Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Surgeon breaches the Code for errors that led to surgical fire

20HDC00617

Deputy Health and Disability Commissioner Carolyn Cooper found an otolaryngologist (ear, nose and throat specialist/head and neck surgeon) breached the Code of Health and Disability Services Consumers' Rights (the Code) for the care of a man in his seventies.

In 2020 the man underwent surgery for recurrent growths on his voice box. He had previously had ten surgeries for similar issues and on one occasion his oxygen levels had dropped. To manage that risk, his doctors arranged to use special ventilation and oxygenation therapy known as THRIVE (Transnasal Humidified Rapid Insufflation Ventilatory Exchange).

The use of this therapy carries a safety risk given oxygen combined with ignition and fuel sources can cause fires. The higher the oxygen concentration, the greater the risk and intensity of the fire.

Most of the surgery used a laser to treat the growths, for which the risk was managed appropriately by lowering the oxygen concentration. However, at the end of the surgery, the surgeon noticed a small area of disease and began to treat it using monopolar suction diathermy, which is the use of a high frequency electrical current to cut tissue. The anaesthetic team were unaware that the surgeon had started using diathermy so had not reduced the oxygenation levels. Unfortunately, a fire ignited in the man's airway, and he sustained burns to the side of his face and shoulder and was transferred to the ICU. It was thought that the diathermy, combined with the oxygen concentration, caused the fire.

This event caused significant challenges for the man and his family and impacted the quality of life in his remaining years (he died from laryngeal cancer in 2020).

The THRIVE guidelines in place at the time, state that the use of monopolar suction diathermy within the larynx is contraindicated with THRIVE.

Ms Cooper says, "I accept that all precautions were taken during surgery and that the surgeon diligently applied the appropriate risk management strategies". However, it appears the surgeon did not apply the same precautions during the use of monopolar suction diathermy in a high oxygen environment (produced by THRIVE)."

Ms Cooper also expressed concern that the surgeon did not communicate with the anaesthetic team adequately before he used the monopolar suction diathermy.

For failing to adequately communicate his use of diathermy with the anaesthetist, and failing to comply with the THRIVE guidelines, Ms Cooper found the surgeon in breach of Right 4(1) of the Code. This gives consumers the right to services of an appropriate standard.

Had the surgeon explicitly communicated with the anaesthetic team before using monopolar suction diathermy, it may have provided an opportunity for the team to advise this was contraindicated and so have reduced the risk of a fire occurring.

Ms Cooper commended the surgeon for his rapid response and actions once the fire ignited. "I also accept that it was the surgeon's intention to improve the patient's quality of life, and that he did not intend to cause him any harm. I also note that the surgeon has made several changes to his practice since events."

Ms Cooper noted that there was no indication of broader systems or organisational issues at Te Whatu Ora and Te Whatu Ora did not breach the Code.

Taking into account the apology provided and the changes made by the surgeon since the events, Ms Cooper did not consider other recommendations necessary.

Te Whatu Ora have undertaken a number of changes since the event. Taking these into account Ms Cooper also recommended that Te Whatu Ora:

- Provide HDC with an update on the Department of Anaesthesia's paper that will be submitted for publication.
- Use the report, as well as the airway surgery guide, as a basis for staff learning at Te Whatu Ora.

July 3 2023

Editor's notes

The full report of this case will be available on HDC's website. Names have been removed from the report to protect privacy of the individuals involved in this case.

The Commissioner will usually name providers and public hospitals found in breach of the Code, unless it would not be in the public interest, or would unfairly compromise the privacy interests of an individual provider or a consumer.

More information for the media, including HDC's naming policy and why we don't comment on complaints, can be found on our website here.

HDC promotes and protects the rights of people using health and disability services as set out in the Code of Health and Disability Services Consumers' Rights (the Code).

In 2021/22 HDC made 402 recommendations for quality improvement and providers complied with 98% of those recommendation.

Learn more: Education