Elimination of hepatitis C

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Elimination of hepatitis C

History
Definition and World Health Organization decisions
Global elimination of HCV- Strategies
Elimination of HCV in North Norway
Elimination of hepatitis C
History and health policy decisions

• World Health Organization (WHO) 2015*: HCV, a viral time bomb
• WHO: elimination of HCV is achievable
  Ambiguous goal: elimination of HCV in 2030
  80 % reduction of newly infected compared to 2010 level
• Directing Acting Antiviral (DAAs) therapy
  Highly effective, few side effects, but so far high cost therapy

Elimination of hepatitis C
Definition and goals

• World Health Organization: *to eliminate hepatitis C virus as a public health threat*. Eradication of HCV not achievable in short time

Goals includes

• Large scale reductions in new transmissions of HCV
• Large scale reduction in the number of people becoming ill and dying from
• Level of HCV no longer represents a major health concern.
• WHO Goal: elimination of HCV in 2030

Global elimination of hepatitis C

- Is elimination of HCV feasible?
- How can transmission rate be reduced?
- Is universal screening necessary to identify HCV patients?
- Barriers to HCV testing
- Vaccine against HCV
- Next steps to achieve elimination of HCV
Is elimination of hepatitis C feasible?

• WHO: yes

But needs
• Reduction of transmission risk in health care setting
• Improvements of interventions among injection drug users
• Improve HCV testing and linkage to treatment
• Resources for surveillance systems to detect and treat
• Ongoing monitoring systems
• Low cost of DAAs
• NETWORK
How can transmission rate be reduced?

• Treatment of main HCV source: people who inject drugs (PWID)
• Syringe service program for PWID, combination with treatment programs
• «Treatment is the best prophylaxis»
Impact of universal screening of HCV?

- Screening among PWIDs
- Screening in surveillance programs
  Tromsø 7: 13/21800 (45000) were unaware of being HCV infected
- Screening of subjects at risk in general practice
  IBD Nord 2002: screening of patients in general practice
- Screening program in pregnant patients - at least with high risk
- Screening of health care workers. Surgeons? Patients before surgery?
- Subjects in jail?
Barriers to HCV testing?

• Patient: knowledge of disease- importance of testing
• Provider- how to test and what to do
• Resources for testing
Treatment of HCH- challenges

Direct Acting Antiviral (DAA) therapy
• Efficacy
• Side effects
• Costs
Vaccine
Next steps to achieve elimination of HCV
Think global- act local

National programme
• strategy including time schedule
• administration
• budget

Local programme- NETWORK
• primary and secondary health care system
• additional health system interventions for drug abusers (PMID)*
• Norway: LAR

Elimination of hepatitis C in North Norway

- HCV Nord – ongoing from 1991- 11 hospitals
- Ongoing registrations of newly diagnosed HCV
- Mortality registrations 2000-14, Nordlands. HF (Kristiansen MG, Best Practice 2017)
- Hep C Rus project, synergy with LAR (Kristiansen MG et al.)
- Hep C Psyk project, synergy with Dept Psych (Kristiansen MG et al.)
- Tromsø-7 surveillance (Kileng H et al.)
- HCV-North towards 2050 (Kileng H et al. BMC Infectious Diseases 2017, 17: 624)
Elimination of HCV in North Norway

How many untreated patients?
Based on Registrations from HCV Nord
Undiagnosed
• general population
• iv drug abusers- PWID
National registrations of PWIDs (Rusmidler i Norge 2016, Folkehelseinstituttet)
HCV Nord NETWORK
Estimate of PWIDs. Sensitivity interval 2004-2013. Source: Sirius

Estimate North Norway: 738

https://www.fhi.no/publ/2017/rusmidler-i-norge-2016/
LAR in North Norway

Total in LAR 615

PWIDs- estimate North Norway: 738
Estimate not tested: 50 %, ie. 369
Estimate HCV infected 2/3: i.e 247 PMIDS
How many untreated HCV in North Norway?

- Registrations from HCV Nord project
Accumulated numbers of new-infected HCV in North Norway

Kileng H et al. BMC Infectious Diseases 2017, 17: 624
Newly diagnosed HCV in North Norway

Screening high risk subjects in primary care practice

Kileng H et al. BMC Infectious Diseases 2017, 17: 624
Fibrosis development

Ishak Fibrosis Grade vs. Years of infection for different genotypes:
- Genotype 1 & 4
- Genotype 2
- Genotype 3

Kileng H et al. BMC Infectious Diseases 2017, 17: 624
HCV Elimination- North Norway
How many non-treated patients?

- 2589 Registered HCV pos 1991-2011
- 450 Estimated 90 /y new cases 2012-2017
- 274 Undiagnosed gen pop Estimated Tromsø 7

3313 Anti HCV pos

- 938 Spontaneous remission

2174 Alive chronic HCV

- Estimate 247 Infected, undiagnosed drug abusers

1176 Alive untreated chronic HCV

- 268 Deceased

998 Successfully treated

Treatment

Harstad Rana Bodø Tromsø/Finnmark

Universitetssykehuset Nord-Norge
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HCV Elimination - North Norway Direct DAA costs 2017

1176
Alive untreated chronic HCV

+ Estimate 247
Infected, undiagnosed drug abusers

2017

1176
365 mill NOK

1176+247=1423
441 mill NOK

2018 ?

Norway: x 10.9
Conclusions

• WHO: global elimination of HCV within 2030
• Need of global, national and local health programmes
• Universal screening necessary to identify HCV patients
• Think global – act local
• Additional health system interventions for drug abusers
• NETWORK
• DAAs: costs have to be reduced
• Estimate untreated North Norway: 1423 (Norway x 10.9)
• DAAs direct costs 2017: 411 mill NOK. (Norway x 10.9)
• 2018:?