



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Infermieristica in Area Critica

2324-3-I0101D017-I0101D055M

Aims

General goal

At the end of the course the student will be able to plan nursing to the critical patient, identifying the priorities and contextualizing the interventions in the different critical setting

Intermediate goals

- Know the organization, roles and responsibilities of the figures operating in the intra- and extra-hospital emergency-urgency department (DEA)
- Identify the paths of continuity of care in a critical area: NUE112 - AREU Health Aid, Emergency Room, Intensive Care and mention about specialist setting
- Identify priorities using the vital signs assessment approach: A (airways), B (breathing), C (circulation), D (disability), E (exposure) in adults, neonates and children
- Plan and document nursing in a critical situations
 - Disorder of consciousness (DOC)
 - Respiratory failure
 - Hemodynamic instability
 - Septic shock
 - Polytrauma

Contents

Detailed program

Specific topic

The Emergency Department

- Birth of a culture of urgency and historical evolution of the critical care
- Nursing records in critical care
- Assessment of the critically ill patient and scales
- Accountability and skills of the critical care nurse in the application of diagnostic-therapeutic protocols in out-of-hospital rescue and in Emergency Department triage
- Triage in the Emergency Department: objectives, process and skills
- Triage in infectious emergencies-urgencies (notes)

Ventilatory support and respiratory monitoring in the critical patient (adult, newborn and child)

Assist patient undergoing

- Endotracheal intubation
- Percutaneous tracheostomy
- Tracheobronchial suctioning (from tracheal tube/cannula)
- Invasive ventilation: main ventilation methods, management and monitoring of devices and alarms
- Non-invasive ventilation: main methods, management and monitoring of the patient undergoing continuous positive air pressure (CPAP) using helmet and non-invasive positive pressure ventilation (NPPV) using face or nasal masks
- Prone position

Cardiovascular support and hemodynamic monitoring in the critical patient (adult, mention to newborn and child)

- Instrumental and clinical monitoring: heart rate (HR), non-invasive arterial pressure (NIBP), invasive arterial pressure (IBP), central venous pressure (CVP), pulmonary artery pressure (PAP), pulmonary wedge pressure (PCWP), flow heart rate (CO), mixed venous saturation (SVO?), electrocardiogram (ECG)

Assist patient undergoing

- Synchronized Electrical Cardioversion

Maintaining homeostasis in critical patient (adult, mention to infant and child)

Assist patient with

- Impaired endocrine system
- Alteration of thermoregulation
- Acid-base, water-electrolyte, metabolic imbalance
- Impaired blood volume, edema, dehydration
- Impaired liver function
- Impaired renal function (continuous veno-venous hemofiltration - CVVH, outline)
- Alteration of nutritional status [evaluation of nutritional status, management of artificial nutrition (residual gastric volume, intolerance to artificial enteral nutrition), control of glycemic values]

Neurological assessment of the critical patient (adult, mention to newborn and child)

Disorder of consciousness (DOC)

- Unresponsive Wakefulness Syndrome (UWS), Minimally Conscious State (MCS), Coma, Long Lasting Coma (LLC), Brain death (outline) ****

*Clinical and instrumental monitoring *

- Assessment Tools
- Assessment of intra-cranial pressure (PIC), Electroencephalogram (EEG) [outline]

Pain assessment in a critical setting

- Assessment Tools

Evaluating sedation and agitation in adult ICU patients

- Assessment Tools

ICU patient with Delirium

- Assess
- Prevent
- Manage

****Nursing responsibilities and competencies relating to: ****

- Management of pharmacological therapy in critical areas
- Use of early recognition systems of deterioration of vital functions: standardized measurement of disease severity (EWS systems)
- Restraint in the Intensive Care Unit: regulatory, deontological and jurisprudential reference (individual study)
- Methods of approaching the person/caregiver in critical situations, characterized by intense emotional stress; delivering the “bad news”
- Management of intra-hospital emergencies (reference to the activation criteria of the Medical Emergency Team -MET)
- Prevention of nosocomial infections in the ICU: ventilator associated pneumonia (VAP), Sepsis and septic shock

Pre-hospital assessment, management and transport of polytrauma patient

- Premises
- ABCDE system: assessment and management of Airway, Breathing, Circulation, Disability, and Exposure
- Patient immobilization (devices)
- Transport

The program provides for each student to carry out the BLS-D course with the acquisition of the BLS-D executor certificate

Prerequisites

Da regolamento

Teaching form

Lecture; discussion about clinical case

Textbook and teaching resource

ESSENTIAL REFERENCE

Adult e pediatric

AARC Clinical Practice Guidelines: Artificial Airway Suctioning (2022). Respiratory Care. Vol 67 N. 2

Ausili D., Baccin G., Bezze S., Bompan A., Macchi B., Alberio M., Sironi C., Di Mauro S. (2018) Il Modello assistenziale dei processi umani 2018: un quadro teorico per l'assistenza infermieristica di fronte alla sfida della complessità. Stampa: www.lulu.com

Boettger S, Meyer R, Richter A, Fernandez SF, Rudiger A, Schubert M, Jenewein J, Nuñez DG (2019) Screening for delirium with the Intensive Care Delirium Screening Checklist (ICDSC): Symptom profile and utility of individual items in the identification of delirium dependent on the level of sedation. **Palliative and Supportive Care* *17, 74

Caironi G., Pinto F., (2021) *Infermieristica in Emergenza Urgenza*. Edizioni Idelson Gnocchi

Chiaranda M. (2022), *Urgenze ed Emergenze – Istituzioni*, V edizione a cura di Andrea Paoli. Piccin

Clinical Practice Guidelines for the Prevention and Management of Pain, Agitation/Sedation, Delirium, Immobility, and Sleep Disruption in Adult Patients in the ICU (2018) *Critical Care Medicine*

Davis MD, Walsh BK, Sittig SE, Restrepo RD (2013) AARC clinical practice guideline: blood gas analysis and hemoximetry. *Respiratory Care* 58(10):1694-703

Guidelines for the provision of nutrition support therapy in the adult critically ill patient: The American Society for Parenteral and Enteral Nutrition (2022) *Journal of Parenteral and Enteral Nutrition*. 46(1):12-41

Infusion Therapy Standards of Practice – INS (2021) Blood Sampling via Direct Arterial Puncture 44: 128-129 *Journal of Infusion Nursing*

Kallet R.H. (2019), Ventilator Bundles in Transition: From Prevention of Ventilator-Associated Pneumonia to Prevention of Ventilator-Associated Events. *Respiratory Care*. Vol 64 N. 8

Klaus – Fanaroff's (2020) *Cure del neonato ad alto rischio 7° ed.* Antonio Delfino Editore

Linee di indirizzo nazionali sul triage intraospedaliero – atto intesa stato regioni – Ministero della Salute (2019)

Registered Nurses' Association of Ontario (2012). *Promoting Safety: Alternative Approaches to the Use of Restraints*. Toronto, ON, Canada: Author. Retrieved from <http://rnao.ca/bpg/guidelines/promoting-safety-alternative-approaches-use-restraints>

Società Italiana di Neonatologia (2015), *Raccomandazioni per la rianimazione neonatale*. BioMedia

Società Italiana di Neonatologia (2017), *Percorsi assistenziali neonatologici*. BioMedia

Sousa AS, Ferrito C, Paiva JA (2018), Intubation-associated pneumonia: An integrative review. 44: 45-52

Surviving Sepsis Campaign: Guidelines on the Management of Critically Ill Adults with Coronavirus Disease 2019 (COVID-19)

IN-DEPTH REFERENCE

Agency for healthcare research and quality (2012). *Emergency Severity Index (ESI) A Triage Tool for Emergency Department Care*

American Academy of Pediatrics and American heart Association (2016), *Textbook of Neonatal Resuscitation*. 7th edition. American Academy of Pediatrics

A.S.P.E.N. Clinical Guidelines: Nutrition Support of Adult Patients With Hyperglycemia (2013) *Journal of Parenteral and Enteral Nutrition*, Volume 37 Number 1:23-36

Australasian College of Emergency Medicine (2009), *Emergency triage education kit*

Australasian College for Emergency Medicine (2016), *Guidelines on the implementation of the Australasian triage scale in emergency departments*

Badon P, Cesaro S (2012). *Manuale di nursing pediatrico*. Casa Editrice Ambrosiana

Delibera Regione Toscana n° 806 del 24-07-2017

Gelinas C (2016) Pain assessment in the critical ill adult: Recent evidence and new trends. *Intensive and Critical Care Nursing*, 34: 1 – 11

Giacino JT, Katz DI, Schiff ND, Whyte J, Ashman EJ, Ashwal S, Barbano R, Hammond FM, Laureys S, Ling GSF, Nakase- Richardson R, Seel RT, Yablon S, Getchius TSD, Gronseth GS, Armstrong MJ, Gratton RJ, Bazaracai N, Cameron I, Watts N, Brayman C, Hancock G, Twohey R, AlShanteer S, Ryder JE, Wodrich K, Williams E, Guay A, Basso M, Smithson DS (2016). Acuity Assessment in Obstetrical Triage. *J Obstet Gynaecol Can.* 38(2):125-33

Gruppo Formazione Triage (2019). Triage Infermieristico, IV edizione. Mc Graw Hill

Istituto Superiore di Sanità (2021), Rapporto ISS COVID-19 n 43/2020. Indicazioni ad interim per un appropriato sostegno della salute mentale nei minori di età durante la pandemia COVID 19. Gruppo di lavoro ISS Salute mentale ed emergenza COVID-19

Istituto Superiore di Sanità (2021), Rapporto ISS COVID-19 n 45/2020. Indicazioni ad interim per gravidanza, parto, allattamento e cura dei piccolissimi di 0-2 anni in risposta alla pandemia COVID 19.

Hua F, Xie H, Worthington HV, Furness S, Zhang Q, Li C (2017) Oral hygiene care for critically ill patients to prevent ventilator-associated pneumonia (Review) Cochrane Database of Systematic Reviews

Karlsen K A (2012), The S.T.A.B.L.E. Program Learner Manual, 6th Edition. Post-resuscitation/Pre-transport Stabilization Care of Sick Infants: Guidelines for Neonatal Healthcare Providers. The S.T.A.B.L.E. Program

Lamond E, Murray S, Gibson CE (2017) Delirium screening in Intensive care: a life saving opportunity. *Intensive and Critical Care Nursing*, 44: 105-109

Linee d'indirizzo per il triage in pronto soccorso. Proposta del Coordinamento nazionale Triage di Pronto Soccorso – Monitor 29 ed. 2012 – AGENAS

Manuale formativo di triage pediatrico (2009). Biomedica

Ministero della salute (2010), Raccomandazioni per le cure perinatali nelle età gestazionali estremamente basse (22-25 settimane)

Ministero della salute (2010), Linee di indirizzo sull'organizzazione del sistema di trasporto materno assistito (STAM) e del sistema in emergenza del neonato (STEN)

Ministero della salute (2014), Il dolore nel bambino. Strumenti pratici di valutazione e terapia. Rodrigo editore srl.

Ministero della salute (2014), Raccomandazione per la prevenzione della morte o disabilità permanente in neonato sano di peso > 2500 grammi non correlata a malattia congenita.

Ministero della salute (2014), Linee di indirizzo nazionale per l'organizzazione e la gestione delle banche del latte umano donato nell'ambito della protezione, promozione e sostegno dell'allattamento al seno

Semester

Assessment method

Oral exam concerning lessons

Office hours

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY
