Incorrect dose of radiation treatment
16HDC00650, 17 June 2017

Radiation oncology service ~ Radiation ~ Prostate cancer ~ Right 4(1)

A man had a medical history of adenocarcinoma of the prostate. Following consultations with a radiation oncologist at a radiation oncology service, the man consented to receiving radiation treatment.

The radiation oncologist calculated and prescribed the radiation dosage required. Various staff at the radiation oncology service were involved with the planning, checking, and delivery of the radiation treatment. At some stage prior to administration, the prescribed wedge monitor units (MUs), which lessen the dose of radiation received, were removed from the posterior treatment field. It is unclear whether this occurred as a result of human or technical error. The radiation oncology service's pre-treatment checking policy did not include a requirement for MUs or other beam parameters to be re-checked, and the error was not picked up prior to treatment.

The man incorrectly received significantly higher doses of radiation treatment than intended.

Findings
The radiation oncology service delivered significantly higher radiation doses to the man than had been prescribed. In addition, the service did not have an appropriate policy for the pre-treatment check of beam parameters. Accordingly, the radiation oncology service did not provide services to the man with reasonable care and skill, and breached Right 4(1).

Recommendations
It was recommended that the radiation oncology service report back to HDC on the implementation of proposed measures to allow for a further electronic check of parameters between the treatment planning system and the delivery system. It was also recommended that the Office of Radiation Safety share the anonymised details of this incident with other radiation oncology departments in New Zealand for educational purposes, and that the radiation oncology service provide a written apology to the man's family.