IRC 2021

CONGRESSO NAZIONALE

16•17•18 DICEMBRE

NUOVE LINEE GUIDA 2021: RIANIMAZIONE CARDIOPOLMONARE POST-LOCKDOWN

IRC | Italian Resuscitation Council

GESTIONE DELLE EMERGENZE IN PRONTO SOCCORSO: ORGANIZZAZIONE DEL SISTEMA

Davide Silvagni

UOC Pronto Soccorso Pediatrico

Azienda Ospedaliera Universitaria Integrata Verona

Dove vengono trattate le emergenze pediatriche?

- The majority of children who seek emergency care (69.4%) are cared for in EDs that see fewer than 15 pediatric patients per day (about 5000/year)
- In USA most children who seek emergency care (83%) present to general EDs versus specialized pediatric EDs.

Pediatrics. 2018;142(5):e20182459

Italian Resuscitation Council

Pediatric emergency room activities in Italy: a national survey

Riccardo Longhi[1*], Raffaella Picchi[1], Domenico Minasi[2] and Alessandra Di Cesare Merlone[1]

- Survey su 237 PS italiani
- Nel 56% presenza di un pediatra dedicato
- 82% dei PS gestiscono meno di 10000 bambini/anno

Longhi *et al. Italian Journal of Pediatrics* (2015) 41:77
DOI 10.1186/s13052-015-0184-9

IRC Italian Resuscitation Council

Emergenze pediatriche: criticità

- ✓ I bambini si aggravano più rapidamente degli adulti
- ✓ Maggiore difficoltà di valutazione in < 2 anni
- ✓ Più difficile eseguire indagini o terapie
- ✓ Impiego di più tempo e personale
- ✓ Necessità di sedazione più frequente

Rimini IRC 2021 CONGRESSO NAZIONALE 16•17•18 DICEMBRE POST-LOCKDOWN

Pediatric Readiness in the Emergency Department

Katherine Remick, MD, FAAP, FACEP, FAEMS,[a,b,c] Marianne Gausche-Hill, MD, FAAP, FACEP, FAEMS,[d,e,f] Madeline M. Joseph, MD, FAAP, FACEP,[g,h] Kathleen Brown, MD, FAAP, FACEP,[i] Sally K. Snow, BSN, RN, CPEN,[j] Joseph L. Wright, MD, MPH, FAAP,[k,l] AMERICAN ACADEMY OF PEDIATRICS Committee on Pediatric Emergency Medicine and Section on Surgery, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS Pediatric Emergency Medicine Committee, EMERGENCY NURSES ASSOCIATION Pediatric Committee

Pediatrics. 2018;142(5):e20182459

American Academy of Pediatrics

Facing the Future: Standards for children in emergency care settings

June 2018

RCPCH Royal College of Paediatrics and Child Health *Leading the way in Children's Health*

Standards of Care for Children in Emergency Departments

Version 3.0

International Federation of Emergency Medicine

IRC Italian Resuscitation Council

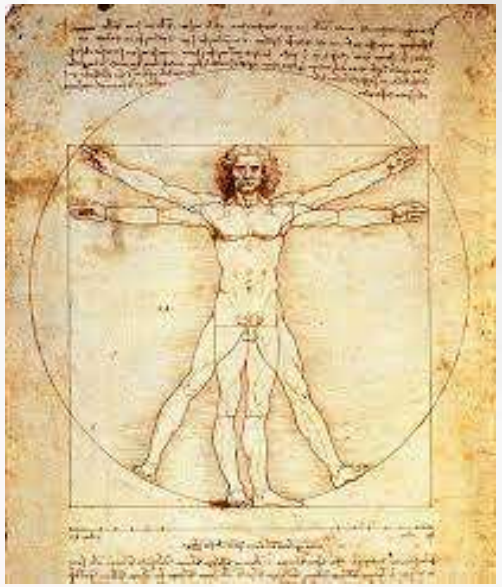
CHALLENGES

All EDs must be continually prepared to receive, accurately assess and, at a minimum, stabilize children and safely transfer children who are acutely ill or injured

As emergency healthcare systems mature, countries must consider the special requirements of the paediatric patient with respect to environment, equipment and staff skills & training, ensuring they meet the needs of both the paediatric and adult population of emergency patients.

ERM MODELLO SHELL

Software



Hardware

Environment

Liveware

RCPCH Royal College of Paediatrics and Child Health
Leading the way in Children's Health

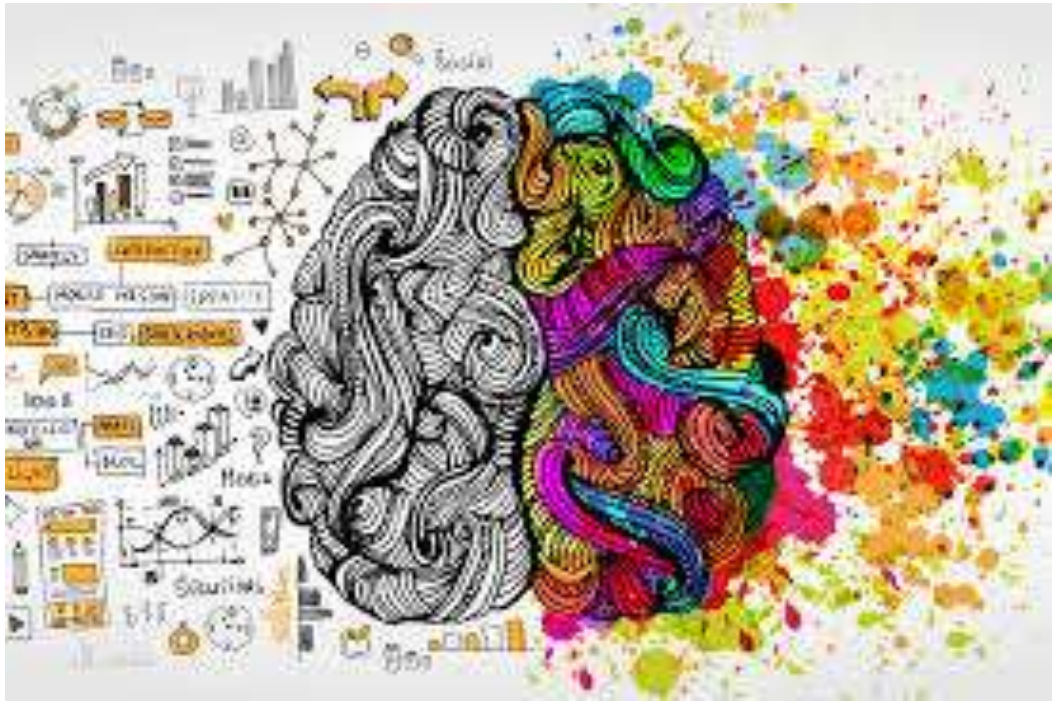
International Federation of Emergency Medicine

American Academy of Pediatrics

IRC Italian Resuscitation Council

SOFTWARE

- Initial assessment
- Stabilising and treating
- Competencies



INITIAL ASSESSMENT

- All children must have vital signs (temperature, RR HR) at initial assessment
- All ED clinical staff must be highly competent in recognising the seriously ill or injured child and recognising a deterioration in a child's condition
- All patients in moderate or severe pain must have pain relief provided within 30 minutes of arrival

TRIAGE PEDIATRICO

Model	Example	Timing & Time	Involves	Outcomes
Rapid visual inspection	Quick "eyeball" of new arrivals to ED	Immediately upon arrival – takes a few seconds	Quick look at face and body to check color, breathing and if floppy / lifeless	Identifies obviously ill child immediately
Brief initial assessment	Patient Assessment Triangle (PAT)[2]	Within 5 minutes of arrival – takes less than a minute	Quick assessment of: appearance, work of breathing and skin circulation	Identifies high priority child immediately. Overlaps with streaming (below)
Streaming	Categorisation by area of ED e.g. resuscitation room, illness area, minor injury area, deflection to other services e.g. primary care / dentist	Within 15 minutes of arrival. Takes 2-3 minutes per patient	Quick history, can include measuring vital signs as well	For allocation to the right area in EDs where there is a choice of receiving areas. Patient would receive full initial assessment in that area as opposed to the general arrivals area
See and Treat	Rapid assessment and full management by senior emergency doctor or nurse	Performed within 15 minutes or may follow brief initial assessment / streaming, takes 5-15 minutes per patient	For uncomplicated cases. Replaces full assessment and incorporates treatments and discharge rapidly	Overall quicker throughput to limit ED congestion. If cases are more complicated than initially thought, they are referred into main ED
Full initial assessment	Comprehensive assessment, usually using a standardised and validated tool (See Figure 1)	Within 15 minutes of arrival. Takes approximately 3-5 minutes per patient.	Most involve assessment of: presenting complaint, key emergency signs and vital signs	Allocation to a triage category to allow prioritisation of whole ED workload

INITIAL ASSESSMENT

16. All children who are streamed away from an emergency care setting must be assessed by a clinician with paediatric competences and experience in paediatric initial assessment within pre-agreed parameters including basic observations.

17. All children attending emergency care settings are visually assessed by a doctor or nurse immediately upon arrival with clinical assessment undertaken within 15 minutes to determine priority category, supplemented by a pain score and a full record of vital signs.

18. A system of prioritisation for full assessment is in place if the triage waiting time exceeds 15 minutes.

19. Children with abnormal vital signs at initial triage assessment have their observations repeated within 60 minutes.

20. Every emergency department treating children has an established Early Warning System.

21. Policies in place for the escalation of care for critically unwell children.

IRC | Italian Resuscitation Council

Paediatric Observation Priority Score

Paediatric Observation Priority Score (POPS) Chart

This chart is not a substitute for good clinical judgement and any concerns about the condition of a child should be brought to the attention of a senior nurse or doctor

Age	Score	2	1	0	1	2
Any	Sats	<90%	90-94%	>95%	90-94%	<90%
Any	Breathing	Stridor	Audible grunt or wheeze	No distress	Mild or Moderate Recession	Severe Recession
Any	AVPU	Pain	Voice	Alert	Voice	Pain
Any	Gut Feeling	High level concern	Low level concern	Well	Low level concern	Child looks unwell
Any	Other	Oncology Patient	Significant PMH*		Significant PMH*	Congenital heart disease
0-1	Pulse	<90	90 - 109	110 - 160	161 - 180	180+
	RR	<25	25 - 29	30 - 40	41 - 50	50+
	Temp	<35°	35 – 35.9°	36 - 37.5°	37.6 - 39°	39°+
1-2	Pulse	<90	90 - 99	100 - 150	151 - 170	170+
	RR	<20	20 - 24	25 - 35	36 - 50	50+
	Temp	<35°	35 - 35.9°	36 – 37.9°	38.0 - 40°	40°+
2-4	Pulse	<80	80 - 94	95 – 140	141 - 160	160+
	RR	<20	20 - 24	25 – 30	31 - 40	40+
	Temp	<35°	35 - 35.9°	36 - 37.9°	38.0 - 40°	40°+
5-12	Pulse	<70	70 - 79	80 - 110	111 - 150	150+
	RR	<15	15 - 19	20 - 25	26 - 40	40+
	Temp	<35°	35 - 35.9°	36 - 37.9°	38.0 - 40°	40°+
13-16	Pulse	<50	50 - 59	60 – 100	101 - 110	110+
	RR	<12	12 - 14	15 – 20	21 - 25	25+
	Temp	<35°	35 - 35.9°	36 - 37.9°	38.0 - 40°	40°+

Total Score	Priority
0-1	
2-3	
4-7	
8+	Immediate review

Any child scoring above **8** should be considered for transfer to resus

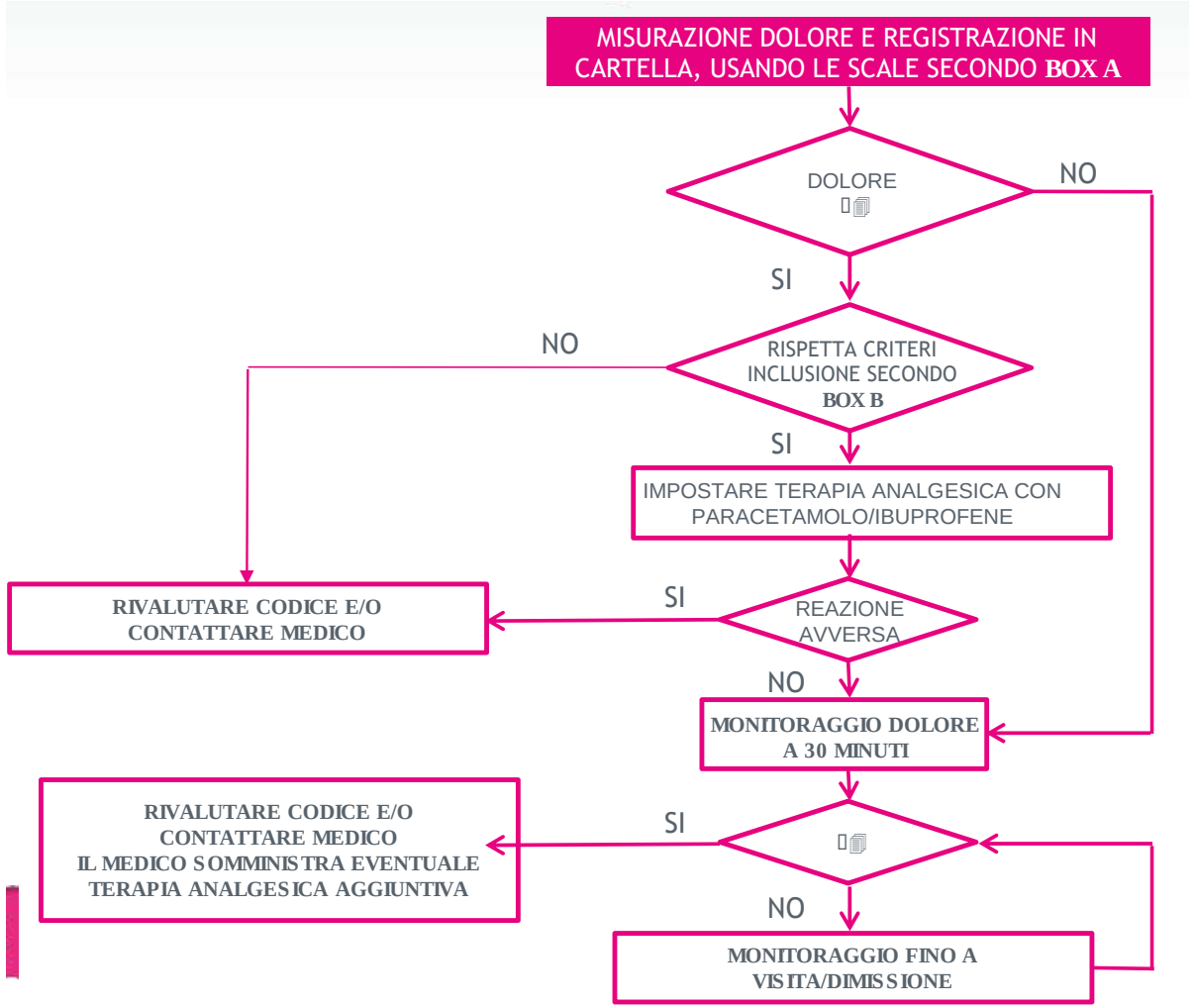
***Significant PMH includes:**

- Ex-premature
- Syndromic conditions
- Cardiac problems
- Asthma
- Diabetes
- Long term steroids
- All other chronic conditions

This is version 1.3 August 2016

INITIAL ASSESSMENT

For children with special needs chronic diseases or complex conditions should be prioritised as they are vulnerable, priority acccess to hospital notes


MISURAZIONE DOLORE E REGISTRAZIONE IN CARTELLA, USANDO LE SCALE SECONDO BOX A
DOLORE
NO
SI
RISPETTA CRITERI INCLUSIONE SECONDO BOX B
NO
SI
IMPOSTARE TERAPIA ANALGESICA CON PARACETAMOLO/IBUPROFENE
REAZIONE AVVERSA
SI
RIVALUTARE CODICE E/O CONTATTARE MEDICO
NO
MONITORAGGIO DOLORE A 30 MINUTI
SI
RIVALUTARE CODICE E/O CONTATTARE MEDICO IL MEDICO SOMMINISTRA EVENTUALE TERAPIA ANALGESICA AGGIUNTIVA
NO
MONITORAGGIO FINO A VISITA/DIMISSIONE


RACCOMANDAZIONE A SUPPORTO DELLA GESTIONE DEL DOLORE IN TRIAGE

PAIN RELIEF

STABILISING AND TREATING: COMPETENCIES

- All ED clinical staff must be competent in BLS
- Goals of hypoxia, shock status epilepticus treatment
- Resuscitation algorithms should be clearly visible in resuscitation areas
- Resuscitation team
- Airway management within 5 minutes of the need being identified

COMPETENCIES

- ✓ Adult trained: trauma resuscitation, substance abuse, major incidents
- ✓ Paediatrician: infant illness, practical procedures, child protection, communication

HARDWARE

- Equipment and medications
- Weight estimation
- Clinical pathways

EQUIPMENT & MEDICATIONS

- The appropriate range of drugs and equipment must be available for facilities receiving unwell or injured children
- Accessible clearly labelled organized (logical layout)
- Equipment and medications in sizes and formulations suitable for different ages and body weight

EQUIPMENT & MEDICATIONS

Pediatric Medication Safety in the Emergency Department

Decreasing Pediatric Medication Administration Errors in the ED

- Appropriate selection of medications
- Pre calculated resources for common or emergency drug doses
- Dilution guidelines and charts
- 2 provider cross check process for high alert medications
- Standardized concentrations and reduce the number of available concentrations
- Alert for upper dosing limits

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

. *Pediatrics*. 2018;141(3):e20174066

IRC | Italian Resuscitation Council

Pediatric Medication Safety in the Emergency Department

*	FARMACO	Dose unitaria max	Via	Dose/KG	Peso paziente (KG)	DOSE DA SOMMINISTRARE
	ADENOSINA *1° dose*	6 mg	EV	0.1-0.2 mg		mg
	ADENOSINA *2° dose*	18 mg	EV	0.3 mg		mg
	ADRENALINA ARRESTO *Soluzione diluita 1:10 000 → 1 fl con 9 ml di Sol. Fisiol.*	10 ml (=1 mg)	EV	0.1 ml *Sol. diluita*		ml
	AMIODARONE	300 mg	EV	5 mg		mg
	ATROPINA	0.5 mg	EV	0.02 mg		mg
	CALCIO CLORURO 10%	10 ml	EV	0.2 ml		ml
	FENTANYL	50 mcg	EV	1 mcg		mcg
	ADRENALINA ANAFILASSI *NON diluita*	0.5 mg	IM	0.01 mg		mg
	CLORFENIRAMINA	10 mg	EV	0.2 mg		mg
	IDROCORTISONE	100 mg	EV	2-4 mg		mg
	METILPREDNISOLONE	80 mg	EV	1-2 mg		mg
	MIDAZOLAM	10 mg	EV	0.1-0.2 mg		mg
	FENITOINA	1500 mg	EV	20 mg		mg
	LEVETIRACETAM	4500 mg	EV	60 mg		mg
	FENOBARBITAL	1000 mg	EV	15–20 mg		mg
	FLUMAZENIL	0.2 mg	EV	0.01 mg		mg
	NALOXONE	2 mg	EV	0.01 mg		mg

* *TPSV* *ARRESTO* *ANAFILASSI*
CRISI EPILETTICA *ANTIDOTI*

ETICHETTA PZ
Nome:
Cognome:
Data di nascita:

Decreasing Pediatric Medication Administration Errors in the ED

Italian Resuscitation Council

European Resuscitation Council Guidelines 2021: Paediatric Life Support

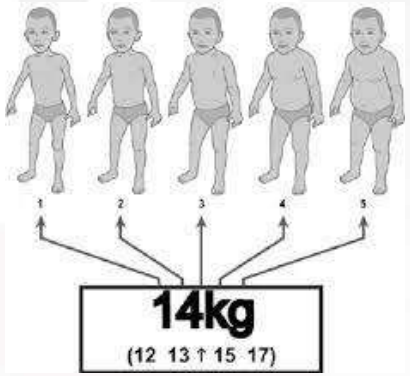
Drug calculation tools and rules

- The dosing of emergency drugs requires a functional estimate of the child's weight.
- Parental estimates are usually more accurate than estimates by health professionals
- Lenght based methods (Broselow) tend to underestimate weight
- Systems including correction for body habitus (e.g. PAWPER) are more accurate

STIMA DEL PESO

Studio monocentrico 2050 pazienti (PSP Verona)

- Confronto diretto tra stima dei genitori, Broselow, PAWPER, EPALS formula
- Stima genitori: preciso e accurato
- PAWPER tape: accurato in tutte le taglie (eccetto estreme)
- Broselow: non affidabile per bambini con taglia non media
- Formula EPALS non affidabile



HARDWARE

- Evidence based clinical pathways should be available to providers in real time

Italian Resuscitation Council

INDICE

IRC | Italian Resuscitation Council

INDICE

ANAFILASSI

DEFINIZIONE

1. Insorgenza acuta (minuti o ore) di sintomi **cutanei e/o mucosi** + almeno 1 fra sintomi **respiratori e/o cardiovascolari e/o gastrointestinali**
2. Insorgenza acuta (minuti o ore), dopo esposizione ad allergene noto o probabile, di **Ipotensione e/o broncospasmo e/o laringospasmo**

SINTOMI

- **Respiratori** (dispnea, broncospasmo, stridore);
- **Cardiovascolari** (ipotensione, sincope);
- **Cutanei/mucosi** (orticaria, prurito o flushing, angioedema);
- **Gastrointestinali** (dolore addominale, vomito, diarrea).

A Stridore - Disfonia - Prurito cavo orale
TET precoce se edema vie aeree

B Distress respiratorio

C Shock e/o ipotensione

D Alterazione stato di coscienza

ANAFILASSI CERTA o PROBABILE o IMMINENTE
(anche con sintomi lievi in pz con pregressa anafilassi)

Adrenalina im 0,01 mg/kg (sol 1mg/ml) max 0,5 mg
< 6 anni: 0,15 mL (150 mcg)
6-12 anni: 0,3 mL (300 mcg)
> 12 anni 0,5 mL (500 mcg)
Rimozione allergene

Ipotensione/shock

Algoritmo shock
Posizione supina con AAII sollevati

Broncospasmo

Salbutamolo aerosol 2,5 mg < 5 aa; 5 mg >5 aa
Metilprednisolone 1-2 mg/kg ev

MET

NO MIGLIORAMENTO

Adrenalina im ripetibile ogni 5-10 min (max 2-3)

Adrenalina ev (ic 0,1-1 mcg/kg/min)

In tutti i casi considerare:
- **Clorfenamina** 0,2 mg/kg ev (max 10 mg), sopratutto se sintomi cutanei
- **Glucocorticoidi** es. metilprednisolone 1-2 mg/kg ev o prednisone 1-2 mg/kg os)

La somministrazione di adrenalina IM va effettuata nella faccia antero-laterale della coscia

Osservazione per 4-8 ore dalla somministrazione di adrenalina per il rischio di anafilassi bifasica (12-24 ore se anamnesi positiva per anafilassi prolungata o bifasica o asma o >1 dose di adrenalina o >60m minuti fra insorgenza sintomi e somministrazione adrenalina)

AMEETIP

IRC Italian Resuscitation Council

ENVIRONMENT

Not necessarily separate facilities

ENVIRONMENT

- Children must be separated from distressing sight and sounds of other patients with some separation from the main waiting area of adults
- The ED must contain child-oriented treatment rooms
- Minimization of parent-child separation

LIVEWARE

- Child and family centered care
- Child protection
- Death of a child

CHILD AND FAMILY CENTERED CARE

- Caregivers of ill or injured children will generally be anxious and feel protective and must have ample opportunity to share their concerns and have questions answered

CHILD AND FAMILY CENTERED CARE

- Engaging the child in the right way
- Guarantee family presence during all aspects of emergency care including invasive procedures and resuscitation
- The family presence does not appear to reduce effectiveness or success rates for invasive or resuscitation procedures

CHILD PROTECTION

- Al clinicians must act in the best interest of children in all of their interactions with children, young people, families and other professionals
- Potentially vulnerable children and young adults should not be discharged from ED until a place of safety is identified
- Collaboration with an experienced multidisciplinary team is strongly recommended

CHILD PROTECTION

- Recognition of possible child abuse
- Clinical assessment of a child
- Initial managemet
- Appropriate authorities to notify about a possible or suspected child abuse

Italian Resuscitation Council

DEATH OF A CHILD

- CPR must be administered initially (until information is verified) unless there are unmistakable signs of death or there is a legally valid written directive stating not to initiate CPR or other forms of life saving treatment.
- ED senior staff and managers must ensure that their staff members are prepared for and helped with the emotional consequence of dealing with child death.
- EM staff must report on any case where death is suspected to be the result of neglect or abuse, to the relevant authorities (Police or other) within the country's law and institutional policy.

MENTAL HEALTH

- 10% dei bambini in UK richiedono supporto
- 2-5% degli accessi in PS pediatrico (USA dati 2016)
- + 84% marzo 2020-marzo 2021 in Italia (SIP)

MENTAL HEALTH

- Tentati suicidi (2° causa di morte 10-19 anni)
- Agitazione psicomotoria e eteroaggressività
- Disturbi somatici/funzionali
- Ritiro sociale
- Abuso di sostanze
- Disturbi psicotici

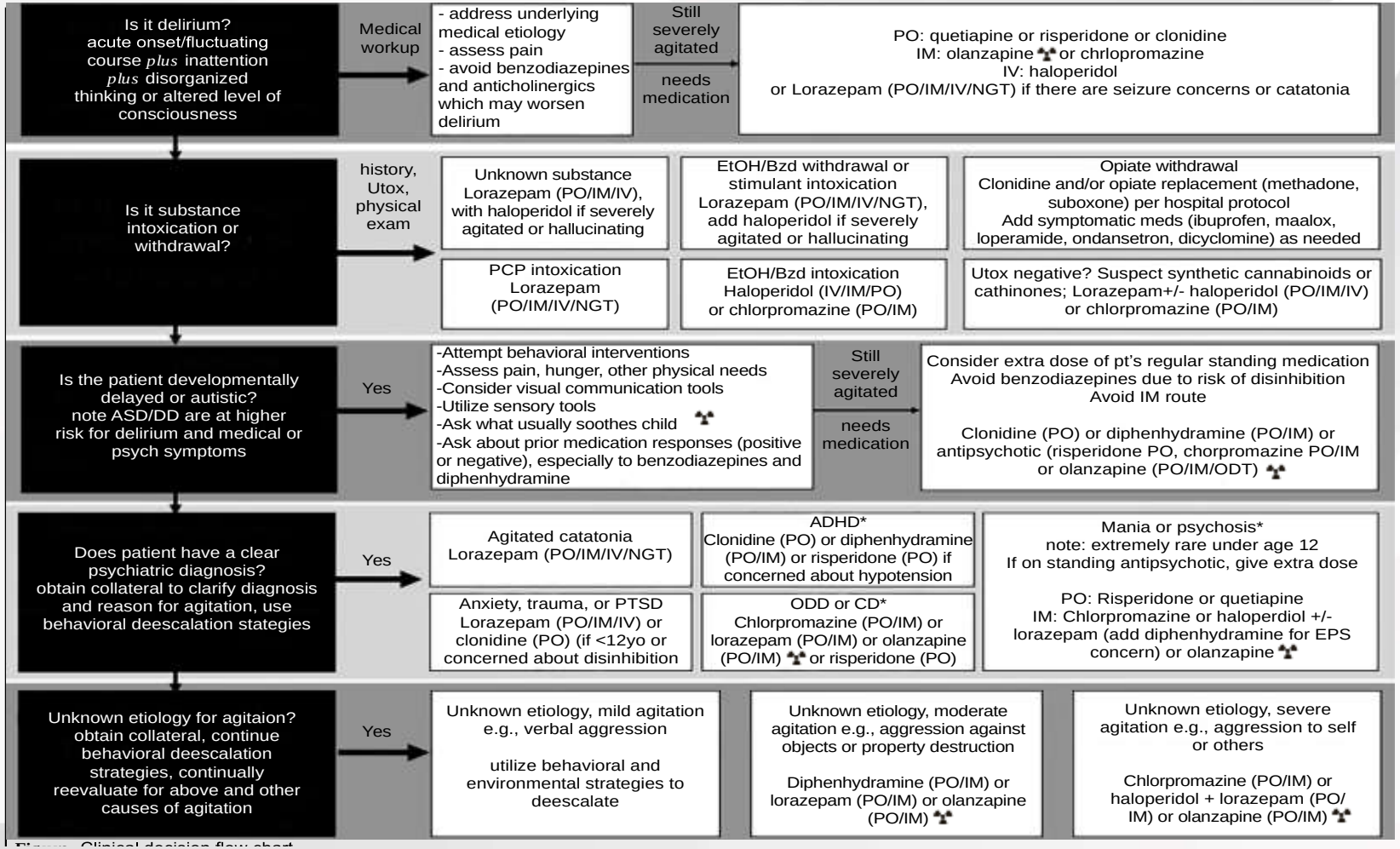
MENTAL HEALTH

- Emergency care settings often represent the first point of contact for vulnerable children who are seeking help in crisis
- It is recognised that urgent and emergency care staff may feel more confident in delivering care for acute medical and traumatic presentations rather than perform mental health assessment
- EDs must consider the needs of adolescent patients as distinct from those of young children and of adults

MENTAL HEALTH

- Minimising sensory stimulation
- Reserve a safe space for children who are emotionally or behaviourally distressed
- An appropriate risk assessment should be commenced at triage for all patients presenting in mental health crisis

Best Practices for Evaluation and Treatment of Agitated Children and Adolescents (BETA) in the Emergency Department: Consensus Statement of the American Association for Emergency Psychiatry



Pediatric Readiness in the Emergency Department

This checklist is based on the American Academy of Pediatrics (AAP), American College of Emergency Physicians (ACEP), and Emergency Nurses Association (ENA) 2018 joint policy statement "Pediatric Readiness in the Emergency Department," which can be found online at: https://pediatrics.aappublications.org/content/pediatrics/142/5/e20182459.full.pdf.

Use this tool to check if your hospital emergency department (ED) has the most critical components listed in the joint policy statement.

Administration and Coordination of the ED for the Care of Children

☐ Physician Coordinator for Pediatric Emergency Care (PECC)*
- Board certified/eligible in EM or PEM (preferred but not required for resource limited hospitals)
- The Physician PECC is not board certified in EM or PEM but meets the qualifications for credentialing by the hospital as an emergency clinician specialist with special training and experience in the evaluation and management of the critically ill child.

☐ Nurse Coordinator for Pediatric Emergency Care (PECC)*
- CPEN/CEN (*preferred*)
- Other credentials (e.g., CPN, CCRN)

* *An Advanced Practice Provider may serve in either of these roles. Please see the guidelines/toolkit for further definition of the role(s).*

Physicians, Advanced Practice Providers (APPs), Nurses, and Other ED Healthcare Providers

☐ Healthcare providers who staff the ED have periodic pediatric-specific competency evaluations for children of all ages. Areas of pediatric competencies include any/all of the following:
- Assessment and treatment (e.g., triage)
- Medication administration
- Device/equipment safety
- Critical procedures
- Resuscitation
- Trauma resuscitation and stabilization
- Disaster drills that include children
- Patient- and family-centered care
- Team training and effective communication

Guidelines for QI/PI in the ED

☐ The QI/PI plan includes pediatric-specific indicators
- Data are collected and analyzed
- System changes are implemented based on performance
- System performance is monitored over time

Please see the guidelines/toolkit for additional details.

ED Policies, Procedures, and Protocols

Policies, procedures, and protocols for the emergency care of children. *These policies may be integrated into overall ED policies as long as pediatric-specific issues are addressed.*

☐ Illness and injury triage
☐ Pediatric patient assessment and reassessment
☐ Identification and notification of the responsible provider of abnormal pediatric vital signs
☐ Immunization assessment and management of the under-immunized patient
☐ Sedation and analgesia, for procedures including medical imaging
☐ Consent, including when parent or legal guardian is not immediately available
☐ Social and behavioral health issues
☐ Physical or chemical restraint of patients
☐ Child maltreatment reporting and assessment
☐ Death of the child in the ED
☐ Do not resuscitate (DNR) orders
☐ Children with special health care needs
☐ Family and guardian presence during all aspects of emergency care, including resuscitation
☐ Patient, family, guardian, and caregiver education
☐ Discharge planning and instruction
☐ Bereavement counseling
☐ Communication with the patient's medical home or primary care provider as needed.
☐ Telehealth and telecommunications

All-Hazard Disaster Preparedness

The written all-hazard disaster-preparedness plan addresses pediatric-specific needs within the core domains including:

☐ Medications, vaccines, equipment, supplies and trained providers for children in disasters
☐ Pediatric surge capacity for injured and non-injured children
☐ Decontamination, isolation, and quarantine of families and children of all ages
☐ Minimization of parent-child separation
☐ Tracking and reunification for children and families
☐ Access to specific behavioral health therapies and social services for children
☐ Disaster drills include a pediatric mass casualty incident at least every two years
☐ Care of children with special health care needs

idelines

ical pathways, order sets or decision
providers in real time

fers

er-facility transfer agreements
er-facility transfer guidelines. These may
sfers (e.g., specialty services)
ction of appropriate transport service
ation of transfer
of patient information
mily-centered care
lehealth/telecommunications

roving Pediatric Patient Safety

edication safety needs are addressed in
hed in kilograms only
ded in kilograms only
require emergency stabilization, a
for estimating weight in kilograms is used
sed system)
en have a full set of vital signs recorded
l signs includes temperature, heart rate,
pulse oximetry, blood pressure, pain, and
hen indicated in the medical record
or children of all ages
edication delivery that includes:
g dosing and formulation guides
erpreter services in the ED
nd reporting of patient safety events

Support Services

abilities and protocols address age-
e dose reductions for children
ransfer completed images when a patient
ne facility to another
adiology, laboratory and other ED
nsure the needs of children in the
es/toolkit for additional details

Guidelines for Medication, Equipment and Supplies

Pediatric equipment, supplies, and medications are appropriate for children of all ages and sizes (see list below), and are easily accessible, clearly labeled, and logically organized.

☐ ED staff is educated on the location of all items
☐ Daily method in place to verify the proper location and function of pediatric equipment and supplies
☐ Medication chart, length-based tape, medical software, or other systems is readily available to ensure proper sizing of resuscitation equipment and proper dosing of medications
☐ Standardized chart or tool used to estimate weight in kilograms if resuscitation precludes the use of a weight scale (e.g., length-based tape)

Medications

☐ Analgesics (oral, intranasal, and parenteral)
☐ Anesthetics (eutectic mixture of local anesthetics; lidocaine 2.5% and prilocaine 2.5%; lidocaine, epinephrine, and tetracaine; and LMX 4 [4% lidocaine])
☐ Anticonvulsants (benzodiazepines, levetiracetam, valproate, carbamazepine, fosphenytoin, and phenobarbital)
☐ Antidotes (common antidotes should be accessible to the ED, e.g., naloxone)
☐ Antipyretics (acetaminophen and ibuprofen)
☐ Antiemetics (ondansetron and prochlorperazine)
☐ Antihypertensives (labetalol, nicardipine, and sodium nitroprusside)
☐ Antimicrobials (parenteral and oral)
☐ Antipsychotics (olanzapine and haloperidol)
☐ Benzodiazepines (midazolam and lorazepam)
☐ Bronchodilators
☐ Calcium chloride and/or calcium gluconate
☐ Corticosteroids (dexamethasone, methylprednisolone, and hydrocortisone)
☐ Cardiac medications (adenosine, amiodarone, atropine, procainamide, and lidocaine)
☐ Hypoglycemic interventions (dextrose, oral glucose)
☐ Diphenhydramine
☐ Epinephrine (1mg/mL [1M] and 0.1 mg/mL [IV] solutions)
☐ Furosemide
☐ Glucagon
☐ Insulin
☐ Magnesium sulfate
☐ Intracranial hypertension medications (mannitol, 3% hypertonic saline)
☐ Neuromuscular blockers (rocuronium and succinylcholine)
☐ Sucrose solutions for pain control in infants
☐ Sedation medications (midazolam, etomidate and ketamine)
☐ Sodium bicarbonate (4.2%)
☐ Vasopressor agents (dopamine, epinephrine and norepinephrine)
☐ Vaccines (tetanus)

Pediatric Readiness Toolkit (www.pediatricreadiness.org)

https://emscimprovement.center/domains/pediatric-readiness/

IRC | Italian Resuscitation Council

Rimini IRC 2021 CONGRESSO NAZIONALE 16•17•18 DICEMBRE NUOVE LINEE GUIDA 2021: RIANIMAZIONE CARDIOPOLMONARE POST-LOCKDOWN

Non illuderti che il nemico possa non venire, ma tieniti sempre pronto ad affrontarlo.

Non illuderti che il nemico non ti attacchi, ma fai piuttosto in modo di renderti inattaccabile.

Sun Tzu

IV secolo a.C.

.ircouncil.it

davide.silvagni@aovr.veneto.it

IRC Italian Resuscitation Council