



# DATA AND DIGITAL SOLUTIONS

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KIRIBATI HEP B CASE STUDY



# About US

**(and conflict of  
interest disclaimer)**

- BES are an Australian company. We implement digital health solutions in low and middle-income settings, with a focus on the Indo-Pacific.
- 10 years old, 65 staff across offices in Melbourne, Auckland, Suva.
- BES' software suite includes Tupaia and Tamanu. We also implement mSupply, DHIS2 and SENAITE LIMS.
- We work in 12 countries and are a Strategic Partner with DFAT's Global Health Division.



Caveat: I work for an organisation that implements digital health solutions and I'm about to tell you how great digital health is. Take it all with a grain of salt!



1. I would know less about viral hepatitis and triple elimination than anyone else in this room.

## Other caveats.

2. The project I am presenting on wasn't my project – by all rights, Dr Thomas Russell, Dr Alice Less, or Shakti Gounder should be presenting it. I especially want to thank them!

3. I do live in Melbourne!

# Kiribati project.

## A new hepatitis B elimination strategy for remote populations is needed

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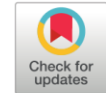
<sup>b</sup>Department of Internal Medicine and Pediatrics, Center for Space Medicine, Baylor College of Medicine, Houston, TX, USA

<sup>c</sup>Department of Internal Medicine, Tungaru Central Hospital, Ministry of Health and Medical Services, Tarawa, Kiribati

In 2016, WHO declared that hepatitis B (HBV) is a global public health threat with case finding, treatment and elimination targets set to be achieved by 2030.<sup>1</sup> Progress towards elimination is slow with only a marginal increase in hepatitis B case-finding from 9% to 10.3% from 2015 to 2019 and treatment coverage from 8 to 22.7%.<sup>2</sup> One barrier to progress is the lack of screening and linkage to care in isolated populations

HBsAg point of care (POC) tests to screen the entire population of an outer island, usually 7000 or less (Supplementary 5, 6).

To date, 11 outer islands with a total of 5497 individuals have been screened with 867 positive tests (15.8%) (Supplementary Table S1). Notably, persons 24 years or younger accounted for one-third of positives. Highest rates were seen in the 30–34 age group with a prevalence of



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# Kiribati project.

## Project

Novel ‘test and treat’ approach, introduced in 2022 across outer islands

>40,000 HBsAG tests performed

>7000 positive cases identified

Mix of paper records and Excel

## Challenges (2024):

“Record keeping – inability to track patients”

“Stock out of medications”

## A new hepatitis B elimination strategy for remote populations is needed



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# Alignment with Electronic Health Record.

## Tamanu EMR/EHR

Went live in 2024. 26 users trained in Hep B program – South Tarawa only, not used for outer island screenings.

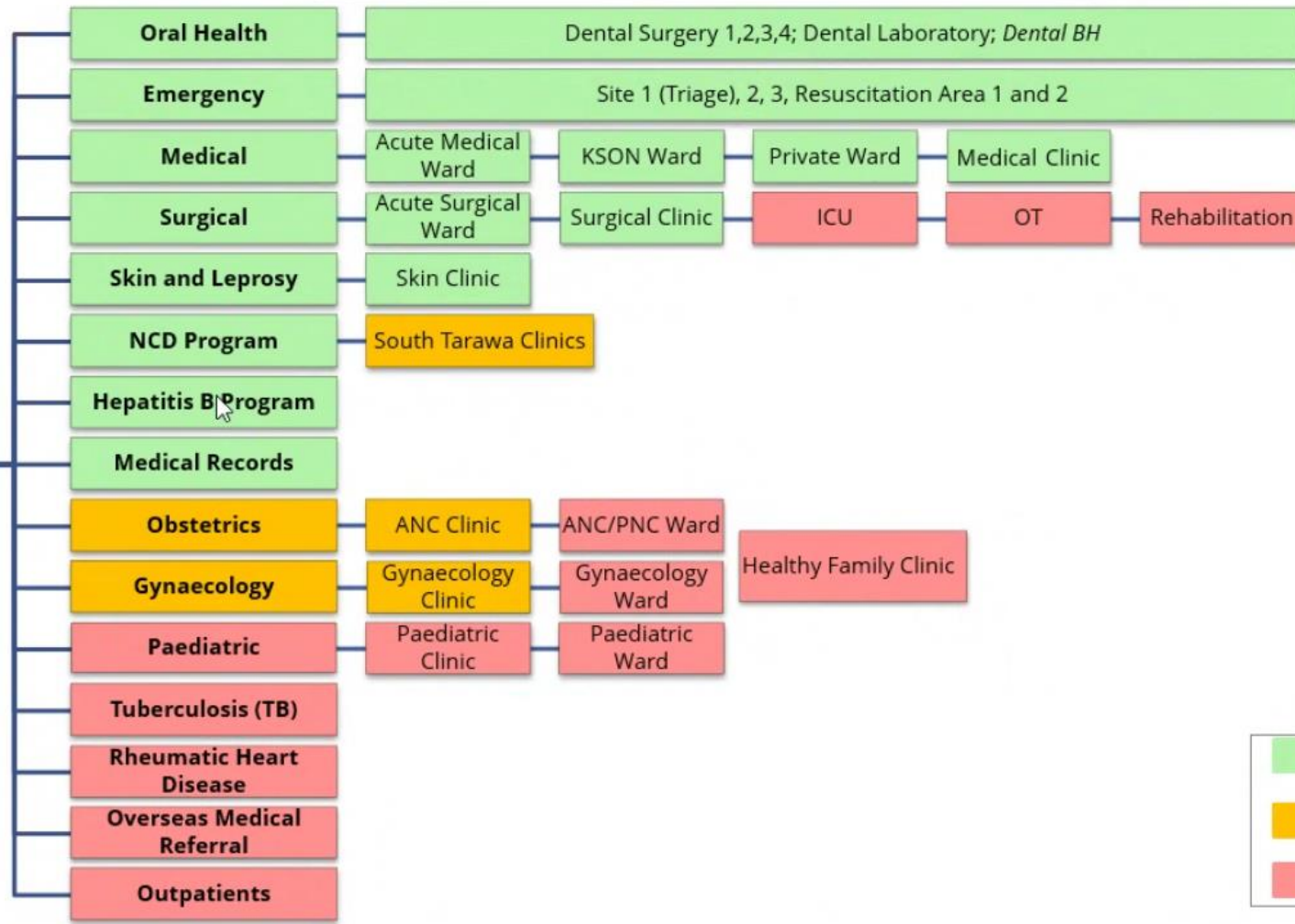
2089 patients in Hep B registry

Patients link with mSupply via HL7 FHIR API (though still semi-manual forecasting)

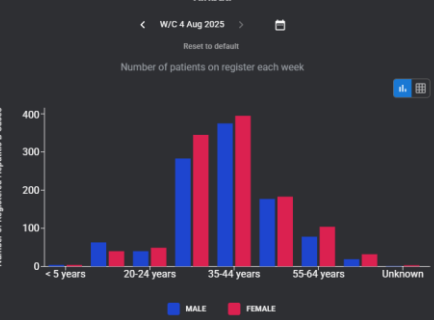
Same EMR/EHR now being used in medical records, ED, Dental, Obs/Gyn with funding to continue expansion.

## Tamanu Implementation Areas

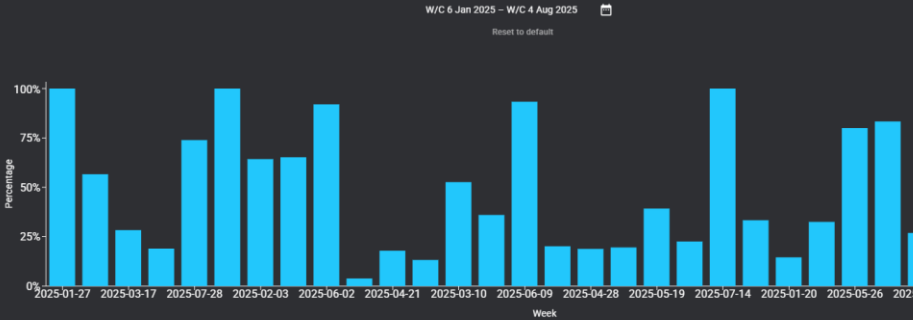
Tungaru Central Hospital (TCH)



Total Number of Registered Hepatitis B Cases per Sex and Age Group, Kiribati



Percentage of Hepatitis B Positive per week, Kiribati



Current registered Hepatitis B cases by status (number and percentage), Kiribati

W/C 4 Aug 2025

Reset to default

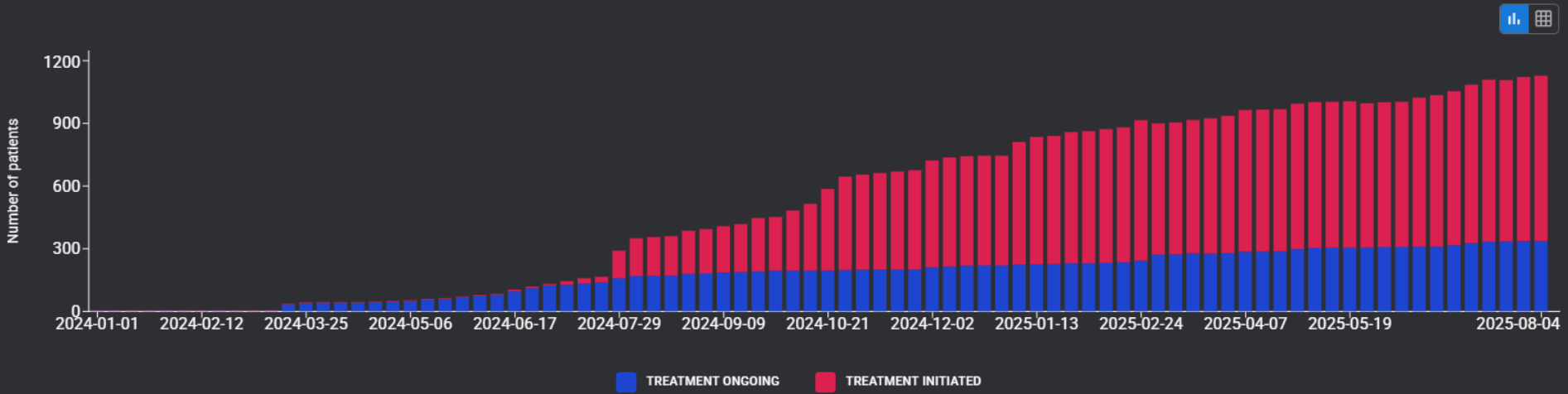
Status	Number	Percentage
Died	30	1%
Lost to follow up	238	11%
Not evaluated	245	11%
Review needed	224	10%
Treatment initiated	791	36%
Treatment not indicated	201	9%
Treatment ongoing	337	15%
Treatment refused	31	1%
Treatment stopped	13	1%
Unknown	85	4%

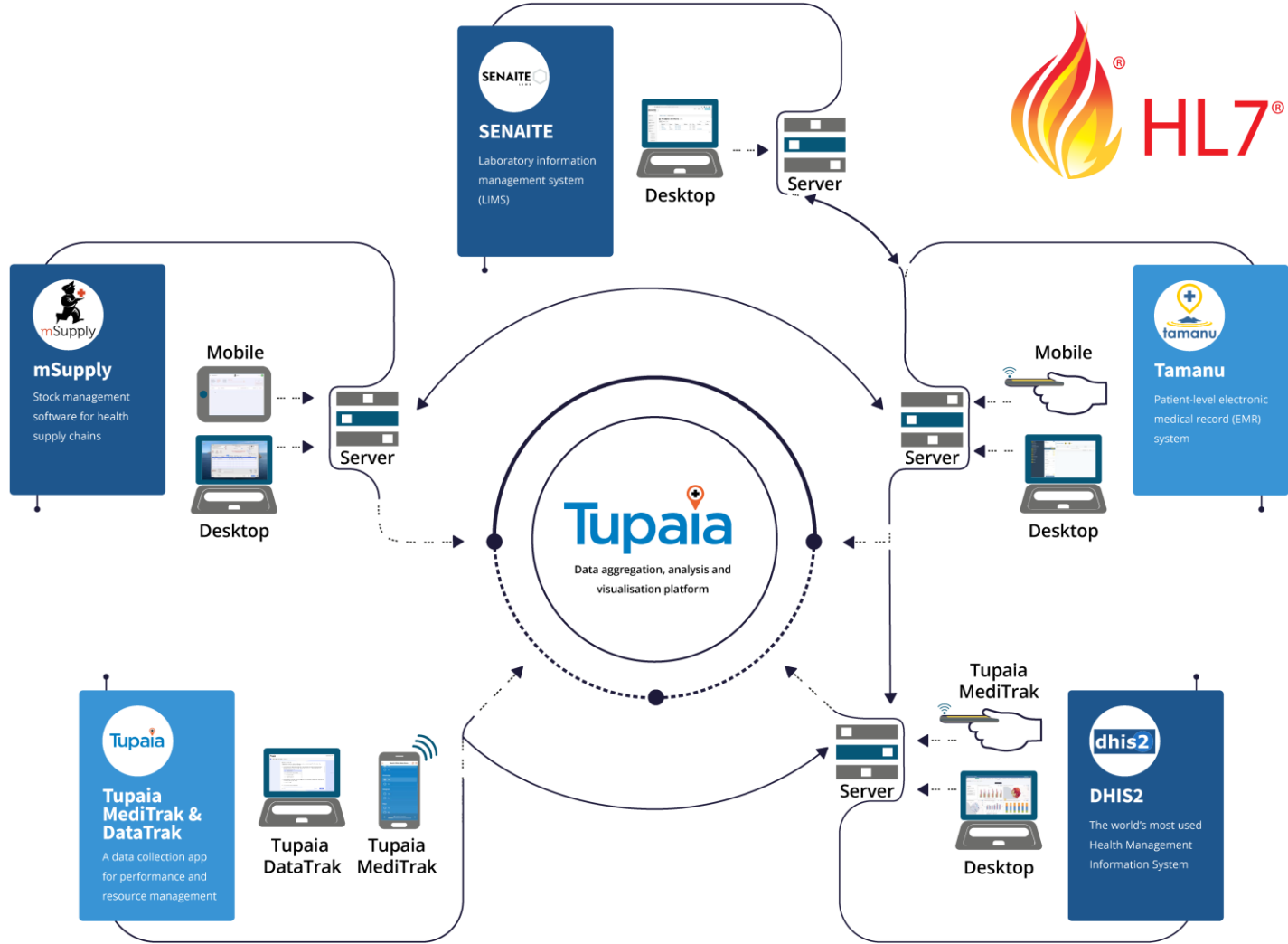
Number of cases under treatment, Kiribati

1st Jan 2024 – 6th Aug 2025

Reset to default

Number of patients on Hepatitis B register each week with clinical status "Treatment initiated" or "Treatment ongoing"







# Why digitise?

**Electronic Medical/Health Records have a bad reputation!**

Patients have co-morbidities – they are complex and so is care.

As patients move, their records must move with them.

Aggregating data from paper for public health purposes is time consuming and problematic.

'Old' tools like Excel don't cut it anymore.



## Risks

When the project finishes, staff revert to old practices

Expensive – costs blow-out

Buggy, downtime, poor experiences

Data security / sovereignty

Staff just don't use the new system, records are then incomplete

# Principles for modernising data management.

## Switch to digital

If you are collecting data on paper, you may as well not be collecting it.

## Perfection is the enemy of good

If an existing tool can do 90% of your program's needs, then use it. **Most new digital projects fail.**

The data requirements for your project just aren't that unique!

## Use versatile tools

Nurses wear many hats. If the project requires that a nurse uses specific software for specific projects, that will fail.

More importantly, the patients are complex. They have Hep B **and** TB, or diabetes, or hypertension. Your software needs to manage all of them.

## You are implementing change, not software

Change management isn't just a corporate term, it's important, it is real, it is different in every context – to some people, the new technology is *not* exciting, it is terrifying.

***If you make their lives easier, the digital aspect of the project will work.***