HEALTH BULLETIN No.1 2014

EDITORIAL BOARD

CONTENT

1. Water and Sanitation

The hygiene and sanitation situation of drinking water in our country's urban areas for the last three months of the year 2013

Valbona Bara, Anilda Kokali, Ediona Bici, Zaira Poga

Unit of Water and Sanitation

Our country has a lot of water reserves, whose utilization and consumption index is not in the proper coefficient yet. This is due of the many social and economic factors, where the utilization index of water reserves in our country is still low, as a result of deficiencies in infrastructure, even though there have been numerous investments.

This evaluation makes the drinking water the most delicate and priority point that must be taken in consideration in the Public Health field.

Therefore the Water Section and Sanitation in the Institute of Public Health, is the National Center of accumulation, refinement, analyzing and evaluation of risk for the data of Water and Sanitation field , derived from Public Health Directories of localities as well as the produced data from the labs of Health and Environment Department in IPH, in order to reduce the waterborne diseases and the prevention of epidemic eruptions with hydro-nature in the country.

- ♦ Overall, our work activity is based on the hygiene-sanitary regulation for the control of drinking water quality of the DCM No. 145 dated 26.02.1998, "For the projection, construction, reconstruction and utilization of supplying activities with drinking water", the UN Directions for drinking water, such as the Direction 98/83/CE and a series of other laws, such as the Law no. 7643, date 02.12.1992 "For public health and State Sanitation Inspectorate," changed, point 4, amendment 42, of the Law no. 10138, date 11.05.2009 "Public Health Law."
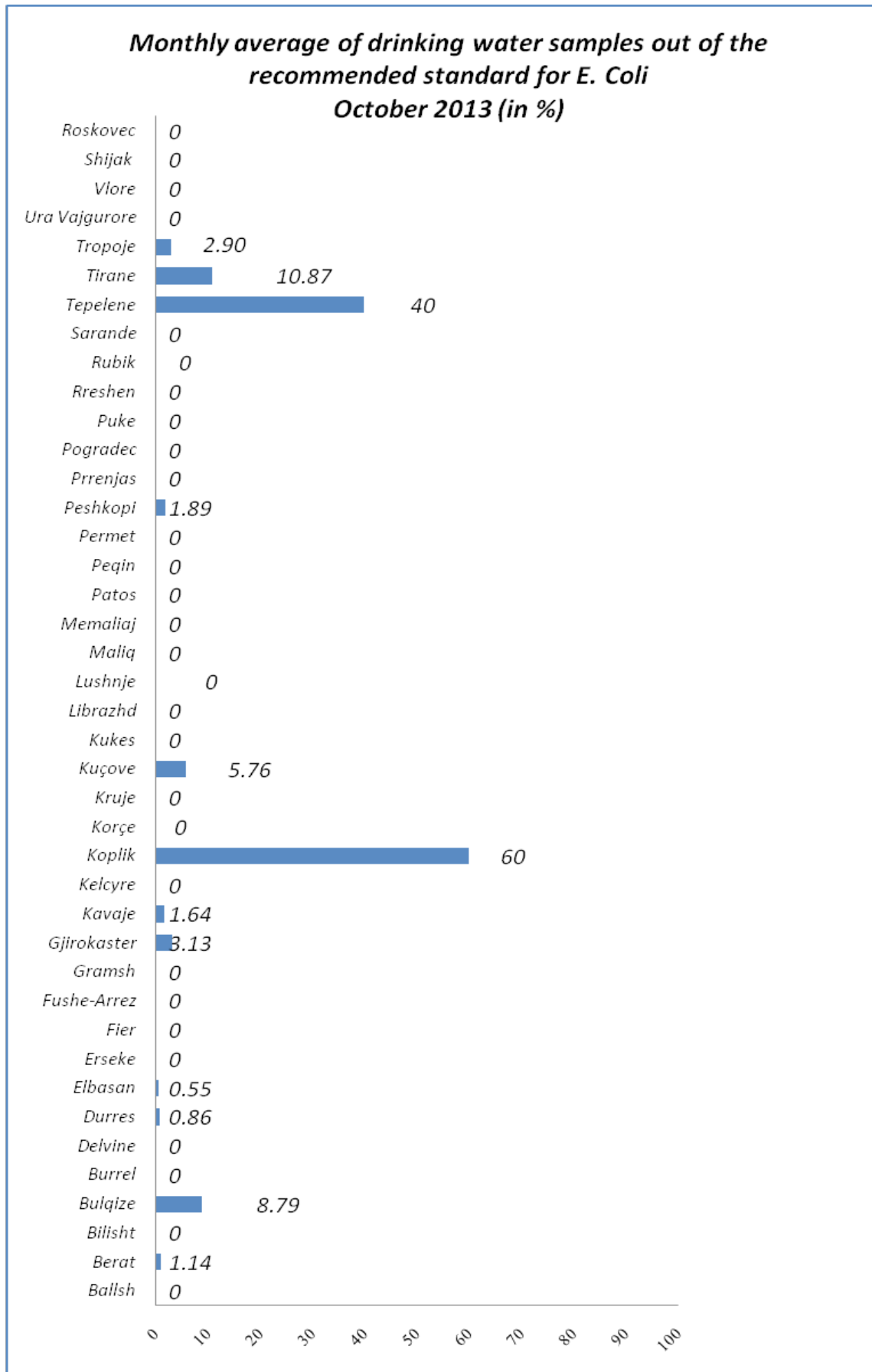
The main indicators of water monitoring reported from localities in the Institute of Public Health are:

E. Coli (MPN) and the residual Chlorine (in mg/1);

The gained databases, are delivered during the monitoring procedure, every month to the Institute of Public Health, which makes the analyses of bacterial contamination of water. This evaluation, made in the form of **Monthly Bulletin**, is delivered in the Ministry of Health, in the Ministry of State for Local Cases, in the Ministry of Transport and Infrastructure, and in the Water Regulatory Entity of Albania.

Results for the period of October—December 2013 :

During the month of October 2013, microbiologic contaminations have been distinguished in the water supplies of Tirana, Tepelena, Tropoja, Peshkopia, Kuçova, Koplik, and Bulqiza. In the water supplies of cities such as Berat, Kavaja, Durrës and Elbasan, these contaminations have been much fewer. From the reported data of chlorine has been observed that when the water supplies have been highly contaminated with bacterium, the chlorine residual has been less than (0.1-0.3mg/l) or at a value of 0 mg/l of chlorine residual. (Look at the following graphics for bacterial contamination and chlorine residual for the month of October 2013);

1. Water and Sanitation

Monthly average of drinking water samples out of the recommended standard for E. Coli October 2013 (in %)

District	Value
Roskovec	0
Shijak	0
Vlore	0
Ura Vajgurore	0
Tropoje	2.90
Tirane	10.87
Tepelene	40
Sarande	0
Rubik	0
Rreshen	0
Puke	0
Pogradec	0
Prrenjas	0
Peshkopi	1.89
Permet	0
Peqin	0
Patos	0
Memaliaj	0
Maliq	0
Lushnje	0
Librazhd	0
Kukes	0
Kuçove	5.76
Kruje	0
Korçe	0
Koplik	60
Kelcyre	0
Kavaje	1.64
Gjirokaster	3.13
Gramsh	0
Fushe-Arrez	0
Fier	0
Erseke	0
Elbasan	0.55
Durres	0.86
Delvine	0
Burrel	0
Bulqize	8.79
Bilisht	0
Berat	1.14
Ballsh	0

Value of chlorine (in mg/l) monitoring during - October 2013

- Number of days without Cl
- In levels 1-1.5 mg/l (per day)
- In levels 0.5-0.8mg/l (per day)
- In levels 0.1-0.3mg/l (per day)
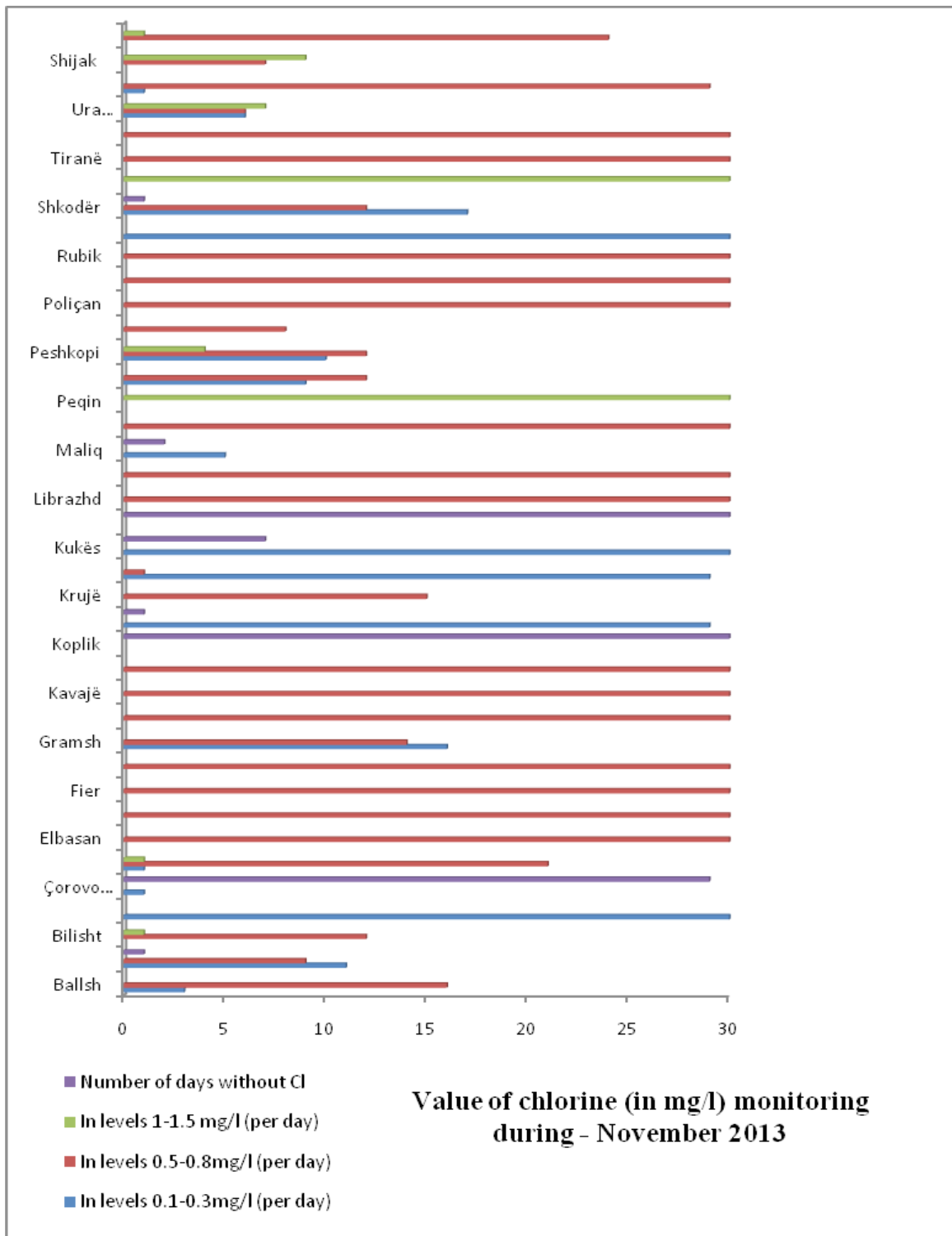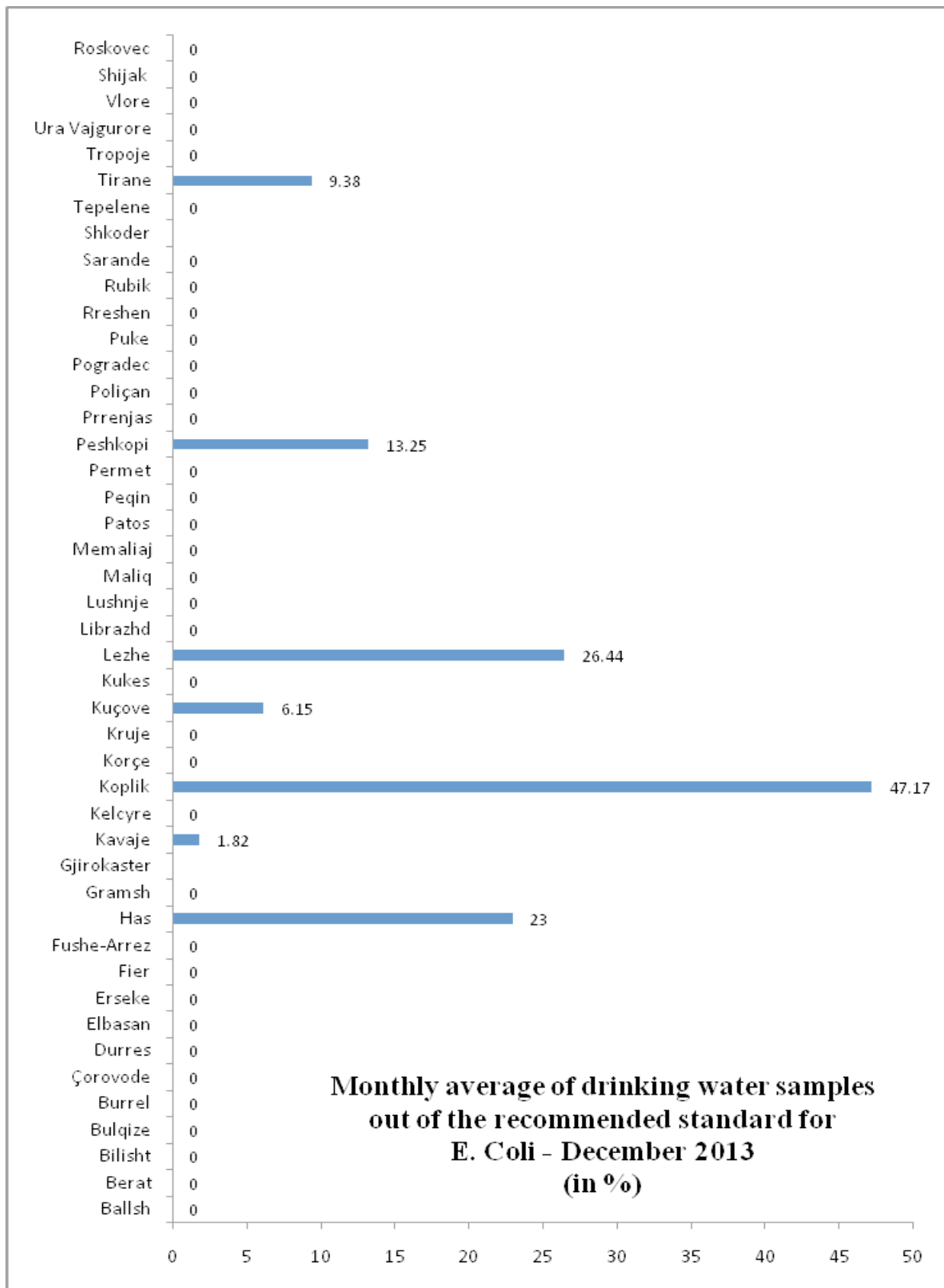
1. Water and Sanitation

- ➤ During the month of November 2013 have been observed considerable bacterial contaminations, from the reported databases, mainly in the cities of Tirana, Koplik, Has, Kuçova, Lezha, Peshkopia, Berat, Shkodra and Tropoja. Slight bacterial contaminations have been observed in the water supplies of cities, such as Vlora and Ura-Vajgurore. Moreover, from the databases of chlorine residual, has been resulted that the cities with bacterial contamination during all month long, have had lower chlorine, or the chlorine has been resulted in zero mg/l levels.
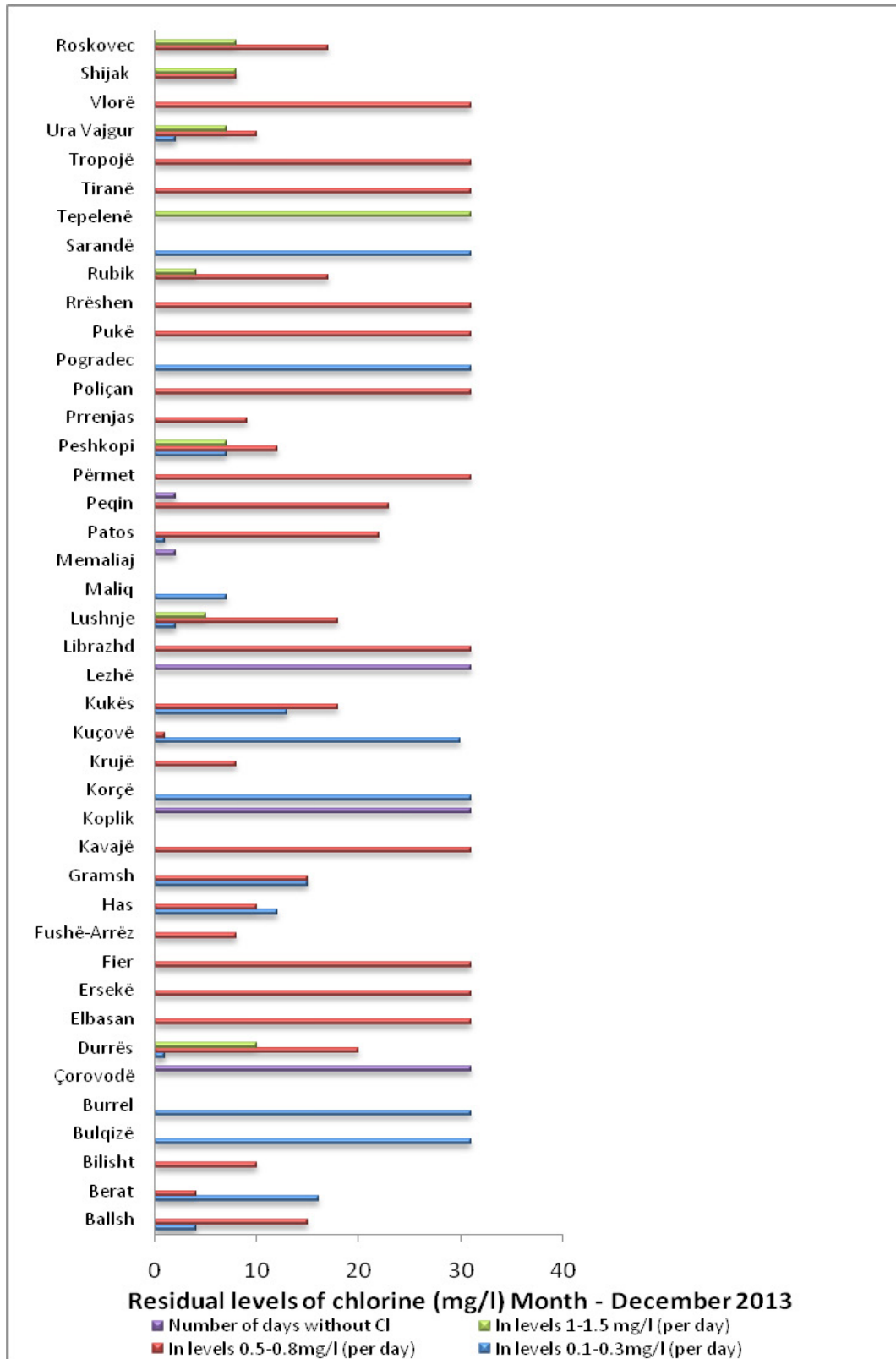

Value of chlorine (in mg/l) monitoring during – November 2013

- ■ Number of days without Cl
- ■ In levels 1-1.5 mg/l (per day)
- ■ In levels 0.5-0.8mg/l (per day)
- ■ In levels 0.1-0.3mg/l (per day)

1. Water and Sanitation

➢ For the month of December, the delivered reports from localities in the microbiological aspect and the chlorine aspect, have shown bacterial contaminations in the city of Tirana, Peshkopia, Lezha, Kuçova, Koplik and Has. On the contrary, the results from chlorine databases have shown low levels of chlorine in the water supplies of cities such as Bulqiza, Burrel, and Saranda. There have been reported some cities without chlorine, such as Çorovoda, Koplik, and Lezha. (See the graphics below).

City	Value
Roskovec	0
Shijak	0
Vlore	0
Ura Vajgurore	0
Tropoje	0
Tirane	9.38
Tepelene	0
Shkoder	
Sarande	0
Rubik	0
Rreshen	0
Puke	0
Pogradec	0
Poliçan	0
Prrenjas	0
Peshkopi	13.25
Permet	0
Peqin	0
Patos	0
Memaliaj	0
Maliq	0
Lushnje	0
Librazhd	0
Lezhe	26.44
Kukes	0
Kuçove	6.15
Kruje	0
Korçe	0
Koplik	47.17
Kelcyre	0
Kavaje	1.82
Gjirokaster	
Gramsh	0
Has	23
Fushe-Arrez	0
Fier	0
Erseke	0
Elbasan	0
Durres	0
Çorovode	0
Burrel	0
Bulqize	0
Bilisht	0
Berat	0
Ballsh	0

Monthly average of drinking water samples out of the recommended standard for E. Coli – December 2013 (in %)

1. Water and Sanitation

Residual levels of chlorine (mg/l) Month - December 2013
- Number of days without Cl
- In levels 1-1.5 mg/l (per day)
- In levels 0.5-0.8mg/l (per day)
- In levels 0.1-0.3mg/l (per day)

1. Water and Sanitation

Conclusions and Recommendations

There are a number of factors that influence water consumption, such as:

- Amortization of inner system of water supply,

- The interventions without any criteria on water supply,

- When the consuming water is without chlorine from the Water Supplies, or in the cases when chlorination is not enough and in low levels of chlorine residual.

- Therefore we recommend inspection and intervention in advance for tthe Water Supplies in order to distinguish the defects of water supply and to make their eliminations.

- Also, on their part, there should be continuous communication with the State Sanitary Inspectorate of the locality, over the possible defects of the system.

- The disinfestations of consuming water should be made in continuation, from the part of Water Supply, according to the given recommendations, in order to supply all the population with secure consumption of water.

2. Electronic Vaccination System

On the electronic vaccination system and its advantages

Erida Nelaj, Artan Mesi, Iria Preza, Arben Xhabija

Albania has a very good vaccination program, which has insured over several decades high vaccination coverage. There are several reasons for this success, but one of them is the fact that the vaccinators are capable to provide detailed information in regards to target population, as well as for the other fact that children are registered in the National Immunization Registry without waiting to be enrolled in National Civil Services Registry, by giving them the opportunity to follow in punctuality the vaccination schedule. However, the program needs to meet several changes and challenges in order to keep the achieved results until now.

Migrations in country and the urbanization have made the management of the essential registers of each health post, by raising doubts in regards to the denominator (population target). The reporting system based on paper overburdens with more work the vaccinators, while no valuable information is reported for any possible intervention. (In a coverage reported at 95%, it is not known who are the non-vaccinated people or the reasons for non-vaccination in the other 5% unreported for).

In order to respond to these challenges and to raise the immunization system in a higher level, Ministry of Health and Institute of Public Health has collaborated with the project OPTIMIZE (WHO & PATH) for the implementation of a immunization information system, which is focused on individual data on vaccination and vaccine management of all levels.

The main idea of Vaccination Information System (VIS) is to digitalize all of the data present in the program of immunization/vaccination and to make ready the final information online, in order to be worth it for the improvement of program management in all levels.
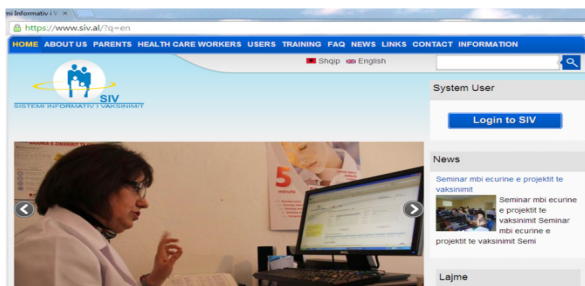

Figure 1. The main page of the Vaccination Information System (VIS).

This system has been piloted in the district of Shkodra, where actually are working in the system 24 vaccinators who haves started to enter the data for parents/guardians and their children.
Our request has been for children born in 2011, but there are vaccinators that have seen the easiness of data-entry, the easiness of monthly planning and the easiness of the monthly calculations for the needed vaccines, through the system, they have started to enter the data for the children born in previous years, giving us a considerable amount of children numbers increase. In order to enter in the main page (Fig. 1), you need to click: www.siv.al

Information given in this page is open to all. In there, everyone could see national immunization schedule, or he/she can read more on the diseases prevented by vaccines. In this page have been listed several questions regarding diseases and vaccines, where you can find the corresponding answers.
A VIS user, that is employed at IPH, or DPH as a vaccinator when entering in the system has to use the username given to him and his password.

2. Electronic Vaccination System

As far as it belongs to the vaccinators, they work in the menu levels only with 5 menus that are:

1. **Person**, which serves to register, list or find every person ready-valued for VIS. The Person could be a parent/guardian or child.
2. **Vaccination**, which serves to find the planned meetings for every child; monthly vaccination schedule for every health post; essential vaccination book-register and the vaccination card for every child, where any information is filled in regards to every given vaccine.
3. **Stock Management**, through which is made possible to manage quantities of vaccines and vaccinators need, receive and use.
4. **Cold Chain**, in which is documented the situation of refrigerating equipment and its monitored temperatures every month.
5. **Reports**, this is where vaccinators and all levels above them can receive in an automatic way the assessment on their vaccine coverage or the children cohort to birth as registered in their corresponding centers.

How has the work of health employees changed?

Data about newborns and their caretakers (typically parents or guardians) is now registered in a central database. As soon as children are entered into the system, a schedule of their future immunization appointments is generated. When appointments are due, the children are automatically included in the monthly plan of the health center responsible for the child. This removes the need for nurses to review their immunization registries to find children due to be vaccinated. Instead, nurses can use the monthly plan to organize their work. As caretaker details are stored by IIS, nurses can send text messages or call them to confirm their appointments. The monthly plan also calculates the total number of vaccine doses required; this information helps nurses determine the right vaccine quantities to order.

Child: Leandra
Health Center: Hajmel

Vaccine	Schedule	Preliminary Dates
HepB-Hib-DTP - 1	2 Muaj	07/06/2012
OPV - 1	2 Muaj	07/06/2012
Pneumo - 1	2 Muaj	07/06/2012
Pneumo - 2	4 Muaj	07/08/2012
HepB-Hib-DTP - 2	4 Muaj	07/08/2012
OPV - 2	4 Muaj	07/08/2012
Pneumo - 3	6 Muaj	07/10/2012
HepB-Hib-DTP - 3	6 Muaj	07/10/2012
OPV - 3	6 Muaj	07/10/2012
MMR - 1	1 Vjec	07/04/2013
DTP - R1	2 Vjec	07/04/2014
OPV - R1	2 Vjec	07/04/2014
MMR - R1	5 Vjec	07/04/2017
OPV - R2	6 Vjec	07/04/2018
DT - R2	6 Vjec	07/04/2018

Child	Caretaker	Vaccine	Vaccine Schedule	Preliminary Date	SMS	Data e Vaksinimit
Ariel Ibrahimi	Kujtim Ibrahimi	Hep-B-1	Ne Lindje	15/06/2004	✚	
Ariel Ibrahimi	Kujtim Ibrahimi	BCG	Ne Lindje	15/06/2004	✚	
Ariel Ibrahimi	Kujtim Ibrahimi	DTP-1	2 Muaj	15/08/2004	✚	
Ariel Ibrahimi	Kujtim Ibrahimi	Hep-B-2	2 Muaj	15/08/2004	✚	
Ariel Ibrahimi	Kujtim Ibrahimi	OPV - 1	2 Muaj	15/08/2004	✚	
Ariel Ibrahimi	Kujtim Ibrahimi	DTP-2	4 Muaj	15/10/2004	✚	
Ariel Ibrahimi	Kujtim Ibrahimi	Hep-B-3	6 Muaj	15/12/2004	✚	
Ariel Ibrahimi	Kujtim Ibrahimi	DTP-3	6 Muaj	15/12/2004	✚	
Ariel Ibrahimi	Kujtim Ibrahimi	FR-1	1 Vjec	15/06/2005	✚	
Ariel Ibrahimi	Kujtim Ibrahimi	DTP - R1	2 Vjec	15/06/2006	✚	

Vaccine Doses Required

Vaccine Code	Quantity
BCG	1
DT	2

Child	Caretaker	Vaccine	Vaccine Schedule	Preliminary Date	SMS	Data e Vaksinimit	Loti i Vaksines
Ariel Ibrahimi	Kujtim Ibrahimi	Hep-B-1	Ne Lindje	15/06/2004	✚		-----
Ariel Ibrahimi	Kujtim Ibrahimi	BCG	Ne Lindje	15/06/2004	✚		-----
Ariel Ibrahimi	Kujtim Ibrahimi	DTP-1	2 Muaj	15/08/2004	✚		-----
Ariel Ibrahimi	Kujtim Ibrahimi	Hep-B-2	2 Muaj	15/08/2004	✚		-----
Ariel Ibrahimi	Kujtim Ibrahimi	OPV - 1	2 Muaj	15/08/2004	✚		-----
Ariel Ibrahimi	Kujtim Ibrahimi	DTP-2	4 Muaj	15/10/2004	✚		-----
Ariel Ibrahimi	Kujtim Ibrahimi	Hep-B-3	6 Muaj	15/12/2004	✚		-----
Ariel Ibrahimi	Kujtim Ibrahimi	DTP-3	6 Muaj	15/12/2004	✚		-----
Ariel Ibrahimi	Kujtim Ibrahimi	FR-1	1 Vjec	15/06/2005	✚		-----
Ariel Ibrahimi	Kujtim Ibrahimi	DTP - R1	2 Vjec	15/06/2006	✚		-----

Vaccine Doses Required

Vaccine Code	Quantity
BCG	1
DT	2
DTP	35
DTPb	4
FR	2
Hep-B	3
HepB-Hib-DTP	30
MMR	36
OPV	70
Pneumo	30

A child's immunization schedule
IIS automatically generates the future immunization appointments for newborns entered into the system.

Planning the month's vaccinations
A nurse examines her immunization registers to determine which children need to be vaccinated the following month.

Determining how much vaccine is required
The monthly plan groups all appointments for a nurse that month. The bottom box shows the vaccines that will be needed.

As children are vaccinated, nurses with access to a computer can update their immunization status directly into the monthly plan by completing the vaccination date and the vaccine lot they used.

2. Electronic Vaccination System

Because IIS is also used for stock management, the system can show the lots every health center should have in store and deduct their balance every time a nurse uses a certain lot for immunization. The district head of vaccinators also prints out the monthly plans for every health center and health post and distributes them to nurses together with the vaccines. In this way, nurses who do not have access to a computer can use the paper plan to organize their work and report back on the vaccinations they have administered by making note of the vaccination date and the lot they used in the columns provided on the form. Some nurses also started testing a mobile phone application that offers most of the functionality of the web-based system.Of course, not every vaccination can be planned for and so IIS enables nurses to retrieve and update the vaccination records of any child in the system, for example using the 10-digit national identification code of the mother or the child's name or date of birth. Children who move within Albania can thus be reassigned to their new health center.

Distributing vaccines and monthly plans
A commune health center nurse receives his vaccines for the month from the district supervisor, together with the monthly plans for all the villages in his area.

Distributing vaccines and a monthly plan
Together with the required vaccines, the health center nurse passes on a copy of the monthly plan to a village health post nurse.

Monthly report printouts
The printout of the monthly plan allows the nurse to record the date and vaccine lot used for each vaccination.

Benefits

IIS simplifies the monthly planning and reporting required of nurses, but there are other benefits to tracking the immunization status of individual children. Firstly, IIS not only generates coverage reports automatically, it is also able to show exactly which children have been registered but have not yet received all their doses. This enables nurses to actively look for and quickly identify these defaulters. Timeliness of vaccinations has already increased in the IIS pilot district.

Calculating coverage
The immunization status of children in any given cohort can be calculated automatically.

Identifying defaulters
Children who miss a certain vaccine dose can be easily identified.

Ensuring that all children are vaccinated
A "patronage nurse" visits the home of a child to remind the parent of an upcoming or missed vaccination appointment.

Secondly, coverage rates are now more accurate, with previous rates shown to be implausibly high. More importantly, analysis of immunization records reveals in more detail the reasons why some children are not being immunized, which community they belong to, and to what extent factors like parental refusal play a role (reasons for refusing a vaccination can be entered into IIS).

Thirdly, IIS manages the stock of vaccines and consumables, which allows the Ministry of Health to monitor levels of buffer stock, expiry dates, and distribution and usage of ever more expensive vaccines. Because IIS can calculate how many children need to be vaccinated each month, the quantities of vaccine that need to be distributed and kept in stock can be kept to a minimum. By linking the vaccine lots to individual child records, lots can be traced through the stores and eventually to any children who have received a dose from a particular lot. This is essential for issues of vaccine safety.

Finally, there are also benefits for parents, as they are able to access the system themselves to download a vaccination certificate for their child, required for school and visa applications.

Evaluation of reports in the district of Shkodra

One of the reports that ease the managerial work is that of the children who actually live in this district. In Table 1, are shown children born in the corresponding months, their total, moved and dead. In Table 2, are shown the number of children born in years 2005-2013.

Table 1. Cohort of children born during the year 2013, in district of Shkodra.

Health Center	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Moved	Dead
DSHP Shkoder	150	145	133	119	139	150	202	164	190	160	160	130	1842	21	5

Table 2. Cohort of children actually living in the district of Shkodra during the years 2005-2013.

Health Center	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
DSHP Shkoder	1239	1587	1496	1596	1796	1806	1740	1939	1842	15041

Another important report is that of the vaccine coverage, where you can see from Table 3, the values of this coverage surpass 95% of the vaccinated children.

In order to see the quantity of vaccines in the district we refer to the management menu of the stock, as you see in Table 4, the data is given total quantity for each of the vaccines. If needed in lot group base number, the system offers this possibility.

Table 3. Vaccine coverage for the first 9-months in 2013

Vaccine	In Plan	Immunized	Delayed	Coverage
BCG	1392	1376	36	98.85 %
HepB - 0	1392	1370	17	98.42 %
DTP-HepB-Hib - 1	1341	1328	42	99.03 %
DTP-HepB-Hib - 2	1360	1338	33	98.38 %
DTP-HepB-Hib - 3	1441	1409	33	97.78 %
OPV - 1	1341	1329	42	99.11 %
OPV - 2	1360	1337	33	98.31 %
OPV - 3	1440	1408	31	97.78 %
MMR - 1	1439	1403	59	97.50 %
DTP - R1	1251	1218	89	97.36 %
OPV - R1	1253	1220	88	97.37 %
MMR - R1	1206	1158	109	96.02 %
DT - R2	1120	1079	116	96.34 %
OPV - R2	1121	1083	113	96.61 %
Td - R3	538	513	44	95.35 %
Pneumo - 1	1341	1328	46	99.03 %
Pneumo - 2	1351	1330	31	98.45 %
Pneumo - 3	1427	1397	33	97.90 %

Table 4. Actual vaccine quantity in stock.

Vaccine	Actual Quantity (doses)
BCG	2900
DT	1423
DTP	590
DTP-HepB-Hib	946
Ethet e Verdha	0
HepB	839
Meningokok	0
MMR	1126
OPV	7097
Pneumo	923
S.Antirabik	0
Td	3308
TT	2890

2. Electronic Vaccination System

How will this system continue to work?

In support of the Ministry of Health and Ministry of Innovation and Public Administration, Institute of Public Health will continue throughout the year 2014 to expand this system in several districts of Albania and gradually through the coming years we will cover all the districts of Albania.

3. Syphilis Epidemiology

Overview of Syphilis Epidemiology in Albania

Adela Vasili, Dhurata Torba, Silva Bino

Department of Epidemiology and Infectious Disease Control, IPH

Syphilis was eradicated in Albania. After continued efforts to eradicate syphilis in the country, from 1972 on, the number of syphilis cases in Albania was zero. For more than 20 years, syphilis was not found in our country even though during this time the screening of pregnant women was mandatory. The first cases of the disease appeared in the early '90s.

Based on the data collected by IPH, up until **November 2013**, 440 cases of syphilis have been recorded. Current data indicate an increase in the number of syphilis cases. During these years, there had been no cases of neonatal syphilis, until 2013 when the first two cases of this disease were recorded. The number of new cases reported in the two years **2012-2013** is double that of previous years, with **98** new cases recorded in 2012 and **84** new cases in 2013.

We must emphasize that these number are only the tip of the iceberg, as they represent only the data collected by the National Center for Blood Transfusion Control (NCBTC), the Infective Disease Services at TUHC (Tirana University Hospital Center), and voluntary testing at IPH or at the Voluntary Test and Control Centers (VTCC) of the Regional Directorates of Public Health and of the Regional Health Authority (RHA) in Tirana. Some of the cases in the last two years displayed no clinical signs or symptoms at the time of diagnosis. As a result, they may have infected their partners during the time since their own infection.
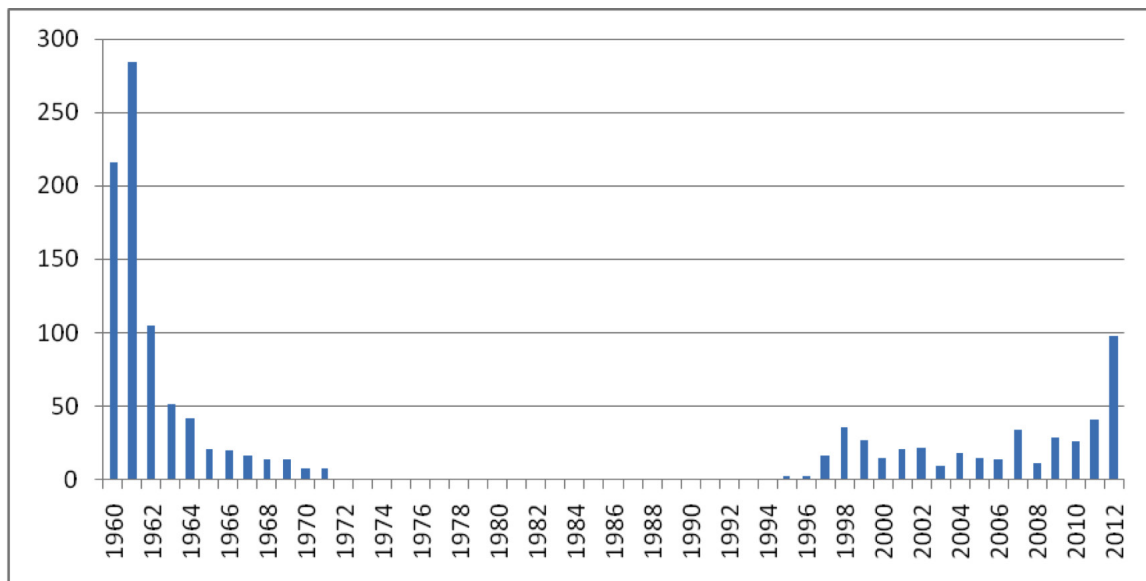
Graph 1: Distribution of Syphilis Cases by Year

Regarding the gender distribution of syphilis cases in this two-year period, **72% (131 cases)** were male and **28% (38 cases)** were female, with only a small number of cases for which gender was not reported.
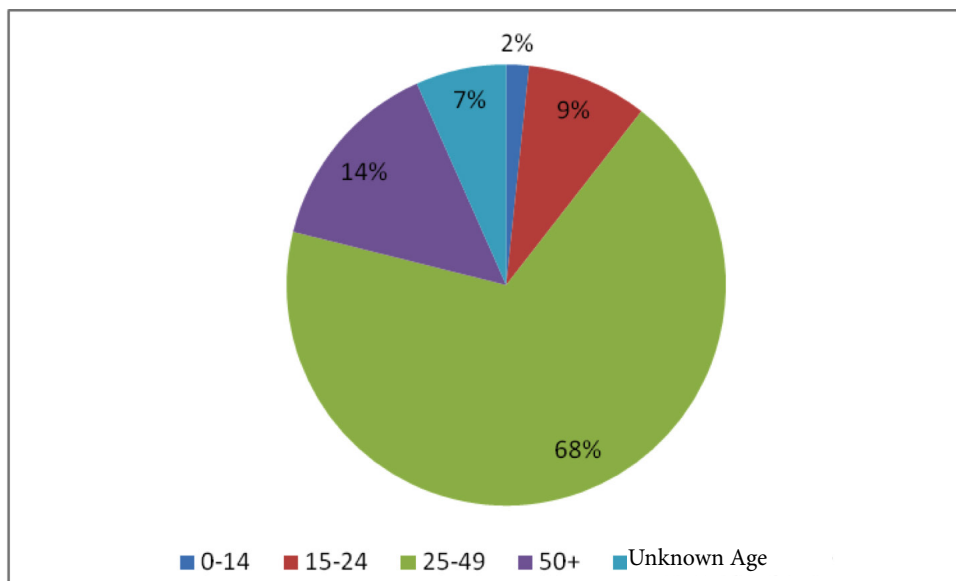
3. Syphilis Epidemiology
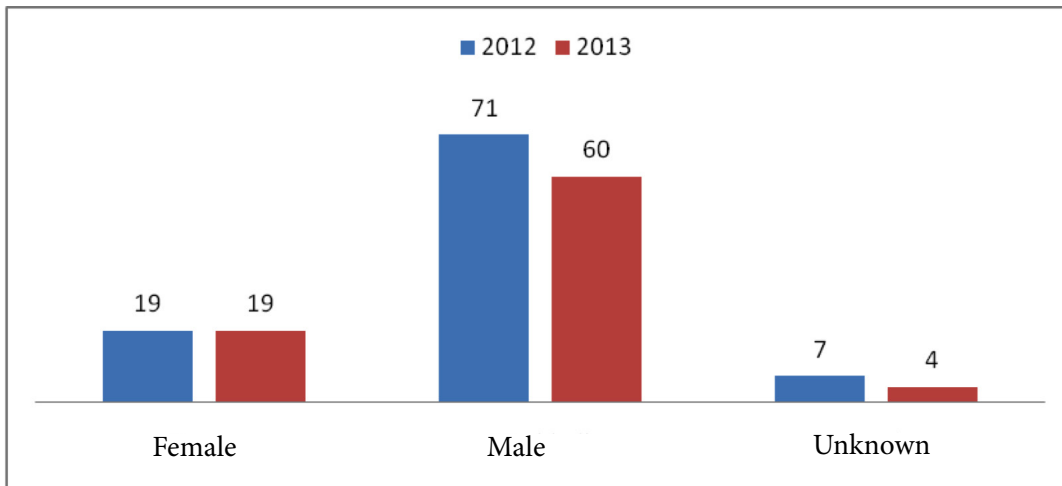
Graph 2: Gender Distribution of Syphilis Cases in 2012-November 2013 (Female, Male, Unknown)

Vertical transmission from infected mother to child reappeared in Albania for the first time in 2013, when the first two cases of congenital syphilis on two newborn babies of mothers with syphilis were recorded in Korçë and Tiranë, after its disappearance for several decades.

The analysis of recent cases by age group shows the following:

- Children, or the age group of 0-14 year-olds, comprise 2% of the cases;

- The age group of 15-24 comprises 9% of the cases, but shows an increasing trend in the number of youth infected with syphilis

- The age group of 25-49 comprises 68% of the reported cases;

- The age group of people over 50 comprises 14% of the syphilis cases.

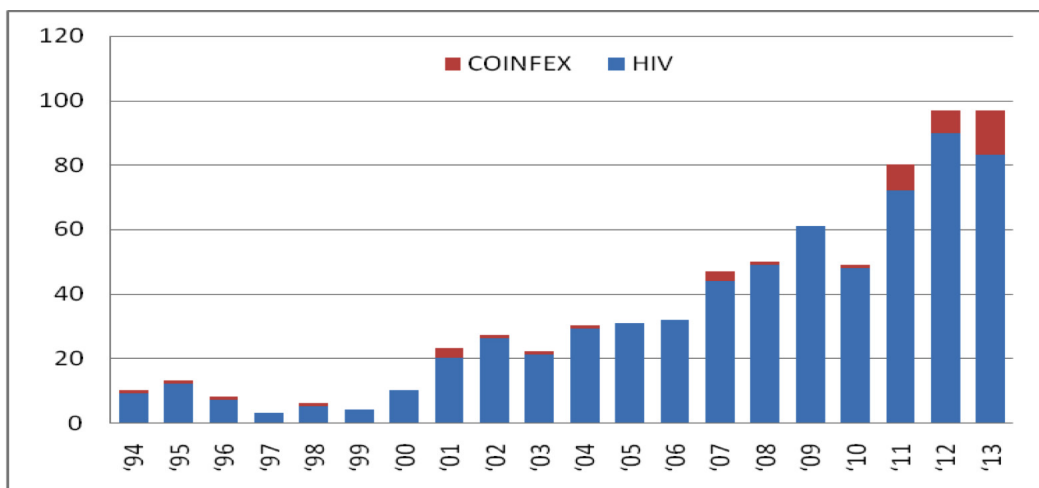*Graph 3: Age Distribution of Syphilis Cases*

3. Syphilis Epidemiology

The graph below (*Graph 4*) presents the referral sources by the various medical services for a clearer picture of the services that are offered and those that are lacking. Regarding the geographical distribution, the largest number of cases, namely 54% of them, has been reported in Tiranë, and following far behind are districts like Durrës, Elbasan, and Shkodër with 7.8%. At the same time, syphilis reappeared in Korçë and Lezhë. The map below shows the number of cases of syphilis reported in the period 1999-2013 in each district of the country. It is clear that syphilis is now present in the whole country, and mainly in the more densely populated urban areas like Tirana (*Map 1*). Several successive studies, like the Reproductive Health Study and the Demographic Study of Health, have shown that there is a lack of knowledge of the disease by health services personnel, which lowers timely identification and even the overall level of diagnosis.
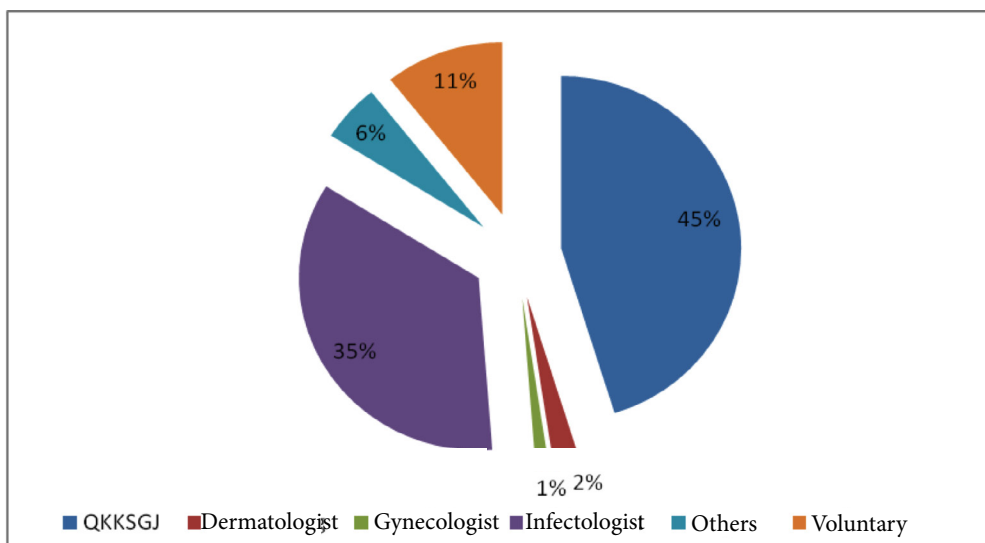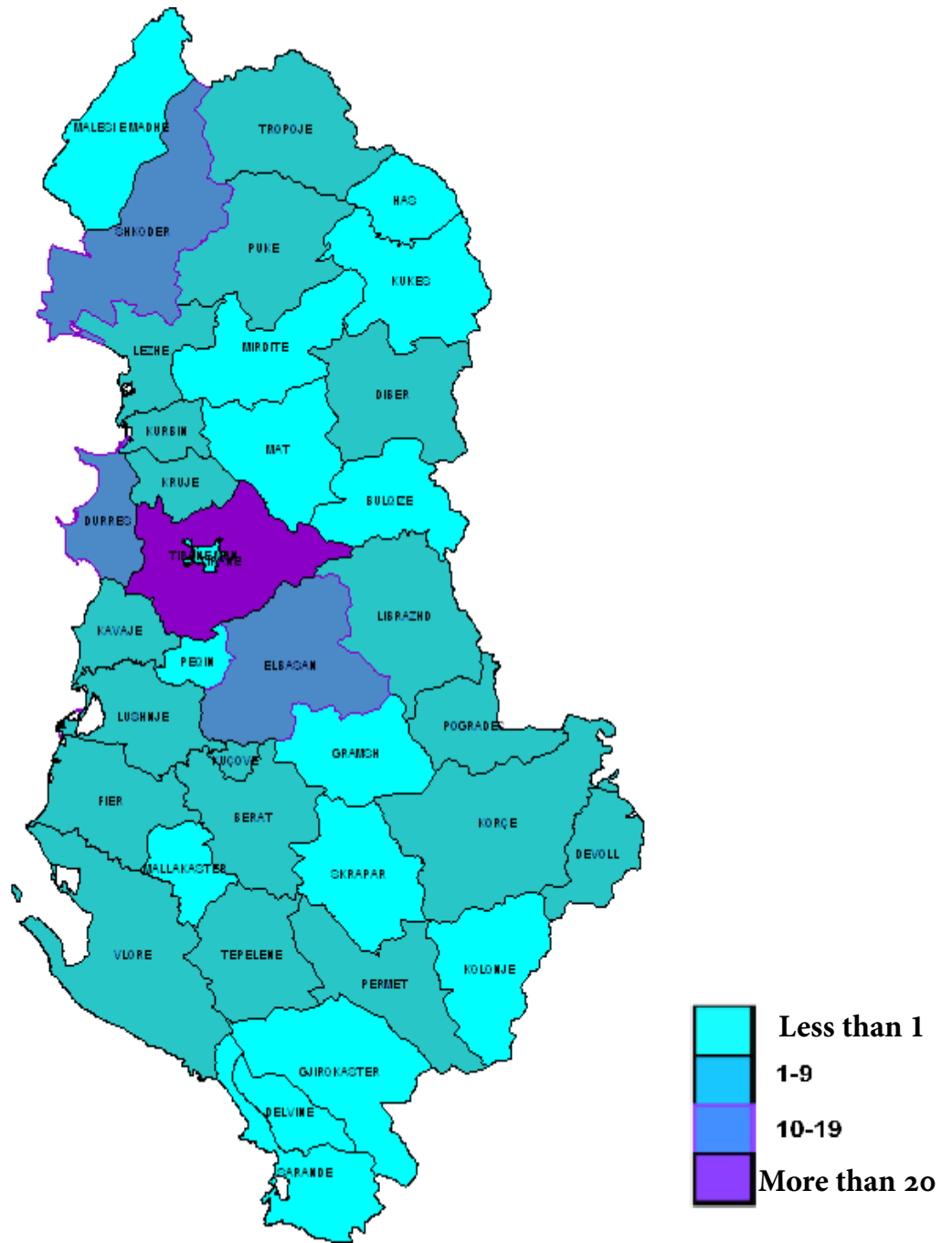

Graph 4: Distribution of Syphilis Cases by Referral Source

One thing to be noticed is that syphilis infection is accompanied in some cases by HIV/AIDS. Until now, there are 44 reported cases in which diagnosis of one infection led to the diagnosis of the other and this indicated the role that syphilis plays in spreading HIV infection.


Graph 5: Distribution by Year of HIV Cases as Co-infection with New Syphilis Cases

Map legend:
- Less than 1
- 1-9
- 10-19
- More than 20

Map 1: Distribution of Syphilis Cases by district

Graph 6 presents the combined number of syphilis and HIV cases by year and shows clearly the paralleled increasing trend of these two diseases, in particular with a faster increase in the last two years, where we have circulation of HIV within the country despite the fact that the prevalence of the latter remains low.

3. Syphilis Epidemiology
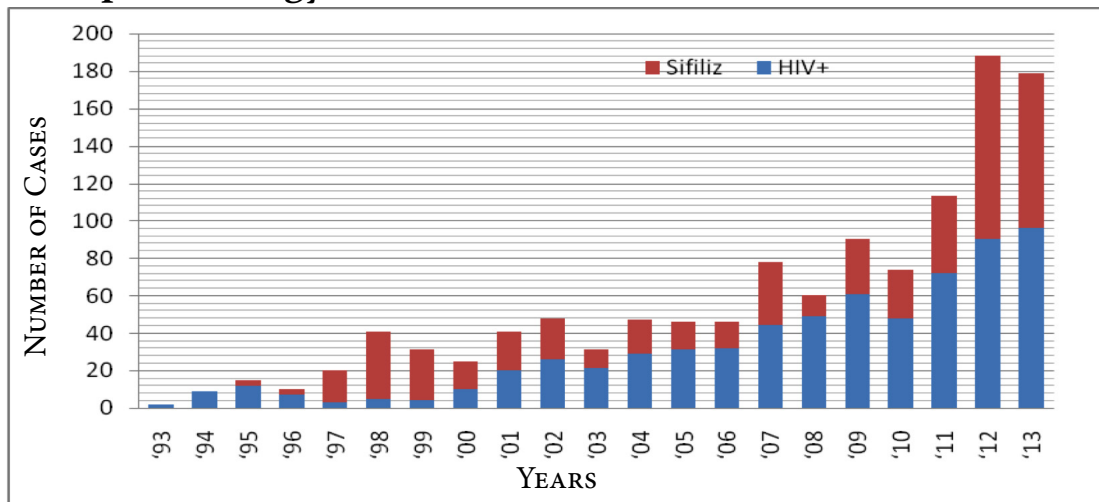
Graph 6: Distribution of Syphilis and HIV Cases by Year

Syphilis has also been diagnosed in three pregnant women, one of which was hospitalized in the Infectious Disease Hospital at TUHC (Tirana University Hospital Center).

The Behavioral and Biological Surveillance Survey (Bio-BSS) in the years 2005, 2008, and 2011 shows clearly the vulnerability of certain populations compared to the overall population.
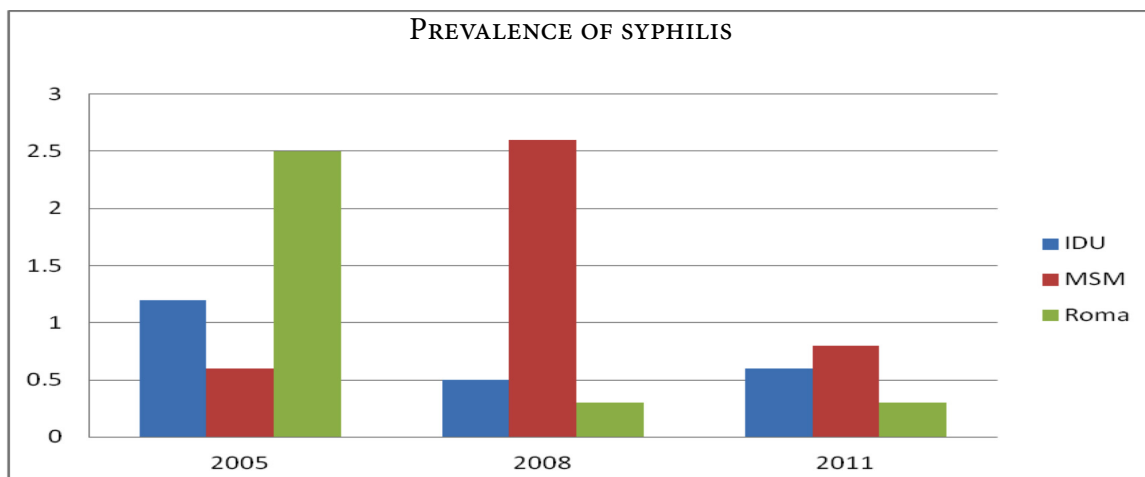
Graph 7: Prevalence of Syphilis according to Bio-BSS in injecting drug users (IDU), MSM, and the Roma population

Despite the limitations of these studies, it is clear that the prevalence of syphilis among MSM, IDU, and the Roma populations deserves special attention and further specific programs.

Although reporting syphilis is mandatory in Albania, this disease and other sexually transmitted diseases are frequently not reported, particularly by the private health system, but also by the public one. Since 2007 Albania has established a Clinical Surveillance (Syndromic Surveillance) System with the purpose of creating a clearer picture of STIs in the country. The system includes eight syndromes that reflect the main STIs according to their case definition reflected in the respective file, among which are genital ulcers. Still, this system has its own deficiencies due to the lack of STI awareness at all levels of healthcare despite the fact that STI care is part of the basic health services package offered in the primary healthcare.

number of cases
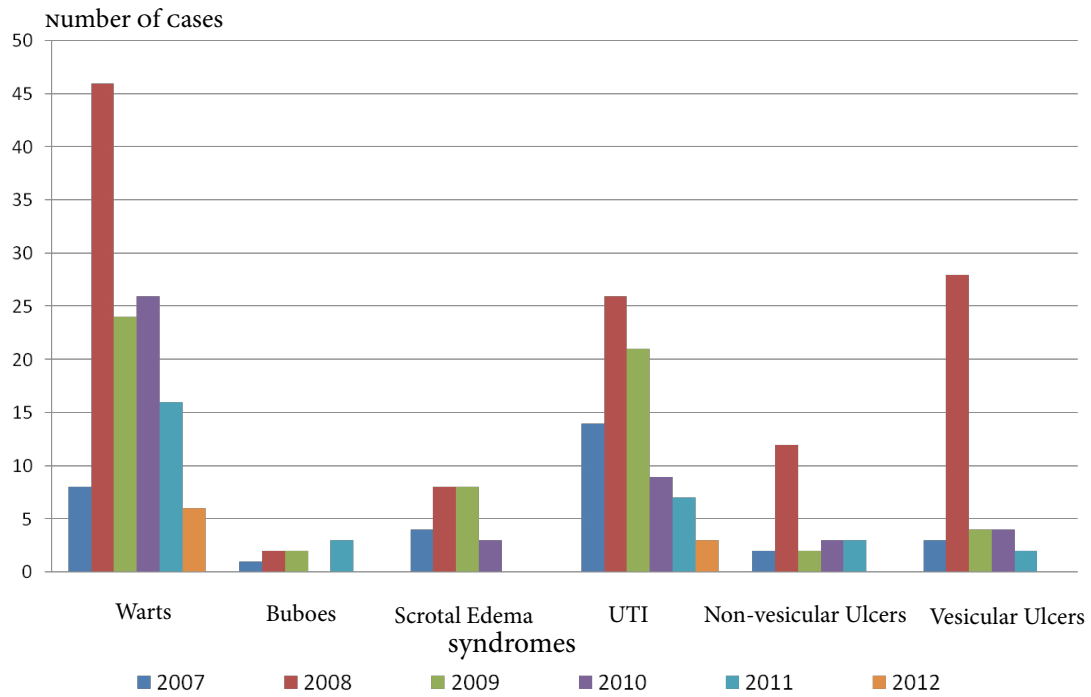
Graph 8: Distribution of Syndromes by Year
(Warts, Buboes, Scrotal Edema, UTI, Non-vesicular Ulcers, Vesicular Ulcers)

Syphilis Report Graphs

Year	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13
HIV+	2	9	12	7	3	5	4	10	20	26	21	29	31	32	44	49	61	48	72	90	96
Syphilis		1	31	31	170	361	270	150	213	221	101	181	150	140	343	111	290	261	418	987	8314

Distribution of HIV/AIDS cases by year, November 20

3. Syphilis Epidemiology

Reporting Year	Frequency	Percentage	Cumulative Percent
1994	1	2.30%	2.30%
1995	1	2.30%	4.50%
1996	1	2.30%	6.80%
1998	1	2.30%	9.10%
2001	3	6.80%	15.90%
2002	1	2.30%	18.20%
2003	1	2.30%	20.50%
2004	1	2.30%	22.70%
2007	3	6.80%	29.50%
2008	1	2.30%	31.80%
2010	1	2.30%	34.10%
2011	8	18.20%	52.30%
2012	7	15.90%	68.20%
2013	14	31.80%	100.00%
TOTAL	44	100%	100.00%

Year	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13
Hiv	9	12	7	3	5	4	10	20	26	21	29	31	32	44	49	61	48	72	90	83
Conifec-tion	1	1	1	0	1	0	0	3	1	1	1	0	0	3	1	0	1	8	7	14

Referral	%
Toxicology Clinic	0.20%
Clinics	57.50%
Epidemiological Follow-up	15.20%
NGO	0.30%
NBTC	10.80%
Voluntary	14.90%
Other	1.10%
Total	100.00%

3. Syphilis Epidemiology
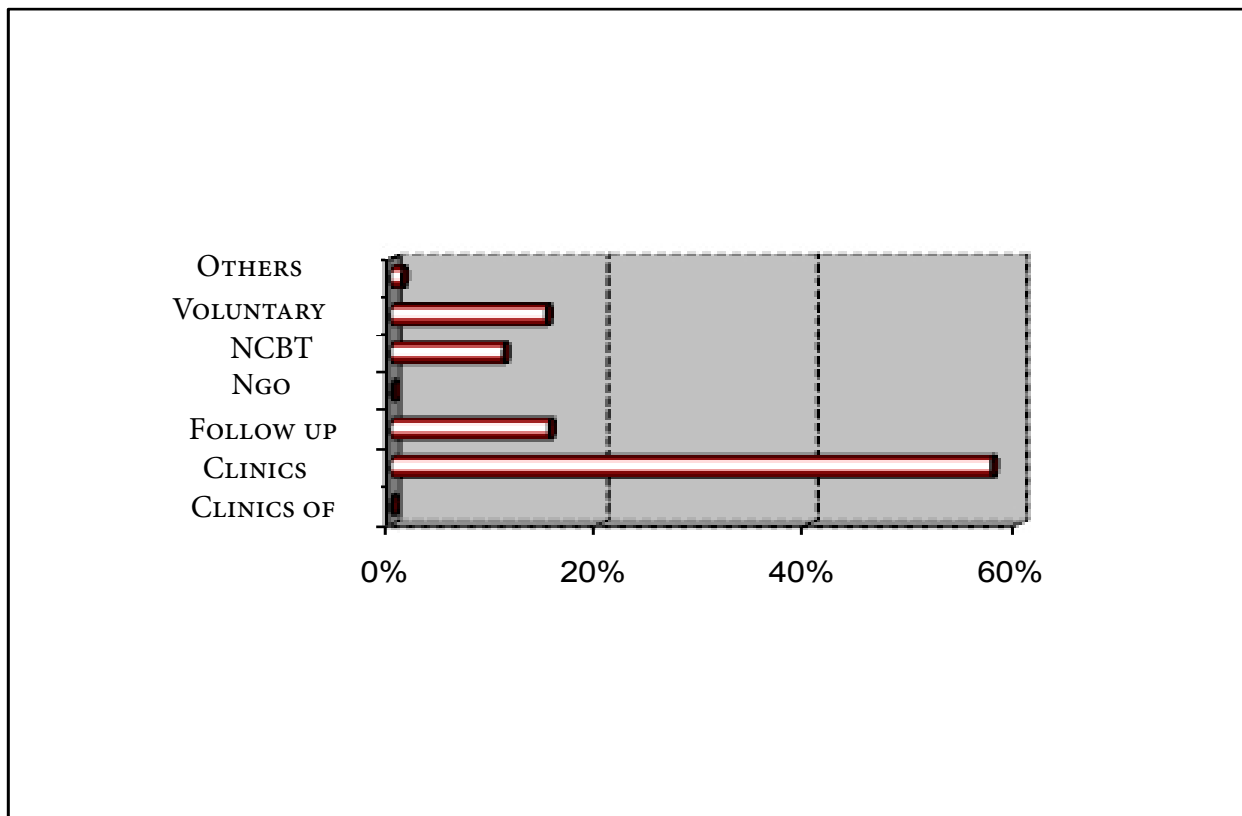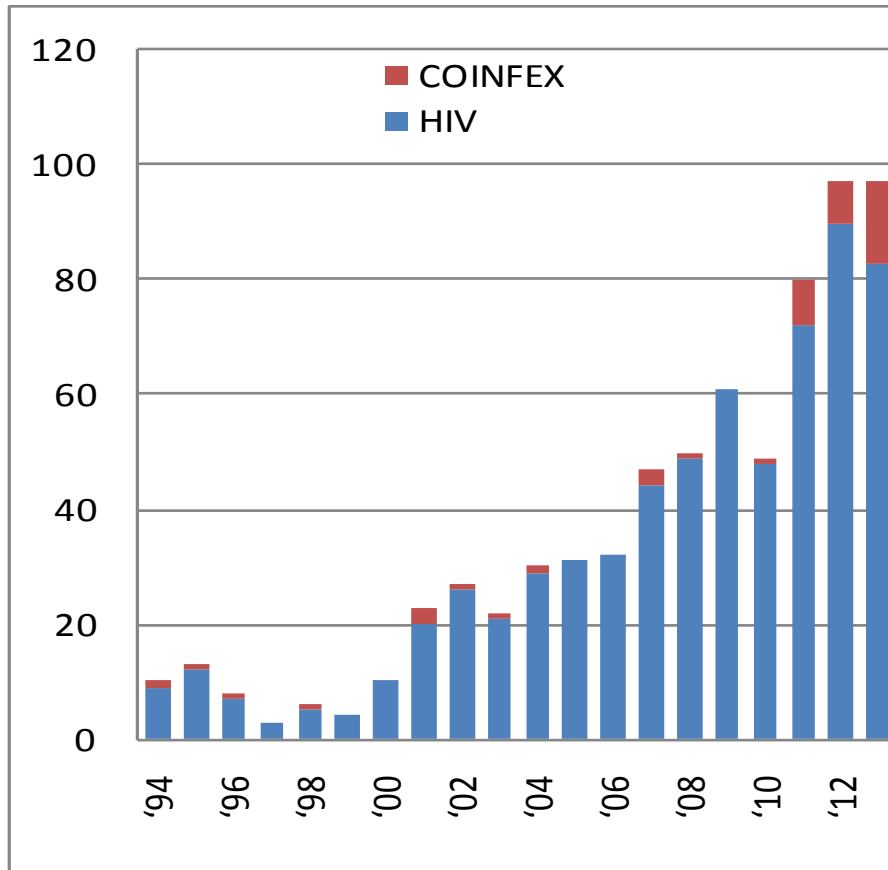
EUROPEAN HIV TESTING WEEK

Roland Bani, Redona Dudushi, Marjeta Dervishi
Department of Epidemiology and Infectious Disease Control, IPH

Transmission of HIV can be reduced through the promotion of behavioral change and the offer of psychosocial support to people with HIV/AIDS. Studies have shown that the programs of Volunteering Counseling and Testing (VCT) centers are effective in encouraging behavioral change, and one of the most effective strategies for the prevention of HIV infection in countries with limited resources.

Volunteering Counseling and Testing Centers for HIV are services that are offered for all people who want to know their status on HIV accompanied with a professional counseling to help the clients to become familiar with the testing results. Every person that suspects that it has been infected with HIV or thinks that has done a risky behavior needs to be addressed to take the HIV test near Volunteering Counseling and Testing Centers. Testing is the only way to know the health status in regards of having HIV. Knowing the health status in regards to HIV prevents the further spread and transmission of infection; it helps the client to be treated in efficient manner and improves the quality of life. Today, all over the country, there are 14 Volunteering Counseling and Testing Centers that function regularly. Despite the efforts of increasing the number of voluntary testing, still their numbers remain low. The increase in the number of testing for HIV requires the support of the existing centers, as well as the construction of other centers in every district of our country or even near the other health services, in order to improve access toward testing.

In 96 new cases diagnosed during the year 2013; 53 of them have been diagnosed in the stage of AIDS. A part of these patients may have been infected in years, without showing symptoms. As an outcome, these people may have infected, without knowing, even their partners during a relatively long period of time. The possible multiplying effect of this situation, if we take into consideration that each person may have had several partners, is very important and sheds light on the immediate need to diagnose the infection in its early stages.

European HIV testing week

The first European HIV testing week was held in all European countries from 22-29 November 2013. This was the week leading up to World AIDS Day on 1 December 2013. The ultimate goal of the European HIV testing week was to make more people aware of their HIV status and reduce late diagnosis by communicating the benefits of HIV testing. The focus for this first testing week was **Talk HIV/Test HIV.** It was introduced to support dialogue between all partners in order to encourage at risk individuals to ask for an HIV test and for more HIV tests to be offered to those at risk.

Testing week aimed to:

- Encourage people who could have been at risk of HIV to get a test
- Encourage healthcare professionals to offer an HIV test
- Make more policy makers aware of the socioeconomic benefits of HIV testing initiatives and how to evaluate HIV testing practices

4. European HIV Testing Week

Promoting regular voluntary HIV testing has many benefits to turn in routine, as many times as we have done a risky behavior, this brings early diagnosis that means:

- Less likely to pass on HIV infection to others if they are taking antiretroviral treatment and make lifestyle changes to prevent onward transmission.
- If the test is HIV positive, more likely to live a healthy life with a near normal life expectancy if timely treatment is initiated.
- Less costly for the healthcare system.

In contrast, late diagnosis brings:
- Suffer with health complications and have a poor life expectancy
- Have passed on HIV to others
- Cost more to treat.

During this week, the Institute of Public Health, Ministry of Health, National Program of HIV/AIDS in cooperation with Volunteering Counseling and Confidential Testing Centers in districts, with the Ministry of Education and support of United Nations organized several informational and awareness activities.

Since the prevention of HIV/AIDS in youth is one of the objectives of the National Strategy for Prevention of HIV/AIDS in Albania, as well as the fact that the group-age 16-24 years makes up 8.9% of the total cases with HIV in Albania, it was aimed that the promotional activities would have the main focus on youth.

In special way in university centers of 4 districts: Tirana (University Town), Vlora, Korca and Shkodra; in addition to promoting the regular HIV testing, it was made possible the offer of HIV testing. We preselected these four centers, keeping in mind the limited financial resources to support this activity.

Testing was offered and was done in proper environment inside the universities in accordance with the standards of counseling and testing.

A meeting with the epidemiologists and psychologists of this VCT centers was done prior the organization of these events. In the meeting it was discussed on the problems related to the functioning of VCT with the district representatives preselected and discussed in regards to organization of the activity and the way of how we offer regular testing and counseling for HIV. Taking into consideration the difficulties faced by the VCT Centers in the districts (observed in the meeting), in a special manner the absence of the diagnostic rapid test kits, and it was asked that the UN agencies could make possible to secure a quantity of 1000 diagnostic rapid test kits for HIV.

Diagnostic rapid test kits were ordered in accordance to the technical specifications needed by the Laboratory of Reference in the Institute of Public Health. Distribution of the kits was done as below: Tirana-250, Shkodra-150, Korca-150, and Vlora-150. An amount of 300 kits was needed by Ambulatory Clinic near the Department of Infectious Diseases, University Hospital Center (UHC) that over some

months had a shortage of them. During the European HIV testing week we did 404 consultations and regular voluntary testing for HIV/AIDS on university youth as in the following table.

Table 1: Testing done during the European HIV testing week.

Districts	Total	Female	Male
Tirana	217	136	80
Korca	50	21	29
Shkodra	35	25	10
Vlora	102	80	22
Total	404	262	141

Some photos that show our activities in these centers.

5. Abortion Report 2012

Analysis of The Abortion Surveillance System Data For The Year 2012

Alba Merdani, Dorina Çanaku, Ervin Toçi, Bajram Dedja

Department of Chronic Disease Epidemiology and Health Systems

This summary presents results from processing the files on abortion collected by the IPH (Institute of Public Health) from all districts of the country in **2012**, the fifth year of collecting data based on abortion filing. IPH, which oversees the work at the country level, has data on the number of abortions performed in each of the districts, their urban-rural distribution, as well as data related to the woman's residence, marital status, level of education, health insurance, employment, and other data related to the type of abortion and the method used.

In 2012, according to the data received from the Surveillance System (Maternity Hospitals in the districts and private clinics), 7846 abortions were recorded in Albania, 461 fewer than in 2011. In total, 5902 files were delivered to IPH from all the districts, representing a reporting level of 75.2% through the abortion filing. The ratio of abortions to 1000 live births for 2012 is 224.3, experiencing a decrease from 242.2 which was the ration for 2011. Abortions performed in the public sector comprise about 90% of the total number of abortions, with the remaining 10% in the private sector.

Content of The Abortion Filing Form

Based on the Guidance of the Ministry of Health on abortion reporting, the file must be completed for every termination of pregnancy and must be reported to the IPH by the District Inspector of Reproductive Health.

The accurate completion of all the sections of the form for reporting abortion is not only a methodology requirement for every maternity hospital or private clinic licensed for pregnancy termination, but also a legal obligation, to ensure appropriate information. To protect the confidentiality of the patient, the abortion file does not contain identity information (name).

The results of processing this information in the respective tables allow a deeper analysis of the phenomenon in its different aspects and over various time periods.

Comparison of Abortion Indicators in 2009, 2010, 2011, 2012

The abortion ratio (number of abortions for 1000 live births) has decreased from 270.2 in 2009 to 224.3 in 2012. Respectively, the ration of births to abortions has increased from 3.7 in 2009 to 4.5 in 2012.

A more detailed view of births and abortions in Albania is presented in the following table.

Table 1. Births and Abortions in Albania (2009-2010-2011).

Description	Year			
	2009	**2010**	**2011**	**2012**
Births	34,044	33,856	34,297	34,974
Abortions (count)	9,200	8,085	8,307	7,846
Abortions: per 1000 live births	270.2	238.8	242.2	224.3
Ratio: Births / Abortions	3.7 : 1	4.2 : 1	4.1 : 1	4.5 : 1

Note: Data on the total number of births provided by the Ministry of Health

5. Abortion Report 2012

The distribution by county shows that the ratio of abortions to live births is highest in the counties of Vlorë (317.6) and Tiranë (315.3), while the actual number of abortions is highest in the county of Tiranë with a total of 3,642 abortions. The counties with the lowest ratio of abortions (abortions/1000 births) are Kukës (59.5) and Elbasan (68.6).
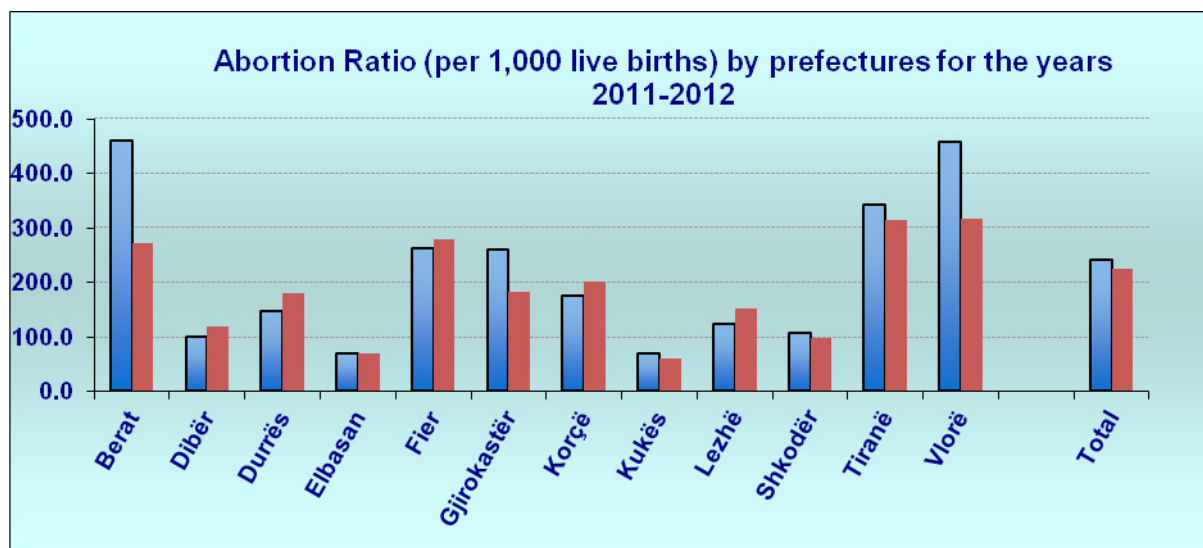

Figure 1. Abortions to 1000 live births by county for the years 2011–2012.

Comparing the surveillance system data over the years shows quite a noticeable increase of the number of spontaneous abortions over the number of abortions by request of the woman. In 1996, spontaneous abortions made up about 18.2% of all reported abortions, while in 2009, they made up they made up 48.1% of the total abortions, and in 2012, spontaneous abortions make up about 65.6% of the total number of abortions.

In fact, we think that such a high number of spontaneous abortions is not correct and it is necessary to investigation further the reasons for this artificial increase of spontaneous abortions over those by request of the woman.
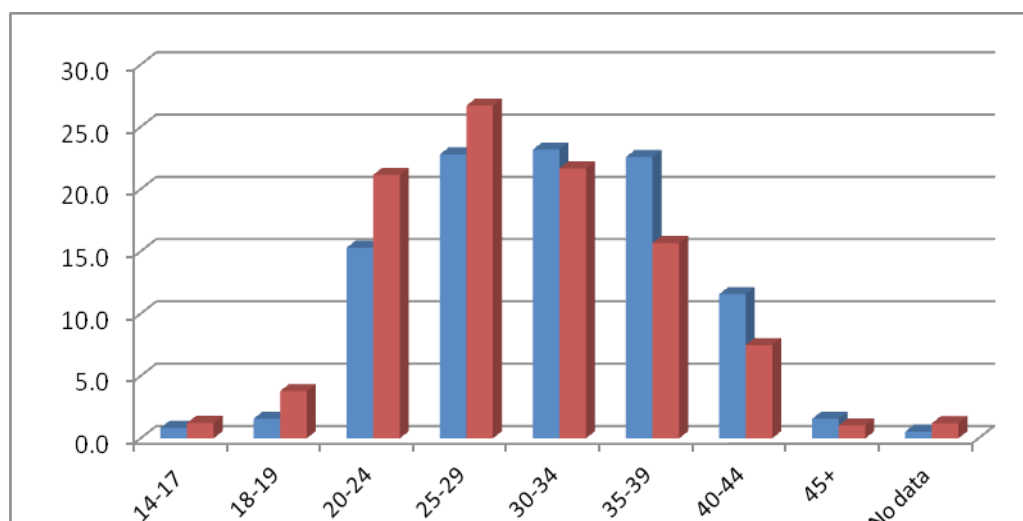
Figure 2. Abortions by Type (as % of the total) from 2009 to 2012.

5. Abortion Report 2012
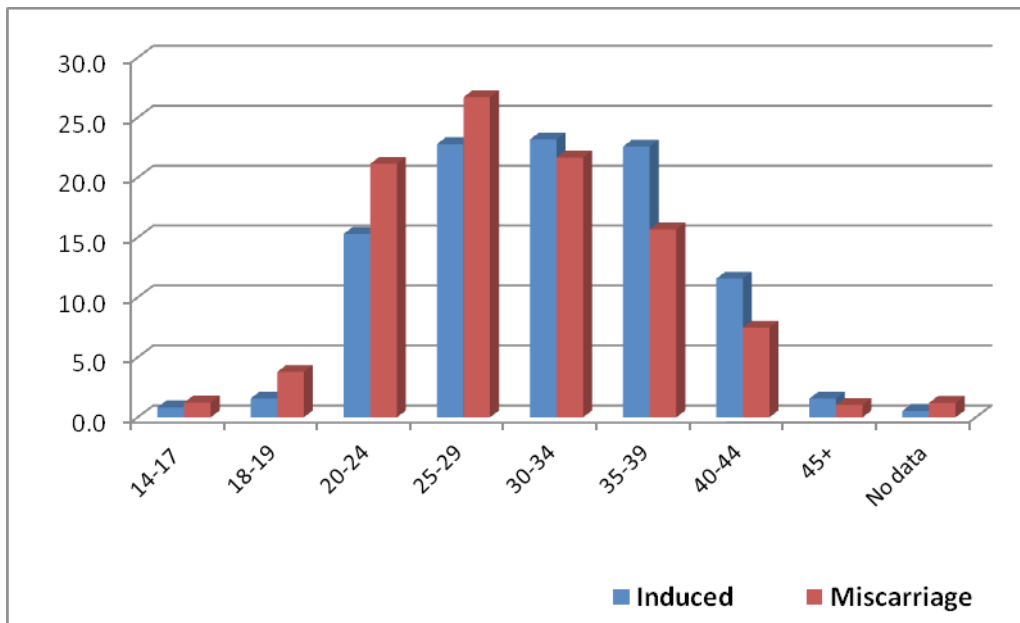
Figure 3. **Abortions by Age-group and Type (as % of the total) for 2012.**

It is apparent that the majority of the abortions are carried out in women between 20 and 34 years old, while teenage abortions (14-19 years old) make up about 5% of the total number of abortions.
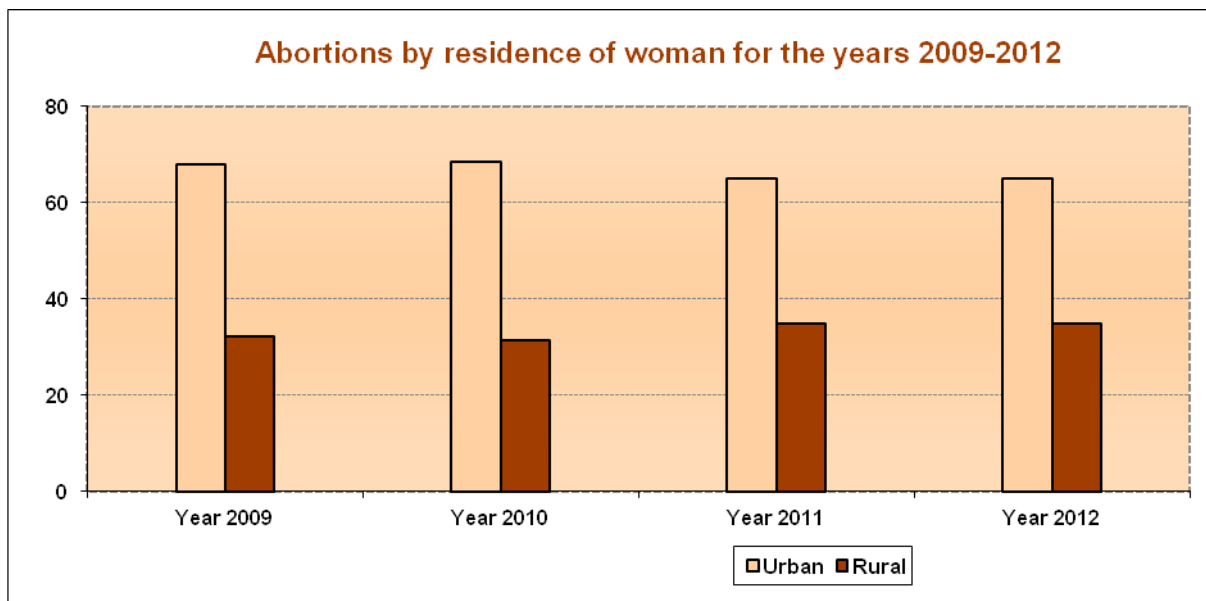
Figure 4. Abortions by Woman's Residence (as % of total) for the years 2009 – 2012.

From the above graph it is clear that abortions carried out by women in urban areas make up more than 60% of the total number of abortions (65.1% for the year 2012), thus giving a clear picture of the demographic transition taking place in the country.

5. Abortion Report 2012

Abortion Indicators for the Period 2009-2012

1. Percentage of Abortions by Type:

Type of Abortion	2009	2010	2011	2012
Induced	51.9	40	36.5	34.4
Miscarriage	48.1	60	63.5	65.6

2. Percentage of Abortions by Woman's Residence

| Residence	2009	2010	2011	2012
Urban	67.9	68.6	64.9	65.1
Rural	32.1	31.4	35.1	34.9

3. Percentage of Abortions by Level of Education

Education	2009	2010	2011	2012
Elementary	2.6	2.3	2.3	2.8
Primary	45.5	43.7	47.4	45.9
Secondary	36.3	36.8	35.8	34.9
University	14.8	15.6	13.5	14.8
Not Specified	0.8	1.6	1.0	1.6

4. Percentage of Abortions in the Public and Private Sectors

2009   Public Sector = 91.6 %   Private Sector = 8.4 %

2010   Public Sector = 90.5 %   Private Sector = 9.5 %

2011   Public Sector = 88.8 %   Private Sector = 11.2 %

2012   Public Sector = 90.0 %   Private Sector = 10.0 %

5. Percentage of Abortions by Employment Status

2009   21.6 % employed   78.1% unemployed

2010   22.2 % employed   77.4% unemployed

2011   18.0 % employed   81.2% unemployed

2012   19.0 % employed   80.8% unemployed

6. Percentage of Abortions by Insurance Status

2009   19.5 % insured   80.3% not insured

2010   20.1 % insured   79.4% not insured

2011   16.5% insured   83.0 % not insured

2012   19.8% insured   80.1% not insured

7. Percentage of Abortions by Marital Status

Year	Marital Status of the Woman				
	Single	Married	Divorced	Widowed	Not Reported
2009	6.2	92.5	0.8	0.0	0.4
2010	7.0	92.0	0.8	0.0	0.2
2011	4.7	93.8	0.7	0.1	0.7
2012	6.2	93.0	0.8	0.1	0.0

8. Ratio of Abortions to 1000 live births (Abortion Surveillance System, IPH)

Year	Ratio
2009	270.2
2010	238.8
2011	242.2
2012	224.3

9. Ratio of Births to Abortions

Year	Ratio
2009	3.7:1
2010	4.2:1
2011	4.1:1
2012	4.5:1

Albania Compared to Other Countries in the Region

The data below come from the European Health for All Database (HFA–DB), WHO Regional Office for Europe, which provides various health related indicators and thus allows a comparison of Albania to other countries.

Abortion Ratio: Number of Abortions per 1000 live births

Country	Year 2008	Year 2009	Year 2010	Year 2011
Albania	249.8	239.1	204.4	205.3
Bulgaria	470.9	416.7	417.8	447.7
Montenegro	141.2	111.6	114.6	114.1
Serbia	349.7	323.4	323.4	322.5
Slovenia	227.3	215.0	195.0	196.1
Macedonia	257.1	238.5	209.0	
Croatia	102.8	99.8	92.8	105.5
Italy	208.8	207.1	205.3	
European Region	307.7	290.8	273.9	274.3

6. Birth Defects Survey

Distribution of Birth Defects in Albania for the Year 2012

(Birth Defects Surveillance System)

Dorina Çanaku, Alba Merdani, Ervin Toçi, Eduard Kakarriqi

Department of Chronic Disease Epidemiology and Health Systems

In 2009, the Institute of Public Health (IPH), in cooperation with the Ministry of Health and with the support of the UNFPA, began the implementation of the Birth Defects Surveillance System (BDSS) as a first step towards the identification of the major birth defects occurring in Albania and the identification of potential genetic, environmental, nutritional and other factors related to birth defects. In early 2009, the Guidance of the Ministry of Health (date 5 March 2009, Nr. 157) established mandatory reporting of BD identified during the pregnancy, induced abortions, births, fetal deaths, and deaths of infants up to 2 years old, both by the public sector and by the private sector.

The progress of the Birth Defects Surveillance has achieved a satisfactory reporting level with the exception of the reporting by a few districts. Reporting centers include maternity and pediatric hospitals, primary care centers in all districts, as well as private hospitals that offer obstetric and gynecology services or pediatric services as licensed by the Ministry of Health. Every diagnosed birth defect is now reported with the official confidential form (4/1/ID-SH individual file).

After the implementation of the system, all obstetrician-gynecologists, pediatric doctors, and neonatal care doctors were trained in detail on BD reporting, and all healthcare reporting institutions in the country have been equipped with the Birth Defects Register.

After three years of effort, about 80% of the districts in the country are using the new reporting system and 50% have installed the electronic reporting system. Now, IPH (the Institute of Public Health) is the ultimate center for monitoring the functioning of BDSS. In addition, IPH collects the reporting files, analyses the data, creates reports, and distributes the findings.

The tables below present the main results regarding the distribution of reported birth defects in the country for the year 2012.

Table 1. Distribution of Birth Defects in Albania in 2012 by Body System Affected.

Body System according to International ICD9 Classification	Nr	%
Central Nervous System	29	5.8
Eye, Ear, Face, and Neck	19	3.8
Cardiovascular System	133	26.7
Respiratory System	6	1.2
Gastro-intestinal System and Oral Cavity	84	16.8
Genital System	76	15.2
Urinary System	7	1.4
Musculoskeletal System	84	16.8
Integument Defects	2	0.4
Chromosomal Defects	33	6.6
Unspecified Defects	26	5.2
Total	**499**	**100.0**

6. Birth Defects Survey

During **2012**, the systems most often affected by birth defects were the cardiovascular system, the gastrointestinal system, and the genital system.

The defects that occurred most frequently in 2012 were hypospadias; polydactylism; Down syndrome; ventricular septal defect; atresia and stenosis of the colon, rectum, and anal canal; and ASD (atrial septal defect).

Table 2. Distribution of Birth Defects in Albania by District for the year 2012.

District	Births	BD	BD/1000 live births
Berat	1522	15	9.9
Dibër	1541	5	3.2
Durrës	3468	35	10.1
Elbasan	3412	24	7.0
Fier	3611	38	10.5
Gjirokastër	511	10	19.6
Korçë	2185	18	8.2
Kukës	1143	10	8.7
Lezhë	1542	8	5.2
Shkodër	2368	4	1.7
Vlorë	1946	27	13.9
Tiranë	11725	305	26.0
Total	**34974**	**499**	**14.3**

The prevalence of birth defects in 2012 for the country as a whole was 14.3 per 1000 live births. Tiranë and Gjirokastër have the highest level of birth defects as a result of accurate and complete reporting from these regions. The regions of Shkodër, Dibër, Lezhë, and Elbasan appear to have the lowest level of birth defects, but incomplete reporting of birth defects by these regions has been observed over the years.

Table 3. Distribution of Birth Defects by Urban/Rural Area in Albania for the year 2012.

Residence: Urban/Rural	Nr	%
Urban	228	45.7
Rural	271	54.3
Total	**499**	**100.0**

A higher level of birth defects is observed in rural areas than in urban areas of the country.

Table 4. Distribution of Birth Defects by Gender for the year 2012.

Child Gender	Nr	%
Male	316	63.3
Female	177	35.5
Hermaphrodite	5	1.0
Not Reported	1	0.2
Total	**499**	**100.0**

About 2/3 of the cases of birth defects occur in male children.

Table 5. Distribution of Birth Defects by Mother's Employment Status for the year 2012.

Mother's Employment Status	Nr	%
Unemployed	304	60.9
Employed	111	22.2
Not Reported	84	16.8
Total	**499**	**100.0**

About 60% of the mothers of children with birth defects are unemployed.

Table 6. Distribution of Birth Defects by Mother's Education Level for the year 2012.

Mother's Education Level	Nr	%
No Schooling	7	1.4
Elementary Education	4	0.8
Primary Education	213	42.7
Secondary Education	131	26.3
Higher Education	61	12.2
Not Reported	83	16.6
Total	**499**	**100.0**

About 68% of the mothers of children with birth defects have elementary and secondary education.

Table 7. Distribution of Birth Defects by Mother's Age for the year 2012.

Mother's Age	Nr	%
15-19	17	3.4
20-24	118	23.6
25-29	143	28.7
30-34	80	16.0
35-39	42	8.4
40-44	14	2.8
>45	3	0.6
Not Reported	82	16.4
Total	**499**	**100.0**

About 70% of the mothers of children with birth defects belong to the most fertile reproductive age-group.

Table 8. Distribution of Birth Defects by Weight of the Baby for the year 2012.

Baby Weight	Nr	%
<1500 gram	23	4.6
1500 - 2500 gram	73	14.6
>2500 gram	395	79.2
Not Reported	8	1.6
Total	**499**	**100.0**

About 80% of children with birth defects had a birth weight above 2500 grams.

Table 9. Distribution of Birth Defects by Duration of Pregnancy for the year 2012.

Pregnancy Duration (in weeks)	Nr	%
<37 weeks	86	17.2
≥37 weeks	399	80.0
Not Reported	14	2.8
Total	**499**	**100.0**

The greater majority of children with birth defects were born on term, meaning during or after the 37th week of the pregnancy.

Birth defects are an important and sensitive problem of public health with extraordinary economic, emotional, and psychological impact on the family. A large number of BD risk factors have been identified, including the low level of socio-economic status, the advanced age of the mother, etc., but other factors that contribute to the development of birth defects remain unknown.

BDSS activities have the potential to inform, complete, and improve existing programs for the health of mothers and babies. Services and interventions for the prevention of birth defects and for health care in cases of such defects must be a part of the existing healthcare services, especially those services that deal with the health of mother and child.

Even though the reporting level for 2012 is at 80%, there are still problems with the trustworthiness of the diagnosis (suspected/confirmed), as well as with the completing of the forms and their delivery. Furthermore, continuous training of the staff of the Public Health Directorates in the districts is necessary, due to the high employee turnover in these institutions. Until now, the greatest challenge to the proper functioning of the BDSS lies in convincing the specialized doctors to complete the BD reporting forms, as they are often "too busy" to complete the file themselves and devolve this responsibility to the nursing staff or the employees of the statistics office.

FAMILY PLANNING

Logistic Management Information System (LMIS)

Miranda Hajdini, Eduard Kakarriqi
Department of Chronic Disease Epidemiology and Health Systems

Family planning in itself means the ability of the individual or couple to have the desired number of children and their interval between births.
Family planning can be defined as the entire tools and techniques that allow us to:

- Prevent the unwanted pregnancy
- Give birth to children when wanted
- Regulate the interval between births
- Plan births in the best moment in rapport with age
- Lower infant and mother mortality rate
- Permits the lowering of abortion numbers
- Reduces STD, HIV/AIDS.

The Purpose of Family Planning (FP)

It improves the health and the well-being of individuals and families. Family planning is one the best investments and cheaper to achieve the health and the well-being of women, families, society. Family planning has its own influence in the reproductive health, since it acts to protect:

- **The health of the mother**
- **The health of the child**

Currently the family planning service or their modern methods are offered in three sectors:

- **Public Sector**
- **Social Marketing**
- **Private Sector**

Currently in the public sector are offered 4 types of methods, 2 are pills: microgynon (combined oral contraceptive pill--COC) and microlut (progesterone only pill—POP); injection/depo-provera IUD (intrauterine device) and condom. In the public sector, the methods are offered for free in all three levels of health services in 36 districts and 427 centers of FP.

- Primary healthcare services near all health post centers
- Secondary healthcare services in maternities and mother and child care centers in districts
- Tertiary healthcare services in two maternity hospitals at University Hospital Center (UHC).

Analysis of Data for the Third Quarter--3/2013

Period of reporting 01/07/2013-31/10/2013
Situational analysis for FP in the public sector evaluated from the systematic data of the third quarter that have come through the system of LMIS.

Reporting and the way of reporting

In total, have reported 35 districts, it has not reported the district of Dibra, percentage of reporting is 97% and the percentage per district family planning (DFP) is 91.1%.

7. Family Planning

Consumption with each of the methods

COC (combined oral contraceptive pill) are 12,918 cycles and POP (progesterone only pill) are 2,248 cycles; Depo-Provera are 3,366; IUD are 385, and Condom are 98,539.

First-time visits and recurrent

Number of first time visits it means: how many new clients have received for the first time a new modern contraceptive method.

Number of recurrent visits is the number of clients that continue to take the methods more than once. This is nearly stable compared with the other previous quarters or you can see a slight lower numbers.

Firt-time visits: COC are 3,447; Recurrent visits are 8,584 and consultations are 8,510.

Level of contraceptive coverage in couples--Couple Year Protect (CYP)

In country level the CYP is 3.1%, districts with lower than contry level CYP are:
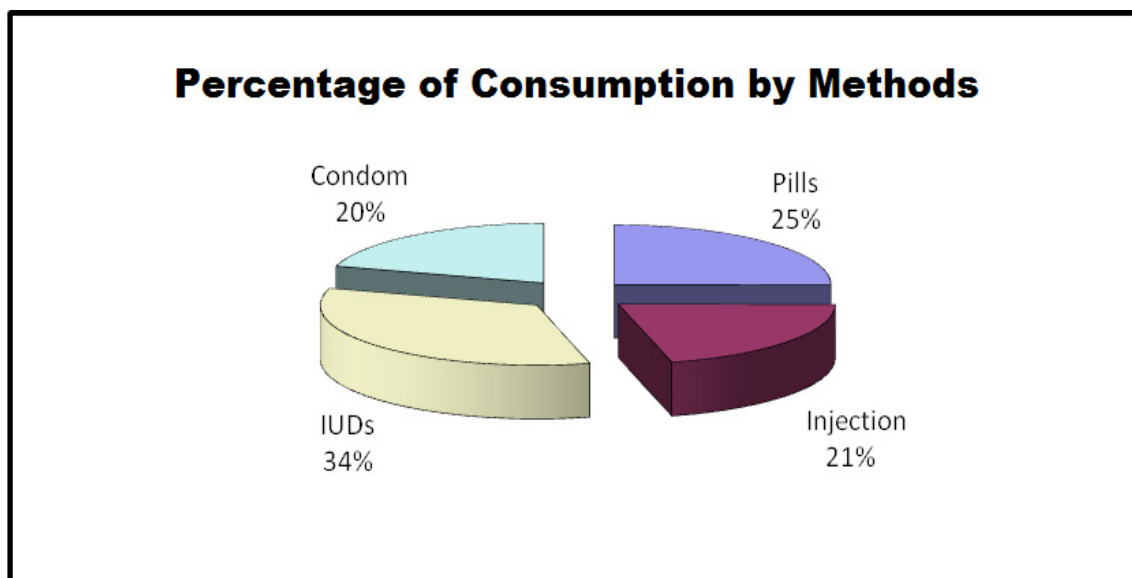Elbasan, Kuksi, Gjirokastra, Kruja, Kucova, M.Madhe, Mallakastra,Tepelena, and Vlora.

Figure 1. Percentage of consumption by methods (Source: IPH Albania).

Stock-out or the lack of contraceptives

Stock-out is the level of offering family planning services to the people.

The lack of them in a center, whichever that might be in any of the three family planning levels and one of the more modern contraceptive methods is the lack of management in one of the links of the chain in the system and it shows a negative performance.

Stock-out for each-one of the methods is: COC at 14.1%, POP at 23.9%, Depo-Provera at 13.4%, and condom at 9.5%. This quarter we see an increase on the lack of COC and Depo-Provera compared with the other previous quarters.

Conclusion

Percentage of reporting is 91%, there is no reporting in Dibra district. Consumption is nearly constant with a small tendency decreasing in these last 2-3 years. The Stock-out for the methods COC and POP with 5-6% is in constant increase. The trend of actual visits is falling in accordance with the trend of visits in the previous quarters.

8. Air Quality In Sharra

ASSESMENT OF AIR QUALITY NEAR THE LANDFILL IN SHARRA

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Introduction

The problems of environmental pollution and its impact on health in Albania have gained focus during recent years. Daily human activity and general development is achieved through the consumption of raw materials coming from different sources. These materials introduced in the production chain for consumer products, are then transformed into finished products and products that do not have value for consumer use, therefore being considered unusable.

Factors such as: the level of economic development, social level, cultural traditions etc., play an important role in the quantity and variety of waste and in their way of treatment.

Solid waste in our country can be classified mainly in waste of human life activities (urban waste), industrial waste (different types and quantities) and various inert (construction activity).

Treatment of urban waste in our country to date is a "practical" filling up of inappropriate places, followed by a primitive technology, which is based simply on their preservation and that in most cases is done by burning them. The lack of segregation at source, non-functioning recycling and composting process under hygienic sanitary techniques degenerate into overall environmental pollution, such as air quality, land surface, surface and underground water and sea water.

One of the most problematic garbage collecting in Albania is Sharra landfill in the outskirts of the capital.

Purpose

Assessment of air quality near the landfill in the Sharra municipality.

Objectives

1. Determination of the average values of suspended solid matter (LNP)

2. Determination of the average values of dust particles with dimensions smaller than 10 micrometer (PM 10)

3. Determination of the average values of nitrogen dioxide NO_2 and ozone gases O_3

Method

The methodology for the assessment of solid suspended matter (LNP) and dust particles with dimensions smaller than 10 micrometer (PM 10) were conducted with no automatic method using paper filters, while for nitrogen dioxide gases NO2 and O3 ozone passive tubes are used. Technical procedures to determine the content of the LNP, PM_{10}, NO_2 and O_3 in the air are in material compliance with the methods "Main analysis of atmospheric air pollutants, Public Health Institute, Laboratory of Air, Tirana 2000".

Monitoring is carried out in the period 21-27.01.2014, in the inhabited area near Sharra landfill, in the distance about 300 m in the northern part of the landfill.
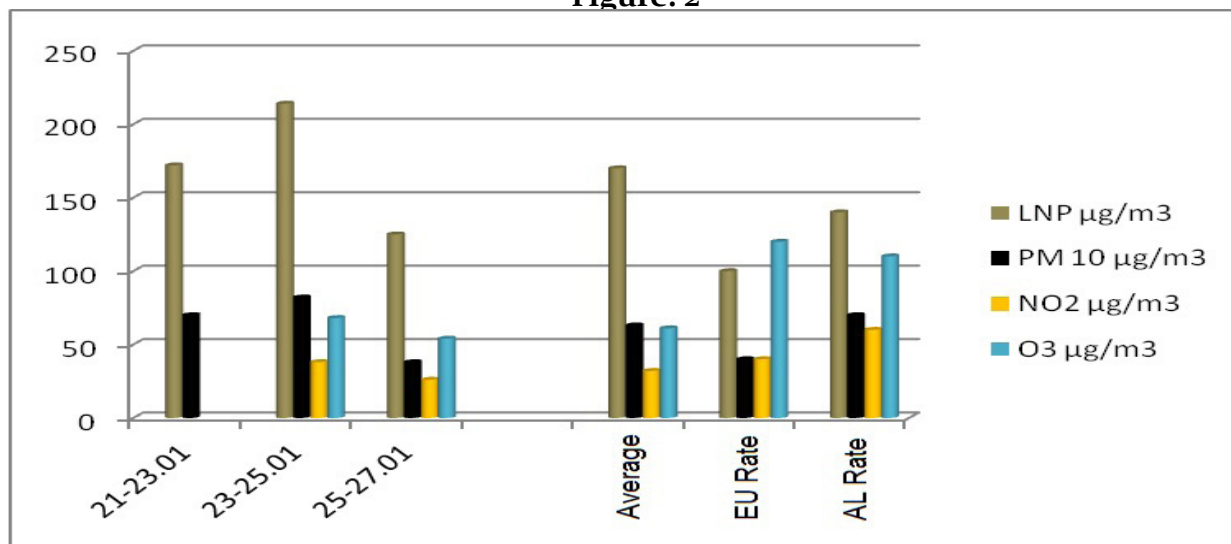
8. Air Quality In Sharra

Results

Results of some daily monitoring of air quality in this area are given in summary form in Table 1 and Figure 2 ($\mu g/m^3$).

Measurements of gas particles are on average 24 hours.

Table1	Measurements in air quality, *21-27.01.2014*				
Nr	Dt	LNP $\mu g/m3$	PM$_{10}$ $\mu g/m3$	NO$_2$ $\mu g/m3$	O$_3$ $\mu g/m3$
1	21-23.01	172	70		
2	23-25.01	125	38	38	68
3	25-27.01	214	82	26	54
Average		170	63	32	61
EU rate		100	40	40	120
AL rate		140	70	60	110

Figure. 2

Conclusions and Recommendations

1. Based on the results obtained from the measurements, the average values of total particle content (LNP) and respiratory particles (PM 10) in Albania are above EU standards. These values are confounded by the presence of these elements in urban environment. The average content of sulfur dioxide gas (SO2) and ozone (O3) is considerable, although within the limits allowed in our country.

2. The respective measurements related to meteorological factors of winter season (wind direction and speed, rainfall abundant, low atmospheric pressure).

3. Specialists from general monitoring concerns noted the presence of bad odors in periods when the atmospheric pressure is low, high relative humidity and no wind movement. In Albania are not available equipments and methodology for measuring odors in air (organic sulfide compounds, amino compounds, esters, volatile organic compounds, etc.) and environmental legislation in this regard is significant deficiencies. It is imperative that legislation to be complemented with norms of the respective compounds in ambient air, as well as determining the institutions that will carry out the expertise of this character.