

European PSA survey

Dear colleague,

Thank you for your time answering this survey on Pediatric Procedural Sedation and Analgesia (PSA) in the Emergency Department (ED).

Our aims are to feel the pulse of PSA in Europe, to create a network of sedation experts, and together to find opportunities for collaborative research, for training, and for enhancing safety in PSA.

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Disclaimer on identifiable information: The data will be securely stored and no data will be communicated outside of the scope of this survey. Once data analysis is complete, likely within the year, the data will be destroyed. Country and hospital name will be used to compare answers by country and to track double entries.

If you have any questions regarding the data, please contact me at cyril.sahyoun@hcuge.ch

Please note that unless noted, the questions below refer strictly to the care of children who are presenting to the Emergency (or Pediatric Emergency) Department.

Case:

A 4 year old girl arrives at your emergency department with a displaced fracture of the radius and ulna, without vascular or neurological deficits. The fracture requires closed reduction and casting (no surgical material needs to be placed), which will be very painful.

What are the way or ways this case is most commonly managed, in your department (multiple responses allowed)?

- Analgesia and transfer to a referral center
- Procedure done under general anesthesia by anesthesiologist
- IntraVENOUS sedation in the emergency department
- IntraMUSCULAR sedation in the emergency department
- Nitrous oxide +/- hematoma block +/- intranasal fentanyl
- IntraNASAL fentanyl +/- intraNASAL midazolam
- No inhaled, intravenous or intranasal medications
- Other
- We do not see Trauma cases at our hospital (transported elsewhere from site of injury)

How is this patient otherwise managed?

What molecule(s) and route(s) of administration are available, for the PURPOSE of Procedural Sedation and Analgesia on children, in your ED (multiple answers and routes possible) ?

	Inhaled	Oral	IV	IM	Intranasal	Intrarectal	Not available in our ED
Nitrous oxide (inhaled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Midazolam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fentanyl	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Morphine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ketamine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Propofol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dexmedetomidine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chloral hydrate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Etomidate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Who physically administers the intraVENOUS medications for PSA, in your ED?

	Physician	Nurse	Either one	Not available in our ED
Midazolam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ketamine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Propofol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dexmedetomidine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other intraVENOUS medications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What other intraVENOUS medication is that?

To the best of your knowledge or estimation, how many dissociative (KETAMINE) and deep sedations (PROPOFOL, KETOFOFOL, etc) are performed?

Please note, first set of answers is per WEEK, second is per DAY

- None, we do not use either molecule
- Less than 1/WEEK
- about 1-2/WEEK
- about 2-4/WEEK
- about 4-6/WEEK
- about 1-2/DAY
- about 2-4/DAY
- about 4-5/DAY
- > 5/DAY

To the best of your knowledge or estimation, how many NITROUS OXIDE sedations are performed?

Please note, first set of answers is per WEEK, second is per DAY

- None, we do not use nitrous oxide
- Less than 1/WEEK
- about 1-2/WEEK
- about 2-4/WEEK
- about 4-6/WEEK
- about 1-2/DAY
- about 2-4/DAY
- about 4-5/DAY
- > 5/DAY

What concentration Nitrous Oxide do you have available in the ED?

- 50/50 % nitrous/oxygen
- Up to 70/30 % nitrous/oxygen

Approximately, and on a typical weekday, during normal DAY hours, how many PHYSICIANS are usually present to perform INTRAVENOUS PSA? How about the number of nurses able to monitor INTRAVENOUS PSA?

	0	1	2	3	4	5	6	7	8	>8
Physician coverage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurse coverage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you have sets of guidelines/protocols in place for the following ?			
	Yes	No	Unsure
TRAINING: Specific PSA curriculum/courses, aside from advanced life support courses, required for the staff administering the sedation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TRAINING: Specific number of supervised PSA before performing PSA solo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SAFETY: General safety rules for administering sedation (which patients can or cannot be sedated in the ED, number of staff members that needs to be present in the room, which monitoring needs to be applied, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CHECKLIST: A specific checklist, used just prior to the PSA, of material, adjunct medications or information that need to be prepared or obtained, in preparation for the sedation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Yes	No	Unsure
TRAINING: Specific PSA curriculum/courses, aside from advanced life support courses, required for the staff administering the sedation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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CHECKLIST: A specific checklist, used just prior to the PSA, of material, adjunct medications or information that need to be prepared or obtained, in preparation for the sedation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you have non-invasive capnography (through nasal/oral monitoring cannulae) available in your ED?

- No
 Yes: it is ALWAYS used during intravenous PSA
 Yes: it is OFTEN used during intravenous PSA
 Yes: it is OCCASIONALLY used during intravenous PSA

Of the following "problem situations", how much does each of them apply to your department?

	Never a problem	Sometimes a problem	Often a problem	Always a problem
The doctors are often unavailable to perform PSA (short staffed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The nurses are often unavailable to perform PSA (short staffed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The ANESTHESISTS resist the use of PSA by NON-anesthesists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The emergency department PHYSICIANS resist the use of PSA in the ED because of ED crowding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The emergency department NURSES resist the use of PSA in the ED because of ED crowding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of physical space to perform PSA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which molecules are currently restricted to anesthesiologist use, in your emergency department (meaning you are not free to create a protocol and use them in children without their direct supervision or official approval) ?

- Nitrous oxide
- Midazolam
- Ketamine
- Propofol
- Dexmedetomidine
- Fentanyl
- No molecule is restricted to anesthesiologist-only use

Of the following statements, please state how much you agree with each:

	Completely disagree	Somewhat disagree	Unsure	Somewhat agree	Completely agree
Systematically using midazolam before ketamine PSA has shown to reduce emergence phenomenon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ketamine often gives nightmares and behavior changes for several days after administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Propofol administration in the emergency department is unsafe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ketamine is a useful agent in the emergency department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel comfortable performing an intravenous sedation on a non-emergent ASA PS Class III patient in the ED (ASA PS: American Society of Anaesthesiology Physical Status Classification, example: 3 year old boy with history of severe asthma and who is currently wheezing)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dexmedetomidine causes neuroapoptosis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One dose of fentanyl of 1 mcg/kg is enough to cause moderate sedation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One physician is enough to simultaneously perform the PSA AND the procedure itself when using Propofol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Systematically using glycopyrrolate or atropine before ketamine PSA decreases airway adverse events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Specialty(ies):

What are the specialty(ies) of the physicians performing PSA for your emergency department pediatric patients (multiple answers possible)?

- General practitioner (no particular specialty)
- General Paediatrics
- Internal medicine (adults only)
- General Emergency Medicine (children and adults)
- Anesthesiology
- General Surgery
- Other

What other specialty is that?

If any, what are the SUB specialty(ies) of the physicians performing PSA in your ED (multiple answers possible)?

- Paediatric Emergency Medicine
- Paediatric Critical Care Medicine
- Paediatric Anesthesiology
- Paediatric Surgery
- No paediatric SUBspecialists performing PSA in our ED
- Other

What other sub specialty is that?

Board certification:

In your knowledge, what is the proportion of the physicians performing PSA on children in your ED that hold a certification by your national board (or equivalent), for their specialty ?

- 100%
- 75-99%
- 50-75%
- 25-50%
- 0-25%

Pediatric advanced life support course:

In your knowledge, what is the proportion of the physicians performing PSA in your Emergency Department that hold a current certification in EPALS (European Paediatric Advanced Life Support), PALS (Pediatric Advanced Life support) or other similar advanced life support course for children?

- 100%
- 75-99%
- 50-75%
- 25-50%
- 0-25%

Are physicians in training usually allowed to perform PSA?

- No
- Yes, all are allowed
- Yes, if in senior years

In your country, are Emergency Medicine and Pediatric Emergency Medicine recognized by a national board certification?

	Yes	No	Not sure
Emergency Medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pediatric Emergency Medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you have a protocol which allows nurses to give analgesics from ED triage, without asking the doctor for a signed prescription every time?

No
 Yes

For which medications is that protocol in place?

Paracetamol
 Ibuprofen or similar nonsteroidal antiinflammatory
 Tramadol or similar oral opiate
 Intranasal fentanyl
 Other

Which other medication is that?

Are Child Life Therapists (aka Hospital Play specialists. Not clowns, not nurses' aids) available to you, in the Pediatric Emergency Department?

No
 Yes: day and night
 Yes: during the busiest hours of the day and evening.
 Yes: during normal daytime business hours

Is hypnosis available to the children of your Emergency Department?

No
 Yes: day and night
 Yes: during the busiest hours of the day and evening
 Yes: during normal daytime business hours

Is a topical WOUND anesthetist available for suturing of lacerations, in your department?

No, we do not have one available
 No, because we do not see/treat lacerations at our hospital (referred or transported elsewhere from site of injury)
 Yes: LET/LAT (lidocaine, epinephrine/adrenaline, tetracaine) gel
 Yes: one similar to LET

What is that WOUND local anesthetic called?

Is skin glue (cyanoacrylate, such as Dermabond, SurgiSeal, etc) available for closing minor wounds, in your ED ?

No, it is not available
 No, because we do not see/treat lacerations at our hospital (referred or transported elsewhere from site of injury)
 Yes

Is a topical NEEDLE stick anesthetic available for a blood draw or for the placement of an intravenous line, in your department ?

No
 Yes

Which topical NEEDLE stick anesthetic is available in your department?

EMLA (eutectic mixture of local anesthetics)
 Ethyl Chloride
 Other

What is that other NEEDLE stick anesthetic called?

Do your emergency department physicians USUALLY sedate patients OUTSIDE of the emergency department (for gastroenterology or bronchoscopy procedures, MRI, etc.)?

- Yes
 No

Does your hospital have a Medical Sedation Service OUTSIDE of the operating theater that serves children?

- Yes
 No

(Defined as a group of physicians on a pre-defined schedule, who sedate patients from different services of the hospital, such as from hospitalization units, from radiology, etc.) ?

Which physicians staff that service (multiple answers possible) ?

- Anesthesiologists
 General Paediatricians
 Paediatric Intensive Care Unit physicians
 Paediatric Emergency Medicine physicians
 Other

What type of physician is that?

How satisfied are you currently with the management of pain and anxiety of children during procedures, in your department?

- Very UNSatisfied
 Somewhat UNSatisfied
 Somewhat satisfied
 Very satisfied

In a few words, please state the MAIN REASON why you are unsatisfied:

What are the official names of the department and hospital you work at?

In which city is your hospital located ?

In which country is your hospital located ?

Last question! How many CHILDREN did your emergency department treat, this last ENTIRE year?
