

I would like to thank the AHRA leadership for arranging the time for this meeting. **Communication between our societies brings us together to better serve our patients, our institutions, and our members.**

As with each organization here, we had no prior experience to prepare for all that 2020 has brought. AAPM is a primarily volunteer driven organization, with nearly 9000 members and only 30 headquarters staff. In the midst of what each volunteer or staff member was going through at home or at their “day job” during stay at home orders and social distancing, we have risen to the occasion and are having a completely different, but yet overwhelming positive year. Highlights of our year are listed below.

In addition to mentioning a few of the resources that may be of interest to AHRA and the other societies at this meeting, I would like to provide an update on gonadal/fetal shielding.

TURNING CHALLENGES INTO OPPORTUNITIES

AAPM’s Virtual Spring Clinical Meeting and Annual Meeting both exceeded our expectations, with final registration numbers higher by 100s than anticipated. These meetings were changed from in person to virtual in only a matter of a few weeks and a few months, respectively.

We learned many valuable lessons about ideas that were on our roadmap, by going virtual. For example, that attendees highly valued:

1. On-Demand feature
2. Interactive chat box during presentations
3. Live Q&A at the end of the sessions
4. After-meeting social sessions
 - a. Trivia game, personal stories, bedtimes stories
5. Discount registration for developing countries
6. Free registration for state regulators
7. Links to evaluation, SAM questions, session handouts.
8. Recorded narration for ePosters
9. Ability to participate from a distance – no travel costs.

COVID

With regard to COVID, we – as did others – quickly formed an on-line resource center for our members that address issues such as the use of radiation to sterilize masks, access to equipment for performance testing, and infection control practices unique to our profession.

- Ad Hoc Committee on COVID-19 Response (AHCCR) – created web-based resource for medical physicists: <https://w3.aapm.org/covid19/>

- AAPM joins with ACR and RSNA to Develop Massive Open-Source COVID-19 Medical Image Database through NIBIB contract with the University of Chicago Joint Press Release: https://w3.aapm.org/media/releases/MIDRC-ACR-RSNA-AAPM_Release_Final.pdf
- NIBIB press release: <https://www.nibib.nih.gov/news-events/newsroom/nih-harnesses-ai-covid-19-diagnosis-treatment-and-monitoring>

ADDRESSING RACIAL DISPARITIES AND SOCIAL INJUSTICE

- AAPM Statement on Racism, Injustice and Humanity: <https://w3.aapm.org/media/releases/StatementRacismInjusticeHumanity.php>
- Presidential Ad Hoc formed to develop and coordinate multiple initiatives.

RECENT SCIENTIFIC REPORTS OF INTEREST

[Report No. 270.A - Practical application of AAPM Report 270 in display quality assurance: A report of Task Group 270 \(2020\)](#)

[Principles and Applications of Multi-energy CT Report of AAPM Task Group 291](#)

[The Design and Use of the ICRU/AAPM CT Radiation Dosimetry Phantom: An Implementation of AAPM Report 111](#)

[PET/CT Acceptance Testing and Quality Assurance](#)

[Estimating Patient Organ Dose with Computed Tomography: A Review of Present Methodology and Required DICOM Information](#)

[Performance Evaluation of Computed Tomography Systems - The Report of AAPM Task Group 233](#)

[Acceptance Testing and Annual Physics Survey Recommendations for Gamma Camera, SPECT, and SPECT/CT Systems](#)

[Considerations for the Use of Handheld Image Viewers: The Report of AAPM Task Group 260](#)

FORMATION OF INTERNATIONAL COUNCIL

The International Council shall develop, prioritize, and coordinate international activities of the Corporation, including external collaborations related to international activities of the Corporation. The International Council shall consider and make recommendations for international policy and programs to the Board.

IMPORTANCE OF VERIFICATION OF CREDENTIALS

National Qualified Medical Physicist registry: <http://qmp.crcpd.org/>

GONADAL/FETAL SHIELDING UPDATE

The CARES committee, although initiated by AAPM, is an alliance of medical imaging professionals representing any stakeholder group who would like to participate. The current list of societies participating include:

AAP	American Academy of Pediatrics
AAPM	American Association of Physicists in Medicine
ACR	American College of Radiology
ASRT	American Society of Radiologic Technologists
AHRA	Association for Medical Imaging Management
ACERT	Association of Collegiate Educators in Radiologic Technology
AEIRS	Association of Educators in Imaging and Radiologic Scientists
COMP	Canadian Organization of Medical Physicists
CRCPD	Conference of Radiation Control Program Directors
HPS	Health Physics Society
IG	Image Gently
IW	Image Wisely
JRCERT	Joint Review Committee on Education in Radiologic Technology
RSNA	Radiological Society of North America
SPR	Society of Pediatric Radiology

We thank **Bill Agee** for representing AHRA. An upcoming project is to draft template department policies and procedures documents for use by departments who choose to alter their practice with regard to use of patient contact shielding for the gonads and fetus. It is essential that Medical Imaging Management be “at the table” in the formation of implementation policies and procedures, as well as educational material for their staff.

Of note, a multi-society group in the UK has produced a very thorough document on this topic, which can be found at this link. This group of radiologists, technologists, medical physicists, and health physicists address the topic of surface shielding not only for radiography and fluoroscopy, but also for interventional radiology, CT imaging, mammography, and dental radiography.

https://www.sor.org/sites/default/files/document-versions/final_patient_shielding_guidance.r1_0.pdf

Participating societies included:

- The British Institute of Radiology
- The Institute of Physics and Engineering in Medicine
- Public Health England (regulatory)
- The Society and College of Radiographers
- The Royal College of Radiologists
- The Society for Radiological Protection

The **U.S. National Council on Radiation Protection and Measurements (NCRP)** has finalized their report on *Gonadal Shielding During Abdominal And Pelvic Radiography*, which has undergone internal and external review and will be published by year end. Their recommendations are consistent with the *2019 AAPM Position Statement on the Use of Patient Gonadal and Fetal Shielding*. These recommendations to discontinue routine use of gonadal shielding have no regulatory authority at the present time, which is granted to each state.

The CARES team is developing the following educational modules regarding the science behind the new recommendations, implementation guidance, and more. The list of modules is given below.

Several of the organizations who have publicly endorsed the 2019 AAPM statement, such as the ACR, have stepped forward to sponsor the cost of obtaining CE credits for their members. We are working with the various professional societies, whose members require CE credits, to discuss similar opportunities. We will follow up with AHRA leadership in a separate meeting.

CARES Education Modules: Fetal and Gonadal Shielding During Radiography

Each Module, ~15 mins, 0.25 CME each

1. Introduction
 - a. Definition of Fetal and Gonadal Shielding
 - b. From a technologist perspective
2. Gonadal Shielding: Historical Perspective
 - a. Radiosensitivity of organs

- b. Evolution of Radiation dose (direct exposure to film, screen-film, digital)
 - c. Evolution of x-ray beam restriction (apertures, cones, movable collimator)
3. Fetal Shielding: Historical Perspective
4. Factors that reduce effectiveness of shielding
- a. Anatomy
 - b. Ideal vs. shifted shielding
 - c. AEC functionality
5. Current AAPM perspectives
- a. Based on scientific evidence
 - b. New practice
 - c. Recognition of challenges
6. A new paradigm-IMAGES
Intended to be used as an in-service for radiology departments (50 minutes, 1 CE credit)
- a. Inform
 - i. For the Patient: Inform the patient about exam, what to expect, and best practices in radiation safety
 - ii. For the Radiologic Technologist: Be informed of current best practices in radiation safety
 - b. Manage
 - i. For the Patient: Manage radiation exposure to the image receptor (use technique charts and consult EI values to ensure optimum kVp and mAs)
 - ii. For the Radiologic Technologist: Manage radiation dose to the patient and others by minimizing repeat exposures (optimum exposure, appropriate procedure, proper positioning, collimation, elimination of artifacts)
 - c. Advocate
 - i. For the Patient: Advocate for the patient by participating in radiation safety best practices to ensure optimum image quality and minimal radiation dose.
 - ii. For the Radiologic Technologist: Advocate for the profession by sharing rationale for radiation safety best practices to the public and other healthcare professionals
 - d. Give
 - i. For the Patient: Give comfort and compassionate care to diverse populations
 - ii. For the Radiologic Technologist: Give the highest quality care to all patients and accurate, quality imaging exams to the radiologist
 - e. Educate

- i. For the Patient: Educate the patient and the public about radiation safety best practices
 - ii. For the Radiologic Technologist: Educate yourself about current radiation safety best practices
 - f. Safety
 - i. For the Patient: Safety - maintain a safe environment and keep safety at the forefront of the delivery of care
 - ii. For the Radiologic Technologist: create a safe, healthy, and positive work environment
- 7. Implementation recommendations at your facility
- 8. Communication with patients about the new guidelines (adults)
- 9. Communication with patients about the new guidelines (pediatrics & parents)
- 10. Regulatory and Licensure aspects of patient shielding
 - a. FDA 21 CFR
 - b. State regulations
 - c. Impact of certification guidelines & codes of ethics
- 11. NCRP statement and how this affects shielding guidelines