

# European Respiratory Society Annual Congress 2012

**Abstract Number:** 2106

**Publication Number:** P4823

**Abstract Group:** 1.12. Clinical Problems - COPD

**Keyword 1:** COPD - exacerbations **Keyword 2:** Acute respiratory failure **Keyword 3:** Oxygen therapy

**Title:** Reducing hospital admission in COPD exacerbation by urgent oxygen provision and home monitoring of capillary blood gases

Dr. Howell 11158 Clague howellclague@aol.com MD <sup>1</sup>, RN. Marie 12486 Herring marie.herring@sotw.nhs.uk <sup>2</sup> and Mr. Paul 12487 Frear paul.frear@sotw.nhs.uk <sup>3</sup>. <sup>1</sup> Respiratory Department, City Hospitals Sunderland Foundation Trust, Sunderland, Tyne & Wear, United Kingdom, SR4 7TP ; <sup>2</sup> Community Urgent Care, South Tyneside Foundation Trusts, Hebburn, Tyne & Wear, United Kingdom, NE31 1AT and <sup>3</sup> Service Improvement, South Tyneside Foundation Trusts, Hebburn, Tyne & Wear, United Kingdom, NE31 1AT .

**Body:** Current NICE guidance recommends hospital admission when SpO<sub>2</sub> < 90% but with supplemental oxygen many such patients might be managed at home provided that worsening hypercapnia and respiratory acidosis is excluded. As part of the NHS Lung Improvement Programme, Sunderland Urgent Care Team (South Tyneside NHS Foundation Trust) set up a six month Pilot to reduce emergency hospital admission by introducing measurement of capillary blood gases (TcABGs) and the urgent provision of oxygen to manage what would have been an admission into a treatable condition at home. Following a clinical assessment, a team of advanced nurse practitioners guided by an operational protocol measured TcABGs in a group of patients with AECOPD who's SpO<sub>2</sub> was in the range 85 -89%. Suitable patients were provided with oxygen cylinders delivering oxygen in the range of 2-6 L/min and monitored until oxygenation improved (SpO<sub>2</sub> > 90%) and there was clinical recovery. Initially, urgent oxygen provision and ABG measurement proved problematic but 25 patients were recruited. 4 were excluded for breaching protocol (2 TcABGs failed, 1 was acidotic (pH 7.29) and chose to remain at home, 1 had no follow up data). 4 were admitted (2 acidotic, 2 hypoxic on LTOT). The remaining 16 hypoxic (SpO<sub>2</sub> 86% ± 1) patients improved (SpO<sub>2</sub> 93% ± 2) with urgent oxygen provision and were managed safely at home but 1 became non compliant. Initial visit times lasted 186.2 ± 80.7 mins with between four and twelve follow up visits until recovery. With urgent oxygen provision, careful selection and monitoring, hospital admission can be avoided even in moderately hypoxic patients with exacerbations of COPD.