## MINISYMPOSIUM: SPECIALIST PEDIATRIC RADIOLOGY — DOES IT ADD VALUE?



## Considering paediatric radiology

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Received: 21 August 2020 / Revised: 21 August 2020 / Accepted: 2 September 2020 / Published online: 18 March 2021 © Springer-Verlag GmbH Germany, part of Springer Nature 2020

Specialist pediatric radiology — does it add value? This issue brings together several papers into a minisymposium addressing this question. Themes that emerge about our specialty are the need for innovation and flexibility, balancing image quality against speed of acquisition, and the need for teamwork with the child, their family and paediatric colleagues. Quality, not quantity, is key. While all of this is essential when working with children, there are clearly transferable lessons — a more holistic approach benefits all patients whatever their age [1, 2].

Paediatric radiologists and radiographers lead the field in developing techniques designed to reduce radiation dose. This is particularly important when serial imaging is required for long-term or developmental conditions such as cystic fibrosis. The information obtained from high-quality serial studies is vital to understanding disease progression, enabling identification of patients who will benefit from early intervention [2, 3].

The novel coronavirus disease 2019 (COVID-19) pandemic highlighted that children respond differently to pathogens. It is not surprising that second reads of imaging studies by tertiary paediatric radiologists differ from the initial read by generalists in a significant number of cases. The discrepancies are often important and require a change of management [4].

Twenty-six percent of the world's population is younger than 15 years old, but there is huge regional variation. In Africa, the proportion is 41%, whilst in Europe it's only 16% [5]. There are frequently very few, if any, paediatric radiologists in countries with the greatest proportion of children and a high child mortality rate. Even in developed countries, most paediatric imaging is performed by nonspecialists [6, 7]. Eva Kis [8] highlights the huge discrepancies in certification, specialist radiographers and dedicated paediatric equipment. When numbers are low, the availability of training is an issue that can lead to paediatrics being an unpopular

specialty for a young radiologist to consider [9]. In addition, the increased time and extra resources required to image children may not be adequately reimbursed, particularly in countries where the focus is on an aging population [10].

While there is a compelling case for the development of paediatric radiology, there is clearly work to do. As a community, we must make every effort to promote the specialty. The development of the curriculum and diploma in paediatric radiology by the European Society of Paediatric Radiology is welcomed, but sadly the first sitting of the final diploma has had to be postponed due to the pandemic. COVID-19 has, however, accelerated the use of digital technology, which must be embraced to support teleradiology for specialist opinions and education. The advocacy of the international societies and the World Federation of Paediatric Imaging is essential to support developing countries and there is a need to coordinate donations to support the purchase of appropriate equipment [8]. Innovative partnerships such as those formed between the Children's Hospital of Philadelphia and Ethiopia are hugely beneficial [11].

Finally, we should encourage young radiologists and radiographers to choose our specialty, which requires excellent communication, knowledge, flexibility and creativity, where they will be rewarded with an infinitely varied, challenging and satisfying career.

## **Compliance with ethical standards**

Conflicts of interest None

## References

- Paulo G (2020) The role of pediatric radiologists and radiographers: a different future from the past. Pediatr Radiol. https://doi.org/10. 1007/s00247-019-04597-w
- Watson TA, Barber J, Woodley H (2020) Paediatric gastrointestinal and hepatobiliary radiology: why do we need subspecialists, and what is new? Pediatr Radiol. https://doi.org/10.1007/s00247-020-04778-y



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522 Pediatr Radiol (2021) 51:521–522

Frush DP, Sorantin E (2020) Radiation use in diagnostic imaging in children: approaching the value of the pediatric radiology community. Pediatr Radiol.

- Sammer MBK, Kan JH (2020) Providing secondopinion interpretations of pediatric imaging: embracing the call for value-added medicine. Pediatr Radiol. https://doi.org/10.1007/s00247-019-04596-x
- Duffin E (2019) Proportion of selected age groups of world population in 2019, by region. https://bit.ly/34tT6vR. Accessed 24 August 2020
- Mathers SA, Anderson H, McDonald S (2011) A survey of imaging services for children in England, Wales and Scotland. Radiography 17:20–27
- Larson DB, Johnson LW, Schnell BM et al (2011) Rising use of CT in child visits to the emergency department in the United States, 1995-2008. Radiology 259:793–801

- Kis E (2020) Pediatric radiology crossing continents. Pediatr Radiol. https://doi.org/10.1007/s00247-019-04598-9
- Olatunji RB, Akinmoladun JA, Atalabi OM (2020) Capacity for paediatric radiology in Nigeria: a survey of radiologists. Pediatr Radiol. https://doi.org/10.1007/s00247-019-04610-2
- Tomà P, Magistrelli A, Secinaro A et al (2020) Sustainability of paediatric radiology in Italy. Pediatr Radiol. https://doi.org/10. 1007/s00247-020-04675-4
- Darge K, Gorfu Y, Jaramillo D (2014) Ethiopia: to educate, how to educate and what to teach. Pediatr Radiol 44:642

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