Failure to follow up chest X-ray result (12HDC00112, 26 June 2014)

District health board ~ Public hospital ~ Consultant radiologist ~ Anaesthetist ~ Pre-anaesthetic assessment ~ Test results ~ Chest X-ray ~ Radiology reporting ~ Red flag ~ Carcinoma ~ Systemic failures ~ Rights 4(1), 4(2)

A woman with a history of heavy smoking was referred by her GP to the dental unit at a public hospital for removal of all her teeth. The woman saw a locum dental surgeon who completed a health questionnaire and operation booking form. A pre-anaesthetic assessment was requested by the surgeon. The surgeon's understanding was that any abnormal test findings would be reported to and acted on by the anaesthetic team.

At the assessment, the anaesthetist recorded the woman's history and her medications. The anaesthetist examined the woman and noted that she had a heart murmur. The anaesthetist requested a chest X-ray and echocardiogram be done before surgery. The anaesthetist did not document this request, or the woman's smoking history. The anaesthetist's signature on the X-ray request form was unclear.

The woman had an echocardiogram. The referrer listed on the echocardiogram report was incorrect, and the report was not copied to the woman's GP, the surgeon, or the anaesthetist. The next day, the woman had a chest X-ray reported by a radiologist. The radiologist reported an abnormal opacity on the lung and recommended a follow-up investigation. However, the wording of his report was unclear, and the report was not copied to the woman's GP. The radiologist was not aware that dental unit X-rays were not copied to GPs — a DHB practice contrary to other outpatient X-rays. The radiologist did not follow the process in place to "red flag" abnormal results electronically.

The woman's abnormal chest X-ray result was automatically faxed to the dental unit. The referrer listed on the report was a generic "Dr Dental Dental" rather than a specific surgeon. No one in the unit sighted the results of the woman's chest X-ray, and staff did not put the results in the woman's health record. Neither the surgeon's nor the anaesthetist's name appeared on the woman's X-ray report, and it was not copied to the surgeon, the anaesthetist, or the GP.

A second anaesthetist, scheduled to provide anaesthesia prior to surgery, saw the woman in the surgical day unit. He checked her medical history and went through the first anaesthetist's preoperative assessment notes, but did not review her heart murmur. The DHB could not confirm whether the X-ray report accompanied the woman to theatre. Surgery went ahead, and the woman was discharged home.

A year later, the woman visited a locum general practitioner owing to chest pain. A chest X-ray showed an upper lobe lung mass. Subsequent investigations confirmed this to be an inoperable carcinoma with metastases. DHB staff met with the woman to explain what had happened and apologise. Sadly, the woman died later that year. The DHB completed a Root Cause Analysis Report, made recommendations, and instigated changes to improve services.

The failure to follow up the abnormality identified on the woman's chest X-ray occurred in the context of a number of serious organisational and systemic failures on

the part of the DHB. Primarily, if the DHB process in place at the time meant that responsibility for following up the X-ray did not lie with the clinician ordering the test, there should have been an explicit and documented process that provided clarity and identified the clinician who *would* be responsible for reviewing and following up the test. An effective and formalised system was not in place for reporting test results. Accordingly, the DHB did not provide services to the woman with reasonable care and skill and breached Right 4(1).

Adverse comment was made about the first anaesthetist's deficiencies in documentation. Relevant clinical information and the nature of investigations ordered were not brought to the attention of the second anaesthetist who would be administering anaesthesia on the day of surgery.

The radiologist's reporting of the chest X-ray was unclear. An opportunity for the woman's abnormal chest X-ray result to be brought to the attention of clinicians caring for the woman was lost when the radiologist failed to "red flag" the electronic system. The radiologist did not provide services with reasonable care and skill and, therefore, breached Right 4(1).

The second anaesthetist's preoperative assessment did not comply fully with professional standards, as he did not address all the elements that were identified in the first anaesthetist's pre-anaesthetic assessment, most notably the woman's heart murmur. Accordingly, the second anaesthetist breached Right 4(2). Detailed recommendations were made to the DHB, to be attended to as a matter of priority.