# Overview

- Background

- Hepatitis C treatment in prisons

  - Nurse-led model of care (NLMC)

  - Scoping project

- Surveillance and Treatment of Prisoners with hepatitis C (SToP-C)

# Background

- 80 million chronically infected with HCV globally

- High rates amongst PWID including prisoners

- Growing burden of disease

- Prevention challenging

- Prison = incarceration / prison ≠health care

- Predominantly short stay

- Frequent movements

- NSW: 11,000 inmates; 25,000 annually

- 93% male; 19% Indigenous

- Poor mental health; ~30% chronic HCV
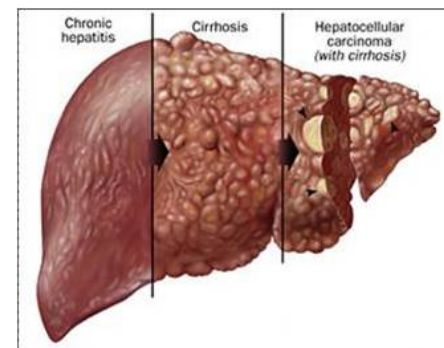
# HCV prevention in NSW prisons

No preventative vaccine

## Hepatitis C Incidence and Transmission Study in prisons (HITS-p)

- 49% reported injecting drug use in follow-up
- 31% reported sharing apparatus
- HCV incidence – 14% per annum
- No apparent protection from 'always' bleach cleansing or OST

Needle and syringe programs

*Luciani F. et al. Addiction 2014*

# Nurse-led model of care (NLMC)

- Goal: Increase HCV treatment rates in NSW prisons

Boonwaat et al *Med J Aust* 2010; 192 (9): 496-500

- NLMC pilot: (2009-2010)

  – Skills-based training of Clinical Nurse Consultants (CNCs)

  – Protocol driven nurse assessment and triage

  – Specialist reviews via telemedicine

  – Three centres - Lithgow, Goulburn, Long Bay

  – Qualitative and quantitative evaluation

- Safe, efficient, acceptable

Lloyd A et al *Clin Infect Dis* 2013 Apr;56(8):1078-84

# NLMC roll-out – NHMRC Partnership Project

CNSs / CNCs
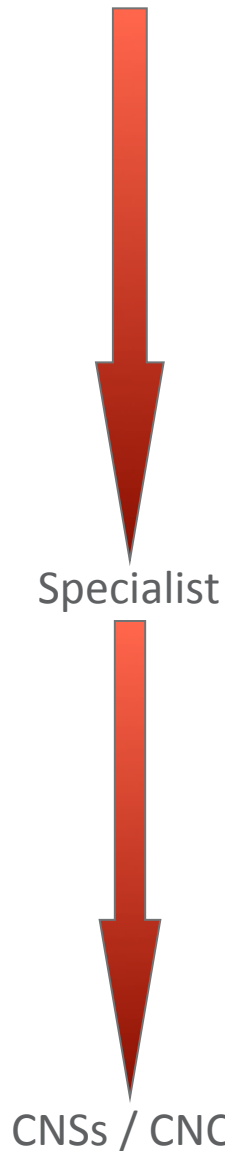
Post-test counselling: chronic HCV

Protocol-driven investigations incl. Fibroscan

Focused history and examination / targeted mental health assessment

Specialist

**Category A:**
Case discussion without patient

**Category B:**
Teleconference with patient

**Category C:**
Face-to-face review

Prescription

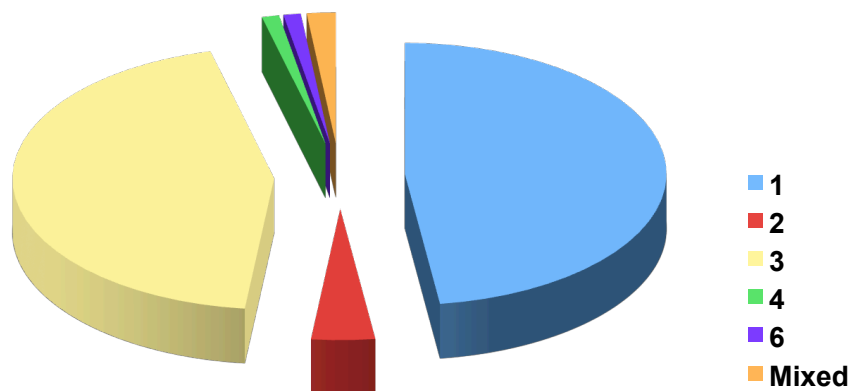Antiviral therapy incl. triple

Post-treatment follow-up

CNSs / CNCs

# Triage decision

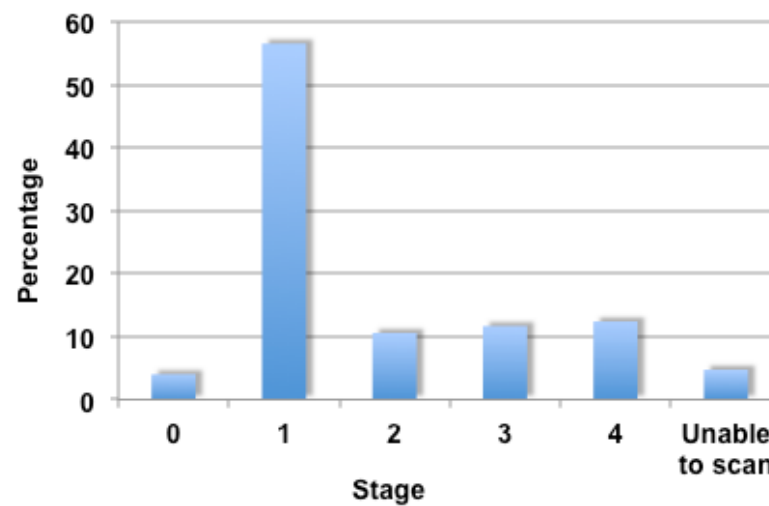| Category | Risk of medical or psychiatric complications on treatment | Motivation and psycho-social issues | Additional considerations | Action |
|---|---|---|---|---|
| A | Low risk, as there are no apparent medical or psychiatric conditions on history or current evaluation | Well-motivated and no psycho-social obstacles to successful completion of treatment and follow-up. | Stable circumstances in the correctional centre; good personal skills and social support structures. | Work up as per protocol and present to specialist (without the patient) for consideration for treatment. |
| B | Generally low risk of adverse events on treatment, but there are medical or psychiatric co-morbidities evident, such as a history of psychosis or possible auto-immune disease. | Well-motivated, but some issues requiring additional support and surveillance, such as ongoing injecting drug use or mental health concerns. | Generally stable circumstances in the correctional centre, but other concerns such as limited personal skills or social support structures. | Provide care plan addressing the individual's issues of concern, and arrange telephone consultation with specialist and patient. |
| C | Significant risk of serious adverse events on treatment, as there are pre-existing medical and/or psychiatric co-morbidities which are likely to impact upon antiviral treatment, such as advanced liver disease, HIV-co-infection, or current major depression. | Motivated, but has psycho-social issues, which are likely to impact upon treatment, such as active injecting drug use or a risk of deliberate self-harm. | To consider treatment: stable circumstances in the correctional centre, reasonable personal skills and social support structures required. | Arrange face-to-face consult with specialist physician. Additional investigations (e.g. exercise stress test) and specialist consultations (e.g. psychiatrist) likely to be required. |

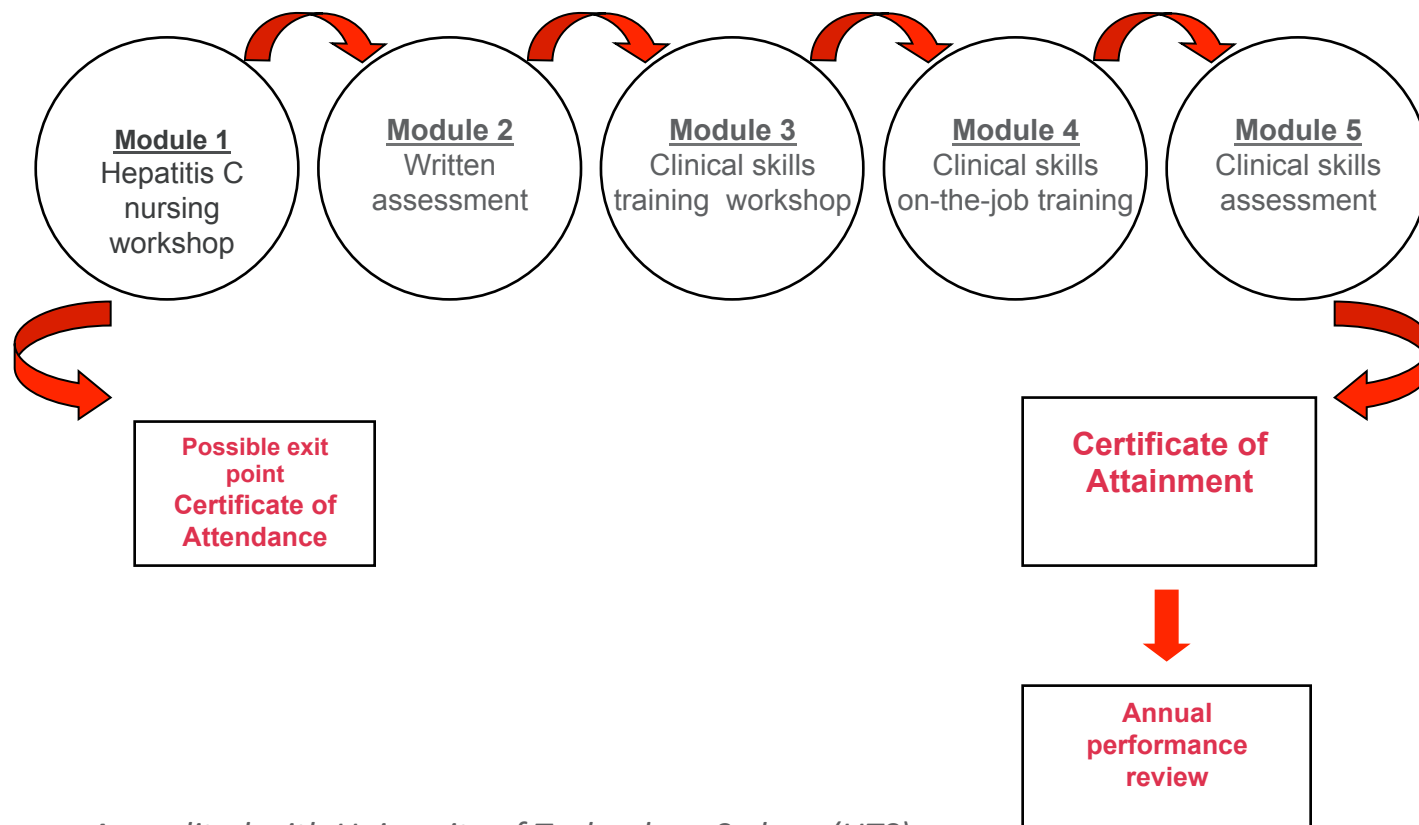# Slides removed - until publication

# Patient characteristics

# CNC / CNS hepatitis training program

## Knowledge and skills-based training



**Module 1**
Hepatitis C nursing workshop

**Module 2**
Written assessment

**Module 3**
Clinical skills training workshop

**Module 4**
Clinical skills on-the-job training

**Module 5**
Clinical skills assessment

**Possible exit point Certificate of Attendance**

**Certificate of Attainment**

**Annual performance review**

*Accredited with University of Technology Sydney (UTS)*

# Scoping project

## Prisoners in Australia, 30/6/2013

| | Total Prisoners | Median age (years) | ATSI (%) | Median sentence length (years) | Remand (% of prisoners) | Remand (median time, months) | Prior adult imprison-ment (%) | Current strategy HCV services |
|---|---|---|---|---|---|---|---|---|
| **NSW** | 9,897 | 34.2 | 23 | 3.6 | 28 | 3.3 | 55 | ✓ |
| **VIC** | 5,340 | 35.3 | 7 | 3.3 | 18 | 2.7 | 51 | ✓ |
| **QLD** | 6,076 | 32.9 | 31 | 3.0 | 22 | 3.5 | 65 | ✓ |
| **SA** | 2,266 | 35.9 | 22 | 4.5 | 34 | 2.3 | 51 | ✗ |
| **WA** | 4,924 | 33.3 | 40 | 2.5 | 20 | 2.4 | 62 | ✓ |
| **TAS** | 483 | 32.7 | 15 | 2.0 | 24 | 1.5 | 65 | ✗ |
| **NT** | 1,436 | 32.6 | 86 | 1.3 | 25 | 1.2 | 71 | ✗ |
| **ACT** | 353 | 31.2 | 18 | 2.8 | 26 | 1.4 | 73 | ✓ |

# Scoping project

## Prisons and health care personnel

| | Total number of prisons | Number of prisons with hepatitis services | Specialist physician - prison based | Specialist physician - hospital based | Hepatitis nurse | General nurse | GP | Psychiatrist | Psychologist | Mental health nurse | D&A counsellor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NSW | 31 | 31 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| VIC | 14 | 3 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ |
| QLD | 11 | 8 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | ✗ |
| SA | 8 | 8 | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | ✗ |
| WA | 16 | 9 | ✗ | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | ✓ |
| TAS | 7 | 7 | ✓ | ✓ | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| NT | 5 | 3 | ✗ | ✓ | ✓ | ✓ | ✓ | ✗ | ✗ | ✗ | ✓ |
| ACT | 2 | 2 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✗ | ✗ |

*Mina M. et al. International Journal of Prisoner Health 2015 (in press)*

# HCV testing & treatment in prisons
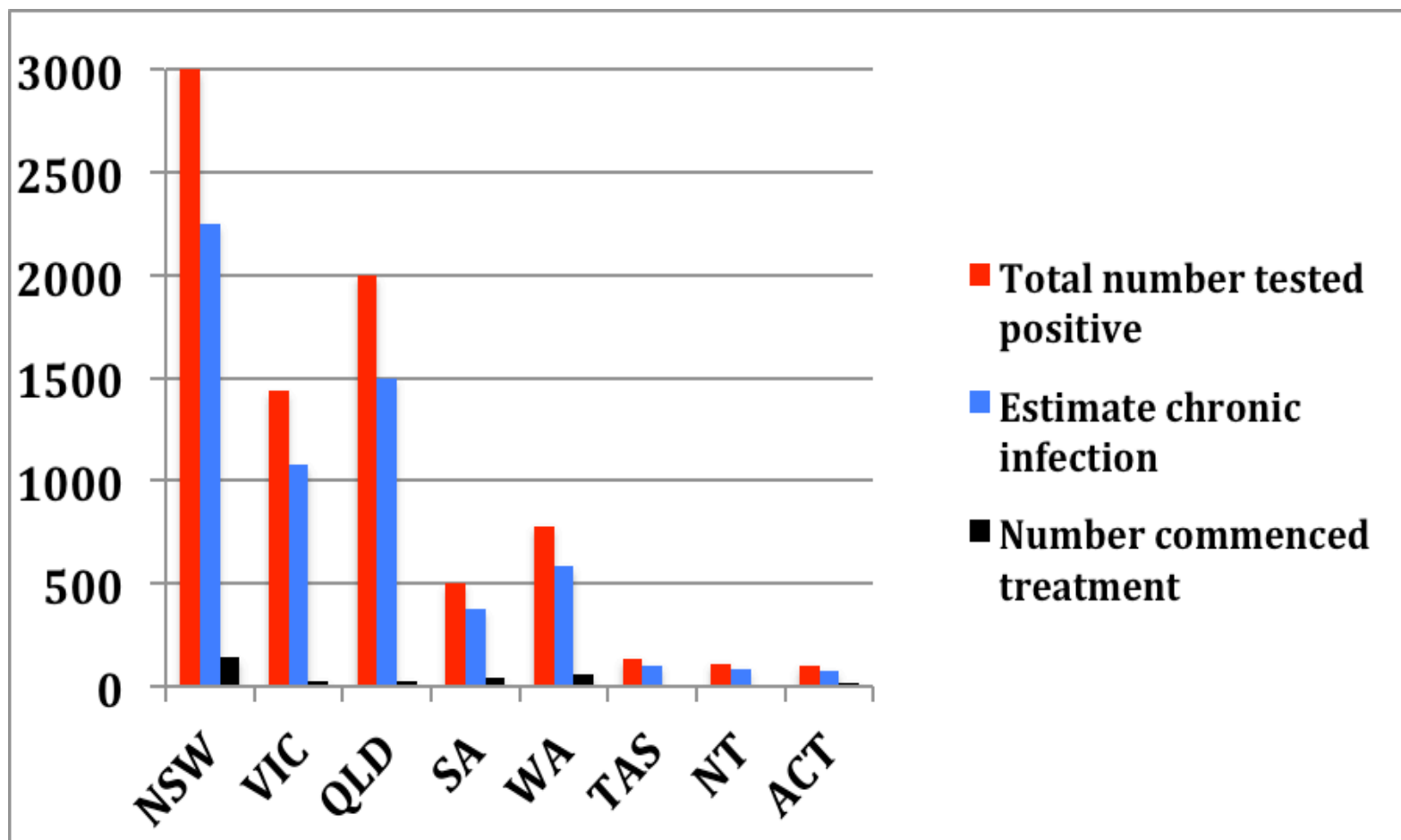
# Scoping project

*How could hepatitis services be improved*
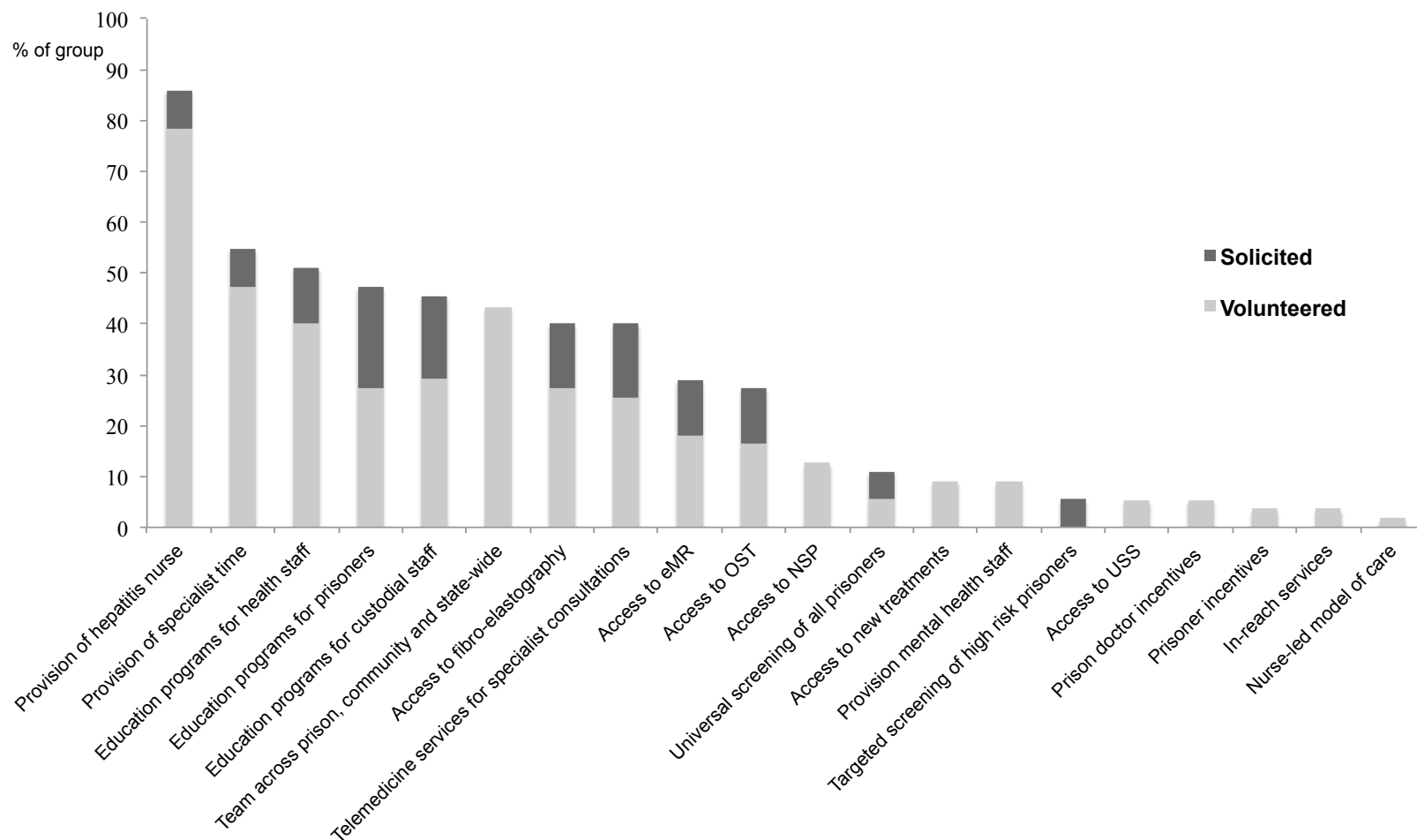
# Goals

- To evaluate the impact of rapid scale-up of DAA treatment on incidence and prevalence of HCV infection in the prison setting

- To develop a translational framework for subsequent establishment of treatment-as-prevention programs in the prison sector

# Study design
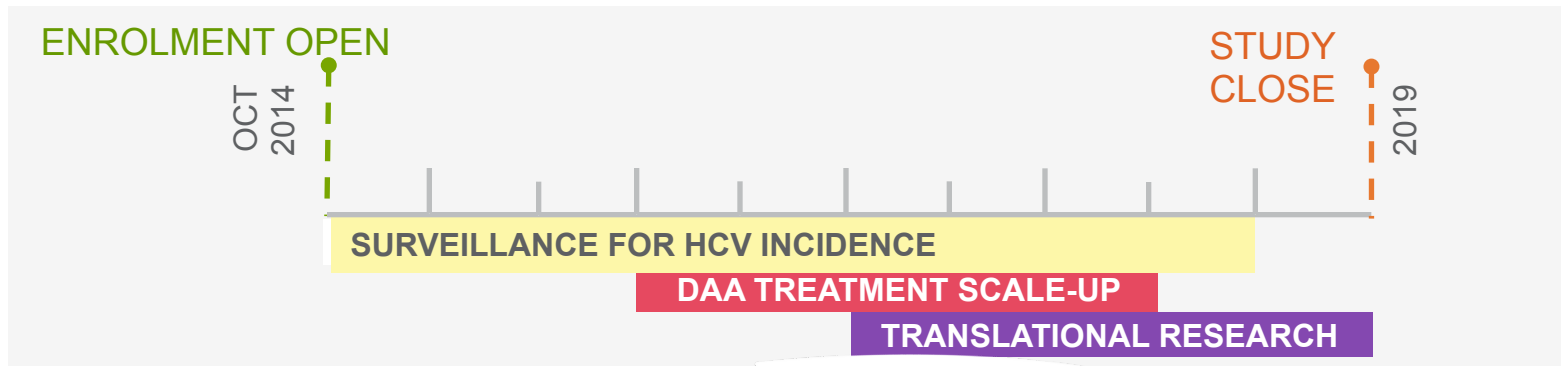


**Primary end-point:**

- Reduction in HCV incidence in cohort across 4 SToP-C prisons

**Additional aims:**

*Mathematical modelling*

- Treatment sample size and epidemiological impact

*Cost-effectiveness and budget impact*

- Is DAA therapy in prisons good value for money and can we afford it?

*Qualitative evaluation*

- Patient & provider attitudes & barriers towards DAA therapy in prisons

*Implementation toolkit*

- How can DAA therapy be scaled up in prisons across NSW and nationally?

# SToP-C network



Lithgow Correctional Centre
Lithgow



Outer Metropolitan Multipurpose Correctional Centre
Sydney



Dillwynia (Womens) Correctional Centre
Sydney



Goulburn Correctional Centre
Goulburn

# Current status – surveillance phase (at 10 Sep 2015)
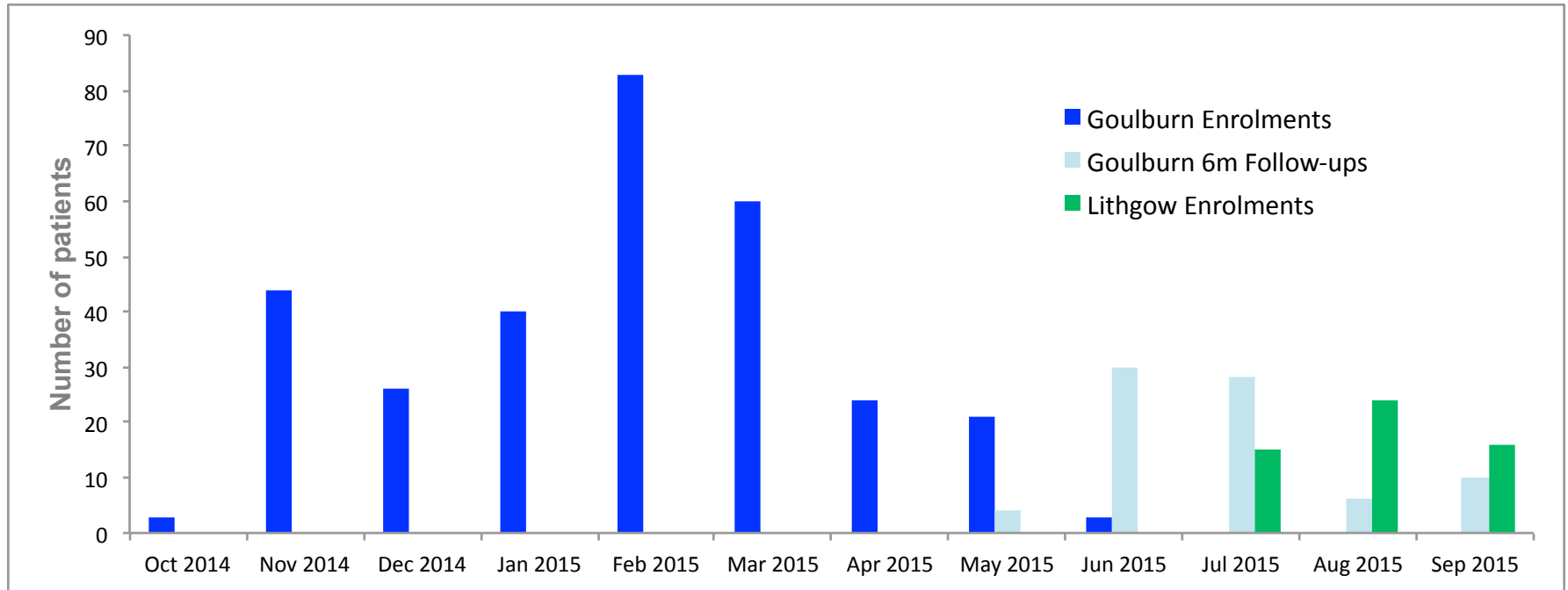


| | | |
|---|---|---|
| Goulburn Correctional Centre | 304 | 78 |
| Lithgow Correctional Centre | 55 | 0 |
| **TOTAL** | **359** | **78** |

# Treatment phase - 2016

- All prisoners with HCV infection eligible

- 12-week directly acting antiviral (DAA) therapy (sofosbuvir/velpatasvir)

- One fixed-dose tablet once daily

- >90% cure rates for Gt1-6

- Minimal side-effects

- Monitor re-infection rates and re-treat

# Education and promotion

- Prison staff (custodial & health) information sessions

- Resources for prisoners and family

  - Video
  - Posters
  - Booklet

# Project partners, stakeholders, funders