



Implementing POC & DBS testing in
a health service

Which test to choose?

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Presentation overview

1 Strengths & limitations of DBS vs POC testing

2 Test setting and recommended testing options

3 How to decide which test to use

4 Case studies



Is there risk of loss to follow-up?



Dried blood spot (DBS)



STRENGTHS

- Minimal kit: capillary finger-prick onto a card
- Can be collected by trained non-clinical or peer workers
- Stable and can be posted at room temperature which suits outreach and remote settings
- DBS testing gained TGA approval in May 2026 removing the need for venipuncture
- High specificity (~100%) and sensitivity ~95–98% vs venous
- Can be used for antibody and RNA testing, with reflex testing available following TGA approval, improving cost effectiveness



LIMITATIONS

- Lab-processed and results take days, not the same visit
- Loss-to-follow-up risk with transient clients
- Sample quality is technique-dependent (an adequate spot is needed)
- Not recommended for SVR testing
- DBS samples will be processed at SEALS, NSW Health Pathology, based at Prince of Wales Hospital in Sydney. Centralised testing may limit access and result in longer turnaround times for test results



Point-of-care testing (POC)



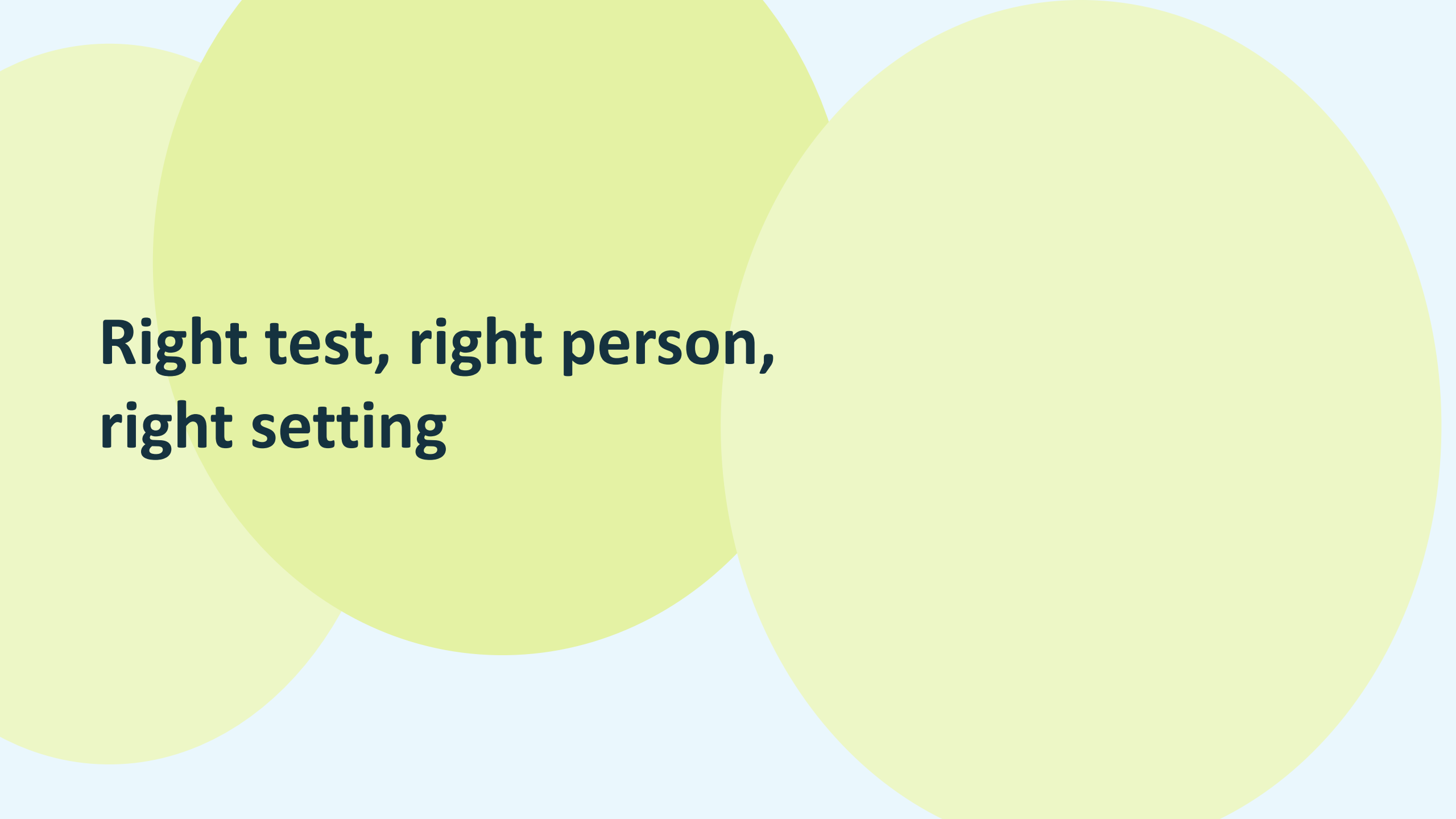
STRENGTHS

- Finger-prick HCV RNA result in about an hour within the same visit
- Enables test-and-treat in a single visit
- A rapid HCV antibody result is ready in 1 to 5 mins
- Reduces loss to follow-up
- Increases treatment uptake vs standard care
- Validated for screening and confirming cure (SVR)



LIMITATIONS

- Access to equipment that is not easily portable
- Must be run by a trained operator linked to one
- Requires ongoing QA / QC and operator competency
- Limited throughput: ~1 hr per RNA test for a maximum of 4 tests - less suited to high-volume testing environments
- Not as convenient as a DBS test card for mobile outreach



**Right test, right person,
right setting**

Test setting



Inpatient LHD

Controlled setting
Patient on-site
Venepuncture available

Lab serology - reflex Ab→RNA



Outpatient LHD

Liver clinic, immunology, infectious diseases

Regular but variable engagement
Venous access can be challenging
Competing priorities

1. POCT Ab + POCT RNA
2. DBS Ab + RNA
3. or lab reflex



Outreach

homelessness, outreach bus, NSP, NGOs

High loss-to-follow-up risk
Limited venous access
Mobile / low-resource

1. POCT Ab + POCT RNA
2. DBS Ab + RNA



Community clinics

primary care, sexual health, D&A

Moderate follow-up capacity
Some phlebotomy
Opportunistic testing

1. POCT Ab + POCT RNA
2. DBS Ab + RNA
3. or lab reflex



Custodial

community corrections · justice health

Variable engagement
Venous access can be challenging

1. POCT Ab + POCT RNA
2. DBS Ab + RNA
3. or lab reflex



CONSIDERATIONS

How to decide which test to use



The factor that usually decides which test to use is **risk of loss to follow-up – how practical will it be to start treatment**

Other considerations



Timeliness of result

Same-visit POCT vs several days of DBS / lab turnaround and what the client will accept.



Linkage-to-care opportunity

Can a positive result be acted on now?
POCT enables same-day treatment pathway



Access & capacity

Cartridges, GeneXpert machine, laptop, trained operators and QA vs minimal DBS test kit



Requirement for mobility

Mobile / low-resource outreach favours DBS testing or portable POCT.



HCV prevalence

Higher-prevalence settings strengthen the case for on-the-spot RNA and test-and-treat.



Cost-effectiveness

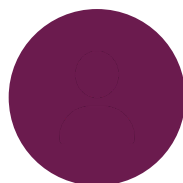
Per-test cost, device and throughput weighed against treatments started.





Case studies

Case 1 — one chance to test



THE CLIENT

Male, 40s, at a homelessness outreach clinic

Presents once during a temporary-accommodation visit. History of injecting drug use, no fixed address, tells you he won't be around next week. Has never been tested and wants it "sorted today".



THE THINKING

Likely to return?

No – transient

Can you obtain a result today?

Yes – POCT on site

Can you access treatment today?

Yes – doctors & DAAs on site

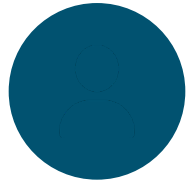
→ Choose **POC** — same-visit diagnose-and-treat

THE PATHWAY

1. Finger-prick POCT HCV RNA ($\pm$ HIV / HBsAg POC)
2. Result in $\sim$ 1 hr: HCV RNA detected
3. Start DAA the same day: Treat-first model
4. HIV + HbsAg POCT and Fibroscan (Fibrosis score does not indicate potential decompensated cirrhosis)
5. Can be used for SVR testing



Case 2 — engaged with healthcare, but no POCT available



THE CLIENT

Female, 30s, rural drug health service

Attends several times a week for opioid treatment dosing with consistent and ongoing contact. Long injecting history, never tested for hepatitis C. The service has no point-of-care testing capability on site.



THE THINKING

Likely to return?

Yes – frequent contact

Can results be delivered today?

No POCT onsite

Can treatment be delayed?

Yes – consistent attendance and is engaged

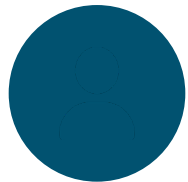
→ Choose **DBS** — reliable recall makes turnaround

THE PATHWAY

1. Collects DBS test: HCV Ab test, which is reflex tested for RNA
2. Card sent to lab
3. Result back in days - recall at next dosing visit
4. RNA detected: Assessment + DAAs (on-site pharmacy can dispense)
5. Require venepuncture for HIV, HbsAg testing and Fibroscan
6. Consideration: Not recommended for SVR testing



Case 3 — blended approach



THE CLIENT

Male, 50s, experiencing homelessness and visits a primary care service

Attends primary care service for wound care, but visits are infrequent. He has known history of hepatitis C and the staff member performs a DBS test. The service operates mobile outreach.



THE THINKING

Likely to return?

Yes – but contact is infrequent

Can results be delivered today?

No POCT onsite

Can treatment be delayed?

No – engagement is opportunistic

→ Choose **DBS** — reliable recall makes turnaround

THE PATHWAY

1. Collect DBS test and send to lab
2. Result returns in a couple of days – HCV RNA detected
3. Client recalled for treatment
4. Mobile outreach team provides DAAs (can conduct Fibroscan, HIV and HbsAg POCT)
5. Start DAAs even if Fibroscan and co-infection testing cannot be performed
6. Opportunistically conducts SVR during mobile outreach once treatment is completed

Take-home messages

1

Right test, right patient, right setting

There's no single best test, match the modality to the client and the context.

2

Know what each is for

DBS testing enables reach and flexibility
POCT RNA enables same-visit diagnosis and treatment.

3

Follow-up ability is the decider

The choice of testing method largely depends on the ability to follow-up with a client.

4

Treat first

Once RNA is detected, start DAAs.
Don't wait for HIV / HBV or fibrosis results.

