



# A Journey of the Pediatric Hematology Oncology (PHO) Chapter of the Indian Academy of Pediatrics (IAP): From Humble Beginnings to Global Influence

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## Abstract

Since its inception in 1987, the Pediatric Hematology Oncology (PHO) chapter of the Indian Academy of Pediatrics (IAP) has emerged as one of its most active and impactful chapters. The chapter has played a pivotal role in improving the care of children with cancer and various hematological disorders in India over the past four decades. It has contributed significantly to the development of the subspecialty in India through capacity-building initiatives, national training programs, guideline development, academic teaching, and conferences. The chapter has also fostered global collaborations and multicentric research, resulting in evidence-based, context-specific improvements in clinical practice. Alongside its sister organization—the research foundation-Indian Pediatric Hematology Oncology Group (INPHOG)—the PHO chapter has elevated pediatric hematology oncology care in India to standards comparable with leading international centers.

**Keywords** Blood · Cancer · Children · Hemato-oncology

## Introduction

For over four decades, the Pediatric Hematology Oncology (PHO) chapter of the Indian Academy of Pediatrics (IAP) has evolved from a small collective of dedicated pioneers into a vibrant national force, shaping the course of pediatric hematology and oncology in India. Grounded in collaboration, education, and research, the chapter has consistently driven progress in the care of children with blood disorders and cancer. Today, it stands as a living testament to vision, perseverance, and the shared commitment of its members. What follows is the story of this extraordinary journey—marked by growth, innovation, and an enduring impact on child health.

## The Past

In the early 1980s, dedicated hematology oncology services for children were virtually non-existent in India, and children with cancer were largely treated by adult oncologists. In this context, a group of visionary pediatricians established the PHO chapter of the IAP in 1987 during IAP's Silver Jubilee at the XXIV National Conference in Madras (now Chennai). Formally launched on October 11, 1987, the chapter set out with a clear mandate: to promote education, encourage international collaboration, support India-relevant research, and strengthen clinical practice in pediatric hematology and oncology nationwide.

Visionaries such as Drs. MR Lokeshwar, Raj Warriar, and Purna Kurkure led this initiative, appointing Dr. T Dorairajan, a pioneering pediatric surgeon from Chennai, as the first Chairperson of the IAP-PHO chapter. As the founding Secretary, Dr. Lokeshwar provided decisive leadership and strategic direction, laying a strong and enduring foundation for the chapter. Dr. Warriar, drawing on his professional experience in both India and the USA, played a pivotal role in disseminating contemporary knowledge and practices across the country [1]. Pediatricians with a shared interest in oncology and hematologic disorders—including thalassemia, hemophilia, and nutritional anemias—rapidly joined

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the movement, transforming the fledgling chapter into a dynamic professional body.

### Foundations Strengthened: Leadership and Early Achievements

Over nearly four decades, successive Presidents and Secretaries have guided the chapter with sustained commitment, earning multiple “Best Chapter” awards from the IAP. This growth was the result of deliberate, collaborative planning and effective execution rather than happenstance.

Dr. Bharat Agarwal was instrumental in initiating early international engagement through a Memorandum of Understanding (MoU) with the International Society of Pediatric Oncology (SIOP) [2]. A major milestone occurred in 1992, when SIOP’s Pediatric Oncology in Developing Countries (PODC) committee sponsored 27 Indian pediatric oncologists to attend its annual congress in Hannover, Germany. Exposure to leading international groups—including the Children’s Cancer Group, National Wilms Tumor Study Group (NWTSG), Berlin-Frankfurt-Münster (BFM), and UK-ALL group—stimulated interest in collaborative research and demonstrated India’s potential for meaningful global contribution.

Prof. Sverre O. Lie, SIOP President (1997–1999), strongly supported the chapter’s efforts to develop resource-appropriate protocols and expand outreach, including joint initiatives such as the first SIOP Asia conference in Delhi. Dr. Agarwal’s subsequent election as SIOP Asia President (2002–2004) further strengthened India’s international standing. A landmark achievement was the hosting of the 39th SIOP International Congress in Mumbai in November 2007, which attracted over 1500 delegates and 300 multidisciplinary faculty members and significantly inspired young pediatricians to pursue pediatric hematology oncology.

### Training in Practical Pediatric Oncology and Hematology

The National Training Project in Practical Pediatric Oncology (NTP-PPO), launched in 1997 with support from SIOP, addressed a major gap in childhood cancer care by training peripheral pediatricians in core principles of pediatric oncology. Through an intensive two-day workshop comprising lectures, hands-on skill stations, interactive sessions, and a standardized manual, the program improved early referrals and introduced the concept of shared care. Since its inception in Mumbai in 1997, NTP-PPO has expanded nationwide, updated its manuals, extended to neighboring countries like Nepal (2004), and conducted over 150 workshops.

Building on this model, the National Training Project in Practical Pediatric Hematology (NTP-PPH) was initiated in 2006 to strengthen pediatric hematology care. These

regional workshops train 70–80 pediatricians per session using standardized, expert-developed materials, focusing on early diagnosis, management, and shared care. Together, these programs have woven a national network of specialists, given a boost to the synergy that elevates care across India.

### Conferences

The chapter’s flagship annual national conference, Pediatric Haematology Oncology Conference (PHOCON)—creates a dynamic space for collaboration and knowledge advancement. Since the first edition at Wadia Hospital, Mumbai, each subsequent event has raised the bar higher, featuring several international faculty, pre-conference workshops, and scientific presentations at par with global events. PHOCON consistently draws approximately 500 delegates, creating a vibrant hub for knowledge exchange. The last conference in 2025, held at Manipal, received 275 abstracts for oral and poster presentation; all the abstracts are published in a special edition of the chapter’s journal.

Initiated in 2014, the Midterm Continuing Medical Education (CME) program complements PHOCON, with its inaugural meeting held in Mumbai. Designed as a theme-based forum, each CME addresses one focused topic in pediatric oncology and one in pediatric hematology. To date, ten national-level Midterm CMEs have been conducted nationwide, with scientific content comparable to PHOCON, except for original research presentations, which remain exclusive to PHOCON.

Established in 2016 and modeled on the frameworks of SIOP and Childhood Cancer International, the Pediatric Hematology Oncology Social Support Services Conference (PHOSSCON) provides a platform for networking among parents, survivors, and social support organizations to promote the exchange of best practices in holistic care. To date, nine editions have been conducted alongside PHOCON. In recent years, the inclusion of hematology-focused non-governmental organizations has further strengthened collaboration between clinicians and civil society.

### Oration

Since its inauguration in 1996, when Dr. Raj Warriar delivered the first RV Lokeshwar Oration at the Annual Pediatric Conference of the IAP (PEDICON), the IAP–PHO chapter has annually honored a senior member for significant contributions to childhood cancer or hematological disorders, with the awardee delivering the oration at the PHOCON conference.



## Research Awards and Scholarships

The RK Marwaha Travel Scholarship, instituted by the PHO chapter in 2015, recognizes the presenter of the best oral paper at the annual SIOP meeting. The annual conference also honors lifetime achievements and emerging talent through best research awards and conducts a National Quiz to enhance clinical acumen among trainees nationwide. In addition, young faculty members and students are encouraged through Best Paper and Best Poster Awards across multiple categories, as well as quiz competitions.

## Chapter's Newsletter and the Pediatric Hematology Oncology Journal

The chapter's newsletter tradition, inspired by the Charaka Samhita aphorism "*Blood sustains life*," commenced with the inaugural issue edited by Dr. Lokeshwar in January 1988, shortly after the chapter's establishment. Subsequently rebranded as *PHO Review*, the newsletter achieved wide reach through generous sponsorship support, enabling free distribution to all approximately 10,000 members of the IAP. This initiative became a widely anticipated academic communication and contributed significantly to strengthening chapter membership. The newsletter was later renamed the *PHO Bulletin* and was revived in 2024 in its current form as *PHO Vibes*.

The *Pediatric Hematology Oncology Journal* (PHOJ), launched in 2016, serves as the chapter's flagship academic publication. Published quarterly and indexed on Elsevier's ScienceDirect, with a Scopus CiteScore of approximately 0.9–1.0, PHOJ prioritizes high-quality research from low- and middle-income countries, including India, while welcoming international submissions [3]. With a median submission-to-publication timeline of approximately 150 days, the journal publishes original research, reviews, and practice-oriented articles, provides free access to members, and continues to strengthen its standing as a key resource in pediatric hematology and oncology.

## Chapter Publications

In 2006, National Consultative Committees on pediatric blood disorders and childhood cancer were constituted under the leadership of IAP President Dr. Nitin Shah. These committees brought together subject experts for structured deliberations, culminating in the development of national guidelines for diagnosis and management. In addition, the chapter has authored six clinical guidelines in collaboration with the IAP, published in *Indian Pediatrics* [4–10].

## Website and Social Media

The chapter's website ([www.phoindia.org](http://www.phoindia.org)), launched in 2007, has significantly enhanced its global visibility by providing regularly updated information on activities, research, and academic events, thereby improving accessibility and facilitating international collaboration. In addition, the chapter maintains an active and widely followed presence on social media through its Twitter handle (@pho\_india), which is particularly popular among younger professionals.

## Training

Training in pediatric hematology oncology has been conducted at tertiary cancer centers, including Tata Memorial Hospital and Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, since the late 1980s. From 2007 onwards, the introduction of structured training programs significantly expanded national expertise, beginning with a two-year Fellowship of the National Board (FNB) in Pediatric Hematology Oncology and a one-year Indian Academy of Pediatrics (IAP) fellowship. This was followed by the initiation of three-year super-specialty programs, including Doctorate of Medicine (DM) in Pediatric Hematology Oncology at PGIMER Chandigarh and the DM in Pediatric Oncology at Tata Memorial Hospital. At present, more than 80 training seats in pediatric hematology oncology (DM, FNB, IAP-endowed fellowships) are available annually nationwide. The last decade has also seen a tremendous growth in stem cell transplant services across the country, with more than 40 centers doing pediatric transplants.

## InPOG/ INPHOG: Catalyzing Multicentric Research

Recognizing the need for multicentric collaboration to improve outcomes, the chapter established the Indian Pediatric Oncology Group (InPOG) in 2008, following its conceptualization at SIOP 2007 by Drs Purna Kurkure, Anupam Sachdeva and Bharat Agarwal. The initial focus was on building research infrastructure and collaborative frameworks. InPOG was revitalized in 2014, with the formation of disease-specific working groups and the expansion of subcommittees to cover all major disease areas. All IAP–PHO members were encouraged to participate based on their research interests.

Between 2015 and 2020, InPOG conducted 31 studies across 114 institutions, enrolling 10,017 children—69.3% in observational studies and 30.7% in interventional trials [11]. To further strengthen governance and facilitate funding for nationally relevant multicentric research, the Indian Pediatric Hematology Oncology Research Foundation (INPHOG) was incorporated as a Sect. 8 company in December 2021.



The group is managed by Dr Ramandeep Arora and three directors. Joint PHO–INPHOG oversight ensures alignment. To date, 22 national multicentric studies have been completed, with several others ongoing or in development, generating robust, India-relevant evidence [12].

### PHO Nursing Working Group

A nursing subgroup is taking shape, recognizing Indian nurses' global reputation as healthcare backbone. The chapter has identified nursing leaders, launched membership enrollment, and initiated regular online educational activities—aiming for their eventual self-reliance with PHO advisory support.

### Uniting for National Impact

The Indian Childhood Cancer Initiative (ICCI) stemmed from a June 24, 2019, stakeholder meeting in New Delhi, led by PHO-IAP members alongside InPHOG, CanKids, St. Jude Global, and SIOP experts. It aligned India's efforts with the WHO Global Initiative for Childhood Cancer (GICC), identifying priority areas that formed 11 taskforces: Workforce and Training, Access to Care,

Drugs/Diagnostics/Therapies, Research and Clinical Trials, Data and Registry, Supportive Care, Information and Awareness, Financing and Policy, Psychosocial Support, Survivorship and Reintegration, and Palliative Care [13].

ICCI functions as a national advocacy and coordination platform, bringing together the medical community, caregivers, non-governmental organizations, volunteers, and government agencies to inform policy and strengthen systems of care. Officially launched in March 2023, ICCI has formalized partnerships with central and state governments, professional bodies, civil society organizations, and international agencies. Its overarching objective is to advance a National Childhood Cancer Plan aligned with the WHO CUREALL strategy, aiming to achieve at least a 60% cure rate by 2030 while ensuring access to care for all children with cancer. Table 1 illustrates the various milestones in the growth of the IAP-PHO chapter.

**Table 1** Milestones of pediatric hematology oncology (PHO) chapter in India

Year	Milestone
1987	Launch of IAP-PHO chapter
1988	1st edition of IAP-PHO Newsletter
1994	Awarded the Best sub-chapter of IAP
1996	1st RV Lokeshwar oration at the 33rd PEDICON, Mangalore
1997	First PHOCON in Mumbai, and the first NTP-PPO, TOT and workshops held in Mumbai
2002	2nd SIOP Asia Conference held in New Delhi
2004	IAP-PHO chapter registered as an independent society
2006	Launch of NTP-PPH; National guideline formation on 7 PHO diseases
2007	Fellowships in PHO started (FNB by NBE and IAP fellowship courses); Launch of PHO website; 39th SIOP International Congress held in Mumbai
2008	Launch of PHO research body- InPOG
2009	Start of DM course in PHO
2014	1st Midterm CME held in Mumbai; Launch of the first multicentric trial on ALL (ICiCLE)
2016	Launch of Pediatric Hematology Oncology Journal (PHOJ); First PHOSSCON held in Mumbai
2021	InPOG registered as a separate Sect. 8 company; InPHOG research foundation, 13th SIOP Asia Congress, Virtual, Mumbai
2023	Launch of the Indian Childhood Cancer Initiative (ICCI)
2023–24	PHO Nursing Working Group formed
2024	Re-launch of the PHO Newsletter 2.0- PHO Vibes
2025	Awarded the Best Sub-chapter of IAP (This was the 16 <sup>th</sup> time PHO chapter has won this award)

All Acute lymphoblastic leukemia, DM Doctorate of Medicine, FNB Fellowship of National Board, IAP Indian Academy of Pediatrics, ICiCLE Indian Collaborative Childhood Leukemia Group, InPHOG Indian Pediatric Hematology Oncology Group, InPOG Indian Pediatric Oncology Group, NBE National Board of Examinations, NTP-PPH National Training Project-Practical Pediatric Hematology, NTP-PPO National Training Project-Practical Pediatric Oncology, PEDICON Pediatric Conference of IAP, PHO Pediatric Hematology Oncology, PHOCON Pediatric Hematology Oncology Conference, PHOSSCON Pediatric Hematology Oncology Support Services Conference, SIOP International Society of Pediatric Oncology, TOT Training of trainers



## The Present

### Digital Innovation and Democratic Governance

The chapter combines democratic governance with digital innovation, electing leaders via e-voting and reporting annually to the central IAP, with a current membership of ~1,350. Since 2020, online teaching programs and from 2024, the International Speaker Program have engaged trainees nationwide, supported by active social media, website updates, and fully digital NTP-PPO and NTP-PPH training modules. The chapter also supports fellowship programs, is transitioning the 2-year Fellowship of National Board (FNB) to a 3-year Doctorate of National Board (DrNB), and continues to strengthen the nursing working group. Recent initiatives include mapping oncology services with SIOP, early cancer diagnosis campaigns (\*12 Mahine, 12 Poster\*), a thalassemia awareness video, and advocacy with the Ministry of Health and Family Welfare, reflecting the chapter's commitment to education, outreach, and national impact.

## The Future

### Bold and Inclusive Growth

With 1,350 members, the PHO chapter plans to establish a permanent secretariat for seamless daily operations. Priorities include intensified advocacy and awareness campaigns; deeper collaborations with SIOP, St. Jude Global, the Thalassemia International Federation, Hemophilia societies, and others to extend their impact to India's grassroots; active roles in government policymaking—essential for scalable execution; and multistakeholder engagement to reach every child affected by the disorders we treat.

The chapter's remarkable growth has transformed care for children with hematological disorders and cancers across India. Stem cell transplant and cellular therapies are poised for greater growth in the coming years. We remain deeply grateful to our pioneers, and are also fueled by optimism for the road ahead. Despite these strides, challenges persist, including equitable access in remote areas, late diagnoses, drug availability and quality, resource gaps for rare disorders, and scaling research infrastructure amid rising caseloads.

Looking ahead, the chapter will advocate for pediatric cancer units in every medical college, push to designate

pediatric cancer as a notifiable disease to strengthen population-based registries, and map all pediatric oncology units and specialists to build a robust referral system.

Through InPHOG, the chapter aims to foster a research ecosystem that enrolls every child in locally relevant or multicentric studies, generating context-specific, cost-effective solutions with better outcomes for India and other low- and middle-income countries. The PHO chapter remains committed to ensuring equitable access to high-quality care for all children, by driving policy, innovation, and lasting improvements in pediatric hematology oncology nationwide.

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