Glasgow Caledonian University

University for the Common Good

FUNDED BY NIHR | National Institute for Health Research

Public Health Scotland

Reduction in the population prevalence of chronic HCV among people who inject drugs associated with scale-up of direct-acting antiviral therapy in Scotland: real world data

Dr Norah Palmateer

On behalf of co-authors: Andrew McAuley, John Dillon, Samantha Shepherd, Rory Gunson, David Goldberg, Matthew Hickman, & Sharon Hutchinson

Email: norah.palmateer@phs.scot

@NorahPalmateer

INHSU 2021

Acknowledgments

Thank you to all of the people who inject drugs who participated in this research!

- Disclosure of interest:

This study is funded by Public Health Scotland (PHS) and the National Institute for Health Research (NIHR) Programme Grants for Applied Research programme (Grant Reference Number RP-PG-0616-20008). The views expressed are those of the author(s) and not necessarily those of PHS, the NIHR or the Department of Health and Social Care.

Background

NHS Tayside – the intervention site:

- Rapid & major scale-up of DAAs among PWID in **Tayside** (500 over 2-3 years from 2017)
- Aim to reduce chronic HCV prevalence among PWID from 30% to <10%
- Testing (by services) & treatment (by nurses & pharmacists) in multiple community settings

A 'natural experiment':

- Compare changes in chronic HCV prevalence among PWID in Tayside to **Greater Glasgow & Clyde (GGC)** and the **rest of Scotland (RoS)**

NHS Tayside
Popl'n: 417,000
PWID: 2,700

RoS
Popl'n: 3,864,000
PWID: 17,300

NHS GGC
Popl'n: 1,185,000
PWID: 10,000

Hickman et al. (2019) Evaluating the population impact of hepatitis C direct acting antiviral treatment as prevention for people who inject drugs (EPIToPe) – a natural experiment (protocol). *BMJ Open, 9:e029538.*

Background

We previously demonstrated the early impact of DAA scale-up in Tayside (2013-14 to 2017-18):

- Uptake of DAAs (last year) in Tayside (15%-43%) was greater than scale up in GGC (6% to 16%) or RoS (11% to 23%)
- A greater decline in chronic HCV prevalence in **Tayside** than elsewhere in Scotland
  - In Tayside, fell by approximately a third, from **34% to 24%**
  - In GGC, fell from **45% to 40%**
  - No change (**27%**) in RoS

Palmateer et al. (2021) Reduction in the population prevalence of hepatitis C virus viraemia among people who inject drugs associated with scale-up of direct-acting anti-viral therapy in community drug services: real world data. *Addiction*; 116(10): 2893-2907.

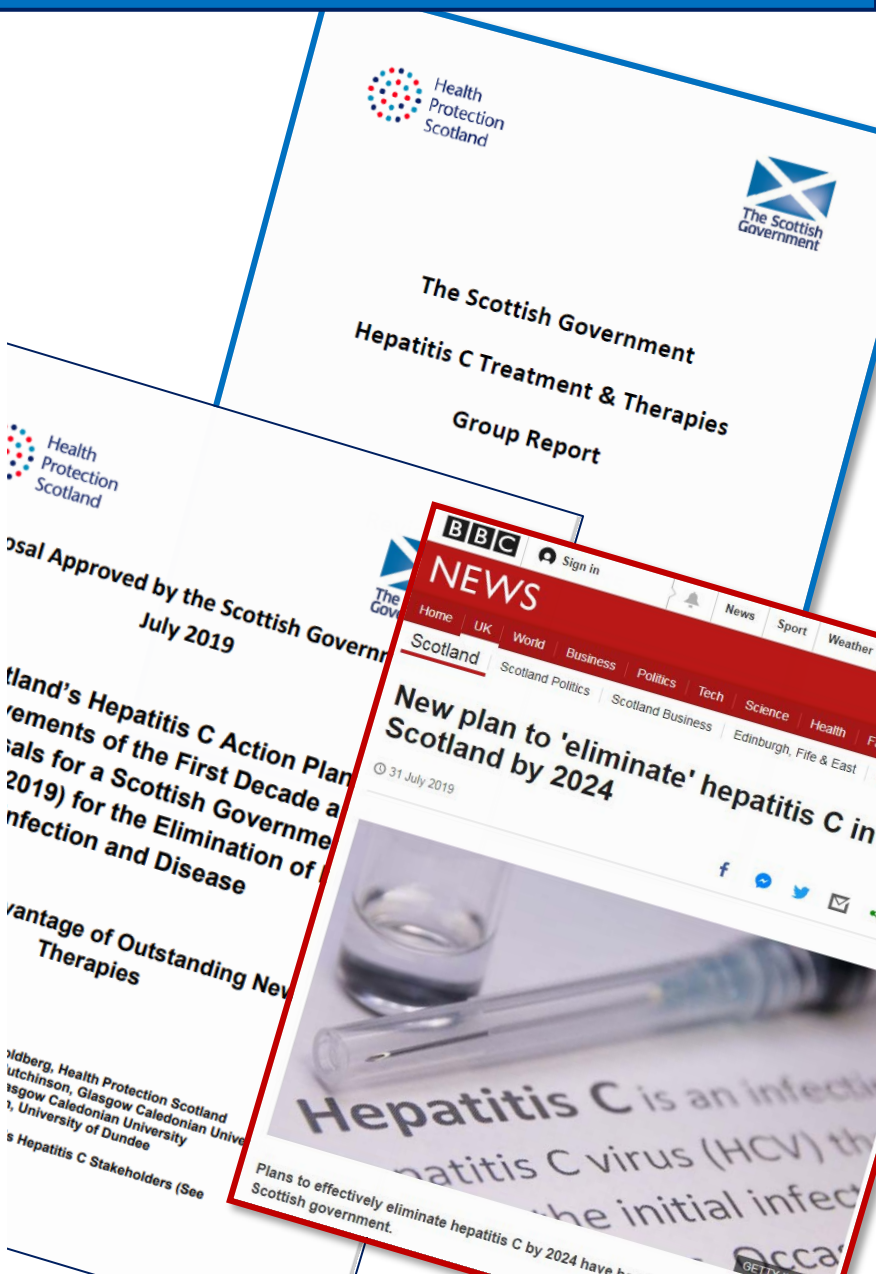
Background: Scottish Government Policy

2015-2018

- **Treatment Targets** : 1500 per year
- Prioritisation based on disease stage (**lifted in 2018**)
- Aim to deliver therapy for most infected people in community settings (includes prisons)

2019-2024

- **Elimination strategy:** ≤5000 chronically infected people by 2024
- "Ensure that people who inject drugs have access to and take up i) optimal harm reduction services and ii) if deemed clinically ready, antiviral therapy to prevent the onward transmission of infection"
- **Treatment Targets:** Average of 3,000 people each year from 2020



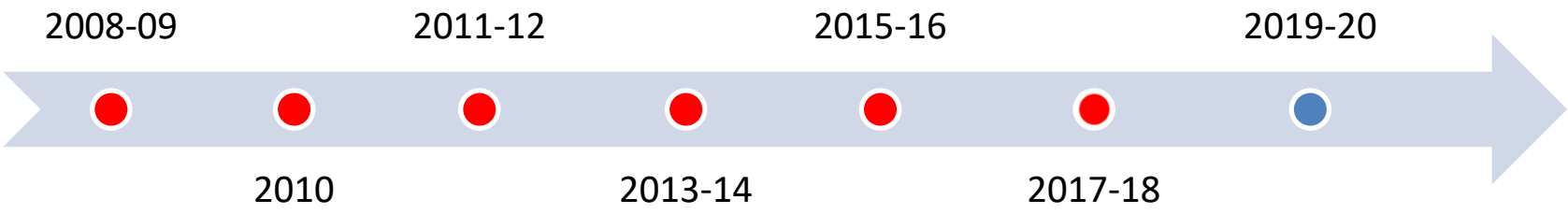
Methods

Needle Exchange Surveillance Initiative (NESI):

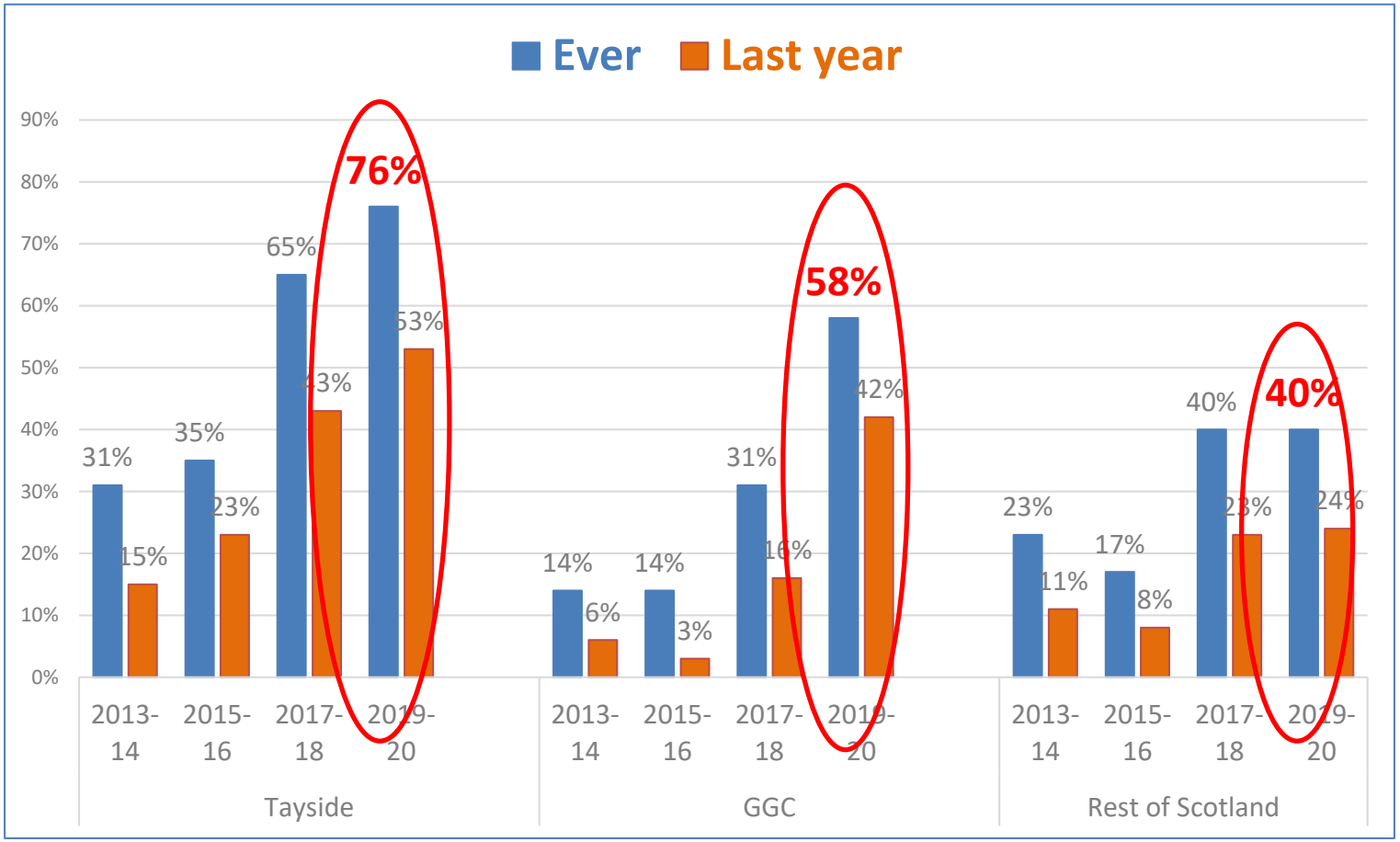
- A bio-behavioural survey of people who inject drugs (PWID) - questionnaire & dried blood spot (DBS)
- Recruits at services that provide sterile injecting equipment across mainland Scotland
- Eligible to participate if ever injected drugs (70-80% injected in the last 6 months)

Recruits between 2,000-2,500 participants per sweep (equivalent to ~10% of the population of PWID in Scotland)

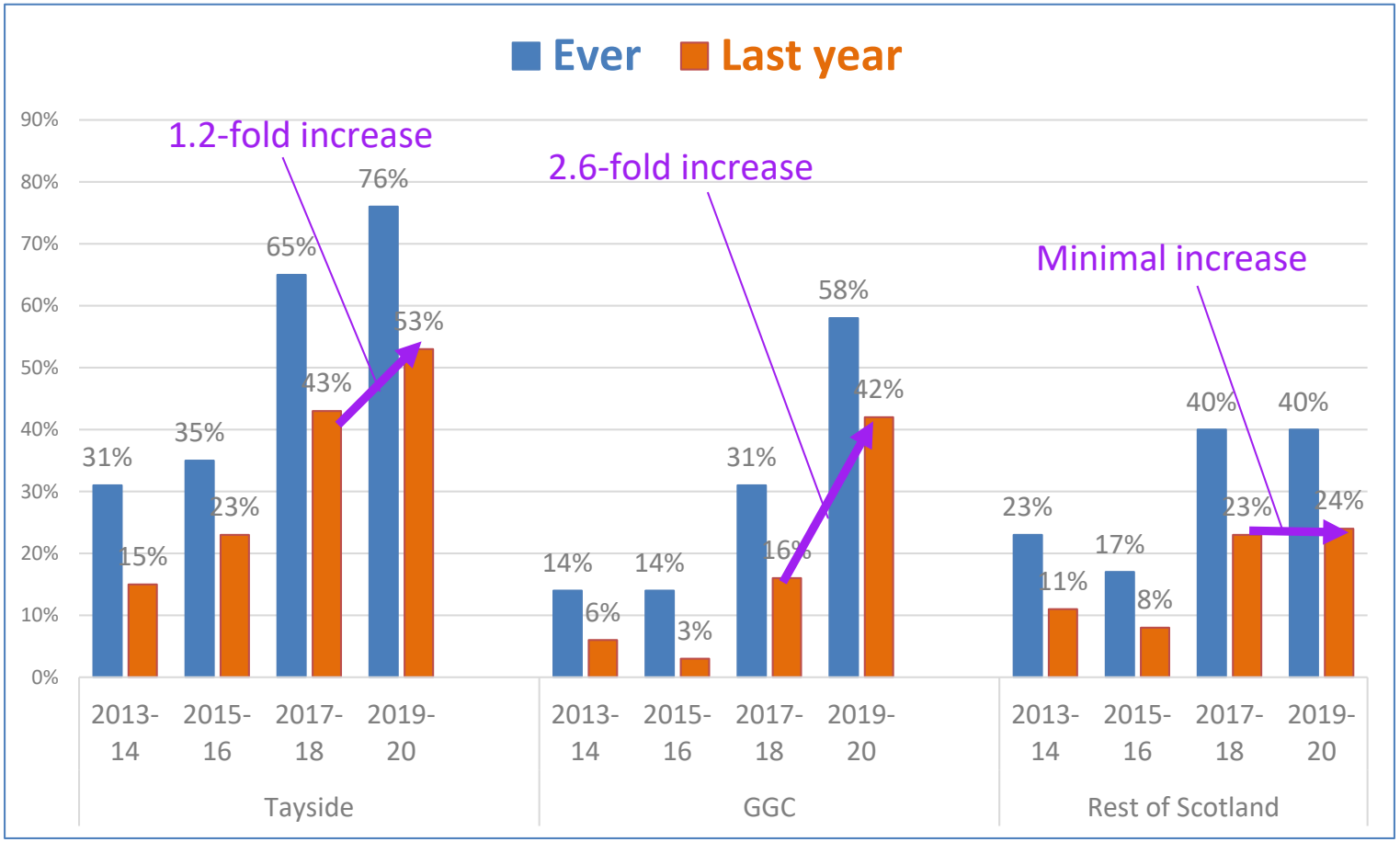
NESI sweeps to date:



Results: Uptake of HCV therapy



Results: Uptake of HCV therapy

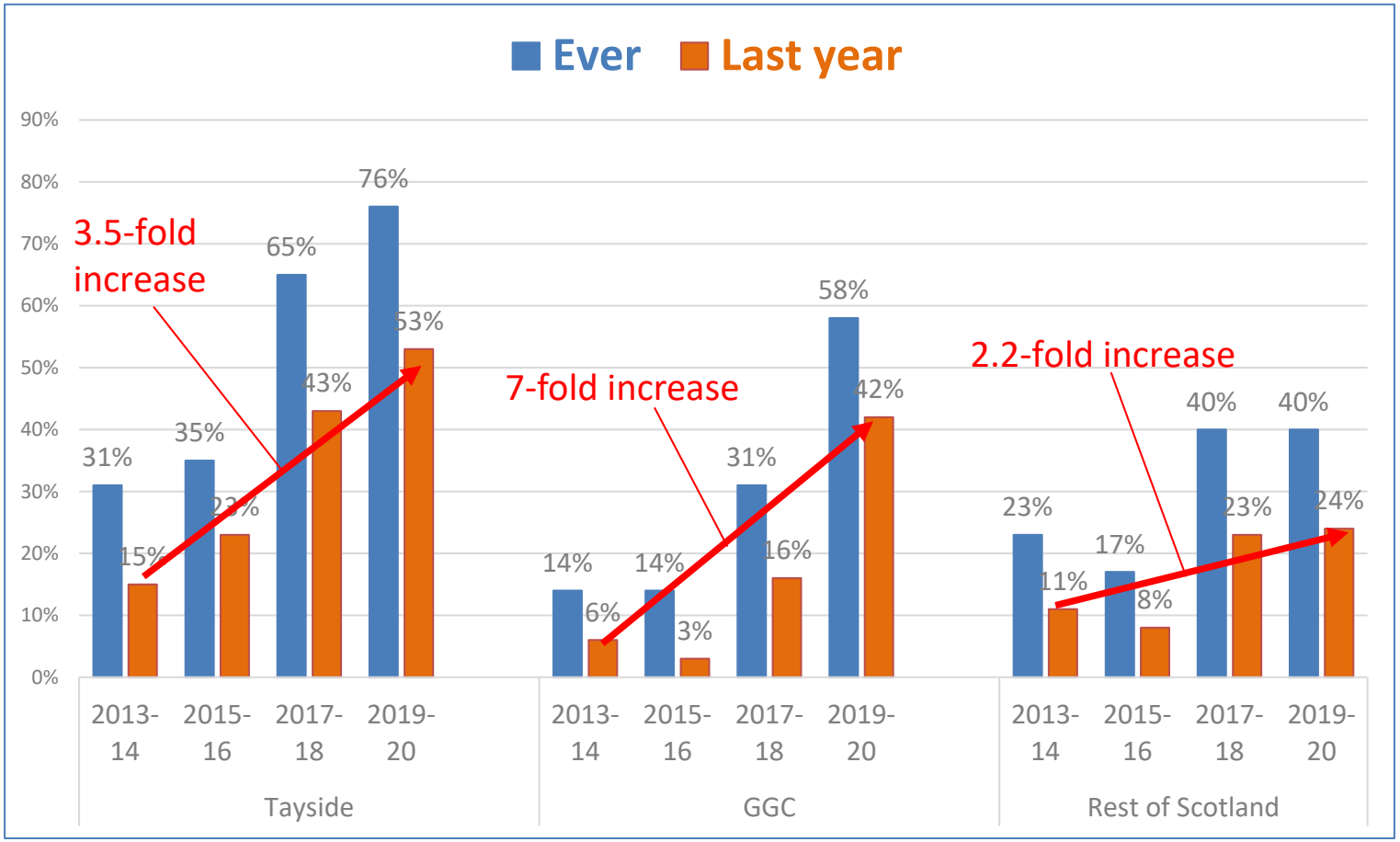


<u>Absolute</u> increases in therapy (percentage points)

<u>Between 2017-18 and 2019-20:</u>

- Tayside: 10%
- GGC: 26%
- RoS: 1%

Results: Uptake of HCV therapy

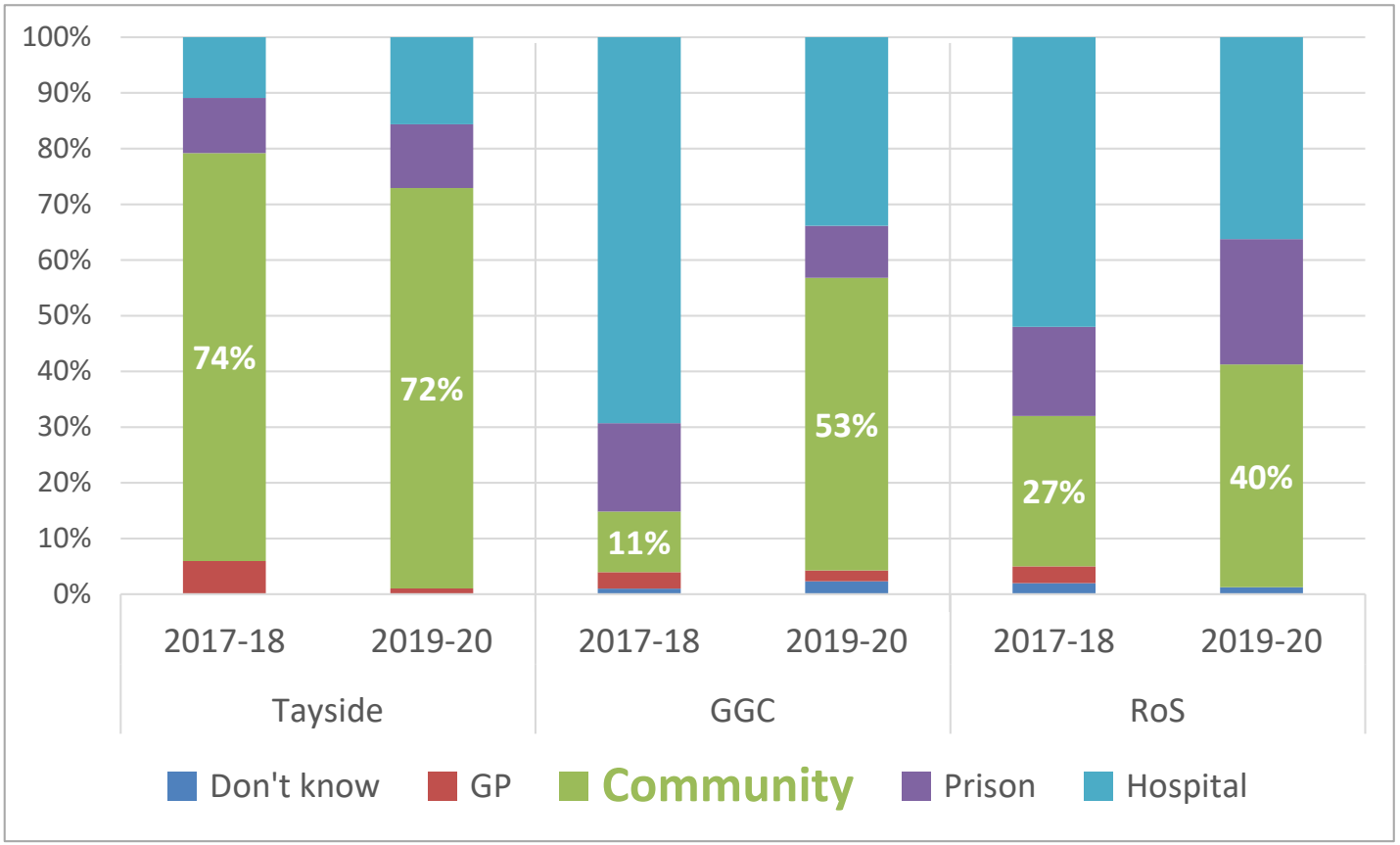


<u>Absolute</u> increases in therapy (percentage points)

<u>Between 2013-14 and 2019-20:</u>

- Tayside: 38%
- GGC 36%
- RoS: 13%

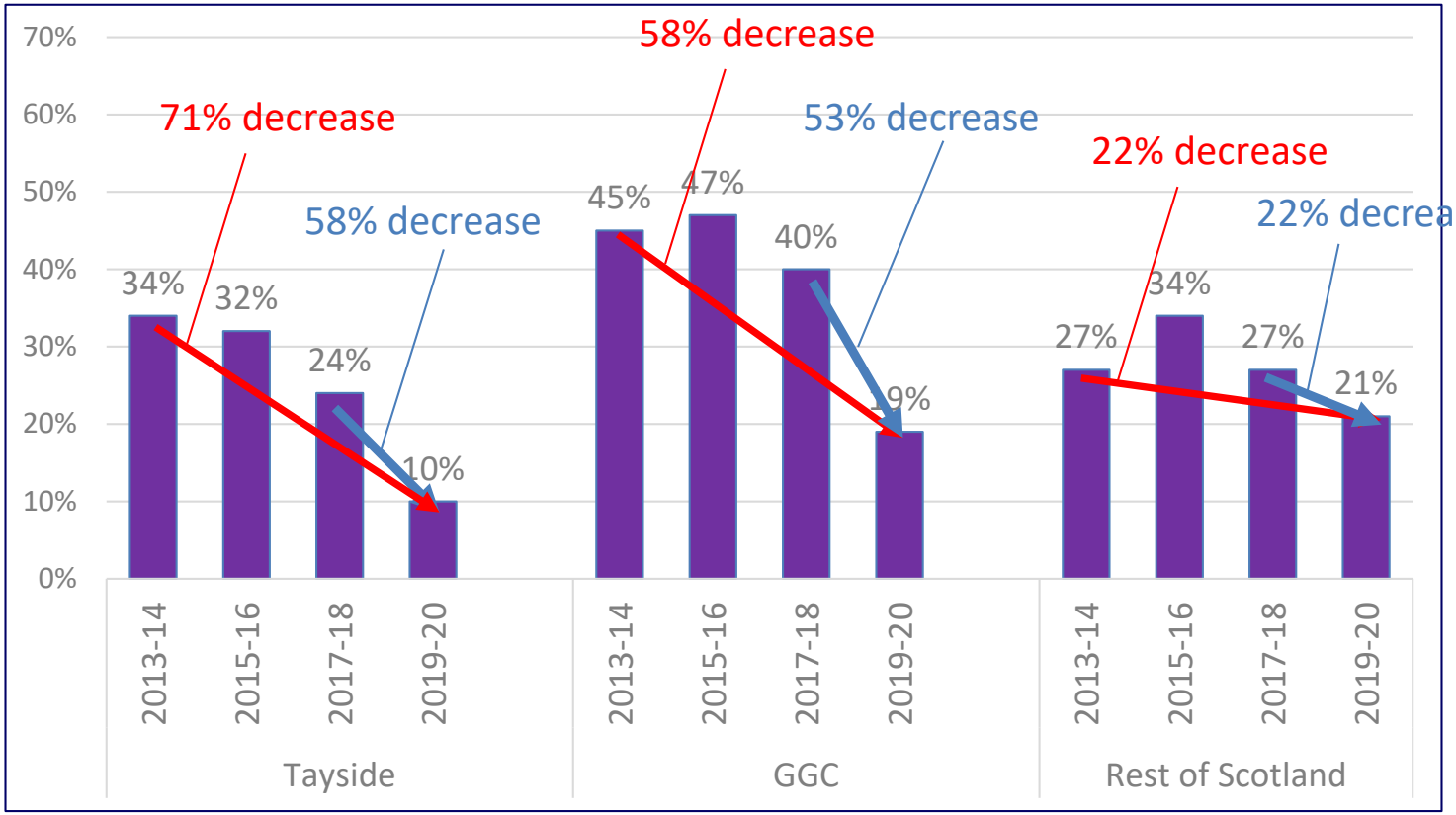
Results: Site of therapy initiation*



- Largest increase in those starting therapy in the community in GGC, from 11% to 53%
- Also increased in RoS from 27% to 40% but remains highest in Tayside (72% in 2019-20)

*of most recent course of therapy

Results: Prevalence of HCV viraemia*



*data has been imputed for missing laboratory DBS results for 2013-14 to 2017-18

Absolute decreases in viraemic prevalence

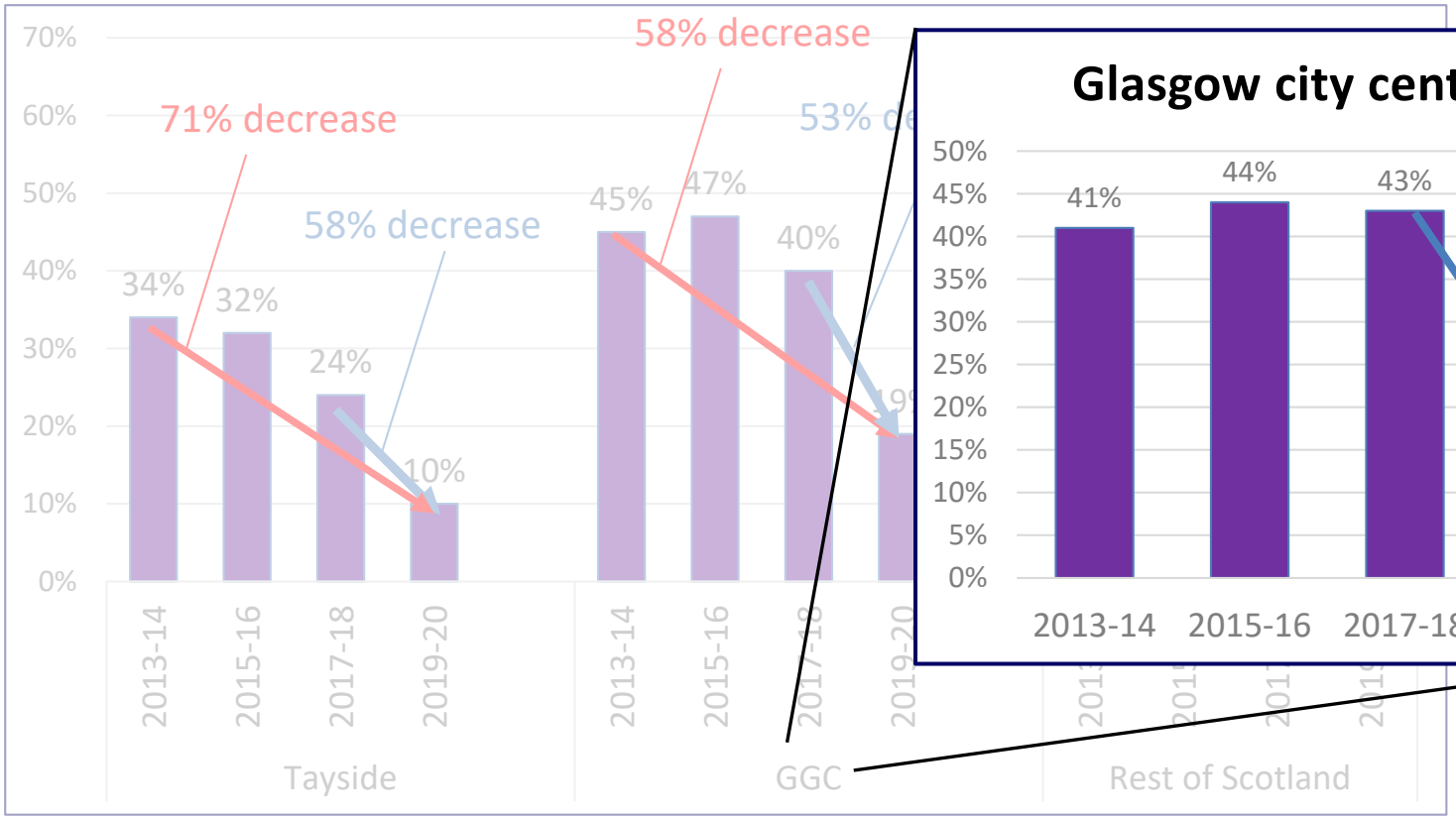
Between 2013-14 and 2019-20:

- Tayside: 24%
- GGC: 26%
- RoS: 6%

Between 2017-18 and 2019-20:

- Tayside: 14%
- GGC: 21%
- RoS: 6%

Results: Prevalence of HCV viraemia*



*data has been imputed for missing laboratory DBS results for 2013-14 to 2017-18

Absolute decreases in viraemic prevalence

Between 2013-14 and 2019-20:

- Tayside: 24%
- GGC: 26%
- RoS: 6%

Between 2017-18 and 2019-20:

- Tayside: 14%
- GGC: 21%
- RoS: 6%

Key messages

- *Further* scale-up of DAA therapy in community settings has **halved** chronic HCV prevalence among PWID in Tayside **since 2017-18** to **10%**
- A **halving** of chronic HCV prevalence has also been seen in Greater Glasgow & Clyde, which scaled up DAA therapy **2.6-fold since 2017-18**
  - Includes **halving** of chronic prevalence in Glasgow city centre, which is an area with a concentration of vulnerable and chaotic PWID and an ongoing HIV outbreak
- Reduction of chronic prevalence to 10% or less achievable through rapid scale-up of DAAs in community settings

GCU Glasgow Caledonian University

University for the Common Good

FUNDED BY NIHR | National Institute for Health Research

Public Health Scotland

Thank you!

Email: norah.palmateer@phs.scot

@NorahPalmateer