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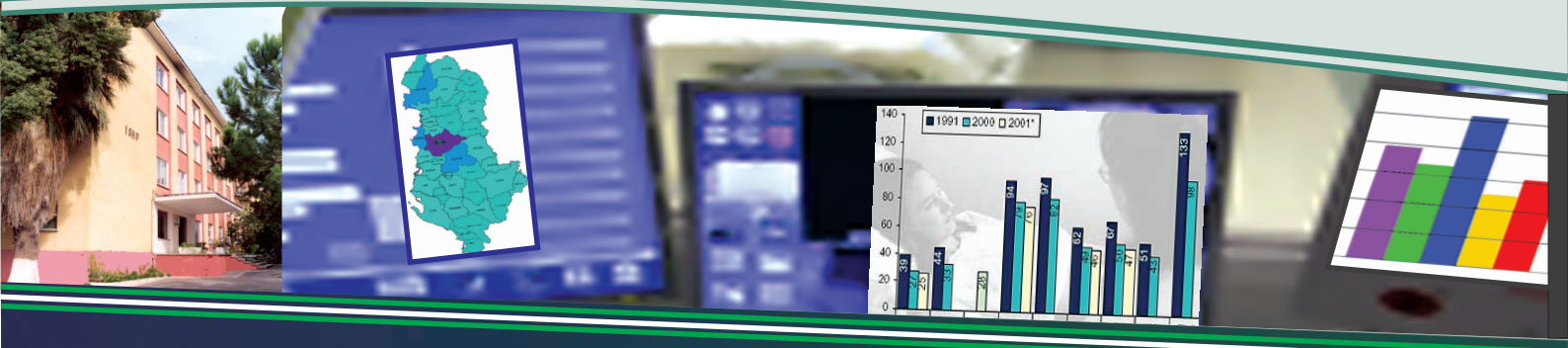

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Healthcare Workers Influenza Vaccination during 2015 – 2016 season

Iria PREZA[1], Erida NELAJ[1], Fuat TOPTANI[1], Gjergji ROSHI[1], Erjon MUHAXHIRI[1], Silvia BINO[2,3]

[1]National Immunization Program, Institute of Public Health, Tirana
[2]Control of Infectious Diseases Department, Institute of Public Health, Tirana
[3]Faculty of Medicine, University of Medicine, Tirana

Abstract

Influenza is a vaccine preventable disease. This vaccine is recommended for all persons, but vaccination is particularly important for people at high risk groups, such as healthcare workers. The National Program of vaccination of frontline healthcare workers has been launched during 2014 – 2015 influenza season and it is an ongoing program. This program aims to prevent and protect frontline healthcare workers from influenza and its consequences. During 2015 – 2016 influenza season, healthcare workers, pertaining to high risk group, from all Heath Centers and main Hospitals were vaccinated, and the vaccination was monitored .In addition to vaccination application, another important element of this program was the adequate informing and trainings with regard to flu epidemics. The rise of vaccinations number and the accurate informing of the healthcare personnel in relation to the flu vaccine and vaccination was achieved, in order to protect not only this risk group, but also other groups that use these health care facilities.

Introduction

Influenza is a vaccine preventable disease and influenza vaccines have been available for use in Europe since the 1960s. A number of variants of the influenza viruses co-circulate each year. Immunity to the infecting influenza virus type develops following a natural influenza infection. However, there is little cross-immunity between influenza types/subtypes or lineages. This is why several influenza strains must be included into combination vaccines (ECDC).

Vaccination is the most effective way to prevent infection and severe outcomes caused by influenza viruses. Development and production of influenza vaccines, planning for their supply and use, as well as provision of other respective health care resources, are essential components of a comprehensive seasonal and pandemic influenza response (WHO). Based on World Health Organisation (WHO) recommendation, influenza vaccination should applicate especially at high risk groups, which include: pregnant women, elderly over 65, children from 6 to 59 months, individuals with specific chronic medical conditions and health workers (WHO).Vaccination is the most effective way to prevent infection and severe complications caused by influenza viruses. Vaccination is especially important for people at higher risk of serious influenza complications, and for people who live with or care for high risk individuals (WHO).

Influenza vaccination policies have started in 2007 in our country, and the primary focus were then high risk persons with chronic disease and healthcare workers. During last years, especially throughout pandemic influenza in 2009, the whole population started to express interest in influenza vaccination. As a result, there were some changes and enlargements in Influenza Vaccination policies,and besides chronic ill persons and healthcare workers, a special care was added for elderly people and pregnant women. Furthermore, since 2014 and onwards recommendations of vaccination of high risk groups have been emphasized including some other people like children, overweight people,and the whole healthy population older than 6 months, with the invlovement of the frontline healthcare workers. During 2014-2015 influenza season was launched National Immunization Program (NIP) for healthcare workers, it aims at prevention and protection with vaccination not only of this important group but for other people as well. This program is an initiative of Ministry of Health, it is monitored by Institute of Public Health and Public Health Directorates, both in prefecture and national level. During 2015-2016 Influenza season, Influenza vaccine was applied and monitored at healthcare workers for all Health Centers and main Hospitals of the country.

Methodology

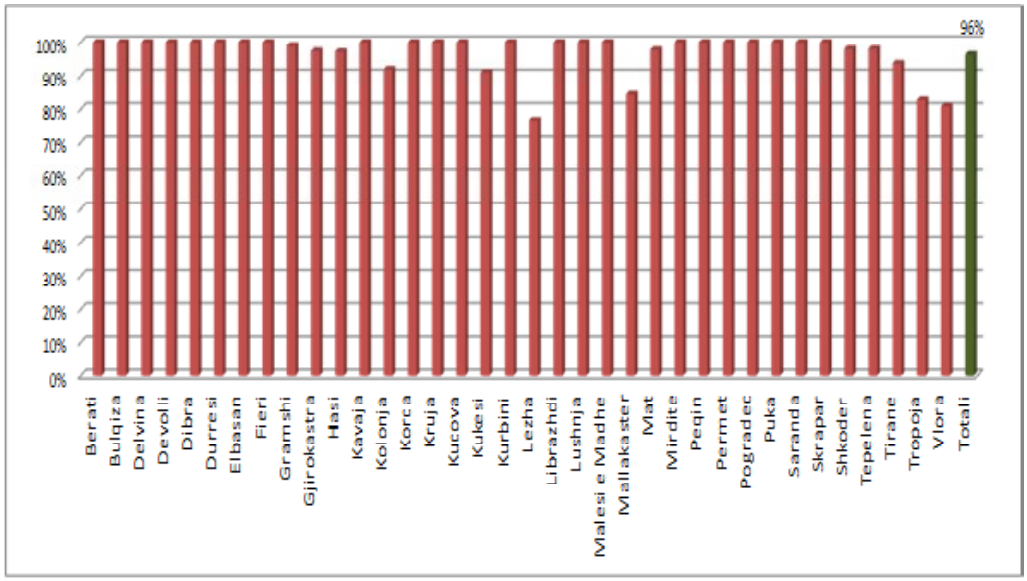
The rate of influenza vaccine application of healthcare workers was determined relying on the percentage of healthcare workers that were vaccinated. This application rate is the ratio of the number of vaccinated healthcare workers, to the number of healthcare workers planned to be vaccinated .

Results

Application rate data reported by Health Centers and Hospitals, are aggregated in the higher levels thus calculating the rate at Regional Health Directory/Public Health Directory and national level for all healthcare workers involved in influenza vaccination program.

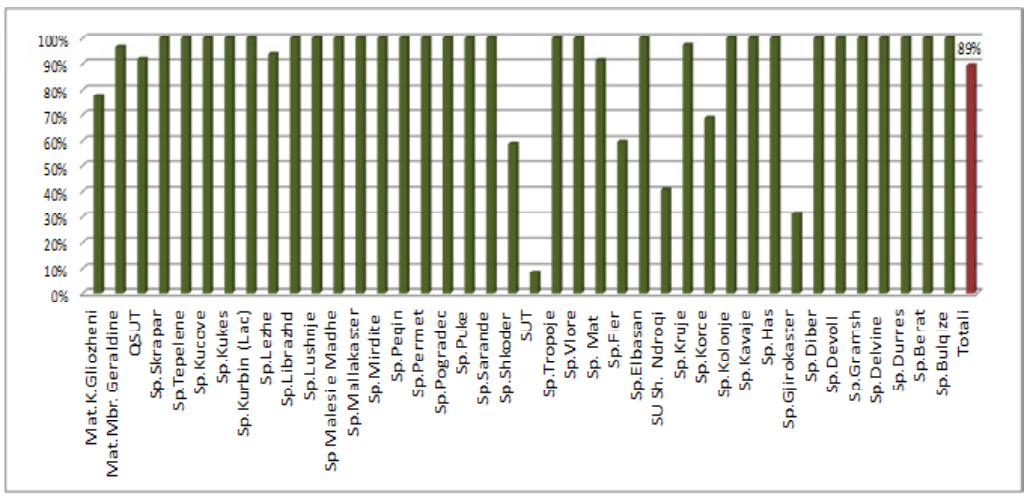
During 2015-2016 influenza season, 96% of planned vaccination for this group was applied in health centers (Figure 1).

Figure 1. Application rate of influenza vaccine at frontline heathcare workers in heath centers, 2015-2016



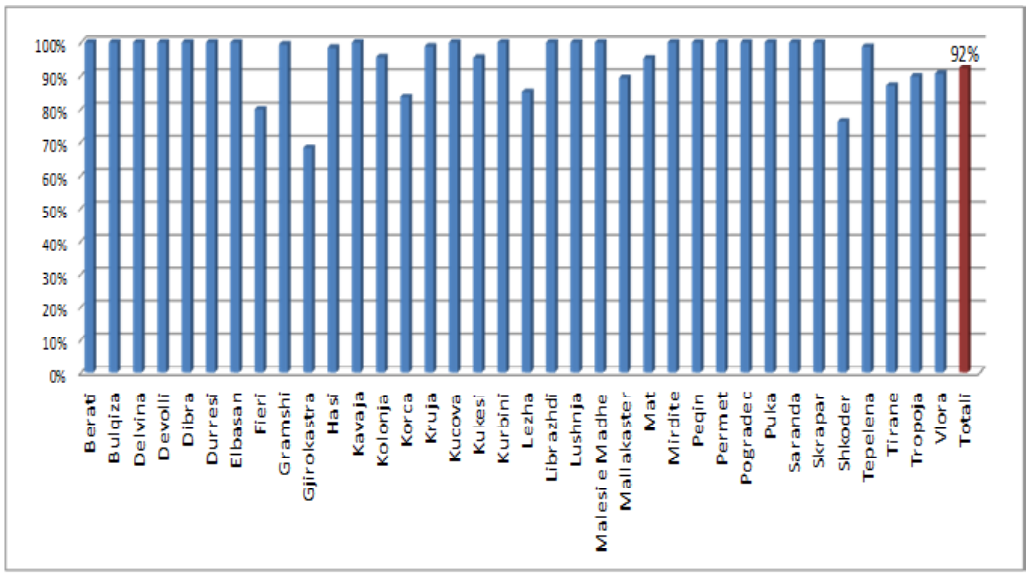
Vaccinations numbers in hospitals, during 2015 – 2016 season, were a little lower, and compared to planned amount the application rate of influenza vaccine was 89% (Figure 2).

Figure 2. Application rate of influenza vaccine at frontline heathcare workers in hospitals, 2015-2016



In total, during 2015-2016 influenza season, about 92% of influenza vaccination planned for frontline healthcare workers was applied (Figure 3).

Figure 3. Total Application rate of influenza vaccine at frontline healthcare workers, 2015-2016



Measures taken

Vaccination of healthcare workers was applied in their workplaces. This process was monitored by National Immunization Program (NIP), which is based in the Institute of Public Health and epidemiologists / vaccinators at the district and prefecture level.

Conclusions

Influenza vaccination process of healthcare workers during 2015-2016 season, was applied at all Heath Centers and Public Hospitals from November 2015 to early February 2016. During this period, more than 9000 frontline healthcare workers of Health Centers and hospitals were vaccinated. During this process, awareness was also raised about vaccination and influenza protection for the whole population. Application rate of planned vaccinations for healthcare workers was 92% at national level.

The progress of this process and other elements such as trainings, promotions and sound information regarding prevention, illness and influenza consequence, aim at raising the awareness, increasing number of vaccinations and eleminating prejudices against influenza and vaccination.

Summary box

What is known about this issue?

Influenza is a vaccine preventable disease. Vaccination is especially important for people at higher risk of serious influenza complications, and for people who live with or care for high risk individuals

What this study adds?

This report presents application rate in health centres and hospitals of influenza vaccine at healthcare workers during 2015-2016 influenza season.

What are the implications for public health?

Vaccination is the most effective way to prevent infection and severe complication outcomes caused by influenza viruses. The administration and well-informing of the healthcare workers regarding influenza vaccination aims at the protection not only of this important risk group, but also of other high risk groups covered by healthcare

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Assessment of laboratory capacity in Albania 2014-2015

Adela VASILI[1], Elona KURETA[1], Marjeta DERVISHI[1], Silva BINO[1,2]

[1]Control of Infectious Diseases Department, Institute of Public Health, in Tirana
[2]Faculty of Medicine, University of Medicine, in Tirana

Abstract

An increase in the number of Sexually Transmitted Infectious Diseases, Viral hepatitis and HIV-AIDS has been noticed in the last years. In this situation, it is necessary to increase the access to diagnostic examinations of these diseases in both public and private laboratories all over the country. The aim of this study was to assess the laboratory capacity for diagnostics of the above diseases and the method and time of diseases reporting in all the chain of the health system. The assessment of the laboratory was carried out in 36 districts of the country. A standardized form was used for the assessment of the public and private laboratories which was filled by each laboratory. Tirana, Durres, Vlore, Fier and Elbasan district have the major number of private laboratories including biochemical, clinical and microbiological laboratories. In 14 districts of Albania there are no private laboratories; only the microbiological laboratories of Public Health Directorates do exist. Among the public laboratories, only that of Vlora district uses ELISA as a diagnostic method to identify HIV and Hepatitis B/C viruses, while all public laboratories of 12 regions of the country use Rapid Diagnostic Test to identify the infections. Other laboratories do not have diagnostic capacity. In all microbiological laboratories of Public Health Directorates Rapid Diagnostic Test is used for syphilis diagnoses, while for gonorrhea, microscopy and culture test are used. There is no public laboratory which has the diagnostic capacity for Chlamydia diagnosis. In general, private laboratories provide a variety of services for disease diagnosis. All public laboratories report the diagnosed diseases, while private ones don't. Therefore it was recommended the enhancement of laboratory capacity in public sector, staff training and the further improvement of data reporting.

Introduction

An increase in the number of Sexually Transmitted Infectious Diseases, Viral hepatitis and HIV-AIDS is noticed in the last years. In this situation it is necessary to ensure an increasing access to diagnostic examinations of these diseases in both Public and Private Laboratories all over the country.

In order to enhance laboratory surveillance of STID, Viral hepatitis and HIV-AIDS, an assessment of diagnostic capacities of public and private laboratories was carried out all over the country. The aim of this study was to evaluate the laboratory diagnostic capacities of the above diseases and the method and time of diseases reporting, across all steps the health system. The study objectives were:

· To set a standardized instrument on laboratory assessment, for collection of relevant information about laboratories capacities of all levels, as a part of the assessment of the national surveillance system.

· To identify the laboratory weaknesses in defining the diagnosis: and to respond to clinical signs and symptoms for setting the diagnosis.

· To evaluate the reporting process step by step from the basal level, up to the national one (IPH).

· To determine a plan for the enhancement of the laboratory capacities for the surveillance and control of infectious diseases.

Methodology

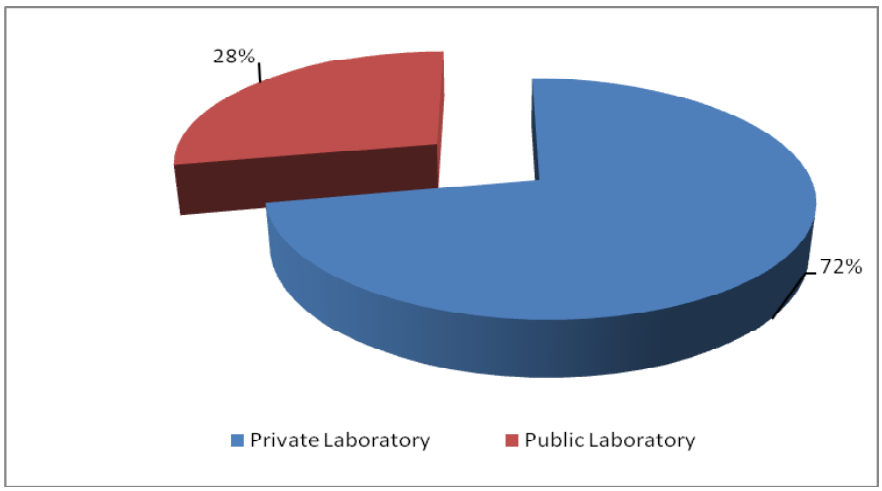
This assessment was based on the Law No. 7761, date 19.10.1993 "On the Prevention and Combating of Infectious Diseases", Law No. 9952, date 14.07.2008 "On Prevention and Control of HIV/AIDS", Order No. 49, Date 11.02.2011, for approval of the regulation: "On organization and functioning of medical laboratories".

For the assessment of the public and private laboratories, a standardized instrument was used, a form to be filled by each laboratory. This questionnaire includes the following data: type of laboratory, address, responsible persons, staff, diagnostic methods used by laboratory, markers that are tested for each diagnosis and the reporting methods of infectious diseases by the labs.

Results

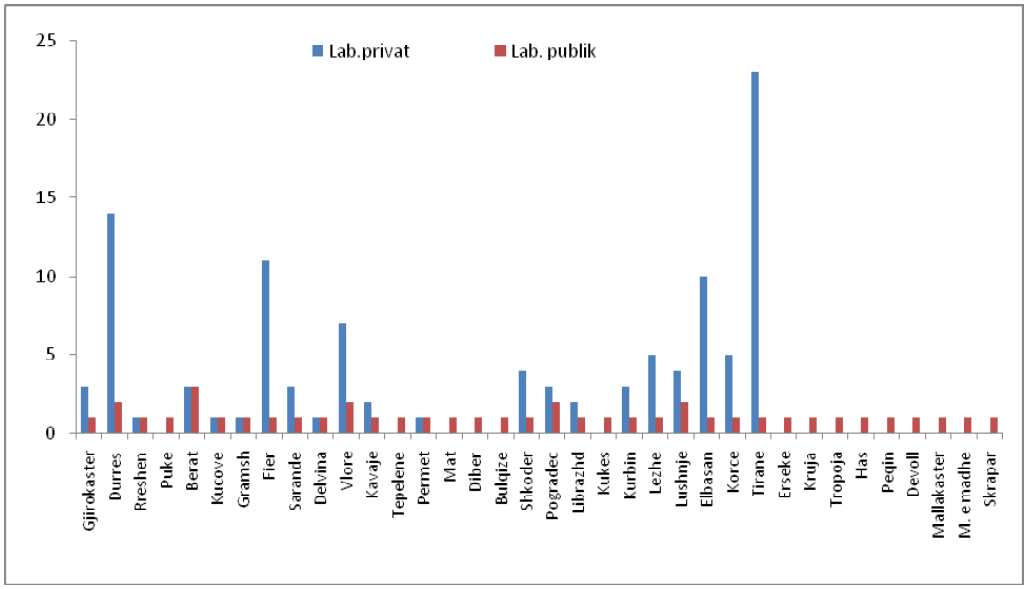
The total number of assessed laboratories was 148. Among these, 41 (28%) were public laboratories and 107 (72%) were private ones (Figure 1).

Figure 1. The percentage of Public and Private Laboratories in the country.



The largest cities in our country Tirana, Durresi, Vlora, Fieri and Elbasani have the majority number of private laboratories, including biochemical, chemical and microbiological laboratories (Figure 2).

Figure 2. Distribution of laboratories according to regions



As it is shown in Figure 2, 14 regions do not have private laboratories, but only the microbiological laboratories of Public Health Directories.

Diagnostic methods

Public unit

· *HIV, Hepatitis B and C*

In public laboratories, only in Vlora district ELISA is used as a diagnostic method to identify HIV and Hepatitis B/C viruses, while public laboratories of 12 regions of the country use Rapid Diagnostic Test to identify the infections. Other laboratories do not have diagnostic capacity.

· *Sexually Transmitted Infectious: Syphilis, Gonorrhea, Chlamydia*

In all microbiological laboratories of Public Health Directorates, Rapid Diagnostic Test is used for syphilis diagnosis, while for gonorrhea, microscopy and culture test are used.

None of the public laboratories has diagnostic capacity needed for Chlamydia diagnosis.

Private sector

· *HIV, Hepatitis B and C*

In the private laboratories of 14 regions of the country, not only the Rapid Test is performed, but also ELISA, miniVIDAS and PCR.

In Korça, Delvina, Kavaja Permet, Librazhd, Kurbin regions, private laboratories use only Rapid Test.

In Tirana, Durrësi, Fieri, Vlora, Gjirokaster and Saranda regions, private laboratories the examination of HBV, is done mainly with ELISA.

In some cases, private laboratories send the serum sample to Tirana or abroad such as to Italy or Greece.

Meanwhile for Sexually Transmitted Infectious, private laboratories offer a variety of diagnostic methods but the requests for these diagnoses is low.

Reporting

All public microbiological laboratories report to the epidemiological sector of infectious diseases in Public Health Directories. Even though private laboratories are aware of the reporting obligation, there is a lack of reporting from them.

In most of the laboratories, apart from Vlore, Tirana, Fier and Durres district, the notification forms of infectious disease were missing. All the data recorded in private laboratories is computer based, while in the public ones it is paper based.

Each public and private laboratories have their response form of analysis, in which is recorded the laboratory name, signature and doctor's stamp.

Conclusions

The Public sector experiences some difficulties for the diagnosis of these agents due to the following reasons:

a. Lack of laboratory kits and equipment
b. Lack of microbiologists in districts

· Durres, Berat and Pogradec, unlike other regions, also offer the possibility of diagnosis at microbiological laboratories of hospitals.

· Private laboratories offer wider access and variety of diagnostic methods about STIs diagnostics.

· Due to lack of knowledge about infectious diseases legislation in Albania, there is a lack of reporting from private laboratories.

· All private laboratories in all regions of the country were located near respective hospitals and health centers.

Recommendations

· Providing private laboratories with kits and reagents to increase access for STIs diagnosing in these laboratories.

· Training of staff not only about diagnostic methods but also about reporting methods.

· Standardization of diagnosis protocols for each infectious disease.

· Timely and proper reporting of all infectious disease cases.

· Providing the private laboratories with relevant documentation for infectious diseases reporting, notification forms, appropriate individual file for each diagnosis

· Appropriate reporting of infectious diseases according to legislation in force.

Summary Box

What is known about this issue?
Monitoring of infectious diseases such as HIV/AIDS and other Sexually Transmitted Infections is an important issue of Public Health. For a better monitoring process, appropriate laboratory and human capacities are needed.

What this study adds?
This report analyses the capacity of laboratories of public and private sectors to detect Sexually Transmited Diseases, types of used tests and their availability at the regional level. In this way, we get a general view of health system for fulfilling these important functions. In general private system is better equipped than the public one, but public system is more extensive and it is easier to access.

What are the implications for public health?
In the public system, it is important to enhance the laboratory capacities, training of the staff, improve the reporting process, from the private sector.

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An investigation of cases of nosocomial infections. The sterility and microbial load assessment in Surgery Clinic No 1 of UHC

Zahide SULEJMANI[1], Eugena ERINDI[1]

[1]Institute of Public Health

Abstract

Nosocomial infections, also called hospital acquired infections, are infections acquired during treatment in hospital, which do not exist or are in the incubation state before and at the moment of hospitalization. These infections are manifested 48 hours after hospitalization time. The aim of this study was the detection and timely reporting of nosocomial infections, strictly sticking to the protocol of prevention of health care infections control. The analysis has addressed the problematics of the spread of nosocomial infections on sterility policies in Surgical ward No 1 of Tirana University Hospital Center "Mother Theresa". The samples were collected in the surgical wards and in post-operatory wounds, during January-March 2016 period. All 44 samples taken within the surgical wards resulted negative, because those environments were disinfected and sterilized in advance. The samples in operatory block were taken from the surfaces, furniture in solutions, personnel, washing up water of instruments caretaker personnel, in aspiration and oxygen tubes, physiological solution in the bottles of oxygen device, single use masks, patient ambu and the bed of the patient, sterile cysteine and medication kits. There were taken 4 samples from post-operatory wounds in the surgical ward no 1, out of which 3 resulted positive with E. Coli and one sample taken resulted positive with Staphylococcus aureus. The implementation and application of all elements of the health care infections control and prevention protocol ,and the monitoring of medication therapy following the operation, is imperative.

Introduction

Hospitals acquired (HA) infections, also called nosocomial infections, are defined as "Infections acquired by patient during his/her hospitalization, for other reasons or causes, not related to the condition of hospitalization". Thus this infection is not present in the moment of patient's hospitalization. Nosocomial infections include hospital acquired infections, which may be manifested in patients even after leaving the hospital, and those affecting medical personnel employed in the hospital.

The percentage of HA infections is a key indicator of the quality and safety of medical care. The quality indicator measures the degree of the standard fulfilment. The measure of the spread of infections serves as one of the indicators of performance assessment.

The monitoring of infection level is the first step to identify the local problems and the priorities to evaluate the preventive measures undertaken. The aim of infection control is the prevention and minimization of HA infections of patients and medical care staff, as a consequence of medical follow-up for the achievement of two goals:

- Prevention and reduction to a minimum of the level of HA infections
- Protection of medical personnel and visitors from eventual infection risks.

The infected patients or those carrying pathogen microorganisms are a source of infection for other patients and also for the medical personnel. Patients with HA are another source of infection. Hospital overcrowding, frequent patient transfer across hospital wards, and the concentration of the most vulnerable patients towards infections in the same space could influence the spread of HA infections.

The antibiotics overuse for therapy or prophylaxis has led to a decrease of their efficacy in many cases, due to the increasing resistance towards them. When an antibiotic is widely used, the specific resistant bacteria may be spread all over hospital, thus causing a situation of endemics. This problem may become especially critical in developing countries, where the more expensive second line antibiotics are hardly available.

Materials and methods

The existing state of affairs of HA infections spread and its influence on sterility policies in the premises of Tirana University Hospital Center (TUHC) "Mother Theresa", where Surgical Clinic No 1 is situated, was investigated in detail. The data were collected in hospital environment (in operatory department, in the wake-up room, where samples were collected in furniture, air, disinfectant solutions, single use sterile objects, sterile cystines, surgical packages, health care personnel, washing-up procedures, etc.) where the most exposed areas at risk of infection are situated due to various factors related to the patients' health.

The basic requirement is the filling-up of a questionnaire for all hospital environment, e.g. number of surgical wards, reanimation rooms, wake-up therapy rooms, and pre-operation preparatory rooms; number of surgical interventions carried out per day, how many surgical packages are available for patients undergoing operations, the particular disinfectant used for surgical packages, the number of physicians participating in an operation, and the number of supporting technicians. The age of operated patients and included in this study ranged between 22-78 years old.

Methodology

This is a cross-sectional study involving two components:

- Descriptive-this component refers to the description/assessment of sterility policies, relating them to the level of presence (the level

of contamination) of pathogenic microorganisms according to the type of sample collected in hospital environment.

• Identifying- this component refers to the isolation and identification of pathogenic microorganism variety in these hospital environments, separating them into gram-positive and gram-negative microbes.

The object of our investigation in Clinic No. 1 of TUHC during January- March 2016 time period was the identification and isolation of pathogenic organisms present in hospital environment, in surgical, treatment and wake-up rooms, as the most high risk spaces for the spread of nosocomial (HA) infections.

During first years of transition and on, as a result of massive population migration towards Tirana, the number of residents of the later has been multiplied, transforming the capital into a true metropolis, which led to a highly increased variety of surgical interventions and to the presence of a big number of visitors in hospital environments, which became highly contaminated and centers of HA infections spread.

Data collection

In order to obtain the necessary information and to ensure the identification of different species of pathogenic microorganisms in hospital environment procedures of inspection, investigation and surveillance of all the hygiene and sanitary rules were carried out, the application of all clinical protocols relating to the spread of nosocomial infections, dilution procedures and exposure to different kinds of disinfectant solutions, available in all surgical clinics of the country was monitored.

Relying on the above mentioned procedures of investigation, a wide range of examinations were accomplished to enable the identification of those pathogenic microorganisms, present in surgical rooms as well as in treatment rooms; samples were taken from post-operatory wounds to be examined in laboratory, enabling the isolation of pathogenic microorganisms such as gram-positive ones (e.g. Staphylococcus aureus), and gram negative ones (e.g. Escherichia coli).

Sample techniques

The correct sampling of the material to be analyzed is the most important step for the exact diagnosis of an infection.

The microbiological diagnostics includes: sample taking, sample transport, sample processing in order to extract the infection causative agent, its identification and the determination of its sensitivity to the antimicrobials, reporting and interpreting the result of the microbiological examination. Sampling must be done using sterile tools under strict asepsis conditions. This rule is important for the protection of personnel working in the given environment, as well as for the personnel collecting samples (laboratory technicians).

Note: All the samples must be accompanied by the respective official paper. All sample data must be clearly written and stated in it, and namely: the place where sample was collected- air, surface, furniture, wound, disinfectant solution, sterile material, surgical package (kit), number of protocol, sampling time, accurate description of the sample type and of the place where it was taken from, compliance of the examination number (Rodak plates, bouillon tube) with the protocol registry number, where reading and interpreting of the type of analysis shall be done.

• Air examination was done by standard methods using R.C. S. (Reuter-Centrifugal-Sampler), which determines the contamination level of environment by counting the number of particles falling on Rodak plates in agar-blood, Wurts and Saboro growth mediums. The plates

are incubated at 37Ú C for 24 hours, and after that the reading and microbe identification can be done. The permitted values are 100-500 microbes/m^3 of air (WHO reference).

Figure 1. The sampling technique for surgical room air

• The examination of surfaces is carried out following a simple method, appropriate for routine field work, because in this way the materials are easily transferred to the laboratory. The best method is that of contact of Rodak plates with growth medium, T.S.A. terrain (trypticase-soia-agar) and the simple bouillon medium. The permitted values are 500-1000 microbes/100 cm^2 (WHO reference).

Figure 2. Examinations of surfaces on surgical bed with "Rodak" contact plates

- **Examination of surgical wound.**

In order to carry out the examination of surgical wounds, the following was carried out:

Pre-operative assessment - Epidemiological data related to the patient: age, gender, trauma classification, laboratory analyses.

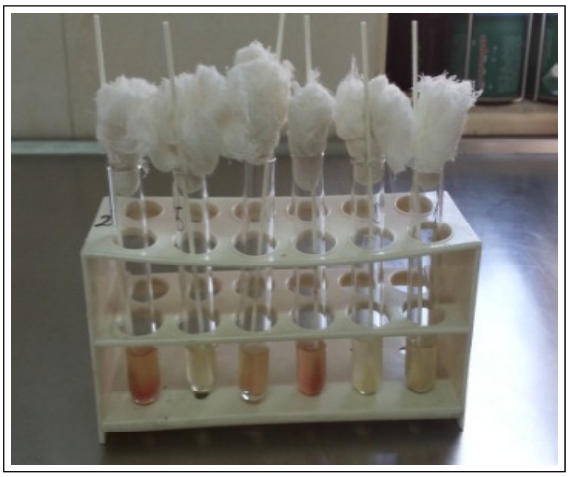
The post-operative assessment - Microbiological examinations were undertaken in the wound with bouillon, including all wounds (clean and contaminated).

The methodology used to identify the pathogenic microbes

In order to identify Staphylococcus aureus colonies we relied on colonies' characteristics of agar-blood medium, pigment output, beta hemolysis, presence of gram-positive cocci gathered as grape vines in the microscope preparations colored according Gramm method, in catalasis and plasma coagulase and catalase tests, production of desoxyribonuclease, manite fermentation, Slidex Staph-Kit of bioMereux trademark quick test, and API-STAPH Biochemical System for very precise identification.

In order to identify E. Coli we relied on colonies' characteristics, that have a special metallic glint in Eosin methylene blue and Endo stains. In simple Agar, colonies are white, humid and wavy. In Agar-blood medium, some E. Coli cultures produce hemolysis, the indole and red methyl tests result positive, while those of Voges Proskauer and Simmon's citrate are negative, the ureases test is negative, and the gel does not liquefy.

Figure 3. Sample taking (left) and pathogenic microbes' isolation (right



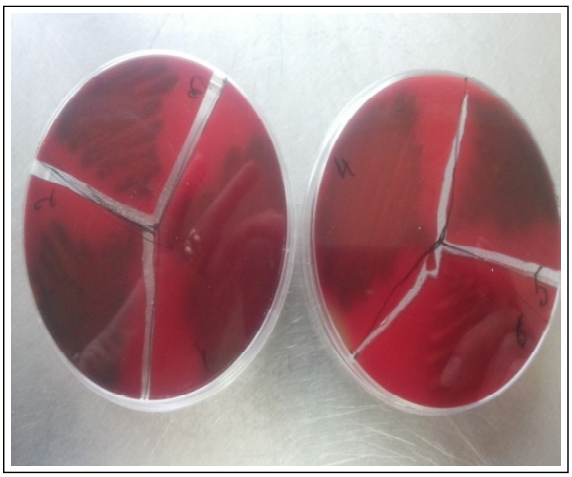


Figure 4. E. Coli and Staphylococcus aureus isolation

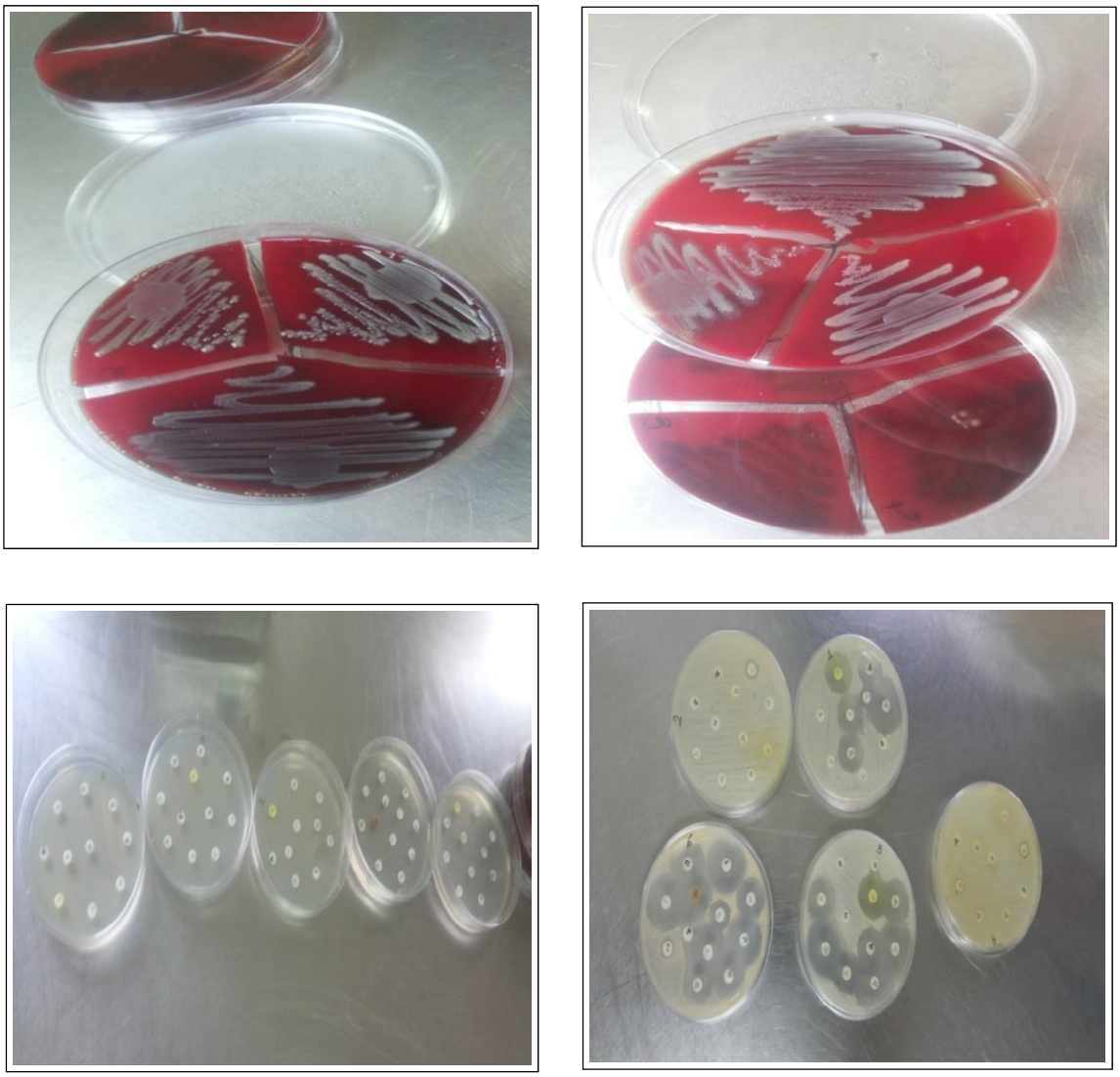


Table 1. The reading and the interpretation of Antibiogram

No	Name-Surname	Culture isolation	Tested antibiotics (Zone diameter mm)	S / R
1	Code 001	**E.Coli**	• Ampicillini • Cephalexine • Cefuroxime • Cefotaxime • Gentamicine • Amikacine • Nalidixuc- Acid • Ciprofloxacine • Nitrofurantoine • Co-Trimazoli	**R** **R** **S** **S** **R** **S** **S** **R** **S** **R**
2	Code 002	**E.Coli**	• Ampicillini • Cephalexine • Cefuroxime • Cefotaxime • Gentamicine • Amikacine • Nalidixic-Acid • Ciprofloxacine	**R** **R** **R** **R** **R** **R** **R** **R** **R**

2	Code 002	**E.Coli**	• Ampicillini • Cephalexine • Cefuroxime • Cefotaxime • Gentamicine • Amikacine • Nalidixic-Acid • Ciprofloxacine • Nitrofurantoine • Co-Trimazoli	**R** **R** **R** **R** **R** **R** **R** **R** **R** **R**
3	Code 003	**E.Coli**	• Ampicillini • Cephalexine • Cefuroxime • Cefotaxime • Gentamicine • Amikacine • NalidixicAcid • Ciprofloxacine • Nitrofurantoine • Co-Trimazoli	**R** **R** **S** **S** **S** **S** **R** **S** **S** **S**

4	Code 004	**Staphylococcus Aureus**	• Penicillini • Oxacillini • Vankomycine • Cefoxitine • Gentamicine • Tetracycline • Chloramphenicol • Erythromycine • Clindamycine • Ciprofloxacine	**R** **R** M/S S S S S S S S S

Results

Examinations were carried out right after the disinfection was completed, surgical interventions had not yet started, and the compartments of the operation room are ready for the different planned interventions.

The samples were taken on surfaces, furniture, solutions, the washing up water of the staff taking care of instruments, aspirator and oxygen tubes, physiologic solution in the bottle of oxygen device, single use masks, patient's lances and his/her bed, sterile cystine, and the medication kits. In Clinic Number 1, samples were taken from 4 post-operatory, the material was inoculated in respective growth mediums in the HA infections laboratory, and they resulted contaminated by E. Coli and Staphylococcus aureus, and then the respective Antibiogram was done for each of the patients, to observe the antibiotic effects and distinguish which pathogen is resistant and which sensible to them (Tables 2-4).

Table 2. Operatory Room No.1

1. The air in the center of the room	7 colonies
2. The air next to narcosis device	12 colonies
3. Operatory bed number 1	negative
4. Window sill	negative
5. Operatory bed	negative
6. Inside medicament sideboard	negative
7. Over plug tube	negative
8. Floor	negative
9. Operation lamp	negative
10. Mask	negative
11. Basins	sterile
12. Intubation tube circuit	negative
13. Floor	negative

Table 3. Operation Room No. 2

1. The air above operation bed	5 colonies
2. The air near window	23 colonies
3. The air at the door	37 colonies
4. The surface on operation bed	negative
5. Operation bed	negative
6. Medicament sideboard	negative
7. Operation lamp	negative
8. The table of intubation tubes	negative
9. Table of medicaments	negative
10. Sterile cystine	negative
11. Wall slab	negative
12. Floor	negative
13. Aspiration tubes	negative
14. Narcosis tubes	negative
15. Mask	negative

Table 4. Operation Room No 3

1. The air over operation bed	negative
2. The air near the window	9 colonies
3. The air at the door	13 colonies
4. A surface on operation bed	negative
5. Operation bed	negative
6. Medicaments sideboard	negative
7. Operation lamp	negative
8. Sterile cystine	negative
9. The table of intubation tubes	negative
10. Wall slab	negative
11. Floor	negative
12. Aspiration tubes	negative
13. Narcosis tubes	negative
14. Sterile cystine	sterile
15. The sink	negative
16. The mask	negative

It is evident that from all the range of microbial examinations, there was not recorded any microbial load in all three operation rooms environments, based on the accurate application of the protocol on the prevention and control of HA infectios.

The results of sterility testing within the hospital Clinic Number 1 of TUHC are presented below:

- All 44 samples taken from operation room environments resulted negative, after the disinfection and sterilization of these spaces.
- Out of 4 total samples taken from operation wounds in the Surgery ward No. 1, three resulted positive with E. Coli, and one resulted positive with Staphylococcus aureus.
- During environmental assessment, some violation of standard rules was noted, related to the entrance into operation room.
- Also, in the wake-up room, in the patient pre-operatory room, and in the window, samples were taken which resulted positive with E. Coli, because injections were prepared in syringes thereafter left by the window, which constitutes a breach of clinical protocols.
- There is no aspirator system in the operatory rooms block.

• There is no air filtering system within the operatory block.

• Germicide lamps were put on before operation start.

• The sterilization of materials was done in a room by an automatic autoclave provided with biological indicators

Standard preventive measures

A systematic program to prevent Hospital Acquired infections includes:

• The application of strict control of the persons permitted to enter operatory room block.

• Washing hands after all medical manipulation.

• All the manipulations and treatments of the wound must be carried out using special single use gloves, and after the manipulation is over, the gloves are thrown away, the hands are washed, and are disinfected.

• The entry of many visitors into the ward must be avoided.

In addition our laboratory assessed the resistance to antibiotics for the samples resulting positive for E. Coli and Staphylococcus aureus, providing a detailed list of the respective antibiotics according to their effectiveness spectrum, which are listed in the above tables.

Obliged by the enforced application of the Protocol on Control and Prevention of Hospital Acquired (HA) infections, following Order 156, dated April 6th, 2012, as well as by the observance of the Ministry of Health, and also referring to the above mentioned results, we do recommend as follows:

• ***The strict application of all the elements of Protocol on Control and Prevention of HA infections.***

• ***Medicament therapy follow-up of post-operation patients -what kind of antibiotic is used and for how many days?***

Summary Box

What is already known about this subject?

The infection control in health care institutions reflects a quality standard and plays an existential role for the well-being and safety of the patients, medical personnel and visitors. All health care institutions must abide by the rules of the program on control and prevention of HA infections, reducing to a minimum their occurrence, and ensure the protection of medical personnel involved from the possible infection risks.

What this study adds?

The surveillance, prevention and control of HA infections programs are integrated in hospital and other health care institutions practice to ensure the well-being of the patients, personnel, visitors and other persons contacting health care environment. The used products and procedures to prevent infections and limit their respective spread may lead to lower costs of medical treatment.

What are the implications for public health?

The protocols must rely on diagnostic-therapeutic policies and procedures, preventive measures; the Protocol of prevention of health care infections, washing and disinfection procedures and the controlled usage of the antibiotics must be strictly applied. It is necessary to improve capacities and also to stimulate higher quality standards in different parts of health care system chain in relation to the application standard protocols for the prevention of the infections in health care practice.

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Bullying: an underestimated phenomenon in Albania. Proposals to start an open wide discussion

Enkeleint Aggelos Mechili[1,2], Aurela Saliaj[1]

[1] Faculty of Public Health, University "Ismail Qemali", Vlorë
[2] Faculty of Medicine, University of Crete, Greece

Abstract

The violence in school environment is considered as widespread nowadays and its consequences are felt beyond just schooling context, making it an important issue of public health. Taking into account the long term bullying implications, as well as the fact the youngsters are the future of a country, all schools are obliged to follow anti-bullying policies, within their general code of conduct. The main aim of this paper is to propose and draft the different policies in approaching this problem. The recommended policies are comprehensive and target school directories, teaching personnel, pupils and parents. The policies should aim at the active change of attitude and behavior of the above mentioned groups. Albania must start without delay drafting of anti-bullying policies to prevent this phenomenon, similarly to many other countries.

Introduction

Statistical data show that youngsters are the first authors, victims and witnesses of cases of interpersonal violence manifestations in social and school environment. The violence in school surroundings is not a recent phenomenon, but nowadays it is considered as extremely widespread, and its consequences are felt far beyond schooling context, transforming it into an important issue of public health.

Bullying is an unpleasant aggressive behavior among children of schooling age, including an imbalance of power, real or a perceived one. This violent behavior (physical and/or psychological) is repeatable, or tends to be repeated with the passing of time. Both those who suffer (victims), as well as those who practice the bullying (perpetrators) are endangered by serious long lasting health problems (Di Stasio, Savage & Burgos 2016)

The phenomenon starts in school courtyard, by teasing, pushing or scoffing someone, and degrades in sexual harassment, groups/bands assault, resulting in violence. Bullying victims experience loss of self-control and fear from the acts of the perpetrator. Other problems include aggression, psychological problems (e.g. anxiety and depression), academic problems and school abandonment. *Bullying,* in addition to what was described above, recently could be applied through technological means (cyberbullying-using internet and social media, emails, SMS, etc.) [Craig, Bell & Laschied 2011; David-Ferdon & Hertz 2007; Huesmann 2007].

Taking into account the long term consequences of bullying, as well as the fact youngsters are the future of a country, all the schools are obliged to follow anti-bullying policies, within their general code of conduct. Through this study we highlight the lack of appropriate sensitivity in all the interested parties, and state some recommendations not simply for the reduction of this phenomena but for the restructuring of long term policies of the education system.

Methods

The proposal of the recommendations was analyzed by the Faculty of Public Health, University of Vlora. For the formulation of recommendations the effective policies relating to phenomenon in different countries of the world were taken into account. To spot the most effective policies, the systematic review of literature was used, through Medical Subject Heading (MeSH) terms.

The argument for anti-bullying recommendations framework

The main argument for the proposal that policy-makers must seriously deal with this phenomenon, were the results of a study conducted in 6 public schools (high schools) in Vlora by the Faculty of Public Health (2016). The results showed the indicator of physical fight was 29% (at least once during the last month), and *bullying* indicator was 33.7%, (at least once during last month), according to pupils' responses. (Mechili et al. in process).

Although the studies conducted in Albania on the subject are only a few, all of those conducted up to this time, come to the conclusion that *bullying* is increasing (Alo_116 2013; Hasekiu 2013, Peza 2014). There is also an increasing sensitivity from the media on the subject, where different media reflect in their programs study and questionnaires data collected by various interested associations or institutes, unfortunately the main part of them from abroad (Peza 2014;No Author 2016). Generally, after such sensitizing statements, general recommendations are provided for bullying prevention and treatment, but in no case recommendations on long term state policies were provided to combat this phenomenon.

The second argument for raising this issue was the indifference or underrating of the problem by education directory authorities, as well as by the majority of teachers and school directories which were contacted by us. The discussion with them revealed an ignorance of the problem, but even after our explanations and the information were provided to them, they kept on neglecting the issue, simply stating " They are only children, and they just play."

The presentation of policies and recommendations

The recommendations and policies against bullying must be formulated and addressed to different groups of people (to school directories, teachers, pupils and parents) (Cleves Primary School 2015; Dewhrist et al. 2014).

Directories of the schools:

- School directors must be legal obliged to compile the procedures (standard protocols) to prevent harassment amongst pupils, and also to raise staff, parents and children awareness about these procedures;
- All school personnel (that is to be educated from education directories in collaboration with mental health staff) must be attentive to psychological violence (*bullying*) evidence, and act immediately and decisively against, in conformity to the policies and action protocol, formulated in advance;
- The leading staff must review and renew policies on a regular basis, and when it is necessary, recommend further improvements;
- They ought to organize meetings with school personnel, informing them on policies to deal with this phenomenon, as well as for its prevention;
- Directories of 9-years schools and high schools are expected to make proposals about the education of teachers of universities about this phenomenon (introduction of some topics about *bullying* in academic curricula).

The personnel (staff):

- The personnel of the school must be obliged to address immediately the incident when it happens;
- The incident must be immediately reported to the directory of education, to the director of the school, to parents, as well as to other school and community staff (psychologist or the nurse of school or community) (Cleves Primary School 2015);
- Educational measures (only in repeated and severe cases, punitive measures are recommended) will be adopted according to the needs and in consultation with all the parties concerned;
- Health care staff, combined with teachers trained for this phenomenon, ought to organize group discussions with regard to *bullying*, encourage children to be aware of it and to collaborate in fighting it, and cultivate friendship and partnership among them;
- *Bullying* must be considered as an anti-value in a systematic way, finding methods to influence collective psychology of the children;
- An appropriate monitoring/observation of school courtyard must be ensured;
- The actions are to be taken in conformity to formal procedures (protocols) foreseen to control bullying cases;
- Staff must be aware about signs and damage of bullying, and able to listen to and react to all unrest the children report or attracts their attention;
- The schools ought to organize periodic special meetings (2 in a year or when the school staff decides so).

Pupils:

- Pupils must be encouraged to report all harassing incident (of every type) by any adult person in school and at home, even when they are not directly involved (this can be done orally or in writing);
- The children who had suffered bullying must be provided direct access to the respective academic staff or medical personnel at their disposal to discuss their experience with them;
- Protection and security, and continual help must be offered to them;
- In order to recover self-respect and lost dignity, specialized aid must be offered;
- A sincere and open heart discussion must be conducted with the persons that have been *bullying* victims, they must be incited to collaborate with adults to find a solution, and also to reveal the reasons for what has already happened.

Parents:

- They must be trained and informed on this phenomenon, and on how to contact school, if they perceive any behavioral change in their children's attitude;
- They must support school anti-bullying policies and actively encourage their children to be a positive member of the school community;
- They must expose *bullying* as an anti-value in a systematic way (even when they think their offspring neither deliver, nor suffers from it), finding methods to influence their children psychology;
- Discussing in a friendly and open way about the problems their children tell them about themselves or somebody else;
- To really support their children and not just declaring "boys are boys and this is their way", or "go and hit him back" (when complaining abound);
- To support school sanctions, if their children are implied in such incidents.

As above mentioned, one of the commonest ways to practice bullying nowadays is cyberbullying. A growing number of adolescents have been victims of cyberbullying from their fellows of the same age (Volak, Mitchell&Finkelhor 2006)

A growing number of denunciations and penal investigations is noted presently in Albania for severe cases of cyberbullying, seriously threatening dignity and life of individuals. A World Vision study of 2015 in Albania showed that from 900 youngsters and children surveyed, 45% reported to have experienced profile theft in Facebook, scolding and public slander in social media (no author, 2015)

Some effective policies to prevent this phenomenon include:

- Forbidding smartphones at school premises;
- Training of parents on this phenomenon;
- "The control" of webpages frequented by children;
- The education of pupils on *cyberbullying* prevention (not open messages coming from unknown people, not answering threats, and informing accordingly parents and teachers);
- The education of parents and children for the appropriate and safe use of social networks and smartphones.

Conclusions

In conclusion, Albania must start the drafting of anti-bullying policies, as it is commonplace practice in many other countries to prevent *bullying* (Smith, Anainiadou&Cowie 2003).

To achieve this aim, we recommend the application of Olweus Bullying Prevention Program (OBPP). The main goals of OBPP are:

• The reduction of bullying prevalence in schools;

• Tthe prevention of development of new *bullying* practices;

• Generally, the improvement of relations among children and adolescents in school premises.

Those goals will be only achieved by creating a friendly environment in schools. The creation of such environment results in the reduction of cases of participation in aggressive behavior manifestations, as well as in the enhancement of the feeling of equal participation in the community.

Olweus Bullying Preventive Program (OBPP) relies on four main elements, where the adults in school must:

1. Show warmth, true positive interest and become participants in pupils' everyday life;

2. To establish unbreachable limits for unacceptable behavior;

3. Always adopt non-aggressive, non-negative behavior when rules are not obeyed;

4. Collaborate with school authorities, using positive models (strengthening them by working in group).

Those principles are "translated" into a specific number of measures (some were mentioned above) aiming their application in schools, in classes, individually, but also in community (Jimerson, Swearer & Espelage 2010).

To prevent cyber-bullying by applying OBPP we can:

1) Create an organized planning effort to address the unrests, and regularly accomplish the assessment of needs;

2) Assess the policies and practice of Internet management and use;

3) Apply effective practices of student Internet use monitoring;

4) Train the teacher and pupils;

5) Implement a cyber-bullying report, review the intervention process;

6) Engage in a continual and effective assessment (Willard 2007).

Comments

• The above mentioned policies are expected to reduce bullying cases at schools and improve the social relations of the adolescents;

• The active participation of pupils in different activities (in theatrical plays organized by pupils themselves, etc.) of the schools may significantly reduce this phenomenon (Jornen et al. 2012);

• Teachers are useful in the effective prevention of *bullying*; their attitude and readiness strongly influences its reduction (Huesmann 2007; Craig, Bell &Leschied 2011; Department of Education and Skills 2013; Marshall et al. 2015);

• If the schools adopt comprehensive anti-bullying policies, they could have a better chance of reducing it (Marsh et al. 2011);

• Application of behavioral ecological model (BEM) constitutes a useful mean to help in the overall and comprehensive programs of anti-bullying intervention (Dresler-Hawke &Whitehead 2009).

The application of the above mentioned methods has resulted highly effective from many studies conducted abroad. The commonest method of results assessment is the use of at least two comparative groups, or measure and re-measure (test-retest) [follow-up] after 1-2 years (it goes up to 4 years in a study in Spain) (Garaigordobil & Martínez-Valderrey 2015; Smith, Ananiadou & Cowie 2003). We also recommend the conduction of similar studies in various regions of Albania, to evaluate the proposed interventions.

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BULLETIN OF THE INSTITUTE OF PUBLIC HEALTH
Aleksandër Moisiu, Str. 80, Tirana, Albania
E-mail: ishp@shendetesia.gov.al
Tel: 04 23 74 756
Fax: 04 23 70 058