

# **SIOP PODC Supportive Care Education**

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Recording Link at [www.cure4kids.org](http://www.cure4kids.org):

[https://www.cure4kids.org/ums/home/conference\\_rooms/enter.php?room=p808p6cvel7](https://www.cure4kids.org/ums/home/conference_rooms/enter.php?room=p808p6cvel7)

## **Pediatric Oncology Nursing Education In Low Middle Income Countries**

Joint Meeting of SIOP PODC Supportive Care  
and Nursing Working Groups

# **Nursing Education Perspectives in Pakistan**

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Karach,Pakistan

# Pakistan



- ◉ Low to middle income developing country with annual per capita income US\$1085
- ◉ World 6<sup>th</sup> most populous country with estimated population of 180 millions 35.4% under 14
- ◉ Less than 2% of the gross national product is allocated to health
- ◉ Poor economic growth due to political instability and terrorism

# Human resource for health in Pakistan:

Professionals	statistics
Nurses (Registered)	47,200
Paramedics	23,559
Lady Health Workers	4752
Midwives	3162
<b>Total</b>	<b>78,673</b>

# Human resource for health in Pakistan

- The existing nurse-patient ratio appro **1:50**  
([jpmsonline.com/2013/08/23/nursing-shortage-in-pakistan-human-resource-management-in-health-systems](http://jpmsonline.com/2013/08/23/nursing-shortage-in-pakistan-human-resource-management-in-health-systems)).
- A government notification hints that Pakistan lacks **60,000** nurses.
- Nursing professionals to population ratio of  
1: 3568 for Nurses .  
1: 54,276 for LHVs. (PNC estimates the 2008)

# Nursing Education:

<b>School of Nursing</b>	<b>162</b>
Degree College	05
Masters Program	01
Post basic specialized diploma institute	10
Oncology diploma course SKMH	01
Pediatric oncology Technician program	01

# Childhood Cancer in Pakistan

- There is no national cancer registry
- Based on Karachi Cancer Registry it is estimated that about 8000 children (younger than 18 y) get cancer every year in Pakistan.
- Most children present in the advanced stage
- Less than 50% children are properly diagnosed and treated due to lack of treatment centers and expertise
- Only 13 centers for 8000 children, limited to 4 cities

# Human Resource in Pediatric Oncology

- About 10 -12 consultants
- No certified oncology program for nurses
- No officially trained/qualified pediatric oncology nurse.
- Experience and trained by physicians 3-5.



# Pediatric Oncology Nursing Education Department

- Pediatric Oncology Nursing Education Department (PONED) was initiated in 2008 with the help from **MY CHILD MATTERS GRANT OF SANOFI AVENTIS**
- Two Nursing faculty members
- One mentoring Oncologist

# The Goals

- Provide quality nursing education based on our strong commitments to practice best patients care, research, innovation, and collaboration
- Produce pediatric oncology nurses at three levels
  - Nurse Technician (nurse aid)
  - RN with skill and knowledge of pediatric oncology
  - Nurse practitioner in Pediatric oncology
- Establish a Pediatric oncology nursing education department at CCH

# Initiated in Three steps



## **Pediatric oncology technician course**

- Affiliated with Sindh Medical Faculty
- One year Diploma



## **Two week course for RN**

- Offered twice a year June and December
- Nine sessions have been offered yet .



## **Diploma in pediatric oncology (DPON)**

- Registered with PNC(Pakistan Nursing Council)
- Post RN One year Diploma
- Initiated from November 2014

# **Pediatric Nurse Technician Course**

- First of its kind in Pakistan
- One year diploma with basic knowledge and skill for general pediatrics and pediatric oncology
- This manual has been developed as per local need with the help of medical educationist
- There is regular in-house assessment and exit exam by Sindh Faculty Board
- The successful candidates have to do one year internship at CCH before they get their certificate

## Curriculum Framework For 1 year Technician Diploma

First Quarter	Module 1 4 Week	Module 2 4 Week	Module 3 Two Weeks	Module 4 One Week	Module 5	Final Week	
	Introduction to Human Body structur & function	Introduction to Pediatrics – Major milestones	Introduction to Cancer	Pharmacology	Maths	Exam Week	
Second Quarter	Module 6 Two Weeks	Module 7 Two Weeks	Module 8 4 Week	Module9			
	Oncological emergencies.	Infection control	Nursing Skills	English			
Third Quarter	Clinical Four Weeks Unit/Pharmacy/Lab			Clinical Four Weeks Infection Control		Clinicals Four Weeks OT/procedure	Viva/Final Exam
Fourth Quarter	Clinicals Four Weeks Outpatient			Clinical Four Weeks Day Care		Clinicals Four Weeks Inpatient Services	

# Workshops for RN

- These 2 week workshops are designed to enhance the nurses skills and knowledge in
  - Infection control
  - Chemotherapy administration
  - Critical care
  - Pain and palliation
- The course content is regularly updated
- Training quality is evaluated by participants
- Nurses working at CCH are evaluated quartely and yearly

# 2Week RN course

Days	0900-0930	0930-1030	1030-1100	1100-1200	1200-1300	1300-1400
	Introduction of CCH Mission & Vision	MODULE 1				
Monday		CBC INTERPRETATION	TEA BREAK	Leukemia and Lymphoma	SOLID TUMOR	SUPPORTIVE CARE
Tuesday		TEST		BMT	FEBRILE NEUTROPENIA	SEPTIC SHOCK
MODULE 2						
Wednesday	TEST	SAFE HANDLING AND ADMINISTRATION OF CHEMOTHERAPY	BREAK	COMMON CYTOTOXIC DRUGS		SUPPORTIVE DRUGS
MODULE 3						
Thursday	TEST	ITP	BREAK	BLOOD TRANSFUSION	ANEMIA	HEMOPHILIA /THALESEMIA
MODULE 4						
Friday	TEST	BASIC LIFE SUPPORT				
module 5						
Monday	PROCEDURES	CVAD	AK BRE	Radiation therapy	DRUG CALCULATION	PFE
MODULE 6						
Tuesday	Hand Hygeine		TEA BREAK	Standard Precaution	Environment Cleaning	Common Mistake
Wednesday	TEST	Isolation Precaution		NSI MANAGEMENT	DECONTAMINATION OF INSTRUMENT	AUDIT /SURVILLENCE
module 7						
Thursday	TEST	Introduction To Palliative Care	TEA BREAK	COUNCELLING TECHNIQUES	GREIVNG PROCESS	Pain Management
Friday	Test/course evaluation			Certificate Distribution		Namaz Break

# Post RN Diploma in Pediatric Oncology

- First of its kind in Pakistan.
- This one year diploma is designed to enhance nursing skills to the level of producing nurse specialists i:e Chemotherapy Nurse, Leukemia Nurse , Palliative Care Nurse etc
- The course is approved from Pakistan Nursing Council.
- The curriculum has been adopted with the help of material from Cure4kids.
- Regular in-house assessment and exit exam by Pakistan Nursing Council.



# Curriculum Outline

	Module 1 One Week	Module 2 One Week	Module 3 Two Weeks	Module 4 Two Week	Module 5 Two Weeks	Module 6 Two Weeks	Module 7 One Week	Final Week
First Quarter	Historical perspective of pediatric oncology.	Biological basis of pediatric and adolescent cancer.	Assessment	Planning	Implementation.	Oncological emergencies.	Symptom management and supportive care	Exam Week
	Module 8 Two Weeks	Module 9 One Week	Module 10 One Week	Module 11 Two Weeks	Module 12 One Week	Module 13 Two Week	Module 14 Two Week	Final Week
Second Quarter	Infection control	Pain assessment and management	Late effects	Pediatric palliative care	Professional development	Individual pediatric cancers	Research in pediatric oncology nursing.	Exam Week
	Clinical 3 Weeks Pain and Palliative Care			Clinical 3 Weeks Infection Control		Clinicals 3 Weeks Lymphoma/Luekemia		
Third Quarter	Cinicals 2 Weeks Outpatient			Clinical 2 Weeks Day Care		Clinicals3 Weeks Inpatient Services		Viva/Final Exam

# Pediatric oncology nursing education Department:

Course name	Number of attendees
Pediatric oncology course certified nurses	151
Technician Course certified.	45
DPON	10 enrolled

# Advantages of in-house training courses

- Better trained personnel
- Continues in-house trained manpower 6/7 each year
- Better retention as RN retention is approximately 2.6 years whereas technicians retention is 3.2 years
- Cost of training break even in one calendar year.
- Cost effective as RN salary is 20% high.
- No need for orientation .

# The Impact

- Produced Pediatric Oncology Nurse Technicians for the first time in Pakistan, now working in different institutions all over country.
- Pediatric Oncology Nursing courses have enhanced oncology nursing skills of nurses working in different centers.
- Many nurses have taken this specialty as a career and will become trainer and nurse practitioner in future.
- Regular provision of qualified and trained nursing resource not only for Children Cancer Hospital but also to other institutions all over country

# Impact (cont.....)

- Improved nursing skills in critical care, infection control and pain management there by reducing morbidity and mortality.
- The impact of early recognition and referral, better nursing and medical care has been achieved to some extent all over country.
- We have developed links and partnership both nationally and internationally (combined infection control project of Children Cancer Hospital Karachi and Children Hospital Lahore with ID Team of St Jude)
- Two nurses recently visited from Jimma ,Ethiopia for six weeks training .

Latin American Center for Pediatric  
Oncology Nursing Education  
Santiago, Chile

# International Outreach Program (IOP) St Jude Children's Research Hospital

Improve the survival rate of  
children with cancer worldwide

LMICs

HICs

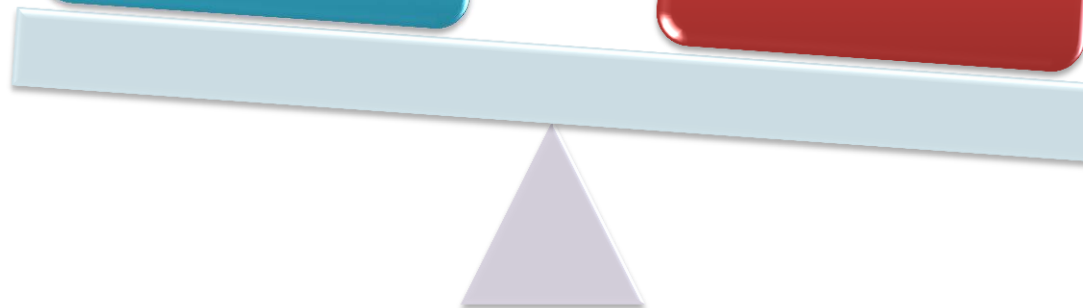
Lack of nursing  
training

Lack of resources

Nurses with  
advanced  
knowledge

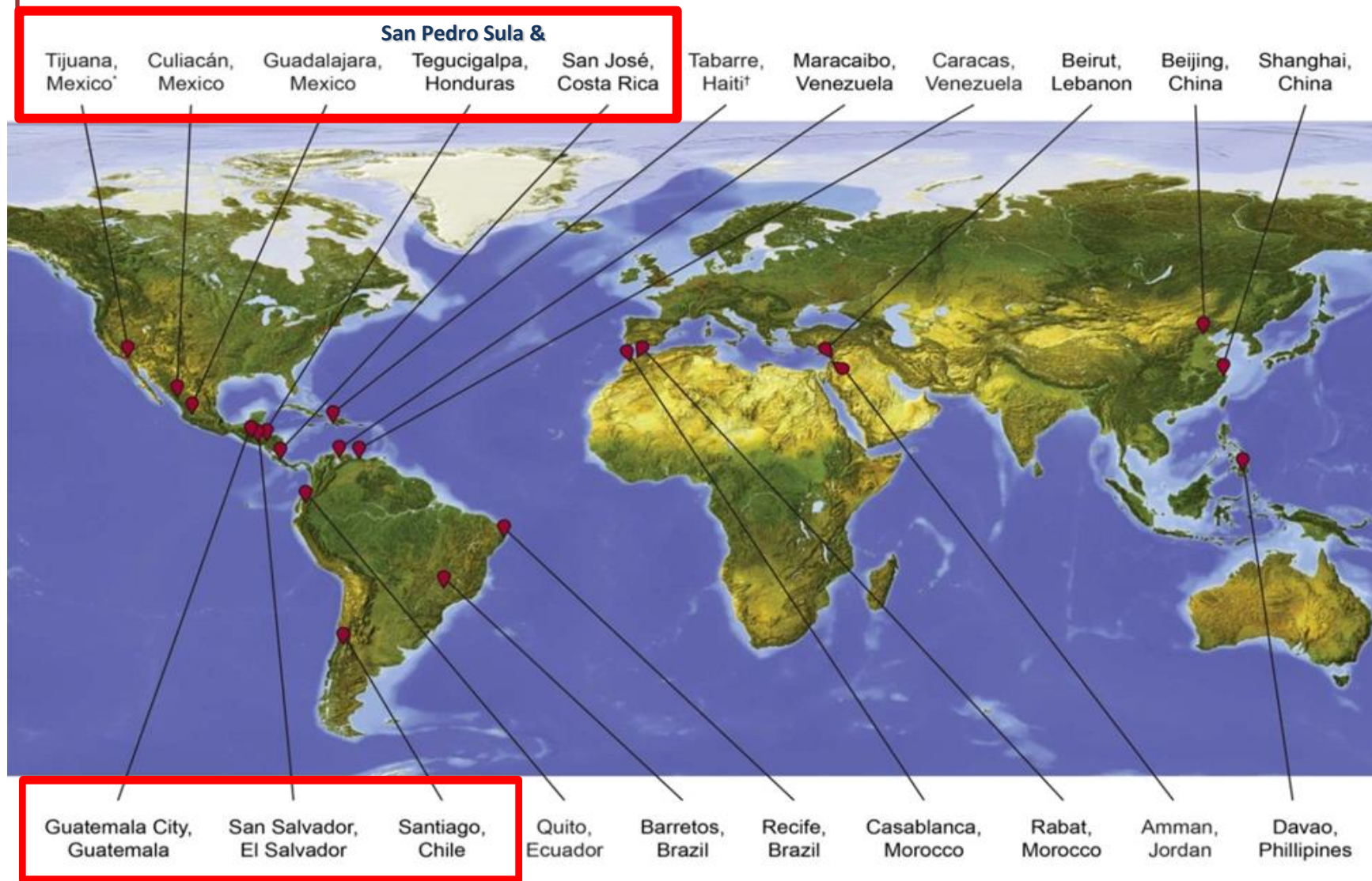
Nurses with  
proficient clinical  
skills

Resources





# St. Jude International Partner Sites



<sup>\*</sup>Partnership with Rady Children's Hospital, San Diego, California, USA

<sup>†</sup>Current demonstration project to establish Haiti's first sustainable pediatric oncology unit.

# Latin America Center for Pediatric Nursing Oncology Education

- Mission:
  - Promote excellence in pediatric oncology nursing education in Latin America
- Main Objective:
  - Provide nurse educators the knowledge and skills needed to succeed

# Pediatric Oncology Nurse Educator

- New concept
- Experienced clinically but no formal education in pediatric oncology
- Nurse educators needed education, skills, resources, and support to succeed in new role

# Nurse educator training curriculum

- Train the trainer
  - Pediatric oncology lectures
  - Direct patient care observation
  - Self learning activities
  - Visit to support units
  - Teaching skills
- Chemotherapy course
- Central lines course
- Palliative care and pain management

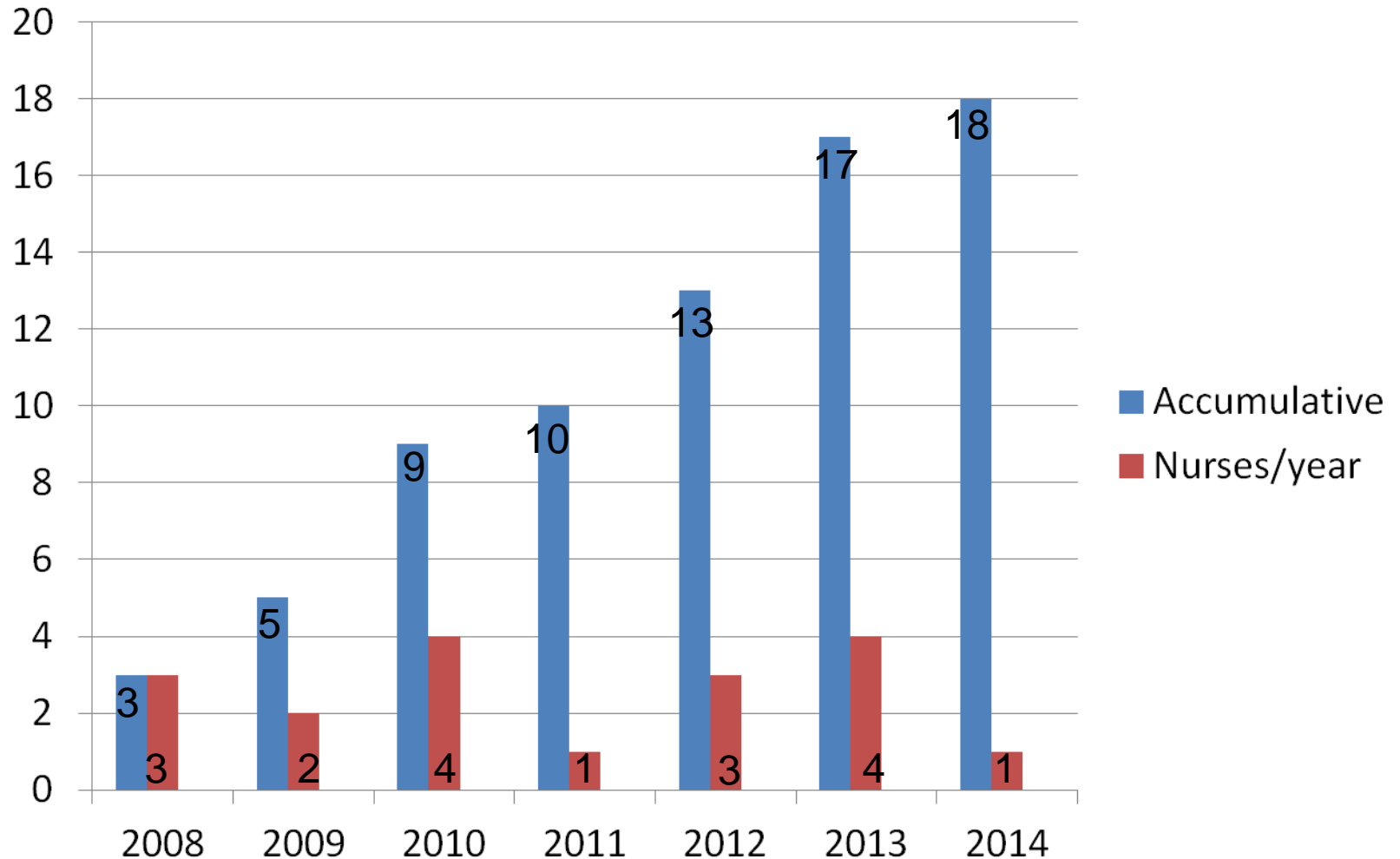
# Nursing Education Program: Development & Implementation

- Develop and implement an orientation program for new nurses
- Develop a continuing education program
- Implement the first 5 JCI quality standards

# Ongoing Mentoring

- Monthly online meetings
  - Support
  - Mentoring
  - Continuing education
    - Cure4Kids
- Email
- AHOPCA

# Total Nurse Educators Trained



## Challenges

- **Local buy-in**
  - Lack of understanding of nurse educator role by local leaders

## Interventions

- **Involve stakeholders**
  - Meetings
  - Educative activities
  - Quality improvement projects



## Challenges

- **Nursing shortage**
  - Nursing oncology staff may rotate through the hospital
  - Lack of comprehensive patient care (skills)
  - High nurse-patient ratio

## Interventions

- **Meetings with stakeholders**
  - Evidence-based practice
  - Acuity-based staffing calculation

## Challenges

- **Nursing education preparation**
  - Poor curriculum at nursing schools
  - Lack of understanding of technical language
  - Nursing staff mix of technical nurses and auxiliary nurses

## Interventions

- **Modify lectures**
  - Start from a basic level
  - Don't use technical language
- **Online courses using C4K**
  - Basic concepts of nursing pediatric oncology
  - Chemotherapy
  - Chemotherapy side effects

## Challenges

- **Nurse educator goals**
  - **Orientation Program development**
    - Lack of time allocated for orientation
  - **Continuing Education program development**
    - Lack of time for continuing education
    - Unmotivated nursing staff

## Interventions

- **Orientation Program**
  - Work within time allotted for education by the institution
  - Advocate for institution policy change
- **Continuing education**
  - Lunch-time
  - Repeat the same class during the week
  - Reward/Recognition

## Challenges

- **Access and use of technology**
  - Lack of access to computers
  - Lack of access to internet
  - Lack of computer skills

## Interventions

- **Involve nursing and medical leaders**
- **Provide educative resources**

# SIOP Nursing Education

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**School of Nursing at the University of California**

**International Oncology Nursing Consultant**

**Co-Chair, SIOP PODC**

# SIOP NURSING EDUCATION

- History
  - SIOP Nursing Committee has run nursing education days for LMIC nurses for years
  - Regional nurses sometimes supported to be in attendance
  - Topics picked by SIOP Nursing Committee
    - Basic Nursing Skills - Portugal
    - African Nurses and Palliative Care – Geneva
    - Venous Access – Sao Paolo
    - ‘The essentials of paediatric oncology nursing’ and sessions for nurses with more advanced knowledge and skills – Boston
    - ‘East Meets West’ – Hong Kong
    - Initiatives, Innovations, and Achievements - Toronto

# SIOP LONDON 2012

- Funding from SIOP Nursing and RCN
  - 2-day workshop with nurses from LMIC paired with nurses from HIC with experience working in LMIC
  - Discussed priorities for LMIC nurses from Latin America, Africa and Asia

# Obstacles to Supportive Care

- Inadequate Staffing
  - 4 nurses for 40 patients
  - Nurses preparing and administering chemo
- Lack of resources
  - No mini-bags (50cc or 100cc) IV fluid bags
    - Nurse has to spend time emptying 1000cc bags
  - No anti-emetics for pre-chemo
    - Nurses have to address children's nausea and vomiting



# More Obstacles

- Lack of standing orders
  - Residents do not write orders for baseline pain control
  - Nurses must find resident for specific orders
  - Difficult to find one resident on duty at night for entire neonatal ward AND pediatrics
- Lack of time for parent/family teaching
  - Nurse giving chemotherapy without adequate patient/parent/family teaching
  - No time for teaching about BM biopsies or LP
  - High risk for patient abandonment

# More Obstacles

- Crisis-management approach
  - Solving problems/crises as they arise
  - No pro-active problem avoidance
    - This requires extensive patient/parent/family teaching
    - Soliciting community support
- Making children with cancer a priority in the hospital
  - Soliciting support of ALL hospital departments that support the care of children with cancer
    - Invite them to Survivors' Day so they see that children SURVIVED cancer due to their efforts

# More Strategies

- Work SMART
  - Harness the intelligence and experience of the nurses that you do have
  - No more “lip service” to “multidisciplinary team”
    - Involve nurses in ward rounds
    - Involve nurses in consent conferences
    - Involve nurses in weekly clinical conferences
    - Ask nurses what they know about the child and family and what they recommend!

# More Strategies

- Write your own residents' manual
  - Do not copy one from Europe/Canada/US
  - Make sure residents have READ it and USE it
- Write your own nursing companion manual
  - Ensure residents know that nurses have a companion manual
- Make protocols available on unit for easy referral

# More Strategies

- Create a climate where everyone is responsible for the child's safety and cure
  - Double check chemotherapy and write it down
  - Make everyone accountable but do not point fingers or create an atmosphere of blame
    - We learn from mistakes, we don't hide them because they endanger the children entrusted to our care

When the doctor leaves the floor. It  
is...

- Nurses who manage supportive care
- Nurses who give the antibiotics
- Nurses who manage the pain

# PODC NURSING CURRICULUM

- Decided to try to create a PODC Nursing Curriculum using a template
  - Had 5 modules written, reviewed by expert panel and field-tested based on LMIC nursing priorities
    - Infection control
    - Pain assessment and management
    - Communication with families and medical team
    - Nutrition
    - Nursing orientation

# SIOP PODC NURSING CURRICULUM

- Outcome of field testing showed that diversity of peds onc nursing settings made a common curriculum impossible
  - Challenges included
    - Staff time
    - Language issues with English
    - Variety of needs/priorities in setting
- Decided to create a repository of existing peds onc nursing curriculum
  - Solicit contributions
  - Review by panel in PODC Nursing Working Group
  - Upload and available on PODC Education and Training Working Group website