Retrospective audit of appropriateness of patient selection for NIV

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BACKGROUND

Admissions to The Rotherham NHS Foundation hospital (TRFT) for patients presenting with COPD total per annum 1200, a figure well exceeding the national average. To serve the requirements of this patient cohort a ward based NIV service was established by respiratory physiotherapists over 20 years ago which has been regularly subjected to review and audit alongside evolving BTS standards and local demands.

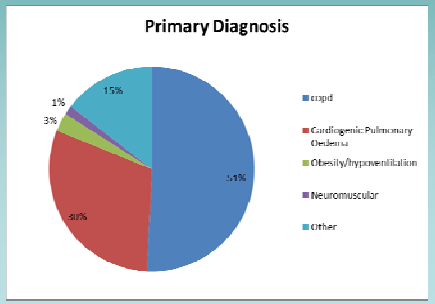
Of late there have been increasing concerns expressed by the physiotherapy team that significant bed pressures faced by the NHS have impacted on this service and diluted standards. Anecdotally appropriate patient selection criteria appear not to have been as rigorously enforced especially with recent winter pressures faced in A&E. This appears to be confounded by increasing acuity of patient presentation and rising public demand all which contributes to unrealistic expectations.

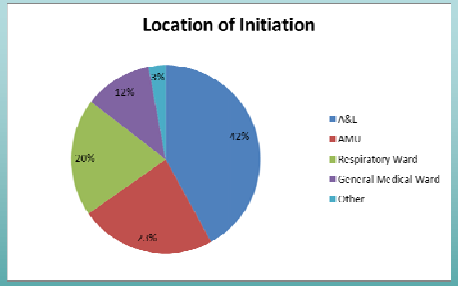
Additionally Rotherham hospital was tasked with improvement following poor compliance with DNACPR provision in its latest CQC report (2017). The respiratory physiotherapy team felt there had been a significant deterioration in planning for NIV treatment failure due to an increasing reliance on locum medical staff. This included a lack of open and frank discussions with patients regarding ceilings of care. It was decided to undertake a retrospective audit to examine these concerns

METHODS

- Retrospective audit of the use of NIV (excluding critical care) at TRFT in January-February 2017.
- **69 Bipap initiations**
  - 36 Males
  - 33 Females
  - Age range 45-94 (mean 69.5)
- Clinical coding were utilised to capture all relevant admissions and a standardised data sheet was used to extrapolate information from the medical records.
- The use of NIV was examined against selection criteria as directed by BTS standards, evidence of planning for escalation or palliation in the event of treatment failure and the appropriate use of DNACPRs within this process.

RESULTS





Mortality rate of sample size: 54%

Of 'other' diagnoses, 60% of patients died

Discussion with family regarding ceiling of care happened in 42% of cases

Ceiling of treatment decision was **not** made or documented by the medical team prior to initiation of Bipap in 57% of cases

12% of patients palliated within 24 hours of Bipap initiation, 7% were within 8 hours

CONCLUSION

- Bipap is being used inappropriately as only 51% of primary diagnoses are COPD
- There is a large scale non-compliance with documenting ceiling of care at the time of initiation if Bipap fails as per BTS guidelines
- Poor rates of discussion with family regarding ceiling of care and treatment plans
- Mortality rate is higher than the national average (34%)

DISCUSSION

- Is inappropriate use of Bipap due to increased pressures on A&E to hit the 4 hourly target?
- Is the high mortality rate due to poor medical staff training of strict selection criteria for NIV?

REFERENCES

BTS/ICS Guideline for the ventilator management of acute hypercapnic respiratory failure. March 2016

Conflicts of interest: none