# Evaluating the Impact Theory of the National Australian Hepatitis C Point-of-care Testing Program: An Implementation Science Informed Study

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## Context


HCVPOCT — National Australian Hepatitis C Point-of-Care Testing Program

- One of the first globally to evaluate scale-up of HCV POCT and treatment
  i. SOPs, logistics, deployment, set-up of POCT platforms, technical support
  ii. Blood collection devices and test cartridges
  iii. Training
  iv. Quality assurance
  v. Device connectivity
  vi. Research and evaluation framework

- **>150 stakeholders, >100 sites** : prisons, drug treatment, NSPs, mobile outreach, homelessness centres, and Aboriginal Health Organisations

- As of June 2024: **>26,000 HCV Ab & RNA tests; >1,600 initiated Tx**
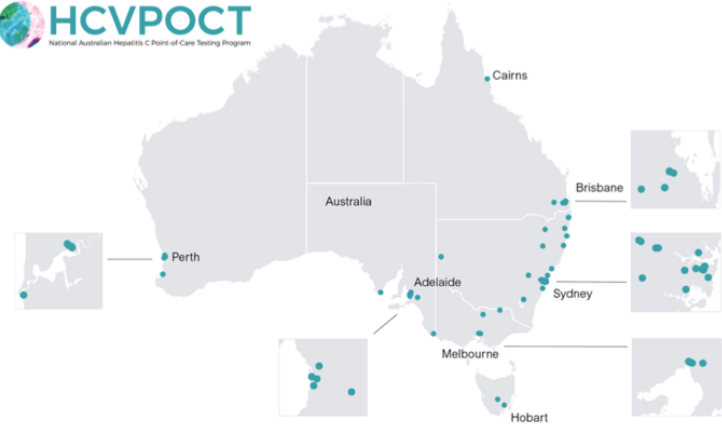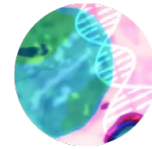


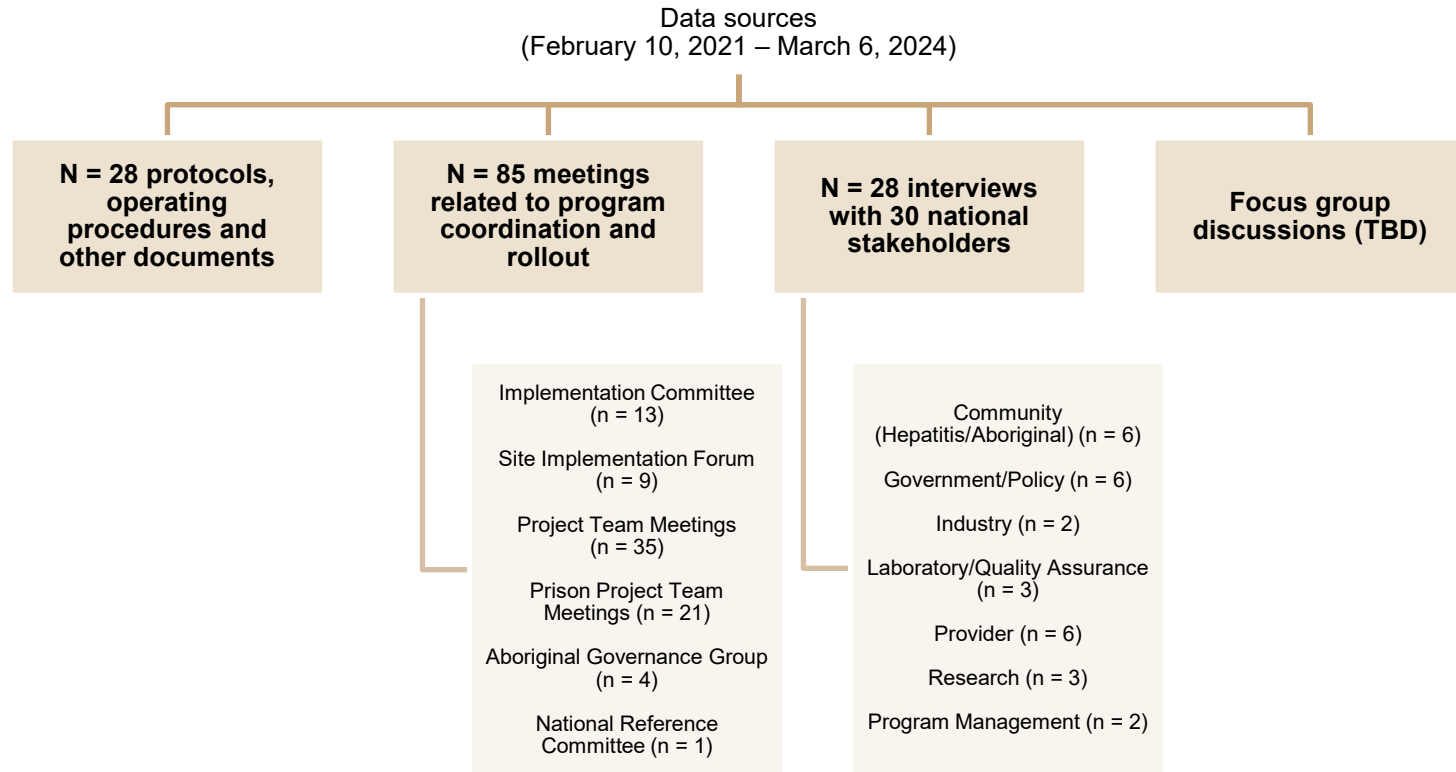| National Australian Hepatitis C Point-of-Care Testing Program | |
| --- | --- |
| Program Duration | 3 years |
| # Services and tests | 85 (200-300 testing sites/locations), 50-60,000 tests |
| Specimens | Capillary finger-stick |
| Analytes | HCV antibody, HCV RNA, HIV Ab/Ag, HBsAg |
| POC Device; Time to result | HCV Bioline, 20 min (5 min pos); INSTI HCV Antibody Test, 1 min; GeneXpert, 60 min |
| Partners | Flinders University, Commonwealth Government, State/Territory Governments, National and state community organisations |

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**Objective:** To assess the underlying program impact theory of the National Australian Hepatitis C Virus Point-of-Care Program, aiming to generate evidence on what works and why for program enhancement and future replication.

**Design:** Mixed-methods, implementation science-informed study.

**Implementation science tools and frameworks:**

| | Identify clinical intervention components | Identify implementation determinants | Identify implementation strategies | Identify implementation, service & clinical outcomes | Represent program impact theory |
|---|---|---|---|---|---|
| **Tasks** | | | | | |
| **Tool(s)** | Template for Intervention Description and Replication (TIDieR) Checklist | Consolidated Framework for Implementation Research 2.0 (CFIR 2.0) | Expert Recommendations for Implementing Change (ERIC) Taxonomy | Taxonomy of Implementation Outcomes | Implementation Research Logic Model (IRLM) |

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# Data sources

Data sources
(February 10, 2021 – March 6, 2024)

**N = 28 protocols, operating procedures and other documents**

**N = 85 meetings related to program coordination and rollout**

**N = 28 interviews with 30 national stakeholders**

**Focus group discussions (TBD)**

Implementation Committee
(n = 13)

Site Implementation Forum
(n = 9)

Project Team Meetings
(n = 35)

Prison Project Team
Meetings (n = 21)

Aboriginal Governance Group
(n = 4)

National Reference
Committee (n = 1)

Community
(Hepatitis/Aboriginal) (n = 6)

Government/Policy (n = 6)

Industry (n = 2)

Laboratory/Quality Assurance
(n = 3)

Provider (n = 6)

Research (n = 3)

Program Management (n = 2)

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**Hierarchy Chart of Factors Influencing Implementation of the National Program**

According to the Consolidated Framework for Implementation Research

Barriers & Enablers (CFIR)

(III) Inner setting domain
- (J) Available resources
  - Funding
  - Materials & Equipment
  - Space
- (A) Structural characteristics
  - Work infrastructure
  - Information techn...
- (F) Compatibility
- (G) Relative priority
- (I) Mission align...
- (B) Relational c...
- (C) Communications
- (D) Culture
  - Recipie...
- (H) Incentive sys...
- (E) Tension for ch...
- (K) Access to k...

(I) Innovation domain
- (C) Relative advantage
- (H) Cost
- (F) Complexity
- (D) Adaptability ...
- (B) Evidence base
- (G) Design

(IV) Individuals domain
- (H) Innovation deliverers
  - (B) Ca...
  - (D) Motivation
  - (C) Oppor...
- (I) Innovation reci...
  - (A) ...
  - (A) High-level l...
  - (D) Motivation
  - (D) Moti...
- (C) Opinion leaders
  - (F) Imp...
  - (D) ...
- (E) Implem...
- (D) Imple...
- (G) Ot...
- (D) Moti...
- (B) M...

(II) Outer setting domain
- (D) Partnerships & connections
- (B) Local attitudes
- (E) Policies & Laws
- (C) Local conditions
- (A) Critical incidents
- (G) Externa...

(V) Implementation process domain
- Research asp...
- (D) Planning
- (I) Adapting
- (B) Assessing...
- (E) ...
- (G) Doing

Factors related to the outer setting

Factors related to the inner setting

Factors related to the implementation process

Factors related to the innovation

Factors related to individuals

# Implementation strategies according to ERIC Taxonomy

- The National Program includes a total of 33 types of implementation strategies (out of 73) across 9 clusters, focusing mostly on *Evaluative and Iterative Strategies, Training and Education of Stakeholders, Adaptating and Tailoring to Context,* and *Development of Stakeholder Inter-relationships*.
- Conversely, the strategies under *Provision of Interactive Assistance, Support of Clinicians, Engagement with Consumers* and *Financial Strategies* are used less frequently.
- This indicates a strong emphasis on continuous assessment and adaptation, stakeholder education, and fostering collaborative relationships to facilitate program implementation.
- May represent areas of underutilization where additional focus (i.e., design and evaluation of additional implementation strategies) could potentially enhance implementation, service and client outcomes.

| ERIC Domains | No. of strategies | Implementation strategies |
|---|---|---|
| 1. Evaluative and iterative strategies | 5 | (1) Assess sites for readiness; (3) Purposefully reexamine the implementation; (4) Develop and implement tools for quality monitoring; (5) Develop and organize quality monitoring systems; (8) Stage implementation scale up |
| 2. Provision of interactive assistance | 2 | (12) Provide local technical assistance; (14) Centralize technical assistance |
| 3. Adapt and tailor to context | 4 | (15) Tailor strategies; (16) Promote adaptability; (17) Use data experts; (18) Use data warehousing techniques |
| 4. Development of stakeholder inter-relationships | 8 | (22) Inform local opinion leaders; (23) Build a coalition; (24) Obtain formal commitments; (25) Identify early adopters; (27) Capture and share local knowledge; (28) Use advisory boards and workgroups; (34) Develop academic partnerships; (35) Promote network weaving |

| ERIC Domains | No. of strategies | Implementation strategies |
|---|---|---|
| 5. Training and education of stakeholders | 8 | (36) Conduct ongoing training; (37) Provide ongoing consultation; (38) Develop educational materials; (39) Make training dynamic; (40) Distribute educational materials; (42) Conduct educational meetings; (44) Create a learning collaborative; (46) Work with educational institutions |
| 6. Support of clinicians | 2 | (49) Develop resource sharing agreements; (50) Revise professional roles |
| 7. Engagement with consumers | 1 | (53) Intervene with patients/consumers to enhance uptake and adherence |
| 8. Use of financial strategies | 1 | (58) Access new funding |
| 9. Change of infrastructure | 2 | (68) Change physical structure and equipment; (70) Change service sites |

# Next steps

- Integration of findings in an **Implementation Research Logic Model (IRLM)**

- Focus group discussions to refine and validate impact theory with key stakeholders

- Dissemination, design and evaluation of new implementation strategies
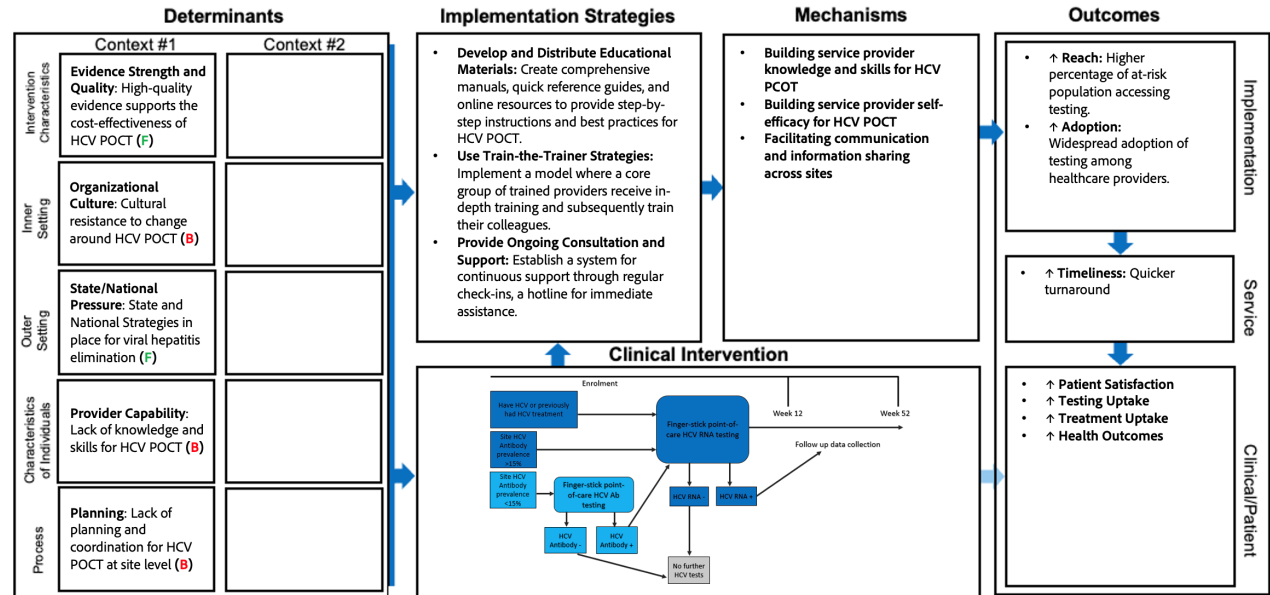
# Study team

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