

Child India

November
2023



Monthly e-Newsletter of Indian Academy of Pediatrics



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Editor's Note

Dear colleagues,

The November 2023 issue of Child India is at hand.

November is an important month for IAP as we pediatricians celebrate Children's Day (also known as Bal Divas) to increase the awareness of people towards the rights, care and education of children. It was in 1957 that the 14th of November was officially declared Children's Day in India by a special government edict to celebrate the birth anniversary of Pandit Jawaharlal Nehru.



The World Diabetes Day is also observed on November 14th since 1991 by the declaration of the International Diabetes Federation (IDF) and the World Health Organisation. November 14 was decided upon as World Diabetes Day because it was the birth anniversary of Frederick Banting, who, along with Charles Best, discovered insulin. The theme for 2023 is "Access to Diabetes Care". The theme highlights the importance of equal access to information and care for timely treatment and management.

Major IAP week and day celebrations were slated for this month. You all would have had many programs between Nov 7th and 14th for the Child and Adolescent Health Care Week (CAHCW) and were busy guiding the adolescent. The IAP Teenage day is observed on the 1st day of the Child and Adolescent Health Week, Daughter's day is celebrated on Nov 12th, the Sunday during the Child and Adolescent Health Care Week and The healthy lifestyle Day on any day of that week.

The theme of World Pneumonia Day 2023 (Nov 12th) is 'Championing the fight to stop pneumonia.' Primarily, responsible for most deaths of children mainly in low and middle-income countries below five around the world, the day focuses on creating ample opportunity and encouraging global action.

IAP Newborn Week (Nov 15th to 22nd) on "Safety, Quality and Nurturing care – Birth Right of Every Newborn" will also have kept us IAPians on our toes this month.

We hope that all reports for the IAP Awards of these Day and Week Celebrations were submitted in time to IAP CO.

This issue of Child India focuses on palliative care for children and we – IAP President Dr Upendra Kinjuwadekar, IAP HSG Dr Vineet Saxena, IAP OB and EB and myself – profusely thank all contributors, especially Rtd. Prof Dr Lulu Mathews for coordinating the submissions.

Wishing you all had a great November,

Jai Children of our country,

Jai IAP!

Dr Jeelson C Unni
Editor-in-Chief

President's Address

Dear IAPans,

Greetings from CIAP!

I'm very happy to address you in the penultimate issue of Child India for 2023! This time our focus is on pediatric palliative care. While each one of us is busy in providing a curative care to the child who comes to our primary/secondary or tertiary level facility with some or the other acute medical challenge, very few of us spend time or are actually aware of ways to take care of a small but significant proportion of children for whom palliative care is of paramount importance. A subset of these children are suffering from a chronic progressive disease for which maintenance of quality of care is all that is needed like advanced cystic fibrosis, severe immunodeficiency, Duchenne muscular dystrophy etc.



Palliative care also includes patients with diseases for which as of now no cure is available like trisomy 13, trisomy 18, or for that matter the treatment is available but may fail like cancer, children awaiting solid organ transplantation. Nonprogressive, irreversible conditions with extreme vulnerability to health complications like children with severe developmental disabilities, such as those with severe cerebral palsy, hypoxic brain injury are non-progressive but at the same time irreversible with extreme vulnerability to health complications. In this issue let us learn from the experts how to alleviate a child's physical, psychological, and social distress and help to live up to its best possible potential.

In hidden gems we are presenting some of our talented colleagues from East Zone. Do read about them and also give your valuable feedback.

Thank you,

Dr Upendra Kinjawadekar

National President 2023

Indian Academy of Pediatrics

Secretary's Message

Dear Colleagues,

Greetings,

“The value of achievement lies in the achieving.”

I am pleased to report that in the month of November, we have achieved remarkable milestones in our various projects and initiatives. We have successfully conducted several workshops, campaigns, and events to promote child health and development across the country. We have also strengthened our collaboration with other organizations and stakeholders to advance our common goals and vision.



We have conducted several meetings in the month of November via Video Conferencing that includes Branch Evaluation Meeting on 06th November. Sports Discussion Meeting on 07th as well as 16th November. IAP's Prevention of Violence against Children (VAC) Initiative with core trainers was scheduled on 08th, 21st and 28th of November. Pedicon 2024 Scientific Committee Meeting took place on 09th November. HPV Master Trainers ToT was done on 17th November. Guidance for Annual report submission in IAP Official Area Meeting with Chapter OB, State and Local Branches OB was scheduled on 20th November and 21st November respectively. IAP URI meeting on 22nd. Meeting with Election commissioner regarding Dr Shyam Kaushik complaint meeting was held on 25th November. InJ matter discussion with the OB member of 2023 and 2024 was done on 28th November 2023.

Along with this, Indian Academy of Pediatric conducted workshops on the following modules under the Presidential Action Plan 2023. 1 of Haematology; 1 of Genetic; 1 of Comprehensive Nutrition Module (CNM); 2 of Hit the bull's Eye-Clinical Clues; 1 of ID Ultra; 4 of Saksham; and 5 of “Good Practices in Pediatrics”

Regarding the ECD, 04 workshops in the month of November 2023 and the total number of workshop till month of November is 171. This month total of 21 Basic NRP and 03 Advanced NRP provider courses have been successfully conducted.

On behalf of IAP, I urge you to organize various activities in the best interest of the health and welfare of the country's children.

Long Live IAP, Jai IAP

Yours sincerely,

Dr Vineet Saxena

Hon. Secretary General 2022 & 23

President's Engagements



Dr. Arun T. Dabke oration at CGPEDICON 23 at Bhilai, Chattisgarh

President's Engagements



Quality of care webinar organized by UNICEF on 15-11-23



Inauguration of 44th UP PEDICON on 18-11-23 at Jim Corbett National park Uttarakhand. Dr Sanjay Niranjana, Dr Vivek Saxena, Dr Shalabh, Dr Ravi, Dr Tandon and the team put up splendid efforts in making the conference successful.

President's Engagements



SSS with Dr Vikas More, Dr Chitra Kulkarni, Dr Neha and Dr Ajay Koli team IAP Uran in the interiors of Raigad district Maharashtra on 6-11-23

President's Engagements



With Dr Abhishek Goel, Dr Neelam Mohan, Dr Ajay Arora, Dr Shivani Deswal for SSS at Gurugram on 7-11-23



SSS at Indo Scot school Thane along with Dr Ramgopal Chejara, Dr Sandeep Kelkar, Dr Amrita Baviskar, Dr Grivita Raikar and colleagues from Thane IAP on 3-11-23

President's Engagements



On 14-11-23 at Chennai with Dr MS Vishwanathan and Dr Indira Jayakumar where MoU was signed with Apollo SHINE for conducting SSS in various schools.

President's Engagements



IAP Thrissur and Madhya Kerala branches conducted SSS on 20-11-23
Dr Bala D, Dr Anand Kesavan, Dr Shimmy Paulose, Dr Muraleedharan and others

President's Engagements



With Dr Rajeev Srivastava, Dr Sudhir Chaudhary, Dr Utkarsh Sharma, Dr Shalini Bhasin and others
for SSS at Dehradun on 17-11-23

President's Engagements



With Hon Minister of school education, Govt of Maharashtra Shri Deepak Kesarkar at the launch of SSS in municipal schools on 13-11-23

President's Action Plan 2023**Hidden Gems - East Zone****Dr Madhumita Bhattacharyya**

I am playing electric steel guitar. I learned it from famous Guitelist Batuk Nandi and Sunil Ganguly in my school days and at my early MBBS time. I also passed the basic course on it with distinction. After many years of discontinuation I have started to play it again regularly from 2019. I played it at IAP celebration of Women's day 2022 at Kolkata.

I got award in International Women's day 2023 for my guitar playing beside my medical duties from IMA West Bengal, Behala branch.

I use to play Rabindra Sangeet and modern songs.

A book of poems written by me 'nana rong' was also published in this year's Kolkata Book fair.

President's Action Plan 2023

Hidden Gems - East Zone

Dr Palash Ranjan Gogoi



Dr Palash Ranjan Gogoi did his MBBS from Assam Medical College and MD in Pediatrics from Guwahati Medical College in the year 2007. He received awards for academic excellence during his UG course.

A sensitive writer and eminent poet, he published his first anthology of Assamese poems in 2008, followed by another two in 2015 and 2020. He released an audio CD of his poems in the year 2014. Being a responsible pediatrician, he used to write various articles on child health and has published nearly 200 health articles in weekly papers, fortnightly magazines, women's magazines, and magazines for children. He has published two books on child health in the Assamese language to create awareness of many common health issues emphasizing practical knowledge and advice.

He is a gifted singer since he was a child, and received several awards in school and college days in singing competitions. He is a percussionist and he enjoys playing Tabla and Assamese Bihu dhol.

He is an active member of IAP, Meghalaya State Branch. He served the state branch as secretary (2011), president (2013), treasurer (2020-21), and was editor of the state academic journal for 3 consecutive years. He was the treasurer of the East Zone Academy of Pediatrics (2018-19) and was honored with Purbanchal Pioneer Award in 2016. He is a senior consultant of the Department of Pediatrics in Nazareth Hospital in Shillong, Meghalaya; DNB teacher and thesis guide for the last 16 years; he has 14 publications to his credit and has contributed articles in medical journals and books. He is a resource person in various IAP projects and courses. At present, he is the State academic coordinator of basic NRP and IAP-ALS and BLS courses.

President's Action Plan 2023

Hidden Gems - East Zone

Dr Debjani Gupta



Dr Debjani Gupta
DCH MRCP (uk)
Senior Paediatric Consultant
Narayana Multi-speciality Hospital
Zenith Superspecialist Hospital

Painting as a form of mindfulness happened somewhere between academics, professional commitments and family ones.

For me it was instinctive, completely untutored and a joyous pursuit.

Raising the bar each time a canvas of colours was shaped helped me to evolve and grow.

The encouraging appreciation of peers friends and family did wonders for my palette.

I was privileged and humbled to showcase my work at various academic state , zonal and national conferences and also for them to be printed in scientific souvenirs as well .

Honoured to have my work showcased alongside other artists at the prestigious Nandalal Bose Gallery ICCR.



President's Action Plan 2023**Hidden Gems - East Zone****Dr. Nilanjan Ghosh**

Dr. Nilanjan Ghosh had picked up his father's Pentax ME super camera at a very young age. That was the beginning of his passion. With time from analogue cameras and reel films he graduated to DSLR camera. In the early days, wildlife was his sole attraction. Gradually he also stepped in other genres of photography like landscape, head shots, Street photography, Astro photography, Macro photography, flower photography. He is the recipient of multiple awards from National and international exhibitions and competitions. He has been awarded with AFIP and EFIP from Federation of Indian Photography, the highest body in Indian Photography. Also he has received AFIAP and EFIAP from FIAP an prestigious photography organization in France.

Dr. Nilanjan Ghosh
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President's Action Plan 2023

Hidden Gems - East Zone

Dr. Mritunjay Pao



Dr. Mritunjay who is a Pediatric Intensivist in Jorhat, Assam is also an avid photographer with a passion for landscape, travel and wildlife photography. He has won many photography awards and for his contributions towards promotion of Photography as a hobby he was nominated to the Executive Board of the Photography Club of Assam which is one of the largest photography club of the North Eastern region having a membership of one lakh twenty thousand active photographers who are mostly enthusiasts. He is also an admin of the Facebook page of the Photography Club of Assam. To promote photography among young photographers he has contributed to the funds for awards in the Annual Photography competition held by the Club. His favorite genre of photography is Landscape photography which is a passion. He also loves travel photography and portraiture, photographing people as a subject is always interesting. Travelling for conferences and family outings gives him the opportunity to squeeze out time for photography also.



President's Action Plan 2023

Hidden Gems - East Zone

Dr Alok Ranjan Singh



I am a freelancer, practicing in Howrah. I have inculcated some hobbies like photography, playing guitar and gardening. These act as a stress buster for me in my day to day schedule and has been very helpful to keep me motivated and productive. I love to be in the midst of nature and experience the divine beauty all around.

Consultant paediatrician
ILS HOSPITAL &
Shree Jain Hospital, Howrah



President's Action Plan 2023

Hidden Gems - East Zone

Dr Vinay Asawa



My activities outside the field of medicine

- More than 70 letters to the editors in 'The Telegraph' raising political and social issues.
- Articles in many magazines
- Prize in Puzzle solving and Quiz Contest and Caption contest
- Prize in FM Radio
- 2 Interactive sessions in AIR
- Drama and Elocution contest
- Chess winner in RH Kar Medical College
- 3rd in swimming competition in Howrah Swimming Club
- 10 medals in Marathon
- 1st prize in Crossword solving in Times of India

President's Action Plan 2023**Hidden Gems - East Zone**

A Pediatrician with special interest in Pediatric Nephrology, Consultant, Department of Pediatric Nephrology Institute of Child Health, and Department of Pediatrics, Amri Hospitals, Mukundapur, Kolkata.

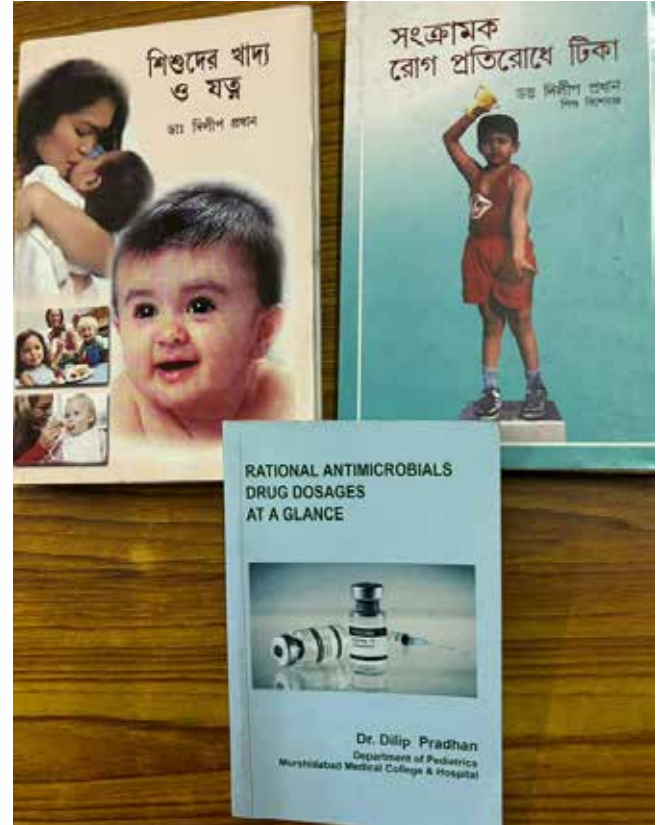
My entry into the world of art is fortuitous. Academics, family and professional commitments had kept me away from art till I decided to give my passion a deserving chance, after my son went abroad for higher studies in 2017. Initially self taught, I came under the mentorship of renowned artist Pranab Ray during the covid period, which gave the so called push to my career in art. Since then I have participated in several exhibitions and my artworks have been well received. The journey explore and create continues.



President's Action Plan 2023

Hidden Gems - East Zone

Dr. Dilip Kumar Pradhan



Dr. Dilip Kumar Pradhan MBBS. 1982 DCH (Kolkata) Mob no. 9434173680,
email : dilipkrprodhan@gmail.com

Has a habit of writing in mother tongue (Bengali) on scientific and social topics in different local magazines since his college life. During his service period published two books in Bengali and one in English. Bengali title : (1)shisuder Khadya o jatna for the parents.

264 pages on child care, highly popular book by Bengali parents. (2) sankramak Rog pratirodhe Tika, the only complete book on vaccine in Bengali, very useful for practitioners, nurses and parents, lucid and easy to understand, first published in 1992, forwarded by Dr. D. Mukharjee the then president of IAP . One English title: Rational Antimicrobials & Drug dosages at a glances for the beginners of medical professionals. His books are very helpful & won the heart of the target people.

President's Action Plan 2023

Hidden Gems - East Zone

Dr. Palash Bandyopadhyay



Several books written
Poetry books
Story Books
Books of Satire
Health awareness book

Sonda mati nona jal
Dhusar smritir album
Dilli bohu dur
Dhritrashtra lipi
Prem tomake
Limeriker khata
Tok jhal mishti
MUHURTER. HABNARA
(thoughts of the moment)
...bilingual
(POETRY BOOKS)

Balodnama
(Story books,)

Choya dhekur
(Satire books)

Mayeder janyo
(Health awareness book)

Award
Bharatiya Dalit Sahitya Akademi award::2021

Common Symptoms in Pediatric Palliative Care

DR SPANDANA RAYALA

Education Lead, Pediatric Palliative Care Specialist
Sunflower Children's Network
Two Worlds Cancer Collaboration



Introduction:

Children with conditions requiring palliative care experience several symptoms that affect their quality of life and can contribute towards rapid progression towards End of Life. Some of the most common symptoms encountered in clinical practice other than pain are nausea and vomiting, constipation, diarrhea, dyspnea, seizures, insomnia, fatigue. The major difference with the approach towards diagnostic evaluations to identify the cause should be based on the goals of care of the child and family.

Nausea and Vomiting:

One of the common symptoms seen in Pediatric Palliative Care that is equally distressing to the child and their family is Nausea and Vomiting.

Just like any other symptom in palliative care, always think about:

- Goal of care in this patient
- Detailed history: try to find the possible causes or contributing factors
- o Timing, quality, severity of Nausea and Vomiting
- o Oral intake, hydration, satiety
- o Abdominal pain, reflux
- o Neurological history
- o Stools
- o Psychological factors: anxiety, depression

- o Medications
- Physical Exam: focused on abdominal, neurology, oropharynx, fundus.
 - Identify the cause to treat the cause and/or
 - Identify the pathway (based on the mechanism) to block the pathway.

Management:

Environmental Changes:

- o Small meals, let them choose the foods
 - o Favorite drinks to sips
 - o Minimize exposure to strong smells
 - o Comfortable environment
 - o Mouth care
 - o Integrative Strategies
 - Support for anxiety: counseling, relaxation techniques, music therapy, hypnosis
 - Aromatherapy: lemon, peppermint
 - Acupressure or acupuncture
- Pharmacological Management:
- The choice of anti-emetics depends on the underlying cause and the receptor being stimulated, e.g. the anti-emetic of choice for Morphine-related vomiting is Haloperidol.
 - Where the cause is not immediately established, a universal anti-emetic is indicated. (Metoclopramide and Domperidone in standard doses). The added advantage of these drugs is increased gastric emptying, which is usually delayed in children with neurological diagnoses.

List of drugs and doses²

Drug category	Drugs	Dosing regime	Route of administration	Side effects/caution
5-HT ₃ antagonists	ondansetron	5 mg/m ² body surface twice a day, max. 8 mg/dose	per os, intravenous	may cause constipation, overdose may cause nausea
Dopamine antagonists/ prokinetic drugs	metoclopramide	0.15–0.3 mg/kg four times a day	per os, intravenous, subcutaneous, per rectum	*
Dopamine antagonists/ prokinetic drugs/ neuroleptic drugs	haloperidol	5–25 µg/kg every 8–12 h	per os, subcutaneous, intravenous	extrapyramidal side effects*
Antihistamines/ anticholinergics	cyclizine	1 mg/kg three times a day	per os, intravenous, subcutaneous	*
Antihistamines	dimenhydrinate	1–2 mg/kg every 6–8 h	per os, intravenous, per rectum	max. daily dose 75 mg (2–6 years), 150 mg (6–12 years)
Anticholinergics	hyoscine hydrobromide (scopolamine)	6–10 µg/kg every 6 h as needed	per os, intravenous, subcutaneous	*
Corticosteroids	dexamethasone	1 mg patch >10 years, change every 72 h 0.1–1 mg/kg every 6–8 h	transdermal per os, intravenous, subcutaneous	cushingoid effects with long-term use, gastric irritation, mood instability, poor control of blood sugar
Benzodiazepines	lorazepam	25–50 µg/kg every 6–8 h	per os, intravenous	drowsiness, max. 1 mg/dose

* Prokinetic drugs not in combination with anticholinergic drugs or amitriptyline.

Dyspnoea

“A subjective experience of breathing discomfort that consists of qualitatively distinct sensations that vary in intensity”³

Causes of Dyspnoea

Pulmonary Causes

- Lung Metastases
- Pleural or Pericardial Effusions
- Interstitial Lung Disease (radiation / chemotherapy induced)
- Chest Infection
- Atelectasis
- Airway obstruction – lower
- Pulmonary Embolus (rare in children)

Non-pulmonary Causes

- Anemia (Hemoglobin < 8 g / dL)
- Airway obstruction - upper
- SVC obstruction / Mediastinal Disease
- Anxiety / fear
- Increased secretions
- Cardiac failure
- Chest wall pain / constriction
- Elevated diaphragm: ascites, abdominal mass

Symptom Assessment & Management

- Begins with thorough assessment (e.g. history, examination)
- Try to find a cause. This may include imaging, depending on goals of care. If it is a treatable cause, treat (e.g. infection)
- Important to remember that we can still provide symptom management even if the

cause cannot be found.

- Needs frequent re-evaluation – often after hours
- Identify what exacerbates or relieves symptoms, including medications and oxygen

Opioids in Dyspnea:

Mechanism of action:

- not exactly clear
- diminish the chemoreceptor response to hypercapnia and hypoxia
- cause vasodilation resulting in decreased dyspnoea due to the resulting reduction in preload and pulmonary congestion
- facilitate a decrease in anxiety and the subjective sensation of dyspnoea without reducing respiratory rate or oxygen saturation

Dosing:

- If patient is not in pain, starting dose is 25-50% of the dose for pain
- Morphine:
 - PO/SL 0.1 mg / kg every 2-4 hours as needed (orally or sublingually)
 - Or IV/SC 0.05 mg / kg every 2 – 4 hours
- o If already on morphine / opioids, increase dose by 30-50%
- o Continuous infusion (SC or IV) for severe or persistent symptoms

Benzodiazepines:

- The addition of benzodiazepines to morphine was significantly more effective than morphine alone, without additional adverse effects.
- Does not worsen respiratory failure.
- Routes of administration:
 - Clonazepam and Lorazepam can be given sublingually,
 - Midazolam can be given via buccal or intranasal route.
 - Midazolam can also be given IV or SC either as bolus or infusion

Anxiolysis: 10 – 30 mcg / kg / hour

Sedation: 60 – 300 mcg / kg / hour

Non-Pharmacological Management of Dyspnea

- Air movement/fan
- Room temperature
- Avoid conditions which provoke anxiety
- Avoid or decrease Physical activity or exertion
- Positioning
- Diversion, Distraction
- Breathing exercises
- Play Therapy

DELIRIUM

- Syndrome of altered cognition and awareness with waxing and waning episodes
- May have multiple underlying factors that essentially lead to acute brain injury
- The three subtypes are hypoactive, hyperactive, and mixed subtypes

Challenges in Pediatrics

- Limited data and the picture is often very complex, so easy to miss
- Most common in younger children and those with developmental delay
- Other things may mimic (e.g., seizures)

Medications:

- Haloperidol
 - a. Only one that also has IV formulation
 - b. Most experience
 - c. Somewhat less sedating
 - d. 0.01-0.02 mg/kg q8 (0.5-1 mg)
 - Quetiapine
- a. 1.5mg/kg/day divided into three doses
 - Olanzapine
- a. 2.5-5mg 1-2 times a day; would start at 1.25mg for under 10 years or so
 - Risperidone
- a. 0.025-0.5 mg night dose or divided into two doses

Table 1. The Richmond Agitation-Sedation Scale (RASS)

Score	Term	Description	
+4	Combative	Overtly combative, violent, immediate danger to staff	
+3	Very agitated	Pulls or removes tube(s) or catheter(s); aggressive	
+2	Agitated	Frequent nonpurposeful movement, fights ventilator	
+1	Restless	Anxious but movements not aggressive or vigorous	
0	Alert and calm		
-1	Drowsy	Not fully alert, but has sustained awakening (eye opening/eye contact) to voice (>10 seconds)	Verbal stimulation
-2	Light sedation	Briefly awakens with eye contact to voice (<10 seconds)	
-3	Moderate sedation	Movement or eye opening to voice (but no eye contact)	
-4	Deep sedation	No response to voice, but movement or eye opening to physical stimulation	Physical stimulation
-5	Unarousable	No response to voice or physical stimulation	

Procedure for RASS Assessment

1. Observe patient
 - Patient is alert, restless, or agitated. Score 0 to +4
2. If not alert, state patient's name and say to open eyes and look at speaker.
 - Patient awakens with sustained eye opening and eye contact. Score -1
 - Patient awakens with eye opening and eye contact, but not sustained. Score -2
 - Patient has any movement in response to voice but no eye contact. Score -3
3. When no response to verbal stimulation, physically stimulate patient by shaking shoulder and/or rubbing sternum.
 - Patient has any movement to physical stimulation. Score -4
 - Patient has no response to any stimulation. Score -5

Figure 1. Cornell Assessment of Pediatric Delirium (CAPD) revised

RASS Score ____ (if -4 or -5 do not proceed)

Please answer the following questions based on your interactions with the patient over the course of your shift:

	Never	Rarely	Sometimes	Often	Always	Score
	4	3	2	1	0	
1. Does the child make eye contact with the caregiver?						
2. Are the child's actions purposeful?						
3. Is the child aware of his/her surroundings?						
4. Does the child communicate needs and wants?						
	Never	Rarely	Sometimes	Often	Always	
	0	1	2	3	4	
5. Is the child restless?						
6. Is the child inconsolable?						
7. Is the child underactive—very little movement while awake?						
8. Does it take the child a long time to respond to interactions?						
TOTAL						

Seizures at End of Life:

- Generally, seizures are managed by neurologist or pediatrician until child is near the end of life, then palliative care provider will assume management responsibility.
- Key is educating and preparing the family about what may occur. This especially stands true for children who have not had a long-standing seizure disorder (eg. Child with brain metastasis or progressive brain tumor) as it can be particularly scary for the child and the family.
- Generally, the care plan based on the Goals of Care should include the clarity to avoid trips to hospital for seizures, at end of life.
- The family needs to have some medications at home to prevent emergency visits to hospital taking into consideration which routes of medication are available (eg. Impaired swallowing)
- Select medications which are relatively easy to give at home in end of life situation:
 - Intranasal, buccal/SL, or SC midazolam
 - Rectal diazepam
 - Buccal/SL lorazepam
 - IM/deep SC phenobarbital

Drugs, Dosages and Routes⁵

Drug	Route	Dose	Maximum Single Dose
Midazolam	Buccal/SL	0.5mg/kg	10mg/dose
	SC/IV	0.1mg/kg	
	Intranasal	0.2mg/kg	
Midazolam Continuous Infusion	SC/IV	0.05mg/kg/hr	Increase dose to achieve seizure control, up to 0.3mg/kg/hr
Diazepam	PR	0.5mg/kg	20mg/dose
	Buccal	0.5mg/kg	20mg/dose
	IV	0.3mg/kg	10mg/dose
Lorazepam	Buccal/SL	0.1mg/kg	4mg/dose
	IV	0.1mg/kg	
Phenobarbital	PO/IV/deep SC	15mg/kg	1200 mg, give over 20 minutes

Spasticity

- Spasticity: muscles are constantly contracted causing tightness/stiffness of the muscles. Generally, spasticity is not painful unless causes joint dislocation or other significant deformity when it can contribute to severe pain. Spasticity can lead to difficulty with sitting, sleeping, ambulation, speech. Spasticity can cause contractures and deformities leading to difficulties with toileting, washing, dressing, seating/positioning.

Step 1: Treat underlying conditions

- Look for and eliminate common triggers
- Pain (especially musculoskeletal)
- Illness- eg. UTI
- Agitation
- Constipation

- GERD/esophagitis
- Anxiety

Step 2: Goal directed treatment

- Goals: Comfort, ease of positioning, providing care, improving function
 - Trial of pain medications (acetaminophen, ibuprofen or morphine)
- Non-pharmacological strategies:
 - Stretching
 - Massage
 - Physiotherapy
 - Bracing and casting
 - Seating/positioning assessment
 - Hydrotherapy

Spasticity: Pharmacological Management 6

Medication	Dosage	Side Effects
Diazepam	6 m and older: 0.12–0.8 mg/kg/24 h PO divided 3–4 times/day 0.04–0.3 mg/kg/ dose IV every 2–4 h PR route also possible. Cannot be given SC	Drowsiness, ataxia, hypotonia, muscle flaccidity, paradoxical reaction
Tizanidine	18 m–7 y: 1 mg/day 7–12 y: 2 mg/day; ≥12 y: 2 mg/day	Drowsiness, weakness, dry mouth, hypotension, dizziness
Baclofen	1–10y: 0.3 mg/kg/day in 4 doses; 10–18y: 5 mg 3 times/day	Sedation, drowsiness, hypotonia, nausea, urinary frequency or incontinence, dysuria
Dantrolene	0.5 mg/kg/dose PO once to twice daily	Drowsiness, dizziness, muscle weakness, diarrhea

Conclusion:

The take away point to remember while applying the principles of Palliative care to our pediatric practice it is important to actively look for the symptoms affecting the quality of life. Based on the established goals of care, to approach diagnostic and therapeutic interventions.

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Morphine in children

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INTRODUCTION

In pediatric palliative medicine, morphine is used in the management of pain and dyspnea. Indications of morphine include:

- Sickle cell disease
- Burns
- Epidermolysis bullosa
- Cancer
- Cystic fibrosis
- Development and neuromuscular disorders
- Complex congenital heart disease with advanced cardiac failure, etc.

MORPHINE FOR PAIN

Morphine is the first-line opioid for moderate to severe pain in children.

Demystifying common myths about morphine

- morphine used for pain does not cause addiction
- morphine does not hasten death
- starting morphine does not imply giving up on the child
- starting morphine does it mean that it is the 'beginning of the end'. Morphine will only end pain.

Morphine for persistent pain

WHO principles of pain management are to

be followed: give analgesics:

- By the WHO ladder – 2-step ladder for children: paracetamol/ NSAIDs for mild pain; strong opioids for moderate and severe pain
- By the mouth – if oral route is not possible, consider either enteral or rectal route (using injectable morphine at the same dose as oral). IV/SC route when urgent analgesia is required, or enteral route impossible
- By the clock – persistent pain requires regular treatment in order to prevent pain
- By the child – titrate the morphine to effect

Route of administration

Oral morphine is the preferred route for persistent pain. Intravenous injection may be needed for acute pain and impossibility to use enteral route. Subcutaneous injection and infusion are mostly limited to end-of-life setting at home. Intramuscular route is never used as it is painful.

Morphine for acute post-operative pain is used for either intravenous or epidural analgesia, usually for the first 24 hours post-operatively.

MORPHINE FOR DYSPNEA

Dyspnea, or breathlessness, is a subjective sensation of unpleasant breathing. It is not an objective observation of tachypnea or increased labour of breathing.

Oral Morphine in half-analgesic doses is a drug of choice in chronic or terminal dyspnea, along with anxiolytics. It reduces anxiety and

pain, decreases the perception of dyspnea by the brain, decreases the respiratory drive without changing the respiratory rate, reduces oxygen consumption and pulmonary artery pressure.

Indications include end-stage respiratory failure, cystic fibrosis, pulmonary fibrosis, inoperable complex congenital heart disease, end-stage heart failure, etc.

PRESCRIBING MORPHINE

Dosing of oral morphine

Morphine should only be prescribed by a physician trained in using opioids.

- The starting dose of oral morphine in opioid-naïve children above 6 months is 0.15-0.2 mg/kg/dose for pain, 0.08-0.1 mg/kg/dose for dyspnea.
- Frequency of administration with normal liver and renal function: 4-hourly dosing, with double dose at night to enable the child to sleep for 8 hours.
- A p.r.n. rescue dose should always be prescribed for breakthrough pain, 1/10 to 1/6 of the total daily dose. If poor pain control, it can be given after one hour, upto every hourly, while continuing the regular 4 hourly dosing.
- After 24 hours, adjust according to response. If more than 3 p.r.n. doses are required in 24 hours, titrate upwards until adequate analgesia (no more than one PRN dose required in 24 hours) by increasing the 4-hourly dose and the p.r.n. by 30 to 50% if out-patient, 50-100% if in-patient.
- Morphine dosing doesn't have an upper limit, the appropriate dose is that which relieves the pain without unwanted side effects.
- Always add a stimulant laxative and a stool softener to prevent constipation, and prescribe metoclopramide p.r.n. for the first 2-3 days.
- Morphine clearance is slower in infants

younger than 6 months and in neonates, due to delayed maturation of hepatic enzymes and decreased renal function. Thus lower starting doses are required below 6 months of age:

Table. Starting analgesic dose of morphine in opioid-naïve children

Age	Oral	Intermittent IV/ SC	Continuous IV or SC infusion
Neonate	25-50 mcg/kg every 6 to 8 hrs	25-50 mcg/kg every 6 to 8 hrs	5-10 mcg/kg/hr
1- 5 months	50-100 mg/kg every 4 hrs	50-100 mcg/kg every 4 hrs	10-20 mcg/kg/hr
6-12 months	100-200 mg/kg every 4 hrs	50-100 mcg/kg every 4 hrs	10-20 mcg/kg/hr
1-11 years	200-300 mg/kg every 4 hrs	100-200 mcg/kg every 4 hrs	20-30 mcg/kg/hr
12-17 years	5-10 mg every 4 hrs	2.5-5 mg every 4 hrs	Max 20 mg/24 hrs

Practical tips

- Narcotic prescription is subject to strict rules that vary from state to state in India. A triplicate prescription is required on a specified format, by a registered medical practitioner.
- Only a few pharmacies are able to dispense narcotic medicines, usually in large cities.
- Strict hospital rules for storage and dispensation of narcotics are to be followed.
- Oral morphine is commonly dispensed at home, provided safe storage and dispensation has been explained to the families, as well as side effects.
- Syrup formulation is not available in India. Thus 10 mg tablets of immediate release morphine are easily diluted in water, mixed well before each administration, and stored in the fridge for a maximum duration of 24 hours.

- Such preparation of diluted tablets may not be given by Ryle's tube as morphine tends to stick to the tube. Injectable morphine is then preferred to be given via RT.

SIDE EFFECTS OF MORPHINE

The common adverse effects of opioids include constipation, and less commonly nausea and vomiting (which usually wear off after 2-3 days), pruritus, urticaria, urinary retention. Tolerance is seen in long-term use, for which gradual tapering off is required.

Respiratory depression has never been described when using the oral route at the dose required to relieve pain.

Morphine toxicity is rarely described with slow intravenous administration: hypotension and bradycardia require urgent naloxone reversal; slowed breathing, pinpoint pupils, reduced conscious level and myoclonus. Switching to another opioid is usually warranted in case of serious side effect.

Caution: Renal and hepatic impairment require to either reduce the dose and/or the interval frequency, or to rotate to fentanyl.

CONCLUSION

Morphine is a great medication for pain and dyspnea in the context of pediatric palliative care. It is safe when used judiciously. Adjuvant medications and non-pharmacological management should always be part of a holistic management of such symptoms.

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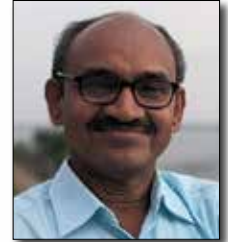
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Chronic Pain in Children

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Pain is one of the most misunderstood, under diagnosed, and under treated/untreated medical problems, particularly in children. One of the most challenging roles of medical providers looking after children is to appropriately assess and treat their pain. New JCAHO (Joint Commission on Accreditation of Healthcare Organizations) regulations regard pain as “the fifth vital sign” and require caregivers to regularly assess and address pain. Pain being a personal experience, many different terms are used to describe different sensations. Assessment of pain in children is linked to their level of development. Children of the same age vary widely in their perception and tolerance of pain.

Every child will experience pain at one time or another, whether it is from everyday bumps and bruises, or due to more chronic conditions such as headaches, gastrointestinal problems, or diabetes. In fact, as many as 40% of children and adolescents complain of pain that occurs at least once weekly, and chronic pain affects at least 15%-20% of children. Just as chronic pain is more prevalent in women than men, girls report more pain than boys. [1]

The medical community has not placed the same emphasis on pain management for pediatric patients as it has for adults and seniors. Each year, 1.5 million children have surgery, and many receive inadequate pain relief and in 20% of cases, the pain becomes chronic. Of children aged 5-17 years, 20% suffer headaches. [2]. More than one-third of children complain of abdominal pain lasting two weeks or longer. [3] Juvenile

arthritis, which causes joint inflammation and aches, affects nearly 250,000 people under the age of 16 years. [4]

If left unaddressed, chronic pain can affect children in ways that will follow them throughout their lives. They can develop emotional and psychological scars from their pain that can taint future choices concerning their lives and health care. Untreated pain in childhood also can lead to chronic pain in adulthood and old age [5]

Pain is truly both a physical and an emotional experience perceived and processed by the brain. Each child has different pain perception, and the meaning of pain is also different from child to child. The goal of treatment is to decrease the intensity of pain and make the child feel better. For acute pain, this goal is often met successfully. But chronic pain-pain lasting for at least three months or more-has a different effect on the nervous system and needs to be treated differently. Perhaps one of the most difficult challenges professionally and emotionally is learning to handle pain in pediatric patients. It is sometimes a necessary part of our work to inflict pain during treatment related procedures and immunizations.[6] Pediatric pain is neglected and undertreated for several reasons:

1. Many physicians become so focused on determining the cause of pain rather than the pain itself and hence, fail to treat pain
2. Physicians generally do not understand pediatric pain management.

How can a physician be alerted to pain in a child

Certain behaviors can alert you to your child's pain, even if the child can not properly express it himself. These include:

- a) Favoring one arm or leg over the other.
- b) A decrease in physical activity.
- c) Changes in appetite or sleep pattern.
- d) Child trying to Avoid contact with other children.
- e) Crankiness, irritability, or unruly behavior.
- f) Nonverbal expressions of pain such as gasping, wincing, or frowning.
- g) Physical cues like dull eyes, flushed skin, rapid breathing, or sweating.

One alerted to the possibility of pain, another way to help your children is to go over the lists of words with them that express pain, so they can use the words that best show what they feel, like "sore," "itchy," "burning," and "aching."

Do not rely on just the verbal: Ask children to point to their bodies to show where they hurt and how the pain travels through them.

Physiology of Pain

Pain sensation is a product of several interacting neural systems. Pain transmission can also be modulated by descending pathways that constitute the "analgesia" system. Neonates have the same number of pain nerve endings per square millimeter of skin as adults and are present in fetus from the second trimester. The central nervous system tracts that subserve pain are completely myelinated by 30 weeks of intra uterine life. Cortical interconnections with the thalamus, those tracts that play a role in higher perception of pain, are complete by 24 weeks. The descending inhibitory controllers of pain, though, are deficient in the neonates. This is the reason that neonates, particularly preterm neonates, are likely to be more sensitive to pain

than older children and adults.

Whenever there is an injury, sensory nociceptors are stimulated and causes pain. In conditions causing on going tissue injury, the silent nociceptors which are normally inactive are also activated. This results in expansion of the area where pain is felt and also increasing the severity of pain (peripheral sensitization). With persistent pain, the intensity is also amplified by sensitization of dorsal horn cells which acts through NMDA (N-methyl -D aspartate) receptor(central sensitization). Gradually, the adjacent spinal segments are also recruited into the firing of signals resulting in more widening of the painful area.

Assessment of Pain

Pain is always subjective. It varies with child to child, depends on the age and the mood of the child. Various scales have been introduced to assess the pain in children.

Self reporting scales

1) Pain Faces Scale:

The child looks at the images of faces given and identifies with the face with which he or she can find the similarity. The most pleasant face is the one having no pain (0- score) and most disturbed face is the one having maximum pain(10- score).

2) Visual Analogue Scale:

This is colour coded chart with light colour representing no pain(0-score) and deep colour representing maximum pain(10 -score)

3) Numerical scale:

This is the gold standard of pain assessment scale7) Can be effectively used in children above six years. On this numerical scale, zero represents no pain and ten represents maximum pain. Child is asked to rate himself the pain score at which he or she stands. This is taken as the baseline and ideally, pain score is to be assessed daily if not twice a day.

Finger Scale:

This is subjective assessment of pain using fingers alone and pain is classified into mild, moderate and severe.

Body mapping:

This is also a very effective method to assess the severity and site of pain. Child is asked to colour the areas in body where pain is felt using different colours, each colour indicating the severity of pain (red for severe, blue for moderate, yellow for mild).

Observational scales:

There are several, but the most commonly used is the FLACC scale⁸ (Face-Legs-Activity-Cry-Consolability). This scale is used in neonates and also in children who are not able to communicate. 0- represents no pain and 10- represents maximum pain.

Evaluation of Pain:

Comprehensive evaluation of pain include four dimensions.

- 1) Cause of pain : Pain can be caused by disease per se, the associated disability, or due to treatment.
- 2) Mechanism of pain: Pain caused by tissue injury is the nociceptive type of pain and secondary to nerve stimulation is the neuropathic pain
- 3) Description of pain: It includes the severity of pain: assessed by the various pain scales, various factors associated with pain like Palliative factors and Provocating factors, Quality of pain, Radiation, Severity and temporal factors associated with it (PQRST)
- 4) Non-Physical components of pain : we should always look into the psychological, social, financial and spiritual aspects associated with it

Management:

It is a broad spectrum multifocal approach focusing on the concept of Total Pain. Hence we should give due respect for the psychological, social and the spiritual aspects attributing to the cause of pain.

We have made a number of advances in our approach to pain management in children, but misconceptions still exist. [9]

Misconcepts:

1) Many providers believe that children do not remember pain, they experience less pain than adults, children are too fragile to receive potent drugs, and narcotics in children can induce addiction.

2) Medical caregivers may believe that if one is urgently trying to save a life, there is no time to worry about pain control. Concentration on intensive care may put the neonate into the role of "biologic machine" rather than a human being capable of perceiving, responding to, and interacting with his or her environment.

3) Generally, adults tend to believe that children exaggerate their pain. But the fact is that many children deny pain because of fear of disappointing caregivers or fear of an injection.

4) Many health care providers also at least subconsciously believe that they, rather than the child, can accurately judge a child's pain experience. They may attribute a child's distractibility to absence of pain. This perception represents a misunderstanding of the powerful roles of distraction and comforting in the attenuation or relief of pain.

5) We still expect children to react to pain with some predictable, visible signs such as sweating, tachycardia, wincing, crying, jerking away, and muscle tension. The absence of these typical signs may be considered as adaptation on the part of the child.

Pharmacological Measures:

After assessing the severity of pain, next step is management based on the severity of pain. Pain management is based on WHO Pain Management. In children what is followed is the two step ladder as against the three step pattern in adults.

General Principles:

1) By the mouth:

Always oral route of administration is preferred over parenteral route

2) By the clock:

Analgesics should be given round the clock and not on SOS basis. This aspect is often overlooked by the treating physician.

3) By the ladder:

Assess the severity of child's pain. If pain is assessed as mild to moderate, start on non-steroid analgesics along with adjuvants if needed, and if pain is moderate to severe, start on strong opioid and adjuvants if needed.

4) By the Individual:

As pain is subjective and the response to analgesics vary, the management is based on the individual's response to treatment and hence should always be individualized.

WHO Analgesic Ladder used in adults has 3 steps, Step 1 drugs for mild pain, step 2 drugs for moderate pain and step 3 drugs for severe pain. In children, WHO Analgesic ladder has only 2 steps, step 1 drugs for mild to moderate pain and step 2 drugs for moderate to severe pain.

2 step analgesic ladder

Step 1 drugs are non-steroids viz Paracetamol, NSAIDs with or without adjuvants.

Step 2 drugs are strong opioids, along with step 1 drugs. Adjuvants may be used as per need.

Weak opioids are not recommended in

children for the following reasons.

(a) Weak opioids available commonly are codeine and tramadol

(b) The metabolism of codeine varies from person to person and is erratic. Codeine is also very constipating

(c) Tramadol lowers the seizure threshold and hence can precipitate febrile seizures and epilepsy. Hence better to avoid in young children as they are prone for febrile seizures.

Adjuvants:

Adjuvants are drugs which are not analgesics per se but are effective in relieving pain in certain situations especially neuropathic pain. Examples include: diazepam and baclofen for muscle spasm, phenytoin and carbamazepine for neuropathic pain, amitriptyline for neuropathic pain etc:

Step:1: Non-opioids

1) Paracetamol:

Acts by inhibiting cyclo-oxygenase in the CNS.

No adverse effect on platelets.

As far as possible, do not use Paracetamol-NSAID combinations. This is because, proper dose titration is difficult.

2) Non Steroid Anti-inflammatory Drugs (NSAID)

The common drugs used in children are the following:

Ibuprofen, Naproxen and Diclofenac.

Mechanism of action:

These NSAIDs act by inhibiting cyclo-oxygenase enzyme thereby reducing the production of prostaglandin and thereby reducing its pain producing effect.

a) Ibuprofen:

This is the safest NSAID used in children. It is a potent analgesic and anti-inflammatory agent

b) Naproxen

Is a Potent anti-inflammatory agent.

It Inhibits migration of leukocytes also and is better tolerated

c) Diclofenac

Is a potent anti-inflammatory agent which gets concentrated in synovial fluids and hence is preferred in arthritis.

It is hepato toxic and hence liver function is to be monitored periodically.

It is a preferentially COX-2 inhibitor and there is an increased incidence of thrombosis.

Less preferred in children when compared with Ibuprofen and Naproxen

d) Mefenamic acid

There is a tendency for pediatricians to prescribe mefenamic acid especially in children with high fever.

It is a potent analgesic and antipyretic but a weak anti-inflammatory agent.

There is a high incidence of Interstitial nephritis, Thrombocytopenia and Steven Johnson Syndrome following its intake.

Hence it's usage in children should be avoided.

Adverse effects of NSAID

Salt and water retention and interstitial nephritis

They can precipitate renal failure even in normal children.

Hence always ensure adequate fluid intake and urine output while children are on NSAIDS

Special precaution:

Special precaution has to be taken when NSAIDS are given to children with underlying renal diseases, cardiac disorders and hypertension. Try to avoid its use when children are on loop diuretics and steroids. Always prescribe a proton pump inhibitor along with NSAIDS so as to minimize the risk of gastritis. History of bronchial asthma, urticaria or angioedema should alert the pediatrician against its use.

Recommended dosages of the commonly used drugs

Name	Dose (mg/kg)	Frequency	Maximum dose	Maximum in 24 hours.
Paracetamol	15mg/kg	3-4 times	75mg/kg/day	4gm/day
Ibuprofen	10mg/kg	3 times	40mg/kg/day	2400mg/day
Naproxen	10mg/kg	2-3 times	20mg/kg/day	1000mg/day
Diclofenac	1mg/kg/dose	2 times	2mg/kg/day	100mg/day

Step-2

For moderate to severe pain: step-2 is followed: The most commonly used drug is the globally accepted strong opioid – morphine.

Precaution:

It is excreted through kidneys and hence dose modification is needed in renal failure.

Mechanism of action:

Opioid receptors are distributed all over the central and peripheral nervous system. The active metabolite of morphine is Morphine-6-Glucoronide and it mimics the action of endogenous opioid peptides binding to receptors in body. In the periphery it alters the sensitivity of small nerve endings in the skin to painful stimuli associated with tissue injury. It also causes euphoria which is an important component of analgesia.

Adverse reactions:

Is classified into side effects and toxic effects. Morphine when used appropriately in pharmacological doses will never cause toxic effects.

Side effect	Management	Toxic effect	Management
constipation	Stimulant laxative(eg: bisacodyl)	drowsiness	Over dose to be avoided by titrating the dose and periodic review. Appropriate titration to relieve pain prevent toxic effects.
Nausea & vomiting	Usually self limiting by 3-4 days T.Haloperidol OD or T.Metoclopramide thrice a day (for 2-3 days)	Myoclonus	Ensure adequate hydration. Dose modification in renal failure. Naloxone in case of respiratory depression.
Itching	Keep skin moist, ondansetron, anti-histamine	hallucination	
Dry mouth	Mouth wash(sodabicar wash)	Resp: depression	

Preparations and dosage:

Morphine is commonly available as the following preparations.

Oral tablet-10,20,50,100mg Injection-15mg/ml

Usual oral dose is 0.15-0.3 mg /kg/day. Generally we start with the minimum dose given 4 hourly and titrated based on response. However, if we want to find out the exact dose needed, do the "Morphine trial"

Morphine trial

First step is recording the vital signs and administering inj. Metoclopramide. The contents of the vial (1ml containing 15 mg morphine) is mixed with 9ml Normal Saline or Distilled Water. Now 1ml of the diluted sample contains 1.5 mg

morphine. Give this 0.1ml (ie:1.5mg of morphine) slowly. Wait for 10 minutes.

If the pain persists, repeat the same dose similarly after 10 minutes till pain relieved or till child is drowsy.

The amount of morphine needed to relieve the pain is this dose. This same dose is given four hourly.

For example: if a child needs three doses of morphine boluses of 1.5 mg each: the amount of morphine/dose needed is 4.5 mg. So give 5mg 4hourly and 5mg sos (if pain persists even within 1 hour of the last dose). This dose is given as follows

6am: 10am: 2pm: 6pm: 10pm: 2am

Generally we skip the midnight dose: instead give double dose at bed time with provision of extra dose whenever the child complains of pain

Hence we give:

5mg: at 6am: 10am: 2pm: 6pm: & 10mg:10pm

If the child needs 2 or more sos doses: then the regular dose is increased by 30-50% every 2-3 days .

If persistent vomiting or unable to swallow: same dose can be given per rectum

Always prescribe: a stimulant laxative (dulcolax) and an anti-emetic(haloperidol or metoclopramide) along with morphine. Laxative should be continued as long as the child is on morphine. Anti emetic can be stopped after two days.

Fentanyl:

It is 100 times more potent than morphine.

Available as the following forms.

- Injection- 50microgm/ml :dose:(1-2microgm/kg/hour- infusion)
- Transdermal Patch- 12.5,25,50 microgram/

- hour- action last 72 hours
- c) OTFC(oral transmucosal fentanyl citrate)

Points to remember:

To be applied to non-inflamed, dry, non-hairy skin

Morphine should be continued for initial 24 hours

50 mg morphine is roughly equal to 25mcg/hr fentanyl patch

Non- Pharmacological Measures

A significant number of non-pharmacological measures are applied in management of pain in children. They include:

Cognitive Behavioral Strategy (CBS) : based on child's belief, expectation and coping abilities.

Supportive counseling

Stress management

Attention & distraction

Relaxation Techniques

Hypnotherapy

Yoga

Massage

Physiotherapy

TENS

Aroma Therapy

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Procedural Pain Management in Pediatrics

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Pain is subjective. The pain response is individual and is learned through social learning and experience. Early pain experiences may play a particularly important role in shaping an individual's pain responses. Painful medical procedures are innumerable in a child's life such as immunizations, venipunctures, dental care, and minor emergency department procedures such as laceration repair. Inadequate relief of pain and distress during childhood painful medical procedures may have long-term negative effects on future pain tolerance and pain responses.

1 Prevention and treatment of procedural pain should be multidimensional, including environmental methods, nonpharmacologic interventions, and pharmacologic interventions. Unknowingly we give too much emphasis on pharmacologic procedural sedation and analgesia, but environmental and nonpharmacologic therapies contribute greatly to distress reduction. Environmental methods to reduce pain and distress include adequate preparation of the parent and child, creating a calm nonthreatening environment, anticipating and planning for each individual child's expected distress, and training the staff in coping-promoting behaviors

Physical strategies

Comfort positioning

During IV insertion or vaccination, if we make the child to sit up upright, rather than the traditional method of lying on a bed while the child is physically restrained, it increases the child's comfort. Sitting upright reduces distress by enhancing children's sense of control. We can

make the smaller children sit on their caregiver's lap. Comforting or 'hugging' the child also helps to calm down and help in restraining the child. It is also advisable to encourage family presence during the procedures after taking caregiver preferences into account.

Infant-focused strategies

Breastfeeding as a comfort strategy has several advantages, simultaneously offering skin-to-skin contact, the comfort of sucking and rocking, and the transfer of endogenous opiates in breast milk.

Sucrose in various dosages and concentrations (0.5 mL to 2 mL of 24% to 33%) sucrose is found to be very useful when undertaking painful procedures like heel pricks, venipunctures, intramuscular [IM] injections and immunization. There is insufficient evidence to support its use beyond 12 months. To be most effective, part of the dose must be given 2 minutes before the procedure and the rest during the procedure. Homemade solutions can be prepared by diluting 5 g of sugar in 10 mL of water.

Simple physical strategies such as non-nutritive sucking (i.e., pacifier use) and rocking or holding an infant can also lower pain and distress. Skin-to-skin or 'kangaroo' care reduces pain scores in neonates undergoing painful procedures. Swaddling and facilitated tucking are also effective in preterm infants. Because these strategies cannot eliminate procedural pain completely, using them in combination with pharmacotherapy, whenever possible, is recommended.

Choosing less painful approaches

When a less painful option is available, avoiding certain painful procedures, such as heel pricks and IM injections, is recommended. Since heel lancing is more painful than venipuncture, with or without sucrose, heel lances should be avoided.

Psychological strategies

There is a strong relationship between distress and perceived pain and managing the first can directly impact the latter. Simple procedures like giving children (> 4 years) simple information regarding what to expect, explaining the steps of a procedure, giving information about what the children might feel (e.g., cold, wet), showing the medical equipments that will be used, and offering realistic choices helps children to feel more in control.

We should also prepare parents regarding what to expect, what they can do to help with positioning and distraction. Advise parents to avoid false or premature reassurances, such as: 'This won't hurt', 'It's all over'. Also, saying 'I'm sorry' can confuse a child and should be avoided in the context of performing painful procedures.

Distraction

Distraction strategies (e.g., blowing bubbles, reading a story, offering an animated video, an interactive game) are effective in reducing the pain and distress associated with painful procedures in children ≥ 2 years old and also during laceration repair. We should create a child-friendly environment, with developmentally appropriate toys, colourful wall decor, and pictures on the ceiling.

For older children, the most effective distraction is (offering an age-appropriate active distraction like an electronic game) or something more passive (a video). Another method is to engage children in non procedure-related conversation which helps to shift their

attention away from painful stimuli and, when appropriate, humour can be used to alleviate tension.

Deep breathing

Deep breathing can be used as a relaxation strategy to reduce perceived pain. For example, the child can be asked to 'Take a deep breath in and blow out slowly [tummy breathing]', Common tools like pinwheel or bubble blowing help promote deep breathing and offer distraction.

Hypnosis

Hypnotic techniques, such as 'the magic glove' reduce the pain and distress associated with needle procedures. However, this intriguing technique requires specialized training and may not be suitable for busy or noisy environments.

Music therapy

Music therapy appears to reduce distress and pain in some children undergoing acute painful procedures. Further studies are required to determine, which age groups are likeliest to benefit, and whether it is preferable to offer music chosen by patients or preselected by a music therapist.

Pharmacological interventions

Needle procedures

Topical local anaesthetic creams are effective for venipuncture, IV cannulation, LP, and immunization but do not seem to be effective for heel lancing. Liposomal lidocaine (Maxilene) has been shown to be an effective topical anaesthetic for IV procedures. Also, according to the manufacturer's directions, occlusive dressings over liposomal lidocaine are not mandatory. When patients are stable enough to wait 30 minutes, using either amethocaine or liposomal lidocaine before needle procedures is recommended, especially when combined with other physical and psychological strategies.

Active ingredient (trade name)	Lidocaine - prilocaine 5% (EMLA)	Liposomal lidocaine 4% (Maxilene)
Onset	60 min (increased dermal analgesia with up to 2 h of occlusion)	30 min
Maximal application time	Max 4 h in children Max 1 h in ≤ 3 months (Max application area of 10 cm ²)	Max 2 h (Max application area 100 cm ² in <10 kg)
Duration of efficacy after removal	Up to 1–2 h (efficacy increases up to 15–60 min after removal)	Longer than EMLA (efficacy increases up to 30 min after removal)

Lumbar puncture

Oligoanalgesia for LP in infants and children is frequently reported. For nonurgent LP, topical local anaesthetic should be administered first, followed by injected lidocaine to achieve deeper tissue anaesthesia. When urgency does not permit applying cream, about 1 mL of injected 1% lidocaine without epinephrine should still be used. Oral sucrose for infants can be added.

Urine Collection

An ideal method of urine collection would be non-invasive, fast, gentle, and simple. Clean catch urine collection involves waiting for a nappy-free child to void spontaneously, and it is the recommended method of urine collection. (NICE Guidelines) Some children void spontaneously during the routine cleaning of the perigenital area before urine collection. This cold, wet stimulation likely triggers cutaneous voiding reflexes. Suprapubic stimulation triggers parasympathetic detrusor contraction through the exteroceptive somato-bladder reflex mechanism. Gentle suprapubic cutaneous stimulation using gauze soaked in cold fluid (the Quick-Wee method) might hasten bladder voiding for clean catch urine. Suprapubic aspiration (SPA) is considered the 'gold standard' for obtaining sterile urine samples but is the most painful approach even after a topical anaesthetic is applied. Simultaneous use of both topical and intraurethral 2% lidocaine gel do not seem to consistently improve urethral catheterization-

associated pain management in children <2 years old. Sucrose appears to have some analgesic effect in neonates but not always in older infants. Point-of-care ultrasound can also be used before SPA to confirm presence of urine and to avoid unsuccessful or 'dry' aspirations.

Nasogastric (NG) tube insertion

Oral sweet solutions in newborns reduces pain before gastric tube insertion. Sitting upright for NG tube placement in adults is common, along with offering water through a straw during the procedure. Both strategies may be helpful for children as well

Laceration repair

Topical anaesthetics such as LET gel (lidocaine 4%/epinephrine 0.1%/tetracaine 0.5%) are recommended to reduce pain from a minor laceration before wound closure with sutures. LET is effective in 30 minutes and helps achieve wound hemostasis. LET is contraindicated for patients <3 months old, on mucosal surfaces and in large, deep, or contaminated wounds.

Tissue adhesives (glues) are an acceptable alternative to sutures for the repair of simple, clean traumatic lacerations on tension-free surfaces to reduce pain. Sterile adhesive strips can enhance reinforcement and mitigate the slightly increased rates of dehiscence. When suturing is required, absorbable sutures used to avoid distress caused by suture removal.

When LET gel is not sufficient to manage pain or a repair is urgent, local infiltration with lidocaine or a nerve block should be performed before suturing. To reduce injection pain, bicarbonate can be added to the lidocaine in a 1:10 volume ratio. The injection solution can be warmed to body temperature and should be injected slowly, using a small gauge needle (27 G to 30 G)

Radiograph for suspected fracture or dislocation

When a fracture or a dislocation injury is suspected, analgesia combined with immobilization and icing should be provided before x-ray. Radiography is known to cause significant pain. Ibuprofen appears to be superior to acetaminophen for alleviating pain associated with musculoskeletal injuries. For moderate-to-severe pain, IN fentanyl appears promising because it can be quickly administered and acts rapidly. (1 mcg/kg to 2 mcg/kg are recommended (to a maximum of 100 mcg). Monitoring after use of IN fentanyl should follow IV opioid guidelines because their systemic effects are similar

Health professionals are encouraged to use minimally invasive approaches and, when painful procedures are unavoidable, to combine simple pain and distress-minimizing strategies to improve the patient, parent, and health care provider experience.

Time constraints and lack of material resources, personnel or knowledge, as well as safety concerns, are often reported as reasons for limiting the use of effective strategies. Both nurses and physicians have indicated that access to synthesized, up-to-date guidelines and institutional supports would facilitate implementation of change for better pain management.

The most effective pain management for procedural pain uses psychological, physical and pharmacological strategies. This is known as the

“3 Ps” approach. When these strategies are used together, they optimize pain relief.

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1. Yioung KD, Pediatric procedural pain Annals of Emergency Medicine Volume 45, Issue 2, February 2005, Pages 160-171
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3. Nelson Text Book of Pediatrics, 20thEdn
4. Oxford Text Book of Palliative Care, 5th Ed
5. WHO Guidelines: Pain in children
6. The PGI NICU Handbook of Protocols
7. AAP guidelines for managing Neonatal pain

Annexure

Ideal agent for procedural pain and analgesia

1. Provides adequate sedation and analgesia
2. Does not cause hemodynamic instability.
3. Has a short elimination half-life
4. Does not have unpleasant adverse reactions
5. Is effective orally
6. Has an antidote

Fasting: Recommendations (2-4-6 rule)

No solid food for 6 hours

No breastmilk for 4 hours

No clear fluids for 2 hours

- 1) Intravenous cannulation:

Apply EMLA cream (Eutectic Mixture of Local Anesthetic) as a thick coat over the puncture sites. Place an occlusive dressing. Apply over 2-3 sites so that cannulation can be attempted at these sites if needed. Wait for minimum 45min to 1 hour before cannulation.

Issues:

The cream can cause cutaneous vasoconstriction {tiny vessels may disappear} and hence may affect the visibility of small vessels. Hence we apply over 2-3 sites. The commonest agent available is a combination of lignocaine and prilocaine {Trade name: PRILOX}

2) Bone marrow aspiration/ Biopsy/ Lumbar Puncture: Has 3 steps

Step 1 : Apply EMLA cream as a thick coat over the area. Wait for 45-60 mts.

Step 2 : Sedate the child with any one of the three drugs

a) Trichlorophos(Eg:Pedichloryl) Dose: 50mg/kg/dose

b) Midazolam a)Oral-0.5mg/kg/dose (wait for 30min:).Injectable form of midazolam can be used for oral administration. May be repeated after 45minutes) Can also be given as Subcutaneous or intravenous: 0.2mg/kg/dose

c) Ketamine

Dose: 0.5 to 1.0mg/kg diluted, IV: Preferably avoided in children less than 2 years. May increase intracranial tension. Should be avoided if patient has hypertension, suspected heart disease or CNS pathology.

Step 3 : 1% lignocaine infiltration

Just 30 seconds prior to the procedure. Always limit the dose of lignocaine to 2mg/kg.

3) Urinary Catheter insertion:

Coat the tip of the catheter with Xylocaine jelly prior to procedure. For boys, inject 2 to 5 ml of Xylocaine jelly with a syringe into the penile urethra and let it remain for 2 minutes prior to catheterisation

4) Wound dressing:

Soak wound with 1% lignocaine or

lignocaine with adrenaline preparation dose to be limited to 2mg/kg. Wait for 5 minutes before attempting the dressing

5) Child on Peritoneal dialysis:

- Lignocaine at the site of puncture
- Sedation with IV Midazolam as and when needed or continuous infusion 1microgram/kg/minute in normal saline or 5% dextrose). Can be increased as per response every 15minutes (maximum dose: 2mg/kg/hour)

6) For CT scan:

Midazolam (oral or parenteral)

If not sedated: give Ketamine (if there is no contraindication as mentioned above)

7) Restraint in ICU:

Triclofos: alone is adequate. If needed, Midazolam can be given.

8) Burns:

Find out the desired analgesic dose of Morphine by "morphine trial" (I/V or oral). Continue morphine 4hrly along with supportive drugs (anti emetics and laxatives)

Morphine trial : Morphine 1ml =15mg: morphine

Dilute 1ml of morphine with 9ml normal saline or distilled water. That means 10ml of this solution contains 15mg morphine (10ml=15 mg) Give 1ml of this solution (1.5mg) slowly over 10 min: till pain is relieved or child sleeps or adverse effects appear. The amount of morphine needed to relieve the pain is "one dose of morphine". This dose is given orally four hourly. The usual oral dose is 0.15-0.3 mg/kg/dose :4hrly.

9) Post-operative pain

Consider pain as 5th vital sign. Record pain on scale 8th hourly. Choose the pain scale based on the age. Follow the WHO step ladder management.

Step: I (Mild to Moderate pain)

Ibuprofen: 10mg/kg/dose: four times a day:40mg/kg/day (Max:2400mg/day)

Naproxen: 20mg/kg/day: twice or thrice a day (max:1000mg/day)

Diclofenac: 1mg/kg/dose:12hrly (max:50mg/dose)

Step: II (Moderate – Severe pain) If pain persists:

1) Morphine- orally or as infusion: Oral dose: 0.15-0.3mg/kg/dose four hourly. Infusion dose:(0.025-0.05mg/kg/hr)

2) Fentanyl infusion:(Injection-(1-2microgm/kg/hour)

10) Fracture reduction:

Morphine± Midazolam

Oral 0.3mg/kg Morphine+ 0.5mg/kg Midazolam OR s/c or i/v 0.1mg/kg Morphine+ 0.2mg/kg Midazolam Wait for 45min: if the drug is given orally for 20min:if it is given subcutaneously.

Precaution: watch for respiratory depression .Observe for AT LEAST 2HRS

12) Spastic CP child

Pain relieved by Tab Diazepam 0.2mg/kg TID for 3 weeks in a month, skip for 1 week, then

restart. This will relieve the pain due to spasm and hence physiotherapy can be given without causing discomfort to the child.

Procedures special to newborns

- Ophthalmic examination for ROP screening
- Laser therapy for ROP

Procedures that lead to chronic pain in newborns include:

- Mechanical ventilation
- Post-operative state

Laser therapy for ROP:

- Proparacaine (0.5%) eye drops 1 drop: 1min: prior to procedure

Baby on ventilator/ post operative/ chronic pain

- Fentanyl infusion (1-2micgm/kg bolus followed by 0.5 to 1 mecum/kg/hr)
- Morphine infusion (0.1mg/kg bolus followed by 5 to 20 microgram/kg/hour in pre-terms, 10 to 20microgram/kg/hour in terms

Lignocaine as local anaesthetic (0.3 ml/kg of 1% solution)

End of Life Care in Children

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According to ICMR, EOL is “An approach to terminally ill patient that shifts focus of care to symptom control, comfort, quality of life rather than treatments aimed at cure or prolongation of life”.

End of Life (EOL) is the phase that begins once the irreversibility of the disease is confirmed and death is imminent. This period may last from a few days to several months. EOL has also been defined as the period when healthcare provider expects the patient to die within 6 months (1).

Period of transition - What do we 'hope for'?



Periods of transition are difficult. The transition involved in re-defining the goals of therapy for a child who is dying is an emotional time for parents and professionals alike.

Often, the end of a child’s life is preceded by a period of quite aggressive efforts to save that child’s life.

Therapies that were used at an earlier stage in the child’s illness may no longer provide benefit at the end of life.

At the same time that parents have to let go of curative or life-prolonging interventions, they are also often grappling with the use of new

medications, such as opioids, anticonvulsants, or anti-emetics.

Remember – the last 48hrs can often only be determined in hindsight.

Unique Barriers:

Below are some unique barriers that hinders the team to provide EOLC

Children are not supposed to die	Difficult communication
Death of a child means therapeutic failure	Constant search of curative treatment
Surrogate decision makers involved in the care	Ethical issues
Prognostication of the condition	Medico-legal issues

End of life care requires a multidisciplinary team approach. Not all personal might be there in a team, but it helps if health care providers are trained in providing overlapping care in case some components mentioned below are missing.

INTERDISCIPLINARY CARING DURING END OF LIFE

Advance Care Planning:

Advance care plans (ACPs) are treatment plans, drawn up after discussion with parents and sometimes children based on their goals and preferences, in the event of change in condition in future. It requires a clinician to built a therapeutic relation and trust with the parents and initiate the process.

Clinician	Discipline specific roles	Interdisciplinary roles
Primary Physician	Leads discussions related to establishing and re-evaluating goals of care and care plans Therapeutic recommendations to relieve distress	Presence Anticipatory guidance Assessment and relief of child's and family's distress Respond to questions and concerns
Nurse	Assessment and administration of distress relieving intervention Ensure the setting is equipped to meet child's and family's need with regard to staff, medications and equipment Communicates with larger team regarding bedside experience of child and family	
Psychologist/ social worker	Understanding family dynamics, provide individual or family with needed psychological support as continuation of on-going process, or as needed on a crisis-basis Facilitate in legacy building (memory making) opportunity Assist with advance care planning regarding after death steps such as funeral arrangements and death certification. Finding support for siblings and family as per needs, such as schooling for siblings	
Child life specialist/ Play therapist	Play activities for child if able, siblings and other children to promote expression of feelings regarding child's death Play activities for siblings and other children to help escape from intensity of being with a dying child. Play activities to allow legacy-building opportunities	
Pharmacist	Ensure adequate supply of distress-relieving medications	
Chaplain/ Priest	Assess and respond to the spiritual needs of the child and family Ensure that clinicians and care providers are familiar with and respectful of family rituals related to death and dying	

ACP should include advanced statements of preferences, discussions about the level of interventions, resuscitation preferences, and wishes concerning place of care and death.

ACPs should be communicated to all the care providers, including care givers.

How do we start planning for EOL?

Consider what you know about the

Disease – what is likely? What could happen?

Child's fragility - are you expecting a sudden deterioration?

Few cues to how to initiate the conversation:

Begin by eliciting from the parents and child their understanding of the child's prognosis

Tell me what you are seeing...

Can I share what I am seeing and what I think is ahead?

"I see that she has not been eating for several days and her body is weaker. What do you see?"

Communicating to parents	
Carers may have difficulty asking directly if a child or young person is dying	
Explore and discuss concerns if you think they want to talk about this	
Compassionate information sharing	
Avoid overly-vague sentences	
Using unclear language leaves parents confused and could lead to fostering false hopes	
Address emotional reactions	

Communicating with Children	
Assess	Assess what the parents want their child to know
Educate	Educate the parents that not talking to their dying child about his/her death may be regretted later
Provide	Provide words to help parents begin the conversation
Explore	Explore what the child currently knows and understands
Encourage	Encourage open communication but do not force it
Help	Help the child to live as fully as possible
Allow	Allow the child to communicate with parents, friends, family, if possible to say goodbye
Remind	Remind parents that most children are less afraid of “dying” than being alone and/or leaving their loved ones behind

Communicating with Siblings	
Inquire	Inquire what parent(s) believe the sibling(s) understands
Encourage	Encourage parents to ask their healthy child(ren) what they understand
Provide	Provide words to help parents clarify information based on developmental level and emotional needs
Encourage	Encourage parents to involve siblings in the end-of-life care open communication between siblings
Prepare	Prepare parents for possible emotional reactions from siblings

Checklist approach for End-of-life Care management plan

Issues	Things to consider
Physical	Functional, symptom, medications
Emotional	Understanding, expectations, fears, relationships
Personal	Family relationships (Dynamics), play, isolation, spiritual/ religious needs

Social	Nutrition, financial, housing, caring for carers, practical support
Information	Does everyone know what they need to know for the plan to work?
Control	Place of death, dignity, involvement in treatment options
Out of hours/ Emergency	Who will the family call in emergency? What will happen? Do the family know what to do? Have they got enough drug and information?
Late phases	What is end of life management plan? Has non-palliative treatment stopped? Considerations about resuscitation status
Afterwards	Bereavement support for family, audit of your performance, opportunities for debrief and support for the team

Symptoms at End of Life:

End of life symptoms are well documented in cancer condition than in non-cancer. Management of symptoms would focus on correcting the correctable and will be guided by relieve of distress experienced by the child.

Common symptoms	Management
<p>Pain: One of the most prevalent symptoms in EOLC</p> <p>Expected to present 70-80% children with advanced cancer in varying intensity.</p>	<p>Morphine drug of choice for moderate severe pain</p> <p>Oral dose: 0.2-0.3mg/kg/dose, Subcutaneous/IV: 0.1mg/kg/dose every 4th hourly or as and when required. No ceiling dose</p>
Dyspnoea:	<p>Drug of choice is usage of Morphine, for a morphine naïve patient use 0.5-0.1mg/kg/dose of oral preparation. Works well in combination with a benzodiazepine.</p> <p>Non-pharmacological: Use of fan and wiping face with wet cloth. Breathing techniques can be used</p>
Delirium:	<p>Non-pharmacological management: Orient the child to time, place, person. Avoid restrains</p> <p>Optimal dose of anti-psychotics – Risperidone 0.25-2mg/24hrs, Haloperidol</p>
Seizures: Noted in leukaemia's and malignancies with brain metastasis. Also, in metabolic disorders as well as well other illness in EOLC	<p>Use Midazolam nasal spray according to the body weight of the child if seizures last for more than 5mins. Repeat after 10 mins if seizure control not achieved. To keep using until seizure control</p> <p>Lorazepam and Diazepam are other alternatively</p>
Bleeding: Common in leukaemia's and solid tumours with huge mass	<p>Use dark clothes in case of massive bleeding.</p> <p>Use lorazepam 0.5mg per dose to calm the child and remove anxiety due to bleeding. Use pressure for oral bleeding, for surface bleeds put adrenaline (1:10,000 dilution) or tranexamic soaked gauze for control.</p>
Respiratory Secretions: Presents as noisy breathing and might be distressing for the parent(s) to notice	<p>Optimize hydration, use non humidified oxygen, nursing intervention (positioning)</p> <p>Glycopyrrolate: 4-10 mcg/kg/dose IV every 3 hours for secretions, also can use atropine eye drops 1-2 drops orally for oral secretions.</p>

Care of skin and mucosa:

Skin care: Positioning, comfort beds, pressure point care

Mouth care: Hydrate with unflavoured sponged tipped swab every 2-4hrs. Avoid mouth wash, lemon glycerin, artificial saliva

Eye care: Methylcellulose eye drops

Nutrition & Hydration at End of Life:

Medically administered hydration and nutrition can be burdensome for the dying child (increase the likelihood of excessive secretions/pulmonary oedema)

Offer small sips and tastes of favoured liquids and food.

If medically administered fluids and nutrition are discontinued prepare families for child to appear increasingly dehydrated and that child may live for days to couple of weeks.

Recognizing a child or young person is likely to die in hours or days:

The following signs are common in the last hours or days of life, and monitor these non-invasively as far as possible

A change of breathing pattern (for example noisy, laboured or irregular breathing)

Impaired peripheral perfusion (which can be indicated by a pale or grey appearance, or a prolonged capillary refill time), including temperature instability

Loss of interest in ability to tolerate drinks or food

A marked and unexplained fall in urine output

An altered level of awareness (for example reduced consciousness, alertness or responsive, excessive sleeping, or confusion)

Intractable seizures that keep occurring even with optimal management

New onset of profound weakness

Easing Child's Distress:

No ceiling dose exists for symptom management at the end of life. The correct dose is the one that relieves the symptoms.

For patient already on opioids: administer loading dose of same opioid equal to 10% of total opioid dose from preceding 24 hours.

For patients not already receiving opioids: administer loading dose IV

Morphine 0.1 mg/kg IV x 1 dose

Subsequent Dosing:

Doses may be given every 10 minutes during the end-of-life.

Rapid titration of Opioids:

This strategy suggests giving 10 to 20% of the total opioid daily dose as a bolus and administering this once every 10–15 minutes, increasing the bolus by 30 to 50% every third dose until effective. If significant side effects are observed, rotation to a new opioid is suggested.

Always consider use of adjunctive therapy

Adjunctive Therapy:

For Anxiety/Agitation: (Recommended Starting Dose)

Intermittent Lorazepam: 0.05 mg/kg IV Q4h as per need for anxiety/agitation

Intermittent Haloperidol: 0.01-0.03 mg/kg/day, IV divided Q8h or Q12h for hallucinations/agitation

Guiding parents at EOL:

“These are some of the things that you can for her..”

Hold her hand, cleanse her mouth. Sing a song or tell stories.

“I wonder if you want to contact your family

to say goodbye”

“Why don’t you hold her and I can take a photo of this precious time”

Statements that facilitate saying good-bye

Younger children:	Older adolescents and young adults:
“I am proud of you”	“Please forgive me”
“You will always be with me”	“I love you”
“I love you”	“Thank you”
“You will be in peace and I will be ok”	“I forgive you”

Participating in prayer with families

The pronouncement of death & Death certificate completion

The health care provider’s response:

Anticipate your own anxiety as the condition progresses and death approaches

Monitor your avoidance

Child’s anxiety and the parent’s grief (particularly when expressed through outbursts of grief/ anger) can be difficult

Bereavement: Providing bereavement support, identifying high risk bereavement families or care givers, referral to support groups for care givers with complicated grief and referral to psychiatry for complex bereavement.

Parents have reported finding face-to-face visits following the child’s death to be very helpful in their bereavement.

Siblings: Care of siblings is paramount on how they are processing the grief of death.

Staff debriefing: Staff debriefing helps for processing the stress the team has gone through for caring for the child and their family. Helps as a team to formulate plans to deal with situations better in future.

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PEDICON 2024 – ANNOUNCEMENT



RATES PEDICON 2024 KOCHI

Category	Early Bird upto 31Mar 23	Up to 30 Jun 23	Upto 30 Sep 23	upto 31 Dec 23	From 01 Jan 24
IAP member	11000	18700	27500	37400	45000
Accompanying	11000	18700	27500	37400	45000
Non IAP	16000	37400	44000	55000	66000
Accompanying	16000	37400	44000	55000	66000
PG student	6000	9000	10000	12000	16000
Accompanying	11000	18700	27500	37400	45000
SR citizen	-			11000	11000
Accompanying	11000	18700	27500	37400	45100
SAARC	\$250	\$250	\$300	\$550	\$750
Non SAARC	\$450	\$450	\$550	\$750	\$950
Corporates	25000	38500	44000	49000	60000
Accompanying	25000	38500	44000	49000	60000

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IAP Navi Mumbai

NAVI MUMBAI IAP BRANCH REPORT NOVEMBER 2023

ACADEMIC –

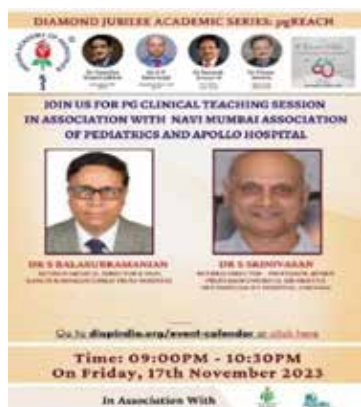
1. 3rd November 2023 - As a part of Diamond Jubilee Academic Series: Pg Reach of CIAP
Topic: **IAP PG Teaching Sessions** - Supported by Apollo Institute of Child Health
Prof Dr S Balasubramanian & Prof Dr Srinivasan.
<https://us02web.zoom.us/j/86554831885?pwd=Rm1nTW1WNHdubmlOU1crc0tPWjJYdz09>
2. 9th November 2023 - **AHA Raigad & IAP Raigad in association with MAHAIAP Women's Committee, Rotary Club of Panvel Industrial Town & Inner Wheel Club Khopoli celebrating IAP Child & Adolescent Health Care Week {CAHCW} (7th -14th November 2023)**
Theme: Celebrating the Voice, Vision & Vigour
Celebrating the IAP Healthy Lifestyle Day
Theme: A Gift to Myself
Guest: **Dr. Pravin Gaikwad**, Practising Pediatrician, Navi Mumbai Fitness Expert
<https://www.youtube.com/channel/UCjLZbj5fO1ISdjp7vh8hZSw/live>
3. 14th November 2023 – **Academic Pearls 2023**
Topic – Therapeutic principals of managing connective tissue disorders
Expert – **Dr Vijay Vishwanathan**
Convenor – **Dr Mahesh Mohite**
4. 17th November 2023 - As a part of Diamond Jubilee Academic Series: Pg Reach of CIAP
Topic: **IAP PG Teaching Sessions** - Supported by Apollo Institute of Child Health
Prof Dr S Balasubramanian & Prof Dr Srinivasan
<https://us02web.zoom.us/j/82039298064?pwd=cWpzMG4xb0xHMG9oVIBFYmV3TVVpdz09>
5. 26th November 2023 – **Asthma Training Module** organised by IAP National Respiratory Chapter with IAP Navi Mumbai
Faculty & workshop coordinator – **Dr Vikram Patra.**
MOC – **Dr Kalyani Patra**

Topic – Management of an acute flare up
Expert – Dr Vikram Patra

Topic – Prescription writing
Expert – Dr Vikram Patra

Workstation – Peak flowmetry & Spirometry.
Expert – Dr Vikram Patra

IAP Navi Mumbai



PUBLICATIONS AWARDS & REGOGNITIONS –

1. Dr Dhanya is honoured as a moderate pediatric focused sessions in WHO' s world AMR awareness week on 20th and 23rd Nov co-hosted by PIDS, USA and International Ped Association respectively with WHO. Dr V N Yewale is honoured to be the Guest speaker.
<https://www.who.int/campaigns/world-amr-awareness-week/2023/waaw-events>
<https://www.youtube.com/live/t3tmKGGb7I?si=ge4hld7M4s721LVk>

IAP Navi Mumbai



SOCIAL –

1. Our own most respected and dynamic **Developmental Pediatrician, Dr Leena Deshpande** came up with a programme to teach parents to be 'shadow teachers' to each other's children! The third batch of parents completed their training today at the **iCAN developmental centre in Kharghar** and were presented their completion certificates and personalised mugs by our **Former President Dr BG Ranpise, scientific convenor Dr. Jeetendra Gavhane and EB Member, Dr Suhas Kharche**. It was a true step towards empowering parents in the true sense to be able to be a part of schooling for children with disabilities and also begin saving money that otherwise would be required to be spent on such activity. We assured our continued support for this activity in future and have taken advice from senior most Pediatrician of Navi Mumbai, Dr Ranpise.
2. On account of ***World Anemia Day ***, celebrated on 26th November, and to spread awareness about Thalassemia, we have organised an **"End Thalassemia Run"** which is also the **3rd edition of the SWACHH NAVI MUMBAI HALF MARATHON**. **Swach Navi Mumbai Half Marathon** on Palm beach road, Vashi. **Dr Arti Gaikwad** was honoured to be the ambassador for the same. <https://youtoocanrun.com/races/swachh-navi-mumbai-half-marathon-2023/>
3. Sip into the essence of life – Spirituality & Science @drshilparoskar <https://drshilparoskar.wordpress.com/2023/11/18/sip-into-the-essence-of-life-spirit-uality-science-drshilparoskar-slice-of-my-life/>
4. Focussing on these prospects, and as part of "IAP & AHA Adolescent health week celebration" in collaboration with **KDA (Kharghar Doctors Association), Navi Mumbai AHA (UBU)** had an innovative session for the teens celebrating 'Healthy Lifestyle day in teenagers' on 18th November, 2023 at **Brahmakumari hall, Kharghar**. The session was conducted by **Dr Satish Shahane (IAP PRESIDENT, NAVI MUMBAI)** and **Dr Amog Shahane (Executive Board member, Navi Mumbai IAP, Adolescent counsellor)** on the importance of good nutrition & Physical fitness in teens- the real gift of life! The children

IAP Navi Mumbai

Anaemia in their children. Iron deficiency and subsequent anemia especially in early years of life can lead to long term effects affecting the overall development of a child. Regular supplementation and food fortification are the important steps taken to prevent this micronutrient deficiency.

6. Dr Jeetendra Gavhane & Dr Amit Saxena have spread knowledge through informative video on World Anemia Day.
7. Navi Mumbai IAP celebrated **Antimicrobial Awareness Week** by releasing the first part **NMIAP Infectious Disease Practical Tips Series'** - an extremely useful, **handy booklet** to guide practitioners in diagnosing and managing common respiratory illnesses as well as other infectious diseases. Stalwards **Dr Vijay Yewale**, Dr Jagdish Chinappa, Dr Dhiren Gupta, **Dr Jeetendra Gavhane**, **Dr Mangai Sinha** in this field have taken efforts to curate and simplify this for easy understanding and imbibing it in our daily practice. **Dr Priyanka Amonkar** has compiled these tips to make it more impactful.

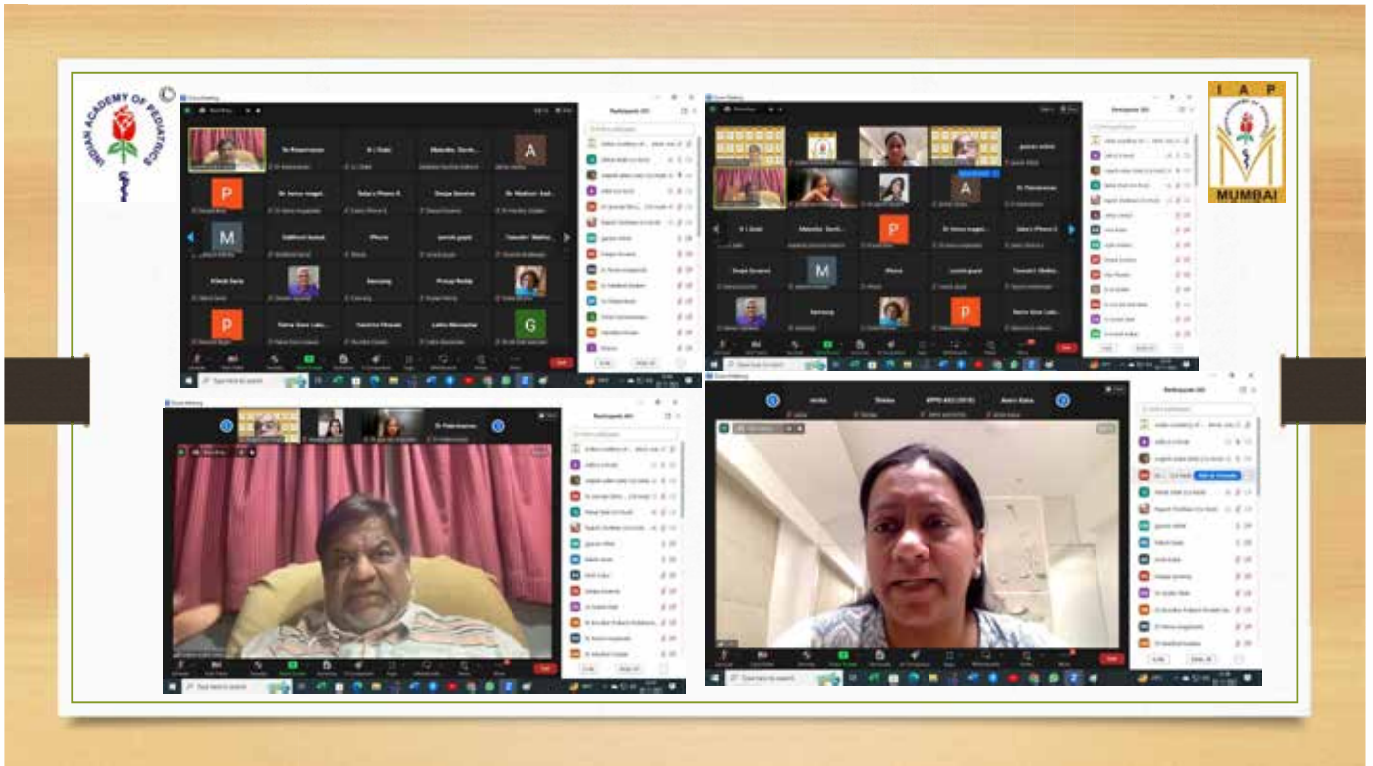


IAP Mumbai



SSS program under the Presidential Action Plan, 2023 - IAP Mumbai, successfully conducted the SSS program under the Presidential Action Plan, 2023 at the D J Doshi Gurukul English Medium High School, Ghatkopar on the 1st November 2023 from 3.30 - 5.30 pm.

IAP Mumbai



WEBFLIX series : Episode 3 Neurology- IAP Mumbai conducted the online episode of its Webflix series “The Third Umpire” on 3rd November, 2023 on the zoom platform from 9.30 pm onwards.

IAP Mumbai



Interactive sessions in 4 batches on the topic of TEENAGE RELATIONSHIPS - On occasion of the CAHCW, Team IAP Mumbai EB member, Dr Jagruti Sanghvi conducted interactive sessions in 4 batches on the topic of TEENAGE RELATIONSHIPS, addressing around 550 students of Std 12 of Shree D J Doshi Gurukul English Medium High School & Junior College of Commerce in Ghatkopar East.

IAP Mumbai



Drug Abuse Awareness Session at SVKM Baghubai Polytechnic College - On occasion of IAP Child and Adolescent Health Care Week (CAHCW), IAP Mumbai branch conducted a Drug Abuse Awareness Session at SVKM Baghubai Polytechnic College for teenage students of IT and Computer science stream on 8th Nov 2023.

IAP Mumbai



Awareness Session on Menstrual Hygiene for young adolescent girls - As a part of the Daughters day celebrations of the IAP Child and Adolescent Health Care Week CAHCW, IAP Mumbai in collaboration with the Rajesh Pacharkar Foundation organized an Awareness Session on Menstrual Hygiene for young adolescent girls.

IAP Mumbai



Seminar on “Domiciliary care of Preterm Babies - On the occasion of first day of National Newborn Week, Cuddles n Cure Children’s Hospital, Mulund in collaboration with IAP Mumbai conducted a seminar on “Domiciliary care of Preterm Babies.” The Newborn Week is celebrated each year as a National Health Event across the country from 15th to 21st November to create awareness on importance of newborn care to improve child survival and development.

IAP Mumbai



World Anemia Day - The World Anemia Day was celebrated by IAP on the 26th of November, 2023. The theme for this year is "Listen to Your Body".

IAP Mumbai



World AIDS Day Celebration - IAP Mumbai in collaboration with the Infectious Diseases Division, B.J.Wadia Hospital for Children, celebrated the World AIDS Day on the 30th November, 2023. The theme this year is "Let Communities Lead."

IAP Kerala



**GREEN ARMY - SANSKRIT HIGHER SECONDARY SCHOOL
VADAKARA (29th November)**

**GREEN ARMY -SREE NARAYANA HIGH SCHOOL, VADAKARA)
(4th November)**



Presidential Action Plan - Green Army IAP Vadakara

IAP Kerala



Comprehensive Newborn Care module CIAP @ IAP Trivandrum

IAP Kerala



AMR GO BLUE Campaign - IAP Pathanamthitta

IAP Kerala



SSS Programme attended by Dr Upendra, CIAP President organised by IAP Thrissur

IAP Kerala



Children's day celebration at IAP Kozhikode

IAP Kerala



Adoption of Tribal village - IAP kerala Charity activity - Clean Water & Toilet facilities for Tribal population

IAP Kerala



IAP Kerala State Pedicon at Wayanad - Dr Shimmy Paulose installed as state president

IAP Kerala



Pre conference workshop - Dermatology Module at DM WIMS