

**Appendix: Quality indicators for evaluation of the diagnostic and therapeutic appropriateness for RF (GOLD 2008 guidelines as standard)**

INDICATOR	FORMULA
<p>1. RF diagnostic appropriateness according to GOLD 2008 guidelines §</p> <p>(standard = 100%)</p>	<p>1.1 N = No. of cases with ABG data</p> <hr/> <p>D = total cases hospitalised</p> <p>1.2 N = No. of cases with PaO<sub>2</sub> &lt; 60 mmHg at admission and diagnosis of RF</p> <hr/> <p>D = total cases with PaO<sub>2</sub> &lt; 60 mmHg at admission</p> <p>1.3 N = No. of cases with PaO<sub>2</sub> ≥ 60 mmHg at admission and diagnosis of RF</p> <hr/> <p>D = total cases with PaO<sub>2</sub> ≥ 60 mmHg at admission</p>
<p>2. In hospital mortality</p>	<p><u>N = No. of deaths with diagnosis of RF</u></p> <p>D = Total no. of cases hospitalised with diagnosis of RF</p>
<p>3. Patients with at least one re-hospitalisation</p>	<p><u>N = No. of re- hospitalisation cases (within 90 days of first discharge)</u></p> <p>D = Total no. of cases hospitalised with diagnosis of RF</p>
<p>4. Average length of stay</p>	<p>Mean days of hospitalisation</p>

## ONLINE DATA SUPPLEMENT

5. Appropriateness of long term O<sub>2</sub> therapy  
(standard = 100%)

N = No. of cases with LTOT and ABG in room air and PaO<sub>2</sub> ≤ 55 mmHg

D = No. of cases with LTOT and ABG in room air

6. Adherence of pharmacological treatment to the GOLD 2008 guidelines during hospitalisation and/or at discharge  
(standard = 100%)

N = No. of cases of hospitalisation with adequate treatments according to standard

D = Total No. of cases of hospitalisation with diagnosis of RF

§ To prove diagnostic inappropriateness we used two indicators:

1.1. quota of cases with PaO<sub>2</sub> < 60 mmHg in which RF was diagnosed (% true positives)

1.2. quota of cases with PaO<sub>2</sub> ≥ 60 mmHg in which RF was diagnosed (% false negatives)

**RF: Respiratory Failure; ABG: arterial blood gas; PaO<sub>2</sub>: partial pressure of oxygen**