NITCAR HCV Audit

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Introduction

• 160,000 Chronic HCV infections in England
• 15 million people globally
• 20% clear virus without treatment but 80% chronically infected
• In England ~1,700 new cases per year of HCV-related end-stage liver disease and hepatocellular carcinoma
• Rapid expansion in the number of classes of antiviral drugs available for the treatment of hepatitis C virus (HCV).
• Possibility of cure in many viraemic patients unable to tolerate older regimens.
Introduction

• Sustained virological response (SVR) is the aim of treatment
• Possibility of cure in many viraemic patients unable to tolerate older regimens.
• WHO goal to eliminate HCV as a major public health threat by 2030.
• PHE: All people at risk of HCV should have access to testing.

AIM
To ascertain how many patients with a new serological diagnosis of HCV received PCR testing to detect viraemia
NITCAR HCV Audit – Standards

Two auditable standards for follow-up HCV testing:

1. In 100% of cases, a first positive (or indeterminate) HCV serology should be followed up with repeated serology testing on a second specimen for confirmation within 12 months.

2. In 100% of cases, a first positive (or indeterminate) HCV serology should be followed up with PCR testing to detect viraemia within 12 months.
Methods

• Retrospective, multi-site, observational audit in the UK via NITCAR.
• Audit period: 1\textsuperscript{st} November 2011 – 31\textsuperscript{st} October 2014
• Auditable standard: 100% of patients should have HCV PCR testing within 12 months of their first positive HCV serology.
• Specimen results collected locally and assigned anonymised study location code. Due to anonymisation, patients potentially tested at multiple study sites could not be reconciled.
• Statistical analysis and cost implications.
Results – first positive serology

• Six participating centres
(Preston, Coventry & Warwickshire, Manchester, Shrewsbury & Telford, Leicester, Cambridge)
• Included results: 3,847
• Male: 63%
• Median age 41 (18-93)
Results - follow-up PCR testing

- **Standard not met**: 63% of first positive serology results were followed-up with PCR to detect viraemia.
Results

• Women are generally more likely to be tested by PCR than men

![Bar chart showing samples not tested by PCR by location in men versus women: ages 18-40](chart)

- Samples not tested by PCR by location in men versus women: ages 18-40

- Pearson test: p-value <0.05 in all categories
Our data suggests that a significant number of patients, who may be eligible for novel HCV treatments, have not received follow-up PCR following first positive serology testing.

Gender differences in follow-up testing likely reflect differences in health-seeking behaviours.
Discussion

→ We estimated a short-term increase in the cost to the health system of PCR testing 100% of patients.
  → Eventual cost savings in the future

→ Chief limitation: reliance on laboratory-level data to infer first positive HCV serology, without additional information about the context of results or follow-up.

→ Lack of national data coordination places unnecessary financial and logistical burden on laboratories and primary care related to unnecessary testing and follow-up.
Conclusions

- Audit standard was not met, and a significant number of patients who may become eligible for novel HCV treatments did not receive follow-up testing by PCR within 12 months of first positive serology.

- The projected cost implications of treatments, as well as the current burden of unnecessary or incomplete testing, would support a coordinated HCV testing strategy.
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NITCAR http://nitcollaborative.org.uk/wp/
Thank you for listening