Guide for Management of Patients Who are Ventilated in the Ward

There are 4 categories of patients who are ventilated in the ward

i. Category 1 – Patients who have a reasonable prospect of meaningful recovery but not admitted due to unavailability of ICU bed.

ii. Category 2 - Patients whose initial prospect of meaningful recovery is uncertain and not admitted due to unavailability of ICU bed. Refer Appendix for criteria to include patients in Category 2.

iii. Category 3 – Patients with minimal or no prospect of meaningful recovery
In these patients, efforts should be made to institute End-of-Life care
Examples of category 3 patients:
    - Irreversible Brain Damage
    - End Stage Cardiac, Respiratory and Liver Disease with no options for transplant
    - Metastatic cancer unresponsive to chemotherapy and /or radiotherapy
    - Patients with non-traumatic coma leading to a persistent vegetative state
    - Severe disability with poor quality of life
    - Patients with poor response to treatment to date eg recurrent bowel leaks with multiple laparotomies, recurrent soft tissue and musculoskeletal infections requiring multiple surgical interventions, chronic medical conditions which fail to respond to treatment such as SLE and HIV

iv. Category 4 – Patients for chronic ventilation or "home ventilation" i.e. patients who are ventilator dependent for the rest of their life e.g. Traumatic Tetraplegic patients, Gullain Barre Syndrome and Motor Neuron Disease

Management of Patients in Category 1

- Every effort should be made to admit them to ICU. If ICU beds are not available, then they should be admitted to other critical care areas in the same hospital while waiting for ICU bed availability. If beds are still not available, then efforts should be made to transfer them to another hospital with ICU beds.

- Priority of ICU admission should be given to Category 1 patient over elective surgical patient

Management of patients in Category 2

Prior discussion between ICU/Anaesthetic Specialist and Primary Unit Specialist should be made prior to intubation of a patient whose meaningful recovery is uncertain. Clear

decision should be made and written in the BHT and family members should be informed of decision i.e. not for ventilation or for ventilation with possibility of the limitation of care at 24 to 48 hours if no improvement or if patient deteriorates.

- If the joint decision is not to intubate/ventilate the patient, the management of the patient shall be continued in the ward (without ventilation).

- If the joint decision is to intubate/ventilate the patient, then the patient will be intubated and effort made to bring patient to ICU. If ICU bed remains unavailable, assessment should be made to see the progress of the patient. If the patient still remains in Category 2 and ICU bed is still unavailable, reassessment is needed after another 24 hours. At the end of 48 hours, decision must be made to categorize the patient to either Category 1 or 3. If there is a difference in opinion in categorization of the patient, a second person in both disciplines should be sought to resolve the difference. No patient in Category 2 will be ventilated more than 48 hours in the ward.

- Patients who are already intubated before any discussion between Primary Unit Specialist and ICU/Anaesthetic Specialist, decision should be made in the next 24 hours to categorize the patient into either Category 1 or 3 by the two teams. At the end of 48 hours, decision must be made to categorize the patient to either Category 1 or 3. If there is a difference in opinion in categorization of the patient, a second person in both disciplines should be sought to resolve the difference. No patient in Category 2 will be ventilated more than 48 hours in the ward.

Management of patients in Category 3

- Effort should be made to institute End of Life Care. In the event that the patient is intubated, effort should be made to withdraw therapy and to provide comfort and tender loving care. Neither inotropes nor vasopressors should be started and patient should be extubated and not ventilated.

Management of patients in Category 4

- Patients in this group should not be in any acute deterioration of physiological parameters and arrangement may be made to discharge home on ventilator

- If the patient deteriorates, he or she needs to be re-assessed and re-categorised to either Category 1, 2 or 3 and subsequent management follows accordingly the Category that he or she is assigned.

Appendix: Criteria to include patients in Category 2
(Adapted from Dr. P. Mc Daid - A Quick Guide to Identifying Patients for Supportive and Palliative Care 2011)

A. General decline. Symptomatic with low level activity.
Formal measures of poor or deteriorating performance status include:
   a. Limited self-care; in bed or chair over 50% of the day
   b. MRC Breathlessness Scale 4/5
   c. NYHA Grade 3/4
   d. WHO Performance Grade 3/4

B. Chronic illnesses based on organ systems involvement.
Have to fulfill any two of the underlying conditions

   I. Heart Disease
      a. NYHA Class III/IV Heart Failure, Severe Valve Disease or Extensive Coronary Artery Disease
      b. Persistent symptoms despite optimal tolerated therapy

   II. Respiratory Disease
      a. Severe airways obstruction (FEV1<30%) or restrictive deficit (vital capacity < 60%, transfer factor < 40%)
      b. Meets criteria for long term oxygen therapy (PaO_2 < 7.3 kPa)
      c. Breathless at rest or on minimal exertion between exacerbations
      d. Persistent severe symptoms despite optimal tolerated therapy

   III. Cancer
      a. Performance status deteriorating due to metastatic cancer and/or co-morbidities
      b. Persistent symptoms despite optimal palliative oncology treatment or too frail for oncology treatment

   IV. Neurological Disease
      a. Progressive deterioration in physical and/or cognitive function despite optimal therapy
      b. Recurrent Aspiration Pneumonia; breathless or Respiratory Failure

   V. Kidney Disease
      a. Conservative kidney management due to multi-morbidity
      b. Deteriorating on renal replacement therapy; persistent symptoms and/or increasing dependency

   VI. Liver Disease
      a. Advanced Cirrhosis (Childs C) with one or more complications:
         i. Intractable ascites
         ii. Hepatic Encephalopathy

iii. Hepatorenal Syndrome
iv. Bacterial Peritonitis
v. Recurrent Variceal bleeds
vi. No options for liver transplantation

b. Serum albumin < 25g/l and prothrombin time raised or INR prolonged > 2.5

VII. Dementia

a. Unable to dress, walk or eat without assistance; unable to communicate meaningfully
b. Urinary or Fecal Incontinence

C. Recurrent ICU admissions (more than 2) during a single hospital admission

D. Two or more unplanned admission to hospital within the last 6 months

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5. MSIC and MOH. Management Protocols in ICU. August 2012