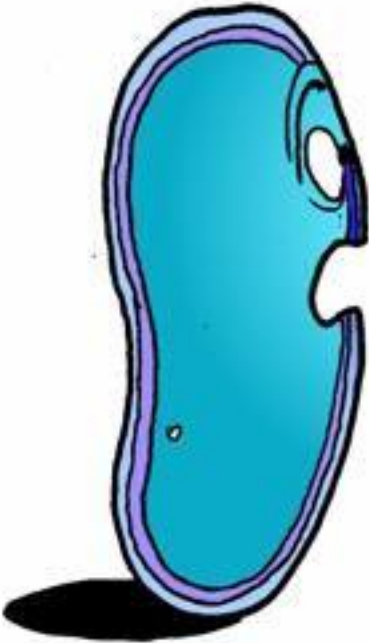


**50**



**5**

IS IT BECAUSE I'M  
GRAM NEGATIVE?



Penelope  
2006



5







# iNIV

## How to use NIV in the acute setting

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Roberto **Cosentini**

Anna Maria **Brambilla**

Federico **Piffer**

Stefano **Aliberti**

7,35 - 45



iNIV

How to use NIV  
in the acute setting

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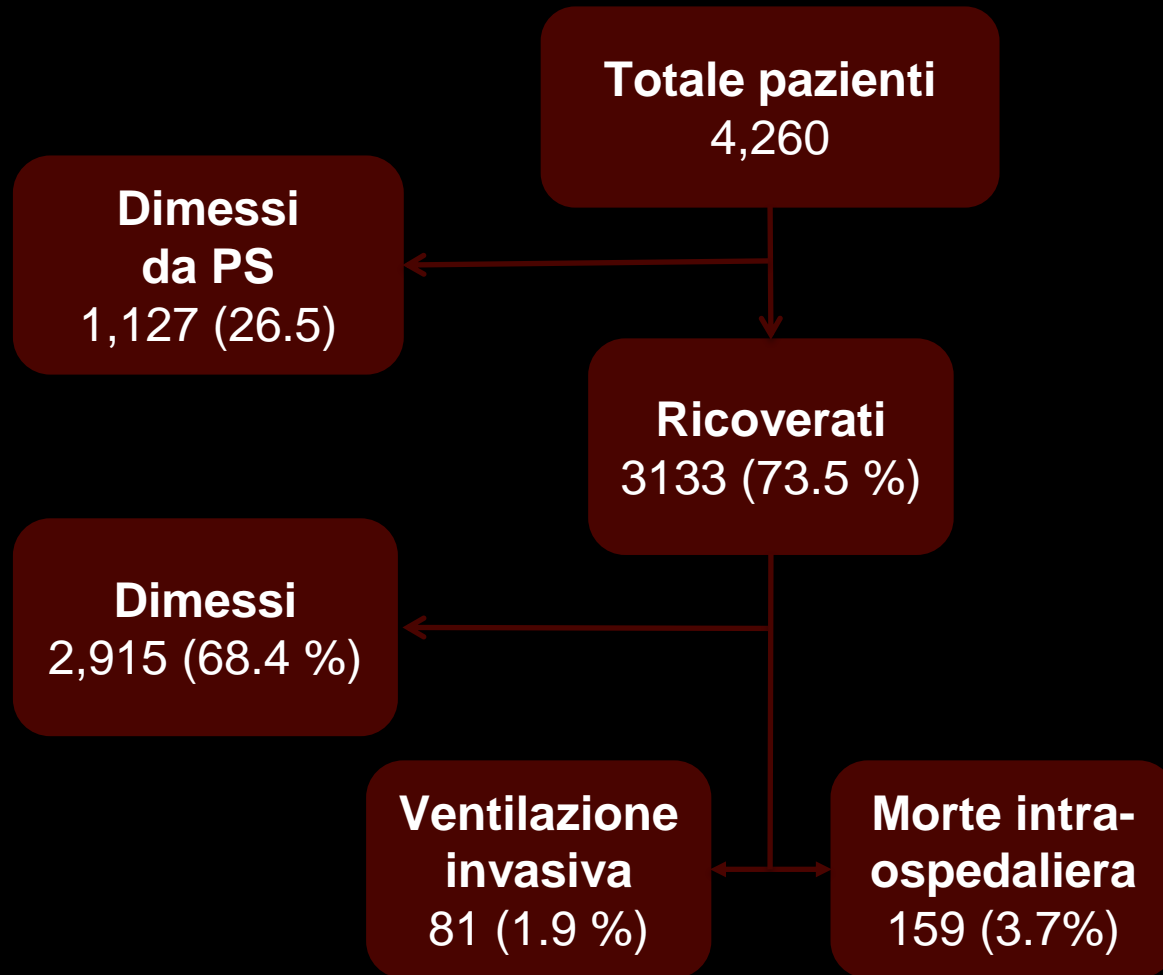
5 + 10



## Terapia - PS

|                            | n (%)        |
|----------------------------|--------------|
| Broncodilatatori inalatori | 2.587 (51,5) |
| beta agonisti              | 2.532 (60,2) |
| anticolinergici            | 1.844 (43,9) |
| Teofillina                 | 120 (5,8)    |
| Beta agonisti sistemici    | 19 (0,5)     |
| Steroidi                   | 3.024 (71,9) |
| inalatori                  | 2.419 (57,5) |
| sistemici                  | 2.274 (54,1) |
| Ossigeno                   | 2,495 (60.0) |
| CPAP                       | 97 (2.3)     |
| NIV                        | 272 (6.5)    |

# Outcome



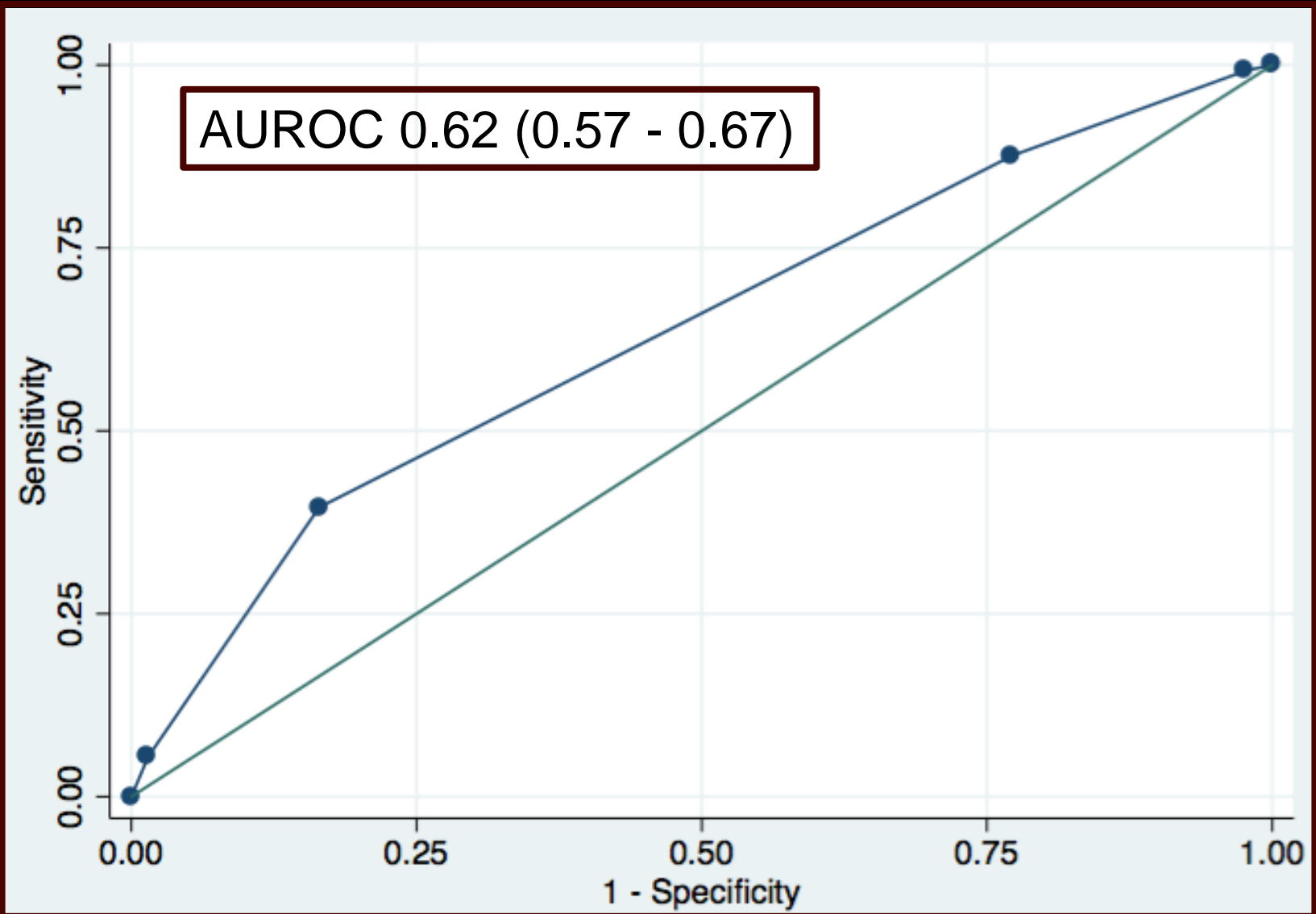
# Analisi multivariata

|                                   | <b>OR</b> | <b>CI 95 %</b> |
|-----------------------------------|-----------|----------------|
| <b>Classe BAP-65</b>              | 2.58      | 1.80 - 3.73    |
| <b>Età</b>                        | 1.04      | 1.02 - 1.06    |
| <b>Insufficienza respiratoria</b> | 3.14      | 1.93 - 5.11    |

# Accuratezza

| <b>Classe BAP-65 IV-V</b>  | <b>%</b> | <b>CI 95 %</b> |
|----------------------------|----------|----------------|
| Sensibilità                | 42.6     | 40.8 - 44.5    |
| Specificità                | 80.8     | 79.4 - 82.3    |
| Valore predittivo positivo | 9.7      | 8.6 - 10.8     |
| Valore predittivo negativo | 96.7     | 96.0 - 97.4    |
| Prevalenza                 | 4.6      | 3.8 - 5.4      |

# Accuratezza



# BAP-65 score

| <b>BAP-65 class</b> | <b>%</b> | <b>Outcome (%)</b> |
|---------------------|----------|--------------------|
| <b>I</b>            | 2.3      | 1.6                |
| <b>II</b>           | 9.6      | 3.7                |
| <b>III</b>          | 67.9     | 3.3                |
| <b>IV</b>           | 18.6     | 9.2                |
| <b>V</b>            | 1.64     | 4.6                |

**Table 7:** Clinical variables contributing to preliminary Ottawa COPD Risk Scale to identify patients with COPD seen in the emergency department who are at high risk of a serious adverse event

| Variable   | Points |
|--|--------|
| <b>History</b>   |        |
| Coronary bypass graft  | 1      |
| Peripheral vascular disease intervention   | 1      |
| Intubation for respiratory distress  | 2      |
| <b>Examination</b>   |        |
| Heart rate on arrival in ED $\geq 110/\text{min}$  | 2      |
| Too ill to do walk test after treatment in ED<br>( $\text{Sao}_2 < 90\%$ or heart rate $\geq 120/\text{min}$ ) | 2      |
| <b>Investigations</b>  |        |
| Acute ischemic changes on ECG  | 2      |
| Pulmonary congestion evident on chest radiography  | 1      |
| Hemoglobin $< 100 \text{ g/L}$   | 3      |
| Urea $\geq 12 \text{ mmol/L}$  | 1      |
| Serum $\text{CO}_2 \geq 35 \text{ mmol/L}$   | 1      |
| <b>Total score</b> (possible range 0–16)   |        |

Note: COPD = chronic obstructive pulmonary disease, ECG = electrocardiogram, ED = emergency department,  $\text{Sao}_2$  = arterial oxygen saturation.



**ALL IT TAKES  
TO SAVE YOUR MATE**

**Table 7:** Clinical variables contributing to preliminary Ottawa COPD Risk Scale to identify patients with COPD seen in the emergency department who are at high risk of a serious adverse event

| Variable                                 | Total score | Risk of adverse event, % | Risk category |
|--|-------------|--------------------------|---------------|
| <b>History</b>                           | 0           | 2.2                      | Low           |
| Coronary bypass graft                    | 1           | 4.0                      | Medium        |
| Peripheral vascular disease in           | 2           | 7.2                      | Medium        |
| Intubation for respiratory dis           | 3           | 12.5                     | High          |
| <b>Examination</b>                       | 4           | 20.9                     | High          |
| Heart rate on arrival in ED $\geq$       | 5           | 32.9                     | Very high     |
| Too ill to do walk test after t          | 6           | 47.5                     | Very high     |
| ( $SaO_2 < 90\%$ or heart rate $\geq$ 1  | 7           | 62.6                     | Very high     |
| <b>Investigations</b>                    | 8           | 75.6                     | Very high     |
| Acute ischemic changes on E              | 9           | NA                       | Very high     |
| Pulmonary congestion evide               | 10          | 91.4                     | Very high     |
| Hemoglobin $< 100$ g/L                   | $> 10$      | NA                       | Very high     |
| Urea $\geq 12$ mmol/L                    | 1           |                          |               |
| Serum $CO_2 \geq 35$ mmol/L              | 1           |                          |               |
| <b>Total score</b> (possible range 0–16) |             |                          |               |

Note: COPD = chronic obstructive pulmonary disease, ECG = electrocardiogram, ED = emergency department,  $SaO_2$  = arterial oxygen saturation.



**ALL IT TAKES  
TO SAVE YOUR MATE**



### **Table 5.3. Potential Indications for Hospital Assessment or Admission\***

- Marked increase in intensity of symptoms, such as sudden development of resting dyspnea
- Severe underlying COPD
- Onset of new physical signs (e.g., cyanosis, peripheral edema)
- Failure of an exacerbation to respond to initial medical management
- Presence of serious comorbidities (e.g., heart failure or newly occurring arrhythmias)
- Frequent exacerbations
- Older age
- Insufficient home support

**C'è qualcosa di nuovo per la  
broncopneumopatia cronica  
ostruttiva?**

**Forse no, ma c'è tanto di  
vecchio da fare.**

**Grazie per l'attenzione.**

