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Screening Emergency Admissions at Risk of Chronic Hepatitis 3 Extension (SEARCH-3X): Characterising prevalence and unmet needs in the setting of funded hepatitis C therapy

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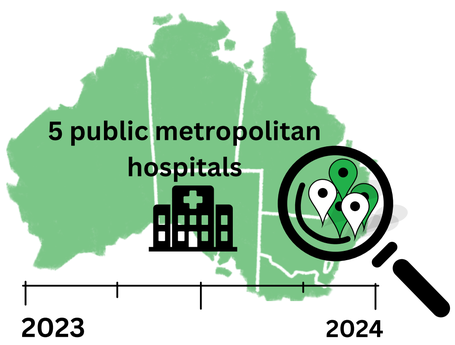
Introduction & Aim

- With availability and full funding of curative therapies for hepatitis C (HCV) in Australia, patients may remain undiagnosed or untreated. We evaluate the use of universal, automatic hepatitis screening in the emergency department (ED) to determine HCV Antibody (HCV Ab) prevalence, viraemia, treatment rates and the characteristics of the untreated population.

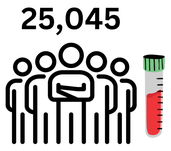
Method

- Automatic hepatitis C Ab testing
- Universal screening
- Implemented at 5 metropolitan hospitals in Sydney, Australia during 2023-2024
- A computer algorithm solution automatically added HCV Ab tests when an adult underwent blood draw for routine biochemistry. Serology was performed in the biochemistry autoanalyser.
- patients were followed up
- Data was collected on patient demographics, risk factors, prevalence of HCV Ab and HCV RNA.

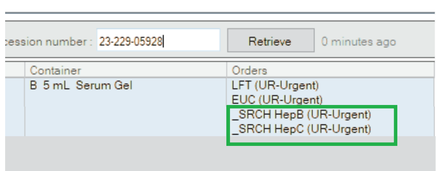
Implementation sites → **Universal testing** → **Computer Algorithm: HCV Ab add-on test** → **Serology testing** → **Positive result**



25,045



single blood collection during ED visit



Cobas e801 biochemistry analyser

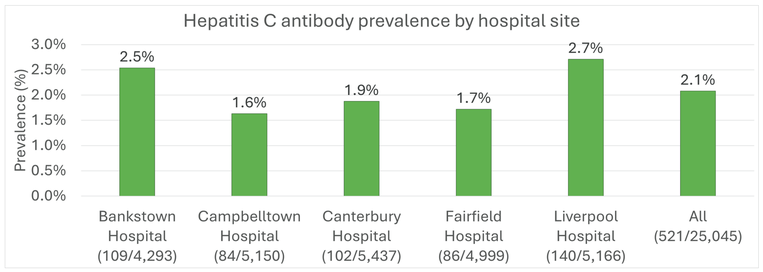
521

Patient linkage to care

Results

HCV Ab

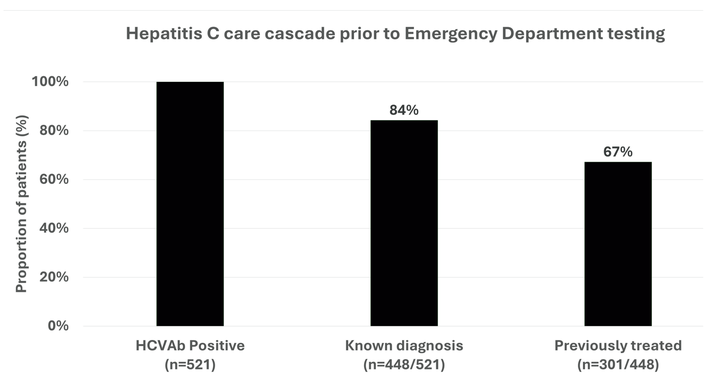
- **25,045** tested, 521 **HCV Ab positive** (**2.1%**)
- **93%** (**484**/**521**) tested for HCV RNA



- HCV Ab prevalence:
  - Overseas born 1.4%
  - Australians non-Indigenous 2.3%
  - **Indigenous Australians 12.6%** (**p<0.0001**)
- New diagnosis (n=65, 12%)
  - **Overseas born 17%** (**34**/**196, p 0.007104**)
  - Australian non-Indigenous 9% (20/231)
  - Indigenous Australians 13% (11/87)

Prior HCV treatment

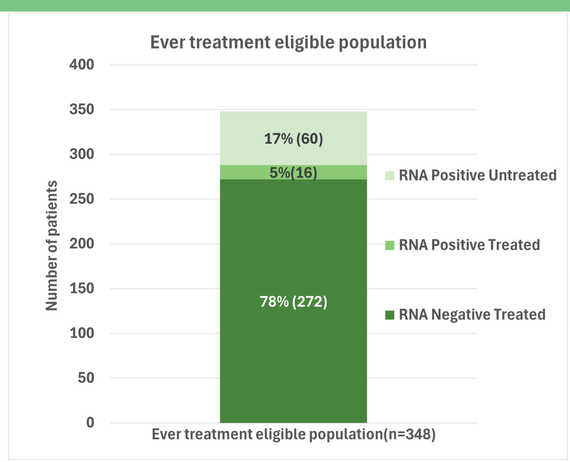
- Prior to ED testing, **84%** (448/521) of patients had a **known diagnosis,** of whom **67%** (301/448) were **treated previously.**



Results

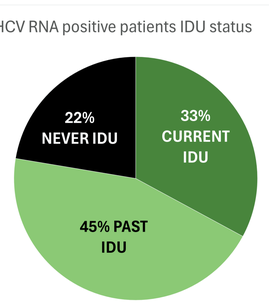
HCV RNA

- Of the 76 RNA positive:
  - New diagnosis 36% (27)
  - Never treated: 79% (60/76)
- **Treatment coverage was 83%** (288/348) of those ever eligible for treatment.

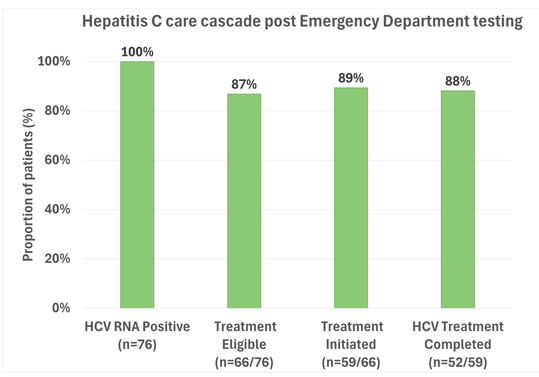


Risk Factors

- Intravenous Drug Use (IDU) reported by **66%** (**344**/**489**) of HCV Ab
- **Overseas born patients had lower IDU rates** 41% (78/188) p < 0.00001
  - Australian non-Indigenous (86%, 189/220)
  - Indigenous patients (95%, 77/81)
- **Current IDU were more likely to be HCV RNA positive** (32.9% 25/76), compared to past IDU (22.4% 17/76) (p=0 .02).
- Those with diagnosed **psychiatric illness were more likely to be viraemic** 52.6% (40/76) compared to those without (34.8%, 142/408), p0.038528



Linkage to care



HCV treatment in viraemic patients:

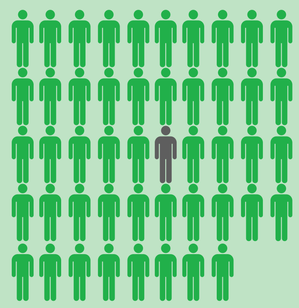
- 13% (10/76) had a medical contraindication
- **89%** (59/66) initiated
- **88%** (52/59) completed
- Did not complete treatment (n=7):
  - 1 on treatment
  - 2 dead
  - 4 LTFU

Conclusion

- SEARCH 3X was effective in identifying HCV patients and linking them to care (**HCV Ab prevalence 2.1%**).
- **High treatment and low viraemia rates** (0.30%) suggesting a successful HCV treatment program in Australia.
- Higher viraemic rates in **current IDU, and those with mental illness**
- Strategies to target IDU and mental health will aid elimination efforts

Key Takeaways:

2.1% or, 1 in 48 people , tested positive for HCV Ab via universal emergency department screening



Higher viraemic rates in current IDU, and those with mental illness

Linkage to care was highly successful with:

- **93% of patients tested for HCV RNA**
- **89% of those eligible for treatment, initiated**