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## COMMENTARY

# Achievements and pitfalls in improving Pediatric Oncology Nursing standards: A public-private partnership project

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## ABSTRACT

**Rationale:** Approximately 8,000 new cases of pediatric cancer arise annually in Pakistan. However, there is a dire survival rate of 30–35% due to various factors, especially a lack of competent nurses in pediatric oncology care. Public-private partnerships (PPP) supported by a My Child Matters (MCM) Grant from Sanofi Espoir Foundation was granted to Indus Hospital & Health Network (IH&HN) to improve pediatric nursing standards.

**Methods:** Starting in 2016, nurses from hospitals across Pakistan were enrolled in a continuing education program, which included a comprehensive, hands-on training component. A group chat was created following the training for communication and mentorship regarding challenges faced locally.

**Results:** Seventy-seven pediatric oncology nurses were successfully trained by IH&HN over three years.

**Discussion:** Challenges included lack of government funding, shortage of specialist nurses, frequent shifting of nurses away from pediatric care, and indifferent attitudes. Success of the project could have been maximized if trained nurses were motivated and retained by hospitals.

**Conclusion:** Development and maintenance of PPP in national healthcare systems is essential to improve pediatric oncology nursing care.

**Key words:** Public Private Partnership, pediatric cancer, pediatric oncology nurses, nursing care

## INTRODUCTION

The concept of cooperation between public and private healthcare facilities is not a new one in our country. It was originally instituted in Pakistan in the national health policy in 1960 and has involved various private entities and non-governmental organizations (NGOs) throughout the years. It has also been used successfully to achieve several outcomes such as the development of national programs for the control of endemic diseases (i.e., malaria, tuberculosis [TB], HIV) and delivery of primary healthcare services at Basic Health Units in urban, rural and slum communities (Ahmed & Nisar, 2010).

Approximately 200,000 children and adolescents are annually diagnosed with cancer worldwide; 90% of the annual mortality takes place in low and middle-income countries (LMIC's). However, authentic population level data regarding LMICs is severely lacking, with a consequent gap in knowledge of local pediatric cancer epidemiology (Rodriguez-Galindo et al., 2013).

In Pakistan, most of the available information on pediatric cancer comes from hospital-based data, which estimate the occurrence of approximately 8,000 new cases each year (The Newspaper's Staff Reporter, 2019). Most of these children face multiple barriers such as financial constraints, late presentation due to lack of awareness, a dearth of oncology expertise, and lack of access to quality care (The Newspaper's Staff Reporter, 2016). This dismal situation is reflected in the national childhood cancer survival rate of 20–25% compared to rates between 85–98% in high-income countries (HICs) where there is adequate infrastructure, up-to-date resources and national-level programs (The Newspaper's Staff Reporter, 2019; Day et al., 2020).

Pediatric oncology research and development thus becomes an essential field for focused efforts for reducing childhood mortality in Pakistan, in line with the Millennium Development Goals set in September 2000. The Indus Hospital & Healthcare Network (IH&HN), a network of free-of-cost tertiary care hospitals in Pakistan, took the initiative of developing private-public partnerships with government hospitals willing to develop pediatric oncology care in areas lacking specialized care. Along with initiation of pediatric oncology services, a series of regular multidisciplinary trainings and collaborative activities were started to improve quality of care in existing pediatric oncology units across Pakistan. Due to the lack of nurses specialized in pediatric oncology nursing, as well as the essential role of nursing in improving outcomes, particular attention was given to oncology nursing standards and consequent trainings (The Newspaper's Staff Reporter, 2016). These public-private

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partnerships began in 2016 with the help of a My Child Matters Grant awarded by the Sanofi Espoir Foundation, focused on education, training and capacity building for childhood cancer.

## METHODS

Six pediatric oncology units (POUs) belonging to large public hospitals or institutes lacking oncology care in Sindh and Punjab were approached by IH&HN. Institutes were chosen in areas lacking pediatric oncology services, and an agreement pertaining to nursing mentorship, trainings, on-site visits, and long-term resource improvements was offered. Following the agreement, a bond was signed to solidify an official partnership between the institutes.

As a first step, a baseline assessment of nursing standards was conducted in each institute regarding patient-nurse ratio, rotation schedules, resources available and hygiene standards by using an established assessment tool (Day et al., 2020). Secondly, a two-week in-person course on pediatric cancer nursing was designed by IH&HN faculty with special focus on childhood cancer quality indicators. Sponsorship was offered through the grant to cover expenses of partnered institutes and serve as incentive to nurses to attend the training course. A group chat was also created for course participants using a popularly used smartphone application for enhanced communication and consistent mentorship for the challenges faced locally. Enrollment in a one-week on-site, hands-on, training was offered and conducted at IH&HN immediately following the two-week course. It was completed based on participant willingness and availability.

## RESULTS

A total of 77 participants from My Child Matters (MCM) partner organizations were trained by IH&HN from the period of June 2016 to December 2019, with the one-week on-site hands-on opportunity provided to 10 nurses. Trained nurses were motivated to improve the quality of their practices particularly in regard to infection control. Detailed feedback was collected from participants after the course through

paper forms. Most of the recorded feedback regarding their learning experiences was noted to be positive and is illustrated below in several quotes:

- “This course is excellent & I have gained knowledge. I have learned more and more about nursing profession and nursing care.”
- “I want to give the same lectures to the nurses in Iraq and doing something to change the level of nurse’s knowledge and practice.”
- “It was an incredibly good session for my knowledge about cancer and could enhance my practice.”
- “Overall course is highly effective. The teaching methodology is excellent and full of knowledge.”

Communication was consistently maintained after participants returned following the training, with mentor support available regarding chemotherapy preparation, management of treatment complications, effective counselling, and education of parents to increase patient retention rates. Unfortunately, many of the trained nurses were transferred from pediatric oncology units to other departments due to administrative changes over the next two years and did not continue correspondence.

Only a couple of registrations were gained by previous participants for further trainings causing the program to start anew and enroll fresh nurses for repeat training modules in the following years. Unresponsiveness and lack of improvement in nursing standards at successive facility evaluations were linked to a deficiency of motivation and active effort in applying learned knowledge practically by trained individuals. The nursing staff at these public hospitals also face financial and scheduling issues from their home institutes, further impeding long-term improvements.

Although private interventions in public organizations have been noted to produce tangible effects due to their support in meeting rising healthcare expenses (Fanelli et al., 2020), the lack of governance, accountability and effective policy can lead to major challenges in the success of a public-private partnership (Newell et al., 2005). Multiple challenges have previously been in the

process of establishing and maintaining public-private partnerships in pediatric oncology, with the degree of complexity varying according to local context (Ahmed, & Nisar, 2010).

The primary challenge noted during these programs was lack of prioritization of specialist training and poor funding for this purpose across existing institutions. The My Child Matters Grant dispensed to IH&HN bore responsibility for the entirety of the specialist training of multiple institutions, limiting the outreach potential of this project along with the rate of progress of those centres. A lack of acceptance was also noted in most government hospitals regarding their need to improve and adopt changes in functionality, a factor leading to slow progress in raising the standard of the POU overall, despite advancement in training and practice of individual nurses.

Another threat to childhood cancer care in the public sector is the shortage of trained and reliable nursing staff present in wards at public hospitals on a daily basis. The nurse-to-patient ratio, as advised by the instrument designed to assess baseline nursing standard, of 1:5, was not fulfilled in any public hospital unit (Day et al., 2020). The solution to this issue falls exclusively within the control of public health policy makers and administrative authorities that could not be tackled through partnership and collaboration under the grant.

Along with an existing shortage, the frequent rotation, departure, and replacement of trained specialist nurses from their home institutes and departments creates repetitive gaps in continuity of care. This particular challenge also negatively impacts the assessment of long-term effect of trainings and collaboration. The shortage of trained and specialist nurses leads to hectic schedules and negatively affects the number of nursing staff available for training sessions, a challenge that the program is now attempting to tackle through its virtual learning model. This model includes provision of recorded sessions for review at the participant’s convenience before evaluation is done through online testing.

Due to the overall shortage of clinical pharmacists in public sector hospitals (Ahmed et al., 2018), particularly those assigned to chemotherapy preparation, nurses are often delegated the task of chemotherapy dilution and administration, as instructed by the consulting doctor and protocol sheet. Lack of resources, training, and experience can often result in unsafe techniques not fulfilling set international standards. The dilution of chemotherapy medications in insecure areas without use of personal protective equipment poses harm to the nurse, as well as personnel and patients present in surrounding areas. A well-known long-term effect of chemotherapy handling is the development of secondary cancers such as myelodysplastic syndrome, acute myelogenous leukemia (AML), acute lymphocytic leukemia (ALL) and chronic myeloid leukemia (CML) (Rheingold et al., 2003). The lack of regular

screening of these secondary cancers for nursing staff directly involved in manual dilution of these toxic agents reflects lack of ethical policies and attitudes on the part of hospital administration.

A consistent effort to increase public-private partnerships is the only viable solution to achieve standardized and widespread quality pediatric oncology nursing care. Continuous training of nursing workforce as part of a multi-disciplinary team is a crucial building block to bridge the survival gap between children with cancer in HICs and LMICs. Despite multiple challenges and setbacks, investment in public-private partnerships is key to achieving the WHO global initiative to fight childhood cancer, while also consistently providing evidence to public stakeholders and decision makers on the best strategies to improve outcomes and outreach for the general population.

## CONCLUSION

Long-term goals for pediatric oncology should be aimed at providing constructive role modelling to nurses along with active pursuit of legislative and policy changes to improve nursing standards of childhood cancer wards in public hospitals. This should also include implementation of mandatory training programs, continuing nursing education and timely evaluations within the home institute.

## FUNDING DETAILS

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## CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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