

ANNUAL REPORT OF THE ACPSEM PARTICLE THERAPY WORKING GROUP

PREPARED BY SCOTT PENFOLD, CHAIR OF THE ACPSEM PTWG
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BACKGROUND

The ACPSEM Particle Therapy Working Group (PTWG) was formed in 2018 with the aim of establishing a national collaboration for the safe and effective introduction of proton therapy in Australia. The PTWG includes representation from each State/Territory branch of the College, with the exception of New Zealand, and representation from ARPANSA. The PTWG also has representation from an ACPSEM member working at a proton therapy centre in the United States.

The PTWG has been structured into 5 subgroups. Each subgroup has an allocated lead, however members may contribute to more than 1 subgroup. The Chair of the PTWG participates in the work of each subgroup.

This annual report summarizes the activities of the PTWG in 2021.

MEETINGS

Quarterly Group meetings were held as per the Terms of Reference. These occurred in February, May, August and November. Training and Professional Certification Subgroup meetings were also held in addition to these to develop the Level 1 Module for the online Training and Professional Certification platform.

Members of the PTWG made a significant contribution to the program of the 2021 National Particle Therapy Symposium, with 4 presentations from PTWG members. The Chair of the PTWG also co-ordinated the multi-centre comparative planning workshop on Day 2 of the Symposium.

SUBGROUP REPORTS

TRAINING AND PROFESSIONAL CERTIFICATION

LEAD – ANDREW FIELDING

In 2020, the PTWG submitted a proposal for particle therapy training and professional certification to the ACPSEM Board. A three-level structure was proposed as described below:

Level 1

- Training for all TEAP registrars
- CPD activity for certified ROMPs (if the content was not already completed as part of TEAP)

Level 2

- Training for certified ROMPs working within the National Referral Network

Level 3

- Training for certified ROMPs working at a clinical particle therapy facility

The three-level proposal was endorsed by the Board and preparation for Level 1 was commenced in 2021. The ACPSEM contracted MedCast to provide the infrastructure for an online learning system through COMET. Members of the Training and Professional Certification subgroup prepared the content and assessment for the training. The Level 1 online learning platform was launched at the 2021 National Particle Therapy Symposium and at EPSM. The expected go-live date is 22/11/21. One subsection of the online learning system is still in development. The considerable time and effort of the contributors devoted to creating the content is noted and acknowledged with thanks.

The PTWG Fellowship awarded in 2020 was not able to be taken-up due to COVID-19. It is hoped the Fellowship will recommence in 2022 or 2023.

RADIATION SAFETY AND SHIELDING

LEAD –SCOTT PENFOLD

The Radiation Safety and Shielding subgroup is currently awaiting advice from ARPANSA concerning an update to Radiation Protection Series 14.3. It is envisaged that the subgroup will provide input to the 14.3 update on particle therapy related aspects.

PATIENT SELECTION MODELS AND DATA ANALYTICS

LEAD – JONATHAN SYKES AND SCOTT PENFOLD

In 2020, the PTWG provided a response on behalf of the ACPSEM to the Federal Department of Health regarding an application to have proton beam therapy listed on the Medicare Benefits Schedule. In 2021 the public summary document for the application was released which recommended the creation of new item numbers for proton beam therapy. The new item number descriptors recommend PBT for specific indications only.

In 2021 Jonathan Sykes was the lead investigator of a TROG co-ordinated MRFF Clinician Researcher grant submission. The application sought funding for a TROG based database for patients treated with advanced techniques, including particle therapy. The application is still under consideration.

Also in 2021, the South Australian Health and Medical Research Institute (SAHMRI) was successful in obtaining funding to establish an Australian Proton Therapy Clinical Quality Registry (APTCQR). The APTCQR aims to acquire treatment and outcome data for those patients treated with photon therapy who will be eligible for proton therapy in the future, and for patients treated with proton therapy in the future.

Finally, in 2021 the PTWG Chair put forward a proposal to ASMIRT and RANZCR particle therapy speciality group Chairs for the creation of national consensus guidelines for comparative proton-photon treatment planning. Expressions of Interest were sought from the PTWG which resulted in Jonathan Sykes and Adam

Yeo, in addition to Scott Penfold as the project lead, being put forward as the ACPSEM representatives for this work. RANZCR and ASMIRT similarly put forward three representatives. Excellent progress has been made with this document. It is expected the draft will be submitted to the relevant ACPSEM, ASMIRT and RANZCR bodies before the end of 2021.

REFERENCE DOSIMETRY

LEAD – IVAN WILLIAMS

Ivan Williams has provided updates on ARPANSA's plans for a new water calorimetry system at each PTWG meeting. The PTWG will continue to monitor these developments and provide assistance as required by ARPANSA.

QUALITY ASSURANCE

LEAD – URSZULA JELEN

The QA subgroup continues to monitor the literature for recommendations on particle therapy quality assurance. The subgroup plans to prepare a Position Paper in 2024 prior to the opening the Australian Bragg Centre.