Inspiring Change
A review of the quality of care provided to patients receiving acute non-invasive ventilation

The Facts

**DATA**
- 353 sets of case notes reviewed
- 432 questionnaires completed by clinicians from hospitals across the UK
- 168 questionnaires returned on the organisation of acute NIV services in UK hospitals

**CODING**
- 61% of excluded cases were due to the patients having CPAP not NIV, as the same code is used for both

**PATIENT GROUP**
- 69% of patients were admitted with COPD and 60 patients had been ventilated previously for the same indication

**STAFFING**
- 144 hospitals had a named medical clinical lead for their NIV service - usually a respiratory consultant but in 110 hospitals, this person had no specific time allocated in their job plan to lead the service
- Only 79 hospitals reported having a defined ratio of nurses to NIV patients as recommended by the British Thoracic Society
- 45% of hospitals had staff without a defined competency who supervised NIV patients

**VITAL SIGNS and MONITORING**
- 19% of respiratory wards, 26% of general medical wards where NIV was used and 8% of respiratory high care wards did not have continuous oxygen saturation monitoring
- 53% of patients had an oxygen saturation of 91% or lower and 97% of patients required treatment with oxygen prior to NIV
- 21% of acute medical units and 33% of respiratory high care areas had no continuous ECG monitoring available
- 15% of patients had a heart rate of >120/minute at the start of ventilation, the level at which guidelines recommend continuous ECG monitoring
- 56% of patients had a respiratory rate of 25 or more on arrival in hospital, and 50% had a respiratory rate in this range at the start of NIV
- 46% of patients whose care was reviewed could have had improved monitoring

**DOCUMENTATION**
- 69% of hospitals had a prescription form for NIV
- 83% of hospitals used an observation chart specifically for use with NIV but ventilator settings were not adequately documented in 51% of cases

**TREATMENT**
- 27% of patient cases reviewed had a delay in starting NIV

**EQUIPMENT**
- 40% of hospitals reported times when they had more patients requiring NIV than machines available
TO IMPROVE THE QUALITY OF CARE FOR PATIENTS RECEIVING ACUTE NON-INVASIVE VENTILATION WE NEED TO:

**DETERMINE** how many patients are treated in each hospital – recognising that coding may be misleading

**CONSIDER**
- the model of care used to provide NIV – can the machine go to the patient?

**APPOINT**
- a clinical lead for NIV and allocate time for this in their job plan

**ENSURE**
- there is an operational policy that includes appropriate staffing and location of treatment

**TRAIN STAFF**
- to be competent in prescribing acute NIV and manage the ventilator settings

**ENSURE**
- all patients have an escalation plan in place

**MONITOR**
- vital signs frequently and improve documentation

TREATMENT ROOM