



ISRRT
INTERNATIONAL
SOCIETY OF
RADIOGRAPHERS
& RADIOLOGICAL
TECHNOLOGISTS

news & views

from around the world

APRIL 2018

The Official Publication of the ISRRT



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Advertisements and images to be sent as high resolution PDF, TIF, EPS, JPEG files.

You are invited to comment in relation to the ISRRT Newsletter editorial content and make suggestions for future issues.

All comments will be considered by the Editor and her Committee.

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For further details or to advertise your program or new publications please contact the ISRRT Chief Executive Officer:

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The ISRRT Newsletter *News & Views* reaches 72 countries, 4,500 associate members, libraries and schools of radiography, government bodies and professional societies.

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Dr Fozy Peer
ISRRT Outgoing President

President's message (Outgoing)

As this is my last communication as President of the ISRRT – I have taken the privilege to deviate from the regular format and to report on the highlights of the past 4 year term of office.

As the global voice of radiographers and radiation medicine technology throughout the world and so to help achieve the objectives of the ISRRT, members of the ISRRT Board worked tirelessly on the initiatives identified to achieve the strategic goals set at the strategic planning meeting in 2016. The strategic goals identified were to:

- Collaborate to develop and promote international standards
- Empower societies
- Advocate for the profession

with the underlying foundation principles of communication and governance. An update was presented at the pre-Council meeting in Trinidad in April 2018.



Whenever an opinion related to radiography is needed at the international level from any organisation across the globe, it is the ISRRT that is recognised as the global voice of our profession. The ISRRT works very closely with other international bodies such as the World Health Organisation (WHO) and the International Atomic Energy Agency (IAEA). As we know some 20% of the average radiation exposure to the world population is from medical sources. Reduction of unnecessary radiation exposure by justification of radiological medical procedures is a major goal for the WHO Global Initiative. To address this some of the initiatives that the ISRRT is actively involved in include:

- Dose Optimisation and Justification - The ISRRT is committed to the joint initiative from the WHO and the IAEA related to the Bonn-call-for-action in the area of radiographer involvement in the justification of imaging procedures using ionizing radiation. An explanation and a flow chart, depicting a summary of actions in the process of authorisation and justification of medical exposure to ionising radiation has been designed for use primarily by radiographers and is available on the ISRRT website.
- Major input has been made by the ISRRT to the IAEA publication on Basic Safety Standards. The Safety Standards provide the fundamental principles, requirements and recommendations to ensure nuclear safety. They serve as a global reference for protecting people and the environment and contribute to a harmonized high level of safety worldwide.
- The ISRRT was invited to provide input on the WHO publication on 'Communicating Radiation Risks in Paediatric Imaging - Information to support healthcare discussion about benefit and risk'. A tremendous amount of work was done by the ISRRT representatives to provide the radiographic perspective for this publication. The book is available as a free download on the WHO website.
- The ISRRT was a part of the team that provided input into the document on: 'Priority Medical Devices for Cancer Management'. The WHO identified the need for member states to have access to resource documents that identified appropriate basic and priority medical devices to use as a reference. This specific list provides the general medical devices that are required in clinical units, the priority medical devices required in cancer

President's (outgoing) message continued

- management and the specific devices required for the management of the six most common cancers affecting men and women globally which are breast, cervical, colorectal, leukaemia, lung and prostate.
- The ISRRT provided input on the European commission initiative on Breast Cancer guidelines for all breast cancer care processes including the non-disease specific but relevant to palliative care. The guidelines include screening, diagnosis, treatment, rehabilitation, follow-up and palliative care.
 - As regards Occupational Radiation Protection and Immobilisation devices, the ISRRT provided the radiographers' perspective to the ICRQS working group on immobilization device in the practice of radiology with relation to dose reduction to both the patient and the occupational dose to the technologist.
 - Members of the ISRRT meet regularly with members from the IAEA where we have agreed to work together on webinars related to radiation protection.
 - The ISRRT was represented at many IAEA meetings, including:
 - the technical meeting on 'justification of medical exposures and the use of the appropriateness criteria' hosted by the IAEA in Vienna in March 2016.
 - IAEA 'Workshop for the 'Development of Harmonized QC protocols for Diagnostic Radiology' in April 2016 in Vienna.
 - the IAEA workshop on 'Developing a quality framework to enhance patient care in diagnostic radiology' in October 2016.
 - the 1st European Congress of Medical Physics, in September 2016 in Athens at the EFOMP-ISRRT joint Session; 'Radiographers' input for improving a safety culture for medical Imaging and therapeutic procedures'.
 - 'Accidental and Unintended Exposures' in Vienna in March 2017.
 - Technical meeting on 'Strengthening of Safety Culture in Radiotherapy through the Use of Incident Learning Systems' in October 2017 in Vienna.
 - International Conference on Radiation Protection in Medicine – Achieving Change in Practice 11-15 December 2017.
 - In February 2018, ECR 2018, the IAEA, Radiation Protection unit met with the ISRRT and amongst other initiatives discussed the training related to 'justification' at universities.
 - Currently the IAEA is preparing the Bonn Call-for-Action Toolkit related to Strengthening Radiation Protection in Medicine. The ISRRT was an integral part of the meeting from 3-5 March 2018 in Vienna at which this was discussed.
- In keeping with the strategic initiative, to 'collaborate when policy makers require information on the profession' the ISRRT provided input to the 'WHO: Commission on Health Employment and Economic Growth'.
- In March 2016, the United Nations Secretary-General announced the appointment of a Commission on Health Employment and Economic Growth. The Sustainable Development Goals (SDGs) set an ambitious agenda to improve the lives of all, including through improved health and prosperity where health workers and health employment reside at the heart of the SDG agenda. The ISRRT was privileged to be requested and hence contributed input on 'the radiography task force – looking ahead' to this high level commission on health employment and economic growth.
- The ISRRT had proposed commitments to contribute according to our role to improve justification in medical imaging related to the Heads of European Radiological Competent Authorities, HERCA - SMART



Top L-R: Fozy Peer and Dimitris Katsifarakis at World Health Assembly (Geneva); ECR 2018; David Hunter from the ILO meets with ISRRT representatives in Geneva.

Bottom L-R: European Society of Radiology (ESR) President meets ISRRT President at ECR 2018 to agree on future collaboration; International Society of Radiology (ISR) President, Fozy receives a copy of the document on Cancer Management Devis from WHO Officer Dr Adrianna Velasquez; Dr Ricardo Garcia-Monaco signs off an MoU with ISRRT President Fozy Peer.



Left: Fozy Peer with Cynthia Cowling, winner of the Dien Van Dijk award. Right: Invited guests at the World Congress 2018 Opening Ceremony.

approach. The tool has been developed and is available on the ISRRT website www.isrrt.org

We are in collaboration with educational institutions and the IAEA as relates to the introduction of modules on justification at educational facilities.

The ISRRT was represented at the 3rd Regional Workshop in Radiation Safety Culture in Healthcare: Focus in Paediatric Imaging which was jointly hosted by IRPA, WHO and IOMP where we actively participated in the workshop. The meeting was held in Cape Town, South Africa in December 2016.

The International Commission on Radiological Protection (ICRP) publications scientific secretariat has thanked the ISRRT for submitting comments on the ICRP document "Occupational Radiological Protection in Interventional Procedures". The comments will be available on the ICRP website, and will be considered in further development of the report.

We collaborated with the International Association of Forensic Radiographers (IAFR) on an international publication on 'Guidelines for best practice: Imaging for Age Estimation in the Living'. These guidelines should assist radiographers who are faced with providing imaging for skeletal age estimation especially in medico-legal situations.

International Society of Radiology Quality and Safety Alliance (ISRQSA) News aims to support concerted efforts from the radiology community to improve quality care and patient safety by offering a communication platform for stakeholders from different disciplines to share experience and facilitate collaboration. The ISRRT, on invitation, regularly submits articles to this Newsletter

An MoU was signed with International Radiation Protection Association (IRPA) so as to collaborate with respect to recognising that both organisations can complement each other in promoting the safe use of radiation and to enhance the cooperation between both organisations in promoting high standards and ethics in radiation protection.

We as radiographers and radiological technologists take pride in what our jobs entail as we form an integral part of the healthcare team. The ISRRT is working towards raising the Radiographer profile by working with the International Labour Organisation (ILO) so that we may be recognised as professionals.

World Radiography Day (WRD) is celebrated worldwide as tribute to

Nobel Peace Prize – winning founder of x-rays Prof Wilhelm Rontgen's discovery on November 8, 1895 where medical diagnosis was revolutionized. Commemoration is a global rallying call for all of us to ensure that medical imaging and radiation treatment continue to strive to achieve uncompromising service excellence. To commemorate WRD, the ISRRT theme for WRD 2017 was 'We care about your safety'. We would like to encourage all member societies to embrace the annual theme set by the ISRRT.

The Radiologists have recently started celebrating International Day of Radiology (IDoR). The ISRRT was asked to provide a chapter by the European Society of Radiology (ESR) in their publication on IDoR for 2019.

The ESR has invited the ISRRT to run a tract for radiographers at ECR called 'ISRRT meets Africa' at ECR 2019. ESR. We have requested an MoU with the ESR so that we can work together on future ECR meetings.

For the first time the ISRRT requested and signed off an MoU with the International Society of Radiologists (ISR). We agreed to collaborate on issues of mutual interest and for the MoU to be reviewed after 5 years.

The International Radiation Protection Association (IRPA) and the ISRRT also signed off an MoU recognising that both organisations complement each other in promoting the safe use of radiation and to enhance the cooperation between both organisations in promoting high standards and ethics in radiation protection.

The ISRRT reviewed and signed a memorandum of agreement with the European Federation of Radiographer Societies (EFRS) outlining the terms of co-operation between the ISRRT and the EFRS for the coming 5 years.

We also signed an MoU agreeing to work collaboratively as a partner society of the British Institute of Radiology (BIR).

The ISRRT encourages new societies to join our family. Of note are radiographers in parts of the middle-east who do not necessarily have their own member radiographer societies. The ISRRT has encouraged these countries to form societies and join the ISRRT.

The ISRRT-Chesney Annual Research Award was set-up with funds that were kindly donated by the Chesney sisters in their legacy. The aim of this fund is to promote research so as to help improve the standards ▶

President's (outgoing) message continued

of delivery and practice of medical imaging and radiotherapy. The theme for 2018 is; 'Safe Practice in Medical Imaging and/or Radiation Therapy'. This fund is available to Radiographers from member societies and associate members.

When possible, the ISRRT offers workshops, to member societies that request them. The member society has to identify the need for a particular subject, to their regional representatives who then adjudicate the requests and determine the feasibility and cost of the workshop. This is then approved by the Board. Proposed ISRRT Workshops scheduled for 2018 include;

- Quality Assurance and risk management in medical imaging in Dakar, Senegal
- Justification of Practice and Optimization of Radiation Protection in Kenya
- ISRRT/EFRTS workshop in radiation protection in Sofia (Bulgaria)
- ISRRT/ASRT - Women's Health/ Mammography, Ultrasound, Bone Density either in the Caribbean Islands or South America.

Advanced technology employing ionising radiation has increased medical imaging substantially. Each member of the radiation team has a distinctive role in the final delivery of the radiation dose. The ISRRT believes that work in these areas will help radiographers/technologists to contribute positively to the safe and effective use of radiation in medicine. It comes down to a way of working; a radiation safety culture that requires a balance between the benefit to the patient versus risk related to the radiation dose so as to encourage radiographers, the ISRRT together with Philips-Medical gives one radiographer each year the opportunity to become the ISRRT Dose Wise Radiographer of the Year.

Radiographers/technologists are concerned about best practice and dose management. Radiographers should lead with innovative protocols and procedures that stand as an example of forward thinking. To recognize the ongoing efforts of radiographers and to promote best practice and share critical knowledge globally, Samsung and the ISRRT have partnered to host the Samsung Best Practice award starting April 2018. More details on both awards to be found on the ISRRT website.

During RSNA and ECR we were fortunate to meet many exhibitors and renew and/or secure some new corporate sponsors. We cherish the relationships we build with the vendors.

Phillips is a valued corporate sponsor and they also sponsor the Dosewise award.

We were fortunate to secure Samsung as a platinum corporate sponsor after almost 2 years of negotiations. Samsung is also in the process of finalising an ISRRT- Samsung research award for 'Best Practice' that will be awarded annually.

Guerbet recently signed up as a corporate sponsor.

Interesting discussions related to the PEP connect system were held with representatives from Siemens. More on this once an agreement has been reached.

Bracco as one of our existing sponsors of long standing, is very keen to work with the ISRRT on providing educational opportunities to our members. They will probably provide webinars/recorded sessions on MRI.

We have tried to interest Carestream not only in corporate membership of the ISRRT but also had discussions around the promotion of educational material to ISRRT members.

We look forward to the continued support from our existing sponsors and engaging new vendors.

So as to assist Radiographers/Technologists attend the biennial ISRRT World Congresses, the ISRRT World Congress travel fund together with other member societies was initially set up in 2011. The ISRRT and some member societies contribute voluntarily to this fund. The travel-fund committee adopt strict criteria to select the recipients of these awards. These sponsorships allow approximately 20 radiographers mainly from developing countries to attend the World Congresses.

Currently the ISRRT funding is based on membership numbers from the individual member societies and associate members. However due to the increase in commitments especially where as the global body representing radiographers we get asked to represent the profession on various platforms, it is becoming increasingly difficult to be financially sustainable.

I am pleased to announce that during the deliberations at the 2018 Council meeting a new funding model was accepted in principle and will be phased in over the next few years.

Dr Sandy Yule earned a well-deserved retirement after serving as CEO of the ISRRT for 14 years. I was fortunate to work with Sandy for just over 2 years of my tenure as President. Although retired, Sandy

once again stepped in and agreed to be responsible for registrations for the 2018 ISRRT World Congress.

The initial steps related to change in the ISRRT governance model related to structure and process as identified as an area of concern on the strategic plan, took effect since 1 January 2017, when Dimitris Katsifarakis was appointed to provide the CEO support services for the ISRRT.

My sincere appreciation to both Sandy and Dimitris for their help and guidance during my term of office.

A new look interactive website was launched in 2017. Your comments/input related to the website will be appreciated. The ISRRT also has a very active and informative facebook page and twitter account.

The 21st ISRRT World Congress in August 2020 will be hosted in Dublin, Ireland. I am assured of an outstanding meeting and would like to encourage radiographers to attend this event.

The 22nd ISRRT World Congress in 2022 has been awarded to Thailand – a meeting not to be missed. ►



Sandy Yule, Fozy Peer, Donna Newman, Stewart Whitley and Aneesa Ali.

At the last Council meeting it was agreed that, in future bids for ISRRT world Congresses will not be restricted to a particular region but will be open to all member societies. The 2024 meeting could be anywhere in the world!

You can be assured that although the members of the ISRRT team are from different countries across the world that when any one of us speaks, acts or comments on behalf of the ISRRT, we represent every one of us as Radiographers/Technologists across the globe!

To the ISRRT Board of Management and past CEO and CEO support Service – many thanks for your help and support over these past 4 years. Without you none of what has been accomplished over this past term would have been possible. I salute you for your loyalty and support and for giving off valuable time and effort and working on a total voluntary basis.

I was privileged to be a part of two really remarkable ISRRT World Congresses during my term – the first being in Seoul, South Korea in October 2016 and the recent one in Trinidad and Tobago. Interestingly, both very different to each other, but both leaving very special memories. Seoul boasted an attendance of 2000 delegates who had access to 330 oral presentations and 220 poster presentations. The social events surpassed all expectations. It was extremely encouraging to note the active participation by not only the speakers but by the delegates participating in the discussions that followed from the presentations. I sincerely hope that many of these well researched presentations were written up and published.

The culmination of my tenure as President was marked by the end of a remarkably successful congress, the 20th ISRRT World Congress in Trinidad and Tobago. To the congress committee of this milestone congress, thank you for hosting us and ensuring that not only did the delegates enjoy being a part of an academically stimulating congress but thoroughly enjoyed the warm hospitality and the full fun-filled social activities. We had 462 delegates from 48 countries, enjoying the excellent scientific program. In total, there were 130 oral presentations and 30 posters.

Having attended many ISRRT World congresses over the past 20 years it is interesting to see that the quality of the presentations just keeps getting better and that the sessions are far more interactive. Also the amount of research being presented is very encouraging.

It is well known that active collaboration can change the world. By engaging at these ISRRT congresses we share experiences and get to collaborate with not only radiographers and radiological technologists from around the world, but also with other members of the imaging and radiation therapy teams. Many of us take back knowledge gained during these meetings and implement this in our respective countries. Hopefully these collaborations help in making the change to the benefit of our patients. During the interactions witnessed during these congresses this was evident in the many papers presented.

In the future I personally would like to see the ISRRT working towards standardising some basic programs for the training of radiographers.

I sincerely hope that we can be called by one name, be it radiographer or radiological technologist. Having so many different names, is extremely confusing for other professionals or members of the public

As life is a collection of moments - my moments as President of this prestigious society have passed – comfortable in the knowledge that handing over the baton to Donna Newman, can only take the ISRRT soaring to new heights. To the new Board I wish you well and I'm sure that you will make great strides. ■

Dr Fozy Peer
President (outgoing) ISRRT



ISRRT is changing to payments via PayPal

The ISRRT is pleased to report that we have set up a PayPal account and that with immediate effect Associate Membership subscriptions can now be made via the ISRRT PayPal account for one and three years subscription via the website as well as accepting donations.

Now is the opportunity to join as an associate member!

website

www.isrirt.org

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Donna Newman
ISRR President

President's message (Incoming)

Let me begin in my first Presidents report by stating that I am honoured and humbled to serve as your 15th President of the ISRR. I am also grateful to our two Immediate Past Presidents, Dr Fozy Peer and Dr Michael Ward who have been great leaders and exceptional mentors to me and many others. I am privileged to call them both dear friends.

Your entire Board of Management has dedicated themselves to improving and elevating radiation protection and radiation safety for our entire profession. They have volunteered to serve you as member societies and our profession as a whole.

Today, in my first column I'm going to share with you three key messages: Influencing Change, Impacting Change, and Creating Change.

There is a quote from Saira O'Mallie that inspires me about Impacting Change; and something which I have lived by throughout my entire career.

"If you ever feel like you're just one person trying to change something, I promise there are hundreds, thousands, if not millions of people out there who feel the same way as you, who want to make a difference." – Saira O'Mallie

As a professional, I am passionate and wholeheartedly believe that we have an opportunity to make a difference in our profession just by being active and involved. We all have an opportunity to influence the direction our profession moves, and to influence how standards are developed and implemented in all countries all over the world.

I want to share with you a story how the ISRR has influenced change over the last four years. In 2012, I went to the Bonn meeting to represent the ISRR Board and speak on behalf of our organisation. At this important meeting, the Bonn Call-for-Action was established. At the time, the climate was that physicians were the gatekeepers on Justification. All the international talks given by our leaders verified this statement. At the same time, all over the world radiographers were doing their daily jobs making sure patients were receiving quality health care. This included working closely with the radiologists and referring physicians in a team approach to justification. Fully understanding that as radiographers, they are the last professional with that patient before an exposure is made. They work diligently to ensure that all radiography requests are checked, ensuring the indication, signs and symptoms are appropriate for that protocol to be performed.

In addition, part of their daily practice includes ensuring that the tests they are performing are not not duplicate studies before they expose the patient. Anytime either of these two issues come up the radiographer would then contact the radiologist or the referring physician to bring the matter to their attention.

To you and I this sounds a lot like the team approach to Justification.

The ISRR came out of the Bonn meeting intent on influencing change. They developed the algorithm for the team approach to Justification with the role of the radiographer.

Once produced, the ISRR spent the next two years, promoting this document at international meetings with IAEA, WHO, HERCA and other regional meeting that a board member attended. Articles were produced and published in the *International Radiologist Journal*, as well as the ISRR's Newsletter *News & Views* explaining the team approach to justification.

Fast forward to Dec 2017 at the Joint International Meeting with the IAEA and WHO which was incidentally, the follow up meeting to the Bonn Call-for-Action. I again presented the data and information the ISRR had developed. Interestingly, at the closing session, of this international meeting a summary of the outcome was presented to the audience on how to move forward. The ISRR's team approach to Justification was included. This was described as something of value that should be considered in the Implementation Toolkit for the Bonn Call-for-Action being developed.

Also, at the IAEA, this past month the reward happened! The team working on the Implementation Toolkit for Bonn Call-for-Action, which included radiologists, radiographers, physicists and regulators, came to a consensus to include this document in the Toolkit.

I present to you the way the ISRR has truly influenced change globally.

As your newly elected President, I promise to work with the Board of Management and work within the ISRR's strategic plan to help move our profession forward. I also promise to continue to find ways to influence change globally. I would also like to describe how to impact Change.

We as professionals have an opportunity to impact change by staying involved and when asked for input, each of us taking the time to share our expertise. Individually, we can impact change to global policy standards and guidance documents being developed. I want to share ►

another story about how the ISRRT has created change over the last four years.

Three years ago, the WHO sent out an excel spreadsheet to the ISRRT for draft consultation asking for input on what would be the minimal medical devices needed to treat cancer.

The ISRRT sent this document out to our regional directors for professional practice and education and asked them to reach out and review the document. Expert information was gathered on minimal radiology equipment needed to start a dept in order to provide Cancer Care.

The document covered all specialties in radiology. We also sent it to some of our larger societies and asked them to reach out to their members to give expert input on the document. I reported in our *News & Views* all the information gathered from the members regarding pertinent information about data that was missing in the document as well as the parts that were inaccurate on current practice. You as members also gave important suggestions in different areas that were missing that should be considered for a successful document.

I point this out to you because just by responding with your expertise in each of your respected areas you helped impact change in this WHO global project.

The ISRRT represented the global radiographers voice and provided real data based on evidence for the WHO to consider. This is an important point, because of the ISRRT's involvement, the final document was impacted by experts in our profession taking time to provide their expertise.

The final document has been released and is on the ISRRT website to download and use in your own country.

Many of you might just say this is just a document but let me assure you of the relevance of this document and what it means to countries around the world.

There are still 30 countries in the world that have no cancer care at all. If you happen to get cancer in one of those countries, can you imagine the painful death some people go through unnecessarily?

Now that this document is completed, all the relevant information is available for ministry of health or governments to budget and plan for cancer care for the citizens in their country.

We as an organisation have impacted change in healthcare in the world just by helping with a document and perhaps will help reduce that number of 30 to something smaller.

I say to you by being involved and giving your expertise when asked as professionals each of you contribute to impact change globally. Just by doing our small part and as an international organisation and gathering this information collectively the ISRRT impacts change in healthcare globally.

What a difference we can make in patients' lives.

As you newly elected President I promise to work with the Board of Management and our member societies to gather that pertinent expertise and appropriate data for global documents to help impact global change. I also promise to concentrate on contributions to the Bonn Call-for-Action projects that will contribute to impacting change in health care as well. I am committed to concentrate on our own ISRRT's Position Statements, Guidance documents and Educational Standards to ensure these can contribute to impacting change in health care as well. Finally, I would like to talk to you about Creating Change as a global organisation. I am inspired all the time by this famous quote about

Below: CEO Support Services Dimitris and Incoming ISRRT President Donna Newman.

Right: Donna Newman at World Congress Closing Ceremony with Trinidad & Tobago organising committee and local members.

Bottom right: Incoming ISRRT President Donna Newman with ASRT Board of Directors, CEO Sal Martino and ASRT leadership and delegation.



President's (incoming) message continued

Change that Robin Williams once stated and it is something that I think about often as a leader in our profession

"No matter what people tell you, words and ideas can change the world." – Robin Williams

As we look to the future, no one knows what it holds but we have to be diligent about investigating and looking for new ways to keep our organisation strong and moving forward. I promise as your leader to look for new opportunities and find new innovative ways to create change, make change where necessary and impact healthcare globally. I am looking forward to the serving you the membership over the next four years.

To give a few specifics I will concentrate on as newly elected President with the newly elected ISRRT Board of Management:

1. Work with ISRRT Board to promote Implementation of Toolkit for Bonn Call-for-Action being produced by global Stakeholders and IAEA
2. Work with CEO Support Staff to disseminate action item projects relating to strategic Plan
3. Work with Board and CEO Support Staff to promote and implement Radiation Safety and Radiation Protection projects that relate to ISRRT's response to Bonn Call for Action and ISRRT Strategic Plan
4. Work with Board to continue formulating Position /Guidance statements reflection radiographers Scope of Practice/ Professional Practice and radiation safety issues
5. Work to promote Web Based decision tools for radiographers for Justification and Authorization and promote Team based approach to Justification
6. Develop working group to review statutes to develop and evolve statutes to reflect today's practice
7. Work on the ISRRT governance documents through our board of management and subcommittees to ensure that our council members requests were heard at this 2018 World Congress and report back at the next council meeting our finding for improvement for our organisation

8. Work on ways to communicate the relevant information to our member societies through all our ISRRT media including Facebook, website, newsletter communications and any other new media that arises and become beneficial

I would also like to take this time to introduce your newly elected ISRRT Board of Management that will be representing you the membership over the next four years.

- ISRRT Treasurer – Philippe Gerson
- ISRRT Vice President of the America's – Terry Ell
- ISRRT Regional Director of the America's – Sharon Wartenbee
- ISRRT Vice President Asia/Australasia – Napapong Pongnapang
- ISRRT Regional Director Asia/Australasia – Tan Chek Wee
- ISRRT Vice President Europe Africa – Hakon Hjemly
- ISRRT Regional Director Europe – Tim Agadakos
- ISRRT Regional Director Africa – Boniface Yao
- ISRRT Director of Education – Robin Hart
- ISRRT Director of Public Relations and Communications – Alain Crompt
- ISRRT Director of Professional Practice – Stewart Whitley

As a newly elected ISRRT Board we are ready to communicate and work towards the ISRRT strategic plan over the next four years for its member societies to impact Change, influence change and Create Change globally in health care. ■

Donna Newman
B.A. RT (R) CNMT F.A.S.R.T.
ISRRT President



Fozy Peer, Outgoing ISRRT President and Donna Newman, Incoming ISRRT President.





Dimitris Katsifarakis
ISRRT CEO Support Services

CEO Support Services report

Greetings to all!

Our regular meeting through this page of the *News & Views* comes after a very successful World Congress in Trinidad, last month in April 2018.

A considerable number of radiographers/radiation technologists from over 48 countries/ Societies came and actively participated to the greatest event (Scientific and social) of the ISRRT family.

A number of vendors and exhibitors created a large exhibition area which gave participants the opportunity to meet the producers and have firsthand experience on the product or services they provide on daily practice.

This year was the year for holding elections during the Council meeting.

A new Board has been elected, and the past Board 2014-2018 have left its legacy to the history of the ISRRT.

All Council members, board members and colleagues have thanked the past board and their President Dr Peer for the work they have done.

Radiographers throughout the world welcomed the new Board for 2018-2022 and the new President Ms Donna Newman.

During the Board meeting held in Trinidad there were a considerable number of decisions made for the management of the ISRRT and we have already started working to make them happen.

You will be made aware of them as they become mature and ready to be presented, in the near future.

I want to thank those who participated in the 20th World Congress, the societies of ASTR and CAMRT, and the Trinidad and Tobago Society who offered tireless efforts for hosting a successful world congress, and the number of individuals for giving their best for that.

I am looking forward to the next big event of the ISRRT, the World Congress 2020 in Dublin,
Best regards. ■

Dimitris Katsifarakis
CEO Support Services



Fozy Peer and Dimitris Katsifarakis with Corporate Sponsor Guerbet.



Stewart Whitley
Treasurer, outgoing



Philippe Gerson
Treasurer, incoming

Treasurer's report

The role of Treasurer changed hands at the recent World Congress held in Trinidad. At the Council meeting Stewart presented his Treasurers Report for 2017 and the official ISRRT 2016 Accounts which have been registered with the England and Wales Charity Commission. Copies of these reports are available via each member country Council member.

Stewart indicated that he was hopeful that there would be a small surplus for 2017 rather than an expected deficit but that this would be confirmed when the official accounts for 2017 were completed by the ISRRT's auditor Wormald & Partners based in Bristol, UK. These are expected to be available June 2018 soon after which they will be presented to the UK Charity Commission.

The workshops approved for 2018 include:

- **Africa 1**
Quality Assurance and risk management in medical imaging
September 28-29, 2018, Dakar, Senegal
- **Africa 2**
Justification of Practice and Optimization of Radiation Protection
October 8-10, 2018, Mombasa, Kenya or Nairobi, Kenya
- **Europe**
ISRRT/EFRS workshop in radiation protection
Sofia (Bulgaria) scheduled 26th October 2018

The new ISRRT Board, under the direction of the Finance Committee, is now in the process of agreeing a budget for 2019. This involves a number of steps with the first step involving all Board members from April 16 – June 15, 2018 being asked to consider budget requests for workshops and other important matters. A dialogue therefore between Council members and their respective Regional Vice President and Regional Director will soon be on the way. This will be your opportunity to have input to the decision making process. Details of the process is available on the ISRRT website.

All of our activities are funded by member societies, associate members, corporate sponsors and surplus income from World Congresses. The Board members are grateful for your on-going financial support.

Corporate partnerships

This year we welcome Samsung as a new Corporate Platinum member who join Guerbet who also recently joined the family of Corporate organisations supporting ISRRT. We need to recruit more as well as ideas to generate funds for all our activities. So I invite ideas that would generate valuable funds – please contact Philippe Gerson at philgerson@neuf.fr

We look forward to the future and assure you of our ongoing commitment to be prudent and good stewards of our limited resources.

Associate Membership fees

These have now been increased to £12 for one year and £30 for three years. The application form is available on the ISRRT website www.isrrt.org/associate-membership

Regarding PayPal

Since my last report I am pleased to say that a number associated membership subscriptions have been received via the ISRRT PayPal. That said now is the opportunity to visit the ISRRT website join as an associate member!

All of our activities are funded by member societies, associate members, corporate sponsors and surplus income from World Congresses. The Board members are grateful for your on-going financial support.

We look forward to the future and assure you of our ongoing commitment to be prudent and good stewards of our limited resources. ■

Stewart Whitley
Treasurer (outgoing)



DoseWise Portal

Take control of dose management across your organization

DoseWise Portal is the core component in your radiation dose management program. DoseWise Portal is a vendor-agnostic, web-based solution that collects, measures, analyzes, and reports patient and staff radiation exposure, assisting you to make data-informed decisions, improve efficiency, and demonstrate a commitment to quality, satisfaction, patient and staff safety.

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Philippe Gerson

Philippe Gerson

ISRRT Treasurer

Philippe Gerson qualified as a radiographer in 1981. He became Chief Radiographer in 1990 at the Hôtel Dieu hospital, the oldest hospital in Europe built in 651 and close to Notre Dame. Philippe managed the department of radiology, nuclear medicine and functional explorations of Hôtel Dieu hospital until 2005.

Now he is the Director of all paramedical staff including radiographers, nurses and psychologists at Hôtel Dieu hospital.

Philippe has held the positions of ISRRTs Council Member for France from 1995 to 2005 and regional PR for Europe and Africa from 2002 to 2005. He became Vice President of Europe and Africa region from 2010 to 2018.

Thanks to Marion Frank and Adrien Finch he has been very involved in Africa, attending the first ISRRT workshop in Arusha, Tanzania, in 1994. Philippe has been very active in this part of the world, organising several workshops and conferences in Burkina Faso, Cameroon, Ivory Coast, Gabon, Benin, Togo and Congo.

He has been appointed by the French Red Cross as an expert to set up radiology departments in health day care centers for AIDS in Africa specially in Congo, Niger, Burkina Faso and Gabon. Philippe has also organised workshops in Vietnam and Haiti. Always involved to help societies to be member of the ISRRT family.

More than 12 societies in Europe, Africa and Asia have developed thanks to Philippe joining ISRRT.

Philippe is an active member of the French Society AFPPE and has been Vice President since 2009 and Director of International Relationship Department since 1995.

He has presented many papers about his work in Africa at several national and international conferences.

Philippe's hobbies are like a good french man, cooking and tasting wine. Watching rugby on a Saturday afternoon is one of his greatest pleasures for the weekend. ■



Robin Hart

Robin Hart

ISRRT Director of Education

Rob is originally an Australian, but spent his formative years growing up in the UK. After studying Zoology at Sheffield University, Rob return to Australia in the 1990s to pursue a clinical career in the radiation sciences, and graduated from Curtin University in Western Australia with an honours degree in Medical Imaging in 1995. Rob then pursued doctoral studies and received his PhD from the University of Western Australia in 2001 for his research on the use of Transcranial Doppler Sonography in stroke survivors.

After graduating with his initial degree, Rob worked in the public health system of Western Australia for nearly twenty years, interspersed with a post-doctoral training fellowship at Ninewells Hospital in Dundee, Scotland between 2000-2001, and further periods in private industry developing novel medical imaging contrast media using porous silicon. Specialising in vascular surgery and interventional radiology, Rob has undertaken further training in interventional techniques, and with colleagues from Royal Perth Hospital is currently undertaking research into novel interventional catheter design. His other research interests include the use of medical imaging (particularly CT) in forensic and victim identification, and in the provision of medical imaging support in remote and resource-poor environments. Since 2002 he has served as a Subject Matter Expert in imaging for NASA's Space Medical Informatics and Health Care Systems branch, and also currently serves as an advisor to the Australian Antarctic Polar Medicine Unit. He has over 50 peer-reviewed publications in the international literature, and serves on the editorial review board of several international medical imaging and radiation sciences journals.

Professionally, Rob has served on the Accreditation Board of the Australian Institute of

Radiography (now the Australian Society of Medical Imaging and Radiation Therapy), and served on the Board of Directors of the same body until March 2017. In August 2017 Rob was appointed to the role of Associate Professor and Course Convenor for the Bachelor of Radiation Sciences at Monash University. He is an experienced supervisor of research students at Masters and Doctoral levels, and is passionate about engaging his students in active and flipped learning environments.

As the Director of Education for ISRRT, Rob brings his clinical and educational experience to the role for the empowerment of the international profession and for the benefit of patients. With colleagues in the Educational Regional Co-ordinator roles, the support of the ISRRT board and the broader international professional community, he will continue the good work of his predecessors in ensuring world's best practice in the radiation sciences.

In his spare time, Rob is a qualified private pilot and flies whenever he can. He holds tailwheel and aerobatics endorsements, and enjoys taking family, friends and colleagues for a mild to wild flying experience. He is currently building his own aircraft, which he hopes to finish at some point in the future. ■



Euthimios Agadakos

Euthimios (Tim) Agadakos

ISRRT Regional Director Europe

Mr Agadakos Euthimios or Tim as known by most, has been President of the Panhellenic Society of Radiological Technologists since 2010, and an associate clinical lecturer of the West Attica University. His major areas of interest are CT, radiation protection, patient safety. He is committed to promoting CPD, continuous quality improvement in medical imaging and radiographer role development.

He received his secondary education in Pireaus, Greece. His professional history as a radiographer began in the late 80s, when Tim returned to Sydney to continue his studies. His tertiary education was completed with a degree in Medical Radiation Technology (Diagnostic Radiography) at Sydney University. In 2011, he was awarded a MSc in Health Services Management from the National School of Public Health in Athens. Currently he is completing his PhD thesis in Medicine at the University of Athens.

His employment appointments include a five year period where he was a practicing radiographer and ultrasonographer in various private practices in Sydney.

In 1995, when he relocated to Athens, he commenced working in a large teaching hospital as a diagnostic radiographer. He is currently the Chief Radiographer of the Medical Imaging Department and has been working in the CT unit since its establishment in 1999. He recently designed and established CT protocols on a 128 MSCT system while benchmarking departmental Diagnostic Reference Levels (DRL) compared to the national DRLs. Tim is also a key member of the department's ISO working group and the PACS committee. He has also developed technical specifications of medical imaging systems for public procurement. In 2017, he was elected on the hospital's scientific council.

All these years, he has been actively involved in national and European scientific congresses with presentations in ECR 2004 and ECR 2008, ESUR 2009, CIRSE 2010, ECMP 2016 as a speaker, moderator, and a member of both scientific and organising committees. In 2016 and 2017 he was the ISRRT delegate at the HERCA MultiStakeholder workshops where he presented ISRRT's statements and flow chart model on justification by radiographers. In 2017 he observed the IAEA meeting on Unintended and Accidental Medical Exposures.

Furthermore he designs, delivers and evaluates health care CPD programs for the Ministry of Health and Social Welfare. Euthimios is a registered educator in healthcare by the National Organisation for the Certification of Qualifications and Vocational Guidance (Greece) and is often invited to design and deliver CPD programs in Educational Institutions of both, the public and private sector.

In addition, he represents radiographers' interests as a voting member in special governmental committees. ■



Håkon Hjemly

Håkon Hjemly

ISRRT Vice President Europe Africa

I come from the northern part of Norway, but live close to Oslo and work for the Norwegian Society of Radiographers as Manager of Policy. My main responsibilities for the society are related to professional role development of radiographers and to health political issues and I have held this position since 2008. During this period, I did a master degree in clinical health focusing on role development for radiographers, and post graduate education in both digital imaging processing and in x-ray protection.

Prior to working for the Society, I had variety of roles in both the private and public health sector in Norway; Clinical radiographer, QA-administrator, manager, Radiation Protection Officer, product specialist and sales representative (CT, mammography, conventional x-ray, Dexa scanners and mobile C-arms).

I was a pioneer in identifying pitfalls and establishing quality assurance controls during the process of digitalisation of medical imaging, and did consultative work for several x-ray departments in Norway. I also worked for the National Radiation Protection Agency in Norway, as part of the team that did quality controls on all the equipment that were being used in the National Mammography Screening Program.

I have been chairing and delivering a significant number of presentations at national and international conferences. I was elected member of the European Federation of Radiographer Societies (EFRS) election committee in 2010, but stepped down when nominated (and later elected) for Treasurer in the 2011-2014 board term. I had the role of EFRS Vice President for 2014-2015 and President 2015-2017. Beside my professional career I have been active in local and national politics and I also used to compete at national level in mid and long distance running. I still do some running but stopped competing a few years ago. I married for a second time 12 years ago and have 6 children in total.

I had no clue what a radiographer was when I applied to the education in Tromsø back in 1991, but it sounded exciting and a friend of mine said it was really cool. I actually worked as a plumber and was supposed to take over my father's successful plumbing business, but strange coincidences happened and I decided to break from my father's business and instead go for this totally different occupation in the health sector. I probably said no to lots of money by doing so, but I don't regret it and would have done the same again if I had the chance.

I am proud to be elected ISRRT VP Europe Africa and look forward to getting on with the work that this requires to be successful. I did not seek the position for personal glory or benefits. I did this because with my professional background, experience and my courage to speak up for those I represent, no matter how many or who is listening, I believe I can do a good job and together with the many great colleagues in the ISRRT leadership make a difference for our members and the future of our profession. ■

free e-book for ISRRT members

The British Institute of Radiology has just published

The Safe Use of Ultrasound in Medical Diagnosis

edited by Gail ter Haar

Sonographers and other practitioners increasingly need to be knowledgeable about the safety of a diagnostic ultrasound scan as the onus has shifted from the manufacturers to the person performing the scan.

This book, now in its third edition, is written for the practitioner and covers basic concepts important to the safe use of ultrasound and directs readers to extensive literature on the topic.

As part of the BIR's open access initiative, BIR Open, the eBook version is **FREELY AVAILABLE ONLINE** at:

www.birjournals.org/site/books/ultrasound.xhtml

as well as in print



2018 Dien Van Dijk awardee: Ms Cynthia Cowling

At this year's Trinidad and Tobago World Congress Gala dinner, the ISRRT Board of Management awarded Ms Cynthia Cowling the 2018 Dien Van Dijk award. The Dien Van Dijk is award in honor of the contributions of Dien Van Dijk one of the founders of the ISRRT and who in 1962 became the first president of the ISRRT.

She was dedicated to the education of radiographers and to supporting the development of medical radiation technology worldwide. This award was dedicated to her memory and set up to honor members of the ISRRT who have shown exceptional service and commitment to the ideals that were so powerfully demonstrated by Dien Van Dijk.

The person receiving this award must demonstrate exceptional service to the radiographic community, have held a past or present recognized position in the ISRRT and have demonstrated activities that reflect the founding principles of the ISRRT including assisting in the education of radiographers and assistance in the development of the profession of radiography in several countries.

Ms. Cynthia Cowling demonstrated her systematic contributions and efforts towards the enhancement of radiographers and the promotion of radiography and research in many of her various positions she has held in education and practice over her career.

Cynthia demonstrates many of these very qualities and founding principles of the ISRRT in regard to education. Just a few of her accomplishments include having been actively involved in contextualizing and delivering Curriculum for

radiography students in her tertiary institutions. Cynthia has demonstrated a lifelong support and promotion of the radiography profession in Africa, India, Asia and Arabic countries where among others she assisted in the education of radiographers with the coordination of education programs in Durban, Trinidad (Caribbean region), Tanzania and Western Pacific in Fiji.

Cynthia has dedicated work as a consultant for the Pan American Health Organization (PAHO) where she designed an associate degree program in radiography in Guyana and coordinated workshops in Uganda and Haiti.

Cynthia also put on focused workshops in improving the practice of radiography worldwide including 84-member countries during her term as ISRRT Director of Education from 2006 to 2014.

Cynthia demonstrates constructive leadership as Chairperson of the World Radiography Education Trust Foundation (WRETF) since 2014 to present.

Cynthia also wrote a very important article which was published in Radiography in May of 2013 which was used to support the effort to elevate the radiography profession with the International Labor Office (ILO) Qualification framework.

Cynthia professional career is filled with many more accomplishments but this short snapshot truly demonstrate why Ms. Cowling was chosen by the ISRRT Board of Management to receive the 2018 Dien Van Dijk Award.

Congratulation on your accomplishment Cynthia, it is well deserved. ■

ISRRT World Congress Pre-Congress Workshop

Radiation Protection and Safety

(Follow-up to Bonn Call-for-Action)

Jointly sponsored by the ASRT and the ISRRT

Hyatt Hotel, Port of Spain, Trinidad

April 12, 2018

Donna Newman, Outgoing Director of Professional Practice ISRRT

Stewart Whitley, Incoming Director of Professional Practice ISRRT

THE ISRRT Board of Directors and the ASRT co-sponsored what was the second Pre-Congress workshop on Radiation Protection and Safety following the successful Pre-Congress workshop held in Seoul October 2016. The aim of the workshop was to promote the ISRRT's continued efforts to be a global stakeholder in disseminating the Actions and requirements of the Bonn Call-for-Action by promoting knowledge and understanding of the vital aspects of the radiographer's role in radiation protection in medicine.

The decision to hold educational workshops before the world congress was reaffirmed at ISRRT's strategic planning meeting in January 2016 where they supported these global ideas and took the time to incorporate this practice strategy into the ISRRT's strategic goal, strategic priority and strategic initiative in which they agreed to notify member societies about the role the ISRRT playing in radiation Protection and safety and as one form of strategy is a Pre-Congress Workshop.

The format from our first workshop in Seoul worked so well the ISRRT Board agreed again have the same format at the Trinidad Pre-World Congress Workshop with the morning starting off with a global overview and panel discussion with audience participation to obtain suggestions and ideas for consideration in determining the priorities and next steps in the ISRRT's response to the Bonn Call-for-Action from its members themselves.

The ISRRT thanks the ASRT for sponsoring three expert speakers on specific topics relating on Radiation Protection as well as providing the wonderful lunch and coffee break for our participants during the daylong event. We also thank PAHO who agreed to record and help facilitate the workshop as a Webinar that day for professionals around the world that couldn't attend the World Congress. Please watch in the near future on the ISRRT Facebook page and website for the recordings form these presentations.

As Director of Professional Practice, and first speaker of the workshop, Donna gave an overview of the Bonn Call-for-Action 2018-ISRRT Global Assessment which was a summary of the outcomes from the International Conference on Radiation Protection in Medicine: Achieving Change in Practice global meeting held in Dec 2017 in Vienna Austria. This meeting was the follow-up meeting to the 2012 Bonn Call-for-Action meeting where stakeholder came together to review actions and developments since the 2012 meeting and focus on the progress in response to it Call-for-Action which is still needed for the successful implementation by 2022.

The second speaker of the day was Elizabeth Balogun, ISRRT Regional Coordinator for Professional Practice of Africa, who I invited to speak on the Radiation Safety Campaign they had started in Africa. Her topic was titled Radiation Protection in Africa – The Journey So Far. Elizabeth shared with the audience that AFOSAFE was established in 2015 as a radiation-safety campaign developed by the Pan African Congress of Radiology and Imaging (PACORI) and the aim of the Campaign was to establish that African radiation workers should establish for themselves the working tools necessary for radiation safety. The campaign has developed a tools matrix that can be used in elevating radiation protection and safety within their continent for their patient population.

The third and final session of the morning was moderated by Stewart Whitley, ISRRT Treasurer at the time and incoming Director of Professional Practice for ISRRT, as a Panel discussion with the Audience on the topic of Radiation Protection and Safety, Bonn Call-for-Action Assessment around the World.

The following three questions were asked to the audience for input and response:

- 1. What are the biggest Challenges that you are facing in implementing radiation protection of patients and staff in your country and hospital?**
- 2. What Bonn Call-for-Action strategies have you implemented in your country or department?**
- 3. What help do you need for implementation for Bonn Call-for-Action from ISRRT?**

In response to question one about the biggest challenges facing countries and hospitals Interestingly, several audience members from different countries talked about the lack of equipment for Quality Control procedures and the need for protocols on how to perform Quality control. Also, interestingly as part of the discussion surrounding both developing and developed countries, was the lack of training on radiation safety both for the worker and the patients. There is a need for more educational provision to be developed by stakeholder for professionals and to these have available where possible as free access using tools such as webinars and workshops similar to the one held at the Congress.

Also discussed by the audience was the need for more training for referring physicians in the medical programs with a focus on elements of radiation awareness and safety as well as an understanding of the ►

Justification process and the physician role within this process. Also verbalised during this discussion was the fact that radiographers need to ensure that Justification is applied appropriately and that they stay diligent about checking for duplicate procedures requests as well as ensuring that procedures that are requested fit within the established protocols in the department.

Also discussed from the audience as a challenge is in countries where there isn't a medical physicist and radiology equipment is being put into service without acceptance testing. It was also brought to light that more information is needed for technologist to understand quality control procedures and how to ensure that the quality control is being performed correctly. More information is needed to be developed on this aspect for radiographers to ensure they understand and can be the voice in their department to ensure the acceptance testing happens and all quality control is undertaken and passes before use. Two examples such as computed tomography and digital radiography were used during this discussion as areas that radiographers needed to know more about the quality control procedures and what to look for.

Surprisingly one participant shared that in one location that there was a push for disbanding regulation boards due to budget cuts and the need therefore for education for regulatory bodies and legislators and Ministry of Health to understand the area of radiographer's education and specialty areas.

Discussion also happened about the encroachment by other Health Care Professional in the radiologic science trying to gain exemption with no addition education to work within our field of practice. Radiographers have knowledge of the Basic Safety Standards and as an organization we need to discuss with governments to ensure that proper legislation is in place to protect the public with the use of properly trained staff. The ISRRT as an important stakeholder can provide the relevant advice on educational standards and it is our aim that this be sought with the aim to help and protect patients globally.

Question two about Bonn Call-for-Action strategies brought a lot of discussion as well. A lot of discussion happened surrounding the regional and county campaigns regarding radiation protection and safety. Although there has much been done in this area it was agreed that a wider distribution needs to happen in all countries to elevate the protection of the patient in radiation safety. Also needed was more

awareness on radiation protection and safety standards so it can be marketed to the end user in hospital setting so we can all be giving the same message.

African participants discussed that although there is great momentum on the initial launch of the AFROSAFE more African countries need to be brought on board with the correct message to help disseminate the information as well as the initial documents so all African countries can share the experience and elevate the safety within their continent.

Finally, on question three on what do our member countries need from ISRRT to implement the Bonn Call-for-Action participants said there are still many people who still have to hear about the Bonn Call-for-Action and that more is needed on how to find this information. It was discussed that the ISRRT website has a special tab just on this subject and that all members should go there to find relevant information regarding this issue. In response ISRRT is committed to continue to bring this information forward to its members in all different forms including the *ISRRT News & Views*, ISRRT Facebook, Webinars and Workshops over the coming years.

What was apparent in the discussions that the subjects raised coincided with the outcomes from the follow-up meeting held in Vienna this past December. First, more education is needed to be developed on how to optimise the dose in computerized tomography in the form of guidelines or protocols to understand how to enhance the image, optimise the dose without losing quality as well as protocols for performing quality control procedures.

Secondly, because of the shortage of workers in countries nontraditional education is needed to help radiographers understand how to reduce dose in computed tomography, digital radiography, and nuclear medicine.

Thirdly regarding radiation therapy that users know who to undertake quality control using the lowest doses possible when acquiring images for position accuracy for the treatment plan.

Also discussed was the importance of the World Radiography Day and using this to educate the public, referring physicians and other health care workers.

The new Director of Professional Practice Stewart Whitley will take all this information back to his committee to see how they can help with all these issues over the next four years. Also, to note a



survey was distributed to each workshop attendee regarding the Bonn Call-for-Action and its components. Stewart is compiling the result as this is written and look for a summary later this year.

We then proceeded on to some more pointed education on specific areas of our profession relating to radiation protection with a wonderful speaker Michael Latimer MSRS RT, FASRT who spoke on Radiation protection in medical imaging: A Holistic Overview. Mike gave a best practice overview including how important it is to have the radiographer select the appropriate exposure technique factors for the patient's size and condition based on a planned exposure system designed in collaboration with radiologists to determine adequate image quality for diagnosis.

Mike also talked about best practice as using collimation of the X-ray beam to the anatomic area appropriate for the procedure, not to use wide open collimation and in particular when performing digital radiography electronic collimation should be applied in a manner that demonstrates the actual exposure field edge to document appropriate collimation. The entire lecture was filled with practical information for radiographers to bring back to their daily work.

Also talked about by Mike for best practice in Digital Radiography was to use the highest kVp within the optimal range for the position and part being imaged. Couple this with the lowest amount of mAs needed to provide an adequate exposure to the image receptor.

Michael Odgren MSRS RT, FASRT went on to talk specifically on paediatric imaging with a talk titled 'Radiation protection in Pediatric imaging'. Mike's talk was right in line the principles of the Bonn Call-for-Action and shared some best practices for any procedure being ordered by a physician.

First, Mike talked about the role of the radiographer having a responsibility to recognise and take action when an incorrect exam is requested. He went on to explain that unneeded exams requested by doctors are contributing to or causing excess radiation exposure to pediatric patients. Mike also gave some practical pointers on how to reduce dose in computed tomography by making sure you reduce kVp and MA where appropriate based on size and weight of patient and when performing pediatric imaging always use single phase contrasted studies to reduce unnecessary exposure to the patient. We should also keep in mind to always limit the exposure to only that area which the doctor requested and to use iterative reconstruction. Also, in relation to pediatric imaging in digital radiography avoid "Dose Creep" and be sure to document exposure factors (kVp and mAs) and check for prior exams before making the exposure to the patient.

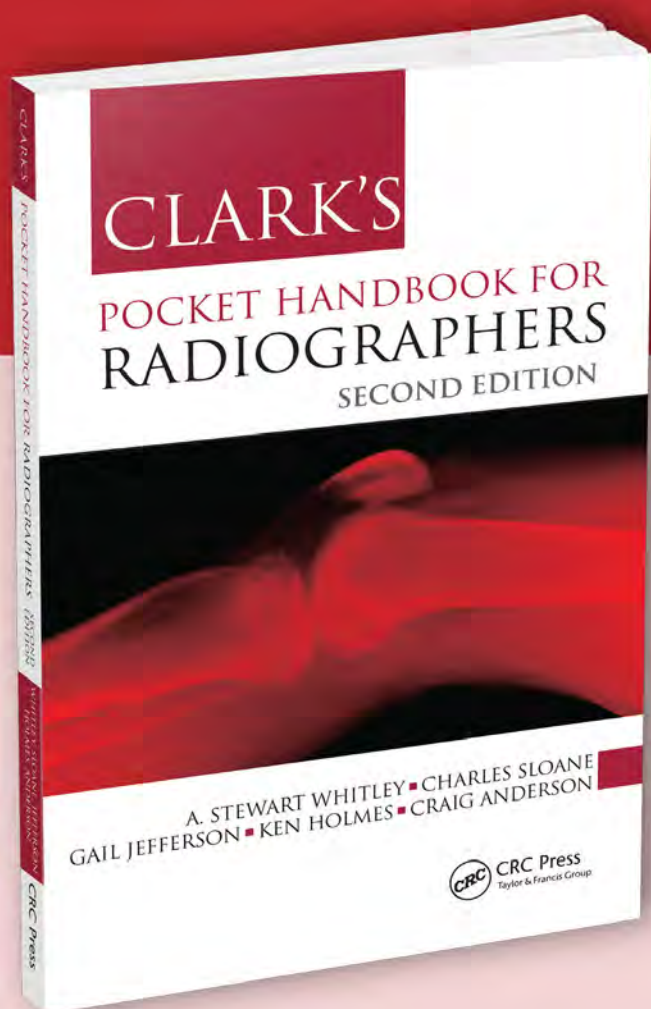
Our final speaker of the day was Sandra Hayden. MA RT, FASRT who spoke on radiation safety in radiation therapy. Sandra stressed the fact that even in Radiation Therapy you need to use radiation safety and radiation protection practices every day. Her main topic was emphasising the use of good practice when you are doing daily imaging to ensure your treatment is accurate and effective. Sandra also talked about some of the top causes of errors that can happen which include; stress, time pressure or rushing, Multi-tasking, imprecise communication, overconfidence, vague guidance, first time performing task and distraction or interruption. Sandra shared some great pointers on how to put the patient in the front of you and pay attention to just their exam or procedure at the time.

The audience were also able to ask pointed questions about quality control and equipment checks with best practice on a particular vendor's equipment to ensure optimal dose was being delivered.

At the end of the interactive presentation Sandra was able to share some best practices on the importance of staffing for radiation therapists, chart check by physician and the role radiation therapist plays in ensuring radiation safety and radiation protection.

For anyone interested in hearing this education the ISRRT is working on this being turned into a webinar for its members to login to on our website and review the specific information as well as to share with other back at their practice site. Look for more information coming in the near future. ■





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ISRRT World Congress Trinidad and Tobago

A Council Members perspective

Submitted [Hanna Joki](#), ISRRT Council Member Finland

I had the honour to represent Finland as a Council Member for the second time in the International Society of Radiographers and Radiological Technologists (ISRRT) meetings at Port of Spain, Trinidad and Tobago. Open Forum as well as the other meetings was held at the Hyatt Regency Congress Hotel. At the Open Forum all Council Members had the possibility to open any discussion, ask anything from the acting Board and the Board is able to give information of the on going co-operations, projects and matters to be decided at the actual Council Meeting. This time as expected, the majority of the open forum was used to go through the new suggested funding model that was to be decided if the council accepts it or not, during the Council Meeting. Fact was and is, that the funding model has to be renewed. However, the model that was created did raise many questions and there was a concern that the new model will be too expensive for certain countries and maybe not equal in general. The working group that created the model did answer the questions well and they did give useful additional information to the decision making. It was agreed, that the model was not quite clear and 'on date' and it does need some 'tweaking' to be equal.

At the regional meetings Europe and Africa, Asia and Americas hold their own meetings to discuss the Council Meeting matters and other regional matters. In my opinion, in future, there should be a set agenda for the regional meetings which has to be sent beforehand to the council members within the areas. During the regional meeting there was a question raised of should Europe and Africa be one region or should they be separated in future? The two areas are totally different and it might be useful if they work independently in ISRRT. This is worth investigating. Representatives from the Africa region did ask help with training specialists for different modalities. Especially there is need for people from different hospitals to find collaboration from Europe and other regions with hospitals and universities, who are interested in on-site training at their facilities so the person who is trained can go back to the homeland hospitals and train other staff. This is something in which I hope the ISRRT can help, to connect people, organisations and facilities for future collaborations. I think it is the very core of why ISRRT exists today.

At the Council Meeting there were delegates from 32 countries present. With the new members that were accepted to be part of the ISRRT family, we now have 100 member associations around the world. The Council did elect a new Board and

new regional co ordinators and there was a decision of a change in the election process of the future congresses. In future, each region will be eligible to bid for the World Congress, it does not have to rotate through each region in order any more.

The council did vote of the new funding model and it was approved, the discussion before voting brought out the fact that the new model must be corrected by the new board so it is equal and fair for every country. There might be need for a fifth tier in the model and as was said in the meeting, the tier and amount of payment must be in the end at a level that the societies are able to pay.

Due to the funding model, discussions during the pre-council meeting and in the council meeting brought up the fact that we as a society, might have to go through our statutes and rethink them. There was a question raised as well of, should we accept the educational organisations as members in future? That might be a benefit for ISRRT as well as for the educational wing, we could do more efficient collaborations and connect for example universities and member societies to work together

Maybe there is a need to re-think of who we are, why we are and where we are? The world is changing rapidly, the funding has tightened in our countries and hospitals. Maybe we need to make some changes too? And the big question lies ahead in our national societies and in ISRRT as well; how do we make ourselves interesting to the next generation to participate and take actions? ■



Director of Public Relations and Communications Alain Crompt, Regional Coordinator Public Relations Europe Hanna Joki, Regional Coordinator Public Relations Asia/Australasia Edward Wong, Regional Coordinator Public Relations Africa Stephen Samson Mkoloma.

ISRRT World Congress Trinidad and Tobago

A Council Members perspective

Submitted Denise Choong, ISRRT Council Member Singapore

This being my first attendance at the ISRRT World Congress was indeed an eye opening experience as the Singapore representative on the ISRRT Council. As a relatively young radiographer with only seven years of experience in the industry, exposure to the professional issues that radiographers and radiologic technologists face around the world comes at a key point in my radiography career.

The week began with a pre council meeting open forum where the strategic priorities for the ISRRT were recapitulated and the progress of action on these priorities were updated. I could appreciate how the ISRRT truly works as the voice of the profession, affecting change by bringing the radiography perspective into global documents on key issues such as radiation protection and safety, paediatric imaging and cancer management. The ISRRT continues to develop and promote international standards in practice and radiography education by collaborating with policy makers and education providers around the world.

In addition to the existing initiatives the ISRRT was taking, new developments were discussed; a new funding model was introduced to ensure equitable collection of funds from member countries so that the ISRRT coffers would remain healthy to provide quality programs throughout the years. Based on tiered stratification of each society's income, there were concerns that the steps between tiers were too great and that for many societies funds collected were to cover insurance and other fixed costs, thereby possibly inflating the value used for calculation of ISRRT membership fees. It was agreed however that the model designed by the workgroup would be accepted and that these concerns would be adjusted for along the way. Huge thanks are extended to the appointed committee for working tirelessly over the past year to develop this.

Subsequently the regional council meetings were held, where the member countries of the Asia and Australasia region updated each other about the current issues and developments in each country over the past two years. The region was well represented, with council members from Australia, Thailand, New Zealand, Vietnam, Nepal, Sri Lanka, Macau, Taiwan, Hong Kong and Singapore. Key issues discussed included expanding capabilities for collaboration between societies by identifying modality experts from each country to facilitate organization of workshops and skills training around the region. An important issue of radiographers performing ultrasonography was raised in light of difficulties our Korean

colleagues are facing. Due to the variation in practice among the countries within the region, we collectively agreed to provide the summary of the current practices with regard to ultrasonography of each of the countries to further explore the issue.

The Council Meeting began proper with the approval of previous Council Meeting minutes from the last World Congress in Seoul, followed by the activity reports of the Board of Directors. The first voting procedures were undertaken for the council approval of two position statements formulated by the Board: first on the prescription of medication by radiographers and radiological technologists, and second on the roles of radiographers and radiological technologists on team based quality assurance and control. These statements support role extension of adequately trained radiographers in the Asia Australasia region which are especially important in areas where clinician availability is scarce. More importantly it paves the way for elevation of the roles of radiographers and radiologic technologists as professionals. In addition to electing a new Board of Directors, we are happy to welcome six new member countries, including the Taiwan Association of Medical Radiation Technologists (TAMRT). We acknowledge that there may be more than one society in each country, but with more countries under the ISRRT umbrella, there is a common platform where we can come together.

The congress was thoroughly enjoyable with an extensive scientific program and a lively social program to match. The Society of Radiographers of Trinidad and Tobago were lovely hosts who I sincerely thank for a great job well done. It was lovely to experience the cultural diversity of Trinidad. I am glad to have made many new friends in the ISRRT family and I look forward to working with and meeting everyone again in Dublin for the 21st ISRRT World Congress in 2020.

Till then, I know it may take time familiarising myself with the various ISRRT initiatives and projects, but I will endeavor over the next two years to incorporate what I have learned from the congress to guide my practice and strive to bring the profession to greater heights. ■



Asia/Australia regional Meeting with ISRRT Council Members, President and leaders from around the region.



Ghana WRD: Professionalism and safety of the patient

Ghana

November 8, 2017

Report by [Prince Rockson](#), President Ghana Society of Radiographers

NOVEMBER 8 each year is celebrated globally as World Radiography Day and in 2017 The Ghana Society of Radiographers took active steps to ensure that the Ghanaian Radiography professionals were part of the world celebration.

The theme was Professionalism and Safety of the Patient.

The commemoration of the WRD celebration was in collaboration with the Nuclear Regulatory Authority of Ghana and the Allied Health Professions Council of Ghana to highlight the important role Radiographers play in ensuring safety of the patient at all times.

The program gave radiographers the opportunity to share knowledge on recent scientific research with other members.

The 122nd anniversary of the discovery of x-rays was hosted at the Golden Bean Hotel in Kumasi, Ashanti Region, the second largest city in Ghana with a total of 150 participants present.

The Chairman of the LOC Nana Sarfo, a Traditional Chief and the Chief Radiographer of Komfo Anokye Teaching Hospital introduced the Chairman of the occasion as The Paramount Chief of Bompata Traditional Area under the Ashanti Kingdom and also the Board Chairman of Komfo Anokye Teaching Hospital. Nana Effah Apenteng, the Chairman is also a retired carrier Diplomat.

The President of the Society Mr Prince Rockson delivered the welcome address, followed by the Guest speaker's speech by Prof Emi Reynolds, The Director General, Nuclear Regulatory Authority of Ghana. Dr Samuel Opoku, Registrar of the Allied Health Profession Council of Ghana and also the President of PACORI (Pan African Congress of Radiography and Imaging). Dr Chukwudi Okeji, President, African Radiography Forum and a Senior Lecturer from

the University of Nigeria was the International invited guest. The last speech was delivered by Prof Eric Ofori, Dean of University of Health and Allied Sciences of Ghana.

All speakers highlighted on the theme for the year's celebration.

Other dignitaries present at the occasion were Dr William Antwi, Lecturer, University of Ghana School of Biomedical and Allied Health Sciences, Dr Yaw Wiafe, Lecturer, Kwame Nkrumah University of Science and Technology, Dr Abdul Nashirudeen Mumuni, Lecturer University for Development Studies of Ghana, Mr Lawrence Arthur a retired Radiographer and Lecturer.

Nana Effah Apenteng, gave his closing remarks commending all the speakers. He graced the occasion with his rich royal experience of wise sayings blended with his academic exposures.

The core information disseminated on all media platforms was the need for the Regulatory Authorities to apply the laws to get rid of unauthorised persons exposing the innocent patient to ionizing radiation. Secondly the building of capacity for radiographers by the Universities and the need to be united to champion a common goal in Africa in the interest of the patient.

The 122nd World Radiography Day celebration and National Scientific Conference also goes down in history as our greatest effort at establishing the needed publicity and awareness creation for our profession. Congratulations to the Local Organising Committee led by Nana Sarfo and the Regional Chairman Mr Daniel Olai Mensah. The program was sponsored by the Ghana Society of Radiographers, GE Health Sciences and Star Life Company.

In conclusion, 2017 WRD was a success for the society. ■

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Regional Director Boniface Yao (centre) and participants.

Justification of radiological procedures and optimisation protection of patients and workers – an ISRRT - Chesney capacity building Workshop in Africa

Abidjan, Côte d'Ivoire

December 11-14, 2017

Report by **Boniface Yao**, ISRRT Regional Director Afric

ON December 11-14 last year in Abidjan Côte d'Ivoire, an ISRRT sponsored workshop was held. The session namely ISRRT-CHESNEY capacity building workshop, was hosted by the National Association of Radiographers (ANTIMCI).

Following the ISRRT's response to Bonn Call-for-Action, it has been decided to deal with justification of practice and optimisation of radiation protection and patients and workers.

The venue was the Amphithéâtre Dr Bruce Struminger at the National Institute of Health Agents (INFAS). The event attracted 50 participants from five french speaking african countries.

The conference was approved by the Ivorian Ministry of Health and was patroned by the General Director of Health Prof Dagnan Simplicie representing the Minister and co-chaired by the General Director of the National Authority of Radiation Protection Prof Goffry Marie Chantal and the General Director of Health Training Institute, Prof N'Dahtz Meliane E. Epse Sanogo.

The training composed of four sessions.

The inaugural lecture on basic radiation physics was



Dosimetry skillslab.



Above L-R: Mr Saliou Zourmba (Cameroon), Mrs Muaka Diela (RC), Mrs Zouankeu and Mr Mohamaou Aminou (Cameroon).



Opening ceremony.



Student radiographers at the opening ceremony.



Quality control skillslab.

provided by a local expert of IAEA, Prof Monnehan Georges Alain, Director of Nuclear Physics and Radiation Protection Laboratory, University Felix Houphouet Boigny Abidjan .

The second part, managed by Pof N'Zi Kouassi Paul, radiologist and IAEA project coordinator for patients safety, dealt with radiation protection of patients.

The third part focused on radiation protection of workers and was taught by Mr Robert Aziagba, a radiation protection officer from Togo. This session was completed by skillslab performed by the trainer and participants and consisted of dose measurement and quality control procedure

The workshop had a practical orientation and aimed at teaching

the participants a method to organise and assure radiation protection for patients and staff in a radiology department through elaboration of sustainable projects.

The fourth session focused on projet management. To help all delegates conceive radiation protection projects for their local settings.

This workshop has been an opportunity for radiographers to develop skills and update their knowledge in radiation protection. A follow up survey will be carried out to evaluate the impact.

This project is part of the ISRRT action plan to echo Bonn Call-for-Action in Africa. The present workshop will be replicated in English speaking Africa in 2018. ■



Prof N'Zi Trainer, Pr Yapo responsible for radiographers training, Boniface Yao ISRRT Regional Director Africa, Prof Goffry Marie Chantal General Director Authority pictured with participants.



Workshop: Radiation Protection & Patient Safety in Daily Practice

Mandalay, Myanmar

February 1-2, 2018

Report by **Khin Maung Tin**, President, Myanmar Society of Medical Radiation Technologists

THIS workshop is jointly organised by University of Medical Technology – Mandalay, Myanmar Society of Medical Radiation Technologists and Thai Society of Radiological Technologists at the University of Medical Technology, Mandalay on February 1-2, 2018.

The opening ceremony was held at the Myat Yadanar Auditorium on February 1, 2018 at 8:30 am. The high ranking official from the Ministry of Health and Sports, the Rectors from the University of Medicine, Mandalay and related universities, lecturers and teaching staff of various departments, medical radiation technologists and medical physicists from whole of Myanmar attended.

The total participants were 120 from 23 government hospitals, 11 private hospitals and clinics and 2 universities.

The faculties are:

1. Napapong Pongnapang, Ph.D.
Department of Radiological Technology,
Faculty of Medical Technology,
Mahidol University, Bangkok, Thailand
2. Taweap Sanghangthum, Ph.D.
Department of Radiology, Faculty of Medicine
Chulalongkorn University, Bangkok, Thailand

3. Kitiwat Khamwan, Ph.D.
Department of Radiology
Faculty of Medicine
Chulalongkorn University, Bangkok, Thailand

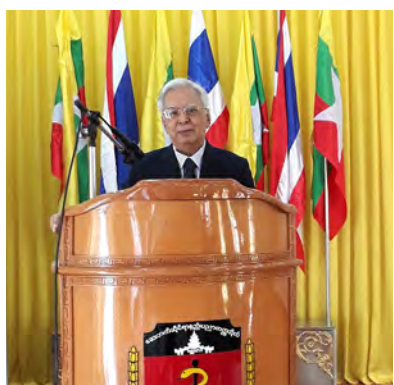
4. Ms Mya Mya Chaw Su
Lecturer
Department of Medical Imaging
University of Medical Technology, Mandalay

February 2, 2018 Time: 8.30-12.00 (Day 2)

Practical session on radiation safety in diagnostic radiology multi-modalities (plain radiography, fluoroscopy, CT and nuclear medicine) by Ms Mya Mya Chaw Su.

Group discussion on assessing and evaluation of the present status of radiological protection encountered in radiology departments in government hospitals and private sectors.

The workshop was very successful and fruitful for medical radiation technologists and medical physicists. ■





First Congress of the Algerian Radiographers Society

Algiers, Algeria

May 4-5, 2018

Report by [Philippe Gerson](#), former Vice President Europe and Africa and incoming ISRRT Treasurer

FOLLOWING my nomination in 2010 as ISRRT Vice President for Europe and Africa, one of my objectives was to help the countries from the Maghreb region to become ISRRT members. First was Morocco, then Tunisia and since our last world congress in Trinidad, Algeria joined the ISRRT family.

The Algerian Society AAMIM (Association Algérienne des Manipulateurs en Imagerie Médicale) was born in November 2017 and just six months later they are now ISRRT members.

This is a new association with several young members very motivated for their profession. The President Samir Kechout, the Vice President Khadidja Bouchelout and the General Secretary Abdel Ghembaza organised several conferences and congresses in different provinces of Algeria in 2017.

Algeria is a huge country with an area of 2 million km². The Society's immediate objective is to inform all the radiographers in Algeria that a new association has been formed and is now operational.

The Society provides good education during each calendar year and decided to organise, with the help of the French society (AFPPE) their first congress in Algiers at the beginning of May.

Three educators including myself attended this first conference which gathered 225 people from Algeria.

Delegates came from the south of the country which meant a 20 hour journey by bus or by car, with delegates covering all their

expenses (transport, accommodation and registration) to attend their first post graduate course.

Fifteen papers (2 from radiologists and 13 from radiographers) were presented on this single day conference. For most of the radiographers presenting it was their first ever public presentation which was accompanied with a lot of stress for the individuals concerned but of all high quality.

Algeria has a good supply of CT and MRI scanners as well as digital radiography systems, however, the big issue is the education for radiographers. They graduate after a three year program in a paramedical school but then need post graduate education.

The congress ambience was fantastic with a warm welcome for the French educators but also for our colleagues from Tunisia who had a 20 hours journey by car to attend the congress.

Unfortunately, on their way back home two radiographers had a car accident and were injured with fractures and facial trauma. Thankfully they are now safe and well and immediately we extended our best wishes and support.

AAMIM has already planned another regional conference in a few months time as well as another National Congress next year.

I'm sure that ISRRT with the Regional Director Boniface Yao and the new Europe Africa Vice President Hakon Hjemly will support AAMIM and this region. ■



Patient safety

Report by **Nicole Dhanraj**, Guam

Overview

Patients seek medical care from health care organisations and medical providers in their times of need. Patients do not expect to be cured 100% but they expect that the medical care provided will be of excellent quality, affordable and delivered in a safe environment. Patients trust medical professionals and the system. Patients assume they will be well-taken care of and protected from harm. However, the realisation is that even though health care organisations comprise of a dedicated workforce who is typically well-trained, competent and committed to providing quality and compassionate care, there is a certain level of risk that can cause patient harm unnecessarily.

Healthcare organisations are people intensive and filled with operations that can become strained and lead to inadvertent errors. Health care professionals are keenly aware of this inherent risk and as such patient safety is a top priority.

What is Patient Safety?

In 1999, the Institute of Medicine (IOM) released a report, “*To Err is Human: Building a Safer Health System*” which the authors highlighted problems of inefficiencies, waste, unsafe practices, inequitable care, unnecessary volumes, and rising expenditures. The report stated that the industry lacked sustained practices to promote cost-efficiency and high quality and safety. According to the World Health Organization, 1 in 10 patients are harmed while receiving care, 43 million safety events occur at a cost of \$42 billion per year. Since the IOM report, and more so with reimbursements shifted from volume-based care to value-based care in the United States, there has been a redefined focus on patient safety; both from a negative and positive perspective.

Consequently, the healthcare industry is on a continued improvement path to reduce unnecessary injuries, errors and avoid any unexpected harm to patients. Therefore, patient safety is defined as the manner in which healthcare organisations protect their patients from any preventable harm.

Medical Errors

A medical error is a failure of an intended action or the incorrect use of a specific plan that results in unintended outcomes. Errors can result in incidents that either reach the patient or never reach the patient. Those that reach the patient could be defined as serious or minor errors and those that never reach the patient are termed, “near-misses”.

Near Misses

Near misses are events that were potentially harmful but were recognized and corrected before harm resulted. These are also called “potential adverse events” and is much more common than adverse events. Unfortunately, reporting of such events are less common as they are not seen as a concern. However, near misses are excellent “free” opportunities for identifying vulnerabilities in the workplace. These close calls are more frequent than adverse events and provide more information about errors from the perspective of health care workers who come into contact with processes and equipment at all levels of the health care system. These events can help leaders understand the circumstances that triggered them as well as the “upstream” systemic factors that can give rise to them. It is also easier for risk managers to investigate because there typically is no worry of liability. The staff is typically less worried and therefore more comfortable in discussing the concerns and brainstorming solutions.

Why Harm Occurs

Patient harm is often seen as a deliberate act, or a willful neglect of compassionate quality care. However, this is not the case. Instead, it is as a result of several issues both human and systematic with some issues compounding others. Some examples include:

1. Patient mismanagement

Patient’s succumb to improper management of their care which

can lead to outcomes such as incorrect site for performing procedures, incorrect procedures/medications or a simple failure to follow through with appropriate care.

2. Poor communication

Lapses in communication amongst providers or even patient and health care provider are linked to many patient safety events. Even though health care professionals are supposed to be effective communicators, poor communication is a continued problem. This is because communication has a behavioral component to it, influenced by cultural differences, varied skill/educational levels and personalities.

3. Improper resource allocation

Care is compromised when not enough resources are dedicated to various areas resulting in workforce shortages, lack of medical equipment, medication unavailability, reduced opportunities for training and implementation of safety strategies.

4. Lack of proper policies and procedures

Workers rely on policies and procedures to guide their practices. Without it, assumptions are made, or inconsistencies experienced as there are no set guidelines. Consequently, a lack of definitive policies makes patients more vulnerable to a harmful event.

5. Organisation culture and leadership practices

Patient safety becomes a priority in organisations when leadership emphasises it as a priority. It is crucial that leadership establishes a culture of safety, listens and addresses patient and staff concerns, and is supportive of continued improvements and monitoring.

6. Technical failures

Failures that result from equipment or lack of competent technical expertise can result in negative patient safety events.

7. Training deficiencies

The health care industry is a very dynamic one. It is critical to any organisation to ensure that their workforce is properly trained in procedures, equipment, familiar with hospital best practices and update their practices frequently to ensure that their skills and competences are abreast with industry patterns.

8. Breakdown in teamwork/Disconnected care

Delivering healthcare takes a team of multidisciplinary professionals. When there is a breakdown in safety-relevant teamwork behavior, it impacts the quality and safety of patient care. It is important that manager evaluate barriers to effective teamwork and communication so that team goals are achieved successfully and efficiently, with fewer errors.

9. Failure to follow implemented procedures

Health care is comprised of various complex services. Formalized written policies and procedures promote compliance, reduces variation, reduces the reliance on memory, and serves as an important resource for daily operations. When not adhered to, it puts patients at risk for unnecessary harm.

10. Mistakes

Despite adequate training, education, awareness etc, staff are subjected to mistakes that consequently causes unintentional harm to patients.

Examples of errors that occur in radiology

A Misidentified-patient events

- errors in patient identification that either stems from another area or within the radiology department.

B Mislabeled-patient events

- the correct patient was imaged but the images were placed in another patient's folder

C Wrong-dictation events

- images are placed in the correct folder, but another patient's images were reviewed in error

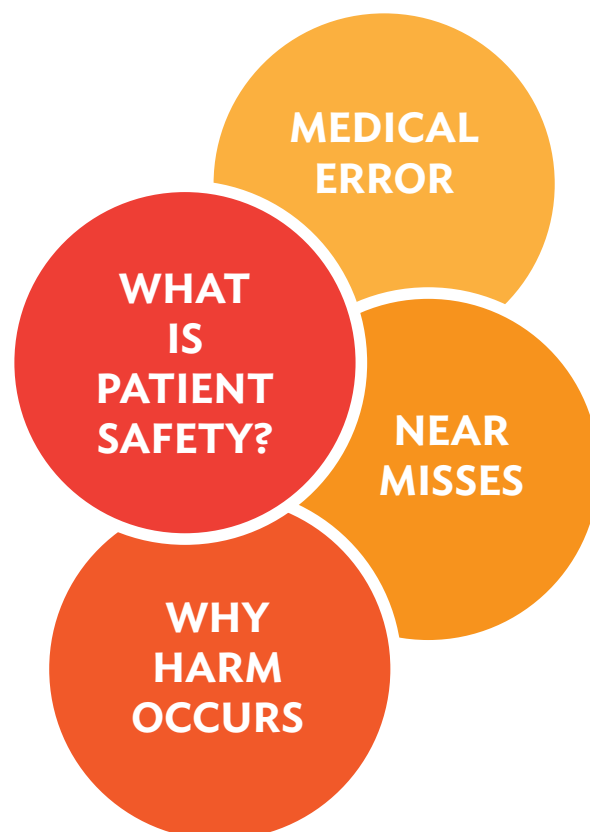
D Improper medication administration

- patients are given wrong medication, incorrect dose or have conditions that contraindicate the use.

Current patient safety initiatives in the US

Across the US, much emphasis is placed on some key areas that have a significant impact on reducing preventable errors. These include:

- 1. Antimicrobial stewardship.** As bacteria and fungi continue to become increasingly more resistant to antibiotics, health care organizations focus on implementing programs to reduce the rate of which these antibiotic resistant organisms grow.
- 2. Adherence to hand hygiene protocol.** Improper hand hygiene practice is linked to infections. Organizations stress to their workforce the importance of accountability in adhering to such a simple method to reduce risk of infection.
- 3. Minimizing patient falls.** This is the most frequently reported safety occurrence. Organisations identify patients who are at risk for falls with wrist bands, or signs on patient rooms.
- 4. Preventing adverse drug events.** This includes administering too much or too little medicine or patient experiencing an unexpected allergic reaction. The prevention of adverse drug events is spearheaded by the use of computerised health record system which provides warnings that take into consideration the patient's underlying conditions.
- 5. Pressure ulcer prevention.** This is especially for bed-ridden patients where pressure ulcers can slow recuperation process and impact quality of life. Improved staff training on wound care such as skin inspections, patient positioning, nutrition, and appropriate skin care is important to preventing pressure ulcers.
- 6. Reducing radiation exposure.** With the advent of computed tomography technology (CT), CT has become the gold standard for diagnosing injuries very quickly and as such used very frequently. Consequently, the initiative is to use as low as dose as possible to reduce the probability of cancer occurring in the patient.



7. **Patient identification.** As a means to identify the correct patient, organisations have established the use of two patient identifiers which patients use to confirm their identity.
8. **Improved information management in patient electronic medical health records.** Health providers need to have accurate, up-to-date information needed to make the best clinical decisions for their patients.
9. **Improved medication administration.** This is accomplished through disuse of abbreviations, and barcoding which helps to ensure right dose to right patient.

Current patient safety measures in radiology

Medical imaging is of critical importance to the health care industry. As such radiology professionals have the task of not only providing superior imaging with quality service, but to ensure that they do so within a safe environment. Within radiology, there are multiple processes that have been implemented to improve safety.

These include

1. Reducing radiation exposure to all patients, regardless of age.
2. Proper screening of patients and of patient's families prior to having a MRI examination.
3. Labeling of MRI safe zones and MRI safe equipment (such as fire extinguishers, gurneys, wheelchairs and IV poles).
4. Availability of crash carts for pediatric population if your department serves such a population.
5. Use of glomerular filtration rate to assess renal function if contrast need to be administered.
6. Conducting mock codes in all areas so that staff and support personnel understands their role and equipment location.
7. Training not only of radiology staff but hospital-wide staff on radiation safety.
8. Ensuring patients are consented for their procedure while they are unmedicated and coherent.
9. Administering medication in the right dose and via the right route.
10. Performing time outs prior to invasive procedures.
11. Confirming accuracy such that the right exam is performed on the right patient on the correct side and anatomy.
12. Maintaining continuity of care. For example, critical results are delivered to patients' caregivers in a timely manner.
13. Understanding patient's history and contraindications to specific medications such as CT contrast, oral contrast or nuclear medicine isotopes.
14. Maintaining open communication amongst colleagues and across departments to facilitate care.
15. Providing adequate training especially for new employees, when new equipment is purchased and when areas of deficiencies are identified.

Identification of patient safety issues

Insights to understanding patient safety events are identified by three sets of people

1. **Frontline staff.** These are the staff that works directly with patients and equipment every day.
2. **Patients.** Patients, through their experience are able to help understand issues.
3. **Professional bodies/researchers.** Such people help to identify areas of risk and in some cases propose solutions that help improve safety in the delivery of care.

Safety-Conscious

Even though organisations share common patient safety goals, each organisation is unique and need to continuously monitor their practices and processes to identify areas that can potentially cause unnecessary harm. In doing so, organisations can act before actual harm occurs, or can intercept as needed to reduce further harm. Some organisations have a greater focus on patient safety than others. Regardless of organisation size, resources, or location, it is imperative that leadership cultivates a culture that focuses on patient safety, continuous learning and improvement. It is important that leadership facilitates a culture where staff feels comfortable to report near miss events, raise concerns or speak up when there is a safety event or potential for harm to occur.

Other safety components

Of note, patient safety also includes processes not directly related to patient care such as the healthcare environment, for example, safety, preventing fire hazards, ensuring proper equipment functionality, and proper flooring.

Conclusion

Preventing harm to patients is quite challenging. Health care organisations work hard to protect patients from unnecessary harm during their care. Despite key awareness and multiple efforts to implement stop signs to thwart errors, mistakes do occur. The health care industry is a function of our actions as humans, so we are all fallible. With this understanding, most approaches to improving safety has shifted from human error to creating robust systems within organisations that will help identify, prevent, and reduce errors before harm occurs. However, it is our duty as health care professionals to

1. Remain committed to understanding the depths of problems so it can be fixed.
2. Be vigilant to daily operations to identify areas of concern.
3. Ensure that we speak up to help mitigate risks or prevent future errors
4. Be proactive and continuously alert to evaluate where work processes may break down. It is a team effort. We must not fall victim to the attitude that it is not "my job"
5. Improve our collaboration and communication with the team.
6. Be open to learning from past events to prevent similar events from occurring.
7. Support a high reliability and patient safety culture in our respective organisations. ■





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International Conference on Radiation Protection in Medicine

Achieving change in practice

IAEA, Vienna, Austria

December 11–15, 2017

Donna Newman, Director of Professional Practice ISRRT (outgoing)
Napapong Pongnapang, Vice President ISRRT Asia and Australasia

Donna Newman and Napapong Pongnapang attended the conference representing the ISRRT December 11–15 to represent the radiographers global voice along with other stakeholders to discuss the Bonn Call-for-Action and review successes and gaps. Stakeholders were asked to determine how they can contribute or improve and help facilitate the success to the Bonn Call-for-Action. The conference was a way for stakeholders to review actions and developments since the Bonn Conference with focus on progress in response to it Call-for-Action. The conference participants reviewed and discussed overall approaches such as guidance documents, training material and electronic tools which has impacted radiation protection. All areas of radiology were covered with a one-track system so all stakeholders could engage in the panel discussion to help determine a toolkit that still may be needed to help record the progress of the Bonn Call-for-Action by 2022.

DONNA Newman presented the ISRRT's activities and priorities influenced by the Bonn Call-for-Action and its implementation during the opening session of the International Conference on Radiation Protection in Medicine on where professional organisations and stakeholders presented the activities and priorities that briefing session.

The Conference was organised by the IAEA and co-sponsored by the WHO and PAHO with over 534 participants and observers representing 97 countries and 16 organisations from around the world. There were over 80 posters displayed with sessions for the authors to answer question regarding their research. A total of 8 one track sessions and four round table panels were held in order to allow all stakeholders to participate in the topical discussion.

In addition, at lunch time there were an additional three breakout sessions where National Champions presented and discussed strategies they have used relating to Bonn Call-for-Action as well as UNSCLEAR and ICRP gave updates on their work related to radiation protection. During the 8 one track session more than 57 topical presentations and statements were given from invited speakers as well as invited organisations that reviewed, summarised and presented the research of the submitted abstracts. The ISRRT was invited to participate not only in the summary of the papers with an outstanding number of 200 accepted contributed papers but as well as the overview of the work the ISRRT has developed relating to the Bonn Call-for-Action as well as participation in the Panel expert discussion on certain topics of interest. There were 300 abstracts submitted for consideration for this conference and 200 research papers. The overall hope of the conference was to develop a on line toolkit that could add and support the advancement of the 2022 Bonn Call-for-Action goal for improvement in Radiation protection and radiation safety in medicine.

The IAEA also took this time to use a concept called ESPACE's during the coffee break time and introduced six of the IAEA projects either with a progress report or showing the a finished product.

One of the most interesting facts was that more than **25,000** people viewed the live streaming on Facebook of the sessions on communication.

Donna Newman also presented in session 4, Radiation Protection of Patients, Staff and the Public in Diagnostic and Therapeutic Nuclear

Medicine and Hybrid Imaging, the summary of research papers that were contributed to this session and served as a panelist representing the technologist voice in the open forum session on this topic with the audience.

Napapong Pongnapang presented in session 5, Radiation Protection in Medical Exposures of Children and pregnant Women, the summary of research papers that were contributed to this session as well as served as a panelist representing the technologist voice on this issue during the panel discussion with the audience,

At the closing day of the conference the conference president Geoffrey S. Ibbott from M.D Anderson of the United States gave an overall impression of the findings of the conference and attributed the collaboration of discussion and presented that overall the international



IAEA Conference Chairman Madam Rehani (centre) with Napapong Pongnapang Vice President Asia/Australasia and Donna Newman Director of Professional Practice ISRRT (outgoing).

conference was a great success.

During this conference summary session Mr Ibbott reviewed his impress of what had been achieved change in practice since the Bonn Call-for-Action meeting held in Bonn Germany in 2012. He presented tools, texts, materials that had helped implement the Bonn Call-for-Action as well as Live platforms with links to the different initiatives that have been developed and had successful implementation.

Under the Bonn Call-for-Action one, Area of Enhance the Implementation of the Principle of Justification, Geoffrey highlighted presentations that described areas of existing tools that had been developed and implemented. Mr Ibbott did include in his presentation the ISRRT's Decision tool for technologist role in the team approach to Justification and Authorization as well as other international organisation existing tools form example the WHO's document on chest imaging for TB. These tools maybe able to shared in the implementation of the Bonn Call-for-Action Toolkit to strengthen Radiation Protection in Safety in medicine.

He also talked about Tools that were under development such as the WHO's Policy guidance on Justification of imaging in asymptomatic people and described HERCA's Initiative and also described the enhanced role of radiographers in Justification as being a possible outcome of conference to help with the implementation of the toolkit

Mr Ibbott finished this section about Justification describing some outcome tools that are still needed including Guidance document on implementation Justification tools and concentration in the areas of comprehensive referrers and medical professionals still needs work in the future.

Under Bonn Call-for-Action 2 Enhance the implementation the principle of optimisation of protection and safety Mr Ibbott described many existing tools that are available today highlighting guidelines produced form the AAPM, EC, PiDRL guidelines protocol for QA in CBCT from the EFOMP, IAEA and IOMP. Mr Ibbott also highlighted about tools that were under development as IAEA Safety reports on dental radiology which was just released.

Under number Bonn Call-for-Action 3 Strengthen Manufactures role in contributing to the overall safety regime Mr Ibbott reported that speakers during the conference reported on existing tools included dose index data, DICOM information has also been improvements that have contributed to Radiation safety and protection. Mr Ibbott as discussed tools in development that speakers covered during their presentation including IEC standard currently in development. Included under this section from the conference discussion throughout the week

for addition tools still needing consideration or development for the successful implementation of the Bonn action by 2022 he described that the participates throughout the conference sessions talked about needing Tools for assessing Quality of Radiation Therapy treatment plans and better calculation algorithms for Dose outside the fields of treatment range.

As for Bonn Call-for-Action 4, Strengthen radiation protection education and training of health professionals Mr Ibbott talked about the ten training packages available on Bonn website threw the IAEA website as well as the e-learning courses available on the Image gently/Wisely. Mr Ibbott when on to say that all international organisations have a wealth of existing tools used to educate and train health professionals and many were presented at this meeting.

In the area of the radiographers globally Mr Ibbott also praised the ISRRT as being leaders in the global profession for incorporating a pre-congress workshop related to Bonn Call-for-Action at each of their world congress's. He also highlighted the ISRRT as a leader in this part of his summary again for incorporating Bonn Call-for-Action items of strengthening radiation protection into their educational programs and workshop that were held since the 2012 Bonn meeting. Finally, he also talked about the ISRRT new website which has a section on Bonn Call-for-Action as tools as a great way to strengthen radiation protection and help educate professionals on the Bonn Call-for-Action. Under item 4 Mr Ibbott summarised that tools are still needed to educate professionals and public about components of radiation protection in training packages which might be able to be used remotely in regions of the world where there is a shortage and training tools should be considered in the Implementation of Bonn Call-for-Action for the tools in development.

Under Bonn Call-for-Action 5 Shape and promote a strategic research agenda for radiation protection in medicine Mr Ibbott talked about the EUROMED strategic research agenda as a existing tool that had been very successful and also described the tools under development as risk estimates for low doses as presented at the

conference and discussed during the panel discussion groups. He described more research is still needed on the global research agenda for radiation protection in medicine and evidence-based guidelines are still needed on global big data projects and that these should be considered in the development of implementation of the Bonn Call-for-Action Toolkit.

Under Bonn Call-for-Action 6 Increase availability of improved global information on medical exposures and occupational exposures in medicine Mr Ibbott presented the following existing ►



Radiographers along with ISRRT representatives attending IAEA International Conference on Radiation Protection in Medicine, Vienna.



Beth Weber ASRT Speaker, Sharon Wartenbee Regional Director ISRR, Napapong Pongnapang, Vice President ISRR Asia and Australasia and Donna Newman, Incoming ISRR President.

tools being presented at the conference: UNSCEAR survey website including user manuals for medical and occupational exposures as well as ISEMIR tool for occupational, rad protocols in interventional radiology. As for tools that were presented under development at the conference Mr Ibbott highlighted the translation of user manuals. Finally, under action 6 of Bonn Call-for-Action for the implementation of toolkit an improved data collection tool to collect more data from more countries is needed to succeed with this action by 2022.

Bonn Call-for-Action 7 Improve prevention of medical radiation incidents and accidents Mr Ibbott presented the following existing tools that were presented and discussed at the conference by Stakeholders as the IAEA's reporting tools for learning from near misses and accidental, including their toolkits of SAFRAD, SAFRON and SEVRRRA. Mr Ibbott also described some successful national package tools including the US's ROILS and the UK's NRLS. Under this action item he presented tools that are under development but not completed as the automated systems for patient setup in radiation therapy. Most importantly from the stakeholder discussion during the week under this section Mr Ibbott summarised that the participants at the conference described during the panel discussion that several tools that should be considered for the implementation of the Bonn Call-for-Action toolkit was a automated reporting systems for near misses during patient setup in radiology or diagnostic nuclear medicine procedures and therapies as well as a way to have on line monitoring for dose to patient during a fluoroscopy procedure.

Under Bonn Call-for-Action 8 Strengthen radiation safety culture in healthcare he described the following as being presented at the conference EFOMP guidelines on registration of medical physicists and AAPM/ASRT safety is no accident program as well as the ARAB Safe program as successful existing tools. As for Tools under development the guidance on establishing and strengthening radiation safety culture in Health care facility is well under way with the international organisation of the WHO, IOMP, IRPA and IAEA but essentially still needed that come out of the discussion from the stakeholder which Mr Ibbott presented as a tool still needed was a tool for assessing level or status of RSCHHC.

Bonn Call-for-Action 9 Foster improved radiation benefit risk dialogue Mr Ibbott describe the following existing tools from the weeks conference as the factsheet on Chest x-ray for TB detection and

the WHO's Communication radiation risks in pediatric imaging which the ISRR has contributed to during the development of the product. As for the tools that are in the development phase that were presented at this conference included many leaflets, posters, infographics and graphic publications for patients, parents and community.

Important that was discussed and presented by Mr Ibbott presented as still needed is patient information tools in many areas of radiology for all professionals including radiographers, referring physicians and the public.

Bonn Call-for-Action 10 strengthen the implementation of safety requirements globally Mr Ibbott talked about the documents that currently exist that were presented in this conference including the International Basic Safety Standards and the European Basic Safety Standards are great standards that contribute to improving radiation safety and protection in medicine. Although these tools do exist he also highlighted some tools under development that were talked about as well including the IAEA safety guide on Radiation Protection in medicine which is due to be released from publication some time next year. Another thing that Mr Ibbott talked about that would be of interest to the ISRR was how it was good to see an international organisation such as the ISRR incorporate the Bonn Call-for-Action into its

strategic plan for the next five years which showed great leadership as an international stakeholder. Finally, Mr Ibbott described that the tools needed for this action to be successful by 2022 the profession still needs tools for implementation in a radiographers daily practice the IAEA's safety standards document that is due to be released in 2018. Just for our members societies information the ISRR participated as one of the writing team both on the radiology /interventional chapter as well as the nuclear medicine chapter. As members you sent in over 200 comments on the draft document to be considered in the revisions of the final draft which the ISRR Board of Directors could be prouder of.

As you can see from this closing comments the ISRR is positioned as an international Stakeholder to continue help with the development and the implementation of all these actions to ensure success of the Bonn Call-for-Action by 2022 and to ensure the improvement of Radiation protection in medical imaging by 2022 as well.

Dr Madan Rehani was as Conference Chair was asked to summarise the session and roundtables for consideration in the conclusion and the outcome toolkit that the IAEA will be working with other stakeholders to produce from this meeting.

As Conference Chair, Dr Rehani took a representative review of the discussion and presentations as well as the discussion that happened at the round table and panel discussions with the audience. Dr Rehani purposes just did an overview which isn't meant to showcase which organisations presented or which are leading each of the changes he talked about rather he tried to characterise the main points that emerged.

The IAEA asked Dr Rehani to answer the following question at the conclusion of the week long international conference," was the Bonn Call-for-Action working"? Dr Rehani concluded that gathering from the input, discussion, presentations, posters, and presentations that were presented the answer is clearly yes, the Bonn Call-for-Action is working.

Dr Rehani mentioned several performance indicators that supported this from the weeklong conference. First the publication in literature shows more than a 100% increase with various relevant search terms since 2010 Bonn meeting. The second performance indicator was the series of regional and national campaigns in recent years regarding

radiation protection and safety that have been launch since 2012. There is also many active actions and tools by various international organisation and regulators bodies presented in support the Bonn Call-for-Action since 2012.

Also Dr Rehani mentioned that it was very apparent from the presentation in the conference this week show case success stories particularly form developing countries. As the literature supports a temporal change in patients and staff doses which was reflected by presentations given during the week.

Dr Rehani proceed to present some supporting common points that emerged from the presentations, roundtables and breakout session which were held during the conference. First it is very apparent that the momentum in focus on radiation protection in medicine is the highest point that he has ever witness in his whole career. Second, common point that came out from the conference was the fact that procedures are increasing in number in almost all specialty area and becoming more and more complex. Many new procedure and emerging technology were discussed this week as well. It was apparent in the field of technology that medical imaging and therapy is showing a faster rate of change in technology than other areas of medical practice.

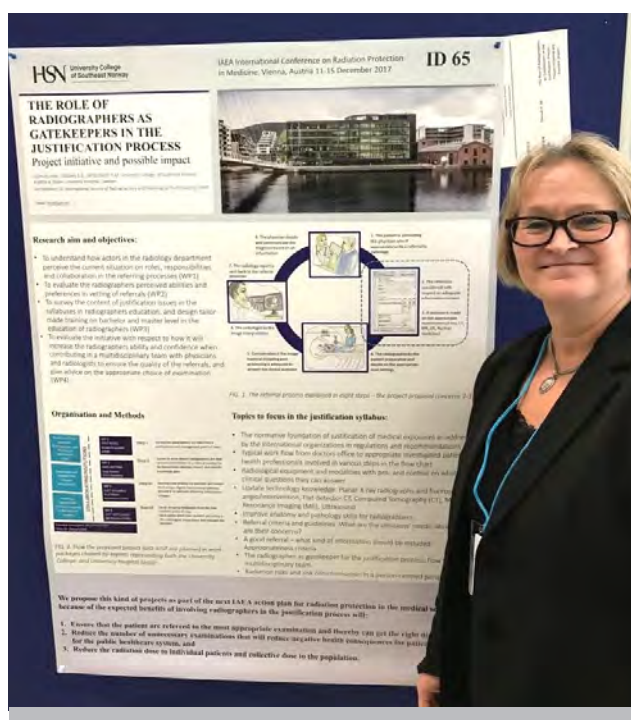
Dr Rehani was tasked with delivering what he and his conference team would submit to the IAEA for consideration as possible solution for a implementation of a Bonn Call-for-Action Toolkit to ensure success by 2022. The first common point that will act as a solution for the toolkit is that education and training is the key to success and although there are perceived gaps in teaching of clinical colleagues many innovative way were presented and there is a need to find ways to extent the outreach of these teaching methods. Also saw as a success is the encouragement of research on the long-term effects of low level radiation to fully understand this aspect of radiation safety and radiation protection. Dr Rehani talked about from the papers, posters, round table discussion and presentations a integration of image quality and dose needs to happen to ensure success of Bonn Call-for-Action by 2022.

Dr Rehani also presented that it was apparent that national and local DRL need to move to indication based DRL's. Also presented for consideration was that regulations are essential and that a move to more automation and handling of big data needed to happen.

One idea to drive home the importance of radiation protection is to create a special international day or week to bring forward the success that has happen with the national and regional campaigns that have had so much success in the area of radiation protection which were presented this week.

Dr Rehani also presented that it was very apparent that even though protocols are well established in several developed countries and are regularly updated a large part of the world still lacks these protocols and in order to ensure success for the Bonn Call-for-Action this needs to be addressed.

There still remains an inadequate lack of material explaining



POSTER: The role of radiographers as gatekeepers in the justification process is presented during the IAEA conference on radiation protection. Prof Dr Hilde Olerud, Drammen University, Radiography School, Norway.

Benefit and risk for patient in all medical imaging procedures and a temporal change in patient doses in imaging facilities needs to happen.

Dr Rehani also focused specifically on each of the Bonn Call-for-Action items as well starting with Bonn Call-for-Action one on Justification and stated that we have the strongest ever momentum among so many organisations to work toward a common goal. He also stated that newer issues for Justification at level 2 are becoming important. We need implementation at level 3 also many countries have adopted and adapted guidelines as many success stories were shared during the week. Over the next several years we now need success stories on implementation of guideline to be showed as well as it was apparent during the discussion at the conference with stakeholders that there are definitely few at the moment. Since the global profession is at a high momentum among radiological professionals and regulators we have never been at a better time to have the success of the

Bonn Call-for-Action.

Also, regarding Justification, it was presented that level 3 clinical decision support is progressing in the US with undated requirement by 2020 and this idea is also picking up in Europe as well but in other regions it isn't clear yet. It was presented during the week that a lot of countries are showing interest in clinical decision support and lots are investigating if that can truly be a benefit. It was a general consensus from the stakeholder that this is important to success for all countries to implement this. Clinical decision support while it has been introduced for radiologists this momentum to referring physicians needs this as well. It was very apparent from all discussion and all stakeholders that a wider implementation of this needs to happen and to continue on with the 3 A's approach.

Dr Rehani also presented that the theme from the week was that tools to better assess benefit/risk including detriment of not performing procedure needed to happen in the justification process and maybe a better innovative solution would be implementation of clinical guidelines globally.

Also, describe by Dr Rehani was the extension of players in Justification where the current players are just the radiological and medical practitioners in BSS.

In Session two on Radiography, Fluoroscopy and Computed Tomography to ensure success in the next 5 years Dr Rehani suggested that it appeared from the discussion over the week that development tools to enable judgements on image quality to balance against dose were needed. Also Dr Rehani described that manufacturers should incorporate clinical protocols for scans linked to clinical purposed which was a very interesting discussion that happened over several days during the conference. To simply state it we need implementation of techniques for optimisation of radiation protection on CT scanners.

Dr Rehani also presented that it came out that establishment of international depository for collecting data on patient's doses and related factors for benchmarking and optimisation of patient protection are needed. Also, what came of the discussion in session 2 was that

training given by CT manufacturer applications specialist should be extended to include use and adaptations of clinical protocols and ensure end-users have complete understanding of dose setting at facilities on scanners.

Dr Rehani also presented that for success over the next 5 years that the conference consensus was that requirements for DRL's, QA and appointment of medical physicist should be included in national regulations to implement BSS requirement but consideration needs be paid to how to fund this. Also, that countries should investigate models through which they might expand numbers of diagnostic medical physicist. Also, countries should investigate methods by which experience in patient dose surveys and good radiologic practice from some best practice centers can be extended into national programs. International collaboration through IAEA programs and regional assistance agreements might be a great way to make this happen.

In Session 3 on Radiotherapy Dr Rehani described that new technologies in VMAT versus 3D was presented that newer technology isn't always the better for all situation and can create unexpected side effects including lower dose to patients which was presented in the sessions. Also, low dose bath and out of field dose can result increased second cancer risk. Because of the advancement in technology in radiotherapy there is a need for risk estimates for imaging procedure in therapy and the daily imaging scans used in radiotherapy need to be registering the dose as this adds to the overall accumulation of patient dose. There is also a need for optimisation of imaging in the dose reduction methods and specific protocols developments and the need to outline more critical organs than are presently being done is also a need. So, over the next 5-years Dr Rehani describe the themes that emerged in radiotherapy threw the papers, posters, presentations and round table discussion and the following are the recommendation for consideration for the toolkit. First a global study on the out of target doses need to be done. Second a harmonization of nomenclature to enable machine learning methods needs to happen. Third Proposition to the manufacturer to include traffic light tool which worsen the user if dose spread is too much outside the target volume.

In session 4 on nuclear medicine which included hybrid imaging in pet CT the presentation presented that there are several newer radiopharmaceuticals including SPECT agents using Tc-99m and In-111 that deliver doses on higher side. Also presented were that newer improvement in dose management features in nuclear medicine equipment are happening but they are not offered to all users as a default. IDAC dose 2.1 free for organ dose estimations. Also presented in the papers and presentations was that technologist who handle PET substances have radiation doses about three times that of a tc-99 but still less than 3 mSv a year. Also presented was that finger doses to staff handling PET radiopharmaceuticals is 10-100-fold higher than tc-99 and almost approaching dose limit of 500 mSv a year. It was discussed in the round table and in the papers that the automatic dispensers are able to bring doses down to finger dose by 50-80% with proper handling. Radiopharmaceutical have moved with radioimmunotherapy using monoclonal antibodies and alpha emitters as well.

Now for what need to happen in the next 5 years to ensure success of the Implementation of the Bonn Call-for-Action toolkit. Dr Rehani presented that it appeared from the consensus that assessment of magnitude of inappropriate use needs to be studied and further exploitation of value of personalised dosimetry and propagation of correct message of its value and limitation too avoid overuse of catch word need to happen as well. A better approach is needed to happen for reporting unintended exposures like the SAFRON tool. Also, the need to reexplore biological dosimetry for therapy patients' needs to happen.

In session 5 children and pregnant women the progress was presented by UNSCEAR 2013: Children have better information on

radiation sensitivity of children but perhaps lack of new information on radiation effects in pregnancy. Also, there is free software and several papers of radiation dose estimation to the fetus that can be good resources for tools for this type of information. So what needs to happen in the next 5 years Dr Rehani presented the consensus seemed to be guidelines for multiple examination of individual patients and premature babies and children needs to happen. Attention and action needs to happen for better protection of both sensitive groups listed above. Child and premature protocols need to be developed and disseminated and a way to address the shortage of pediatric radiologist as there are less experts to get correct information about radiation protection and dose form.

In Session 6 on Interventional radiology Dr Rehani presented that patient radiation doses can be in the ranges of radiotherapy fractions during one procedure and tissue reactions (skin injuries) continue to happen with similar frequency as a decade ago. Another concern is that eye lens opacity and cataract major causes of concern in interventional. Now there is treatment planning happening in interventional more education needs to happen to motivate operators and staff to wear protective equipment as well as keeping up on education and training. The greatest progress has been on eye lens doses as you can find many more research papers on the subject since 2012 in fact publications increase 300% since the Bonn meeting also an increase use of personal protective devices has been seen to comply with the ICRP new dose limits. The most recent development has been skin dose mapping. so, what needs to happen in the next 5 years as presented by Dr Rehani since more data needed on fluoroscopists in different clinical areas including interventional radiology as most data is from interventional cardiology. Identification of high risk professional for eye lens injury and adoption of eye protection universally needs to happen. Assessment of stochastic risks in pediatric interventional procedures need to happen. Adoption of active dosimetry for occupational exposure. Also, at the round table it was discussed that routine eye dosimetry need to be developed and implementation in to daily frame work. And monitoring of eye lens injuries for progression into cataracts needs to be studied. It was discussed that lesion from skin dose maps and decide if there is a need to change current guideline for patient follow-up.

Session 7 on unintended exposures, the outcome of this meeting was that in the next 5 years we need to enhance reporting incident learning systems (ILS) and a need to develop these systems for fields other than radiotherapy like the IAE SAFRON and SAFRAD are needed. Believe that we need to enhance sharing of learning from these systems to help with best practices and a dissemination of lessons learnt and partnership with key stakeholders needs to happen to implement these tools.

Finally in Session 8 mammography and Dental imaging Dr Rehani reported life's years lost due to breast cancer continues to be high and the challenges and changes since Bonn 2012 are new technology is happening in breast imaging including #D, Brest CT, mono-chromatic and phase contrast. With this new technology higher doses are being delivered but still this will lead to more benefit. There is a move to personalised screening and challenges still exist for medical physics testing in this area.

Also Cone Beam Ct for Dental practices lagging behind CT in dose management as there is many more manufactures offering this product and appropriateness issues still exist on how to use the application of the systems among users so the same exposure is used for everyone instead of using the features the system offers. Due to the low frequency of the dental imaging it may be ideally suited for machine learning application to be enhance and more education in the training of personal.

Round table on Safety Culture A there is difficulty for many people to distinguish radiation safety culture from radiation safety. The ►

Culture is all about what all or what most people do. Fear is playing in personal role of law or risk. Regulators has strong influence in making people do thing thus can alter culture. There is still a need for decision support and automated dose monitoring and tracking and DRL's

For actions needed over the next 5 years patient radiation safety culture we need a integration in to patient safety of organizations and a team actions to brake boundaries. Safety programs including check list and doses registries are still needed. An awareness campaigns in needed and risk (fear) approaches need to move to reward based approaches.

As for the newer technology round table B applications of new technology often happens before safety aspects are studied. Equipment

are designed to be safer for operator action lead towards breach of safety, there is also very inconsistent units. We need mulit-stakeholder groups and meeting and a mechanism needs to be develop to support participation of professional's in IEC meetings. Also, guidelines for donated equipment need to be updated.

As you can see from the two summaries at the conclusion of the week long international conference there is still much work to be done and the ISRRT is ready and willing to participate and help global stakeholders develop and implement the Bonn Call-for-Action Toolkit.

As we receive more information we will be sure to publish this in our *News & Views* newsletter. ■

The ISRRT is proud to present their new website.

Please go to www.isrrt.org

and have a look at all the information available about the ISRRT.

We encourage you to share this link with your colleagues.

ISRRT
The voice of the imaging and therapy radiography Profession, worldwide

"To improve the standards of delivery and practice of medical imaging and radiation therapy throughout the world by acting as the international liaison organisation for medical radiation technology and by promoting Quality Patient Care, Education and Research in the radiation medicine sciences".

[ISRRT Mission Statement](#)

Update on ISRRT attendance at ECR 2018

Vienna, Austria

February 28 – March 4, 2018

Report by Dimitris Katsifarakis, CEO ISRRT Support Services

PRESIDENT Dr Fozy Peer and Dimitris Katsifarakis had a busy week representing the ISRRT at this year's European Congress of Radiology in March 2018. As global stakeholders representing over 500,000 radiographers worldwide we feel strongly that we should find opportunities to collaborate with our other international stakeholders whenever possible.

One highlight from this year's meeting was the signing of our Memorandum of Understanding between our President Dr Fozy Peer and Dr Ricardo Garcia-Monaco the ISR President as a way to formalise our collaboration between our two international organisations. As an international organisation we agreed to collaborate on issues of mutual interest whenever possible. Both organisations are looking to find ways to collaborate and one such project is that the ISRRT has been asked by the ESR to join them in celebrating the International Day of Radiology (IDOR). The ISRRT agreed to collaborate on writing a chapter for their publication for IDOR related to Cardiac Imaging for 2018.

Another nice collaboration effort by the ECR is that they have kindly provided the ISRRT with a free booth in the exhibit hall while attending ECR which allows us as an international organisation to meet and collaborate with our fellow colleagues from around the world. We also take the time to thank our corporate sponsors of the ISRRT. One of these such sponsors we met with was Guerbert to discuss ways we could collaborate on radiation protection and safety projects.

One of our most important meetings we attend while at ECR is our meeting with our European colleagues that represent the radiographers in Europe (EFRS). We take this time to discuss common issues affecting our profession, update each other on our strategic initiative and projects and look for common project that we may be able to work together on relating to radiographers.

The ESR Executive Council for the first time had an exclusive support program for radiographers at ECR 2018. Radiographers who (a) have completed their training not longer than 5 years ago, (b) are active ESR members and (c) have submitted a poster abstract to ECR 2018 were eligible to apply for the "Shape your Skills" program, which was offered to 500 selected radiographers for free registration to ECR 2018 including 2 free hotel nights. We have to thank the ECR for this wonderful program and opportunity for radiographers from around the world to not only share their expertise and but also obtain other relevant continuing education to bring back to their daily practices.

When attending this meeting we take the opportunity to meet with the WHO, and this year we met with Dr Maria Perez who is one of our official contacts there. She indicated that she will arrange joint meetings of the ISR, IOMP and ISRRT as we are now under her wing at the WHO. She will continue to collaborate with the ISRRT on various issues, including matters related to patient safety culture and radiation protection. The WHO is in 'official relations'



with the ISRRT. The current workplan expires in January 2019. The ISRRT has to submit a report on the activities undertaken as per the workplan submitted in 2016 and are in the process of creating a new work plan for the next three years to be re-assessed to maintain the 'official relations' status as a non-state-actor. Dr Perez together with Dr Adrianna Velasquez will be assisting the ISRRT with completion of these documents. Look for more information on these initiatives through the ISRRT Facebook, website and *New & Views*.

During ECR 2018, the IAEA, Radiation Protection unit met with the ISRRT and among other initiatives discussed the discussed the training related to 'justification' at universities. Plans are well underway with the research project to pilot the team approach to Justification to teach new students their role in this team approach. One highlight I had was the opportunity to present at a session called Radiation Protection A to Z which was moderated by one of our ISRRT Council members from Italy Mr Diego Catania. Also presenting at this session were the following radiographers Shane Foley, Peter Hogg, and Jonathan Portelli. I had the opportunity to speak on the Importance of Justification and highlighted the important role radiographers play in safety for patients, and the importance of complying with regulations when working with ionizing radiation for medical purposes. It was apparent by the full room the radiographers presenting in this session were of interest in the International Imaging Scientific community.

Also agreed upon at this year's meeting was that the ESR Board approved a program featuring international radiographers and radiological technologists and their specific guest countries, called "ISRRT meets Africa session". The Session will be held at the 2019 ECR meeting which is going to be held February 27 to March 3. Our session is scheduled for Friday, March 1, 2019, from 16:00 to 17:30. The session is set up for radiographers to share practices that are taking place in different African countries relating to educational standards requirements and scope of practice issues. ■

Diary Dates

2018

June 21-24

ASRT Educational Symposium and Annual Governance and House of Delegates Meeting
Las Vegas, Nevada

September 10-15

CARO-COMP-CAMT Joint Scientific Meeting
Montreal, Canada

September 28-29

Quality Assurance and risk management in medical imaging
Dakar, Senegal

October 8-10

Justification of Practice and Optimization of Radiation Protection
Mombasa, Kenya

October 21-23

ASRT Radiation Therapy Conference
San Antonio, Texas

October 26

ISRRT/EFRS workshop in radiation protection
Sofia (Bulgaria) scheduled

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Trini Radiographers show “We Care”

Submitted Anushka Kattick, Conference Co-Chairman



ISRRT 2018
20TH WORLD CONGRESS
TRINIDAD & TOBAGO
12-15 April, 2018

“Dynamite comes in small packages”, said Dr Fozy Peer, President of the ISRRT, as she addressed 55 countries that converged at the Hyatt Regency, in the small Caribbean island of Trinidad, on April 12-15, 2018 during the 20th ISRRT World Congress. The theme of the Congress, We Care, highlighted radiographers care of patients, colleagues, students and the radiography profession.

THE Congress was hosted by the Society of Radiographers of Trinidad and Tobago (SRTT), a non-government organisation of 45 years. Trinidad and Tobago is the smallest country to ever host such a conference, as previous hosts include Hong Kong, USA, South Africa, Australia, Canada, Finland and South Korea. Given the many financial and social constraints that Trinidad and Tobago currently faces, SRTT is truly encouraged as delegates have labelled this congress “the BEST” yet.

Participants basked not only in the warmth of the Caribbean sun but also in the warmth of the Trinbagonian hospitality. The scientific sessions commenced with the prestigious Hutchinson Memorial Lecture, a traditional feature address in honour of the first ISRRT Secretary General, E.R. Hutchinson, which was delivered by Dr Pablo Jimenez, PAHO Regional Radiological Health Advisor in Washington. As the meeting progressed, it included five plenary speakers, 130 oral presentations, 20 poster presentations, six educational tracks and two specialty forums which addressed topics in Radiography Education and Radiation Protection and Safety.

The Opening Ceremony was addressed by The Deputy Mayor of Port-of-Spain, Councillor Hillan Morean as he welcomed all guests to the capital city. A representative from the Ministry of Health, Dr Alexander Sinanan, a Consultant Radiologist and Chairperson of the National Radiation Steering Committee, gave opening remarks on behalf of the Minister of Health. The President of the Radiological Society of Trinidad and Tobago (RSTT) also addressed delegates and reminded radiographers of the importance of viewing more than “Fifty Shades of Grey”. The Society of Radiographers of Trinidad and Tobago must be recognised and congratulated for a job well done as they charged on and hosted a World Congress with limited local financial support. The success of the Congress was not measured by the profit made or number of persons attending, though, but rather the impact that the scientific sessions, networking and lasting friendships made on the attending delegates. Delegates were inspired to do more for their profession and collaborate at a global level to conduct research and make positive changes in their communities. Without the kindness of sponsors and exhibitors, the Congress would not have been remotely possible.

The Local Organising Committee sincerely thank all sponsors and exhibitors who showed they care.

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ASRT (American Society of Radiologic Technologists), Pan American Health Organisation (PAHO), Biomedical Technologies Ltd., Cemrad, Curis Technologies, Gulf View Medical, MRI Trinidad and Tobago Ltd.

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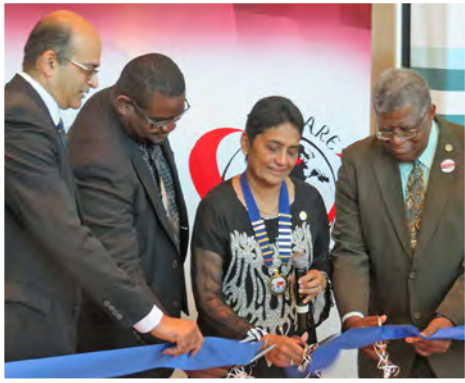
Additionally, the SRTT thanks the South West Regional Health Authority (SWRHA), North Central Regional Health Authority (NCRHA) and North West Regional Health Authority (NWRHA) who facilitated hospital tours; Montrose Government School, Naparima College, Bishop Anstey High School, Malik & Shiv Shaki Dance groups, Johann Chuckaree on the steelpan and the Moko Jumbie Mas Camp for their heartwarming and energetic performances during the Opening Ceremony. The Prisons Service Band and Rene Sound & Vision provided superb entertainment during the Congress Gala Dinner and Injoy Tours executed a Panyard Lime and Cultural Experience that made the world move in unison to the beat of the sweet steelpan music.



Local Organising Committee from Left-to-right: Anushka Kattick-Mahabirsingh (at the podium), Aleth Bruce, Dana Nanansingh, Chae Gardoo, Reshma Maheepat, Lynette Laloo, Aneesa Ali, Justin Mahabirsingh, Adrian Sampath, Wilma Collins, Jyoti Deonarine and Roxanne Pantin of iCreate Events Ltd.









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Professional Practice Director's report

Report by [Stewart Whitley](#), Director of Professional Practice ISRRT

WITH all members of the team present at the recent World Congress we have all come away from Trinidad inspired to serve the radiographic community.

The Congress was very educative and interactive with enough time for colleagues to share experiences across continents with greater insights to how things are done and should be done.

Each regional coordinator is fully committed and honoured to have been elected as Regional Coordinator for their Region and are very much looking forward to working with the rest of the Professional Practice team to support the developments and initiatives in Professional Practice across each Region and the World.

At the Congress, for the first time, an electronic questionnaire titled; 'ISRRT Professional Practice Survey (Follow-up Bonn Call for Action)' was distributed to delegates.

This was inspired to assess how many delegates were aware of the 'Bonn Call-for-Action' program including their understanding of the role of the radiographer in Justification, Optimisation and Diagnostic Reference Levels (DRLs) as well as other related radiation protection matters.

The results of the survey will soon be evaluated and will hopefully provide what colleagues think should be provided by ISRRT in terms of support in these areas.

I trust that each reader and Council member will be inspired to raise issues through their Regional Coordinator and bring to their attention matters of concern relating to Professional Practice across all the imaging modalities and therapy practices which need to be discussed and formulated into position statements of the ISRRT.

We look forward to working together. ■



Meet the newly appointed Regional Coordinators for the ISRRT Professional Practice team elected at the 20th ISRRT World Congress in Trinidad April 2018 with newly elected ISRRT President Donna Newman: (left to right) Pam Black (UK) representing Europe, Chris Steelman (USA) representing the Americas, Donna Newman (President); Stewart Whitley (UK) Director of Professional Practice, Elizabeth Balogun (Nigeria) representing Africa and Naoki Kodama (Japan) representing Asia-Australasia.

Professional Practice update

Annual activity relating to ISRRT Strategic Plan

Report by [Donna Newman](#),
Outgoing Director of Professional Practice ISRRT

[I would like to take some time to highlight the progress and phases of initiatives that the professional practice committee has been working on since the Seoul Korea World Congress in October 2016 to the World Congress in Trinidad and Tobago, April 2018 as they related to the ISRRT's Strategic Plan.](#)

There are three key goals that were established in the strategic planning meeting that relate to the professional practice committee and ISRRT Board Subcommittees I am responsible for. My committee have been working hard for the ISRRT member societies under this portfolio over the past year and half and have much work to be proud of for our profession. In addition to this work I have also been attending to all communications from the board, submitting articles to all *News & Views*, ISRRT Facebook and the ISRRT new website as well as the ISR external newsletter relating to professional practice, radiation protection and safety.

The first strategic goal relating to professional practice is to collaborate to develop and promote international standards. Within this goal is a strategic priority of contributing to and promote radiation protection safety culture and the ISRRT initiatives is to notify member societies about the role the ISRRT is playing in radiation protection and safety.

Part of the ISRRT's initiatives for this strategic goal for professional practice is the following:

First, April, 2017 the ISRRT was asked to contribute and participate in a survey from the WHO which dealt with SSFFC medical products. This project came out of the World Health Assembly, resolution 65.19 which established a working group which was tasked to ensure availability of quality, safe and efficacious medical products among its member states and also to prevent falsified medical products and associated activities globally. The group had established that there are falsified medical products in many countries in both large scale and small back street operations. The working group was also tasked with identification of major needs and challenges and was asked to help determine policy recommendations to prevent falsification of medical products in order to strengthen national and regional capacities for supply chain.

The WHO survey had several questions related to the general goal and objective and if these objectives were being achieved. A question about at what level the appropriate mechanism for adequate platform to foster intermediate collaboration to promote the prevention detection and response to SSFFC medical products should be at a global level, regional level or national level.

I believe that the WHO committee has achieved this by creating a portal where much of this information can be found and I reported this out in the survey. The survey also included a question asking how to priorities projects that should be to undertaken to address to

prevent and response to SSFFC medical products. I reported out in the survey on behalf of the radiographer's global voice that the best use of budget is to make the following, two the highest priorities.

First to focus on the current state of affair of WHO working group in regards to access to quality safe and effective medical products and the second priority to have recommendations on an effective risk communication awareness campaign of SFFC medical devices.

Finally, I reported out that if the WHO budget allows prioritise working on definition of SSFFC medical product to help educate the medical community to understand all facets of this project. I gathered the information related to the radiology profession and filled out the survey on behalf of the ISRRT to ensure the radiographers/radiological technologists voice was represented in this survey. For complete details on this please see *News & Views Professional Practice updates*.

A second ISRRT's initiatives for this strategic goal included under the professional practice section was the ISRRT's Response to the Bonn Call-for-Action. This past December at the International Conference on Radiation Protection in Medicine: Achieving Change in Practice in December 2017 in Vienna, Austria, myself and Napapong Pongnapang represented the radiographers global voice for ISRRT along with other global stakeholders. Our task as representatives at this meeting was to discuss the Bonn Call-for-Action and determine how they can contribute, improve and facilitate the success of this by 2022. The Conference was organised by the IAEA and co-sponsored by the WHO and PAHO with over 600 participants and observers representing 106 countries and 17 organisations from around the world. There were 300 abstracts submitted for consideration for this conference and 200 research papers. The overall objective of the conference is to review the electronic tool

The conference was a way for stakeholder to review actions and developments since the Bonn Conference with focus on progress in response to stakeholder's contribution to the Bonn Call-for-Action. The conference participants reviewed and discussed overall approaches such as guidance documents, training material and electronic tools which has impacted radiation protection and safety since 2012. All areas of radiology were covered with a one-track system so all stakeholder could engage in the panel discussion and help determine a toolkit that still may be needed and developed to ensure and record the progress from stakeholder on the Bonn Call-for-Action by 2022.

I presented the ISRRT's activities and priorities influenced by the Bonn Call-for-Action and its implementation during the opening session of the International Conference on Radiation Protection in Medicine along with other international professional organizations and stakeholders who also presented the activities and priorities from their organisations relating to the Bonn Call-for-Action during this briefing session.

I also presented in session four Radiation Protection of Patients, Staff and the Public in Diagnostic and Therapeutic Nuclear Medicine and Hybrid Imaging the summary of research papers that were contributed to this session and served as a panelist representing the technologist voice in the open forum session on this topic with the audience.

Napapong Pongnapang presented in session 5 Radiation Protection in Medical Exposures of Children and pregnant Women, the summary of research papers that were contributed to this session as well as ►

served as a panelist representing the technologist voice on this issue during the panel discussion with the audience. For report on the outcomes presented at the closing session from this meeting see the April issues of the News and Views and for more information on the ISRRT response to the Bonn Call-for-Action and the Creation of the Implementation of the Bonn Call-for-Action Toolkit see the *News & Views*, ISRRT Facebook, and the ISRRT website blog.

Third initiative that falls under this section of the strategic plan that I participated in this past year was the initiative to notify member societies about the role of ISRRT in radiation protection and safety. This also included the ISRRT's response to the Bonn Call-for-Action and part of the strategic plan was to promote and disseminate tools and information that ISRRT developed as part of this plan.

I participated in was the developing of the Decision tool on Justification and Authorization for planned Medical exposure and the role of radiographer in the team approach which we finished last year. Also developed last year was under ISRRT response to Bonn Call-for-Action was the ISRRT position statements on Team approach to Justification and the Team approach to Optimization related to the Radiographers scope of practice.

The plan for 2017 relating to these two projects were to promote this tools and positions statements to other stakeholders including radiologist, Radiographers, and other health care professionals.

I did this at several meetings including the International Conference on Radiation Protection in Medicine: Achieving Change in Practice in December 2017 in Vienna, Austria, and the 2017 RSNA Associated Science Meeting, where I was a guest speaker on a talk called "Developing Scope of Practice of Radiographer from the ISRRT Perspective where the audience included, radiographers, Radiologists, Physicist and other health care team members. For a complete article on the presentation with its content please see the December 2017 issue of *News & Views*.

I am also happy to be able to present in this report great success and news from a meeting held at IAEA just this past March 2018 which was a follow up meeting from the International Conference on Radiation Protection in Medicine: Achieving Change in Practice was a technical meeting called: Technical Experiences with the Implementation of the Bonn Call-for-Action Toolkit to improve radiation protection and safety by 2022.

Dimitris Katsifarakis our CEO Support Staff stayed on at the last minute and presented the ISRRT already developed tools to be included in this toolkit. At the conclusion of the meeting the group had decided to include all items that were presented including the ISRRT Decision tool on Justification and Authorization for planned Medical exposure and the role of radiographer, The ISRRT Position/Policy Statement: Radiographer/Radiological Technologist (Medical Radiation Technologist) Role in Authorization and Justification of Medical Exposure as a Team Approach, the ISRRT Policy/Position Statement – Radiographer/Radiological Technologist (Medical Radiation Technologist) Role in Optimization of Medical Exposure and finally the "Radiography Education Framework developed to benchmark radiography programs against the ISRRT standards

The second strategic goal relating to professional practice is to collaborate to develop and promote international standards. Within this goal is a strategic priority to contribute to and promote professional Practice and the ISRRT initiatives is contribute to and review publications to enhance knowledge.

Part of the ISRRT initiatives for this strategic goal relating to my portfolio included in June 2017 the ISRRT submitted comments to the ICRP draft report on Occupation Radiological Protection in Interventional procedures.

The ICRP draft document contains guidance on exposure monitoring strategies, methods and options for a radiological protection approaches. The documents also cover some

comprehensive information to develop an effective radiological protection program with emphasis on education and training. The draft has great advice on parameters for quality assurance and effective implementation strategies. The draft is meant to be a global guidance document for use by professional bodies. You can see as a global stakeholder representing the radiographers voice we believe that the radiographers play a vital role in ensuring quality radiation protection is met through high quality standards of practice to patient dose, occupational dose and public dose. The ISRRT Board of Directors, along with Professional Practice, Education and Public Relations Directors reached out to their regional coordinators who in turn reached out to its member societies and asked for content experts relating to radiographer's role to validate the draft was evidence-based information and accurate relating to radiographers practice. Also requested was review of the draft for trend or gaps that may still be needed or amended. As Director of Professional Practice, I compiled our report and submitted it to the ICRP website for consideration. For full report on our comments please read August 2017 *News & Views*.

Part of the ISRRT's initiatives for this strategic goal relating to my portfolio included in July 2017 the ISRRT was asked to review a draft consultation on the Guidelines for best practice: Imaging for age estimation in the living from the International Association of Forensic Radiographers. This initiative also falls under the Bonn Call-for-Action 10 to strengthen implementation of safety requirements globally. As part of our discussion at the Seoul Korea meeting where all regional coordinators as the Directors if they could all participate in global document the ISRRT is asked for input in. As a Board we have implemented this practice so as a relate this document was reviewed by Professional Practice, Education and Public Relations committees of the ISRRT as well as the ISRRT Board of Directors. All reviewers were asked to read and give feedback from the draft guideline relating to scope and completeness as well as quality and clarity. The reviewers were also asked to determine if the draft reflected current consensus and contained supportive evidence for global practice, the last item the reviewers were asked to present were any gaps in practice that might be missing in the document. The comments written by reviewers were grouped as a general comment which pertains to the entire document or a specific comment that is specific to a section, the specific section has the page number and paragraph it pertains along with draft suggestions to consider. As Director of Professional Practice, I compiled our response and sent to the organization on behalf of the ISRRT. For full report on our comments please read professional practice update in August and December 2017 *News & Views*.

Finally, under this initiative I would like to highlight the ISRRT's involvement in the WHO's priority list of medical devices required for Cancer Management which now final and available for download.

In early spring 2017 as a contributor and expert content for the book I was asked to review and send in any final comments in for the last draft which was only changes to your section of the final draft document which reviewed and sent in final comments. Earlier in the year the entire professional practice, education and public relations regional coordinators had reviewed this document and gave input into the draft version. As we have asked for input many times from our member societies while this book was developed over the last 3 years and just a short note for those who aren't aware this project it was developed by the WHO in response to the need for a model reference list of basic and priority medical devices required for cancer management. The list includes the basic technologies required to provide general services and the specific priority medical devices to manage cancer. The book ask covers other health care system components such as infrastructure, human resources and quality management requirements and guidance documents by service units. ►

Its goal was to increase access to these medical devices especially in low and middle-income countries. The publication covers the six most common cancers affecting countries worldwide. The final was release to the community to use and download from the WHO website and as a global stakeholder the ISRRT was asked to help disseminate to our member countries for use. I worked with public relations and our CEO support staff to develop a section on the ISRRT website www.isrtr.org under professional practice to house this book in a flip book in order to help our member societies to have early availability to this important work. Please take time to go to the ISRRT website and download this book for use in your country. Also, for complete information about the input from the ISRRT please see articles from Professional Practice in *News & Views* from 2015-2018.

Finally, the third Strategic Goal relating to professional practice is to collaborate to develop and promote international standards. Within the goal is the strategic priority to provide expert opinion relating to scope of practice and the ISRRT initiative is to draft and develop position statement relating to radiographer's scope of practice.

I would like to highlight the development of the 2018 position statements by the professional practice committee, where background information was gathered from member countries scope of practice from member societies and feedback on wording on content from expert stakeholders including all regional director committees (professional practice, education, public relations) some member society experts and presented the two drafts to ISRRT board input and for approval and are now ready to be presented at the 2018 Council Meeting for approval by our council members

1. ISRRT draft Position/Policy Statement-Radiographers/ Radiological Technologist role in Quality Assurance and Quality Control as a Team Approach
2. ISRRT draft Position/Policy Statement: The prescribing, supply, preparation and/or administration of medication to patients by radiographers/radiological technologists ■

Donna Newman

Professional Practice for Africa



Ghana group meeting.



L-R: Glory, Ifeoma, Usenobong, Ebere (leader of the team), Elizabeth, Aaron (therapy radiographer) with others who are resident radiographers.

RAF9059 Consultancy Meeting to improve the radiation protection curriculum for radiographers 16-21 October 2017, Accra, Ghana

The project is instigated by the IAEA with the aim to build training material that can be used to improve radiation protection in radiography. The week long meeting was dedicated to identify gaps in the radiation protection curriculum and to strategise how to sustain radiation protection practices.

The scope of this project is to develop (short lessons) to enhance the curriculum in the area of radiation protection of patients in radiography. Target audience is the working radiographer, the educator and the student. It was expected that each participant prepare 2 or 3 modules during the week to close the gap on radiation protection of patients.

Dr Belinda van der Merwe
South Africa

Re-accreditation of centers in Nigeria

The Radiographers Registration Board of Nigeria (RRBN) is saddled with the function of regulating practice of Radiography in Nigeria. One of the major ways is to make the work place safe and personnel adequately protected on the job.

An initial accreditation of centres is usually followed with a re-accreditation after a period of 4 years. This was done in major hospitals during the last quarter of the year 2017 and has continued ▶

in the first quarter of this year. One of such is the re-accreditation of the University of Benin Teaching Hospital Radiology Centre. The emphasis was on personnel monitoring and availability of radiation protection devices.

The day was quite hectic but not without a few socials with the accreditation team being hosted by Radiographers(diagnostic/therapy) to an evening cocktail after the close of work. ■

Elizabeth Balogun
Reporting for Africa

Professional Practice for the Americas

Report by **Christopher Steelman**,

Regional Coordinator of Professional Practice for The Americas

American Society of Radiologic Technologists State Affiliates Seek Licensure

The Alabama and Missouri Society of Radiologic Technologists are affiliates of the American Society of Radiologic Technologists (ASRT). They are two of four states, in the United States that does not have standards for medical personnel who perform medical imaging or radiation therapy procedures. Licensure bills have recently been introduced in Alabama and Missouri that would change that. Each state has submitted bills that would establish education and certification standards to license radiographers, radiation therapists, nuclear medicine technologists, radiologist assistants and limited x-ray machine operators. The ASRT supports the measure, as it would establish consistent education and certification standards for the state's medical imaging and radiation therapy personnel.

The 2018 ASRT Educational Symposium and Annual Governance and House of Delegates Meeting

The 2018 ASRT Educational Symposium and Annual Governance and House of Delegates meeting will be held June 21-24, at the Red Rock Casino, Resort & Spa in Las Vegas. This one-day educational conference for radiologic science professionals and students. Courses cover computed tomography, management, general interest and topics relevant to students. This year, the comprehensive lineup also includes a hands-on mammography positioning workshop. The ASRT House of Delegates will meet to debate and vote on motions and proposed changes to the ASRT Bylaws and to adopt clinical practice and educational standards. During the meeting, delegates represent their affiliates or chapters and act on issues that affect professional practice.

American Society of Radiologic Technologists Survey Focuses on Educational Program Enrollment

The number of students enrolled in radiography educational programs increased in 2017, according to new survey published by the American Society of Radiologic Technologists (ASRT), but not by a significant margin. The survey was sent to directors of all radiography, radiation therapy and nuclear medicine technology programs recognised by the ASRT. More than 15,700 students were enrolled in such programs in 2017, an average of 21.7 students per program. In 2016, the average was 21.1 students per program. In addition, an average of 10.5 students were enrolled in radiation therapy programs and an average of 10.9 students were enrolled in nuclear medicine technology programs in 2017. These numbers are both down compared to 2016 statistics.

Polls Close for 2018 ASRT Election

The polls have just closed in the American Society of Radiologic (ASRT) election. The purpose of the election is to select the ASRT Board of Directors and House of Delegates chapter representatives. Dedicated ASRT members volunteer to run for these positions. The ASRT has a seven-member Board of Directors. The membership elects the president-elect, vice president, secretary and treasurer. Voters were given access to the officer and delegate candidate profiles and the opportunity to question candidates on the ASRT's online community. This online resource provided comprehensive information to members and the opportunity to get to know each candidate and learn about their positions on specific radiologic technology topics. When the president-elect takes office at the June ASRT Governance and House of Delegates Meeting a year following the election, the current President then becomes Chairman of the Board. The remaining two members of the Board – speaker and vice speaker – are elected by the ASRT House of Delegates at its business meeting during the annual meeting. ASRT chapter delegates are elected by the ASRT membership in the Annual General Election as representatives of the 15 disciplines and specialties recognised by the ASRT House of Delegates. Chapter delegates serve for a term of two years.

The primary responsibilities are to provide a direct voice to the ASRT on behalf of their constituents, serve on the Practice Standards subcommittee for the discipline or specialty they represent, communicate information about chapter activities and concerns to the ASRT Board of Directors and members of the chapter. Each candidate must meet specific criteria and submit an application during the nomination. ■

Christopher Steelman



Elizabeth Bologun, Regional Coordinator of Professional Practice for Africa.



Christopher Steelman, Regional Coordinator of Professional Practice for The Americas.

Influence of computed radiography imaging plate deterioration on simulated mammography image

Tokiko Nakamura^{1,5} Fujiyo Akita² Yoshie Hasegawa³, Ikuo Kobayashi⁴, Shoichi Suzuki¹, Kyoichi Kato⁵

1. Department of Radiology, Daido Hospital, Japan
2. Department of Diagnostic Imaging, Shizuoka Cancer Center, Japan
3. Aichi Health Promotion Public Interest Foundation, Japan
4. Nagase Landauer, Inc
5. Showa University graduate school of Health Sciences

Abstract

Introduction: To study deterioration of computed radiography (CR) imaging plate over time and its influence of digital mammography images, the phantom images were assessed using two different CR imaging plates installed in 2010 (CR-A) and in 2017 (CR-B).

Methods: Uniform exposure images were acquired with 26 kV, 20 mAs and a Mo/Mo target/filter combination. The pixel values were measured drawing a 400×400 pixel region of interest (ROIs) with ImageJ and the standard deviation of pixel values and the signal-to-noise ratio (SNR) were calculated.

In addition, all the images of mammographic phantom model-156 were visually evaluated by nine radiological technologists and film density was measured.

Results: Visibility decreased in a sight evaluation in CR-A. The unevenness of the evaluation occurred between observers in simulation sample of calcification. However, CR-A and CR-B passed it in the standard of guidelines in all simulation samples. In all ROIs we acquired, CR imaging plate with longer period of use showed higher SNR, and each ROI varied. There was the part indicating the value that SNR of CR-A was low in when we compared ROIs of the same part of CR-B with CR-A. The inclination of the pixel values was correlated with that of SNR. Moreover, the part where the pixel values changed was consistent with the place where breasts were placed. The coefficient of correlation of pixel values and SNR were 0.5.

Conclusion: The cause of the increase in noise is the image plates for there was a correlation between the standard deviation of pixel values and SNR. Consequently, we need to make quality control (QC) of CR imaging plate considering the alternation in the pixel values or increase or uniformity in noises brought by its deterioration.

Introduction

Digital mammography is a widely used imaging modality because it can capture images that are equivalent or superior to those from conventional analog screen/film mammography. The available digital devices include computed radiography (CR) devices and flat panel detectors (FPDs). CR devices have been available since the 1980s and have significantly improved since that time.¹ Although FPD equipment is becoming more widely available, CR devices remain more common, with CR devices being used in 80.2% of cases and FPDs being used in 19.8% of cases in Japan.

Quality control and accuracy in imaging facilities remain important concerns. For example, recent problems have emerged that are related to the burn out of stimutable phosphor, which is the backbone of CR technology.² Long-term repetitive exposure to X-rays causes alterations in the stimutable luminescence mechanism, which leads to decreased amounts of luminescence being generated.³ Thus, image quality deteriorates over time. Furthermore, the imaging plates (IPs) are often used in a specific orientation and at a specific location, which can produce “ghost images” on the area where the breast is being imaged. Therefore, this study is the attempt to quantify the influence of IP age on the quality of simulated mammography images by comparing IPs that were used for 2010 and 2017.

Method

Equipment

This study used a Lorad M-IV mammography device (Hitachi, Japan) and a Fuji Imaging Plate HR-BD with a screen size of 6 (Fujifilm Co., Japan). The density gradation number was 10 bits, and the sampling interval at the time of reading was 50 μ m. The output printer was a Dry Pix 4000 device (Fujifilm Medical Co., Japan) that used DI-ML dry imaging film. The phantom was an RMI 156 (GAMMEX; Sun Nuclear, Melbourne, FL) and a Step Phantom

AGH D-210-F (Kyoto Kagaku Co. Ltd). One acrylic disc was used (thickness: 4.024 ± 0.002 mm, diameter: 9.620 ± 0.0012 mm). A transmission densitometer (MODEL-301RS; Fujifilm Co.) was used for the concentration measurements. Image data were analyzed using open source image processing software (ImageJ version 4; National Institutes of Health, Bethesda, MD).⁴

Visual evaluation

The IPs were defined as CR-A (manufactured in 2010) and CR-B (manufactured in 2017), and images from the RMI 156 phantom and Step Phantom were acquired as shown in *Mammography Imaging Quality Management Manual* (14-4). A molybdenum target and filter were used, with a tube voltage of 26 kV and a tube current time product of 80 mAs. These settings were selected for quality control because they are the average settings that are used at our hospital for obtaining images of a breast with a thickness of 40 mm. The CR processing parameters were an L value of 2.00 and an S value of 113. Two output films were generated and visually evaluated by 9 medical radiological technologists (technologists A–I) in accordance with the *Mammography Imaging Quality Management Manual* (14-4).

Concentration measurements

The films of CR-A and CR-B from the visual evaluation (RMI 156 phantom) were subdivided into 15 rectangular regions of interest (ROI). Density values were obtained at three locations in each ROI, and the average value for each ROI was recorded as the concentration in that ROI.

Pixel-level measurements

Using CR-A and CR-B, a board was positioned near the edge of the image-receiving surface and irradiated to obtain a uniformly exposed image. The molybdenum target and filter were used with

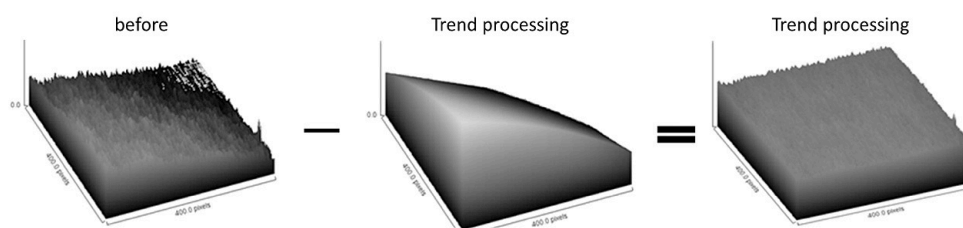


Figure 1: Trend processing image creation.

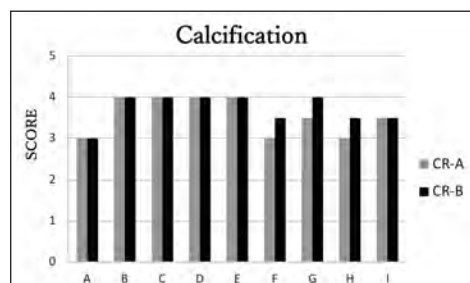


Figure 2a: Calcification.

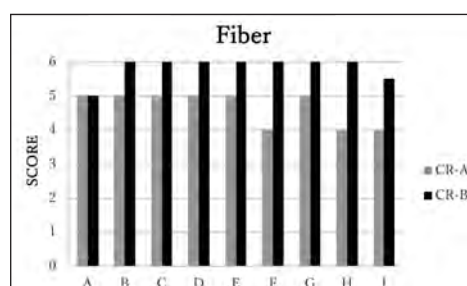


Figure 2b: Fiber.

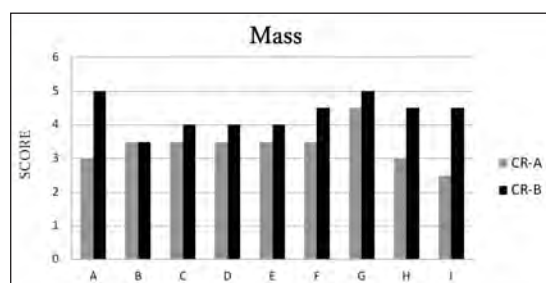


Figure 2c: Mass.

CR-A	A	B	C	Average	SD
1	1.99	2.07	2.09	2.05	0.06
2	1.90	2.04	2.08	2.00	0.09
3	1.76	1.96	1.97	1.90	0.12
4	1.58	1.75	1.76	1.70	0.10
5	1.46	1.57	1.61	1.55	0.08
Average	1.74	1.88	1.90	1.84	–
SD	0.22	0.21	0.21	–	0.21

CR-B	A	B	C	Average	SD
1	1.62	1.68	1.71	1.67	0.05
2	1.60	1.67	1.71	1.66	0.05
3	1.56	1.64	1.69	1.63	0.06
4	1.52	1.60	1.65	1.59	0.07
5	1.44	1.52	1.60	1.52	0.08
Average	1.55	1.62	1.67	1.61	–
SD	0.07	0.06	0.05	–	0.08

Table 1: Average concentrations and standard deviations. The regions of interest in this table reflect the regions of interest that are shown in Fig. 2. SD: standard deviation.

a tube voltage of 26 kV and a tube current time product of 20 mAs. The CR processing parameter was set to “A gradation” (linear) to minimize the image processing as much as possible.

The ImageJ software was used to obtain a Digital Imaging and Communications in Medicine (DICOM) image with uniform exposure. This image was then divided into 11 rows (oriented along the chest wall side) and 8 columns (progressing outward from the chest wall side toward the nipple side). This produced a total of 88 ROIs (400 pixels × 400 pixels), and the pixel value of each ROI was measured.

Standard deviation and measurement of signal-to-noise ratio

Trend processing was performed to minimize the influence of the concentration gradient when obtaining the standard deviation (SD) and the signal-to-noise ratio (SNR) for the DICOM with uniform exposure. Approximate images for signal strength correction were created using the original Macro Polynomial Fit of the 88 ROIs, and then images for trend correction (created using the original image). This approach provided the image after correction for only noise (Fig. 1), which facilitated the calculation of the SD and SNR for each ROI.

Results

Visual evaluation

The visual evaluation results from the nine radiologists for the RMI 156 phantom using CR-A and CR-B are shown in Fig. 2. For the fiber, tumor mass, and calcification samples, CR-A generally provided lower scores than CR-B. The tumor mass sample provided uneven results between CR-A and CR-B, with both samples being within the reference range.

Concentration measurements

Table 1 summarises the results of the concentration measurement from the 15 ROIs in the RMI 156 phantom. The average concentrations for CR-A and CR-B were 1.84 ± 0.21 and 1.61 ± 0.08 , respectively. Analysis of variance revealed a significant difference between the measured concentrations for CR-A and CR-B. Analysis of variance was performed; a significant difference of 5% was observed between the measured concentrations of CR-A and CR-B.

Pixel-level measurements

The relationship between the position of 88 ROI and pixel values on a uniformly exposed DICOM image. That figure shows the results starting with the first column of 11 ROIs that are in contact with the chest wall side and subsequently progressing towards the nipple side. The vertical axis indicate the pixel values and the horizontal axis indicate the corresponding columns from Fig. 3 shows that the pixel values for CR-A decreased sharply (i.e., decreasing photographic density) with less dispersion in columns that were nearer to the nipple side, and that this decrease was greater than that for CR-B (34% vs. 10%).

To facilitate a visual evaluation of the changes in pixel values according to position, a three-dimensional display is shown in Fig. 4. The position of the 11 ROIs in the first column (along the chest wall side) make it simple to evaluate these data in terms of photographic density. For example, the density for CR-B gradually decreases from the chest wall side toward the nipple side, but remains nearly flat with almost no apparent inclination in the depth direction. However, the density for CR-A has a large inclination in the direction toward the nipple side, and the depth direction increases toward the center.

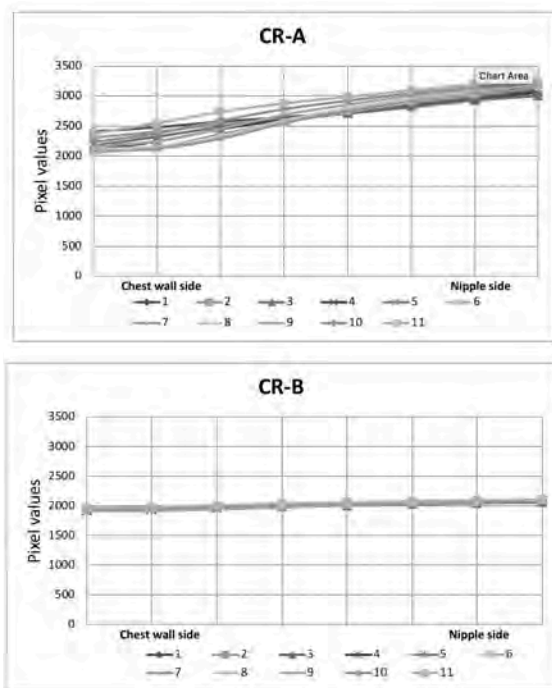


Figure 3: Pixel-level values. The data are shown for each row of ROIs (individual lines are indicated in the legend) at the columns that are shown in Fig 4.

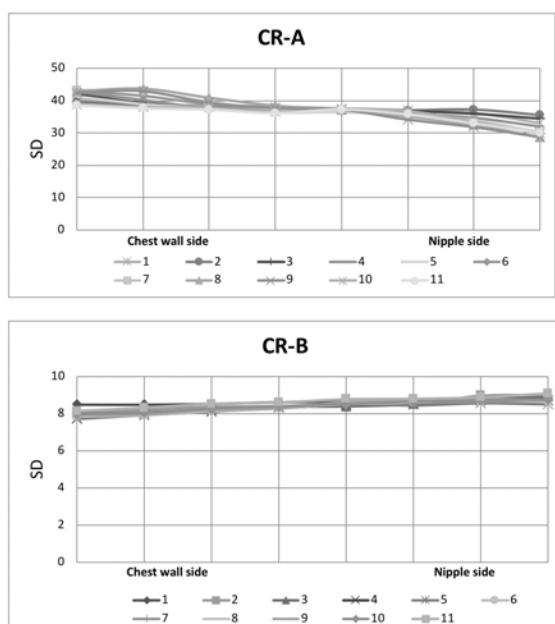


Figure 5: The standard deviation (SD) values.

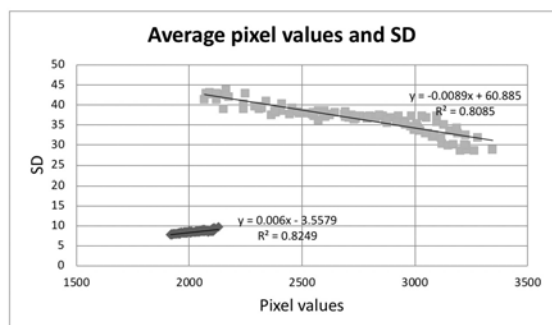


Figure 7: Relationship between the pixel and standard deviation (SD) values.

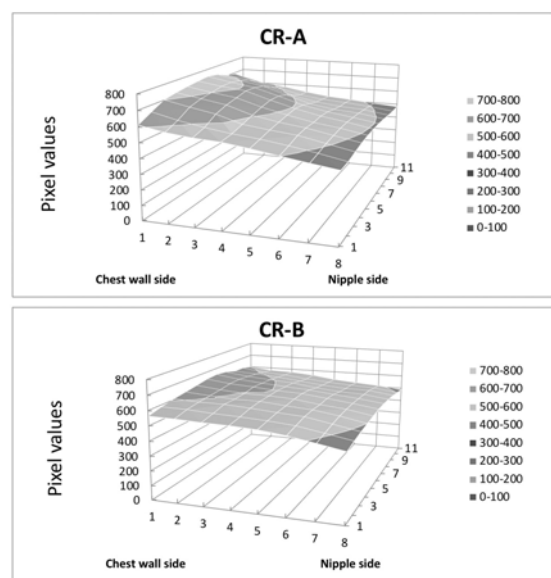


Figure 4: Three-dimensional plots for CR-A and CR-B.

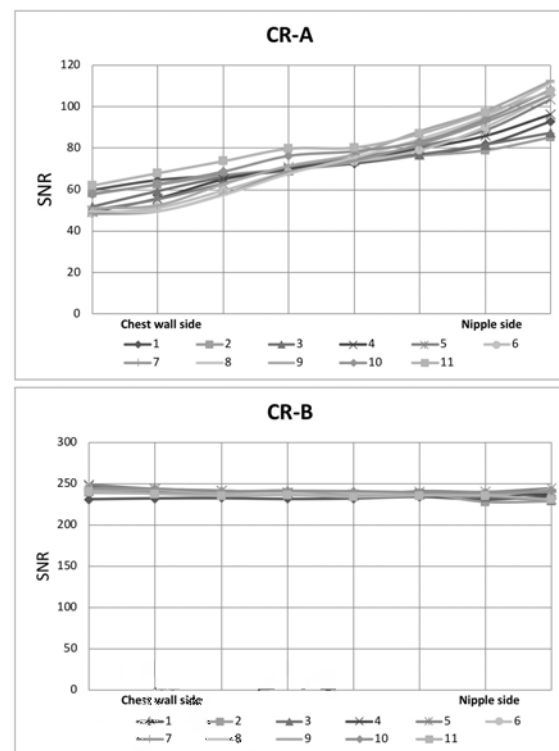


Figure 6: Signal-to-noise ratio (SNR) values.

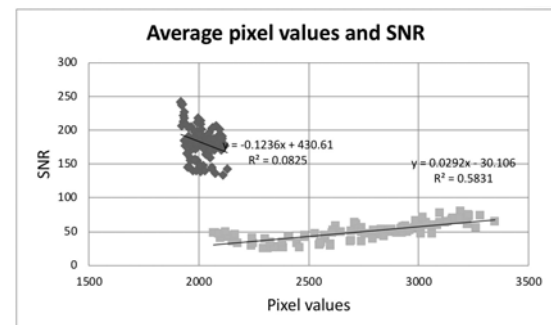


Figure 8: Relationship between the pixel and signal-to-noise ratio (SNR) values

SD measurement

The relationships between the positions of the 88 ROIs on the uniformly exposed DICOM image are shown in Fig. 5, starting at the 11 ROIs that sit nearest the chest wall side. The vertical axis show the SD values and the horizontal axis show the positions of the eight columns of ROIs as they move from the chest wall side toward the nipple side. It is clear that CR-A has a significantly larger SD value than CR-B, which has nearly constant SD values regardless of the ROI positions, while the SD values for CR-A fluctuate according to the ROI positions. The SD values decreased by 34% from the chest wall side to the nipple side, compared to 10% for CR-B.

SNR measurement

The relationships between the positions of the 88 ROIs and the SNR values are shown in Fig. 6, starting at the 8 ROIs nearest the chest wall side. The vertical axis reflect the SNR values and the horizontal axis reflect the columns of ROIs as they move nearer to the nipple side. The SNR value for CR-A was smaller than that of CR-B, which remained nearly constant regardless of the ROIs' position. In contrast, the SNR values for CR-A were small nearer the chest wall side, which generated a larger noise effect. The SNR for CR-A was approximately 29% larger at the chest wall side, compared to at the nipple side.

Relationship between the pixel and SD values

The relationship between the pixel and SD values for each ROI is shown in Fig. 7. There was little variation in these values for CR-B, with a clear positive correlation. In contrast, there was broader variation in the values for CR-A with a positive correlation. The line of best fit for CR-A was $Y = -0.0089x + 60.885$ ($R^2 = 0.8085$), and the line of best fit for CR-B was $Y = 0.006x - 3.5579$ ($R^2 = 0.8249$).

Relationship between the pixel and SNR values

The relationship between the pixel and SNR values for each ROI is shown in Fig. 8. This relationship was inverse to that observed in the previous sections, with the lines of best fit being $Y = 0.0292x - 30.106$ ($R^2 = 0.5831$ for CR-A and $Y = -0.1236x + 430.61$ ($R^2 = 0.0825$) for CR-B.

Discussion

The mammography apparatus is configured so that a strong X-ray beam reaches the end of the chest wall using the anode heel effect. Thus, even during imaging of a uniform object (e.g., the RMI 156 phantom), the dose reaching the IP gradually decreases from the chest wall side toward the nipple side. The present study revealed little variation in the pixel and SD values for CR-B, with a positive correlation that was related to the anode heel effect. However, the concentration gradient and variation in the phantom were remarkable for CR-A. In this context, if the IP has uniform sensitivity, increasing incident doses should generate decreased variations in pixel value if the pixel value is small and the quantum mottle is large. Interestingly, CR-A had a small pixel value and larger incident doses created larger variations in the pixel value, which suggests that the change in the CR-A cannot be explained by the heel effect alone. It is also apparent that the IP deterioration was large and could not be fully corrected using image processing. Although image density affects visual evaluation, concentration variation of CR - A cannot explain the degradation of visibility in the simulated mass sample.

The present study also revealed that IP aging was more apparent when considering image density, compared to visual evaluation of the phantom. This is because CR-A had broad dispersion of the pixel values and a lower SNR (vs. CR-B), which indicates that the image contained many noise components. For example, the point where

the pixel values changed for CR-A coincided with the exact position where the breast is placed. Therefore, changes in the breast's position leads to X-rays directly entering the image receiver and being appropriated as a change in the amount of light emitted. In addition, the correlation between the pixel and SD values suggests that this increase in noise was the effect of burning, which is an afterimage phenomenon that is known as "multiplicative lag." Thus, our results suggest that burning produces both inclination in pixel values (density) and sensitivity changes, as well as increased noise, despite discussion in the literature generally focusing only on the density gradient.

Conclusion

This study used two types of IP that were manufactured during different years, and examined the effects of IP aging on simulated mammography images. The results indicate that pixel value, density, sensitivity, and noise increase with IP age, which is related to burn out of stimuable phosphor. Thus, IPs should be evaluated to examine their noise levels and uniformity, as well as a phantom sight evaluation. And quality control based on this is necessary.

Acknowledgement

Mr Yasuo Okuda gave me constructive comments and warm encouragement.

All my colleagues at Daido Hospital for continued support and encouragement.

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World Radiography Educational Trust Foundation

News

Trustees recently took a decision to increase the maximum bursary award to £700. This reflects the increasing costs that our bursary recipients have to meet to enable them to take advantage of making educational visits and to attend conferences. The new maximum amount to be awarded applies from 2018.

Support

The Trust has recently used contacts made through the Imaging in Developing Countries – Special Interest Group (IDC-SIG) in the UK, to provide textbooks to developing countries, most recently Uganda. Using this route not only saves on postage costs but more importantly means that the book parcels actually arrive at their destination.



Pictured above: Moses of Buluba Hospital Uganda with books provided by WRETF.

Bursary Scheme

The WRETF continues to improve and expand its opportunities to assist our fellow radiographers. Our bursaries have become key features of these and with our terrific expanded social media access it was evident that we needed greater clarity and transparency to our application and grading processes. The application processes have been updated and a comprehensive grading rubric introduced. After a successful pilot run of the new processes we are now using all the new systems for current and future applications. Trustees wish to make all aware of the opportunities that exist within the WRETF to collaborate more closely with our ISRRT colleagues. Trustees Chris Steelman and Cynthia Cowling attended the Congress in April and enjoyed connecting with all our ISRRT colleagues and friends.

Recipient Mr Ud Din of Pakistan visited the International Islamic university of Malaysia to learn more about radiography and teaching practices.

Three applicants have recently been awarded a bursary – two are intending to go to the upcoming ISRRT Congress in Trinidad and Tobago and the third is coming to the UK to make an educational visit to the Sheffield Teaching Hospitals, Yorkshire.

Fundraising

The Fundraising activity of the WRETF is a crucial task and we fairly rely on our Trustees and Ambassadors, their contacts and networks to help in this activity.

Our Chairman, Cynthia Cowling informed Trustees that the radiography students at Monash University, Melbourne were looking to raise funds for the WRETF through an event that was taking place in late 2017. We were absolutely delighted when Jeremy Kilgour, their President, advised us that they had raised A\$1,650, which equated to £920. This will be used to support our burgeoning travel bursary activity that helps support radiographers in developing countries either to undertake some much needed training abroad or to expand their skills by attending an appropriate conference, workshop or similar, with a view to taking that knowledge back to their department for the benefit of their colleagues and of course their patients.

Less than two months earlier a large donation from fundraising activities at the 21st Asia-Australasia Conference held in Hong Kong was received by the WRETF, as reported in the last newsletter.

Together these two wonderful donations, plus their interest from the Charity Commission Investment Fund will support three bursaries that the Trust can deliver over the coming months. The Trust is hugely grateful for these donations and in thanking all those involved I would encourage any other student radiographer or country-wide radiographer organisations to consider joining the Monash students and help raise funds for the WRETF.

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Bursary recipient Mr Ud Din with host colleagues.



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News from member countries

THE AMERICAS

AMERICA



ASRT Foundation honors two with International Speakers Award

Recipients will travel to Liverpool, England, and Montreal, Canada, for conference presentations

Two ASRT members have been selected as recipients of the ASRT Foundation 2018 International Speakers Exchange Award.

- Erin J. Wittland, B.S., R.T.(T), will present “On-Table Treatment Adaptation and Motion Management Using MR-guided Radiotherapy: 4 Years of Clinical Implementation” at the 2018 United Kingdom Radiological Congress in Liverpool, England, in July. Wittland is a senior radiation therapist at Siteman Cancer Center, Barnes-Jewish Hospital in St. Louis, Missouri.
- Melanie C. Dempsey, Ph.D., R.T. (R)(T), CMD, will present “Evaluating Secondary Thyroid Dose in Total Breast Irradiation” at the 2018 Canadian Association of Medical Radiation Technologists Annual General Conference in Montreal, Canada, in September. Dr. Dempsey is radiation therapy program director at Virginia Commonwealth University in Richmond, Virginia.

For more than a decade, the ASRT Foundation has funded radiologic technologists to participate in the ISEA program. It promotes global cooperation through the sharing of research, best practices and professional development in the radiologic sciences. It also provides speakers the opportunity to forge important professional connections with international colleagues. The award includes conference registration, travel and lodging expenses and a stipend to cover related costs.

ASRT contest to send eight to 20th ISRRT World Congress

Eight ASRT members have been selected to receive all-expenses-paid trips to attend the 20th ISRRT World Congress in Trinidad and Tobago.

Thousands of members registered online for the one-of-a-kind opportunity to share

experiences with the global medical imaging and radiation therapy community and to see the latest advancements in the profession.

The winners are:

- Ariel Burns, R.T.(R), Lutheran Medical Center, Wheat Ridge, Colorado
- Ashley Dome, student, County College of Morris, Radiography Program, Newton, New Jersey
- Carlos L. Duran, B.S., R.T.(R), CRA, Philips Healthcare, Coral Springs, Florida
- Christopher Garcia, student, Adventist University of Health Sciences, Orlando, Florida
- Grace Klopfenstein, R.T.(R), Tucson Orthopaedic Institute, Tucson, Arizona
- Mari Pereira, R.T.(R), Dr. Beverly Shafer/ MGH, Beverly, Massachusetts
- Danielle Peterson, R.T.(R), The Diagnostic Treatment Center, Weston, Wisconsin
- Peter Stokich, A.A., R.T.(R), CRT, Tahoe Forest Hospital, Truckee, California

The recipients will receive airfare, a five-night hotel stay, conference registration and a stipend to attend the World Congress. The event took place in the Hyatt Regency Trinidad, April 12 -15, 2018, in Port-of-Spain, Trinidad and Tobago.

ASRT Foundation Community Outreach Fellowship Program

Working in conjunction with our partner RAD-AID, the ASRT Foundation Community Outreach Fellowship Program has supported technologist volunteer work in eight countries. The ongoing program has become incredibly popular within the radiologic technology community. From Kenya to Nigeria to Laos and Ghana, ASRT members have provided patient care services and education for local health care personnel. The program offers a wide range of services ranging from training on equipment sanitation to providing education on 3-D conformal radiation therapy treatment planning.

Sharon Wartenbee Regional Director for the Americas

ASRT survey shows marginal enrolment increase in US Radiography Educational Programs

In a survey conducted by the ASRT, directors of radiography educational programs in the US reported that the number of enrolled students increased slightly in 2017, while

nuclear medicine technology and radiation therapy programs saw modest enrollment declines. Entering class enrollments, student accommodation availability and predicted future enrolment levels are among the findings in the [ASRT Enrollment Snapshot of Radiography, Radiation Therapy and Nuclear Medicine Technology Programs — 2017](#).

According to the survey results, an estimated 15,769 students were enrolled in radiography programs in 2017 averaging 21.7 students per program, up from 21.1 in 2016. Radiation therapy and nuclear medicine technology programs saw slight declines in enrollment. The survey noted an average of 10.5 students were enrolled in radiation therapy programs, down from 10.8 in 2016. An average of 10.9 students were enrolled in nuclear medicine technology programs, down from 11.4 in 2016. In total, the survey showed an estimated 1,151 students enrolled in radiation therapy programs, with an estimated 1,273 students enrolled in nuclear medicine technology programs.

ASRT Foundation Funds Imaging Science Education Study

The ASRT Foundation has funded a research project that will evaluate the role of e-modules in imaging science curricula at three academic medical centers. The study will seek to determine if case-based e-modules improve exam outcomes compared to students who participated in standard education methods. An e-module is computer-based educational content about 10 to 15 minutes in duration. E-modules typically have only one or two learning concepts and incorporate a blend of teaching and assessment tools that may include video clips, direct instruction, gaming elements and social media. A grant of nearly \$10,000 was awarded to Tanya M. Custer, M.S., R.T.(R)(T), RDMS, RVT, an assistant professor and distance education coordinator at the University of Nebraska Medical Center in Omaha, to fund the study, which is titled “The Impact of Case-Based E-learning on Student Knowledge and Critical Thinking,” in the Imaging Sciences Curriculum. The multidisciplinary study will be conducted at UNMC, Mayo Clinic in Rochester, Minnesota, and at Rush University in Chicago.

Recipients named for Education and Professional Growth Grants

Fifty-one ASRT members were selected to receive support for continuing education and professional development in the

Advancing Your Profession: Education and Professional Growth Grants program. The grant program, funded by the American Registry of Radiologic Technologists, supports the professional and educational development of radiologic technologists, radiation therapists and sonographers. Funds are intended to reimburse recipients for the cost of CE, educational conferences or products, or ARRT primary or secondary certification exams. Applicants were required to submit short essays on how acquiring and maintaining certification improves patient care. The ASRT Foundation selected one recipient per active ASRT state affiliate or local affiliate for 2017.

US recognises radiologic technologists in November, 2017



During National Radiologic Technology Week® every November, hospitals, health care centers and clinics in the U.S. recognise the medical

personnel who perform diagnostic imaging examinations and administer radiation therapy treatments. The ASRT established NRTW® to recognise the vital work of radiologic technologists and the important role they play in health care. NRTW takes place every November to honor German physicist Wilhelm Conrad Roentgen's discovery of the x-ray on Nov. 8, 1895. For the celebration, which took place Nov. 5-11, 2017, ASRT designed five popular profile photo frames for Facebook using the theme "Positioning To Save Lives." By sharing the frames, radiologic technologists and others who support the profession could express their pride through social media and bring national awareness to medical imaging and radiation therapy professionals. The Society used the hashtag #NRTW17 to track the impact of the social media activity. "Radiologic technologists should be acknowledged for their indispensable role in health care and patient safety," said Sal Martino, Ed. D., R.T., FASRT, FASAE, CAE, CEO and executive director of ASRT. "Americans should know that the personnel who perform their medical imaging and radiation therapy procedures are educated professionals dedicated to providing exceptional and often lifesaving care."

Upcoming ASRT Events

June 21-24, 2018
Las Vegas, Nevada

ASRT Educational Symposium and Annual Governance and House of Delegates Meeting

Oct. 21-23, 2018
San Antonio, Texas
ASRT Radiation Therapy Conference

Nov. 4-10, 2018
National Radiologic Technology Week®
www.camrt.ca/certification

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CANADA



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Those interested in advanced practice in radiation therapy will be interested to know that the CAMRT now offers a complete Advanced Practice Certification in Radiation Therapy process. Information on the process is available at <http://www.aprt.ca/>

Journal of Medical Imaging and Radiation Sciences (JMIRS)

JMIRS (www.jmirs.org) is calling for papers for a special issue on the topic of Personalised Medicine to be published in December 2018. The goal for this issue is to present research findings, educational and clinical perspectives, systematic reviews, teaching cases, and commentaries of the highest quality that inform on the role and impact of our professions in personalised medicine. JMIRS is also interested in papers with an international focus that cover personalised medicine topics worldwide. Submissions are due May 1, 2018.

Please submit all papers to JMIRS through the JMIRS website: <http://www.jmirs.org/>. If it is a special issue submission, please indicate this in your cover letter.

Education for MRTs

CAMRT is a world-class developer and provider of CPD in medical radiation technology. CAMRT offers over 60 courses and dozens of webinars at competitive rates across a spectrum of topics. All are available for Category A credit (accepted by the ARRT and others) to any graduate of a medical radiation technology program, regardless of the country of education.

To see what education is available to you, explore the CAMRT CPD catalogue (<http://www.camrt.ca/professional-development/>).

Support for those interested in working in Canada

The CAMRT encourages those thinking about working as MRTs in Canada to review two learning modules for Internationally Educated Medical Radiation Technologists (IEMRTs). The first module describes practice/employment in Canada. The second is a module providing education on "How to Write a Competency Based Exam". Both are available in the certification section of the CAMRT website (<http://www.camrt.ca/certification/>).

Marcia Smoke
smokem@hhsc.ca

EUROPE

DENMARK



New collective agreement for Danish radiographers

In Denmark, the Danish Council of Radiographers is both a professional organization as well as the trade union of the Danish radiographers. And in the first quarter of 2018, almost all our resources have been spent on the negotiations of a new agreement.

In Denmark, collective agreements are negotiated separately for the private sector and the public sector. The last 10 years of public sector agreements have been narrow agreements. At the same time, there have been stringent demands for efficiency improvements, with a steady decline in the quality of the employees' working environment. Therefore, the expectations for a better result with this agreement were high among the Danish workers in the public sector.

In opposition to the interest of the workers stands the public employers who, for the parts 10 years, have been conducting tough negotiations, which have ensured the implementation of the Parliament's political ideologies.

This is against the principles of what is known as the "Danish Model" for negotiations of collective agreements. The ideology is, that the politicians do not interfere or try to influence the negotiations between the employer and the employee.

And that the negotiations on state, region and municipality (which are different agreements), are conducted and separate.

In 2018, the employers again had very stringent requirements that were in direct contrast to the union's demands for more in pay and the safeguarding of rights. This led to very tough and very difficult negotiations, and Denmark has indeed been very close to an open conflict that would effectively have close the public sector, and with that, most of the country as well.

Fortunately, the parties managed to find an agreement, a quarter to 12 as they say. And on April 18, we got a new collective agreement for the public sector. It now awaits to be put to a vote amongst the members of the labor unions.

It is a solid agreement, which under the circumstances, is quite reasonable. But the big victory is that of all the professions in the public sector, which has enabled us to go heads to heads with the public employers throughout the negotiations.

Charlotte Graungaard Falkvard
President, MMCR

AFRICA

TUNISIA



The Tunisian Association of Radiological Technologists (ATTR) continues its continuing education efforts.

ATTR began the 2018 program with a regional day on March 31 to study the management of trauma and radiation protection. ATTR also organised its 72nd National Congress in the beautiful tourist city Sousse, April 6-8. The main theme of this congress was CT Scan and oncology.

On May 12, a day of radiology in Tunis,



the capital, is organised.

Previously, on February 17-18, 2018, ATTR collaborated with a private training company (medical professionals), and associations from Lebanon, France, Algeria, Luxembourg,

Belgium and the ISRRT for the days radiology technicians at the tourist town of Hammamet.

ATTR participated in the Council Meeting and at the 20th ISRRT World Congress in Trinidad and Tobago in April. Council Member Mohamed Khelifi represented ATTR at this congress.

SOUTH AFRICA



On 12 April 2018 about 447 delegates from 55 countries around the world visited the city Port of Spain, more specifically the Hyatt

Regency Hotel in Wrightson Road Trinidad with one purpose in mind: to attend the

Delegates from South Africa at the 20th ISRRT conference (Hesta Friedrich-Nel, Fozy Peer and Bernard Mun'gomba) with Aarthi Ramlaul (previously from South Africa).

20th ISRRT conference. Three of these delegates travelled all the way from South Africa. They are the President Dr Fozy Peer, the council member for South Africa and regional co-ordinator for education in Africa, Hesta Friedrich-Nel and Bernard Mun'gomba. In 2017 Dr Mun'gomba received the award for the best presentation at the Society of Radiographers of South Africa and Radiology Society of South Africa (SORSA RSSA) conference in South Africa. As a result, SORSA sponsored his travel, accommodation and registration fees to attend the ISRRT conference in Trinidad. Dr Fozy Peer, the President of ISRRT did an outstanding job to fulfil her president duties during the council meeting and the conference. She had to conduct the council meeting prior to the conference. She also assisted the Society of Radiographers of Trinidad and Tobago's local organising committee where and when needed with logistics and more. She attended a variety of the conference sessions to show her support for both the established and novice radiography researchers. This action also helped her to get an overview of the standard of papers read at the conference. Both the other two delegates read papers that were well received, one paper was co-authored by Leonie Munro. The questions and ongoing discussions lingered long after the closing ceremony of the conference.

Although the journey from South Africa to the Republic of Trinidad and Tobago, Port of Spain and back was long, it was worth the time and effort. It was a wonderful experience to meet so many



radiographers – specifically from the Caribbean - and to witness the growth and maturity in the profession. On behalf of SORSA we salute and congratulate the local organising committee and the ISRR for putting together a conference where we could share research, smiles, hugs, secure new friendships and most of all practically experience the ‘we care’ theme of the conference. We are looking forward to no 21 in Dublin in August 2020.

Hesta Friedrich-Nel
South Africa

AUSTRALASIA

AUSTRALIA



The Australian Society was so glad to be able to have a strong presence at the recent ISRR World Congress in Trinidad.

Our outgoing Councillor, Chris

Whennan, was able to introduce his successor, Jo Page, our current President, Bronwyn Hilder, and Chief Executive Sally Kincaid to the ISRR Council.

We were thrilled to be there when one of our most outstanding Australians, Cynthia Cowling, was awarded the Diek van Dijk Service Award.

Linkages formed through the ISRR are so valuable. We recently had a visit at our head office in Melbourne from fellow ISRR member, the Canadian President, Karren Fader. Karren was here as a guest speaker at



Above: Incoming ISRR Councillor Jo Page, ASMIT President Bronwyn Hilder and outgoing ISRR Councillor Chris Whennan.

Right: Cynthia Cowling with Chris Whennan.

Below: Kev the Koala at the Adelaide Convention Centre. Kev – as he is affectionately called – has the potential to travel far and wide across Australasia and the Pacific region ... Who knows where he will pop up next!



the World Federation of Nuclear Medicine and Biology conference and took some time out to meet and discuss innovations that her Association are working on.

We are all gearing up now in preparation for the AACRT conference in Adelaide in March 2019.

Please look out for tweets and facebook posts updating you on our program – and



you may catch a glimpse of our mascot “Kevin” the Koala ... he will be popping up in all sorts of unusual places! We hope to see many ISRR and AACRT members there.

www.aacrt2019.org

Christopher Whennan
Council Member

Society of Radiography in Kenya
In Pursuit Of Quality Radiography

RASCO 2018

RADIOGRAPHERS SCIENTIFIC CONFERENCE

“Upscaling Radiography & Imaging Towards Universal Healthcare Coverage”

Venue: Pride Inn Paradise Hotel (Mombasa City)
Date: 8th - 14th October 2018

Abstracts Submission Deadline: 15th June 2018

Pre Conference Workshop (8th - 10th October 2018)
Theme: “Justification of practice & optimization of Radiation Protection”
Supported by ISRR

Registration Fee: \$ 50 USD

**Limited to 50 participants based on first come first served basis

SUB THEMES

1. Education & Training
2. Ethics, Governance & Leadership in Radiography & Imaging
3. Evidence-based practice in Radiography & Imaging
4. Patient Care & Safety
5. Public & Private Partnerships in Radiography
6. Quality Assurance and Quality Control in Radiography & Imaging
7. Radiation Protection & Safety
8. Research & Innovation
9. Technology in Radiography & Imaging

MAIN CONFERENCE REGISTRATION COSTS

Ksh 15,000/-
SORK members & Foreign participants

Ksh 16,500/-
Non SORK members
i.e. Not registered with SORK

Ksh 11,000/-
Leaders i.e. Council & Committee members & past council leaders

15% Discount
SORK members with approved abstracts & early bird registration

Our Partners
Radiation Protection Board, Ministry of Health, Eastern Africa Society of Radiation Protection, KEBS (Dosimetry Department), Kenya Association of Radiologists. SORK affiliation: ISRR, APSEA, KHPS

Abstracts to be submitted through:
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