# Epidemiology of hepatitis B & C in Albania

# Surveillance system of Viral Hepatitis B & C in Albania

**Based on:**

1) **Disease specific surveillance** , comprising:

Major Disease-Based surveillance System (SMBS-14 SH)

- monthly mandatory reported aggregated data.

Since 2010 starting the reporting for four types of viral hepatitis .

In 2013 it was established a new case report form for HBV and HCV, which includes the risk exposure for these two diseases (individual data)

**2) Syndromic surveillance System-ALERT-**

weekly mandatory reporting system of infectious syndrome “jaundice”

**3) Surveys,** comprising:

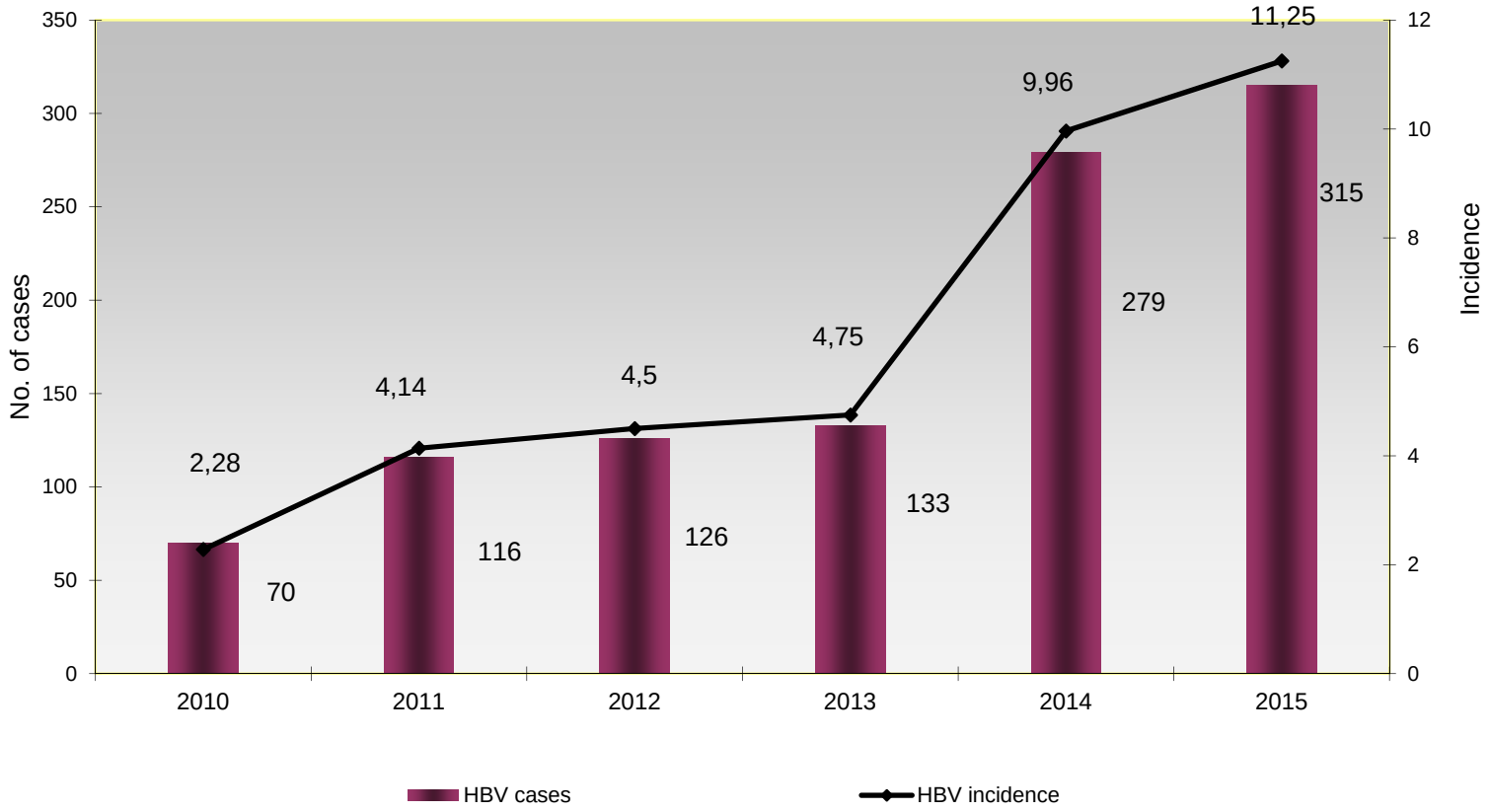
Bio-BSS-biologic behaviour surveillance study (2005,2008.2011)

Biological surveillance of infectious agents among receiving multiple transfusions(2006-2011)

Sero-prevalence studies in general population and in risk groups.

# Incidence of HBV ,2010-2015

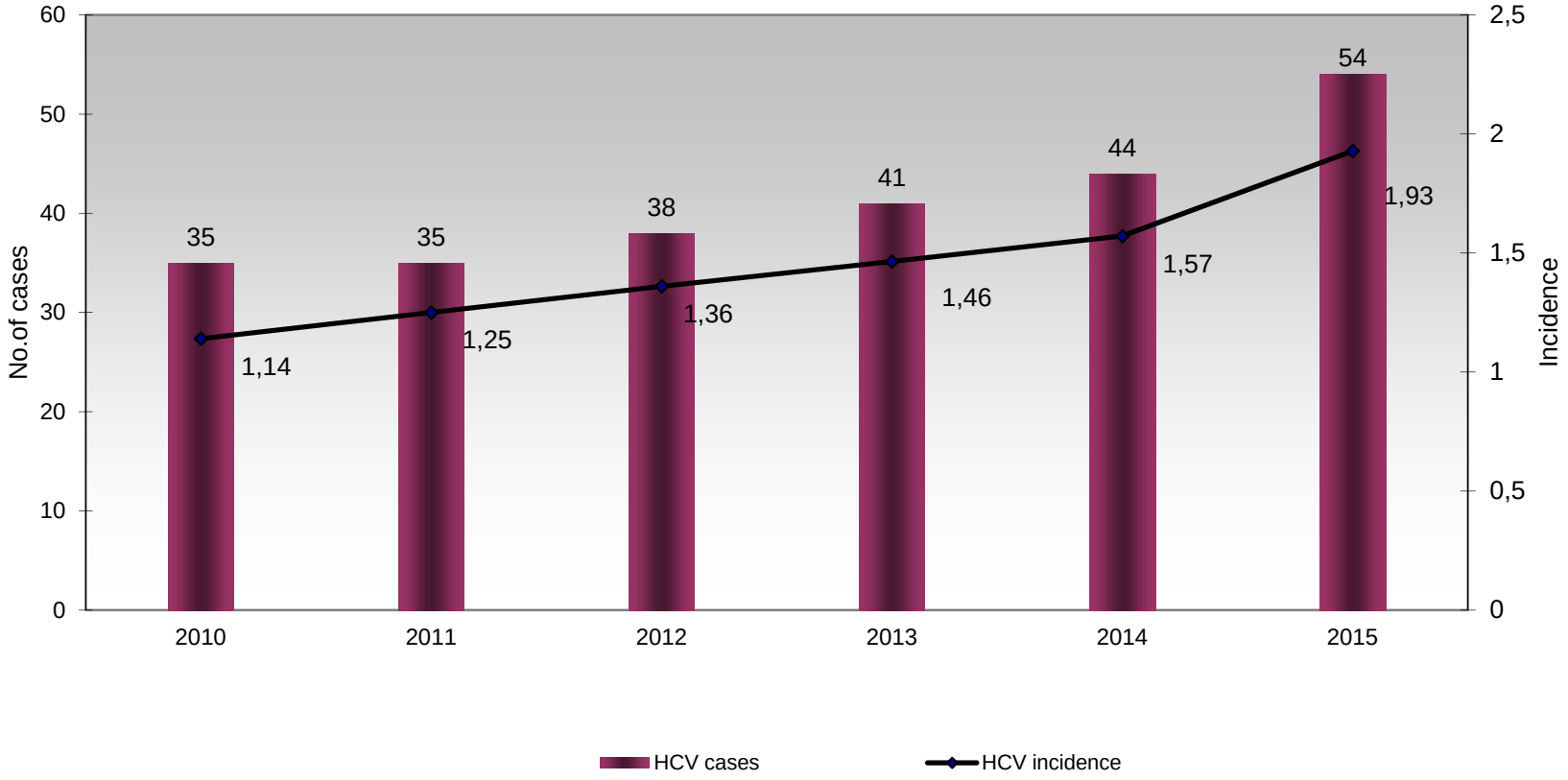
## (no. of cases/100 000 population)




- The incidence of HBV is increased during the years.
- Strengthening of the surveillance system ( a new case report form established.)
- 2010-2012- data from MSBD (hospitals)
- 2013-2015- data from case individual report form ( hospitals, private and public labs)

# Incidence of HCV,2010-2015

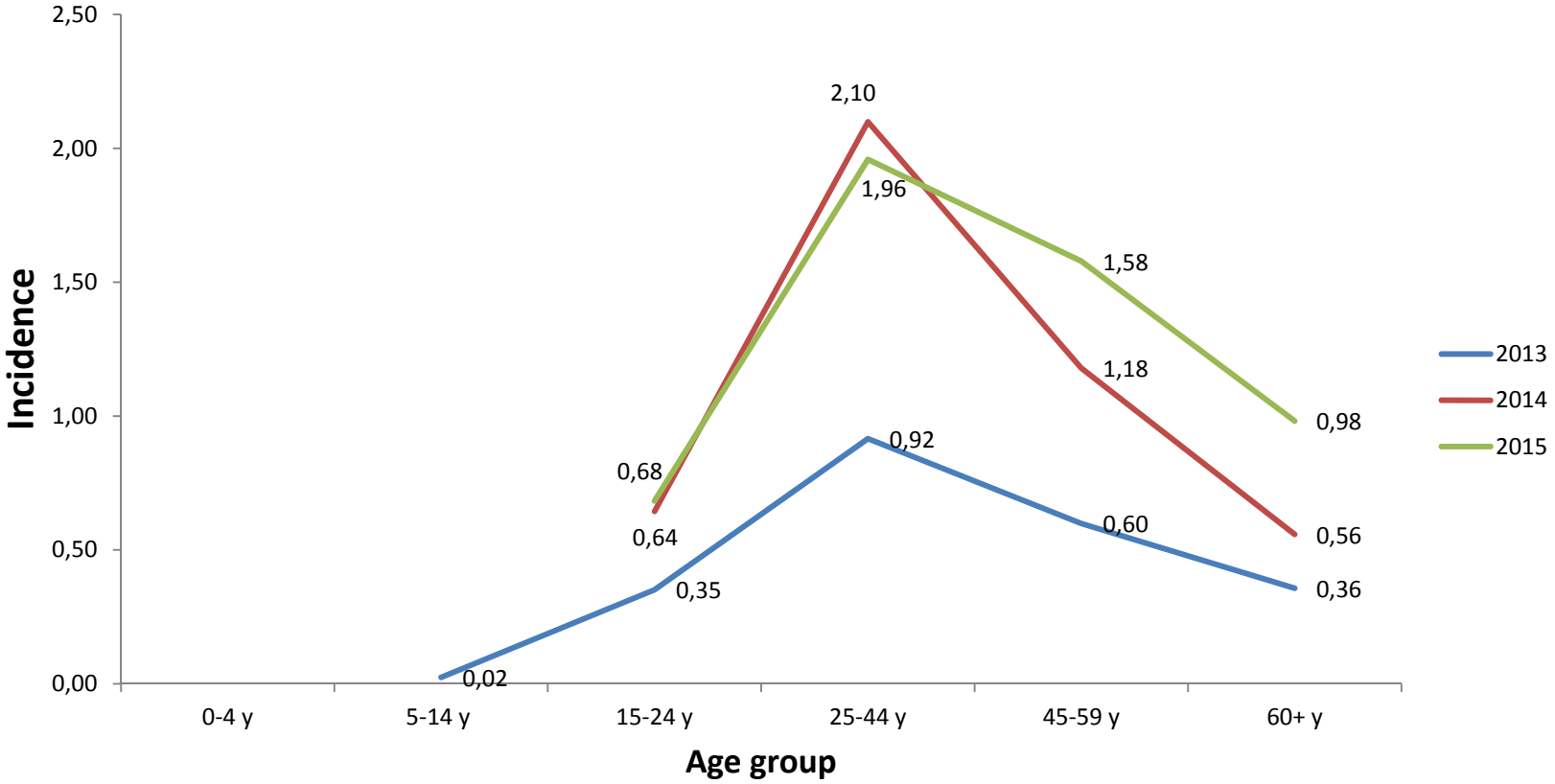
(no. of cases/100 000 population)




- Increase of incidence during 2010-2015.
- 2010-2012- data from MSBD (hospitals)
- 2013-2015- data from case individual report form ( hospitals, private and public labs)

# Incidence of HBV by age group

## (no of cases/10000) 2013-2015



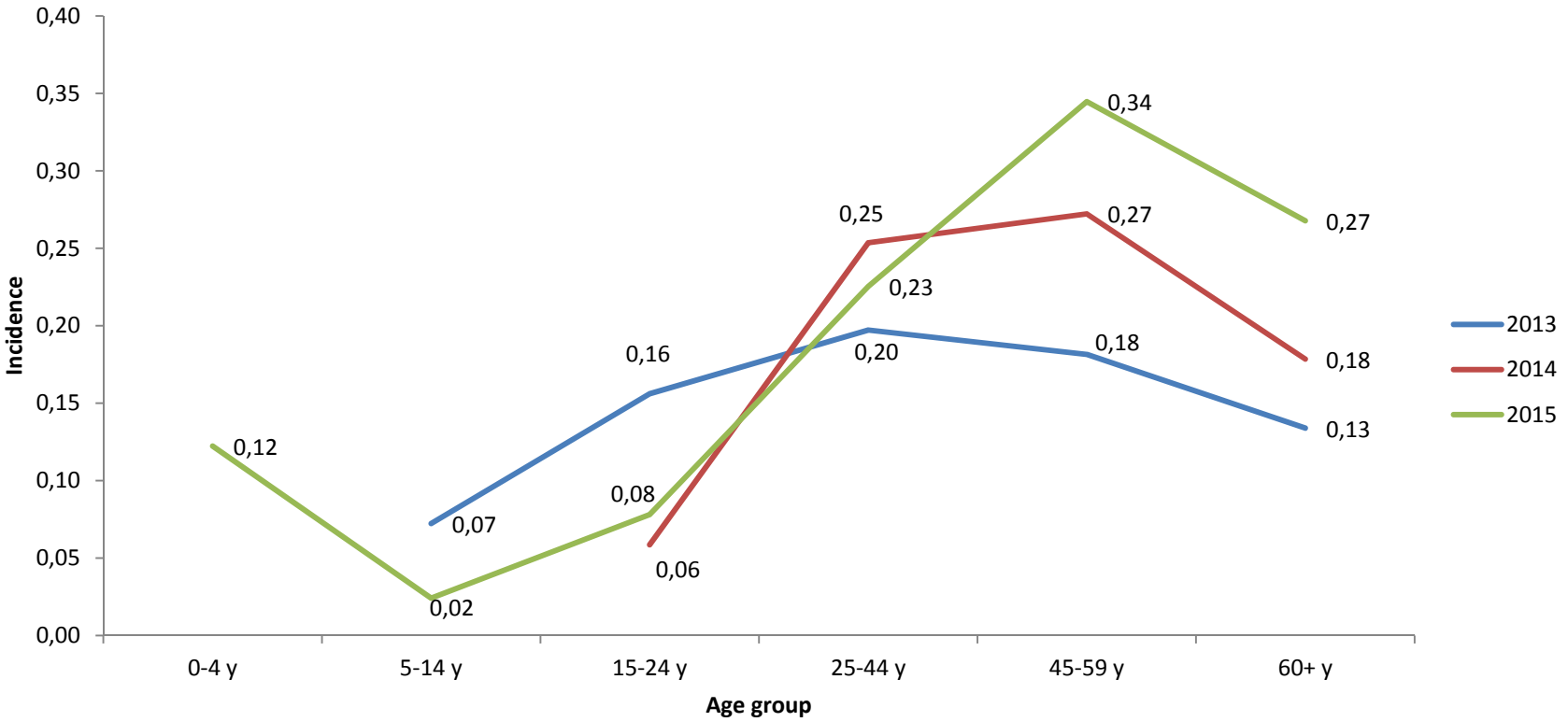

25-44 years old –higher incidence in three years

No cases in pediatric age group in 2014,2015

Only one case in age group of 5-14 years in 2013, very low incidence

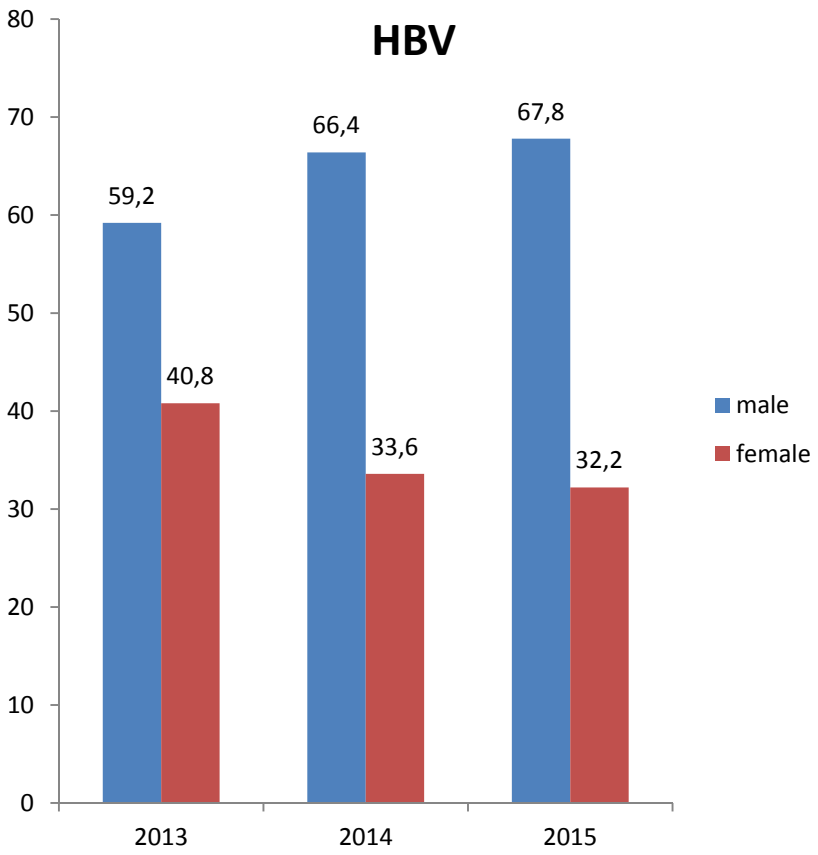
# Incidence of HCV by age group

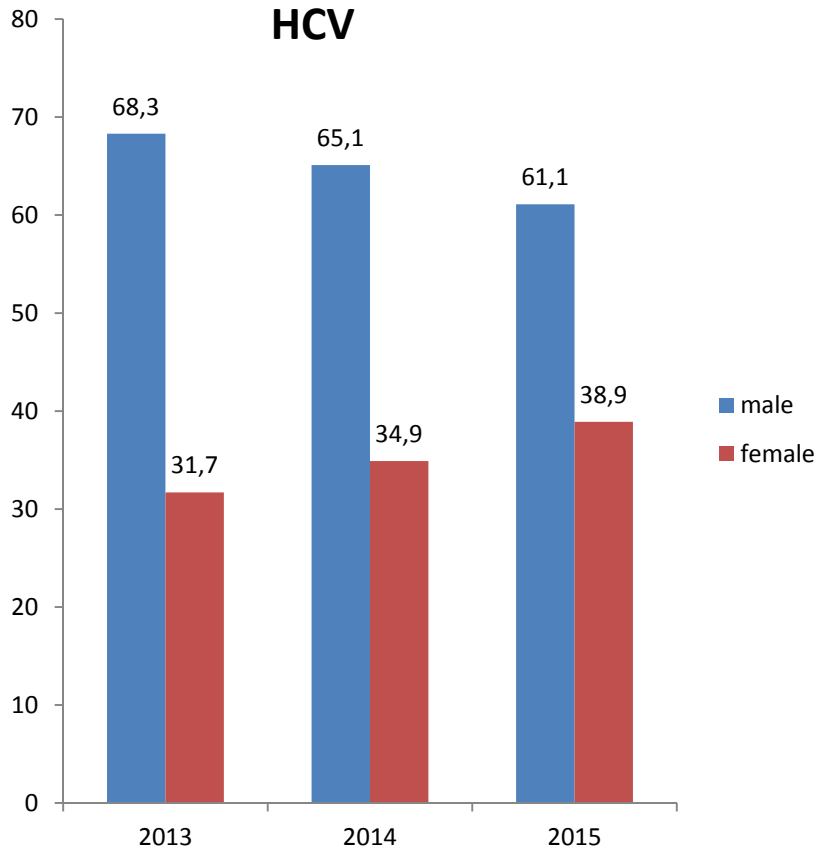
## (no of cases/10000) 2013-2015




- 2013-small difference between the incidence of the age group 25-44 and 45-59 years
- 2014,2015- higher incidence in 45-59 years old
- 2013,2015- low incidence in pediatric age group

# Distribution of cases by gender(%) 2013-2015

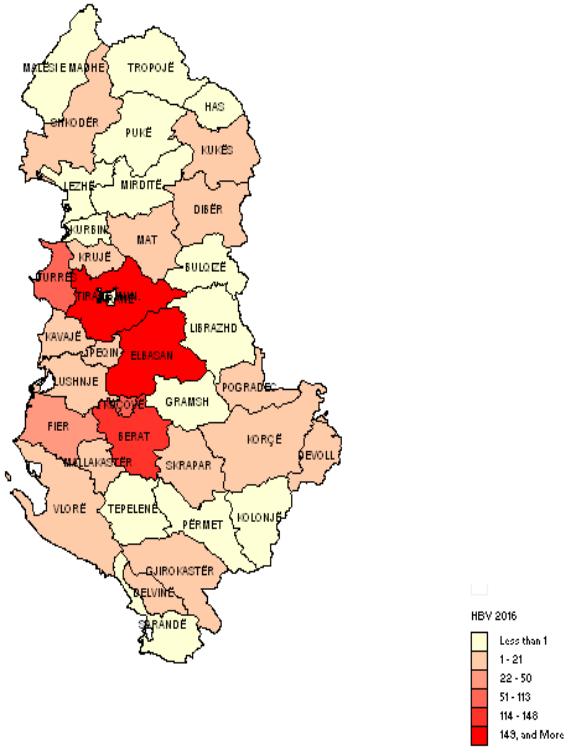


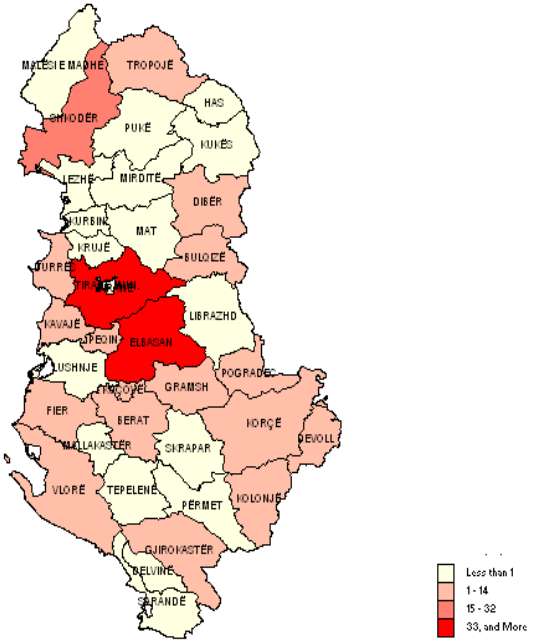

- Male have the higher positivity for HBV and HCV than female in 2013-2015

# Distribution of HBV and HCV in Albania, 2013-2015

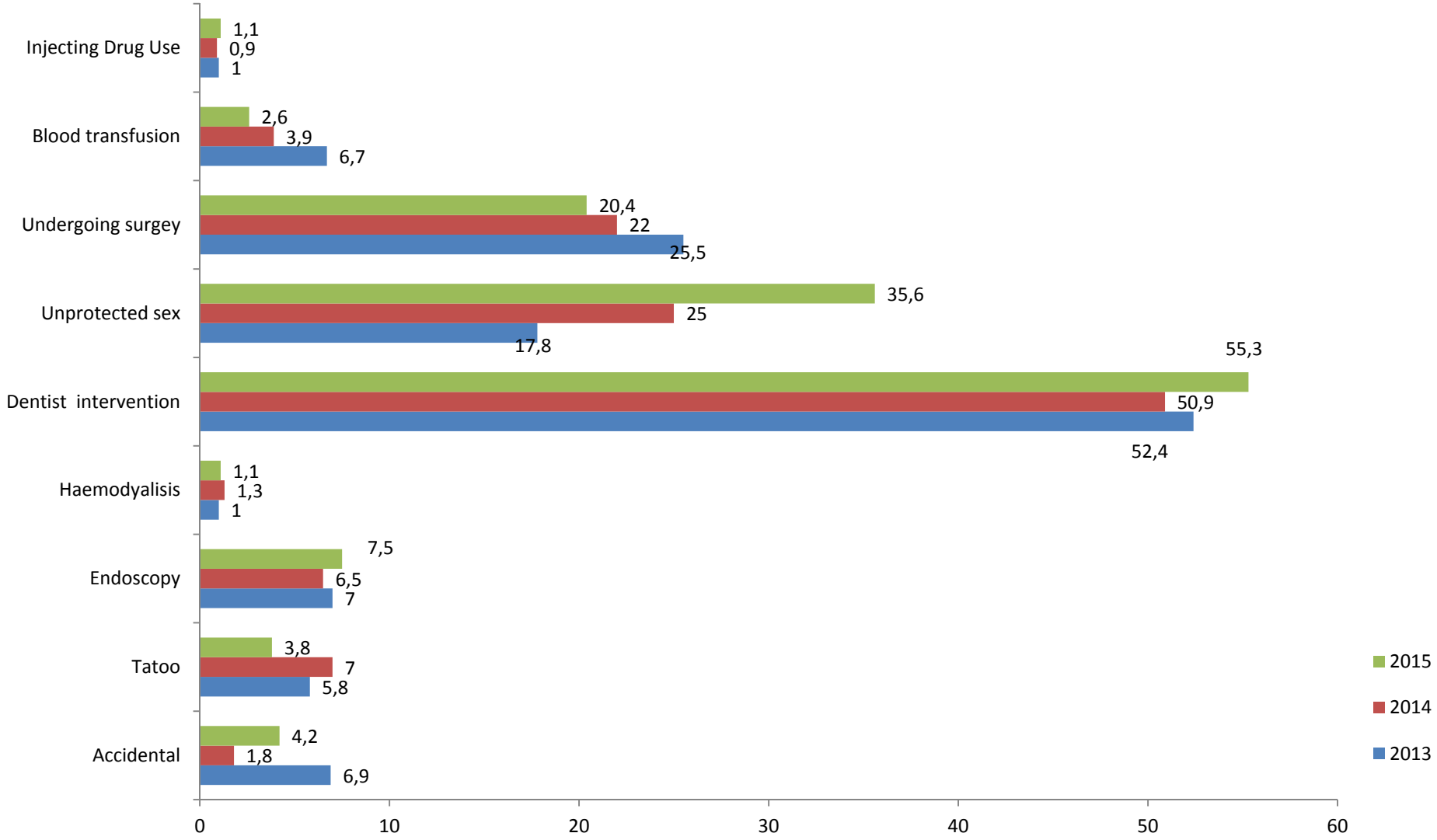
Distribution of Viral Hepatitis B, 2013-2015 in Albania



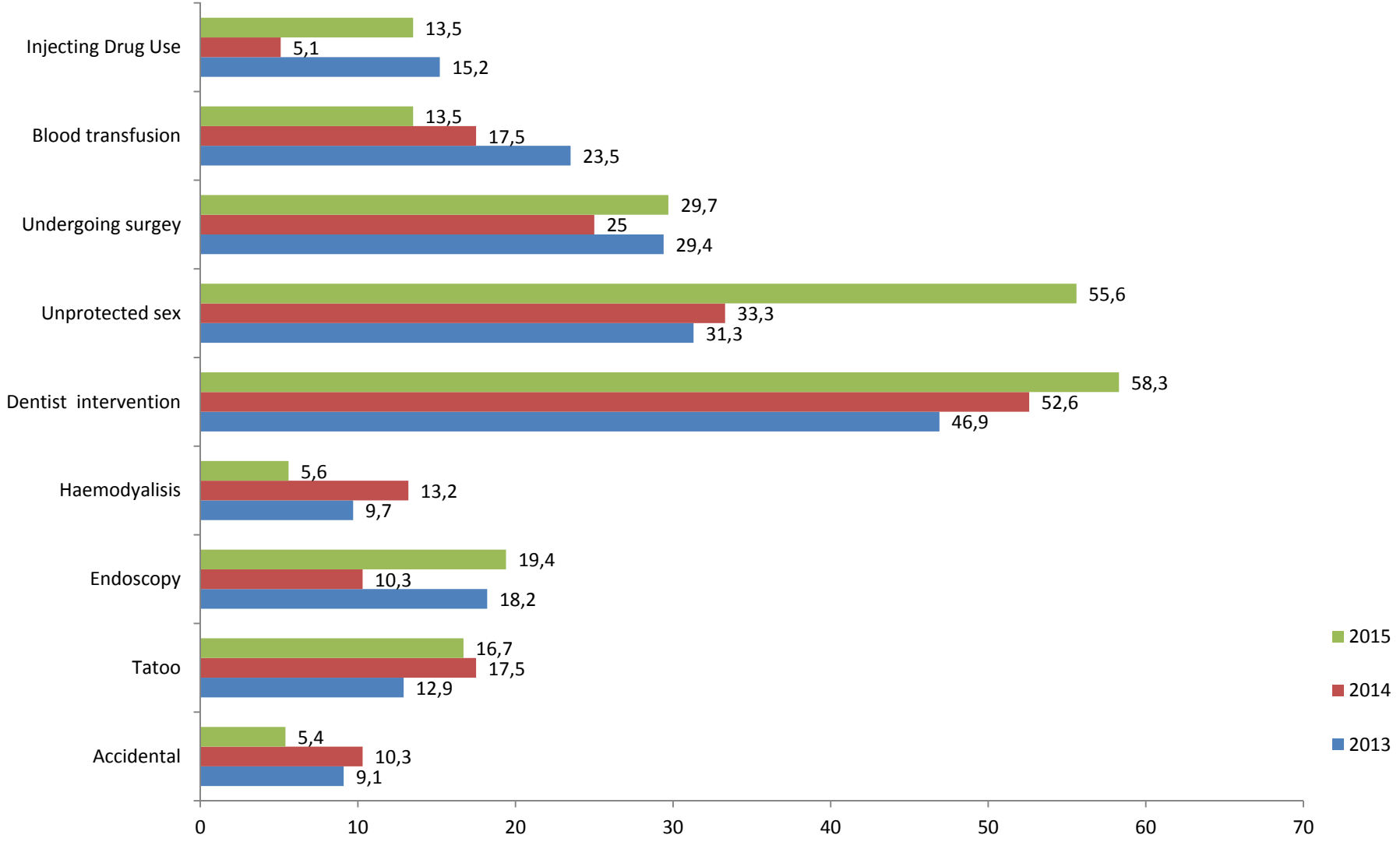

Distribution of Viral Hepatitis C,2013-2015 in Albania



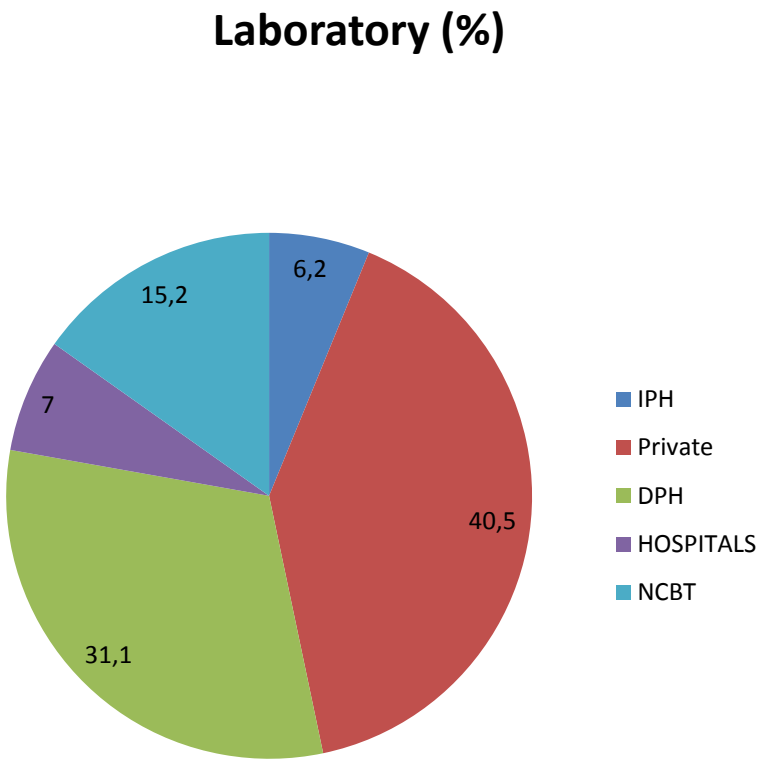
# Viral hepatitis B reports by risk exposure/behavior (%),2013-2015

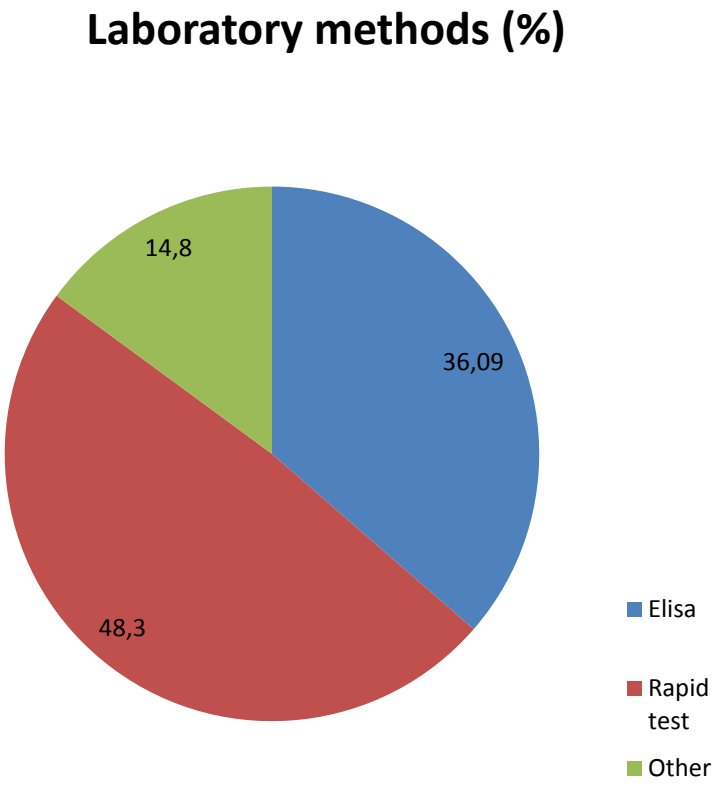


# Viral hepatitis C reports by risk exposure/behavior (%),2013-2015



# Laboratory and laboratory methods 2013-2015




59.5% of cases are tested in public labs vs 40.5% in private labs

# Hepatitis B & C prevalence data – Low risk populations

| Year | Low risk population | HBsAg %, sample size | Anti-HBc %, sample size | HCV %, sample size |
|---|---|---|---|---|
| 2008-2010 | General pop | 7.2 (721) | 57.6 (727) | 1.3 (721) |
| 2002-2005 | General adult pop | 9.4 (602) | 62.6 (602) | |
| 2009-2011 | | 8.4 (448) | 43 (212) | 0.9 (416) |
| 2010-2015 | | 7.11 (885) | 42.36 (550) | 0.9 (878) |
| 2004-2006 | General pop | 9.5 (3880) | | |
| 2004 | Pregnant women | 6.4 (500) | 53.8 (500) | 1.2 (499) |
| 2010-2015 | | 6.51 (307) | 43.75 (80) | 1.38 (288) |
| 2009 | Blood don. | 7.9 (14352) | 59.1 (225) | |
| 1998 | recruits | 13.27 (369) | | 1.6 (366) |
| 2000 | | 15.21 (368) | 55.95 (361) | |
| 2000 | Ped.ages (6-14) | 3.9 (584) | 22.0 (584) | 0.22 (441) |

# Hepatitis B & C prevalence data –High risk populations

| Year | High risk population | HBsAg % | HBsAg sample size | Anti-HBc % | Anti-HBc sample size | HCV % | HCV sample size |
|---|---|---|---|---|---|---|---|
| 2007 | Prisoners | 15.9 | (201) | 64 | (187) | 2.9 | (201) |
| 2004 | Hospital staff | 8.1 | (480) | 71 | (480) | 0.6 | (480) |
| 2002-2003 | Students of medicine | 8.35 | (668) | 46.8 | (670) | | |
| 2005<br>2015 | Roma pop | 13.5<br>9.8 | (600)<br>(273) | | | 0.7 | (273) |
| 2006-07 | IDU | 22.8 | (166) | | | 29.4 | (163) |

# Hepatitis B & C prevalence data –High risk populations

| Year | High risk population | HBsAg % sample size | Anti-HBc % sample size | HCV % sample size |
|---|---|---|---|---|
| 2008 | MSM | 15.2 (200) | | 3.5 (200 ) |
| 2010-2015 | Co-inf HIV pozitive | 13.30 (278) | 69.7 (149) | 4.2 (280) |
| 2005<br>2010-2011 | politransfused | 3.7 (135)<br>2.0 (195) | | 28.9 (135)<br>24.1 (195) |
| 2008<br>2010-2011 | Hemodialysis | 12.3 (105)<br>11.3 (222) | | 31.4 (105)<br>35.6 (222) |
| 2010-2015 | Victims traficing, domestic violence, etc. | 2.7 (222) | | |

# Genotypes of HCV in Albania

| Year | Sample size | Genotype 1 (1a,1b,1a/b) | Genotype 2 (2a,2a/c,2c) | Genotype 3 (3a, 3b) | Genotype 4 (4a,4c,4e) |
|---|---|---|---|---|---|
| **2010-2014** | **350** | **62.8 %** | **18.3%** | **14.9 %** | **4%** |

More frequent is genotype 1, subtype 1b
Genotype 1 is predominant in politransfused and hemodialysis individuals.
Genotype 3 is predominant in IDU .

# Hepatitis D prevalence data

| year | population | Sample size | % anti-HDV |
|---|---|---|---|
| 1998 & 2000 | recruits | 49 & 44 | 0 & 2.27 |
| 2004 | Cronic hep. B | 211 | 12 |
| 2004 & 2010-15 | Pregnant women | 19 | 0 |
| 2015 | Roma pop | 25 | 8 |
| 2015- 2016 | Co inf HIV Poz | 16 | 6.25 |
| 2008-2010 | General pop | 43 | 0 |
| 2010-2015 | Adult pop | 62 | 0 |

# Conclusions

- Increased of incidence for both HBV and HCV on 2010-2015 because of the enhanced of surveillance system
- The higher positivity is among age active groups
- Dentist intervention and unprotected sex remain the two most risky behavior for both HBV and HCV
- Viral hepatitis B remains to be very common in Albanian population.
- It is very important the reduction of HBsAg prevalence in general population (18% to 7.2%) .
- The prevalence of HCV is low in general population, but is higher in high risk group of population. More frequent is genotype 1, subtype 1b .

# Recommendations

- Evaluation and improvement of surveillance system for viral hepatitis
- Strengthening of the public health laboratory capacities for the diagnosis of those diseases .
- Need for sero prevalence studies in general population and risk groups