EVIDENCE-BASED STRATEGIES TO ↓ MORBIDITY, MORTALITY, AND LENGTH OF STAY IN ICU PATIENTS

NEURO: 1) OPTIMIZE ANALGESIA 1^{ST} → IV MSO_4, Fentanyl, or epidural Duramorph +/- Bupivicaine.
2) MINIMIZE SEDATION → Target SS = 2 – 3 w/IV Versed, Propofol, Lorazepam, or Dexmedetomidine; daily interruptions of IV infusions to prevent over-sedation; D/C ASAP.

CV: 1) OPTIMIZE TISSUE O_2 DELIVERY → Target CO, MAP, SVR, PCWP, HCT.
2) PREVENT MYOCARDIAL ISCHMIA → Rx tachycardia, arrhythmias, HTN, ↓ BP.

PULM: 1) PREVENT ASPIRATION PNEUMONIA → CHG mouthwash protocol; HOB ↑ > 35°.
2) ACTIVELY WEAN PATIENTS FROM VENT → Weaning Criteria: stable BP, HR, temp, resolved anesthesia, NMB, alert and cooperative, no active bleeding, minimal secretions. Develop daily weaning plan; avoid excessive WOB, pulmonary fatigue with weaning.
3) MOBILIZE PATIENTS → Incentive spirometry, OOB BID, Nursing ROM, PT consult.

RENAL: 1) AVOID HYPOVOLEMIA → Use U/O, $FeNa^+$, HR, BP, CO, CVP, PAD, or PCWP trends to assess fluid status, renal perfusion. Avoid fluid overload with resuscitation.
2) NORMALIZE ELECTROLYTES → $Na^+/K^+/Mg^{2+}/Ca^{2+}/HCO_3^{2-}/Cl^{2-}/PO_4^{2-}$.

GI/ ENDO: 1) EARLY ENTERAL NUTRITIONAL SUPPORT → Start EN < 72 hr of admission.
2) PREVENT GUT ATROPHY → Give PO Glutamine (10 gm TID) to patients on TPN +/- trophic enteral feeds (Glutamine contraindicated in renal failure, hepatic encephalopathy).
3) MAINTAIN GLUCOSE LEVELS = 80 – 110 mg/dL with Insulin drip.
4) R/O ADRENAL INSUFFICIENCY, HYPOTHYROIDISM → In Vasopressor-dependent patients; if random serum cortisol <15 ug/dl, give 250 mg IV hydrocortisone, then 100 mg IV q8h; if 15-20 mg/dl, give 10 mg IV Decadron and perform ACTH stim test. Check Free T4, TSH levels in hypoadrenal patients.

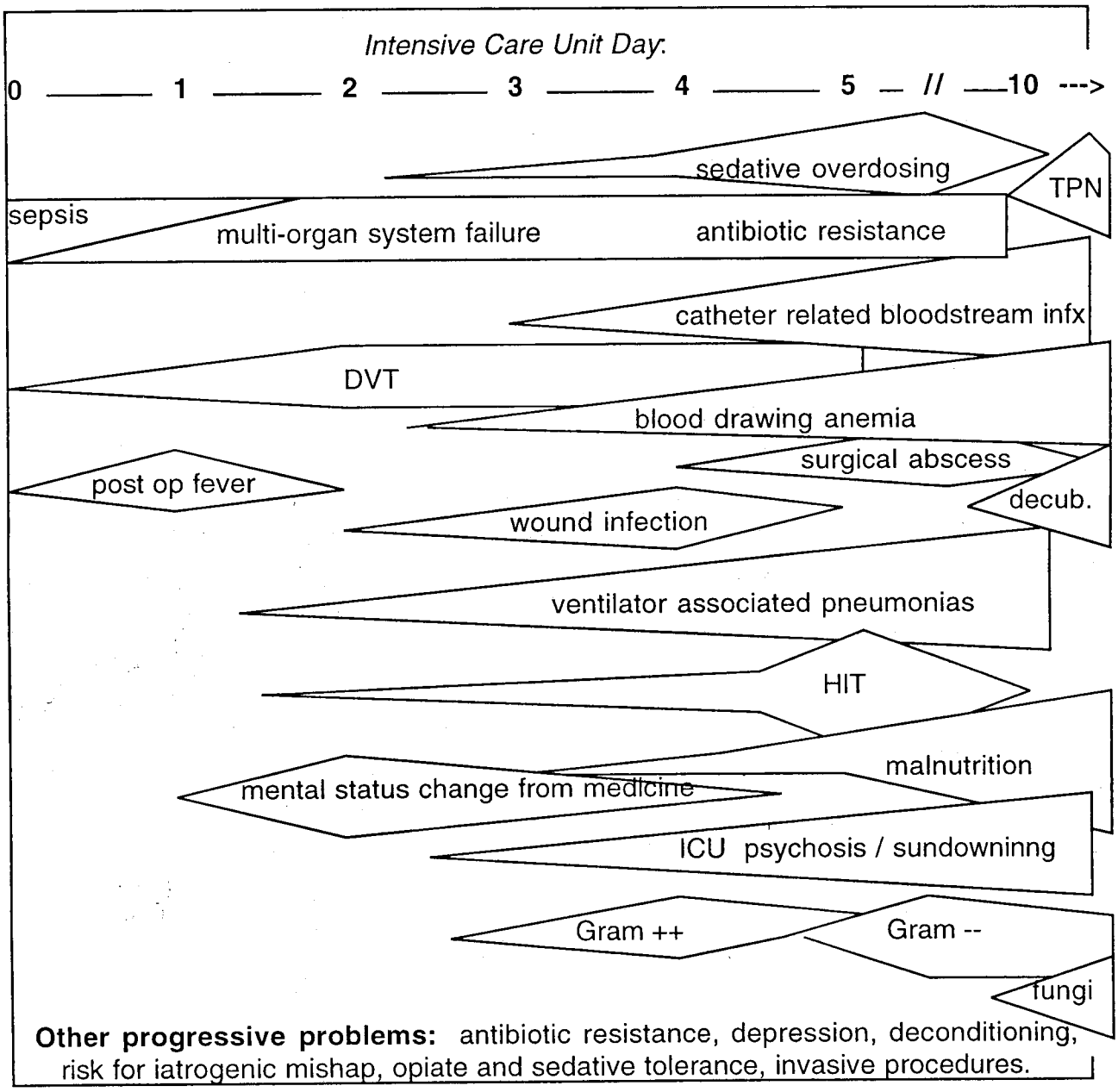
ID: 1) PREVENT RESISTANT ORGANISMS → Minimize antibiotic use (# of antibiotics used and duration of therapy); tailor antibiotics to known organisms.
2) PREVENT CANDIDA INFECTIONS → Give oral Nystatin prophylaxis w/multiple antibiotics.
3) PREVENT CVP, PA, ARTLINE INFECTIONS → Monitor duration, ongoing need for catheters, change artlines q7d, PA caths q5d, CVP prn; sooner if >72h and suspect infection. Always wear gown/gloves/cap/mask, and use full body drape with CVP, PA cath placement.
4) PREVENT FOLEY-CATHETER UTIs → D/c foley ASAP; ck bladder residuals with bedside bladder scanner (Nursing staff performs), then straight cath prn.
5) WASH YOUR HANDS → Before and after exiting pt. room, after bedside keyboard, pt. contact.
6) PREVENT SPREAD OF RESISTANT ORGANISMS → Observe CONTACT ISOLATION.

HEME: 1) MINIMIZE BLOOD DRAWING FOR LABS.
2) TRANSFUSE PRBC's FOR HCT < 21% (< 30% in pts w/ CAD, tissue ischemia).
3) DVT PROPHYLAXIS FOR ALL PATIENTS → 40 mg SC LMWH qd (HIT risk ↓ by 90% w/LMWH vs. UFH ; bleeding risk similar) or SCD + TED hose (for patients w/bleeding risk).
4) CHECK HIPA PANEL → in patients receiving ANY heparin who have ↓ Platelets.

SOCIAL: 1) IDENTIFY PATIENT, FAMILY GOALS OF CARE EARLY → existence of DPA, Living Will, Next of Kin, or Conservator? Obtain Social Work, Hospice Service consults if necessary.
2) SCHEDULE REGULAR FAMILY MEETINGS → if immediate life threatening condition or if patient/family/staff conflicts exist; hold weekly family meetings for updates if ICU LOS >7d.

BARR/September 2002

Time course of classic problems you will encounter in a medical / surgical ICU



Other progressive problems: antibiotic resistance, depression, deconditioning, risk for iatrogenic mishap, opiate and sedative tolerance, invasive procedures.