

Variations in the practice of cholecystectomy in Aotearoa

The CHOLENZ Study

Chris Varghese

On behalf of the

STRATA Collaborative



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Background



Common
>7000/year



Timely Mx
important



Standardized
access

Aims



1. Investigate variations in access to index, and elective cholecystectomy in Aotearoa
2. Present up-to-date outcome data after cholecystectomy in Aotearoa



Methods

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- National, multicenter, prospective cohort study
- Mini-teams (*students, JMOs, trainees, SMOs*)
- 16/20 DHBs – August-October 2021 + 30-day follow-up

Methods



CholeS

Clinical Variation in Practice of Laparoscopic
Cholecystectomy and Surgical Outcomes: a multi-centre,
prospective, population-based cohort study

CholeS Study



*Index cholecystectomy
at acute presentation*

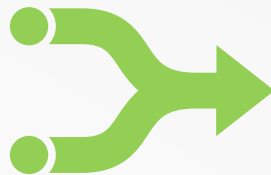
*≥1 previous acute
admission in last 2 y*

*From OP referral + no
previous acute admissions*

Results - Cohort



109
collaborators



1171
patients

August-October 2021

Results - Cohort



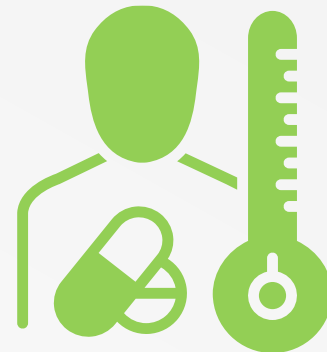
53 years
median age



67%
female



62% / 17.2%
European / Māori



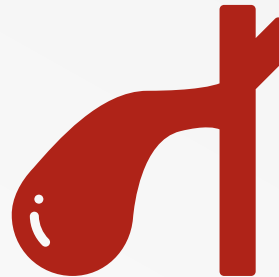
59%
ASA II

Cholecystitis (42%) → biliary colic (37%) → gallstone pancreatitis (13%)

Results - Outcomes



7.6% (n = 88)
Readmitted



2.3% (n = 27)

Bile leak

0.34% (n = 4)

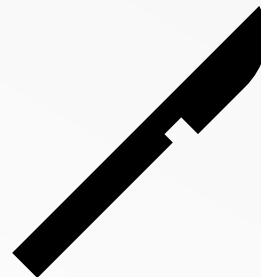
Bile duct injury



14.2% (n = 166)
Minor complication



5.0% (n = 58)
Major complication



1.7% (n = 20)

Lap → Open

5.7% (n = 66)

Subtotal chole

1h 23m median
Op duration

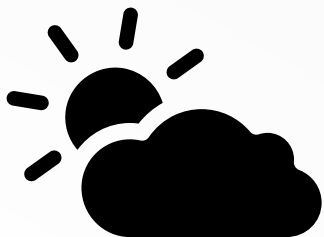
Results - Outcomes



3 d (median; IQR 1-5)
Length of stay



1.4% (n = 16)
Reoperation



28 d (median; IQR 27-28)
Days alive and out of
hospital



0.3% (n = 3)
Mortality

Results - Outcomes

Original article

Population-based cohort study of outcomes following cholecystectomy for benign gallbladder diseases

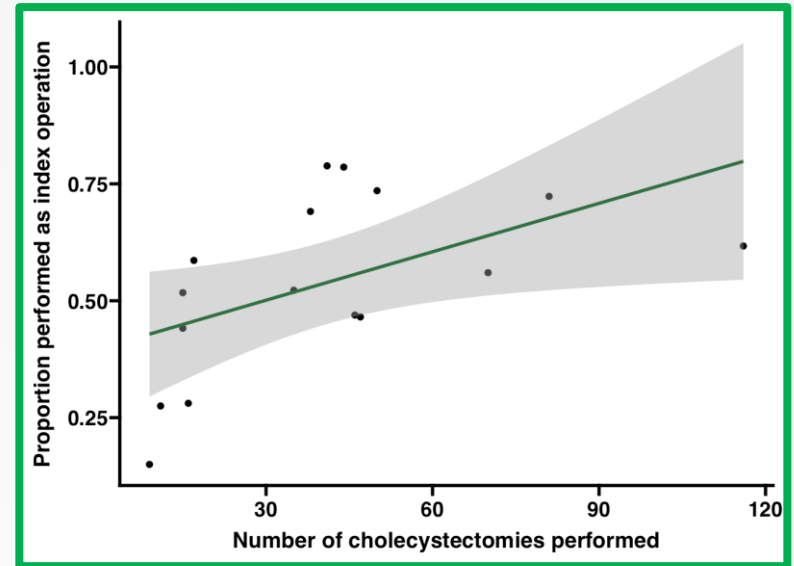
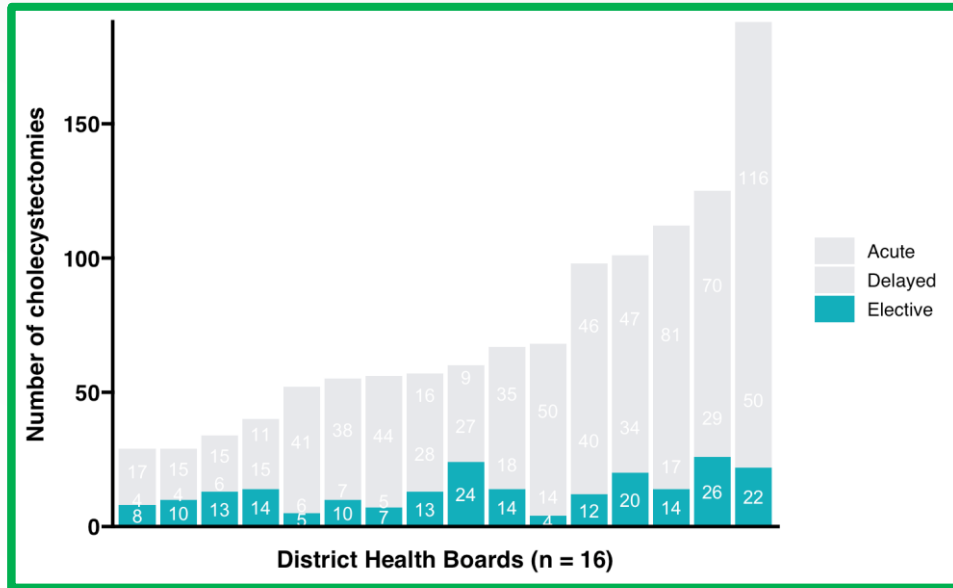
CholeS Study Group, West Midlands Research Collaborative

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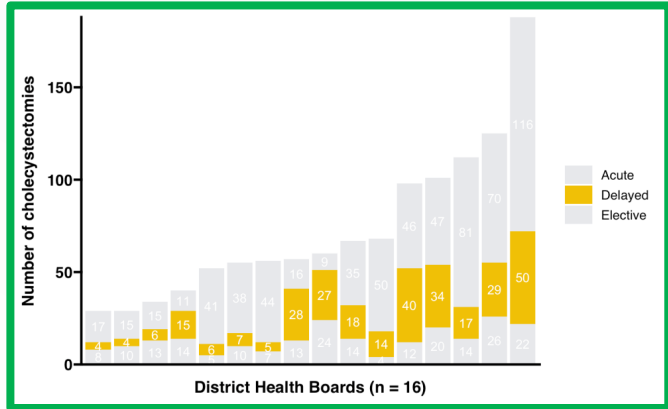
Outcomes are **favourable** compared to international literature

Results - Timing



Results - Timing

Delayed cholecystectomy



Wait from symptoms onset to operation:

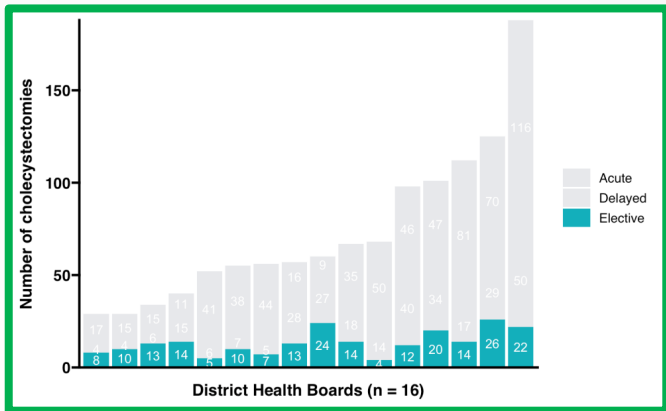
3 days to **227** days

Significant between centre-variation

($p < 0.001$)

Results - Timing

Elective cholecystectomy



Wait from symptoms onset to operation:

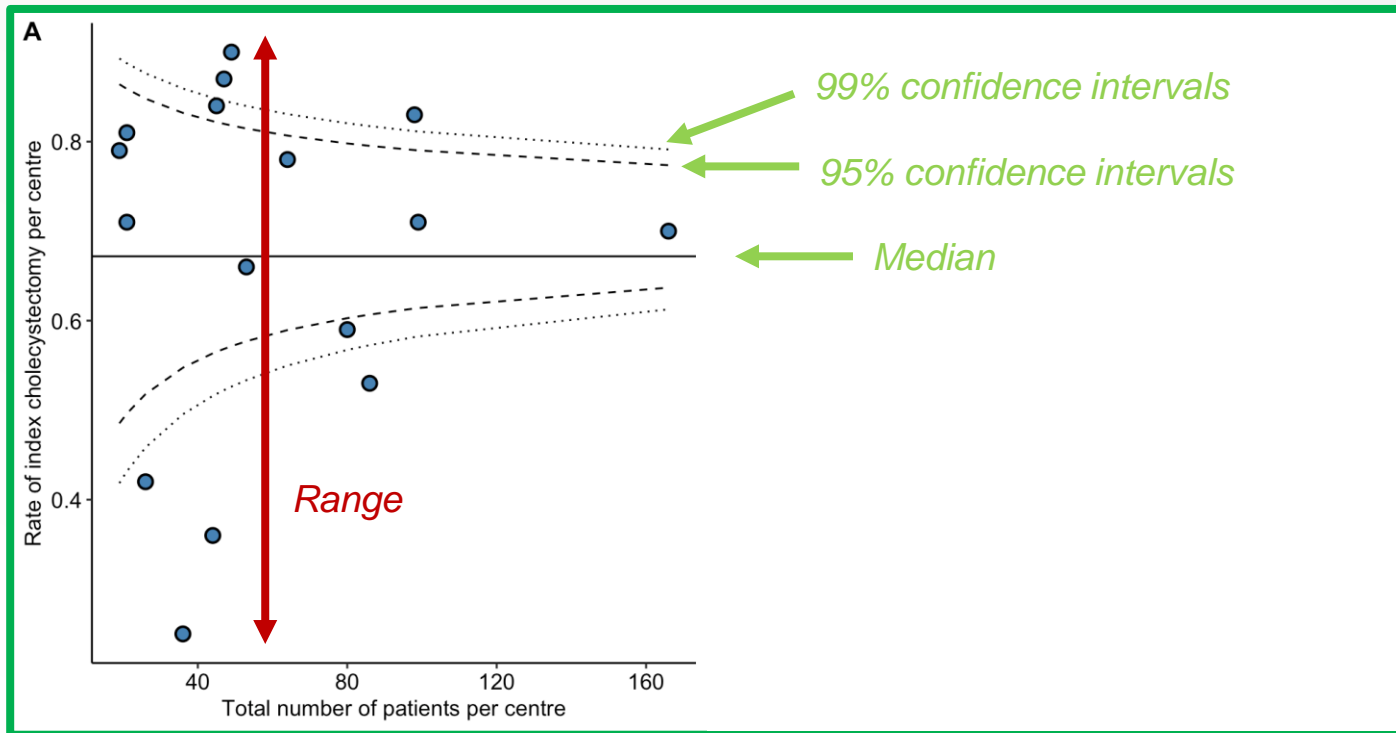
5.5 months to **3.5** years

Significant between centre-variation

($p < 0.001$)

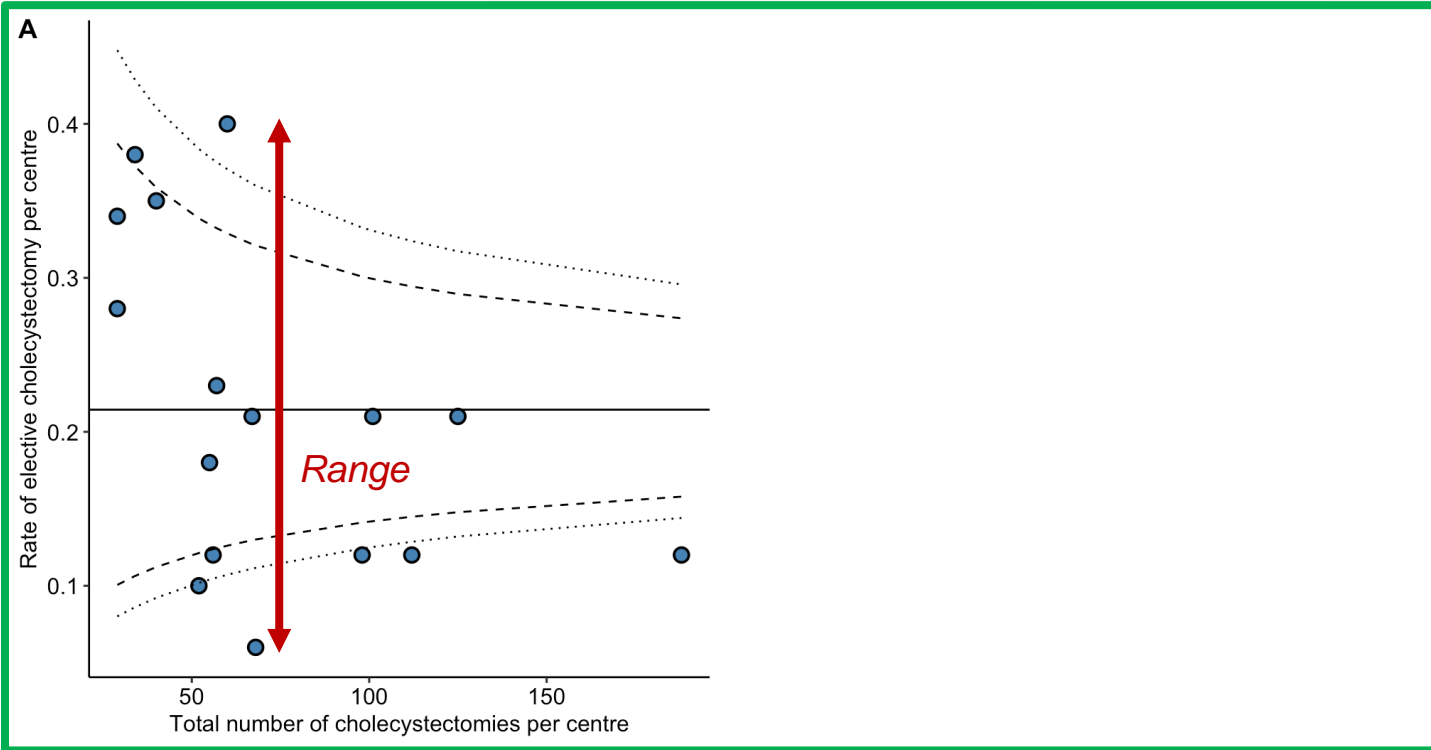
Results - Timing

Acute index cholecystectomy



Results - Timing

Elective cholecystectomy



Strengths and Limitations



Outsourcing to private



Changes in hospital levels

JOURNAL ARTICLE

Collaborative research in surgery: a rising tide lifts all boats

Elizabeth Li , Aneel Bhangu

British Journal of Surgery, Volume 109, Issue 7, July 2022, Pages 576–577,

<https://doi.org/10.1093/bjs/znac099>

Published: 14 April 2022 **Article history** ▼



JOURNAL ARTICLE

Global overview of the management of acute cholecystitis during the COVID-19 pandemic (CHOLECOVID study)

CHOLECOVID Collaborative **Author Notes**

BJS Open, Volume 6, Issue 3, June 2022, zrac052,

<https://doi.org/10.1093/bjsopen/zrac052>

Published: 04 May 2022 **Article history** ▼

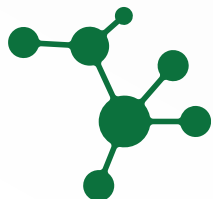
Conclusion



***Timing of cholecystectomy
varies based on where you are***



***Variation is *not explained* by
patient, pathology or hospital
factors***



****Systems-level* changes needed to
tackle geographical inequities***



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AoNZ Works



Original articles

Surgical Endoscopy
Ultrasound and
Interventional Techniques

Surg Endosc (2000) 14: 106–109
DOI: 10.1007/s004649900076

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Acute laparoscopic cholecystectomy

A case controlled study

G. H. Poole, S. Yellapu

Department of Surgery, Middlemore Hospital, Private Bag 93311, Otahuhu, Auckland, New Zealand

Received: 11 June 1998/Accepted: 19 April 1999

**ANZ Journal
of Surgery**

Royal Australasian
College of Surgeons

PERSPECTIVE | Full Access

Index acute cholecystectomy: what's the problem?

Garth H. Poole MBChB, FRACS, Alexandra B. Jacobson MBChB, Andrew G. Hill MBChB, MD, FRACS

First published: 04 December 2018 | <https://doi-org.ezproxy.auckland.ac.nz/10.1111/ans.14853> |
Citations: 1

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Vol 119 No 1239 ISSN 1175 8716



Cholecystectomy following acute presentation to a major New Zealand metropolitan hospital: change to the timing of surgery is needed

Anthony Lin, Peter Stiven, Philip Bagshaw, Saxon Connor

**ANZ Journal
of Surgery**

Royal Australasian
College of Surgeons

RURAL, REGIONAL AND REMOTE SURGERY

Cost analysis of index versus delayed cholecystectomy for acute cholecystitis in a New Zealand Provincial Centre

Gajan Srikumar MBChB✉, Matthew James McGuinness MBChB, Niki Kau MBChB, Cameron Wells MBChB, BMedSc(Hons), Christopher Harmston MBChB, FRCS, FRACS ... [See fewer authors](#) ^

First published: 06 June 2022 | <https://doi.org/10.1111/ans.17829>

G. Srikumar MBChB; M. J. McGuinness MBChB; N. Kau MBChB; C. Wells MBChB, BMedSc(Hons); C. Harmston MBChB, FRCS, FRACS.

ORIGINAL ARTICLE

Index cholecystectomy for management of acute gallstone disease: a change of practice at a major New Zealand metropolitan centre

Magdalena M. Sakowska¹ & Saxon Connor^{1,2}

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