A national multidisciplinary healthcare network for treatment of hepatitis C in PWID in Slovenia

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Disclosure

Within the last 36 months:

• Lecturer: Abbvie, Bayer, Boehringer-Ingelheim, Janssen, Merck, Roche
• Manuscript preparation: Abbvie, Gilead, Janssen, Merck, Roche
• Travel/accommodational meeting expenses: Abbvie, Gilead, Janssen, Merck, Roche

No conflict of interest regarding this presentation
HCV prevalence in the general population of Europe

- WHO Europe: **15 million** HCV RNA positive
- Anti-HCV prevalence in general population: **0.4 – 5.2%**
- Deaths related to HCV infection: **86 000 / year**
Current transmission route of HCV cases in EU/EEA countries, 2012

- In 2015: new infections **not** common in general population
  **major problem** people who inject drugs (PWID)

Route of transmission: injecting drug use **78.1%**

Prati et al, J Hepatol 45 (2006) 607-616
HCV seroprevalence among PWID in the EU 2006–2011

black squares are data with national coverage, blue triangles are data with sub-national (local, regional) coverage.

Proportion (%) of HCV undiagnosed PWID in Europe

Proportion (%) of PWID co-infected with HCV and HIV

Proportion (%) of HCV-infected PWID in Europe entering antiviral treatment in observational studies in non-clinical settings

National level activities on HCV management

A survey of 33 European countries

*Scotland was treated separately from UK

National strategy, 12 (11 PWID)

National level activities on HCV management

A survey of 33 European countries

- National strategy, 12 (7 PWID)
- National action plan, 10 (7 PWID)

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National level activities on HCV management

- National strategy, 12 (10 PWID)
- National action plan, 10 (7 PWID)
- National treatment guidelines, 24 (20 PWID)

*Scotland was treated separately from UK

A survey of 33 European countries
SLOVENIA

Gross national income per capita (2012): 27,240 $
Life expectancy at birth m/f (2011): 77 / 83 years
Probability of dying under five (2012): 3 / 100 000
Probability of dying between 15 and 60 years m/f (2011): 118/51 / 1 000
Total expenditure on health/capita (2011): 2,519 Intl $
Total expenditure on health as (2011): 9.1 % GDP

Inhabitants: 2 million
Drug users: est. 10 000
PWID: est. 6 000

http://www.who.int/countries/svn/en/
Injecting Drug Users: 29% (N=1050) HCV RNA: 15.6%

Hemophiliacs: 26.7% (N=374)

Prison inmates: 26% (N=378)

HIV-positives: 7.6% (N=579)

Hemodialysis: 1.1% (N=1343)

Health care workers: 0.7% (N=281)

General Population Adults: 0.4% (N=2 million)

Pregnant women: 0.09% (N=31,849)

Blood donors: 0.025% (N=1.4 million)

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HCV seroprevalence among PWID in the EU 2006–2011

Slovenia:

- Harm-reduction programmes since the early nineties
- OST since 1995

SLOVENIA 1993-2007

Anti- HCV seroprevalence according to gender and age
N=1504

SLOVENIA 1993-2007

Dynamics of HCV-1 and HCV-3 genotypes

N=1504

SLOVENIA 1993-2007

Dynamics of HCV-1 and HCV-3 genotypes
N=1504

**genotype 1 = blood transfusion before 1992**
OR, 3.28 [95% CI, 2.18-4.95]; P < 0.0001

**genotype 3 = PWID**
OR3.71 [95% CI, 2.97-4.65]; P < 0.0001

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Management of hepatitis C
An integrated approach

• National Institute of Public Health of Republic Slovenia
  (Ministry of Health: Law on communicable diseases)
  Surveillance of communicable diseases
  Strategies for reducing transmission and harm (drug use)

• National Viral Hepatitis Expert Group
  (Interdisciplinary team of highly involved professionals, self-founded in 1997)
  National strategy
  Action plan
  Consensus clinical guidelines

National strategy for complex management of HCV infection

- **Testing**: - special populations: case finding, surveillance
  - general population: *voluntary free-of-charge testing* (routine + campaigns)

- **Treatment**: - availability, access, process, follow-up
  - systematical *analysis* of treatment efficacy and safety (since 1997)

- National consensus *guidelines* on management of HCV infected

- **Research**

- **Education** (professionals, general population)

- **Mass media campaigns** (World Hepatitis Day, etc.)

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Management of HCV infection 1997 - 2015

Slovenian Viral Hepatitis Expert Group

National Healthcare Network for the Management of HCV infection in PWID

National campaigns on free anonymous HCV testing

• Financial assessment of Th
• Modeling approach to HCV elimination

1997
National Strategy and Consensus Guidelines for the Management of HCV Infection

1999
National Consensus Guidelines for HCV Treatment An update

2007
National Consensus Guidelines for HCV Treatment in PWID

2008
National Consensus Guidelines for the Optimization of HCV Treatment with PEG/riba

2012 2014 2015
National Consensus Guidelines for HCV treatment with new DAAs

National campaigns on free anonymous HCV testing

SLOVENIA Management of HCV infection 1997 - 2015

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National campaigns on free anonymous HCV testing
Clinical management of patients with HCV infection

- 5 clinical centers for viral hepatitis: infectologists, (hepatologists)
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Clinical management of patients with HCV infection

THERAPY for HCV:
- IFN (1993)
- IFN/RBV (1999)
- PEG/RBV (2001)
- BOC/TVP (2012)
- Liver transplantation (since 1998)
- SIMEPREVIR (2014)
- SOFOSBUVIR (2015)
- 3D (2015)
- SOFOSBUVIR+LEDIPASVIR (2015)

FINNANCING of HBV & HCV management:
- Public Health Insurance System:
  Nominated specialists to prescribe P/R, DAAs
  National consensus guidelines for the management of HCV infection
- National register: all the HCV treated patients (since 1997)
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Centres for Prevention and Treatment of Drug Addiction

Number of PWID managed per year

Coordination of Centers for Prevention and Treatment of Illicit Drug Abuse, Slovenia 2011.
Centres for Prevention and Treatment of Drug Addiction
Number of PWID managed per year

16% HCV RNA positive
3% treated for HCV

Coordination of Centers for Prevention and Treatment of Illicit Drug Abuse, Slovenia 2011.
Kastelic A et al. 2nd Slovenian Conference on HCV Infection in IVDU, Ljubljana 2007
SLOVENIA 2007

National healthcare network for managing HCV in PWID

INTEGRATED already existing facilities: 18 Drug Treatment Centers
5 Viral Hepatitis Centers

Maticic M, Kastelic A. Zdrav Vestn 2009; 78: 529-39
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A multidisciplinary team for HCV treatment in PWID

Viral hepatitis specialists: infectologists hepatologists

Addiction specialist

Psychiatrist / psychotherapist

Specially trained nurses

Councilors: social workers peers

Other support system: family friends co-workers

Clinical virologist

Clinical pharmacist

Maticic M, Kastelic A. Zdrav Vestn 2009; 78: 529-39
1st Slovenian Conference on HCV Infection in IVDU (Jan 2006): basic medical and supportive education strategies, interventions

2nd Slovenian Conference on HCV Infection in IVDU (Mar 2007): set up National guidelines for the management of HCV in IVDUs

3rd Slovenian Conference on HCV Infection in IVDU (Apr 2008): vulnerable groups

4th Slovenian Conference on HCV Infection in IVDU (Feb 2010): experiences/improvements of the National guidelines future perspectives

5th Slovenian Conference on HCV Infection in IVDU (Dec 2011): role of addiction programmes, new drugs for HCV, HIV and IVDUs in Slovenia

6th Slovenian Conference on HCV Infection in PWID (Mar 2015): new DAAs, increase HCV testing, Inauguration of Slovene Liver Patient Association

Maticic M, Kastelic A. Zdrav Vestn 2009; 78: 529-39
Hepatitis C in drug users on substitution treatment:

National guidelines for clinical management and treatment

March 2007
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National healthcare network for managing HCV in PWID
An integrated approach

• **Un-infected**: counselling to **prevent** HCV infection
  **testing** for HCV infection (every 6-12 mths)
  HBV vaccination

• **Acutely infected**: **testing** and quick diagnosis

• **Chronically infected**: **treatment**:
  identification
  evaluation of readiness
  medical evaluation
  clinical management
  counselling
  motivation

*Drug Treatment Centre*

*Drug Treatment Centre*

*Viral Hepatitis Centre + Drug Treatment Centre*

**SLOVENIA**

National healthcare network for managing HCV in PWID

An integrated approach

**Viral hepatitis specialist**

- Drug user
- HCV RNA +

First visit

Follow up visits-report

Start HCV treatment - report

Monthly FU visits - report

**Drug addiction therapist**

- Drug user
- HCV RNA +

First visit “fill-in form”

Follow up “fill-in form”

“Fill-in form” on psychocondition, adherence

If necessary introduction of psycho-socio-pharmacotherapy
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National healthcare network for managing HCV in PWID
Written communication between viral hepatitis and drug addiction specialists
SLOVENIA

National healthcare network for managing HCV in PWID

16% HCV RNA positive
3% treated for HCV

13% treated for HCV

Strategy Network Guidelines

Coordination of Centers for Prevention and Treatment of Illicit Drug Abuse, Slovenia 2011.
SLOVENIA

Four prospective national studies on currently recommended treatment of all naive patients with chronic hepatitis C

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SLOVENIA 2008 – 2010

HCV treatment success in PWID
Optimised PegIFN/RBV

CURED: 82%

SLOVENIA 2008 – 2010

HCV treatment success in PWID
Optimised PegIFN/RBV

CURED: 82%
Non-adherent: 4,3%

Different models for HCV treatment in PWID (Peg/riba)

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DAAs – A game changer
Conclusions

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- Already existing facilities can be used to set up a national healthcare network and a multidisciplinary team of providers for HCV treatment in PWID

- Close cooperation of a multidisciplinary team is crucial

- A comprehensive national policy is needed to set up national strategies, action plans and clinical guidelines for the integrated management of HCV infection in PWID
Thank you!