

# A multicentre study of appendicitis management comparing a large South Island metropolitan hospital, to its referring regional and rural centres.

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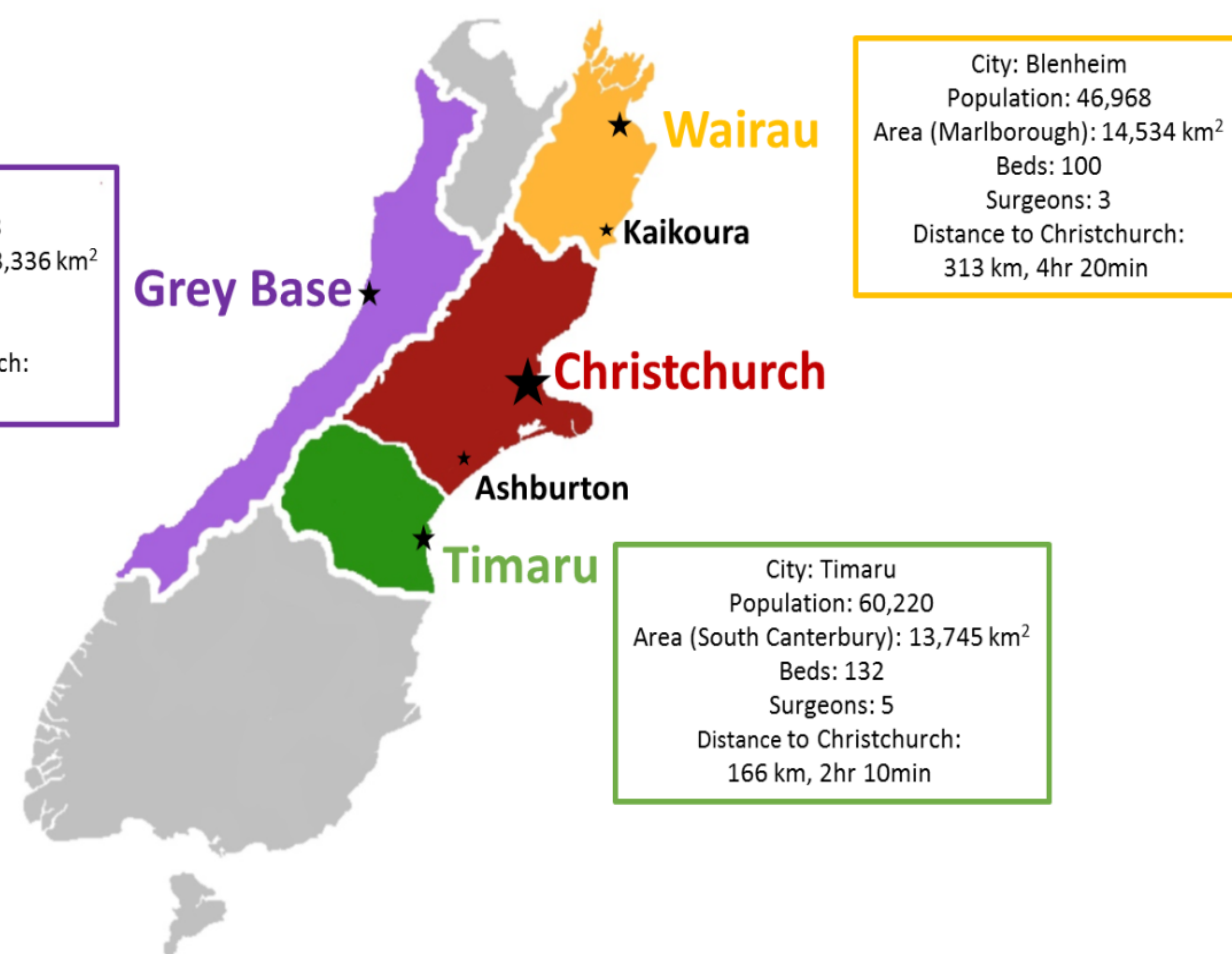
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## Background:

Appendicitis is the most common abdominal surgical emergency for acute admissions with abdominal pain<sup>1</sup>. Given the prevalence of appendicitis, many surgical units have used appendicectomies as a metric of the delivery of acute surgical services.

Internationally, perforation rates are higher for those treated for appendicitis in rural areas<sup>2</sup>. Even in high-income countries with access to universal healthcare, complicated appendicitis is associated with distance from surgical services<sup>3</sup>.

In recent years, surgical services in New Zealand have undergone centralisation. With the progressive withdrawal of surgical services from rural communities, outcomes for rural patients presenting with acute surgical conditions are currently unknown.



## METHODS:

This is a retrospective, multi-centre clinical study, performed across six rural, regional and metropolitan hospitals in the South Island of New Zealand.

All patients diagnosed with appendicitis, presenting to the six hospitals, were identified over a five-year period; November 2014-October 2019. Electronic health records, which include ED admissions, radiology and operative notes, pathology reports and discharge summaries, as well as paper notes and electronic theatre management systems, were analysed for patient work-up, operative and non-operative details, final pathology, length of stay, and complications.

## SUMMARY:

This is the first study to show South Island regional hospitals with surgical capacity provide patients presenting with acute appendicitis more timely access to imaging and operative treatments, than metropolitan hospitals. Patients who were transferred to Christchurch Hospital from rural centres without surgical services had a longer wait-time than those who presented to Christchurch Hospital directly, or were treated in their local, regional centre. This delay was associated with significantly higher rates of perforated appendicitis and a trend toward poorer post-operative outcomes.

## REFERENCES:

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