

SCHOOL MEDICINE IN THE COVID-19 PANDEMIC PERIOD

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Abstract

INTRODUCTION: Since the first cases of SARS CoV-2 infection were detected worldwide, each country has implemented various measures to prevent the population from becoming infected with this new virus. In Romania, epidemiological measures were instituted quickly, and the county Public Health Directorates were strengthened, including by delegating medical staff from the school medical offices.

OBJECTIVES: The study follows the way in which the medical staff from the school medical offices took part in the prevention actions against the SARS CoV-2 infection, at national level, from the establishment of the state of emergency, on March 16, until the beginning of May 2020.

MATERIAL AND METHOD: Questionnaires with open-ended questions were distributed online to physicians and nurses across the country. The received responses were statistically analyzed.

RESULTS: Out of the 336 questionnaires received, 324 were considered valid (with answers to all questions), representing 88.52%. Questionnaires were received from 35 counties (69 cities) and Bucharest, 225 of the respondents being nurses and 99 doctors.

Of these, 289 were delegated to the DSP, and 27 took specific actions within the Local Public Authorities. The main activities carried out were: coordination of emergency situations within the County Command Centers (6 people), medical assistance in quarantine centers (91), epidemiological investigations, telephone monitoring of people in isolation at home / quarantine and of their contacts (95), border triage (33), pre-hospital and emergency triage (40), nursing home care (2), sample collection from

COVID-19 suspects (8), ISU / DSP hotlines (72), creation of databases and data input in databases (20), dental emergencies (3), community support (22).

CONCLUSIONS: Medical staff from the educational institutions offices participated throughout the country in actions to prevent the population against COVID-19 infection, carrying out important activities, with high risk for health.

KEY WORDS: school medicine, prevention COVID-19

INTRODUCTION

Since the first cases of SARS CoV-2 infection were detected worldwide, each country has implemented various measures to prevent the population from becoming infected with this new virus, the epidemiological and public health measures playing an important role in defending the health of the population.

Epidemiology is the science that deals with the study of the health status determinants in the population and the application of these studies to control health problems [1].

Knowledge of entry and exit gates and ways of transmitting infectious diseases is the basis for adopting prevention measures. In general, the most effective control measures concerns even the intervention in the infection's chain of transmission.

The Centers for Disease Control and Prevention (CDC) believes that, in infectious diseases, interventions should be based on: controlling and eliminating the agent that is the source of transmission, protecting the entrance gate and increasing the resistance of the host organism [2]. Thus, for most infectious diseases

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Received: 16.06.2020, accepted: 19.06.2020, published: 20.06.2020

Cite: Rajka D, Moldovan K. School medicine in the COVID-19 pandemic period. Journal of School and University Medicine 2020;7(1-2):37-40

the most important measure of prevention is the control and elimination of the infectious agent that causes the disease. Preventive measures must be taken for patients, asymptomatic persons and for the community [2].

The World Health Organization has developed protocols specific to COVID-19 infection, considering that the identification and follow-up of confirmed cases and of their contacts in the general population, i.e. epidemiological investigations [3], play an essential role.

In Romania, the National Institute of Public Health, through the National Center for Prevention and Control of Communicable Diseases (CNSCBT), has established the main measures to combat SARS CoV-2 infection to protect the health of the population [4]. Thus according to CNSCBT,

Close contact is defined as:

– Person living in the same household as a patient with COVID-19;

– Person who has had direct physical contact with a case of COVID-19 (e.g. handshake without subsequent hand hygiene);

– Person who has had unprotected direct contact with infectious secretions of a COVID-19 patient (e.g. during coughing, touching handkerchiefs without wearing protective gloves);

– Person who has had face-to-face contact with a case of COVID-19 at a distance of less than 2 m and with a duration of at least 15 minutes;

– A person who has been in the same room (e.g. classroom, meeting room, hospital waiting room) with a case of COVID-19 for at least 15 minutes and at a distance of less than 2 m;

– Medical staff or other person providing direct care to a patient with COVID-19 or a laboratory staff handling samples collected from a patient with COVID-19, without proper wearing of protective equipment*; * Medical personnel who have worn protective equipment appropriate to the type of care provided are NOT CONSIDERED CLOSE CONTACT.

The epidemiological link could have taken place within 14 days prior to the onset of symptoms.

Attitude towards close contacts [4]:

Close contacts will self-isolate at home, together with other family members living at the same

address, preferably in different rooms, and will be supervised clinically and epidemiologically for 14 days, as appropriate, from:

– the date of the most recent exposure to a suspected / confirmed case of COVID-19;

– the date of the last exposure in a healthcare facility where COVID-19 patients were treated, where they worked or were present;

Attitude towards persons arriving from the RED zone, as mentioned in the “List of regions and localities from the red zone and the yellow zones with COVID-19 transmission”: These persons will be quarantined immediately after arrival in Romania, for 14 days after entering the country, in spaces specially designed for this purpose. Respiratory samples will be collected ONLY at the onset of symptoms within 14 days from the date of entry in Romania, by DSP (Public Health Directorate) staff, and the positive ones will be transported urgently to the nearest hospital / infectious diseases department [4].

Attitude towards people arriving from the YELLOW zone, as mentioned in the “List of regions and localities from the red and yellow zones with COVID-19 transmission”: These people will self-isolate at home immediately after arriving in Romania, for 14 days from entering the country, together with other family members living at the same address, preferably in separate rooms. Respiratory samples will be collected ONLY at the onset of symptoms within 14 days from the date of entry in Romania, by ambulance service staff / SMURD (Mobile Emergency Service for Resuscitation and Extrication), and the positive ones will be transported urgently to the nearest hospital / infectious diseases department [4].

In the sense of the above, the National Institute of Public Health has established the attributions of the County / Bucharest Public Health Directorate (DSP) [4]:

1. reports immediately in the STS (Special Telecommunications Service) platform the positive result;

2. introduces in maximum 24 hours the rest of the data requested for the newly confirmed case in the STS platform;

3. initiates the epidemiological investigation of the CONFIRMED case within maximum 24 hours;

4. introduces in the electronic platform dedicated to the surveillance file, the minimum data set for the immediate telephone reporting of the SUSPECT case;

5. completes and uploads in maximum 7 days, in the electronic platform dedicated to the CONFIRMED case supervision file, the data from this file;

6. reports to CNSCBT, immediately after detection, any outbreak with at least 3 cases, including the recommended / implemented measures;

7. immediately initiates the epidemiological investigation for the clusters;

8. reports immediately, by telephone, to CNSCBT, the deaths registered in suspected / confirmed cases with COVID-19, following that within maximum 24 hours from the death, the surveillance sheet, updated including with the data related to death, will be sent by fax / e-mail to CNSCBT and CRSP, with the mention "Update";

9. immediately initiates the epidemiological investigation for a deceased case;

10. receives the laboratory results from CNSCBT.

Considering the multitude of actions through which the county Public Health Directorates had to get involved in preventing and combating the effects of COVID-19 infection, with an extremely small number of staff, through the establishment of the state of emergency at national level (Decree 195 / 16.03. 2020), medical staff, doctors and nurses from the medical offices from educational institutions, were delegated to the DSPs, primarily for support in conducting epidemiological investigations [5].

OBJECTIVES: This study aims to highlight the role played by the medical staff from the school medical offices at national level in the prevention of COVID infection, from the establishment of the state of emergency on March 16th 2020, until the beginning of May 2020.

MATERIAL AND METHOD: Questionnaires with open-ended questions were distributed online

to physicians and nurses across the country. The received responses were statistically analyzed.

Activity	Countries	Persons
<i>coordination of emergency situations within the County Command Centers</i>	4	6
quarantine centers	18	91
<i>epidemiological investigations, telephone monitoring of people in isolation at home / quarantine</i>	28	95
<i>border triage</i>	9	33
<i>pre-hospital triage</i>	13	39
<i>emergency units triage</i>	1	1
<i>medical assistance in nursing homes</i>	2	2
<i>ISU / DSP hotlines</i>	25	72
<i>sample collection from COVID-19 suspects</i>	4	8
<i>community support</i>	13	22
data input in databases	6	18
creation of databases	2	2
<i>dental emergencies</i>	3	3

Table No. 2

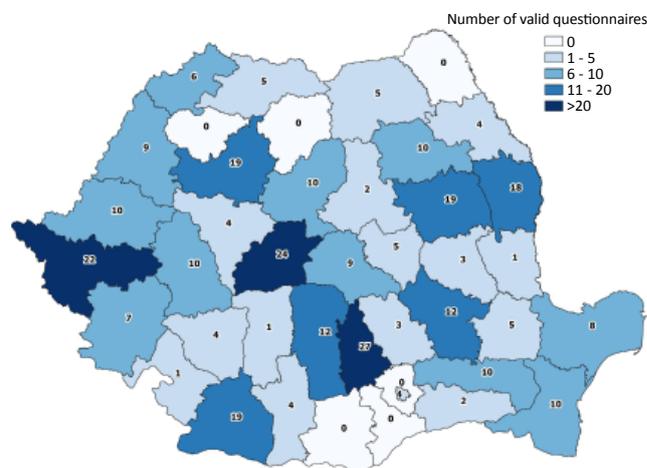


Fig. no 1

RESULTS: 336 questionnaires were received, of which 324 were considered valid (answers to all questions). 225 nurses and 99 doctors from 35 counties plus Bucharest answered questions, totaling 69 cities from all over the country (Table No. 1 and Figure No. 1).

Of the 324 respondents, 289 were delegated during the state of emergency to the Public Health Directorates, while another 27, although not delegated to the DSP, were involved in actions with the Local Public Authorities. 8 people were on technical unemployment, childcare leave, or vacation.

316 persons, representing 97.53% of the respondents, were involved during the state of emergency in actions of: coordination of emergency situations within the County Command Centers, medical assistance in quarantine centers, epidemiological investigations, telephone monitoring of people in isolation at home / quarantine and of their contacts, border triage, pre-hospital and emergency triage, medical assistance in nursing homes, sample collection from COVID-19 suspects, ISU / DSP hotlines, creation of databases and data input in databases, dental emergencies, community support. (Table No. 2)

Equipment corresponding to the actions carried out were received by 224 of the respondents (70.88%), 38 persons did not receive any protective equipment at all, and 54 stated that the protective equipment was insufficient.

106 people (33.54%) received training on what to do during this period and on the correct method of equipment / removal of the protective equipment. 178 of the respondents state that they were not trained at all, and 32 of them consider that they were not trained enough.

With the exception of people that were in technical unemployment, there was one case of a 20% reduction in salary, without any explanation. Otherwise,

the medical staff involved in the study received their full salary during this period.

However, until the 1st of May, none of the respondents had received any salary increase, either for the overtime hours or for the risk conditions in which they carried out their activity.

Although work was carried out in areas with an extremely high risk of infection, only 14 people were tested for COVID-19 infection, representing 4% of the 324 respondents. At least 2 school nurses, delegated to DSP, were confirmed positive during this period, and one nurse died due to COVID-19 infection.

CONCLUSIONS

1. School medical staff have been actively involved throughout the country in COVID-19 infection prevention and control actions.

2. The risk to which the school medical staff was exposed throughout the state of emergency was considerable.

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