Hungary hepatitis meeting

Elimination of Viral Hepatitis in Hungary:
Lessons learnt and the way forward

Budapest, Hungary

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Epidemiology of viral hepatitis in Hungary

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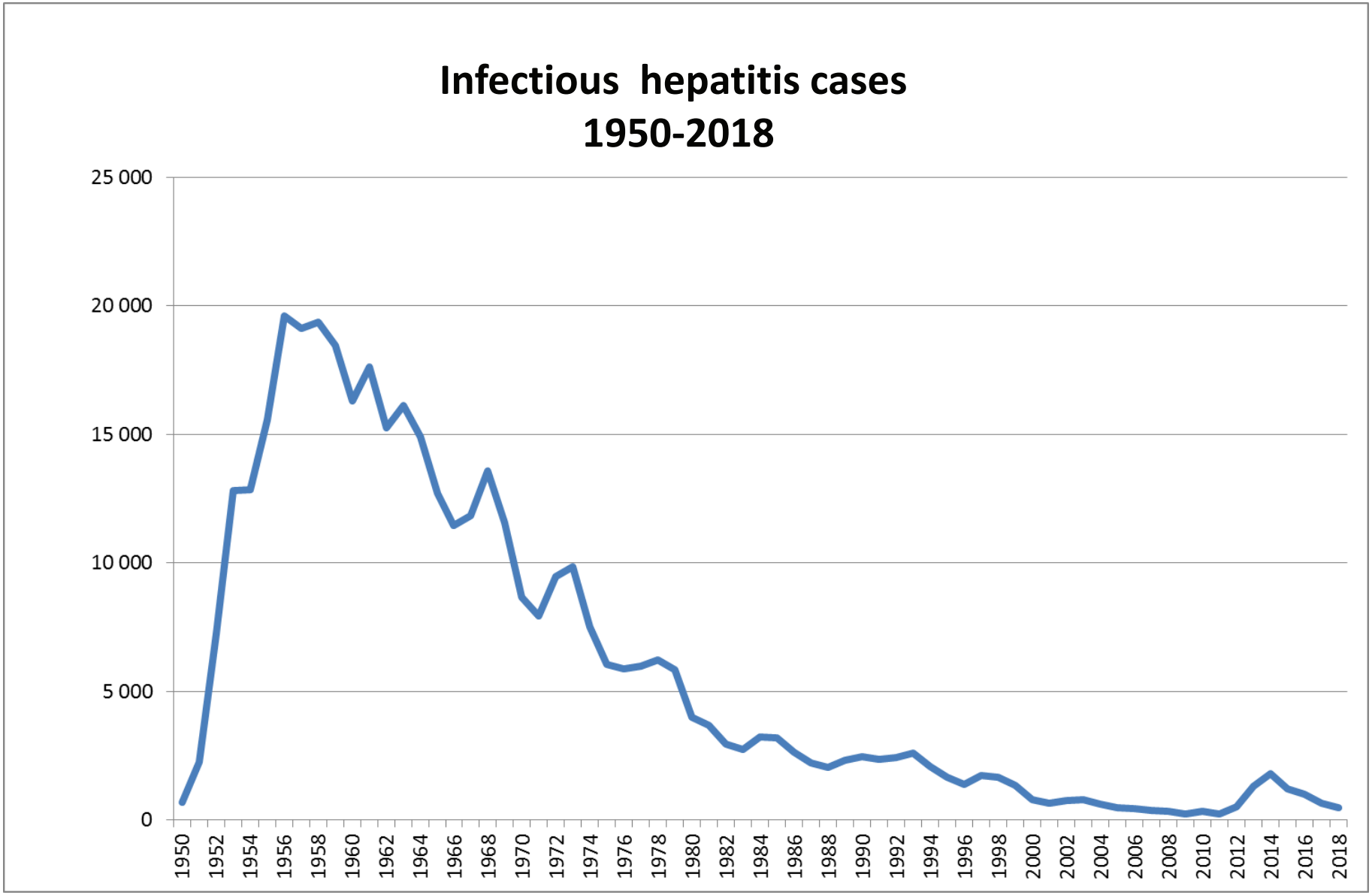
Overview of the surveillance of communicable diseases in Hungary

- Mandatory by law
- Comprehensive (nation-wide)
- Passive
- Case-based
- Clinical information is available
- Laboratory confirmation is obligatory for reported cases
- EU case definitions are used

Main characteristics of the general surveillance system

Mandatory: the legal basis of the surveillance is 13. § and 15.§ (1) a) of Act XLVII of 1997 on the Management and Protection of Health and Related Personal Data (and 1st Annex with the list of compulsory notifiable communicable diseases), and 1-4 § of decree 1/2014. (I.16.) of the Minister of Human Capacities on the regulation of notification of communicable diseases.

The notification system is **partly syndrome-based** (e.g. gastroenteritis, meningitis, encephalitis, hepatitis), and **partly etiology-based.** The reported syndrome-based diagnosis is modified to an etiology-based diagnosis in the national database, when the etiology is confirmed by laboratory investigations.


Infectious hepatitis cases
1950-2018
25 000
20 000
15 000
10 000
5 000
0
1950
1952
1954
1956
1958
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
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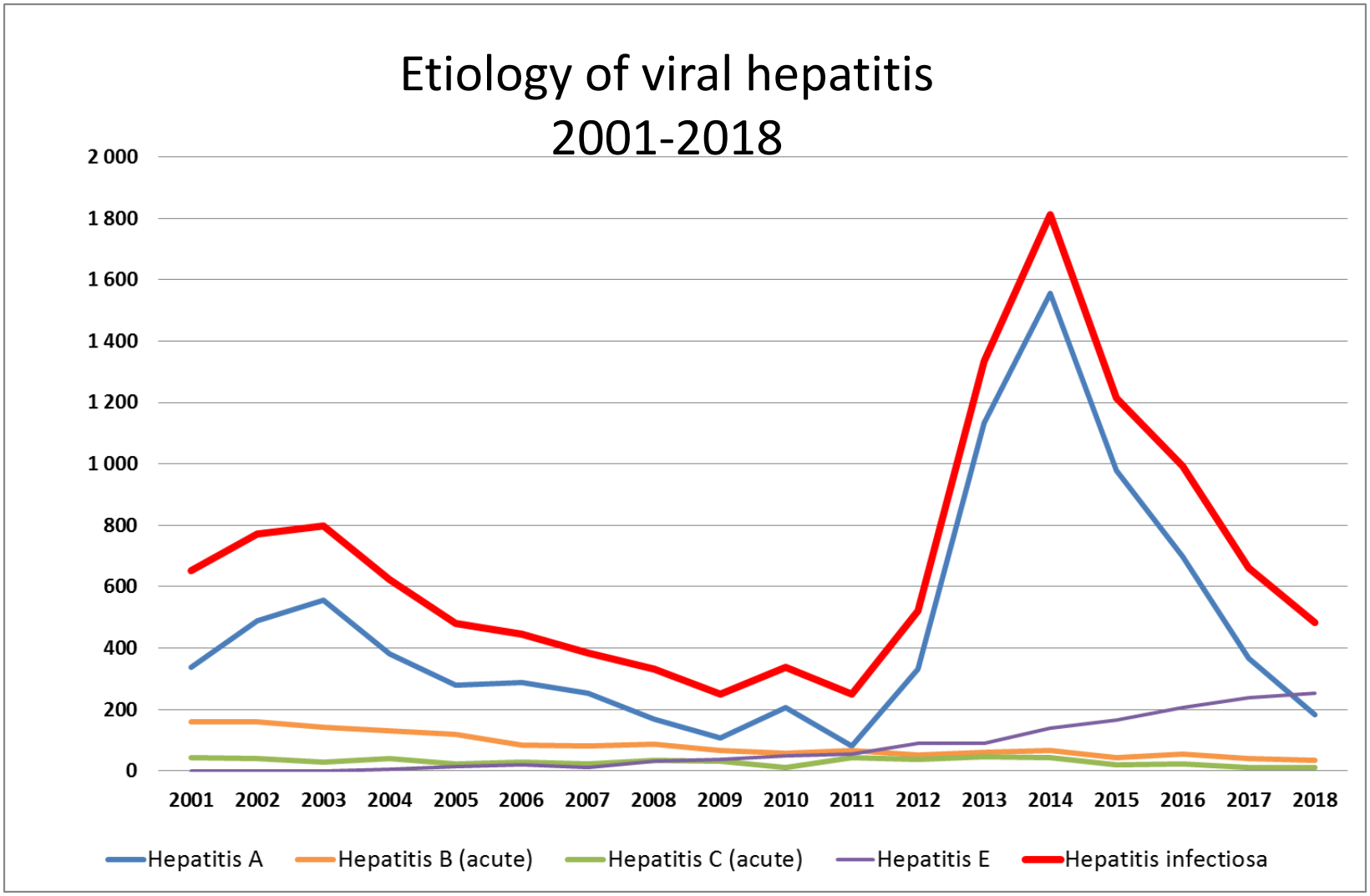
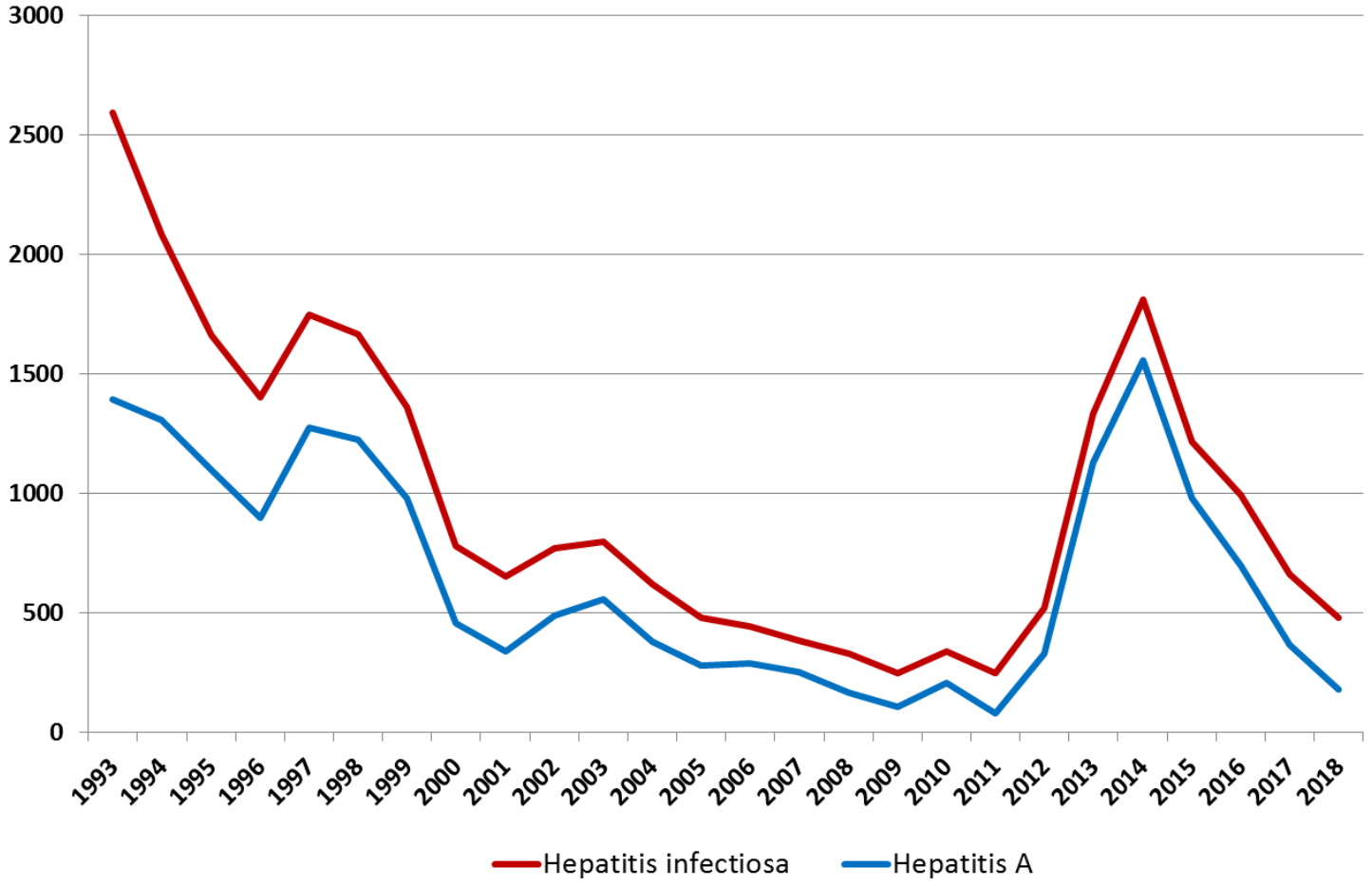
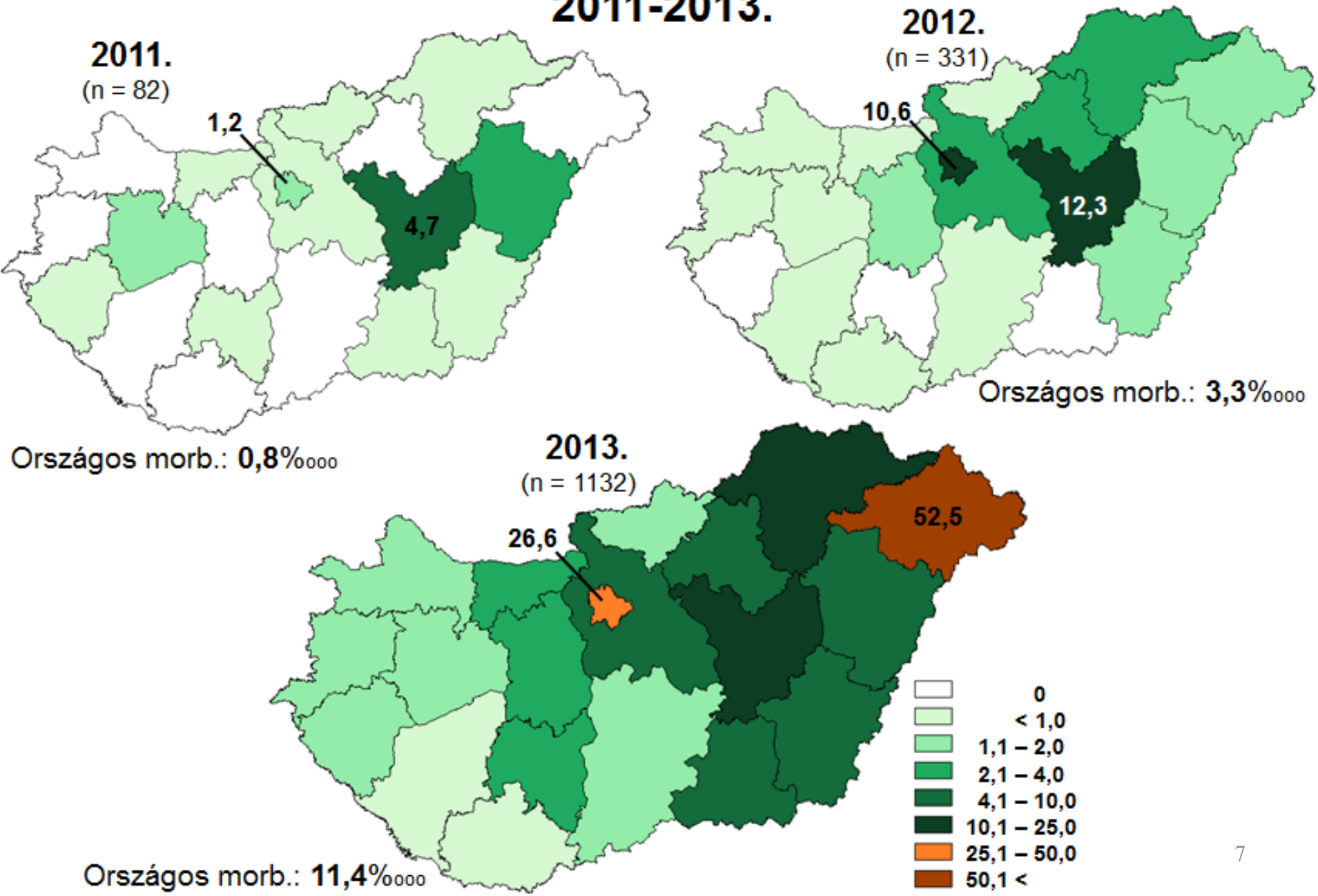
2010
2012
2014
2016
2018


Etiology of viral hepatitis
2001-2018
2 000
1 800
1 600
1 400
1 200
1 000
800
600
400
200
0
2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018
Hepatitis A
Hepatitis B (acute)
Hepatitis C (acute)
Hepatitis E
Hepatitis infectiosa

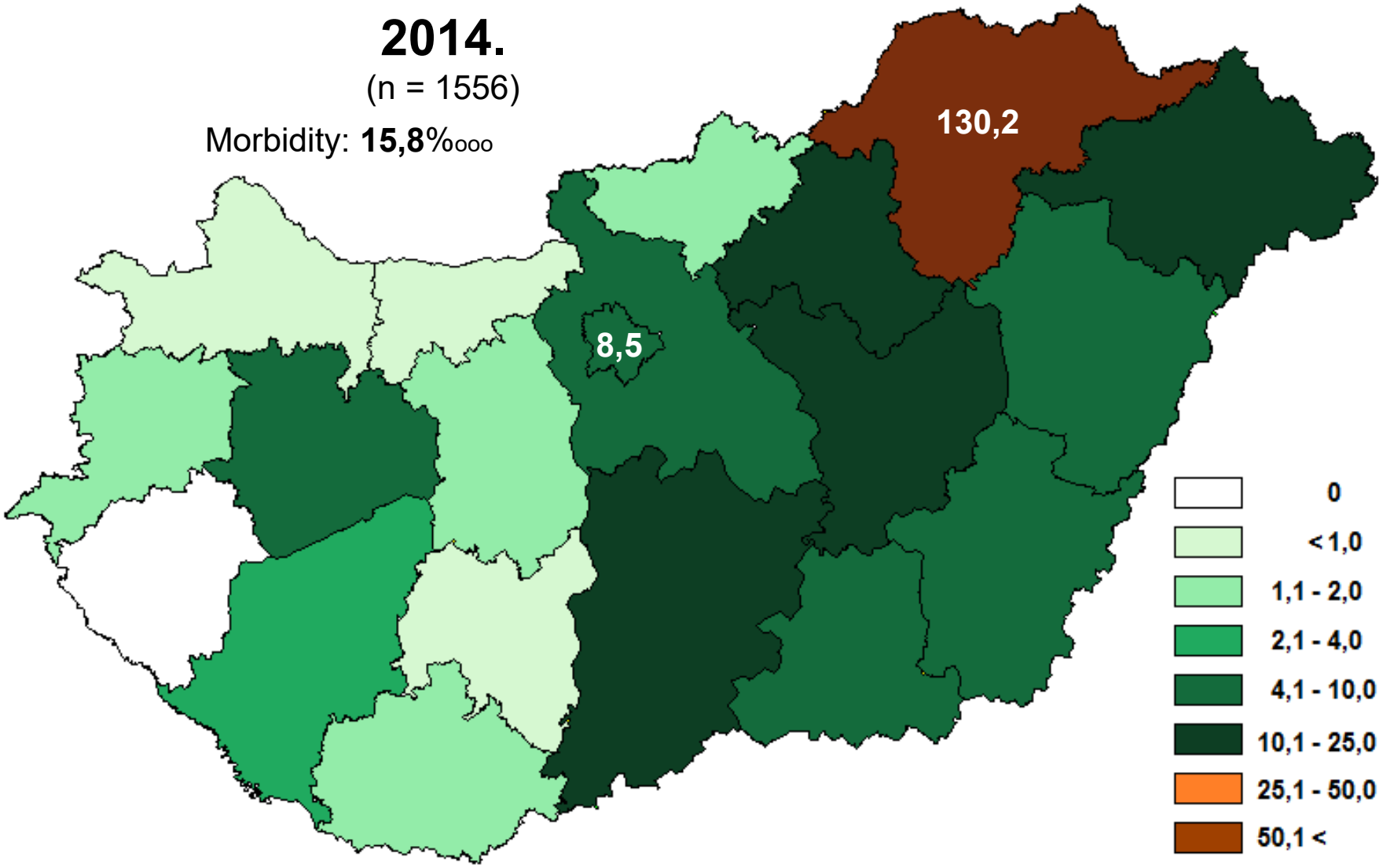
Reported total viral hepatitis cases and Hepatitis A cases 1993-2018



Hepatitis A megbetegedések 100 000 lakosra 2011-2013.



Reported Hepatitis A cases per 100 000 inhabitant



What happened in 2012 ?

Hepatitis A cases increased significantly in 2012 in Budapest.

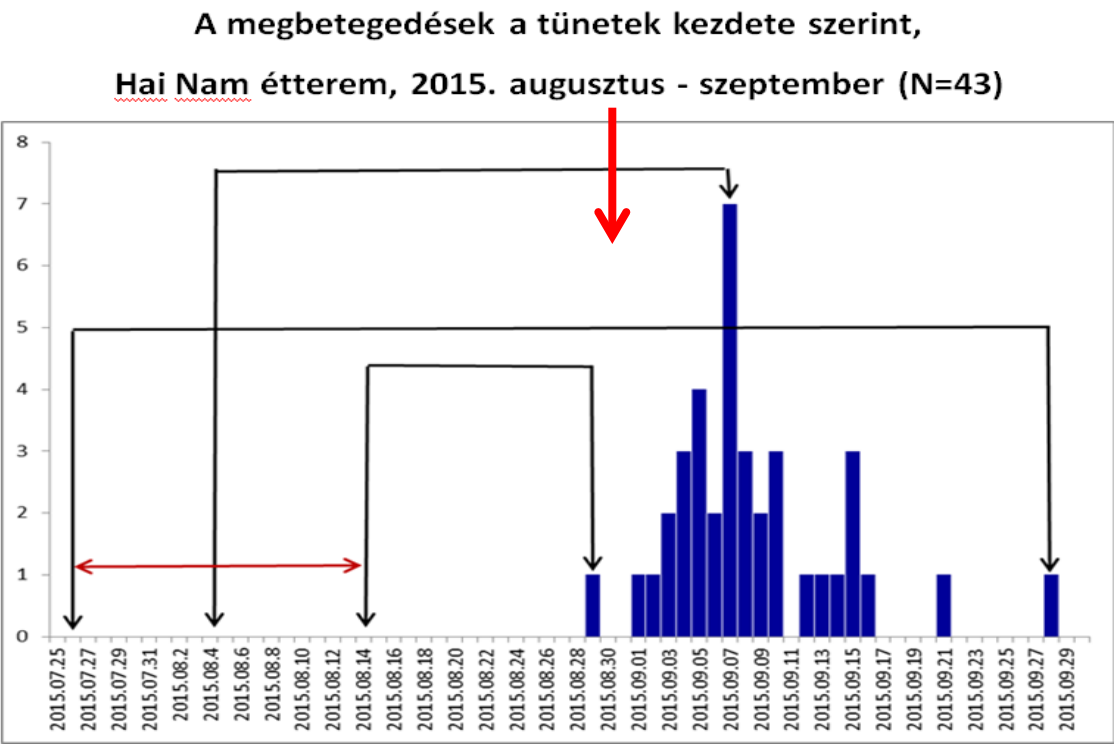
First documented HAV outbreak largely affecting also MSM population in Hungary.

Outbreak occured btw March and August in Budapest affecting a small population group.

From August cases occured among a wilder range of population groups affecting:

- Homless people
- Social workers in homless shelters
- Adult people living in poor social conditions
- Students, adolescents
- Penitentiary institute
- Sex workers

Firsty confirmed food-borne Hepatitis A outbreak Budapest, 2015.



Epidemiological and food safety inspection:
-- many hygenical malpractice (absence of cleaning, dishwashing and hand sanitising problems)

Molecular virology results of the patients:
The detected genotype was already previously documented in Hungarian patients – 1a genotype

Statistical analitical study

Case-control study

Due to interrogating 38 ill and 184 healthy people

- relation between **eating in the Vietnamese restaurant and falling ill**

-OR: 12,66 [CI: 2,96 – 54,20]

Stratified statistical analysis

- ***consuming summer roll***

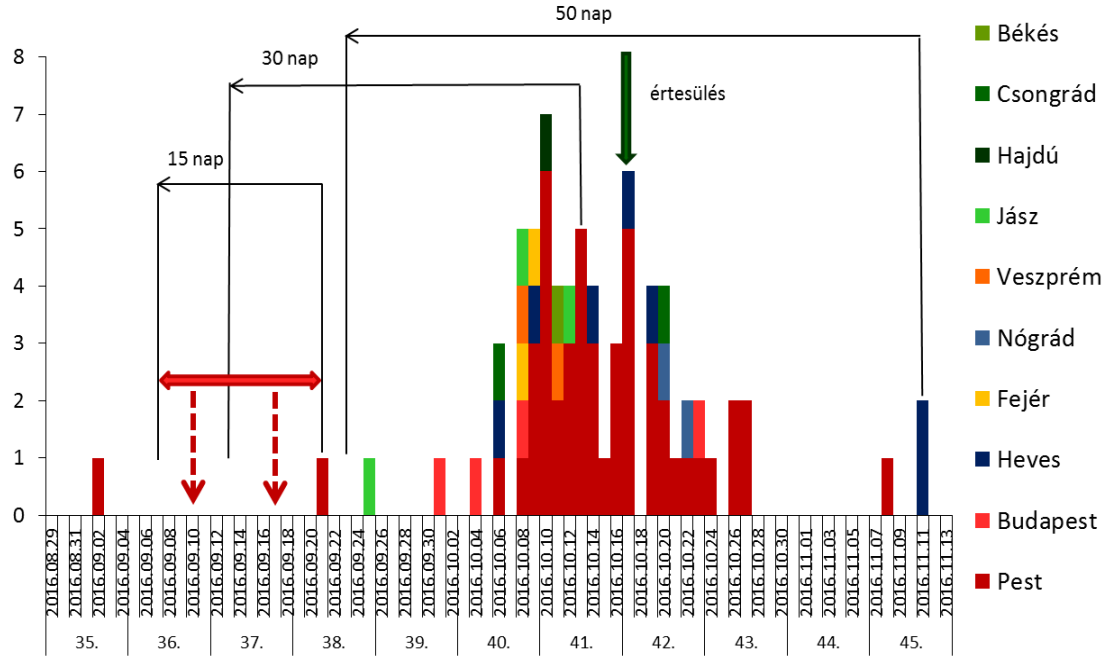
OR: 15,33 [CI: 3,45 – 67,98]

-***pho soup with slowly cooked beef shank***

OR: 6,04 [CI: 1,59 – 22,89]

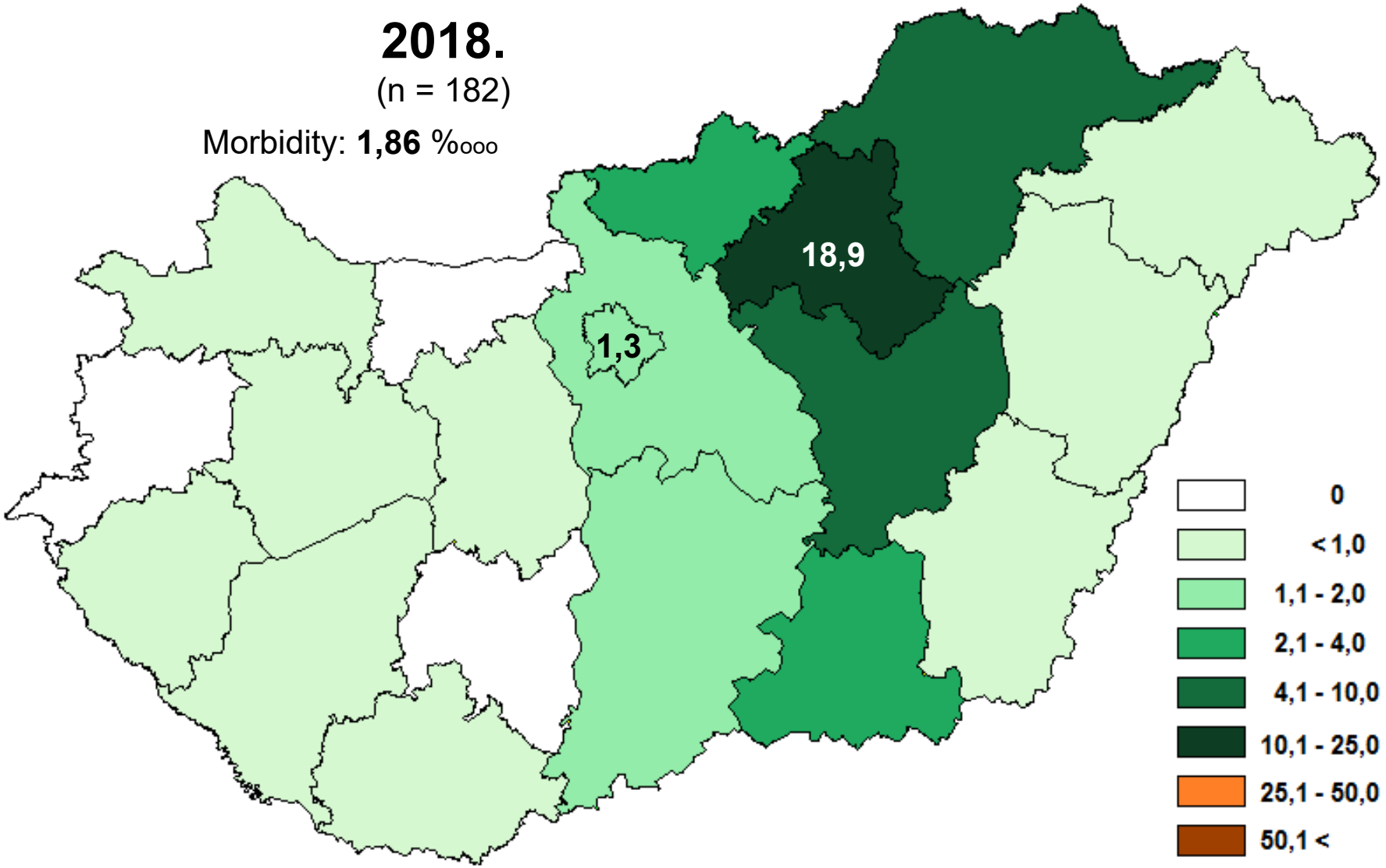
Confirmed food-borne Hepatitis A outbreak
Suburban railway station cantine
Gödöllő, 2016.

Cases as first symptoms started
September - November 2016. (N=73)

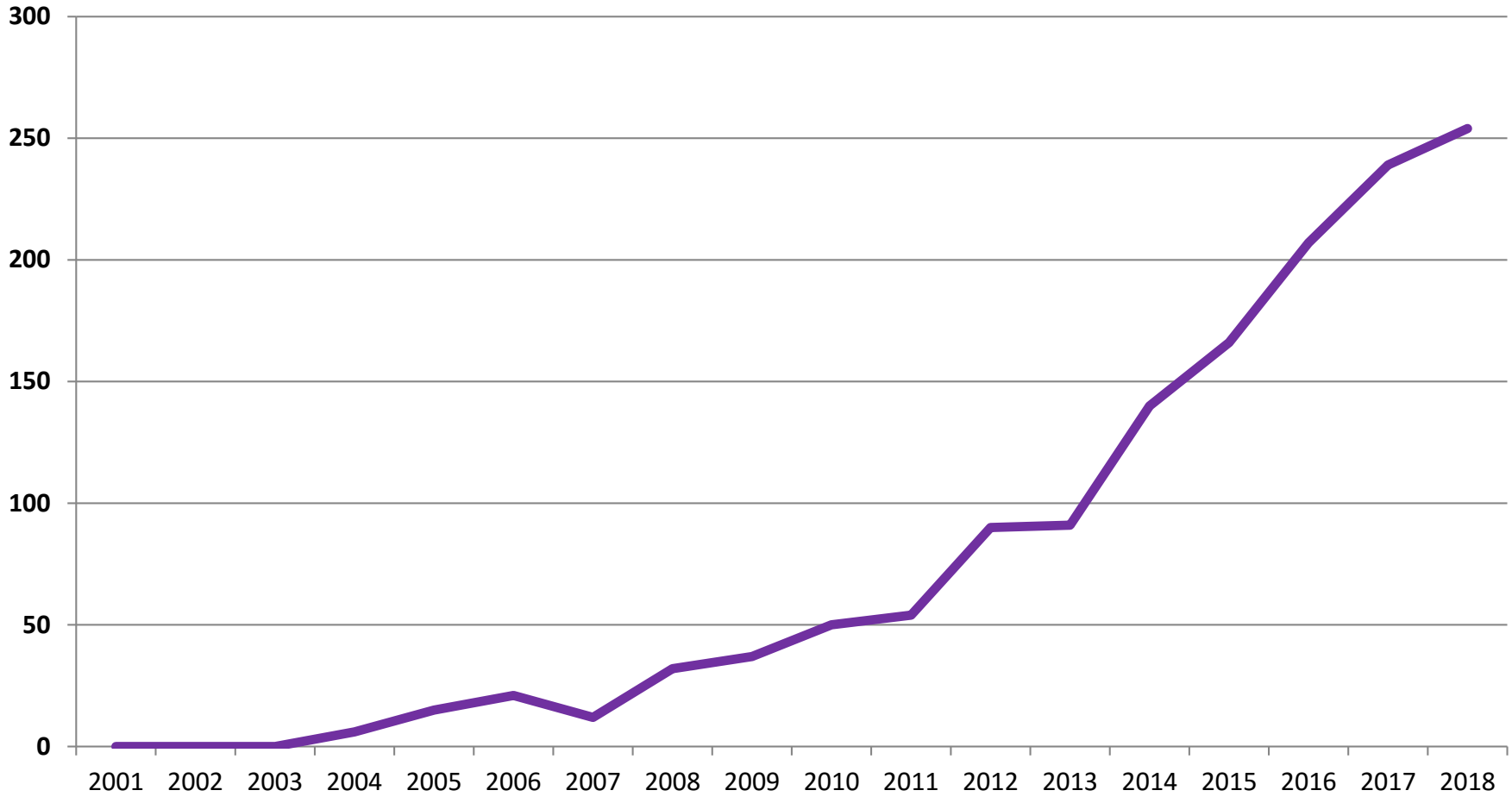


Változó	EH	CI	
Evett X büfében	20,6	9,06	52,18
gyros pitában	24,2	6,92	84,54
gyrostál	18,5	6,80	50,21
sült krumpli	20,3	7,32	56,49
hagyma	41,0	9,24	181,84
saláta	37,8	8,68	164,77
káposzta	46,2	10,55	201,99
férfi kiszolgáló	25,9	5,84	114,57
máshol evett gyrost	0,2	0,03	0,92

Reported Hepatitis A cases per 100 000 inhabitant



Reported Hepatitis E cases
2001 - 2018



„Viral hepatitis complex programme”

1992: proposal made, 1994: governmental programme

1. Decentralising viral serological testing
2. Improving epidemiological surveillance
3. Preventing vertical transmission of HBV
4. Immunising healthcare workers against HBV
5. Immunising individuals in risk groups
6. Anti-HCV screening of donor blood

Decentralising viral serological testing

In 1993, access to viral serological testing was established in the Budapest office and each of the county offices of the public health authority (National Public Health and Medical Officer Service, NPHMOS):

- appropriate laboratories were established
- the ELISA technique was introduced
- new instruments and equipment were procured
- staff received training

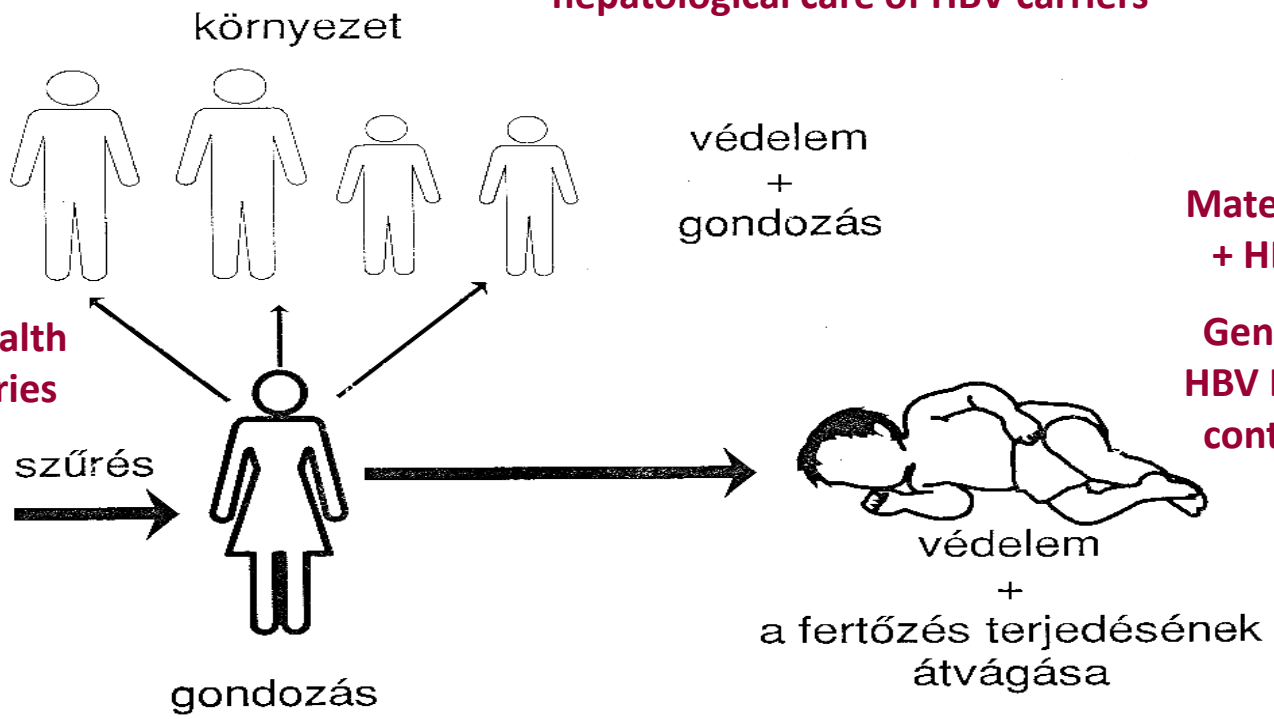
Improving epidemiological surveillance

From 1 January 1993 onwards, in order to further develop the epidemiological information system, a specific, case-based data collection was introduced on cases of acute viral hepatitis.

Cases were reported on individual notification forms including demographic, clinical, laboratory and epidemiological data.

Preventing vertical transmission of HBV

NPHMOS: epidemiological investigation,
education,
HBsAg screening: vaccination of exposed non-immune persons,
hepatological care of HBV carriers



Public Health laboratories

Maternity wards: HBIG + HBV I. vaccination

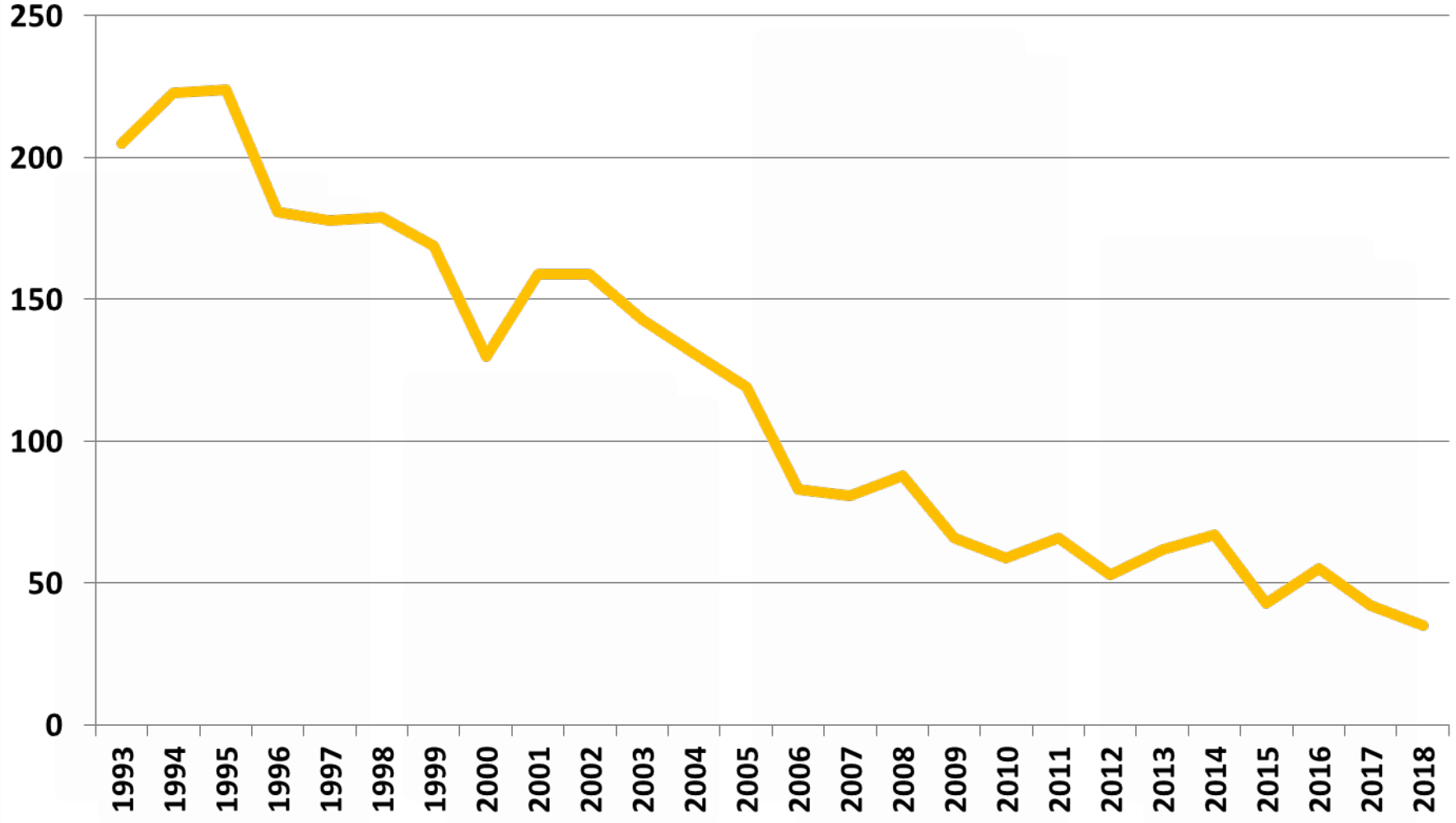
General practitioner: HBV II. –III. vaccination control at 15 months

Screening around 16th week of pregnancy,
Prenatal care: Obstetrician/Gynecologist, health visitor

Screening of donor blood

From 1 July 1992 onwards, in order to prevent cases of post-transfusion hepatitis, a ministerial decree requires all donated blood, tissue and solid organ transplants to be screened for anti-HCV

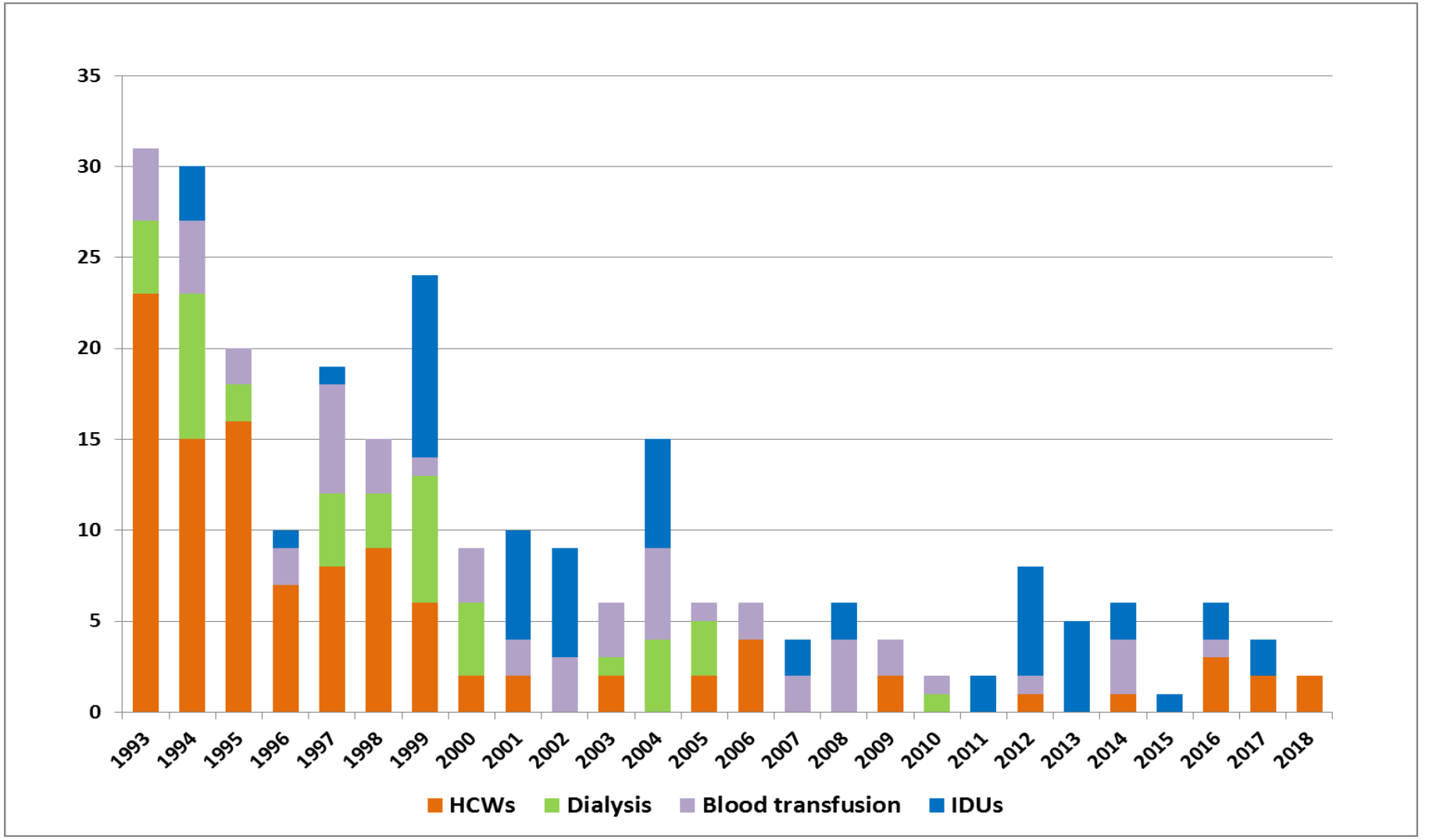
Reported acute HBV cases
Hungary, 1993-2018



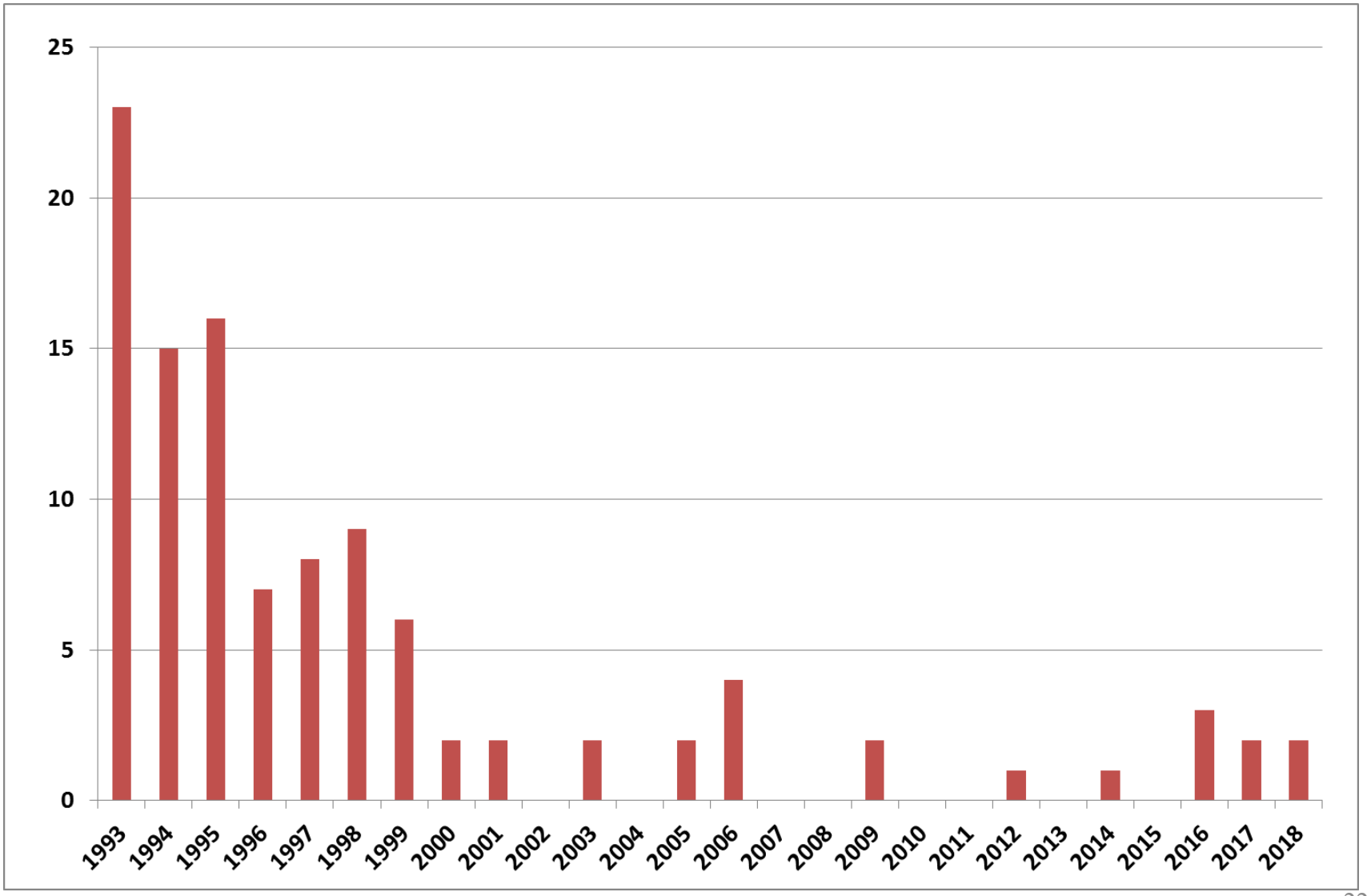
Shift of age-stratified acute HBV cases 1998-2018

Age in years	1998		2008		2018	
	Reported cases	Age-specific incidence (‰)	Reported cases	Age-specific incidence (‰)	Reported cases	Age-specific incidence (‰)
0	3	3.0	0	0.0	0	0.0
1 - 2	0	0.0	0	0.0	1	0.5
3 - 5	1	0.3	1	0.3	0	0.0
6 - 9	2	0.4	3	0.8	0	0.0
10 - 14	4	0.6	1	0.2	0	0.0
15 - 19	18	2.5	2	0.3	1	0.2
20 - 29	36	2.3	10	0.7	1	0.08
30 - 39	23	1.8	27	1.7	8	0.6
40 - 49	18	1.1	13	1.0	8	0.5
50 - 59	17	1.4	17	1.1	6	0.5
60 -	44	2.2	14	0.6	10	0.4
Total	**166**	**1.6**	**88**	**0.9**	**35**	**0.4**

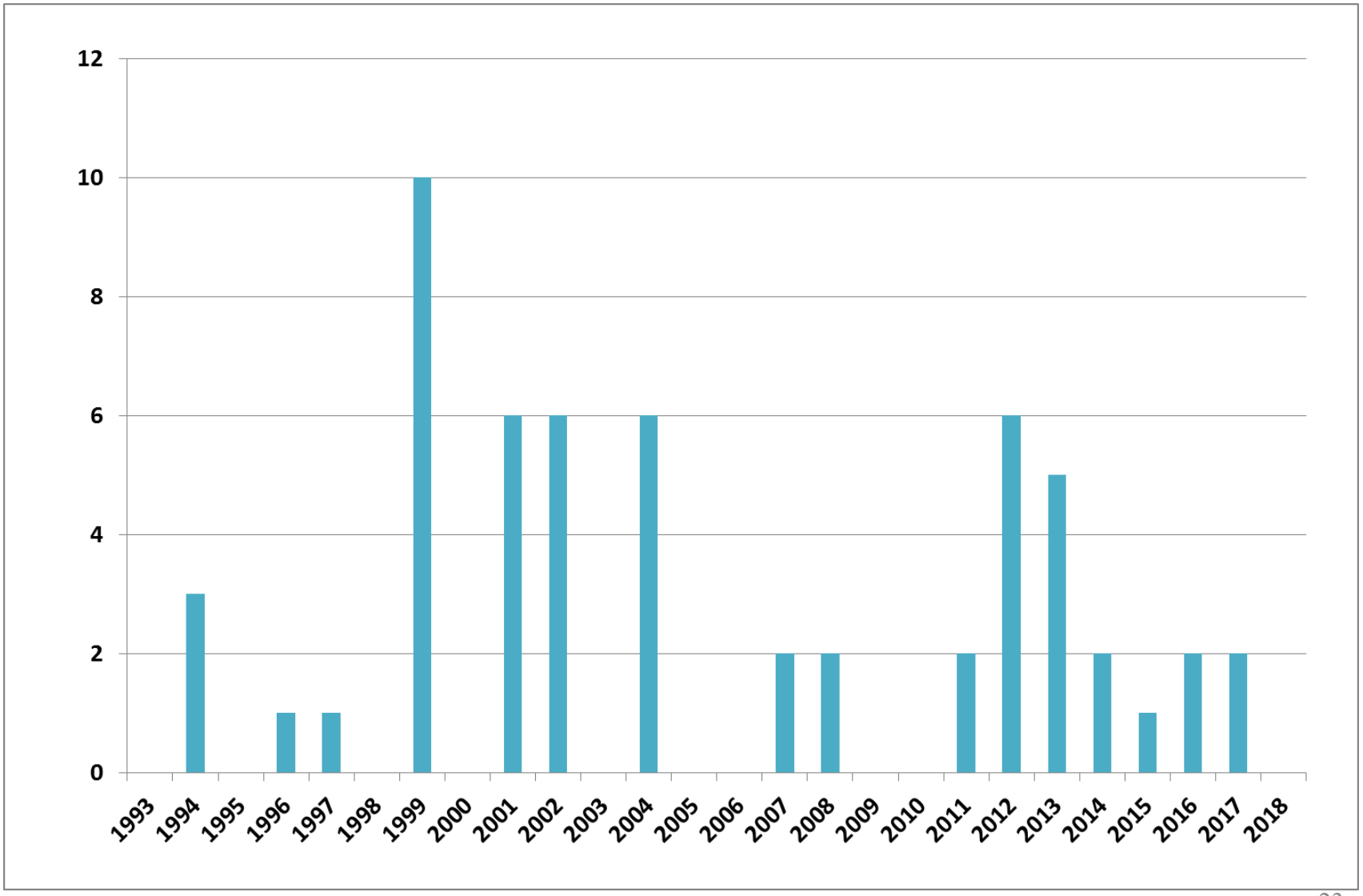
Acute HBV in risk groups 1993-2018



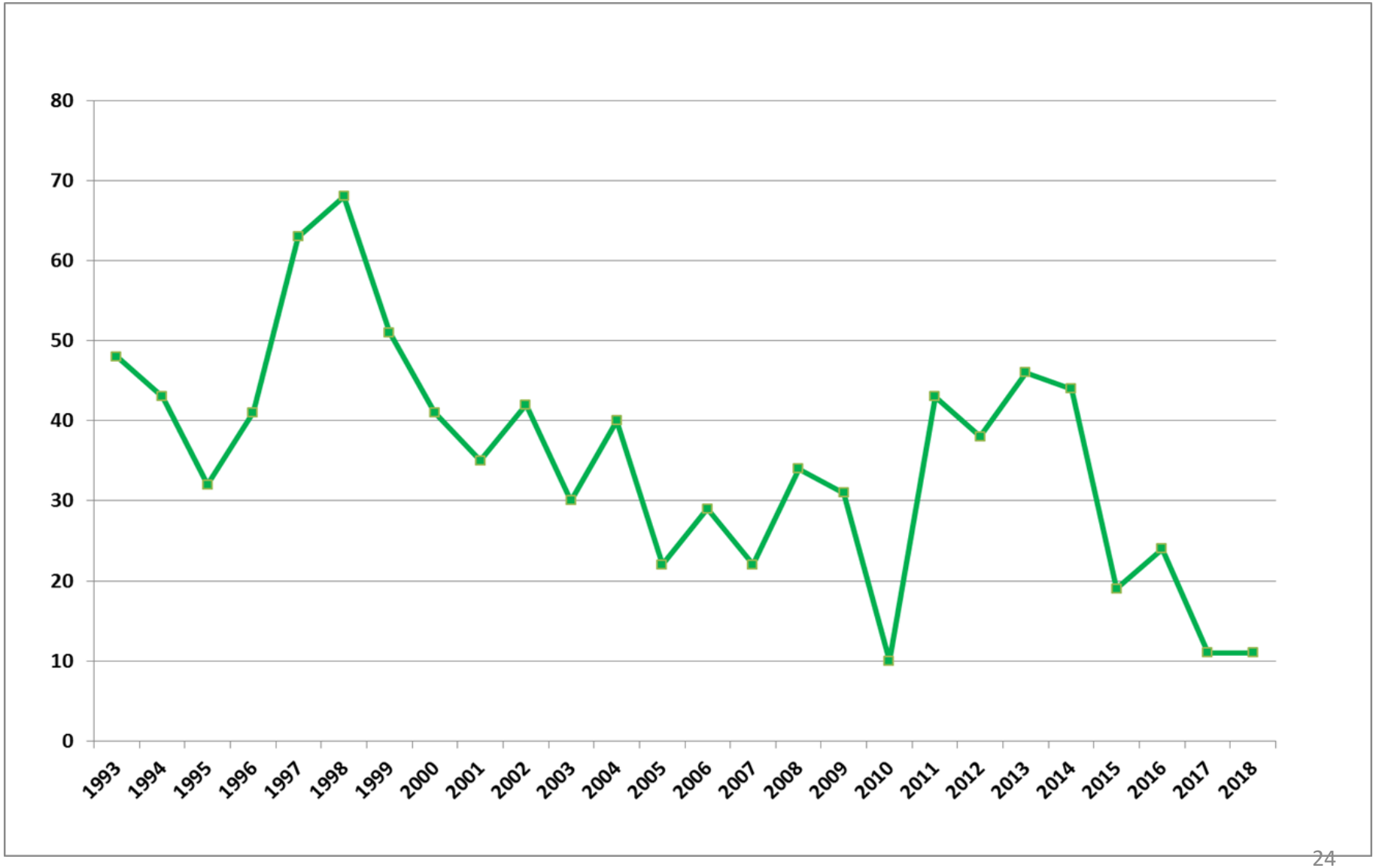
Acute HBV among health care workers 1993-2018



Acute HBV among injecting drug users 1993-2018



Reported acute HCV cases
Hungary, 1993-2018



Main epidemiological characteristics of acute HCV infections, Hungary, 2018

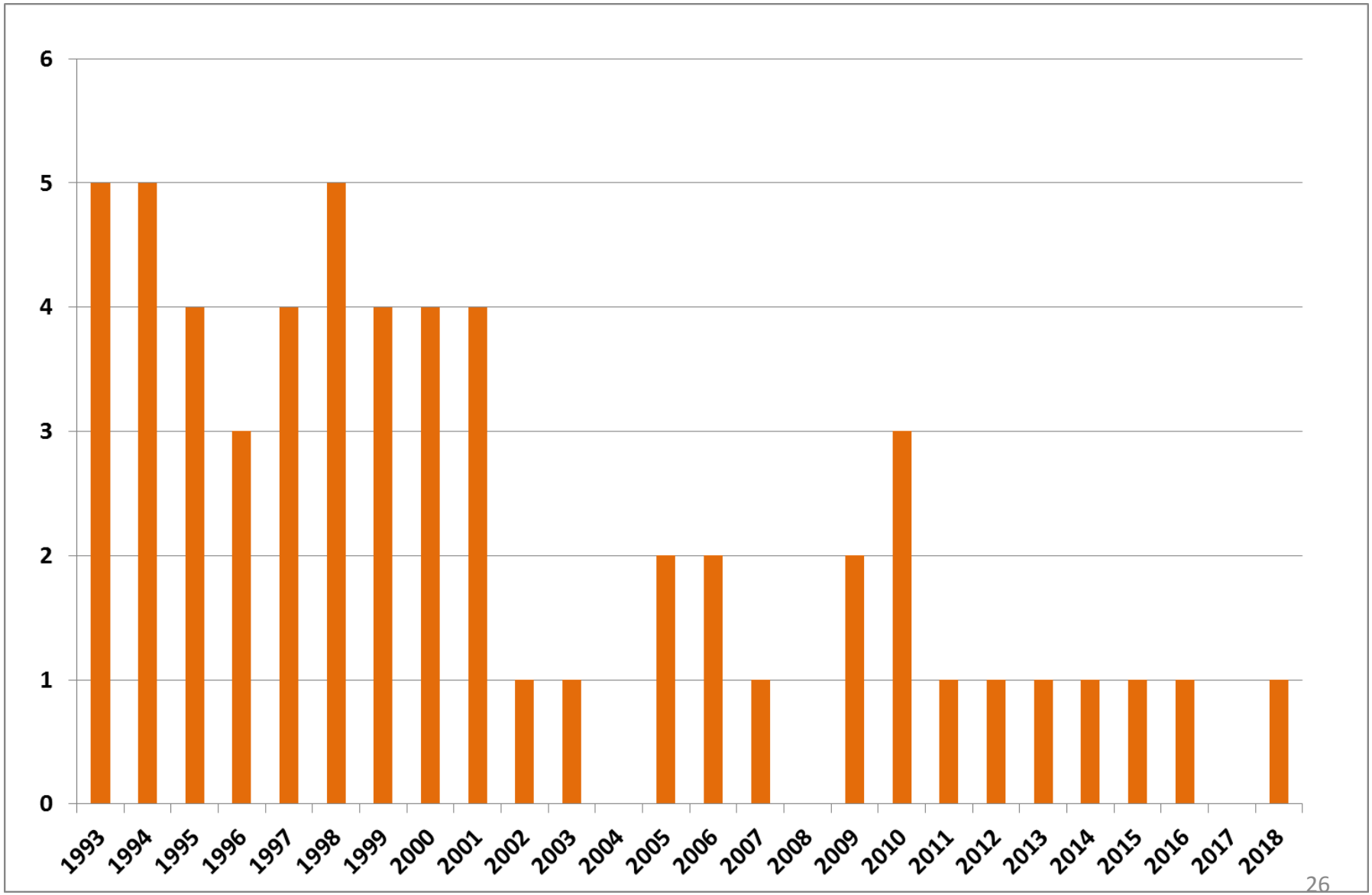
- Reported cases: 11 cases [Budapest (1), Baranya county (2), Borsod-Abaúj-Zemplén county (3) Pest county (5)]

- Notification rate per 100.000 persons: 0.1

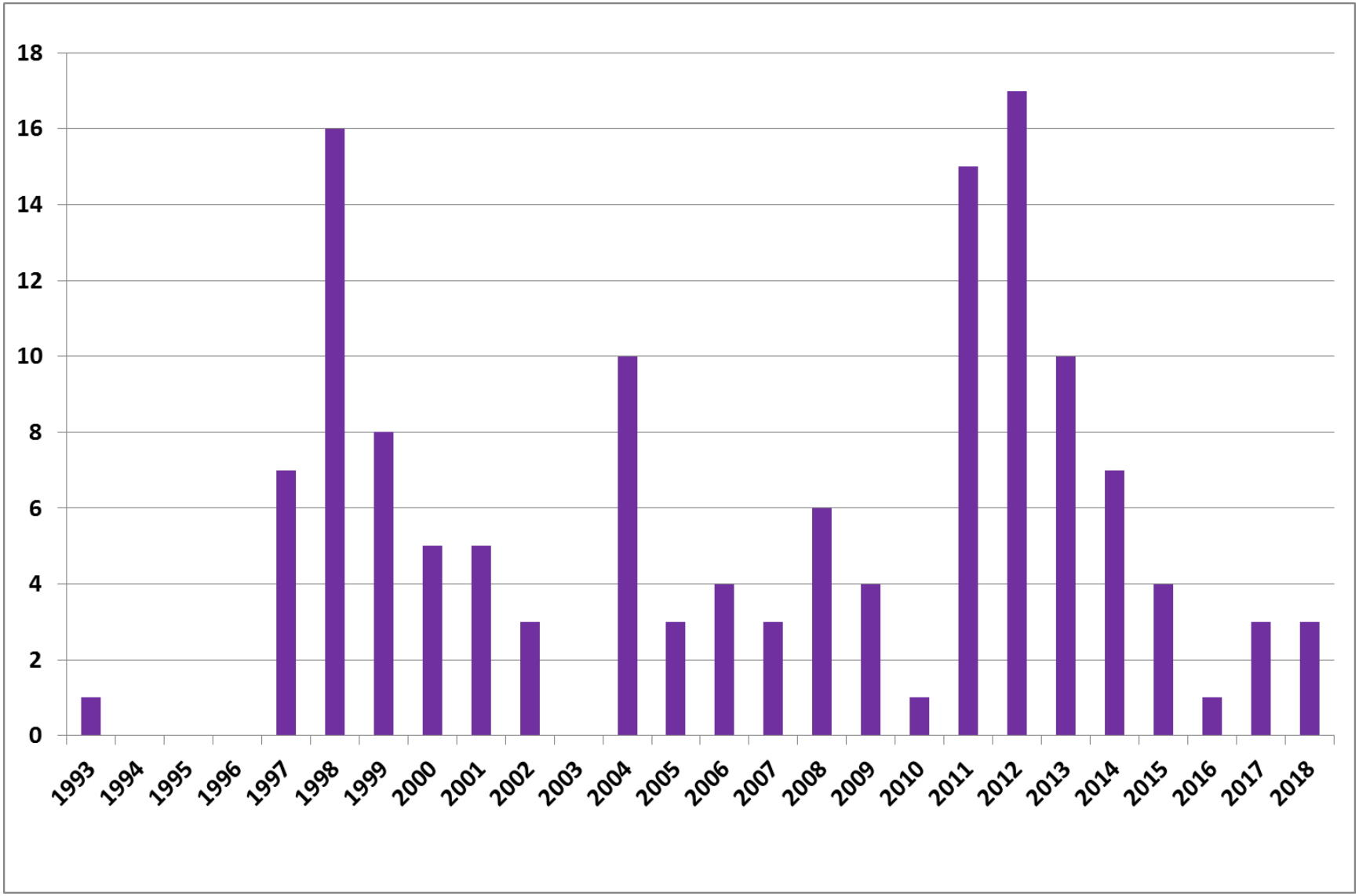
- Distribution by age
  - 15-59 years: 8 cases
  - 60+ years: 3 cases

- Risk groups/transmission route:
  1 healthcare worker (HCW) and 3 IDU

Acute HCV among health care workers



Acute HCV among injecting drug users



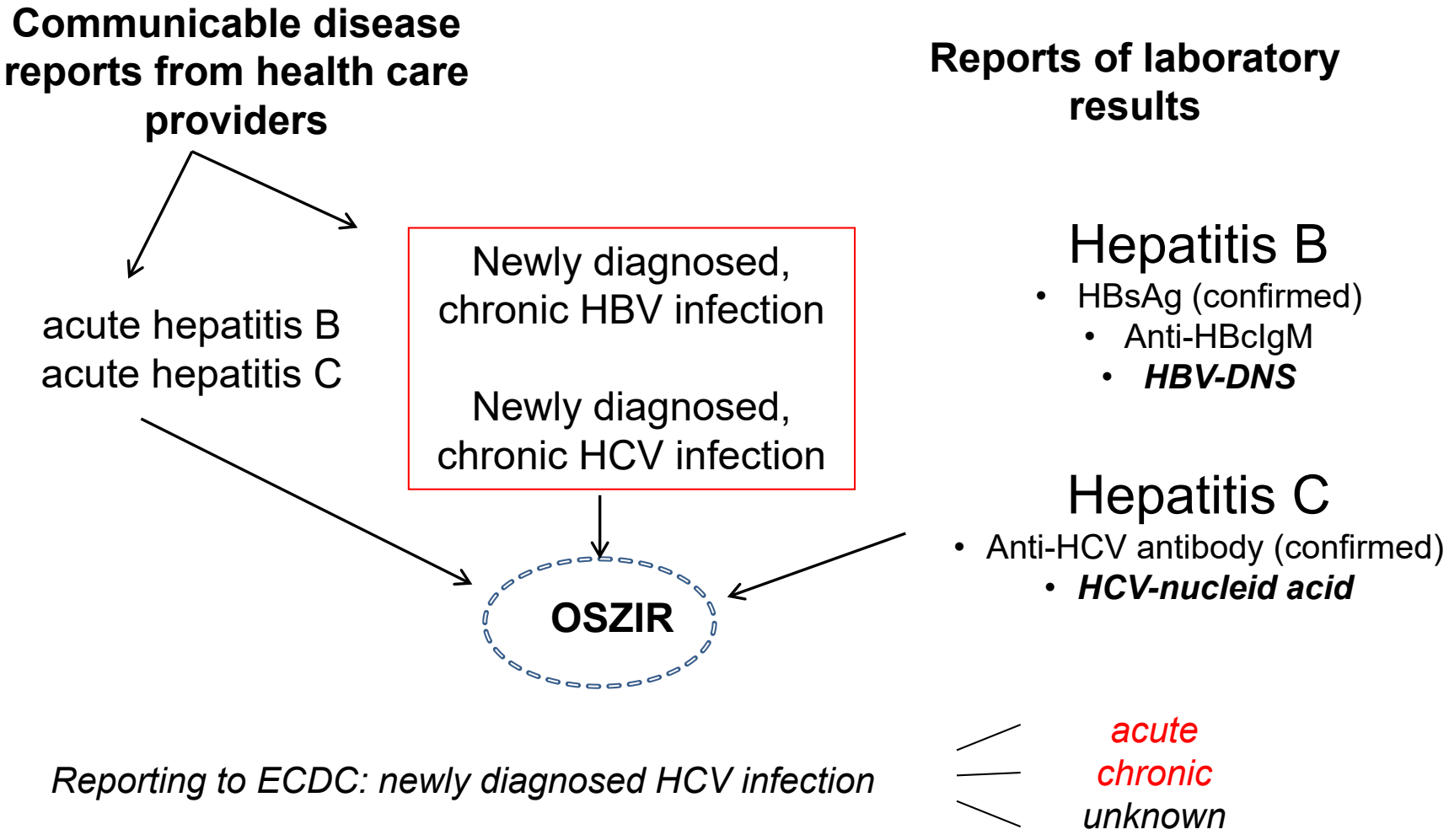
Efforts towards a harmonised European surveillance of viral hepatitis

- 1 January 2012: Act XLVII of 1997 on the Management and Protection of Health and Related Personal Data, 1st Annex: reporting of acute hepatitis and chronic HBV, HCV infection cases with personal identifiers
- 15 April 2012: Case definitions for acute infections included into the Ministerial Decree 18/1998., 1st Annex, but **not for the newly diagnosed, chronic HBV, HCV infections.**
- In the epidemiological information system (EFRIR), a „disease case" could be reported based on confirmed, positive laboratory result of HBV, HCV, without providing a date of disease onset.
- Limitations:
  - The stage of infection was not known,
  - Not all HBV, HCV results made it into the laboratory part of EFRIR

Further steps (2013)

- The method of reporting infectious hepatitis cases has not changed.
- Monitoring the trends of acute HBV, HCV infections has continued.
- The reporting method and the epidemiological information system itself was not suitable to operate as a comprehensive „HBV, HCV register” in the country.
- In 2013, once the legal regulations were renewed, circumstances had to be created for a national surveillance of hepatitis B and C as per the EU requirements, with special focus on the IT background and support.
- **Without direct reporting by health care providers, the public heath authority cannot manage the data collection and assessment of HB and HC cases on its own.**

Data collection on HBV, HCV infections



Reporting to ECDC: newly diagnosed HCV infection

Plans for reporting and assessing cases in 2016

- Establishing links between laboratories performing HCV diagnostics and the new epidemiological information system (OSZIR)
- Ensuring reporting of HCV PCR-positive results
- Circular to hospitals and hepatology centers
- Facilitating case reporting by hepatology centers via interface, creating link between HEPREG and OSZIR
- Developing a methodological guide for the district/county government offices to support the reporting of HBV, HCV cases

Obstacle: 2 waves of institutional reorganisation

Current situation

- Consolidating institutional environment following the reorganisations
- The National Public Health Center, as the surveillance centre in Hungary, continues the work started
- Aim: to create a national database on viral hepatitis cases including data on both acute and chronic infections
- Collaboration with clinicians, particularly Hepatologists, and support from the ministry is indispensable

THANK YOU FOR YOUR ATTENTION!