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Establishing the Australian Particle Therapy Clinical Quality Registry - ASPIRE

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Objectives

In 2020 the Australian Government approved funding for Proton Beam Therapy (PBT) under the national health insurance system, Medicare, for a limited number of indications. Addressing the complexities of cost-utility for PBT, the Medical Services Advisory Committee advocated for a national registry to affirm PBT's safety benefits over Photon Radiation Therapy (PRT). This registry aims to validate health economic analyses for the MBS submission and support evidence for future applications, enhancing PBT's role in cancer treatment.

Methods

In alignment with the Medicare review, the Australian Particle Therapy Clinical Quality Registry (ASPIRE) commenced participant recruitment in 2022. Currently, seven Australian clinical sites are actively recruiting, with two more in different stages of approval nationwide. ASPIRE is a prospective, observational study, focusing on paediatric, adolescent, and rare adult cancer cases within specified tumour categories receiving radiation therapy aiming to examine treatment patterns and gather long-term data on outcomes for patients treated with PRT or PBT. ASPIRE is Australia’s first multi-institutional radiation oncology registry capturing detailed treatment and toxicity data.

Results

Learnings from the initial recruitment phase have shaped the registry's trajectory. Data collection strategies continue to evolve, addressing challenges and incorporating feedback from recruiting sites. Predictive modelling using current Medicare funded indications for PBT suggest 80% of treated patients will be under 25 years of age.

Conclusions

ASPIRE will standardise radiation oncology data collection in Australia, capturing key patient data, short- and long-term toxicities, and outcomes for MBS-funded radiation treatments. This data, accessible to Australian researchers, will provide unique clinical and cost utility insights not available in other national registries.