

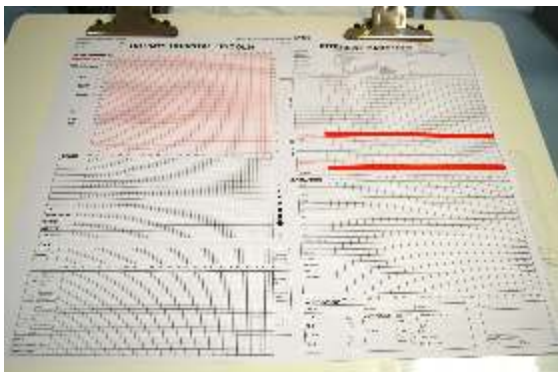
## 10. Understanding the Intensive Care Unit

The Intensive Care Unit (ICU) provides a higher level of monitoring and support for seriously ill or deteriorating patients than is available on the general wards. This will include mechanical ventilation and complex support for patients with multiple organ failure. In practice, most patients on ICU have cardiovascular or respiratory problems, electrolyte and renal malfunction, or depressed consciousness. In many cases this may have been triggered or exacerbated by sepsis of one sort or another.

ICU also provides an outreach service to advise about patients on the wards who have a physiological abnormality which is at risk of deteriorating. The intention is to help reverse this and avoid an Intensive Care admission. Patients may be referred directly to the ICU outreach service by ward nurses. This will be triggered by a scoring system based on a chart called the Modified Early Warning System, which has been shown to be an accurate predictor of clinical deterioration (see Complications chapter). Patients receive intensive care only if they are likely to benefit from it, not just because they are seriously ill; they will not benefit from it if death from their presenting condition is inevitable, for example uncontrolled cancer or end stage cardiac failure.

Admission to ICU may be from the Accident and Emergency Department, from the general wards, or from the operating theatre. Some patients may be booked into ICU in advance if they are having major surgery and they have serious co-morbidity such as cardiac or respiratory disease.

On 'the unit', patients are looked after by the specialist 'intensivists' who are usually specialist



*Patient monitoring chart*



*A patient admitted to ICU 3 hours after a motorcycle accident. His only injuries were a fractured arm and maxilla. He has been heavily sedated with Propofol and is being artificially ventilated through an oral endotracheal tube because of massive facial swelling which would otherwise obstruct his airway. A. endotracheal tube B. air filter C. breathing circuit to ventilator D. bag attached to gastric tube to aspirate stomach contents to prevent regurgitation E. rigid neck collar to stabilize cervical spine (all patients with severe facial injuries are assumed to have cervical spine injuries until they have been X rayed or CT scanned and cleared by an orthopaedic surgeon) F. ECG electrode. I operated on him a week later & he was discharged home 2 days after that.*

anaesthetists. They are assisted by a large team of other professionals, most numerous of whom are the specialist ITU nurses. Each patient will have a nurse solely assigned to them. Where surgeons are involved with the patients there will be shared care; the surgical team should visit each day to contribute advice from the surgical perspective. All treatment orders and prescriptions requested by the surgeons should be formally written by the intensivists; this avoids any confusion.

Patients who require Oral and Maxillofacial Surgery care shared with Intensive Care usually fall mostly within two categories. Firstly, patients who are receiving major resections of cancers of the head and neck, often with soft tissue flap repair, and secondly, patients with multiple injuries which include face and jaw injury. Occasionally we may have a patient in the ICU who has major oro-facial sepsis, usually caused by a dental abscess.

Most patients having major head and neck cancer resection will be transferred from the recovery unit in theatres directly to the ward for post-operative care. However they may go to ITU if they have co-existing severe cardiac or respiratory disease, especially where post-operative ventilation is desirable. Similarly, most patients with facial injuries will not need intensive care as facial injuries are not life threatening unless there is severe bleeding or airways obstruction. However,

patients with multiple injuries, particularly of the head or chest, may need intensive care. The facial injuries are usually dealt with when the life threatening injuries have been stabilised; the Maxillofacial team will have to liaise with the intensivists over the best time to operate.



*Empty bed on ICU awaiting patient*

- A. Video monitor for ECG., blood pressure, P0<sub>2</sub>, CO<sub>2</sub>, temperature, venous pressure, airways gases and pressure
- B. Drip stand for infusions
- C. Lamp
- D. Curtain for visual privacy
- E. Equipment and materials trolley
- F. Clinical waste bag
- G. Sharps disposal bin
- H. Personal protective disposable aprons
- I. Alcohol hand rub
- J. Disposable examination gloves

- K. Mattress pump controller (prevent pressure sores)
- L. Stool for nurse
- M. Calculator and observation charts
- N. Flowtron controller (controls calf compression to decrease deep vein thrombosis risk)
- O. Computer to access patient records (blood and imaging results and reports)
- P. Ventilator
- Q. Dialysis machine
- R. Bed