

# Global Initiative for Childhood Cancer: progress and challenges in Panama

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## ABSTRACT

Despite being classified as a high-income country, Panama still faces challenges in providing care for children and adolescents with cancer. Annually, 170 new cases of childhood cancer are diagnosed in Panama, and the survival rate is around 60%. To improve this, the establishment of a Pediatric Cancer Commission comprised of healthcare professionals and nonprofit organizations has been a critical step toward the objectives outlined in the CureAll framework of the World Health Organization Global Initiative for Childhood Cancer (GICC).

To improve childhood cancer care in Panama, a workshop for cancer in children and adolescents was conducted with the support of St. Jude Children's Research Hospital, Children's Hospital Colorado, the Ministry of Health of Panama, and the Pan American Health Organization. The commissions established were on: Nursing, Palliative Care, Psychosocial, Hospital Registry, Early Diagnosis, and Health Services. Each commission has a specific project to be implemented in the period 2021–2029 to continue the progress toward improving childhood cancer care.

Since the start of implementation of the GICC in Panama, important achievements have included the launch in 2021 of the Guide for the Diagnosis of Cancer in Children and Adolescents, and training programs for primary care health personnel. Through these programs, more than 1 000 health professionals have been trained on diagnosis of cancer in childhood and adolescence. Challenges remain, such as access to quality care, and it is essential to continue efforts to improve childhood cancer care.

## Keywords

Neoplasms; child health; adolescent health; early detection of cancer; health programs and plans; Panama.

Cancer is a leading cause of death worldwide, and it is especially devastating for children and adolescents who are diagnosed with the disease. According to the World Health Organization (WHO), more than 400 000 children and adolescents are diagnosed with cancer each year, and many of them live in low- and middle-income countries where access to quality care is limited (1, 2). Lower survival rates in low- and middle-income countries are influenced by a complex interplay of factors such as inaccurate diagnosis, limited diagnostic capacity, treatment delays, and abandonment of treatment. To tackle these issues and achieve a global childhood cancer survival rate

of 60% by 2030, the WHO Global Initiative for Childhood Cancer (GICC) was launched in 2018, with the backing of St. Jude Children's Research Hospital (3, 4).

With a population of 4.4 million, Panama is classified by the World Bank as a high-income country, but it still faces challenges in providing adequate care for children and adolescents with cancer. In Panama, 170 new cases of childhood cancer are diagnosed annually, and the survival rate is around 60%. In recent years, efforts have been made to improve the situation for children with cancer in Panama. The establishment of a Pediatric Cancer Commission comprised of healthcare

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professionals and nonprofit organizations has been a critical step toward achieving this goal. This Commission has focused on four priority objectives, including timely diagnosis, a unified hospital registry, universal coverage laws, and treatment protocols. These efforts have led to the creation of several commissions that are working toward the objectives outlined in the *CureAll* framework of the GICC, a shared operational approach with the aim to achieve at least 60% survival of childhood cancer globally and reduce suffering for all. *CureAll* aims to achieve GICC's objective by elevating the importance of childhood cancer through awareness, fostering continuous investments, and enhancing capacity to mitigate cancer-related financial burdens. The framework consists of four pillars: (1) Centers of excellence; (2) Universal health coverage; (3) Regimens for diagnosis and treatment; and (4) Evaluation and monitoring. The three key enablers supporting systems access and care quality are: (1) Advocacy; (2) Leveraged financing; and (3) Linked governance.

This report examines the progress and challenges of childhood cancer care in Panama, including the efforts made by healthcare professionals, nonprofit organizations, and the government to improve the situation for children with cancer. By analyzing the current situation and identifying areas for improvement, we hope to contribute to the ongoing efforts to provide better care for children with cancer in Panama.

## MATERIALS AND METHODS

To improve childhood cancer care in Panama, a workshop on commissions for cancer in children and adolescents was conducted with the support of St. Jude Children's Research Hospital, Children's Hospital Colorado, the Ministry of Health of Panama, and the Pan American Health Organization (PAHO). The workshop aimed to create six commissions to make further progress around four objectives: guidelines for timely diagnosis of cancer; unified hospital registry; universal coverage law; and treatment protocols. The six commissions were on the domains of Nursing, Palliative Care, Psychosocial, Hospital Registry, Early Diagnosis, and Health Services. Each commission has a specific project that must be implemented during 2012–2029 to continue the progress toward improving childhood cancer care in Panama.

The Nursing Commission focused on improving nursing care for children and adolescents with cancer by creating a standardized nursing care plan for patients, providing training for nurses, and implementing evidence-based nursing interventions. The Palliative Care Commission aimed to improve the quality of life of children and adolescents with cancer by providing palliative care services, including pain management and emotional support. The Psychosocial Commission focused on the psychological and social aspects of childhood cancer care, providing support for children and their families, and addressing their emotional and social needs. The Hospital Registry Commission aimed to establish a unified hospital registry to ensure accurate data collection, analysis, and reporting of childhood cancer cases. The Early Diagnosis Commission aimed to increase awareness among the population and health professionals about the importance of early diagnosis of childhood cancer, providing training for health personnel, and promoting early detection strategies. The Health Services Commission aimed to improve the quality and accessibility of health services

for children and adolescents with cancer, including treatment protocols, guidelines for care, and increasing the number of trained healthcare professionals.

Overall, the workshop and creation of the six commissions were crucial steps toward improving childhood cancer care in Panama, aligned with the goals of the GICC and with the Cancer Centers of Excellence program promoted by WHO.

## RESULTS

In 2019, the GICC was launched in Panama to increase survival rates among children and adolescents with cancer. As a first step, a review of the national cancer plan was carried out, and a separate chapter on cancer in children and adolescents was created, highlighting the special characteristics of these types of cancers (5). This led to the formation of a Pediatric Cancer Commission consisting of hematologists, oncologists, nurses, palliative care professionals, radiologists, radiotherapists, psychologists, social workers, nutritionists, and other stakeholders.

Since the start of the implementation of the GICC in Panama, several important achievements have been made, including the launch in 2021 of the Guide for the Diagnosis of Cancer in Children and Adolescents, and training programs for primary care health personnel (4). Through these programs, more than 1 000 health professionals have been trained on diagnosis of cancer in childhood and adolescence. Our efforts have already borne fruit, such as in the case of Isabela, a child with Wilms tumor diagnosed in stage II; this is a rare occurrence in Panama, where late-stage diagnoses are much more common (Table 1). Through early detection and appropriate treatment, Isabela is now free of disease and undergoing follow-up.

In May 2022, the first training for primary care health personnel in the Panama metropolitan regions began in the auditorium of the Dr. José Renán Esquivel Children's Hospital in the capital city. A total of 1 051 health professionals have been trained, and this number continues to increase.

Education campaigns for the general population aim at raising awareness of alarm signs and the importance of early diagnosis of cancer in children and adolescents (6), and are centered around two key periods: International Childhood Cancer Day on 15 February, and Childhood Cancer Awareness Month, September. The efforts of the Pediatric Cancer Commission and the education campaigns have resulted in more cases being diagnosed in early stages.

## DISCUSSION

The results presented demonstrate that the GICC implemented in Panama has had a positive impact on childhood

**TABLE 1. Distribution by stage at diagnosis of patients with solid tumors at the Hospital del Niño Dr. José Renán Esquivel, Panama, 2020–2022**

Stage	2020	2021	2022
Stage I and II	4 (10%)	6 (19%)	12 (41%)
Stage III and IV	33 (89%)	26 (81%)	17 (59%)
Total	37	32	29

Source: Prepared by the authors using data from the Panama National Cancer Registry Database.

cancer diagnosis and treatment. The creation of a Pediatric Cancer Commission, consisting of various healthcare professionals and working toward four priority objectives, has enabled the development of a comprehensive approach to addressing childhood cancer in Panama. The review of the national cancer plan and the creation of a separate chapter on cancers in childhood and adolescence have also highlighted the importance of addressing the unique characteristics of these types of cancer.

Through the GICC, important achievements have been made, such as public health policies, guidelines, and training programs (especially for primary care health personnel) aligned to subregional strategies in Central America (7). The training programs for primary care health personnel and the education campaigns aimed at raising awareness of alarm signs and the importance of early diagnosis will result in more cases being diagnosed in the early stages.

While these achievements are commendable, there is still work to be done to reach the goal of doubling childhood cancer survival rates to 60% globally by 2030. The GICC has demonstrated that a comprehensive approach involving various stakeholders can yield positive results. Continued efforts to

improve diagnostic capacity, treatment, and education will be necessary to ensure that all children with cancer receive timely and appropriate care. By continuing to educate the population, healthcare personnel, and government officials on the importance of early detection and treatment, we are hopeful that we can achieve our common goal of increasing the percentage of children who achieve a cure. Early diagnosis and access to treatment are crucial for increasing survival rates among children and adolescents with cancer in Panama.

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**Disclaimer.** Authors hold sole responsibility for the views expressed in the manuscript, which may not necessarily reflect the opinion or policy of the *RPSP/PAJPH* and/or the Pan American Health Organization (PAHO).

## REFERENCES

1. Mechita NB, Cherkaoui S, Abousselham L, Benmiloud S, Kili A, Kababri ME, et al. Implementing the WHO Global Initiative for Childhood Cancer in Morocco: Survival study for the six indexed childhood cancers. *Pediatr Blood Cancer*. 2022;69(10):e29788. <https://doi.org/10.1002/pbc.29788>.
2. World Health Organization. CureAll framework: WHO Global Initiative for Childhood Cancer: increasing access, advancing quality, saving lives. Geneva: WHO; 2021. Available from: <https://apps.who.int/iris/handle/10665/347370>.
3. Gupta S, Howard SC, Hunger SP, Antillon FG, Metzger ML, Israels T, et al. Treating Childhood Cancer in Low- and Middle-Income Countries. In: Gelband H, Jha P, Sankaranarayanan R, Horton S, editors. *Cancer: Disease Control Priorities*. 3rd edition (Volume 3). Washington, DC: The World Bank; 2015 Nov 1. Chapter 7. PMID: 26913338.
4. Pan American Health Organization. Implementación de la Iniciativa Mundial de la OMS contra el Cáncer Infantil en América Latina y el Caribe. Washington, DC: PAHO; 2021. Available from: <https://iris.paho.org/handle/10665.2/53921>.
5. Ministerio de Salud Panamá. Plan estratégico para la prevención y control del cáncer 2019–2029. Panama: Ministerio de Salud; 2019?. Available from: <https://www.ion.gob.pa/plan-estrategico-nacional-para-la-prevencion-y-control-del-cancer-2019-2029/>.
6. Ministerio de Salud Panamá, Comisión de Cáncer en Niños y Adolescentes. Guía para la detección temprana y atención oportuna de la sospecha de cáncer en niño y adolescentes. Panama: Ministerio de Salud; 2021. Available from: <https://www.paho.org/es/documentos/guia-para-deteccion-temprana-atencion-oportuna-sospecha-cancer-ninos-adolescentes-2021>.
7. Pan American Health Organization. Pediatric Cancer Initiative in Central America. Washington, DC: PAHO; c2023 [cited 2023 Feb 23]. Available from: <https://www.paho.org/en/topics/cancer/pediatric-cancer-initiative-central-america>.

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## Iniciativa Mundial contra el Cáncer Infantil: avances y desafíos en Panamá

### RESUMEN

Pese a estar clasificado como un país de ingresos altos, Panamá aún debe hacer frente a distintos desafíos relacionados con la atención a la población infantil y adolescente con cáncer. Cada año, en Panamá se diagnostican 170 casos nuevos de cáncer pediátrico, con una tasa de supervivencia en torno al 60%. Para mejorar esta situación, la creación de una Comisión de Cáncer Pediátrico, conformada por profesionales de la salud y organizaciones sin fines de lucro, constituye un paso fundamental para lograr los objetivos planteados en el marco *CureAll* de la Iniciativa Mundial contra el Cáncer Infantil (GICC, por su sigla en inglés) de la Organización Mundial de la Salud.

A fin de mejorar la atención de los pacientes pediátricos con cáncer en Panamá, se realizó un taller sobre el cáncer en la población infantil y adolescente. El evento contó con el apoyo del St. Jude Children's Research Hospital, el Children's Hospital Colorado, el Ministerio de Salud de Panamá y la Organización Panamericana de la Salud. Se crearon comisiones sobre enfermería, cuidados paliativos, aspectos psicosociales, registros hospitalarios, diagnóstico temprano y servicios de salud. Cada comisión está a cargo de un proyecto específico, que deberá ponerse en práctica en el período 2021-2029 para proseguir con los avances encaminados a mejorar la atención oncológica pediátrica.

Desde que se inició el proceso de aplicación de la Iniciativa Mundial contra el Cáncer Infantil en Panamá se han obtenido logros importantes, como la publicación de la *Guía para la detección temprana y atención oportuna de la sospecha del cáncer en niños y adolescentes 2021* y los programas de capacitación para el personal de atención primaria de salud. Estos programas han permitido capacitar a más de 1 000 profesionales de la salud en materia de diagnóstico del cáncer en la niñez y la adolescencia. Subsisten algunos desafíos, como el acceso a una atención de calidad, y es crucial proseguir con las medidas tendientes a mejorar la atención oncológica de los pacientes pediátricos.

### Palabras clave

Neoplasias; salud infantil; salud del adolescente; detección precoz del cáncer; planes y programas de salud; Panamá.

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## Iniciativa Global para o Câncer Infantil: avanços e desafios no Panamá

### RESUMO

Apesar de ser classificado como um país de alta renda, o Panamá enfrenta desafios para oferecer atendimento a crianças e adolescentes com câncer. Anualmente, são diagnosticados 170 casos novos de câncer infantil no Panamá, e a taxa de sobrevivência gira em torno de 60%. Para melhorar essa situação, a criação de uma Comissão de Câncer Pediátrico, composta por profissionais de saúde e organizações sem fins lucrativos, foi uma etapa fundamental para atingir os objetivos delineados na estratégia *CureAll* da Iniciativa Global para o Câncer Infantil (GICC) da Organização Mundial da Saúde.

Para melhorar o atendimento aos pacientes com câncer infantil no Panamá, realizou-se uma oficina sobre câncer em crianças e adolescentes, com o apoio do St. Jude Children's Research Hospital, do Children's Hospital Colorado, do Ministério da Saúde do Panamá e da Organização Pan-Americana da Saúde. As comissões estabelecidas foram as seguintes: Enfermagem, Cuidados Paliativos, Aspectos Psicossociais, Registro Hospitalar, Diagnóstico Precoce e Serviços de Saúde. Cada comissão tem um projeto específico a ser implementado no período de 2021 a 2029 a fim de continuar avançando na melhoria do atendimento a pacientes com câncer infantil.

As realizações mais importantes alcançadas desde o início da implementação da GICC no Panamá incluem o lançamento do Guia para o Diagnóstico de Câncer em Crianças e Adolescentes em 2021 e os programas de capacitação para profissionais de saúde da atenção primária. Por meio desses programas, mais de mil profissionais de saúde receberam capacitação no diagnóstico de câncer na infância e adolescência. Ainda existem desafios, como o acesso a atendimento de qualidade; portanto, é essencial continuar os esforços para melhorar o atendimento de pacientes com câncer infantil.

### Palavras-chave

Neoplasias; saúde da criança; saúde do adolescente; detecção precoce de câncer; planos e programas de saúde; Panamá.

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