



A Global Mapping of Pediatric Radiologists and Pediatric Radiology training

Background

Five years ago, the leaders of the world's regional pediatric imaging societies launched the World Federation of Pediatric Imaging (WFPI).

By 2012 two firmly held convictions – the need for a louder pediatric voice in the imaging arena, and strength lies in numbers – led to a mission statement: “WFPI provides an international platform for pediatric radiology organizations united to address the challenges in global pediatric imaging training and the delivery of services”.

WFPI's working priorities were re-set in 2016 as follows:

1. Communication and collaboration between pediatric imaging practitioners, via their organizations
2. Digital education
3. Outreach and training in lower resource settings
4. Radiation safety and protection
5. Advocating for appropriate practice and resource allocation for children

By mid-2016, progress on all 5 fronts is tangible. Digital education shows particular potential for development.

We now believe that the time has come for WFPI as an organization to evolve and take another step towards being what our members want us to be, and what true international /global work demands. We seek to lift the organization to a different level, becoming THE pediatric imaging body with global "overview".

By this we mean developing information of global pediatric radiologist's presence, training and needs around the world. This will help define more clearly the needs and gaps regarding pediatric radiology practice and thus guide our educational and outreach efforts. It is an ambitious project, but, due to its unique global nature, WFPI is the only pediatric radiology organization with the ability to take it on - and expect reasonable results! However this will require the help and guidance of each EXCOM and Council member!

Purpose

We intend to gather information on global pediatric radiologists' presence, training and needs around the world.

This will help better define the needs and gaps in pediatric imaging, thus guiding educational and outreach endeavors undertaken by WFPI as well as by the many organizations interested in improving and leveraging pediatric radiology services worldwide.

We know this is an ambitious and challenging project. We will need to compare countries/regions that have great diversity in terms of human and technological resources, health systems, medical education radiological organizations, as well as cultural and language issues. Nonetheless, we aim to provide an overview drawn and put together by experts of all the world's radiology societies, which only WFPI, because of its unique global nature, can assemble.

Objectives

- To establish the number of Pediatric Radiologists (as regionally defined) around the world and their distribution per country/region
- To outline the training pediatric radiologists receive around the world
- To map the training centers for pediatric radiology worldwide
- To highlight major disparities and gaps
- To draw on this information to create a roadmap for WFPI's global efforts

Methodology

A working group that will include members of the 5 regional societies that form the WFPI will be established. This group will:

- Agree on basic definitions,
- Define the information that will be gathered
- Elaborate of survey
- Identify and recruit "key contacts" from different countries/regions that will be responsible for the dissemination of the survey, monitor the degree of responsiveness, receive the data and send it to the working group.
- Collate and analyze the data
- Elaborate the road map for WFPI's own work
- Write a "white paper" for publication / presentation in meetings

Background on some of the challenges that will need to be addressed by the WG

1/ With regard to the definition of a Pediatric Radiologist

There is no universal definition of a Pediatric Radiologist. The training system of a pediatric radiologist varies in different countries / regions:

- The radiology training in the US is standardized with the same American Boards exam taken by all trainees. To practice in Pediatric Radiology, physicians need to undertake at least a 1 year Fellowship. This is notably different to practicing General Radiology, where many individuals go straight from their 4-year training into adult radiology private practice, as radiology residents have much more exposure to adult practice during their training.
- In the UK and Ireland, all those who end up in Pediatric Radiology practice - whether full-time or part-time - have at least one of year of sub-specialty training (fellowship equivalent) after 4 years of general training in radiology.

- Elsewhere in Europe the training is not as standardized, though this is slowly changing in some places. There are areas where training is by "apprenticeship" and the trainees do not always rotate through all disciplines in the specialty.
- In LATAM most pediatric radiologists have not undertaken a formal fellowship. Most acquire their expertise by working in a pediatric hospital ("apprenticeship") and are defined as sub-specialists based on their exclusive (or almost exclusive) dedication to pediatric radiology. Few LATAM centers offer 1-2 years fellowships in pediatric radiology and some radiologists train as pediatric radiologists abroad, mainly in the USA and Canada.
- A different pattern can be found in Argentina, where some centers offer 3-4 year programs to train physicians directly as pediatric radiologists, without having previous general radiology training.
- In Asia, due to heterogeneity of different Asian countries, the practice, definition and training are very different. In some countries such as Korea, Japan, HK etc, there are formal programs for the training of pediatric radiology. In some low resource areas or in some parts of China, general radiologists perform pediatric imaging. The standard of program and training for pediatric radiology also varies between different countries.
- In Africa:
 1. Physician numbers
 - ⇒ Radiologist: South Africa is the best staffed country in Sub-Saharan Africa with +500 registered radiologists. 14 African countries have no radiologist at all.
 - ⇒ Pediatric radiologist: there are only 10 in South Africa and less than 20 in the rest of Africa. Therefore, general radiologists interpret pediatric imaging in most African countries.
 2. Training - in South Africa:
 - ⇒ Radiology specialization in SA is now a 5 year program. During their 5 year training registrars rotate through Paediatric radiology for 4 months.
 - ⇒ Subspecialty training in Paediatric Radiology: the Red Cross War Memorial Hospital in Cape Town is the only centre that offers a paediatric radiology fellowship program since 2009. This is a 1 year program with a postgraduate paediatric radiology diploma affiliated with the University of Cape Town. The Nelson Mandela Children's hospital in Johannesburg will officially open in December 2016. It will be the 2nd Children's hospital in SA and will offer a subspecialty fellowship program in Paediatric radiology.
 - ⇒ The GE Global Innovation Centre for Africa based in Johannesburg opened in June 2016. They have a training facility at the Centre in collaboration with the NMCH and this can serve as a platform for future collaboration and training of other African countries.

How to approach this challenge:

We could use different definitions for different regions according to their realities. But we need to strike a balance between simplicity and accuracy.

- ⇒ This is a **global** mapping (macro data). But the results cannot be so vague that they are stripped of all meaning/use.
- ⇒ Nor can we break down the definition down too far into local variations, rendering analysis and comparisons impossible.

Local definitions should be fixed by the radiologists / representatives of each region / area since they know their realities best. The varying regional definitions should be clearly spelled out in the results (final mapping).

2/ With regard to the definition of pediatric training:

- ⇒ Define universal terminology for the different stages in training
- ⇒ Which certification (national diplomas in general radiology? Pediatric radiology?)
- ⇒ Other possible measurable
 - Academic positions, teachers
 - Number of academic centers/hospitals with pediatric radiologists
 - Number of students in training

See this dropbox link for further background/reference documents

https://www.dropbox.com/sh/agtutev2tuazwj6/AADw-VgLWUn_v2yEikh3gbZCa?dl=0

It includes

- ⇒ ECR/ultrasound global “survey” (limitations on methodology but nonetheless interesting)
- ⇒ WFPI mini-symposium documents offering numbers and overviews of training in different developing countries
- ⇒ Paper by Robert Bramson & George Taylor, 2005, “SOS: Can we Save Pediatric Radiology?”

Timeline

- July 2016: EXCOM clears the Mapping outline, Working group assembled
- August – Sept 2016: Working group discussions on methodology (one GTM, otherwise online – listserv, via Amanda)
- Sept 2016: Working group meets (GTM) to finalize methodology
- Oct 2016 –Jan 2017: Working group collates data
- Feb 2016: Initial collation of data, distributed to Working Group
- March: Working Group meets to discuss initial results, discuss clarifications and discrepancies, data holes, corrective steps
- April 2016: results finalized, approved by the Working Group
- May – July 2017: paper drawn up and submitted