Improvement of HCV screening and linkage to care through implementation science in Madeira, Portugal

Vítor Magno Pereira¹, Elisa Xavier¹, Luís Jasmins¹, Ana Paula Reis¹, Nancy Faria¹, Nuno Ladeira¹, Madalena Pestana¹, Bruno Freitas¹, Nuno Canhoto¹, Diogo Medina², Alba Carrodeguas²

¹ Serviço de Saúde da Região Autónoma da Madeira, EPE
² Gilead Sciences

Gilead Sciences’ FOCUS Program funding supports screening & linkage to a first appointment after diagnosis regardless of how organizations handle subsequent patient care and treatment.
Welcome to Madeira

Gilead Sciences’ FOCUS Program funding supports screening & linkage to a first appointment after diagnosis regardless of how organizations handle subsequent patient care and treatment.
Welcome to Madeira: The Regional Health Service

- Population served: 254,000
- Units: 50
- Yearly adult emergency dept. visits: 88,000

Gilead Sciences’ FOCUS Program funding supports screening & linkage to a first appointment after diagnosis regardless of how organizations handle subsequent patient care and treatment.
Screening framework: The FOCUS TEST model

- Testing integrated into routine care
- Electronically enabled, with automation of eligibility assertion
- Systematic adoption of screening policy throughout the region
- Training of staff and monitoring support continuous improvement

Gilead Sciences’ FOCUS Program funding supports screening & linkage to a first appointment after diagnosis regardless of how organizations handle subsequent patient care and treatment.
**TEST:** Testing integrated into clinical routine

**FOCUS Pilot**
Gastroenterology wards

- **2019**

**Local hepatitis C molecular testing capabilities**
Instead of sending samples to mainland Portugal (970 km / 600 mi)

**FOCUS Phase 1**
All hospital wards

- **2020**

**Hepatitis C core antigen confirmatory testing**

**FOCUS Phase 2**
Emergency department

- **2021**

**HIV testing**

**FOCUS Phase 3**
Primary care

- **2021**

Source: speaker own creation

Gilead Sciences’ FOCUS Program funding supports screening & linkage to a first appointment after diagnosis regardless of how organizations handle subsequent patient care and treatment.
Electronic health record modifications

Patient admission & Physician determines need for blood draw

- System determines eligibility
  - Ineligible
  - Eligible

Electronic Health Record System adds serology tests to lab request

Nurse informs patient

- Opt out
- Patient accepts

Sample is sent to lab

Eligibility criteria
- Age: 18-70 y.o.
- Exclusion factors:
  - Prior positive serologies at any time
  - Prior negative serologies within 365 days
  - Ongoing serology in lab

Gilead Sciences’ FOCUS Program funding supports screening & linkage to a first appointment after diagnosis regardless of how organizations handle subsequent patient care and treatment.
**TEST**: Systemic adoption of policies

Gilead Sciences’ FOCUS Program funding supports screening & linkage to a first appointment after diagnosis regardless of how organizations handle subsequent patient care and treatment.
TEST: Training and engaging staff

Gilead Sciences’ FOCUS Program funding supports screening & linkage to a first appointment after diagnosis regardless of how organizations handle subsequent patient care and treatment.
## Summary of results

<table>
<thead>
<tr>
<th></th>
<th>Jan 2022 - May 2023 (17 mo.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCV Ab tests performed</td>
<td>35,376</td>
</tr>
<tr>
<td>HCV Ab positive tests</td>
<td>171 (0.5% prevalence)</td>
</tr>
<tr>
<td>HCV RNA or cAg positive tests</td>
<td>52 (0.15% prevalence)</td>
</tr>
<tr>
<td>Linkage to care</td>
<td>49 (94% linked to care)</td>
</tr>
</tbody>
</table>

*Source: FOCUS Madeira reports, unpublished data | HCV = Hepatitis C Virus; Ab = Antibodies; RNA = Ribonucleic Acid; cAg = core antigen

Gilead Sciences’ FOCUS Program funding supports screening & linkage to a first appointment after diagnosis regardless of how organizations handle subsequent patient care and treatment.
Progress toward elimination at the regional level

Gilead Sciences’ FOCUS Program funding supports screening & linkage to a first appointment after diagnosis regardless of how organizations handle subsequent patient care and treatment.

Source: FOCUS Madeira reports, unpublished data
Conclusions

1. The TEST model enabled Madeira to increase and sustain testing across clinical settings (wards, primary care, and the ED).

2. Opportunistic HCV screening revealed higher real-world prevalence (0.15% HCV RNA+) than previously estimated for Madeira (0%).

3. Increased testing and decreasing prevalence trends mean Madeira will likely achieve HCV elimination between 2024 and 2026, ahead of WHO’s elimination goal for 2030.

Gilead Sciences’ FOCUS Program funding supports screening & linkage to a first appointment after diagnosis regardless of how organizations handle subsequent patient care and treatment.