

Evaluation of Abortion Surveillance System in Albania for the period 2014-2015

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Abstract

Aim: Since 2007, the Institute of Public Health (IPH) has established the Abortion Surveillance System (ASS). No systematic evaluation for ASS has been conducted and published before. Our aim was evaluate the ASS in Albania during the period 2014-2015 in order to document the degree of abortion underreporting.

Methods: The evaluation followed the Centers for Disease Control and Prevention guidelines for evaluating public health surveillance systems. The evaluation is focused on abortions occurring during 2014-2015, the latest years for which data set is available.

Results: The ASS has a defined structure and is able to provide timely data. The abortion form is simple and consists in 23 variables in total. All the completed abortion forms are reported every three months from district level to the national level (IPH) using either the paper or electronic form. Overall, the completeness of the abortion form for 2014-2015 was 93.2%. The ASS is simple and flexible to changes in the operation, if needed. The abortion surveillance's data can represent only 70% of all performed cases, because we are missing the information from private sector and the information from abortion registers is higher.

Conclusions: The ASS is rather simple, accurate, stable, and flexible and provides valid data used at local and national level. But the ASS needs to be improved in order to provide accurate data and increase the representativeness. Regular trainings and ongoing support should occur in order to improve the reporting process and clarify important problems related with the system.

Keywords: abortion, abortion surveillance system, evaluation.

Introduction

In Europe, 30% of all pregnancies end in abortion. A higher proportion of pregnancies end in abortion in Eastern Europe than in the rest of the region. In Eastern Europe, the abortion rate held steady at 43 per 1,000 women between 2003 and 2008, after a period of steep decline between the mid-90s and the early 2000s (1). Despite this decline, there is a persistent gap in rates between Eastern and Western Europe (43 vs. 18) likely reflecting lower use of effective, modern contraceptive methods in Eastern Europe.

In Albania abortion was legalized in 1991 and the law on the interruption of pregnancy which was later passed in parliament (1995) presented a set of conditions under which abortion was permissible at various gestational ages. Abortion on request may be performed up to the end of the 12th week of pregnancy for psychological and social problems, and up to 22 weeks for other health and social reasons approved by a commission of three specialists (2). The Reproductive Health Survey carried out in 2002 found an abortion rate of 73 per 1000 live births, a rate 64% lower than the official data (that time abortion rate reported by our Institute of Statistics was 200 per 1,000 live births) (3).

Taking in consideration that Albania has a low fertility rate (1.67 live births per woman – Albanian Demographic and Health Survey [ADHS]) (4) and a high reliance on traditional contraceptive methods, which are less effective than modern methods (use of modern methods 11% ADHS) the lack of data and the fact that the reporting was artificially lower constituted an important stimulation for monitoring.

Although abortion is considered a common medical procedure, the law on the termination of pregnancy has some gaps regarding the health care and psychosocial situation of women. The law foresees the provision of information on the health risks that may result from abortion, but it does not provide for any provisions for giving information on the use of the contemporary methods of family planning. Likewise, there is no provision on the check up visits that a

woman must have after abortion. Furthermore, the law does not foresee free of charge health care that can cover the medical tests, the abortion procedure, or the post abortion visit (5).

In May 2007, the Ministry of Health distributed an Order (6) to all the Public Health Directories regarding the way of reporting abortions performed in public and private health services. Based on this Order, the official document for reporting abortions is the abortion form (referred to as “*skeda*”), which must be necessarily filled by the doctor who performs the abortion. Since 2008, the Institute of Public Health monitors the abortion surveillance system at national level.

The purpose of evaluating the abortion surveillance system in Albania is to ensure that the problems related with the surveillance are being monitored efficiently in order to improve the surveillance process. The evaluation is important because no systematic evaluation has been conducted and published before in Albania and it documents the degree of abortion underreporting.

Evaluation results can be applied to improve other vital statistics and surveillance reporting systems. The evaluation report will provide important information for all stakeholders involved directly or indirectly in the surveillance system: specialists in District’s Public Health Directories, doctors in the maternity wards, specialists in the Ministry of Health, UNFPA country office and all the non-profit organizations and researchers working in this field.

Methods

The evaluation followed the Centers for Disease Control and Prevention guidelines for evaluating public health surveillance systems (7). We focused the evaluation on abortions occurring during 2014-2015, the most recent years for which the dataset is available. In addition, we have compared the system’s abortions cases with other sources (abortion registers) and calculated the percentage of reporting with the abortion form, for the analyzed period. We also calculated the proportion of missing values for each

variable on the reporting form. We assessed the system's usefulness, simplicity, flexibility, data quality, acceptability, representativeness and timeliness.

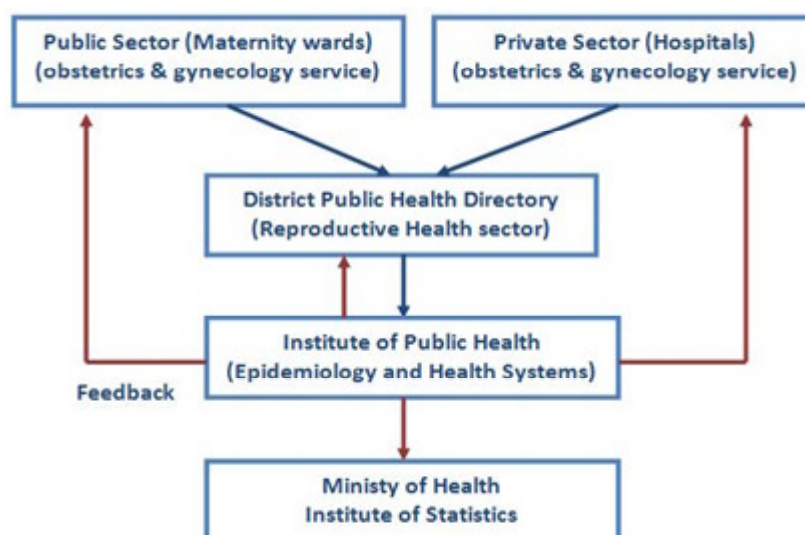
All public or private hospitals performing abortions must report each abortion performed based on the Order of Ministry of Health, May 2007 (8). Each abortion must be certified by the doctor performing it and an abortion form should be filled and signed. The abortion reporting system is managed by the IPH's Department of Epidemiology and Health Systems. The abortion system's purpose is to document the number of legal abortions occurring in Albania and describe the trend over years.

In the first step of reporting process, hospital statistical office's staff collects all the completed abortion forms and record each abortion performed in the abortion register. Than every month, the key person (RHI) responsible for monitoring the surveillance system in local level (every district's public health directory) goes to the maternity ward and takes all the completed abortion forms and the total number of abortions performed, from the abortion register.

The data collected on the abortion form include information on reporting facility name and address, type of facility (public or private), women's date of birth, residence (urban or rural), marital status, education level, employment, women's health insurance, type of abortion (induced or spontaneous), reason for terminating the pregnancy, date of last period, pregnancy history, method used to terminate pregnancy, type of anesthesia, gestational age, duration of stay in hospital, the attending doctor's name and ICD9 code.

Abortion surveillance system is a *passive surveillance system*, because the abortion forms are compiled regularly by the doctors in maternity ward. Every three months, the key person in district level is required to report all the completed abortion forms to the Institute of Public Health (national level) using either the paper or electronic form. IPH reports annually to Ministry of Health and Institute of Statistics about the distribution of abortions by regions/districts and other indicators based on abortion form's fields.

Figure 1. The flow of abortion information



The reproductive health inspectors (RHI), key persons in the districts face a lot of difficulties during the monitoring process. It takes a lot of time to take the abortion forms and enter the data in the

software, or they may face problems with the computers, software and internet connection, resulting so in delays to report the information in time. IPH reports annually to MOH about the distri-

bution of abortions by regions/districts and sends feedback to every District's Public Health Directory based on abortion form's variables.

Results

Usefulness

A public health surveillance system is useful if it contributes to the prevention and control of adverse health-related events (9).

We assessed that abortion reporting system is useful in several regards. Abortion surveillance provides an important measure of pregnancies that are unwanted. Through the abortion surveillance system we see how the incidence of induced or spontaneous abortions has varied over time by districts and are able to detect trend over years. Combined with other data (for ex. contraceptive use) abortion data provide a more complete picture of reproductive health in Albania, as well as proving a basis for regular reporting. The Epidemiology and Health System department in the IPH uses abortion data to develop priorities and conduct further studies. In 2013 the IPH specialists conducted a study in Tirana to assess the number of live births and abortions in adolescents (10).

The abortion surveillance system can provide useful information to public health professionals, community-based organizations and researchers to understand abortion trends, identify age-specific groups with high-risk and help them to set prevention priorities and plan targeted health promotion strategies. Information on abortion in conjunction with data on birth and fetal losses are needed to more accurately estimate the overall number of pregnancies, as well as rates by various age-groups (e.g. adolescents).

Simplicity

The abortion surveillance system has a defined structure and is able to provide timely data. The abortion form is simple, consists in only two pages (23 variables in total) and the doctor does not spend too much time (only 5 minutes) to complete this form.

The abortion form was reviewed in the early years of the surveillance and provides the core information regarding abortion performed. The physician (obstetric - gynecologist) performing abortion is responsible for providing the medical information required in the abortion form. The key person- RHI (local level) monitors the process in district and reports quarterly information on abortion for his/her district. He is the person responsible to make the case ascertainment for the abortion forms based on the information written in the clinical charts and in the abortion register. 22 districts enter the data in the existing software and report electronically; 14 other districts send the abortion forms by mail and they are entered at national level in the software.

All the information regarding abortion is exported annually to Excel and analyzed statistically with SPSS software package. The IPH provide annual surveillance reports to Ministry of Health, Institute of Statistics and also share findings with staff at district level. Feedback information is disseminated annually in every district, with all the recommendations regarding the improvement of the process.

The abortion software faces a lot of problems, because only the data entry works and there are several issues that need to be solved. The existing software cannot analyze the data and provide reports at local and national level. For this reason, building up better software for data entry, analyze and producing annual reports on abortion data is a challenge to resolve in the future.

Flexibility

The national abortion surveillance system is simple and flexible to changing in the operation if needed. For example if a new procedure on performing abortions is entered the abortion form has a field "other specify" when the doctor can write the new method or procedure. Before 2005 in Albania all the institutions performing abortions were obliged to report to the Institute of Statistics, with an abortion form which was old. In 2007, the specialists of the IPH in collaboration with Ministry of Health, Institute

of Statistics, several obstetrics doctors and supported by UNFPA country office had several meetings and decided to improve the form. A new reporting form on abortion was adapted and included various new variables. This new form was distributed to all maternity wards and it is currently being used for reporting of abortions all over the country. Up to now there are no new changes in the variables of the abortion form, but for different variables like method used for abortion, or reason for abortion at the end there is a field where doctor can specify the procedure or reason for abortion. So the form can accommo-

date new changes in the technique doctors use for performing abortions.

Data quality

Examining the percentage of “unknown” or “blank” responses to items on surveillance forms is an easy measure of data quality. In most of the cases the doctors fill the abortion form very well and there are no missing data, but there are cases when the age of mother, employment or insurance status, ICD9 codes are missing. The quality of data is assessed by calculating the percentage of “blank” variables in the abortion reporting forms reported to the IPH for the year 2015.

Table 1. Completeness of reporting for different variables in the abortion form, for the years 2014 and 2015 in Albania

No.	Variable in the abortion form	% of completeness in 2014	% of completeness in 2015
1.	Name of the health facility	100	100
2.	Woman's date of birth	98.7	99.6
3.	Woman's residence (urban/rural)	97.3	100
4.	Marital status	99.1	99.7
5.	Year of marriage	63.1	63.5
6.	Educational level	97.0	97.4
7.	Insurance status	89.2	89.7
8.	Employment status	88.8	89.5
9.	Type of abortion (induced or spontaneous)	100	100
10.	Reason for abortion	84.7	86.3
11.	Date of last menstrual period	73.1	81.2
12.	Previous spontaneous abortions	99.4	99.5
13.	Previous induced abortions	98.2	99.3
14.	Previous dead infants	99.8	99.3
15.	Previous live births	97.1	98.3
16.	Gestational age	99.3	99.8
17.	Method used for abortion	92.1	92.6
18.	Anesthesia used	84.2	79.0
19.	Duration of stay in hospital	94.3	99.5
20.	Type of admission	95.2	96.3
21.	Main diagnose (code)	91.3	95.6
22.	Date of abortion	94.3	94.5
23.	Name of doctor	96.7	95.9

The assessment of the completeness for different variables in the abortion form shows that there is a high percentage in almost all variables and an improvement in the percentages for the year 2015 compared to the previous year. Overall, the completeness of the abortion form for 2014-2015 was 93.2%.

The main problem influencing the data quality is the underreporting of abortion forms compare to the total number of abortions registered in the abortion hospital's register. Until now, we have approximately 70% of the total number of abortions reported with the abortion form, but still we think that the underreporting is more than 30% due to the lack of data from the private sector as well.

Acceptability

Based on the order of the Ministry of Health all the public and private institutions who offer health services for termination of pregnancy in accordance with the legislation should record all the individual information for every abortion they perform in the clinical chart, abortion form and abortion register. The doctor who performs abortion holds administrative and penal responsibility for the information recorded in the abortion form. But, sometimes it depends on the willingness of the doctor to complete the abortion forms for every abortion he performs, and there are many cases when nurses working closely with the doctors complete the abortion form. The key person in the district (RHI) checks the abortion registers in all the public and private district's health facilities. They are well trained and provide accurate, consistent, complete, and timely data. They receive annually abortion reports produced by IPH and see the trend for their districts. The communication with them is frequent either by mail or by phone regarding problems they face with monitoring process. But the new staff needs to be trained in order to be familiar and fulfill the surveillance system requirements.

Representativeness

A public health surveillance system that is representative accurately describes the occurrence of a health-related event over time and its distribution in

the population by place and person (11).

The abortion surveillance system describes the number of abortions over time and the distribution by districts/prefectures of Albania. The system contains information on the characteristics of women obtaining abortions including age, women's residence and the reasons for abortion, monitor unwanted pregnancies and is able to identify the age-specific groups that are more at risk to end the pregnancy.

We have an excellent participation from all the maternity wards in the districts. In Albania there are 34 abortion reporting centers from the public sector (1 in each district and two in Tirana), only 3 districts: Kuçove, Mallakaster and Malesi e Madhe do not perform abortion due to the lack of blood banks. Tirana has 2 maternity hospitals (university hospitals for obstetrics & gynecology) "Queen Geraldine" and "Koço Gliozheni" and the highest number of abortions are performed in these two maternity wards, but the percentage of reporting with abortion form for Tirana is around 45%, given that in many occasions the abortion forms are not completed.

Before 2013 the IPH had information on abortions performed from public sector; around 10% of abortions were performed in private clinics that had license for performing abortions. In 2013 with an Order from the Ministry of Health only the private hospitals with beds are licensed to perform abortions, so still we don't have information from newly licensed private institutions.

Taking into account that we don't have complete information on abortions performed in private hospitals and in the two main public maternity wards in Tirana, the data of abortion surveillance can represent 70% of all cases reported from the abortion register, so we are missing 30% of cases to be representative for all the population. In order to increase the representativeness we need to improve the reporting in Tirana district (public and private sector).

Timeliness

Timeliness is not a very important attribute in the abortion surveillance system, but the mandatory

reporting every three months is to make it easier for the districts the reporting process. In this way we facilitate the procedure and increase the reporting rate.

At the end of the month (every month) all the abortion forms are sent to the hospital's statistical office that is in charge to keep the clinical charts for all the patients. The reproductive health Inspector (who works in the Public Health Directories-PHDD at district level) is the person responsible for abortion surveillance system in his district. He organizes and coordinates the work to collect the information on abortion from public and private district's health services. He goes every month to the hospital and takes the completed abortion forms. He also checks the abortion register to coordinate the completed abortion forms with the total number of abortions in the register. Then he enters the information in the software and/or sends it to the Institute of Public Health (in hard copy) within the first 10 days of the subsequent month, every three months. The information is sent every three months to the IPH, who is responsible for collecting, analyzing and interpreting the data on national level. The IPH send feedback for situation on abortion every 3 months in the reproductive health sector of the PHDD. IPH is in charge to disseminate the report every year to the Ministry of Health and National Institute of Statistics.

Discussion

This is the first evaluation of abortion surveillance system in Albania. This evaluation demonstrates that abortion surveillance system is rather simple, accurate, stable, and flexible and provides valid data that are used at local and national level. But the surveillance system needs to be improved in order to provide accurate data and increase the representativeness. Close collaboration with data providers and reporting key persons in local level is essential for maintaining high-quality reporting systems. The frequent feed-

back and meetings with them will enhance the system ability and management of barriers to reporting.

Regular trainings and ongoing support should occur in order to improve the reporting process of abortion information and clarify important problems related with the system. Establishing better software for data entry, analysis and development of annual reports on abortion data is an urgent need in order to ensure that the information on abortion is accurate and is sent quickly to the national level. Sharing of experience and knowledge will be the most effective way to enhance the performance of the surveillance system. The results of the evaluation report should be used as a basis for planning the further steps for the improvement of the surveillance system.

Based on this evaluation, we developed recommendations based on the main functions of abortion surveillance: data collection, analysis and interpretation, and feedback of information.

As recommendations, the following points can be suggested:

- Improve the quality of data collection by continuously monitoring the completeness of the abortion form and ensure the sustainability;
- Enforcement of mandatory data reporting from the private sector;
- Improve the data reporting by providing trainings to all the staff involved in the reporting process; holding regular trainings with the staff involved in the surveillance will help to develop their skills needed to better collect and interpret the abortion data.
- Revise and update the software in order to include data checks in data entry and creating reports based on the information of abortion form;
- Strengthen the capacity in district level by increasing training activities and provide regular feedback to all reporting sources.

Conflicts of interest: None declared.

References

1. Facts on Induced Abortion Worldwide. Available from: http://www.who.int/reproductivehealth/publications/unsafe_abortion/induced_abortion_2012.pdf (Accessed: February 10, 2017).
2. Republic of Albania. Law No. 8045 of 7 December 1995 on the interruption of pregnancy (Fletorja Zyrtare, No. 26, December 1995, pp. 1144-1148).
3. Albanian Reproductive Health Survey 2002 Printed by US Department of Health and Human Services, Centers for Disease Control and Prevention, Atlanta, Georgia 30333, and USA. Available from: <http://ghdx.healthdata.org/record/albania-reproductive-health-survey-2002> (Accessed: February 10, 2017).
4. Albania Demographic and Health Survey 2008-09. Available from: <https://dhsprogram.com/pubs/pdf/FR230/FR230.pdf> (Accessed: February 10, 2017).
5. Alternative report by non-profit organization on reproductive health. Situation in the country. Published by the Albanian Center for Population and Development (ACPD).
6. Order for reporting abortion in all public and private health facilities, from the Ministry of Health No.157, dt.23.05.2007.
7. Updated Guidelines for Evaluating Public Health Surveillance. Recommendations from the Guidelines Working Group. MMWR Recommendations and Reports. July 27, 2001; 50 (RR-13): 1-35. Available from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5013a1.htm> (Accessed: February 10, 2017).
8. Order for reporting abortion in all public and private health facilities, from the Ministry of Health No.157, dt.23.05.2007.
9. Updated Guidelines for Evaluating Public Health Surveillance. Recommendations from the Guidelines Working Group. MMWR Recommendations and Reports. July 27, 2001; 50 (RR-13): 1-35. Available from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5013a1.htm> (Accessed: February 10, 2017).
10. Alba Merdani, Dorina Toçi (Çanaku). Evaluation of Adolescent's Births and Abortions in the District of Tirana, for the period 2009-2012. Bulletin of the Institute of Public Health 2015:2.
11. Updated guidelines for evaluating public health surveillance systems. Recommendations from the working groups. MMWR Recommendations and Reports. July 27, 2001; 50 (RR-13):26-28.