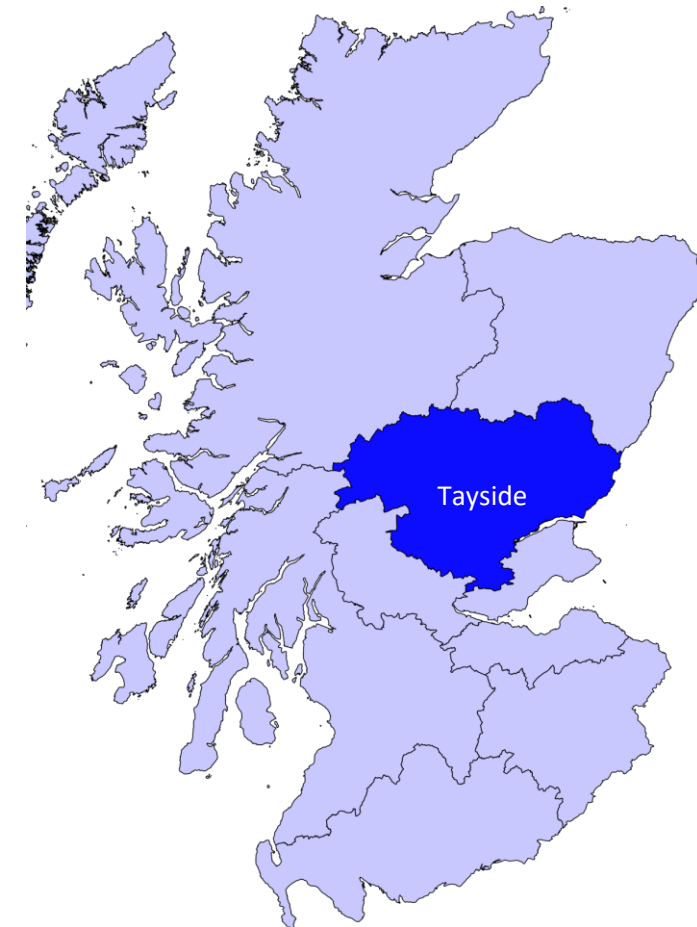




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Community pharmacies in HCV micro-elimination efforts in Scotland



Prof John Dillon

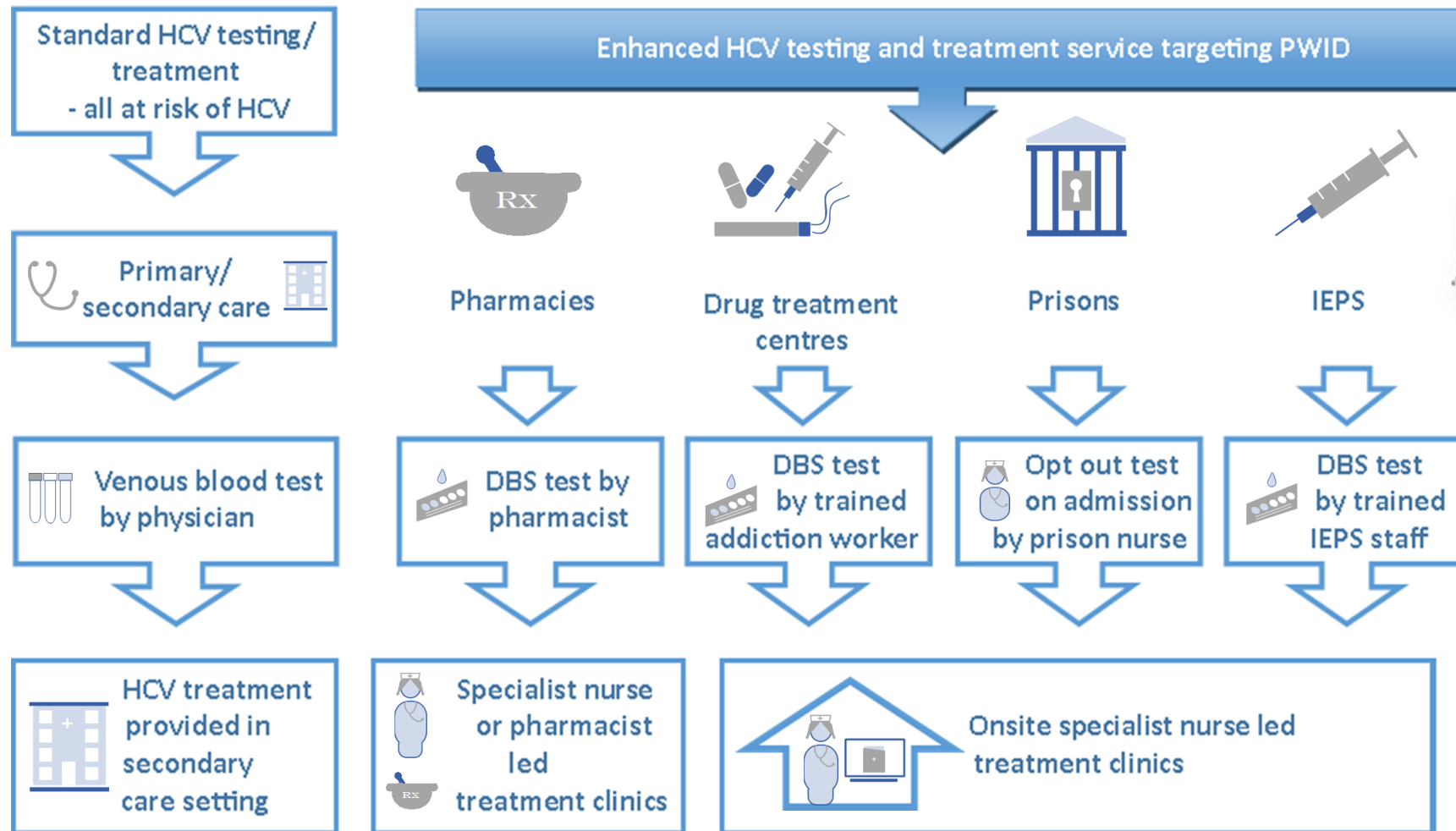
School of Medicine, University of Dundee,
Ninewells Hospital and Medical School, NHS Tayside, Scotland.

Scottish Health service and addiction services

- Free at point of delivery
- Addiction mainly Heroin and Benzo's historically
- Addictions services; Psychiatry and general practice
 - OST prescription
- OST dispensing- community pharmacy
 - Employed by health service on fee for service basis
 - Independent non-medical prescribers
 - Patient group directives



Hepatitis C diagnosis and treatment pathways in Tayside



PWID defined as those who either (a) are currently injecting drugs, (b) have ever injected drugs and are currently on opioid substitute therapy, or (c) have ever injected drugs and are currently in prison

DBS: dried blood spot; OST: opioid substitution therapies; POC: point of care; PWID: people who inject drugs; IEPS injecting equipment provision sites

DOT-C

A research programme to model, evaluate and establish testing and treatment of hepatitis C infection in community pharmacy



“Standing Outside The Junkie Door – A Qualitative Study of the Views and Experiences of People Receiving OST from Community Pharmacy”

Themes Identified :-

Experiences of Care

- *Stigma and discrimination*
- *Confidentiality*
- *Changes that need to occur*

Knowledge and Experiences of Treatment

- Mechanics of care
- Burden of treatment

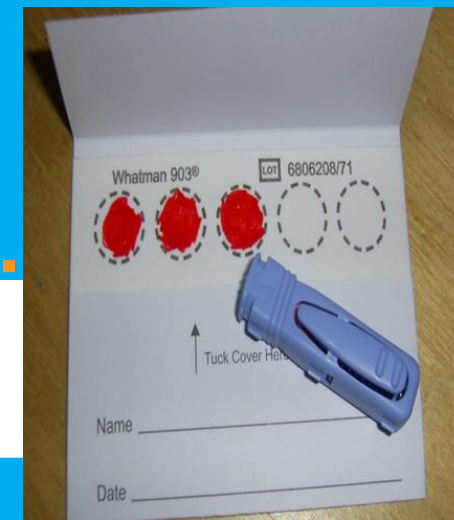
ASK THE PEOPLE we are trying to reach

PREFERENCES FOR HCV TESTING: A DISCRETE CHOICE EXPERIMENT WITH OST USERS

| Preference | Willing to Wait |
|--------------------------------------|-----------------|
| Own rather than other pharmacy | 4.25 weeks |
| Own pharmacy rather than GP | 2.11 weeks |
| Own pharmacy rather than drug worker | 0.08 weeks |
| Treated with respect | 7.42 weeks |

Dried blood spot testing in Tayside, Scotland

A quasi-experimental evaluation of DBST through community pharmacies in the Tayside region of Scotland

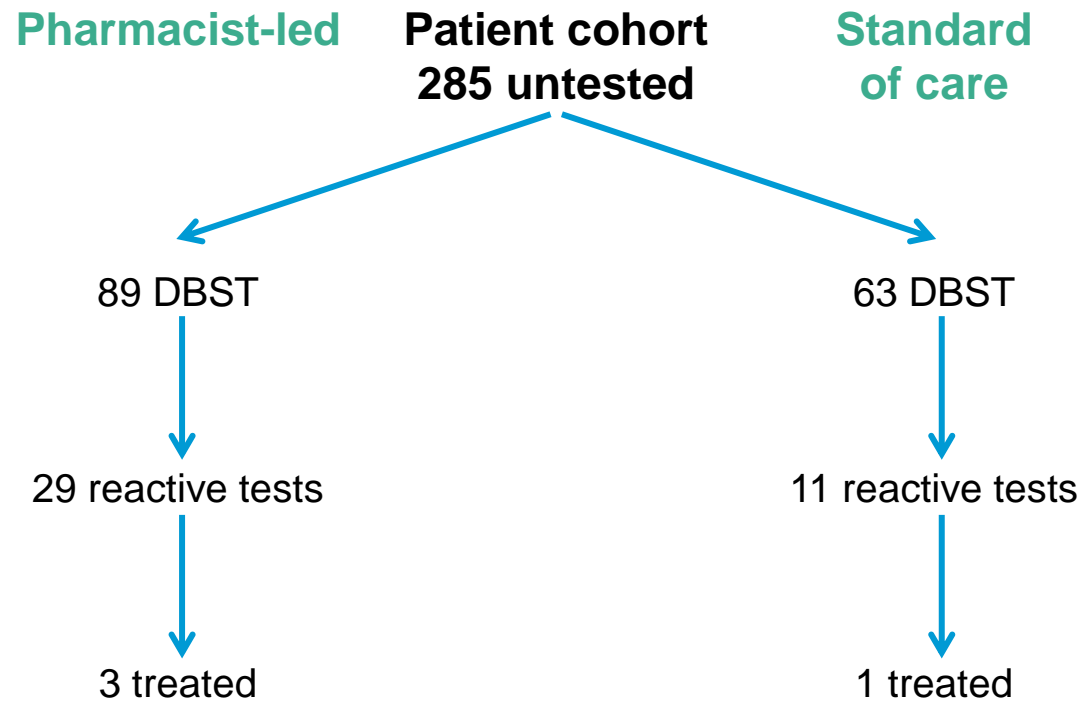


| Pharmacy site | Number of eligible patients | Number of tests taken (% of eligible patients) | Number of positive tests |
|---------------|-----------------------------|--|--------------------------|
| A | 23 | 13 (57) | 3 |
| B | 22 | 11 (50) | 4 |
| C | 30 | 5 (17) | 3 |
| D | 26 | 10 (38) | 1 |
| E | 26 | 3 (12) | 1 |
| F | 16 | 1 (6) | 0 |
| Totals | 143 | 43 (30) | 12 |

The OR for increased uptake of testing within the 6 pharmacies was 2.25 (95% CI 1.48 to 3.41, Z statistic = 3.81 p = <0.0001) in comparison to the other services

HCV testing and treatment in 8 community pharmacies

DOT-C: A pilot cluster randomised controlled trial



HCV testing and treatment in 8 community pharmacies

Outcomes for 40 reactive DBST

| | Pharmacist-led (n=29) | Standard of care (n=11) |
|---------------------------------|--------------------------|----------------------------|
| No assessment blood test | 12 (42%) | 5 (46%) |
| Genotype 3 | 7 (24%) | 1 (9%) |
| Spontaneous clearance | 6 (21%) | 3 (27%) |
| Prison | 1 (3%) | 0 |
| Deceased | 0 | 1 (9%) |
| Treated | 3 (10%) | 1 (9%) |
| Available for treatment/treated | 3/3 (100%) | 1/1 (100%) |

Study Design



SuperDOT-C

Pharmacist-led

Patient cohort
2718 methadone users

Standard of care

28 community
pharmacies
About 1365 patients
Test and treat

27* community
pharmacies
About 1353 patients
Test and refer

genotype 1

genotype 3

Ledipasvir/sofosbuvir

Sofosbuvir + daclatasvir

genotype 1

genotype 3

Objective to treat up to
300 patients

SuperDOT-C - Outcomes

| | Conventional Care Pathway | Pharmacist-Led Care Pathway | Odds Ratio | P Value |
|--|------------------------------|--------------------------------|---------------|----------------------------------|
| Primary Outcome | | | | |
| SVR12 | 43 | 98 | 2.375 | <0.0001 |
| Secondary Outcomes | | | | |
| Diagnosed & Agreed Treatment | 137 | 219 | 1.696 | <0.0001 |
| Initiated Treatment | 61 | 112 | 1.889 | 0.0015 |
| Completed Treatment | 58 | 108 | 1.928 | 0.0007 |
| Diagnosed Population Cure Rate* | | | | |
| | 31% | 45% | | *SVR12/Number diagnosedx100 |
| Notional Population Cure Rate⁺ | | | | |
| | 8% | 18% | | +SVR12/Population at riskx100 |



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REACX

Reaching People Receiving Opioid Agonist Therapy Attending Community Pharmacies with Hepatitis C Virus (Reach)

An international cluster randomised controlled trial

Byrne C^{1,2}, Radley A³, Inglis SK², Beer L², Palmer N⁴, Pham MD^{5,6}, Allardice K⁶, Wang H⁷,
Robinson E⁸, Hermansson M⁹, Semizarov D⁹, Healy B⁴, Doyle JS^{5,6}, Dillon JF^{1,8}

¹Division of Molecular and Clinical Medicine, School of Medicine, University of Dundee,
Ninewells Hospital and Medical School, UK.

²Tayside Clinical Trials Unit, School of Medicine, University of Dundee, Ninewells Hospital
and Medical School, UK.

³Directorate of Public Health, NHS Tayside, Kings Cross Hospital, Dundee, UK.

⁴Department of Microbiology and Infectious Diseases Cardiff, Public Health Wales, UK.

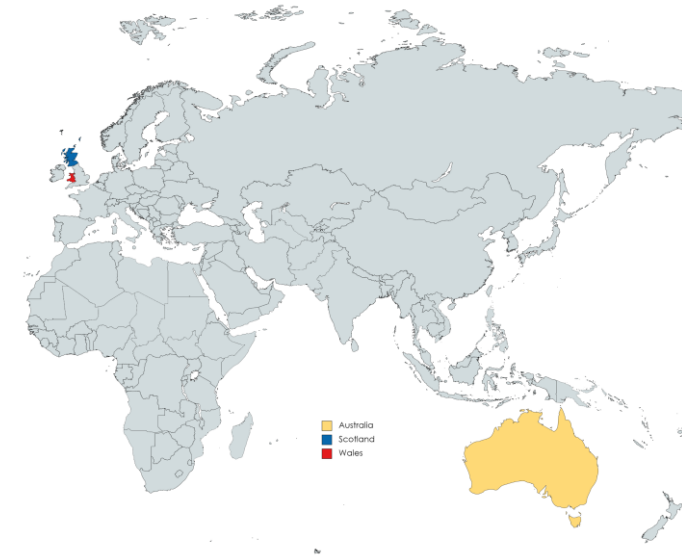
⁵Department of Infectious Diseases, the Alfred and Monash University, Melbourne, Australia.

⁶Disease Elimination Program, Burnet Institute, Melbourne, Australia.

⁷Division of Population Health and Genomics, School of Medicine, University of Dundee, UK.

⁸ Department of Gastroenterology, NHS Tayside, Ninewells Hospital and Medical School, Dundee, UK.

⁹AbbVie Ltd, AbbVie House, Vanwall Business Park, UK.



Methods

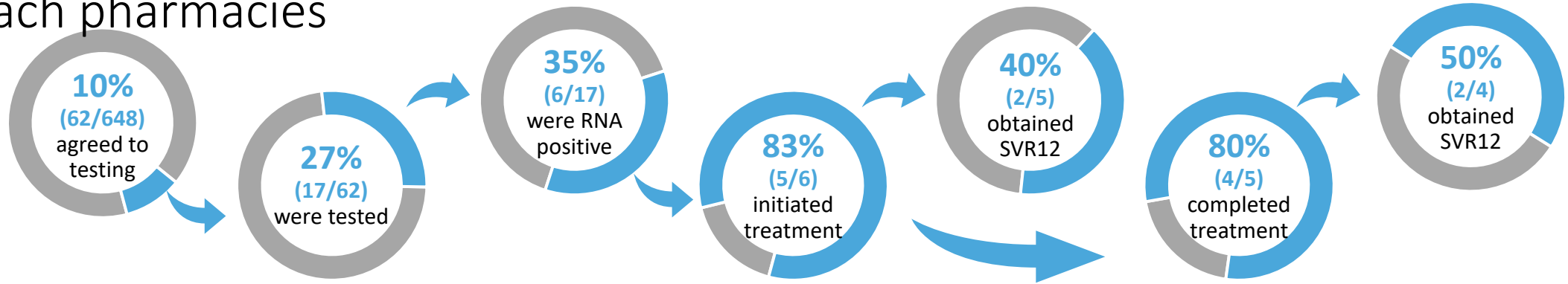


- International (Scotland, Wales, Australia) cluster-randomised controlled trial of outreach point-of-care HCV RNA testing and DAA treatment versus conventional care for OAT clients at pharmacies.
- Pharmacies were randomised 1/1 to intervention or control arm.
- Pharmacists opportunistically discussed HCV with OAT clients and sign-posted to HCV testing.
- HCV testing in pharmacies in intervention sites, or community clinics (UK) and GPs (Aus) in control sites.
- DAAs arranged by nurses in UK under PGD, and clinician or GP in Aus.
- DAAs dispensed by pharmacists alongside OAT.

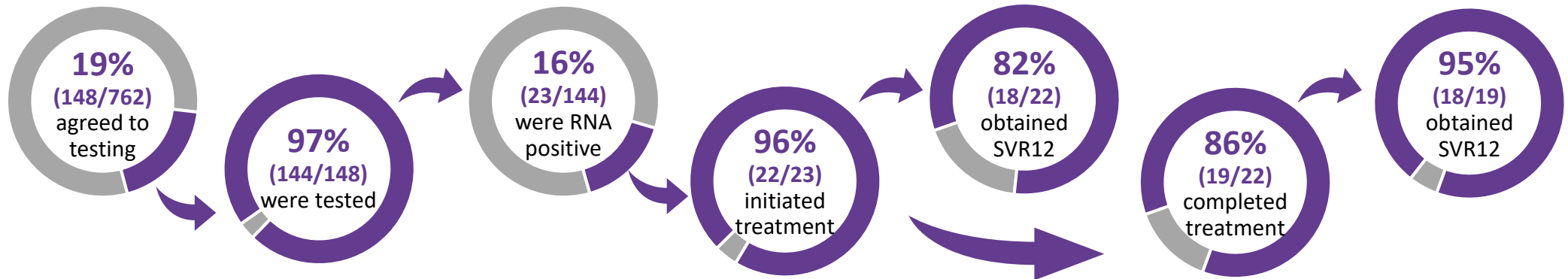
REACH

in reach pharmacies

Conventional pathway (n=648)



Intervention pathway (n=762)



EPITOPE

WS1 : A feasibility study on rapid major scale-up of DAAs among PWID

NHS Tayside

Popln: 400,000

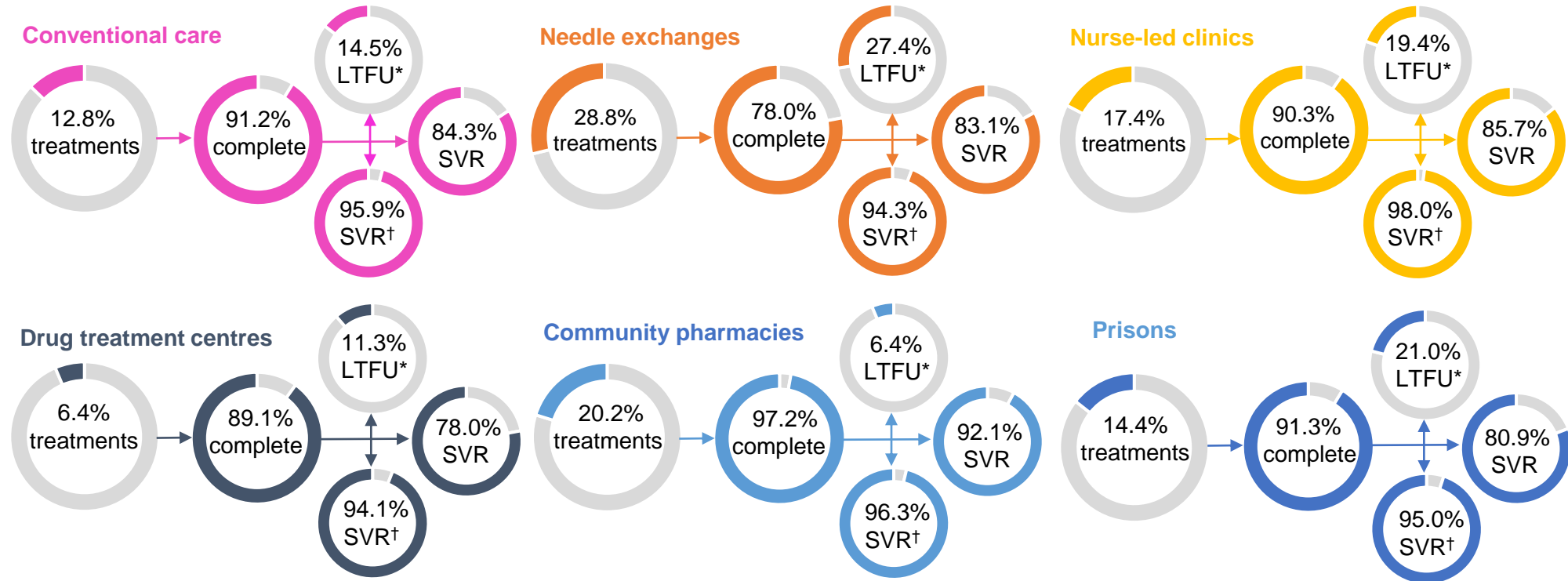
PWID: ~2,800

(800 with chronic HCV)

- Rapid & major scale-up of DAAs among PWID (>500 over 2 years)
- Aim to reduce chronic HCV prevalence among PWID from 30% to <10%
- Testing (by services) & treatment (by specialist nurses & pharmacists) in multiple community settings



EPITOPE HCV treatment scale up for PWID



1. Proportions of treatments, 2. completion, 3. lost to follow-up, and 4. cure

*Percentages are proportions of the LTFU group (n=70), not treated cases.

†SVR for treatment completers who received a test (n=560).

How close to elimination are we in Tayside?

HCV chronic prevalence 0.5% of population = 1,975

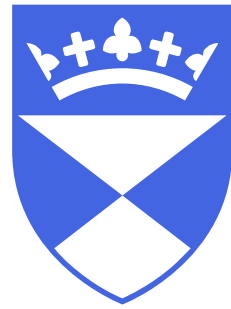
90% of chronic prevalence = 1,776

| | Infections | People |
|---|--------------|--------------|
| Total ever diagnosed | 4,535 | 4,322 |
| PCR negative | 1,056 | 1043 |
| Non resident | 708 | 703 |
| Died | 698 | 698 |
| Total alive and living in Tayside | 2,031 | 1,878 |
| Total treated (treated and SVR with Interferon or completed course of DAA) | 1,969 | 1,812 |

As of July 2022

Acknowledgements

The Team- Nik Rae, Morgan Evans, Jan Tait, Brian Stephens, Emma Robinson, Maya Prakash, Dianne Knight, Farsana Ahmed, Andrew Radley, Linda Johnston, Shirley Cleary, Christian Sharkey, Sarah Inglis, Lewis Beer, Chris Byrne, Amy Malaguti, Steve McSwiggan, James Flood, Donna Thain, Ann Eriksen, Sarah Donaldson



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External Collaborators-Matt Hickman, Peter Vickerman, Natasha Martin, Jeff Lazarus, Margaret Hellard, Joe Doyle, Sharon Hutchinson, David Goldberg