



# Migrant screening for viral hepatitis: two feasible strategies in universities and workplaces in Grampian, Scotland

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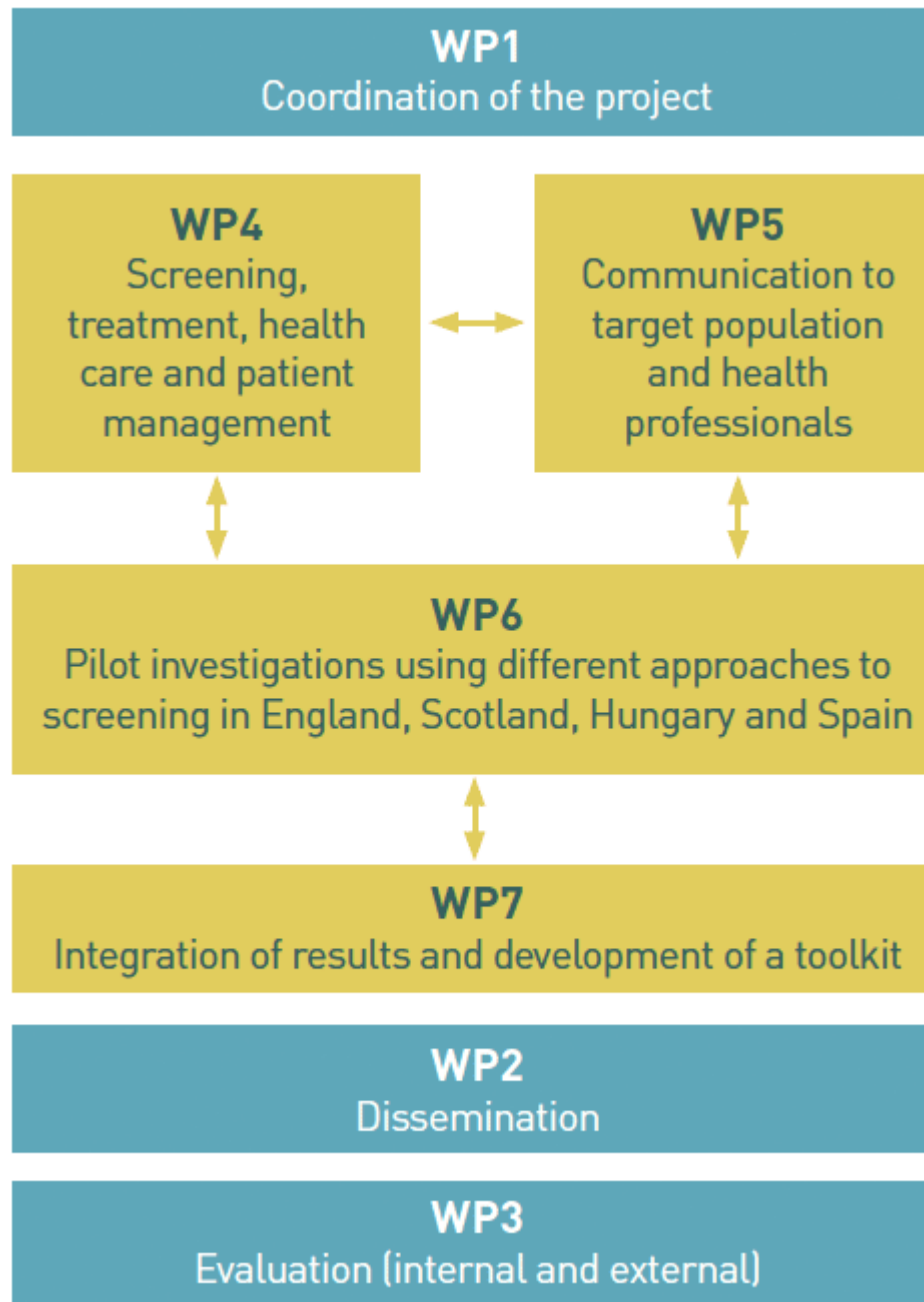


GGD  
Rotterdam-Rijnmond



# Overall HEP Screen project

- EU sponsored project (20101105) – DG SANCO
- October 2011 – 2014
- University of Rotterdam, lead agency  
(Irene Veldhuijzen, Abby Falla, Jan Hendrick Richardus)
- 11 partner organisations, 7 countries  
academic, public health, patient association organisations
- total budget ~ Euros 1.300.000
- general objective:  
to assess, describe and communicate to public health professionals the tools and conditions necessary for implementing successful screening programmes for hepatitis B and C among migrants in the European Union



# aims and objectives – Grampian project



- to test feasibility of models aimed at increasing access to HBV, HCV (and HIV) screening for migrants in universities & workplaces
- to offer BBV screening to at least 500 individuals
- to provide results to screenees and their GP
- to increase access to specialist services

# Grampian in Scotland



# Grampian background

- area of relative affluence in Scotland (recently...)
- population ~570.000; area 9,000 sq km
- urban & semi-rural geography supports
  - vibrant agricultural industry
  - food processing industry
  - tourism/hospitality industry
  - oil capital of Europe
  - strong University tradition of international standing: oil, business management, healthcare

# migrant context - Grampian

- majority Scottish ethnicity ~10% non-UK born
- long-standing migration
  - Indian sub-continent, continental Europe, China
- recent migration in past decade - late 2000s
  - healthcare, oil industry, higher education, manual
  - migration from Africa/E Europe, related to:
    - higher education (India, Middle East, Nigeria)
    - food processing, agricultural (Poland, Lithuania, Latvia)
- length of sojourn for migrants is variable

# rationale for pilot - Grampian

- migrant groups with relatively high BBV prevalence
  - different risk factor profile
- increasingly effective prevention and treatments
  - linked to strong Government Hepatitis C Action Plan
- BBV/healthcare barriers for legal migrants included
  - language, time pressure
  - unfamiliarity with healthcare system (e.g. universal access, free)
  - stigma (self and of professionals)
  - lack of perception of own risk status, fear of diagnosis itself
- some permanency of migration (with families)



# **PREVENTION OF FUTURE PROBLEMS OF PUBLIC HEALTH PROPORTIONS.....**

**phase 1: universities**

# university screening process – 6 steps

**1 - MEET COLLABORATORS, UNIVERSITY MANAGEMENT AGREEMENT**

**2 - PLAN THE MODEL, TARGET GROUP, TIMING, PLACE: piggy-back, on-site, opt-in**

**3 - AWARENESS RAISING: at induction; TB screening now includes BBV offer**

**4 - ATTENDANCE AT TB SCREENING: Mantoux test, return appointment**

**5 - MANTOUX READING, 2 DAYS LATER , BBV SCREENING OFFERED AT SAME SESSION:  
drop-in, between classes, no interpreters  
brief questionnaire, discussion, consent for BBV screen, serology sample**

## **6 - POSITIVE RESULT**

- communicate to patient
  - communicate to GP
- generate specialist referral
- implement contact tracing

## **6 - NEGATIVE RESULT**

- communicate to patient
  - communicate to GP
  - consider window period
- advise repeat screen, if/when indicated

# screening results - university

- piggy-back on to bi-annual new entrant TB screening
  - over 7 days across 2 terms
  - on 2 sites: University of Aberdeen, Robert Gordon University
  - TB Mantoux skin test negative cases offered BBV screen on reading day (immediately after)
  - Mantoux pos students already offered BBV screen normally.
- 455 students attended for TB screening (target group)

# demographics of 156 screened

- **156 students screened - 34% uptake**
  - all except 4 consented to screening for all 3 viruses
  - no requests from non-TB screenees
- 65% male; average age 28y
- 76% African, majority Nigerian (80%) , also Ghanaian, Ugandan, remainder from 22 other countries....
- all English-speaking
- 97% had arrived in UK within past 2 years
  - mostly 1 year post-graduate courses
  - nearly all registered with a GP

## clinical results – university setting

- 26% hepB/C tested previously
- 58% HIV tested previously
- 16% HBV vaccinated; 53% unsure
  
- **22 (14%) HBV exposure**
- **4 HBV chronic infection (of which 2 new diagnoses)**
  
- **no HCV/HIV cases**

# reflections - hepatitis B pilot prevalence

- 2.6% of 156 migrants screened
- 3.4% of African migrants screened
  
- 3.2% of Nigerians screened
  - published prevalence 12-15%
- 8.3% of Ghanaians screened
  - published prevalence 11-16%
  
- caution with small numbers
- known positives may not have come forward

# HEP Screen pilot projects - Grampian



**onto phase 2: workplaces**

# workplace screening process – 5 steps

**1 - FIND COLLABORATORS, WORKPLACE MANAGEMENT AGREEMENT:**  
letter of invitation, introductory visit, agreement

**2 - PLAN THE MODEL, TARGET GROUP, TIMING, PLACE:** workplace benefit, on-site, opt-in

**3 - AWARENESS-RAISING OF BBV SCREENING OFFER TO WORKERS**  
middle management brief, posters, staff session, information sheet

**4 - ON-SITE SCREENING:**  
appointment model, mostly during work hours, translations/interpreters  
brief questionnaire, discussion, consent for BBV screen, serology sample

- 5 - POSITIVE RESULT**
- communicate to patient
  - communicate to GP
  - generate specialist referral
  - implement contact tracing

- 5 - NEGATIVE RESULT**
- communicate to patient
  - communicate to GP
  - consider window period
  - advise repeat screen, if/when indicated



# screening results - workplace

- 6 companies, semi-rural settings
  - of 20 approached by mail and telephone
  - fish processing, meat processing/slaughter, bakery
  - 8 screening sites across 10 days over 6½ week period
- 1,465 employees in total
  - 905 migrants (estimated) = 64% (range 32% - 85%)
- elements of the model
  - awareness-raising posters, staff briefings, both
  - during work-time, on breaks, between shifts
  - appointments, drop-in
  - translation via live, telephone or informal interpreter
  - sufficient consideration of informed consent
  - without disrupting business, preserving confidentiality

## demographics - 362 screened

- **305 migrants screened - 33% uptake (range 23-47%)**
- all accepted screening for 3 BBVs
  
- 36% male
- average age 37y
- 97% Eastern European (296)
  - mainly Polish, Lithuanian, Latvian
  - <10 each from Russia, Bulgaria, Ukraine, Estonia, Czech Rep, Portugal, Philippines, Ireland, Brazil, Switzerland
  
- UK arrival: 29% less than 2 years, 44% more than 5 years
  - 53% used language aid, problematic self-assessment

# clinical results – workplace screening

- little recall of testing previously <10%
- little previous vaccination (10% but 36% unsure)

## **hepatitis B**

- 32 (10.5%) exposure - HBsAb+
- <5 (1.3%) chronic infection - HBsAg
  - all new cases, 1 previously tested negative

## **hepatitis C**

- 7 (2.3%) exposure - HCVAb+
- <5 (1.3%) chronic infection - HCVPCR+
  - all new cases, 2 previously tested negative
- no HIV diagnoses identified
- no positive cases among 57 UK screenees

## referral of positive cases, both settings

- all referred, within 3 weeks
- all attended, within 2 months, most within 6 weeks
- all offered full work-up
  - genotype, LFTs, U/S, fibroscan
  
- no indication for treatment for 8 HBVs
  - one year later, positive student cases had left Grampian
- all 5 HCVs completed treatment

# protocol challenges

- common to both
  - logistic needs – rooms, telephone points
  - recruitment needs (local)
  - on-site vaccination
- university model
  - benefit perspective
  - follow-up
- workplace model
  - finding businesses – migrant aspects
  - translation support
  - devising the model takes time
  - stigma?

# lessons learned

- workplaces and universities present feasible settings for case-finding viral hepatitis infection among migrants.
- key points for successful models include:
  - understanding international mix of target population
  - facilitatory approach with management in settings
  - logistical preparedness
  - clear information and consent procedures in multiple languages
  - quick turn around of screening results
  - easy referral into specialist services
  - general flexibility with non-health partners
- stigma issues not apparent, however potential for self- selection bias

# further workplace aspects in migrant screening?

- investigate variation in uptake rates
  - amongst different migrant groups
  - in different settings
  - in migrants of differing legal status
- use dry blood spot testing to increase uptake
- investigate attitudes before/after screening rounds
- consider return sessions to the workplace
- consider family screening (focusing on adults?)

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- [www.hepscreen.eu](http://www.hepscreen.eu)
  - How to... Estimate the Burden in your Area
  - A Repository of Good Practice Screening Projects
  - The HEPSCREEN Pilots
  - Organising Community-based (outreach) Screening for Chronic Viral Hepatitis among People Born in Endemic Countries: A Practical Guide and more....





## collaborators

### Local collaborators:

- Maria K Rossi, Laura Kluzniak, Helen Corrigan: Public Health Directorate, NHS Grampian
- Rachel Thomson, Pauline Dundas, Andrew Fraser: Liver Service, ARI, NHS Grampian
- Admin team, Corporate Services , NHS Grampian
- Virology Services, ARI, NHS Grampian
- Equality & Diversity Team, ARI, NHS Grampian
- Grampian Regional Equality Council
- University of Aberdeen & Robert Gordon University
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### HEP Screen Consortium:





**thank you – questions...**

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