

# Subregional efforts to improve childhood cancer care in the Andean countries

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## ABSTRACT

Cancer is one of the leading causes of death in children and adolescents younger than 19 years. An estimated 10 000 deaths are caused by this disease annually in this age group in Latin America and the Caribbean. In high-income countries, the survival of children and adolescents with neoplasms can reach 85%; however, in middle- and low-income countries, despite progress, survival rates are significantly lower (between 10% and 60%). Important inequities exist in survival from childhood cancer that need to be addressed through decisive actions from the health systems. This report describes the work of the ministries of health and the Secretariat of the Andean Health Organization (Organismo Andino de Salud – Convenio Hipólito Unánue (ORAS-CONHU)), to develop the Andean Cancer Prevention and Control Policy, with consideration given to childhood cancers. The policy was based on analysis of the cancer situation in the six Andean countries – Bolivia (Plurinational State of), Colombia, Chile, Ecuador, Peru and Venezuela (Bolivarian Republic of) – between 2015 and 2020, and it was approved in 2022. An in-depth study is currently being carried out on the situation of childhood cancer in the Andean countries.

## Keywords

Neoplasms; child health; adolescent health; policy; South America.

Childhood cancer is one of the leading causes of death in childhood. Every year, more than 29 000 cases of cancer are diagnosed in children younger than 19 years in Latin America and the Caribbean with an estimated 10 000 deaths (1). In high-income countries, the survival rate of children with neoplasms can reach 85%. However, in middle- and low-income countries, despite progress, survival rates are considerably lower, ranging from 10% to 60% (1). In countries of the Andean subregion – Bolivia (Plurinational State of), Chile, Colombia, Ecuador, Peru, and Venezuela (Bolivarian Republic of) – the standardized incidence rate of cancer in this age group is similar to that of other Latin American countries (13.9 new cases per 100 000), but the mortality rate for pediatric cancer (5.3 deaths per 100 000) is substantially higher than the overall regional average for the Americas (4.0 deaths per 100 000) (2).

The Organismo Andino de Salud – Convenio Hipólito Unánue (ORAS-CONHU) is a subregional organization focused on advancing health care in the Andean countries (3). Founded in 1971, ORAS-CONHU has six member countries. This organization has a clear mission to enhance health systems, promote collaboration among member countries, and improve health outcomes for the populations within the Andean subregion. By using the collective knowledge and resources of its member countries, ORAS-CONHU aims to address key health challenges and foster a collaborative environment for health research and policy development. Given the importance of addressing childhood cancer in the Andean subregion, ORAS-CONHU approved the Andean Cancer Prevention and Control Policy (4). This policy was developed jointly with the Pan American Health Organization (PAHO) which is supporting

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governments in the implementation of the World Health Organization (WHO) Global Initiative of Childhood Cancer using the CureAll framework (Centers of Excellence, Universal Health Coverage, Regimens of treatments, Evaluation, Advocacy, Leveraged financing, and Linked policies and governance) (1).

This report describes the work of the ministries of health of the six Andean countries in conjunction with ORAS-CONHU to formulate the Andean Cancer Prevention and Control Policy, which is aligned with the WHO Global Initiative of Childhood Cancer.

## ACTIVITIES

ORAS-CONHU and PAHO undertook a series of activities to advocate for improved cancer prevention and control policies in the Andean region, with a focus on childhood cancer. These included the following activities.

- Establishing a cooperation mechanism. ORAS-CONHU prioritized cooperation mechanisms in collaboration with PAHO and the WHO Subregional Program for South America to promote the development of subregional strategies to improve early detection and good-quality treatment of childhood cancer.
- Aligning with global and regional initiatives. ORAS-CONHU aligned its work on cancer prevention and control with other global and regional initiatives, such as the WHO Global Initiative of Childhood Cancer, through the CureAll Americas framework (1).
- Establishing a situational diagnosis of childhood cancer in the Andean countries, and promoting the creation of a subregional working group to develop and validate an Andean childhood cancer action plan.

## OUTCOMES

To improve early detection and quality of treatment of childhood cancer, prioritizing cooperation mechanisms that promote the development of subregional systems and methodologies, ORAS-CONHU drafted resolution 553 for the six Andean countries. This resolution was passed at the meeting of Andean health ministers held in Lima on November 25, 2022 (4). The resolution approved the Andean Policy on Cancer Prevention and Control, which established agreed strategic guidelines on cancer, including aspects of childhood cancer in the Andean subregion. The resolution also approved the creation of the Andean Committee on Cancer Prevention and Control for the development, implementation, and monitoring of the 2023–2030 action plan for improving cancer care in the Andean subregion. This committee, made up of the cancer focal points of the six Andean countries, is actively working (4).

The Andean Policy on Cancer Prevention and Control incorporates the agreements in the Political declaration of the third high-level meeting of the General Assembly of the United Nations (5), on the prevention and control of non-communicable diseases, which promotes internationally agreed development goals, advocacy, capacity-building, research and adoption of good practices, multisectoral work, appropriate surveillance, reduction of risk factors, and strengthening of health protection actions related to healthy eating and physical activity. The policy also aligns with other global and regional

initiatives to improve the diagnosis and treatment of pediatric cancer in Central and South America, such as the Global Initiative of Childhood Cancer and the CureAll framework (1).

After the approval of the Andean Policy on Cancer Prevention and Control, a subregional technical coordination committee was established with participation of the six Andean countries. This committee is composed of the executive directors of the cancer departments of the ministries of health and seeks to inform and promote prioritization of the cancer policy. Similarly, and in accordance with the Global Initiative of Childhood Cancer, priority has been given by the coordination committee to the treatment of acute lymphoblastic leukemia, Hodgkin lymphoma, retinoblastoma, Wilms tumor, Burkitt lymphoma, and low-grade glioma, which were identified as the childhood cancers being diagnosed in the Andean countries (1). This information will allow the preparation of the Andean plan for the prevention and control of childhood cancer 2023–2030 (6).

## Online cancer webinars

Since May 2020, the ORAS-CONHU Secretariat has been providing information on health topics through webinars directed at health workers of the ministries of health of the Andean countries, as well as at the general public. In the webinars, experts and officials from the Andean region, the Americas, and other areas have presented relevant health topics, including the most prevalent cancers and childhood cancers.

## DISCUSSION

Childhood and adolescent cancers in the Andean subregion are a public health problem, as they are the leading cause of death from noncommunicable diseases in children and young people between the ages of 5 and 18 years, causing more than 2 800 deaths each year (Table 1 and Table 2). As with many other health problems in the region, social inequalities have a negative impact on the prognosis of cancer patients, with children and adolescents in low- and middle-income countries being four times less likely to be cured than those in high-income countries. The causes of these negative scenarios are: incorrect

**TABLE 1. Most important malignant neoplasms in children and young people aged 0–19 years in the Andean subregion, 2020**

Rank	Location of the neoplasm	Cases, no.	Crude rate, cases per 100 000	Adjusted rate, cases per 100 000
	Total cases	7 152	13.7	13.9
1	Blood (leukemia)	2 618	5.0	5.2
2	Central nervous system	787	1.5	1.5
3	Testicles	363	1.4	1.3
4	Lymphatic system (non-Hodgkin lymphoma)	518	0.99	0.98
5	Lymphatic system (Hodgkin lymphoma)	375	0.67	0.01
6	Kidneys	339	0.65	0.73
7	Liver	134	0.26	0.28
8	Thyroid	258	0.49	0.45
9	Ovaries	114	0.44	0.41

Source: Sung H, et al. 2022 (2), adapted by ORAS-CONHU.

or late diagnosis; lack of access to health services or difficulties in accessing health care; abandonment of treatment; death due to toxicity; higher relapse rates; lack of access to drugs for cancer treatment; and low adherence to treatment, among others. A WHO survey to measure access to cancer treatment showed that only 29% of low-income countries had systems for accessing cancer drugs for their population, compared with 96% of high-income countries (7).

Current subregional efforts on childhood cancer include an emphasis on South–South cooperation. In the Andean subregion, countries have different capacities to respond to childhood and adolescent cancer. For example, Chile has a history of strategic planning in cancer, including for pediatric cancer, through the National Pediatric Antineoplastic Drug Program. This program began in 1988 to help improve the cure rate in children with cancer. The program has achieved a survival rate of 75.5% at 5 years, which is comparable to that of high-income countries, thanks to public policies developed and integrated by civil society, clinical teams, and different governmental agencies. It is also noteworthy that since 2005, cancer in children younger than 15 years has been included in the list of explicit health guarantees, which provides guarantees of access to, opportunity for, and quality of care as well as financial protection. Likewise, the Chilean pediatric cancer care network model and referral system is a worldwide reference. Currently, priority is given to the development of a national plan for childhood and adolescent cancer, aligned with the Global Initiative on Childhood Cancer, which aims to reduce mortality and improve survival within the framework of health equity for the different areas and regions of the country. Colombia also has a reference model to improve access to diagnosis and treatment of childhood cancer. In 2014, the first care route was adopted in the Colombian health system, which defines the key interventions for the comprehensive care of children and adolescents with suspected or diagnosed pediatric acute leukemias. An evaluation of the leukemia care route in 2016 found that it helped improve processes within institutions (with a decrease in diagnosis times), reflecting enhanced administrative processes for the authorization of treatments for children

and adolescents with leukemias. In this way, the lessons learnt about the access barriers that limit compliance with the Colombian care routes can be a valuable resource in the exchange of experiences among neighboring countries. South–South cooperation efforts are currently being planned across the six Andean countries for an early diagnosis of childhood cancer project, promoted by ORAS-CONHU and PAHO (8).

In addition, the coronavirus disease 2019 (COVID-19) pandemic has had a substantial impact on pediatric cancer. According to a survey of pediatric oncologists from 20 countries in the Americas, led by the Latin American Society of Pediatric Oncology and PAHO, in the early stages of the pandemic, COVID-19-related disruptions in pediatric oncology services were observed due to multiple causes, which led to further delays in diagnosis (9). According to the latest publication by PAHO and the Latin American Society of Pediatric Oncology with data from 2020 and 2021, more than 80% of pediatric oncology services have been restored in most countries in the region. In addition, the use of telemedicine was vital to mitigate the impact of the pandemic (9).

At the beginning of the COVID-19 pandemic, evidence provided by scientific studies showed a higher risk of death in immunocompromised persons, but no recent data were available on the impact of COVID-19 in the cancer population at risk. Therefore, ORAS-CONHU, in coordination with the ministries of health, conducted an evaluation of the morbidity and mortality caused by the different types of cancer prevalent in the Andean countries during 2015–2020 (10), as well as the capacity of health care institutions to respond to the cancer problem. To this end, the Andean ministries of health appointed a working group that, with the support of a consultant, compiled and analyzed the morbidity and mortality data. This information was used for the development of the Andean Cancer Policy, which addresses childhood cancer through the model of comprehensive care through the life course.

In conclusion, among the most important tasks of ORAS-CONHU is the development of Andean policies, and childhood cancer is one of the priority issues in the Andean subregion. To this end, ORAS-CONHU works in close cooperation with the ministries of health of the six Andean countries and PAHO, both headquarters and the subregional program for South America. The progress in diagnosing and managing cancer in the Andean countries enriches the exchange of experiences. These exchanges help formulate regional policies and strengthen collaborative strategies to improve the health status of the populations of the Andean countries by prioritizing common objectives, as in the case of the Andean Policy on Cancer Prevention and Control.

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**TABLE 2. Mortality due to the most important neoplasms in children and young people aged 0–19 years in the Andean sub-region, 2020**

Rank	Type of neoplasm	Deaths, no.	Crude rate, deaths per 100 000	Adjusted rate, deaths per 100 000
	Total cases	2 786	5.3	5.3
1	Leukemia	1 260	2.4	2.4
2	Brain and CNS	411	0.79	0.8
3	Non-Hodgkin lymphoma	180	0.34	0.34
4	Kidney tumors	76	0.15	0.16
5	Liver tumors	73	0.14	0.15
6	Hodgkin lymphoma	50	0.1	0.09
7	Lung tumors	42	0.08	0.08
8	Testicular tumors	39	0.15	0.14
9	Ovarian tumors	29	0.11	0.1
10	Colorectal tumors	23	0.04	0.04

Source: Sung H, et al. 2022 (2), adapted by ORAS-CONHU.

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## Iniciativas subregionales para mejorar la atención oncológica prestada a los pacientes pediátricos en los países andinos

### RESUMEN

El cáncer es una de las principales causas de muerte en la población infantil y adolescente menor de 19 años. Se estima que esta enfermedad ocasiona cada año 10 000 muertes en este grupo etario en América Latina y el Caribe. En los países de ingresos altos, la supervivencia de la población infantil y adolescente con neoplasias puede llegar al 85%; sin embargo, a pesar de los avances, en los países de ingresos bajos y medianos las tasas de supervivencia son significativamente más bajas (entre un 10% y un 60%). Existen desigualdades importantes en materia de supervivencia al cáncer infantil que es preciso abordar mediante medidas decisivas por parte de los sistemas de salud. En este informe se describe el trabajo realizado por los ministerios de salud y la Secretaría del Organismo Andino de Salud – Convenio Hipólito Unánue (ORAS-CONHU) para formular la Política Andina de Prevención y Control del Cáncer, con especial énfasis en el cáncer infantil. La política se basó en el análisis de la situación en materia oncológica de los seis países andinos –Bolivia (Estado Plurinacional de), Chile, Colombia, Ecuador, Perú y Venezuela (República Bolivariana de)– entre el 2015 y el 2020, y se aprobó en el 2022. En estos momentos, se está llevando a cabo un estudio pormenorizado sobre la situación del cáncer infantil en los países andinos.

### Palabras clave

Neoplasias; salud Infantil; salud del adolescente; políticas; América del Sur.

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## Iniciativas sub-regionais para melhorar o tratamento do câncer infantil nos países andinos

### RESUMO

O câncer é uma das principais causas de morte em crianças e adolescentes menores de 19 anos. Estima-se que, nessa faixa etária, a doença cause 10 mil mortes por ano na América Latina e no Caribe. Em países de renda alta, a sobrevivência de crianças e adolescentes com neoplasias pode chegar a 85%; no entanto, em países de renda média e baixa, apesar de alguns avanços, as taxas de sobrevivência são significativamente menores (entre 10% e 60%). Existem iniquidades importantes na sobrevivência ao câncer infantil que precisam ser abordadas por meio de ações decisivas dos sistemas de saúde. Este relatório descreve o trabalho dos ministérios da saúde e da Secretaria do Organismo Andino de Saúde – Convênio Hipólito Unanue (ORAS-CONHU) para desenvolver a Política Andina de Prevenção e Controle do Câncer, com atenção para os cânceres infantis. A política, baseada em uma análise da situação do câncer nos seis países andinos – Bolívia (Estado Plurinacional da), Colômbia, Chile, Equador, Peru e Venezuela (República Bolivariana da) – entre 2015 e 2020, foi aprovada em 2022. Um estudo aprofundado está sendo realizado atualmente para avaliar a situação do câncer infantil nos países andinos.

**Palavras-chave** Neoplasias; saúde da criança; saúde do adolescente; políticas; América do Sul.

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