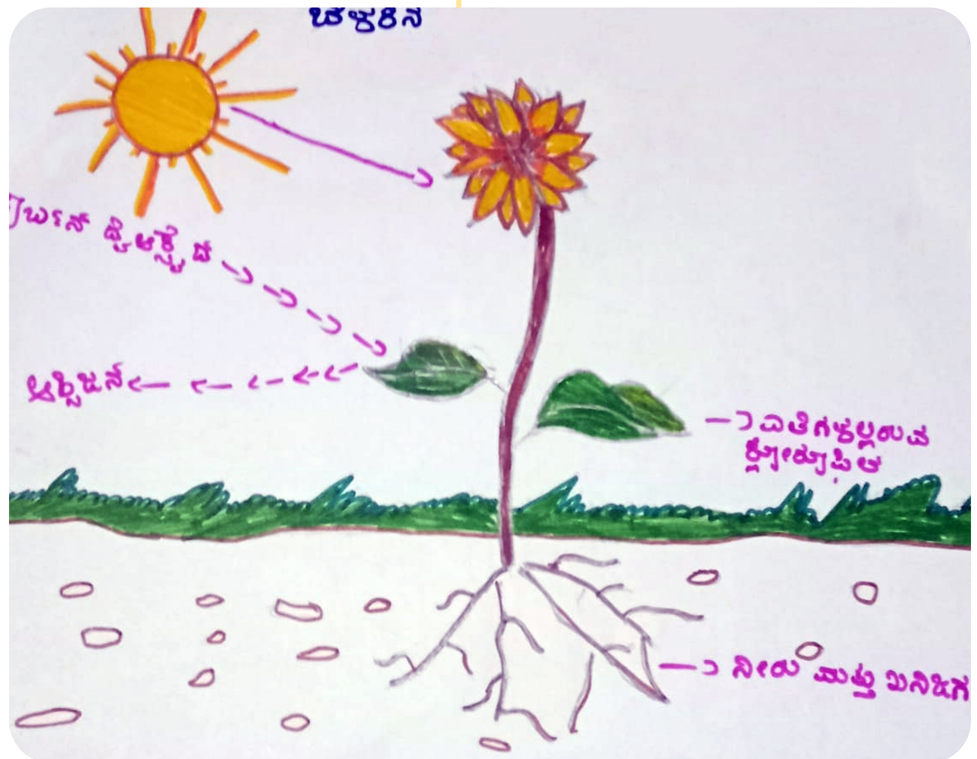
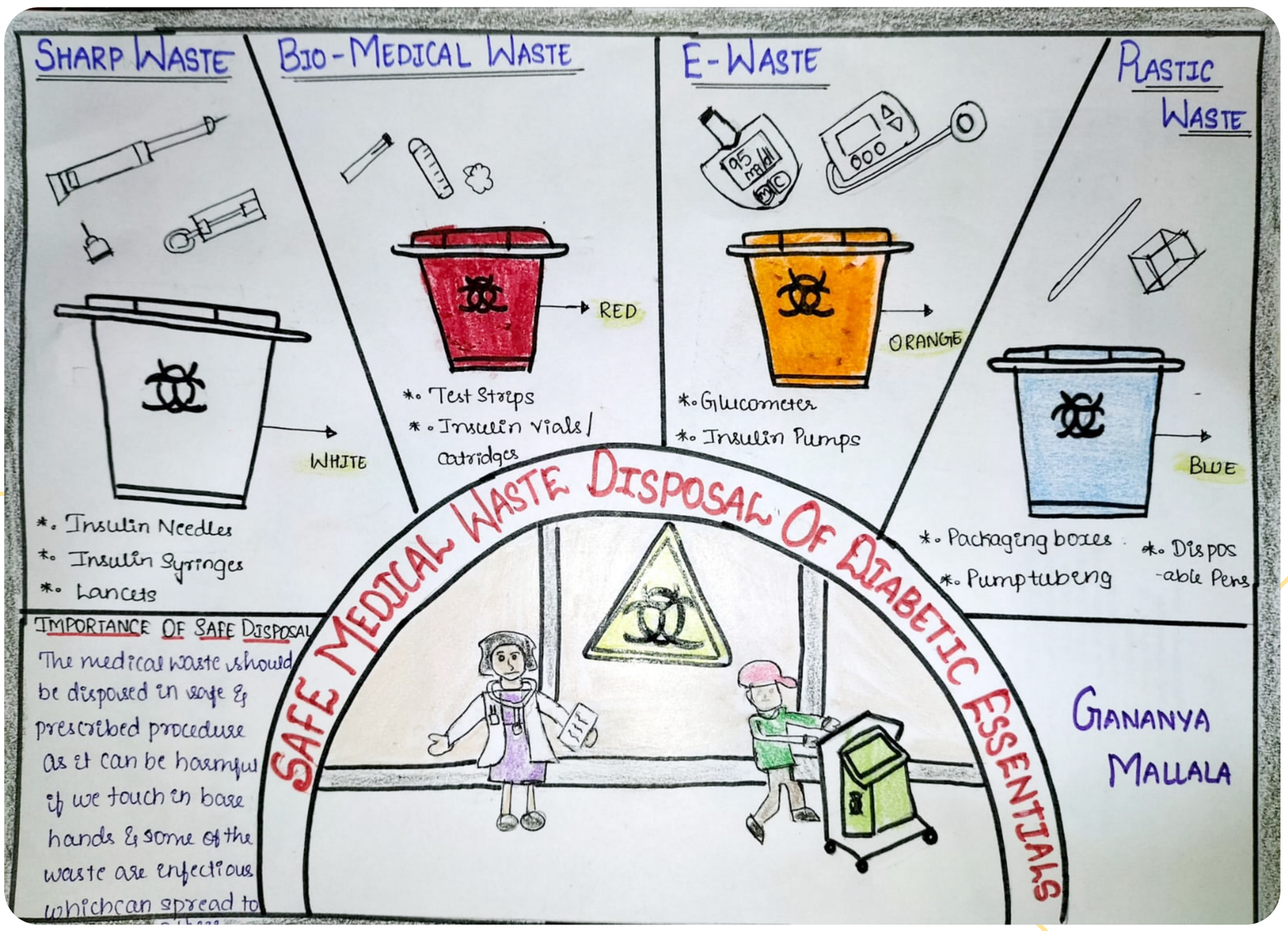
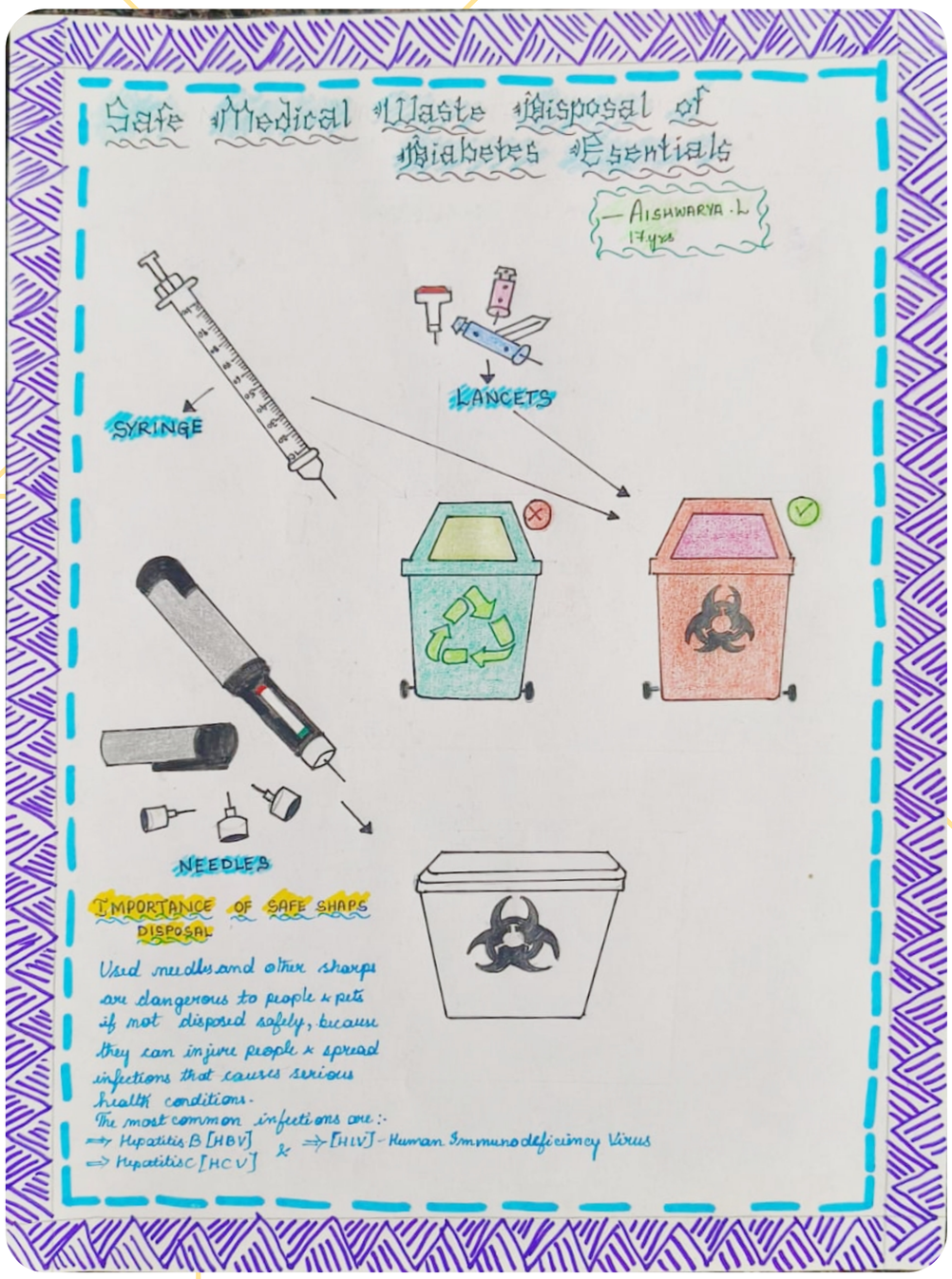
SPEAK

The official newsletter of Paediatric Endocrinology Association of Karnataka







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SPEAK
The Voice of PEAK

The President Speaks

Dr. Vijaya Sarathi H.A.
President

It gives me great pleasure to invite you all to read the third issue of SPEAK, the newsletter of PEAK 2024-2026. First, I would like to thank our fabulous team of SPEAK, Dr Diksha Shirodkar (Editor) and Dr Avani Hegde (Member) for bringing out this wonderful edition of SPEAK. On our journey to create abundant awareness about hormonal disorders among healthcare providers, patients ,and their parents, PEAK members have successfully conducted several awareness and education programs. The number of Paediatric endocrinologists in Karnataka is gradually increasing and Karnataka is one of the states with the largest number of Paediatric endocrinologists. However, awareness regarding the same and their clinical practice location is limited among the health care providers and the public. In this issue, we have made a new effort to offer information regarding the availability of Paediatric endocrinologists in Karnataka. This will help the health care providers referring children with hormonal disorders as well as patients and their parents to locate the nearby Paediatric endocrinologist.

The team PEAK is glad to share that the first annual meeting of PEAK will be held on 2nd and 3rd of August, 2025 at Vydehi Institute of Medical Sciences and Research Center, Bengaluru. The meeting intends to educate and train budding and young Pediatricians to recognize, do initial management, and seek timely expert opinion from the Paediatric Endocrinologists. The meeting will be loaded with plenary sessions, meet-the-professor sessions, case-based discussions, symposia, and panel discussions. The meeting will also feature interesting quiz sessions, a Paediatric endocrine case competition, and oral and poster presentations of research work for Paediatric and endocrine fellows. We look forward to see you all at PEAK 2025.

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The Team of PEAK 2024-2026

Dr. Vijaya Sarathi H.A.
President

Dr. Suman Rath
Vice President

Dr. Pavithra Nagaraj
Secretary

Dr Poornima R .N
Treasurer

The Team of PEAK 2024-2026

Dr. Santhosh Olety Sathyanarayana

Dr. Diksha Shirodkar

Dr Koushik Urala

Dr Tejasvi Sheshadri

Dr. Meenakshi Kathavate

Dr Thrupti S

Dr Supreetha Shetty

SPEAK
The Voice of PEAK

Hello from the Editorial board

Dear All

It gives us great pleasure in announcing yet another issue of the newsletter- SPEAK, after the installation of the new PEAK team (2024-2026).

This newsletter shall highlight all the efforts put in by the PEAK members in sensitizing the Paediatricians, students, clinicians and parents of the children with Paediatric Endocrine disorders and provide you with a list of all practicing Paediatric endocrinologists in Karnataka.

Our cover page shall surprise you by the efforts put in by our little wonders (our patients). Going through this newsletter shall pleasantly walk you through an interesting case report, a drug review and multiple events conducted by PEAK.

We wish to see more members come along in our journey of creating massive awareness in Paediatric Endocrinology and contributions from the members in the upcoming issues.

Wishing you all a memorable experience.

Thank you!

Dr. Diksha Shirodkar
Editor

Dr. Avani Hegde
Co-Editor

Practicing Pediatric Endocrinologists in Karnataka

(arranged in alphabetical order)

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3	**Dr. Chaitra K. R.**	MD, DNB, PDCC Paediatric Endocrinology(SGPGI)	Assistant Professor, department of Paediatrics, Navodaya medical college, Raichur
4	**Dr. Diksha Shirodkar**	MD Paediatrics, MRCPCH(UK), Fellow in Clinical genetics (Society of Indian academy of Medical Genetics), Advanced training in Paediatric Endocrinology (Manipal University), Senior Clinical Fellow in Paediatric Endocrinology and Diabetes (University of Bristol and Weston, NHS, UK)	Assistant Professor (Paediatrics) and Paediatric Endocrinologist, Department of Paediatrics, Yenepoya medical college and Hospital, Mangalore
5	**Dr. Jahnavi M.**	MBBS, DNB Pediatrics, Fellowship in Pediatric Endocrinology (RGUHS)	Senior Specialist, Pediatric Endocrinology, Aster Whitefield, Bangalore
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7	**Dr. Kavitha Bhat**	MD paediatrics, Fellowship Paediatric Endocrinology, Louisiana State University School of Medicine, MS clinical service operations, Harvard medical school	Aster Hospitals Bangalore Cluster
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12	**Dr. Meghana N.**	MBBS, MD, DNB Paediatrics, fellowship in Paediatric Endocrinology (RGUHS)	Assistant Professor and Consultant Pediatric Endocrinologist , Dept. Of Pediatrics, PES University Institute of Medical Sciences and Research (PESUIMSR), Electronic City, Bengaluru
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21	**Dr. Shaila Pachapure**	MBBS, MD Pediatrics, Fellowship in Pediatric and Adolescent Endocrinology	Assistant Professor, Jawaharlal Nehru Medical College, Belagavi, Karnataka
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26	**Dr. Suman Rath**	DNB Paediatrics, Fellowship in Paediatric Endocrinology	Senior consultant, Bangalore Baptist Hospital
27	**Dr. Supreetha Shetty**	MBBS, DCH, DNB Paediatrics, Fellowship in Paediatric and Adolescent Endocrinology	A J hospital and research center, Mangalore
28	**Dr. Swati Dokania**	MD Paediatrics , Fellowship in Pediatric & Adolescent Endocrinology	Senior Resident, Vydehi institute of medical science and research centre, Bangalore
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30	**Dr. Thrupti S.**	MBBS, MD, Fellowship in Paediatric and Adolescent Endocrinology	Consultant Paediatric and adolescent Endocrinologist, Avant BKG Hospital Mysore, Kangaroo care hospital, Mysore
31	**Dr. Vani H. N.**	MD (Ped), Fellowship in Paediatric and Adolescent endocrinology	Professor, Paediatric Endocrinologist, Indira Gandhi Institute of Child Health, Bangalore
32	**Dr. Vijaya Sarathi H. A.**	MD Paediatrics, DM Endocrinology (KEM, Mumbai)	Professor and Head, Department of Endocrinology, Vydehi Institute of Medical Sciences and Research Center, Whitefield, Bengaluru, Karnataka India 560066

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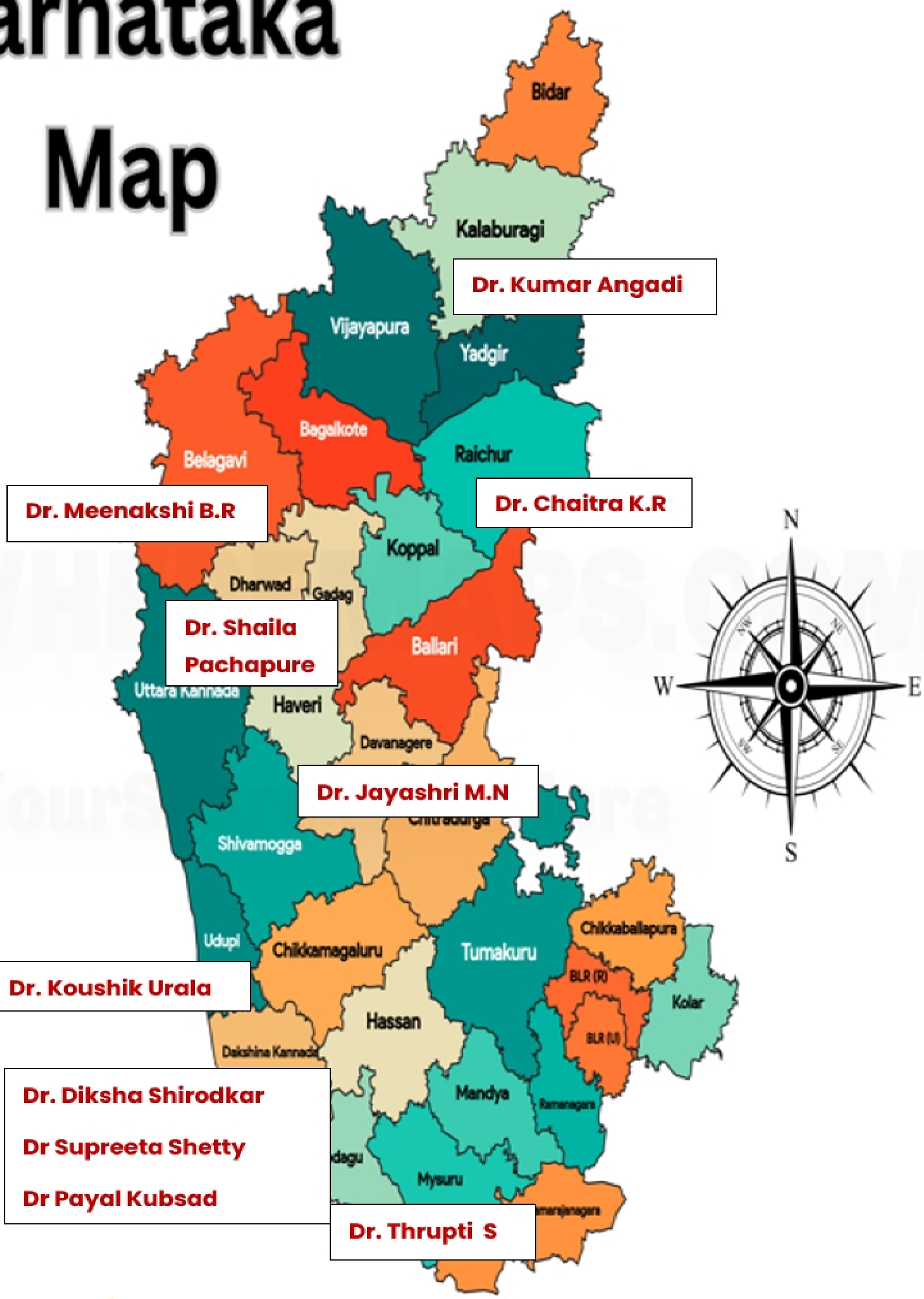
Karnataka Map



Dr. Kumar Angadi

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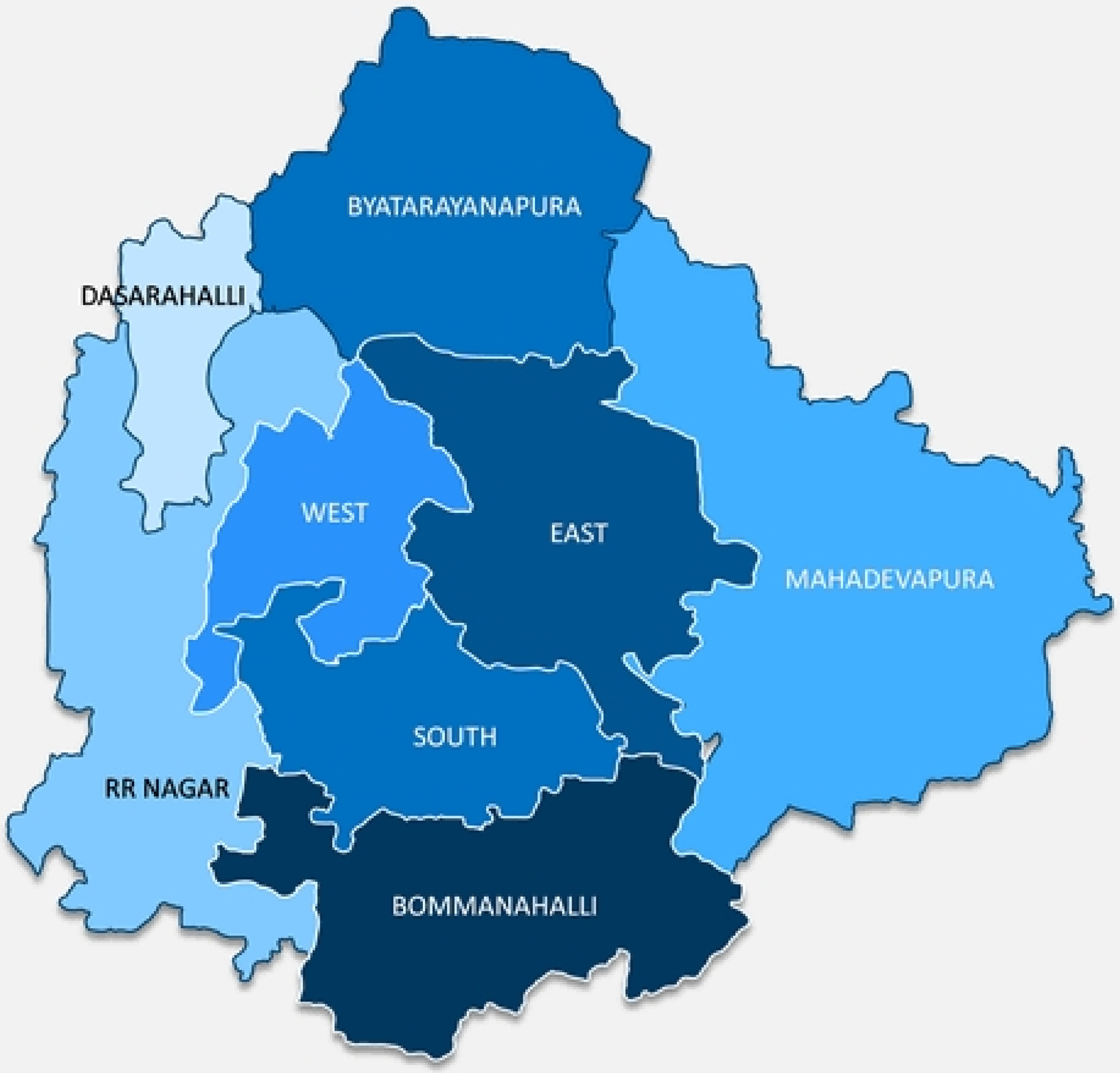
BENGALURU MAP



Dr. Raghupathy P.	**Dr. Poornima R. N**	**Dr. Meghana N.**
Dr Shaila Bhattacharyya	**Dr. Suman Rath**	**Dr. Swati Dokania**
Dr Kavitha Bhat	**Dr. Anjana Hulse**	**Dr Rekha Bathala**
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Dr. Vijaya Sarathi H. A	**Dr. Jahnavi M.**	**Dr. Tejasvi Sheshadri**
Dr. Vani H. N	**Dr. Nabanita Kora**	

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July 21st 2024, Sunday witnessed the valedictory and installation ceremony of Paediatric endocrinology association of Karnataka (PEAK). The program began with an immersive and enlightening lecture on optimisation of growth in Turner syndrome by Dr. Vijaya Sarathi H A followed by the invocation song and lamp lighting. The immediate past president Dr Shaila Bhattacharya, Patron Dr Raghupathy and present president Dr Vijaya Sarathi addressed the gathering. This was followed by the installation ceremony of the new team of PEAK 2024-2025. The event ended with a vote of thanks followed by lunch

Installation of the team PEAK 2024-2026

The programs under the flagship of PEAK

Activities at Karnataka Institute of Endocrinology and Research by Dr Santhosh Olety and team

1. The Nutrition Week was celebrated at the Karnataka Institute of Endocrinology & Research in September 2024.

Event was supported by the Novo Nordisk. Over 45 kids participated in a series of interactive activities aimed at promoting healthy eating habits. The event also featured an interactive session where the kids learnt about balanced nutrition through a quick talk on MNT, followed by traffic zone concept based segregation of foods as per their health benefits and the frequency of consumption. Additionally, kids enjoyed participating in solving puzzles and answering the quizzes. The celebration was concluded with the distribution of healthy snacks, allowing everyone to sample nutritious snack options. Trophies were awarded to those who excelled in the activities.

2. Poster Making on Safe Medical Waste Disposal of Diabetes Essentials: Initiative:* Swachhata Hi Seva

As part of Patient Safety Week -October 2024, a Poster Making Event on "Safe Medical Waste Disposal of Diabetes Essentials" was organized by the Seva initiative. The event focused on raising awareness about the safe disposal of diabetes-related medical waste, such as syringes, needles, insulin vials/cartridges, glucometers, test strips, CGM devices, and insulin pump essentials. Over 30 children with Type 1 diabetes participated in the event, creating drawings that highlighted the importance of proper waste disposal. Our cover page has pictures drawn on this occasion by our children with T1 diabetes.

3. Make-A-Wish Foundation Brings Joy to Children with Type 1 Diabetes in Karnataka

The Make-A-Wish Foundation, a global organization dedicated to fulfilling the wishes of children with critical illnesses, has been bringing smiles to the faces of young patients at the Karnataka

Institute of Endocrinology and Research. Since 2022, the Foundation has granted over 300 wishes to children living with Type 1 diabetes, offering them a much-needed respite from the challenges of their condition. Understanding the emotional and psychological impact of living with a chronic illness, Make-A-Wish focuses on granting personalized wishes tailored to each child's unique dreams and interests. This has included a diverse range of gifts, from bicycles to encourage physical activity – a crucial aspect of diabetes management – to laptops and tablets that facilitate online learning and access to vital diabetes management tools.

Various other wishes include study table, smart watches, TV, toys, sports gears, travel to jungles, meeting sports celebrities etc.

Beyond fulfilling material desires, the Make-A-Wish Foundation has effectively highlighted the critical importance of emotional and mental well-being for children living with Type 1 diabetes. This initiative serves as a powerful reminder of the transformative power of kindness and the positive impact that even small gestures can have on the lives of children facing significant health challenge

4. World Diabetes Day for Children living with Type 1 Diabetes

The event was organized with an objective to create a platform for knowledge sharing, empowering and networking among families with kids living with diabetes to improve overall psychological wellbeing of the child, better quality of life for families and creating a strong support system. It includes various events, to name a few are fun filled team building games, talent show such as singing, mimicry, Bharatanatyam, hip-hop and yoga, knowledge and experience sharing, meeting adults with type 1 diabetes since childhood, thanking all the donors/sponsors and healthy lunch. Around 100 kids accompanied with their families took part in the event.

5. Sakkare Guru: A YouTube Channel with a Purpose

https://youtube.com/@sakkareguru

Launched on November 9, 2023, Sakkare Guru is a pioneering YouTube channel dedicated to raising awareness and providing education about Type 1 diabetes (T1D). Spearheaded by a team of Pediatric Endocrinologist, Certified Diabetes Educators and Dietitians Karnataka Institute of Endocrinology and Research (Bengaluru) , the channel delivers reliable, practical, and relatable content for individuals with Diabetes, caregivers, and the wider community.The name "Sakkare Guru," meaning "Sugar Teacher," reflects its mission to guide individuals with Type 1 diabetes in managing their blood glucose levels and leading fulfilling lives. Sakkare Guru offers a variety of engaging, easy-to-understand videos, primarily in Kannada, making critical information accessible to regional caregivers. The channel aims to bridge the gap in diabetes education, empower viewers, and debunk myths surrounding Diabetes. By providing remote access to educational resources, it helps families enhance their knowledge and minimize errors in Diabetes management. (https://kierbengaluru.karnataka.gov.in/83/videos/en)

Sakkare Guru has become a vital resource for families managing Type 1 diabetes. By addressing unique challenges and fostering a supportive community, it empowers viewers to confidently manage the condition.With more educational content planned, Sakkare Guru continues to provide much-needed guidance and reassurance to those navigating life with Type 1 diabetes.

6. Christmas Event at KIER

We celebrated Christmas at KIER with great enthusiasm and excitement. Before the celebrations began, we observed a minute of silence to pay our respects to the departed soul of Dr. Manmohan Singh.

Blue Santa then brought gifts for all the children, specially chosen to help manage Type 1 Diabetes (T1D). The goodies in the box included Hypo Tabs, Pen Needles, Gel Packs, SMBG Log Books, and other fun items like cards, games, and stickers.

The event was filled with joy and laughter as few children sang Christmas songs, and everyone took photos with Blue Santa. The celebrations were followed by a delicious lunch, adding to the festive cheer. It was a wonderful opportunity for everyone to bond and celebrate the spirit of Christmas.

7. Activities of Pediatric Endocrinology Team, Aster Hospital, Bangalore

Dr. N. Kavitha Bhat, Lead Consultant in Pediatric Endocrinology at Aster Hospitals, Bengaluru Cluster, presented a talk on Childhood Obesity at the inaugural webinar of the IAP Bahrain Branch on October 27, 2024.

The Pediatric Endocrinology team at Aster CMI Hospital successfully conducted the 3rd dedicated multidisciplinary clinic for Prader-Willi Syndrome (PWS) patients on November 16, 2024. Approximately 16 patients from across India attended, underscoring the growing awareness of PWS and the need for specialized care. The clinic comprised a multidisciplinary team, including Pediatric Endocrinologists, Pediatric Pulmonologists, a Pediatric Dietitian, an Orthopedician, a Pediatric Dentist, a Child Life Specialist, and a Physiotherapist. Key highlights included comprehensive, personalized assessments for each patient, family education, and a collaborative approach to holistic patient care.The Pediatric Endocrinology team from Aster CMI Hospital, Bangalore, released the first-of-its-kind Prader-Willi Syndrome patient education booklet in English and several Indian languages, including Hindi, Tamil, Kannada, and Telugu. This initiative was made possible by a grant from the International Prader-Willi Syndrome Organization (IPWSO), secured by Dr. Jahnavi M under the guidance of Dr. N. Kavitha Bhat. Dr. Jahnavi M delivered a podcast on common Pediatric endocrine conditionsions hosted by Dr. Shreya Mishra on the Ropana podcast.

8. Activities at Kasturba medical college and hospital, Manipal by Dr Koushik Urala

Manipal, 04 January 2025: Department of Pediatrics & Pediatrics Endocrinology Clinic, Manipal, in association with Indian Council of Medical Research (ICMR), Govt. of India funded Young Diabetes Registry (YDR) Phase III & Department of Medicine, Kasturba Medical College & Hospital, Manipal has organized a one-day Educational Program for Young Diabetics. Around 30 young persons living with diabetes (2-25 years old) have participated with their caretakers. The fasting blood sugar (FBS) and glycated hemoglobin (HbA1c), along with anthropometric and vital parameters, were measured at free of cost. Fundus screening for identification of diabetic retinopathy. Interactive session with the Department of Clinical Nutrition & Dietetics to make routine homemade diet diabetes-friendly and preparation of healthy snacks. Yoga demonstration by the Department of Yoga Centre for Integrative Medicine & Research, MAHE. Self-introduction by young diabetics, inspirational talks, participation in fun games, quizzes, and cultural programs

by children with diabetes and Paediatric resident doctors were added events to the program, which helped us motivate the young patients to cheer up. Food suitable to persons with diabetes was provided to participants.

9. Paediatric endocrinology and diabetes workshop and CME conducted at Kanachur Institute of medical sciences, Mangalore on 23rd November and 24th November - “Harmonizing hormones”, a Pediatric Endocrinology update 2024 (Co-organising secretary Dr Diksha Shirodkar)

We organised a two day program where in the first day on 23/11/24 there was the Diabetes workshop which included talks on special circumstances in diabetes and sick day management along with management of diabetic ketoacidosis. We had a huge response of 99 registrations on that day. The hands on workshop succeeded the didactic talks at 12 pm which included growth chart plotting and its interpretation followed by lunch and a second workshop of one hour and 30 minutes on Type1 Diabetes mellitus which included its management, insulin administration & titration, insulin delivery devices, and continuous glucose monitoring systems. The faculty were Dr. Diksha Shirodkar,

Dr Koushik Urala and Dr Supreetha Shetty. Day two(24/11/14) included a continued medical education program which was conducted by Dr Shaila Bhattacharya (ex-president ISPAE, member ISPand PEAK- Paediatric endocrinology association of Karnataka), Dr Pavithra Nagaraj (secretary of PEAK and member of ISPAE, Dr. Diksha Shirodkar member ISPAE and EB member PEAK, Editor of SPEAK(official newsletter of PEAK), Dr Supreetha Shetty and Dr Koushik Urala (both ISPAE members & EB members of PEAK). The topics included childhood obesity, approach to ambiguous genitalia, consensus on congenital hypothyroidism, acquired hypothyroidism, short stature and precocious puberty.

10. Sri Devraj Urs academy of higher education and research, Kolar in association with paediatric endocrinology association of Karnataka conducted a paediaric endocrinology CME On 8th November 2024.

It was attended by general paediatricians, post graduates and MBBS students. The theme of the CME was hormones and health. The speakers included Dr Vijaya Sarathi, Dr Pavithra Nagaraj, Dr Poornima RN, Dr Suman Rath and Dr Tejasvi Sheshadri. The CME discussed basic paediatric endocrinology topics such as ambulatory management of type 1diabetes mellitus, congenital hypothyroidism, pubertal disorders, short stature and obesity and was well appreciated by all.

Activities by PEAK Members

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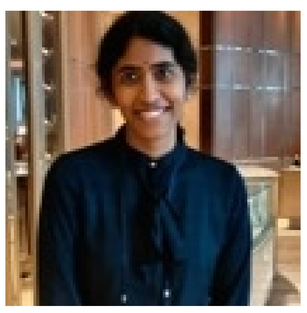
The Paradox of High Aldosterone: A Twist in Congenital Adrenal Hyperplasia



Dr Jahnavi M
Senior Specialist, Pediatric Endocrinology,
Aster Women and Children, Whitefield

A 5-month-old boy presented to the Paediatric OPD with recurrent episodes of non-projectile, non-bilious vomiting. Besides vomiting and poor feeding, the parents had no additional concerns. However, further probing revealed a history of poor weight gain. The child was born at full term with a birth weight of 2.8 kg and was reportedly exclusively breastfed, which the mother believed was adequate. There was also a delay in developmental milestones. The mother denied any lethargy, persistent vomiting, or altered sensorium. Despite this, he failed to gain weight appropriately, and by 5 months, his weight had increased to only 4.2 kg (a gain of just 1400 grams).

A retrospective review of the history revealed a positive newborn screen for 17-hydroxyprogesterone, which had been lost to follow-up. On examination, his vitals were stable. His height, weight, weight-for-length, and head circumference were all below the 3rd percentile. Blood pressure and systemic examinations were normal.

Initial laboratory investigations revealed hyponatremia (104 mmol/L), hyperkalemia (7.8 mmol/L), hypochloremia (73.4 mmol/L), and metabolic acidosis (pH: 7.25, bicarbonate: 15 mmol/L). Renal function tests showed elevated blood urea nitrogen (25.09 mg/dL) secondary to dehydration, while serum creatinine was normal (0.4 mg/dL). Other investigations, including complete blood counts, glucose, and calcium, were normal. Urinalysis revealed 8–10 RBCs/high-power field (HPF) without gross haematuria, suggestive of microscopic hematuria.

The child was admitted to the PICU with a provisional diagnosis of adrenal insufficiency leading to a salt-wasting crisis. The most common differential diagnosis for this presentation was congenital adrenal hyperplasia (CAH) secondary to 21-hydroxylase deficiency. Other rare differentials included adrenal hypoplasia congenita, primary hypoaldosteronism, or pseudohypoaldosteronism. An abdominal and pelvic ultrasound revealed normal adrenals, kidneys, and urinary bladder.

Baseline samples were collected, and the child was treated with IV stress doses of hydrocortisone alongside correction of hyponatremia, hyperkalaemia, and metabolic acidosis. The 17-hydroxyprogesterone level was markedly elevated (649.74 ng/mL, reference: >10 ng/mL), confirming a diagnosis of 21-hydroxylase deficiency. Plasma renin activity was elevated (>500 mIU/L), indicating inadequate mineralocorticoid action. Serum cortisol levels were inappropriately normal for the level of stress (8.9 mcg/dL). Serial investigations showed normalization of sodium and potassium levels. Hydrocortisone was tapered to 15 mg/m²/day after stabilization, and mineralocorticoid replacement was initiated.

While the clinical presentation and elevated 17-hydroxyprogesterone levels were consistent with 21-hydroxylase deficiency, the child's aldosterone levels were unexpectedly elevated (210 ng/dL, reference: 2.5–39.2). Elevated aldosterone levels in a child with salt-wasting crisis suggests a diagnosis of pseudohypoaldosteronism (PHA), but this was inconsistent with the elevated 17-hydroxyprogesterone that was seen in the child. Genetic report of the child was also confirmatory for 21 hydroxylase deficiency. Case reports and literature have shown previous instances where aldosterone and cortisol can be paradoxically elevated in children with salt-wasting congenital adrenal hyperplasia1,2. The possible explanations for elevated aldosterone levels in 21-Hydroxylase Deficiency include:

1. **Transient PHA or Secondary PHA:** Newborn nephron resistance to aldosterone can be exacerbated by urinary tract infections (UTI) or congenital urinary tract anomalies, leading to transient or secondary PHA. In this case, undiagnosed urinary sepsis might have increased aldosterone resistance, elevating its levels.
2. **Cross-reactivity in Immunoassays:** Direct immunoassays like ELISA, RIA, or CLIA can show cross-reactivity between aldosterone and other steroid precursors, particularly in conditions like 21-hydroxylase deficiency where steroid precursor levels are elevated.

Genetic analysis (CYP21A2 testing) confirmed 21-hydroxylase deficiency.

Differentiating 21-Hydroxylase Deficiency from Pseudohypoaldosteronism (PHA):

Feature	21-Hydroxylase Deficiency	Pseudohypoaldosteronism (PHA)
Aldosterone Levels	Low or mildly elevated (may vary with cross-reactivity or transient PHA)	Significantly elevated (tens of thousands)
17-Hydroxyprogester	Elevated	Normal
Response to Treatmer	Rapid response to hydrocortisone and fludrocortisone	Poor response to hydrocortisone/fludrocortisone; requires extra sodium or bicarbonate

Takeaway:

Understanding subtle variations in hormonal profiles and clinical presentation is essential to differentiate common causes like 21-hydroxylase deficiency from rarer conditions like pseudohypoaldosteronism.

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SPEAK
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Long-Acting growth Hormone- Is It the future of Growth Therapy?


Dr. Amita S Verma, Dr. Shaila S Bhattacharyya
Department of Paediatric Endocrinology, Manipal Hospital- Old Airport Road, Bengaluru

Growth hormone (GH) therapy has been a cornerstone in treating growth hormone deficiency (GHD) and other growth-related disorders in children. Traditionally, daily subcutaneous injections of recombinant human growth hormone (rhGH) were the standard of care. However, daily injections pose challenges, such as poor adherence, fear and anxiety associated with the needles which overall impact the treatment outcome. Long-acting growth hormones (LAGH) are a novel advancement aimed at improving adherence and providing a more convenient dosing regimen.

Pharmacology Profile

LAGH have been designed to extend the half-life of GH through various mechanisms:

a) **PEGylation**: Attaching Polyethylene glycol (PEG) chains to GH molecule to reduce renal clearance and proteolytic degradation.
b) **Albumin Fusion**: Fusion of GH with albumin to increase molecular size and prolong circulation.
c) **GH Receptor Binding Modulation**: Altering GH structure to enhance its interaction with binding proteins or reduce receptor-mediated clearance.
d) **Fusion Proteins**: Like, in case of somatrogon, the amino acid sequence of recombinant human growth hormone (rhGH) is fused to three copies of the carboxy-terminal peptide of human chorionic gonadotropin (hCG), extending the half-life of the attached rhGH.
e) **Microparticle Encapsulation**: Encasing GH in biodegradable polymers for a sustained release.

LAGH Product Development History

Company	Product	Modification to GH molecule	Frequency of administration	Current status	Research
GeneScience Pharmaceutical Co. Ltd	Jintrolong	40-kDa PEG attached to GH	7 days	Marketed in China for CGHD	Phase 3 studies show good IGF-1 profile
Ascendis	Lonapegsomatropin (Skytrofa)	Unmodified rhGH transiently bound to a PEG carrier molecule via a self- cleaving linker that is dependent upon ph and temperature. Molecular weight of 22kDa.	7 days	Phase 2 studies in CGHD and AGHD showed comparable IGF-1 profile to daily GH dosing. Phase 3 studies in CGHD show positive growth response and was approved for treatment of children with GH in the fall of 2021 in the US.	Phase 3 study in CGHD ongoing and phase 3 study in AGHD planned. SGA and Turner studies are planned.

Company	Product	Modification to GH molecule	Frequency of administration	Current status	Research
Novo Nordisk A/S	Somapacitan	Single point mutations in GH, with albumin binding moiety attached (non-covalent albumin properties). Molecular weight of 23kDA.	7 days	Phase 2 studies in CGHD showed comparable IGF-1 profile to daily GH dosing Phase 3 studies in AGHD well tolerated.	Phase 3 studies in CGHD and extension study in AGHD ongoing
OPKO Health and Pfizer	Somatrogon	rhGH fused to 3 copies of carboxy terminal peptide of hCG B-subunit. Molecular weight of 40kDA.	7 days	Phase 3 studies in CGHD have found once weekly dosing to be non-inferior to once daily dosing and similar safety profile.	Approved in Europe, Canada, USA, Australia, India, Japan.

CGHD - Childhood Growth Hormone Deficiency, AGHD- Adult Growth hormone Deficiency

Safety Profile of LAGH

a) Common Side effects: Injection site local reactions (pain, redness, itching), flu like symptoms (cough, fever, nasopharyngitis), headache, vomiting.

b) Currently, it is recommended, to monitor IGF-1 values while on LAGH therapy, on day 4th after giving the injection. Dose adjustment should be targeted to achieve IGF-1 SDS levels in normal range (-2 and +2; preferably close to 0 SDS).

c) LAGH can be given at any time of day, but, time and injection site should be recorded, ensuring that injection sites are rotated to avoid lipoatrophy.

d) Immunogenicity: No antidrug antibodies have so far shown evidence of neutralizing activity which could have an effect on safety or efficacy. Analyses of immunogenicity are ongoing as part of the open label extensions of these studies.

e) Long Term risks: Similar to GH therapy, glucose intolerance, potential tumorigenesis and cardiovascular risks are reported. Post-marketing surveillance will be critical for long-term safety data.

Dosage

LAGH	Dose advised	Dose recommended
Jintrolong	0.2 mg/kg/week	0.2 mg/kg/week
Lonpegsomatropin	0.24 mg/kg/week	0.24 mg/kg/week
Somapacitan	0.04, 0.08, 0.16 mg/kg/week	0.16 mg/kg/week
Somatrogon	0.25, 0.48, 0.66 mg/kg/week	0.66 mg/kg/week

Advantages of LAGH

1) Improved adherence due to reduced injection frequency.
2) Improvement in height velocity is similar to the daily Growth Hormone
3) Safety profile of LAGH is similar to daily GH.

Challenges and Limitations

a) Cost – LAGH is comparatively more expensive than the daily GH.

b) Monitoring requires IGF-1 levels to be checked every 3 months on 4th day of giving the GH injection for its peak effect analysis and to titrate the dose.Till now, LAGH is only approved in treatment of isolated GHD, MPHD(Multiple Pituitary Hormone Deficiency)- once child is euthyroid and eucortisolemic.

c) Data are also lacking for pediatric non-GHD states such as SGA, idiopathic short stature, Turner syndrome, Noonan syndrome, Prader–Willi syndrome, SHOX deficiency, and chronic renal insufficiency. Phase II and III trials evaluating the use of LAGH in many of these conditions are ongoing

d) No data is published on LAGH dose requirements to optimize growth and bone health in adolescents with open epiphyses or on bone health and for optimal dosing during the transition period from adolescence into adulthood. Only Somapacitan is proved for adult GHD till now.

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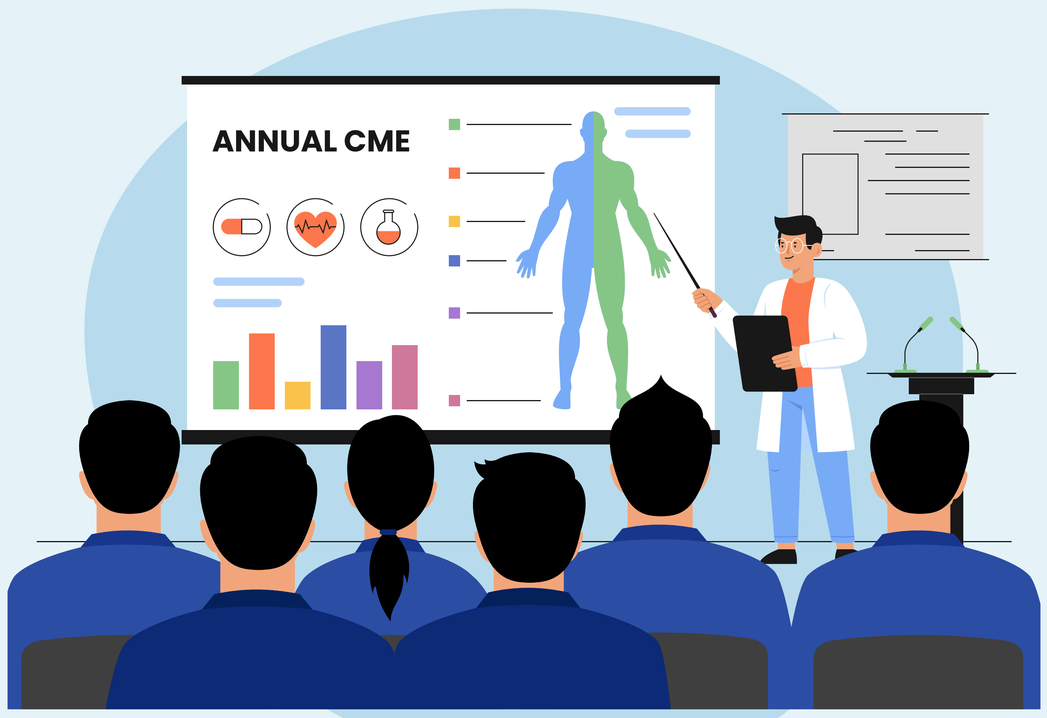
Upcoming Event



Annual CME of PEAK (Team 2024-2026)

August 2nd and 3rd 2025