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Knowledge, Awareness and Practices towards Notifiable Diseases in Health Professionals at Ibn Rochd University Hospital in Casablanca

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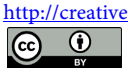

Abstract

Objective: The aim of this study is to investigate the awareness and compliance of healthcare professionals to report notifiable diseases at the University Hospital of Casablanca. Methods: A descriptive cross-sectional study was carried out in the university hospital. A self administered questionnaire was used to collect data. It covers socio-demographic characteristics of participants and their knowledge about notifiable diseases, reporting procedures, and their attitudes towards MDR cases. Results: A sample of 123 health professionals was included. There was a clear predominance of women and young doctors undergoing specialist training. Almost everyone said they had heard of NDs, but about a third (32.5%) could name only two or fewer NDs in our country. Meningitis (73.3%), tuberculosis (60%) and cholera (49.5%) were the most common NDs known to our sample. More than half, and sometimes all, of the respondents were unaware of other diseases such as human anthrax, exanthematous typhus, Creutzfeldt-Jacob disease and related diseases, severe acute respiratory syndrome, Crimean-Congo haemorrhagic fever, Rift Valley fever and West Nile fever. Our findings showed that our participants lacked knowledge about reporting procedures, such as who is responsible for reporting, how and to whom NDs should be reported. In 75.7% of cases, participants expressed a need for training on NDs, while 74.2% reported that the main reason for non-reporting was a lack of knowledge about NDs. Our Participants' knowledge of the reporting procedures and notifiable diseases remains relatively low. There is an urgent need for reflection and action to implement clear procedures and well-defined pathways to ensure complete reporting, as well as appropriate training for healthcare professionals to ensure their involvement in the surveillance of these diseases.

Subject Areas

Epidemiology, Public Health

Keywords

Mandatory Diseases Reporting, Health Care Professional, Notifable Diseases, Awareness, Practices

1. Introduction

Epidemiological surveillance is an essential part of public health. It is based on the systematic and continuous collection of data through the process of monitoring health events to provide stakeholders with information and indicators for planning, implementing and evaluating public health interventions and programmes [1].

From its humble beginnings in the mid-19th century, when it focused primarily on monitoring epidemics such as cholera and yellow fever, epidemiological surveillance has evolved significantly to incorporate advanced technologies such as geographic information systems (GIS) and artificial intelligence (AI) to enable a more rapid and accurate response to health threats [2].

The growing relevance of epidemiological surveillance has been highlighted by global health crises such as the Severe Acute Respiratory Syndrome (SARS) epidemic in 2003 and the H1N1 influenza pandemic in 2009, and more recently by the COVID-19 pandemic in 2019, which has highlighted both successes and continuing challenges in this area [3].

The performance of epidemiological surveillance systems depends largely on mandatory disease reporting (MDR). This is the means by which health professionals report confirmed cases of specific diseases to a national or local health authority. By integrating data from mandatory reporting, epidemiological surveillance enables rapid detection of epidemic outbreaks and disease monitoring [4] [5].

MDR was first introduced in Great Britain in 1855 to control cholera epidemics and was subsequently adopted by many countries around the world [4]. Today, the practice has adapted to technological advances such as information systems that allow for more efficient data collection and faster response to global health threats [6].

The list of notifiable diseases varies between countries and regions, but generally includes a range of infectious diseases with epidemic potential and some non-communicable diseases of public health concern. Typical notifiable infectious diseases include tuberculosis, polio, measles, avian influenza and other emerging infections [7]-[9]. To take account of new public health threats and emerging epidemics, the lists are regularly updated. For non-communicable diseases, some countries require mandatory reporting of cancer, major cardiovascular diseases or serious neurological disorders to monitor incidence, improve treatment and guide public health policy [6].

The obligation to report certain diseases in Morocco dates back to the beginning of the twentieth century, with the dahir of 28 January 1914 requiring the reporting of contagious or epidemic diseases. This dahir was amended in 1938 to strengthen the health surveillance system. However, it was Royal Decree no. 554-65 of 26 June 1967 that really structured the MDR in Morocco. This decree stipulated that health professionals must immediately report cases of quarantine, social, contagious or epidemic diseases to the local administrative and medical authorities at prefectoral or provincial level. The application of this decree was regulated by Ministerial Order no. 683-95 of 31 March 1995, which establishes the list of notifiable diseases and the prophylactic measures to be taken in relation to them [10] [11]. Currently, MDR in Morocco is coordinated by the Ministry of Health through its various regional and local public health directorates, in collaboration with health facilities, diagnostic laboratories and other health sector stakeholders. This holistic approach aims to strengthen the country's capacity to detect, monitor and respond effectively to public health threats, thereby contributing to the overall protection and promotion of Moroccan population health [10].

Health professionals' understanding of notifiable diseases, reporting procedures and the importance of this practice for public health is crucial for a successful MDR system. The aim of this study is, therefore, to investigate the awareness and compliance of healthcare professionals to report notifiable diseases at the University Hospital of Casablanca. A successful MDR system depends to a large extent on health professionals' understanding of notifiable diseases, reporting procedures and the importance of this practice for public health. The aim of this study is, therefore, to explore health professionals' knowledge of the practice of mandatory reporting of diseases at the University Hospital of CasablancaA successful MDR system depends to a large extent on health professionals' understanding of notifiable diseases, reporting procedures and the importance of this practice for public health. The aim of this study is, therefore, to explore health professionals' knowledge of the practice of mandatory reporting of diseases at the University Hospital of Casablanca.

2. Methods

A descriptive cross-sectional study was carried out in the departments concerned by MDR at the IBN ROCHD University Hospital in Casablanca. The departments included were: the departments of the Harouchi Hospital, the infectious diseases department, gynaecological department and medical and surgical, emergency units at IBN ROCH Hospital, and intensive care departments of the 20 August hospital, the two pneumology departments of the IBN ROCHD hospital and the 20 August hospital, and the biology, haematology, bacteriology and parasitology laboratories of university hospital.

Participants were comprehensively included by inviting all healthcare professionals working in the above departments who were in post at the time of the study. The following types of health professionals were targeted: teachers, specialists, nurses, laboratory technicians and those in training, such as residents and interns. Medical

students and Doctors in the accreditation process were excluded.

Data collection took place between 27 June and 26 July 2019, using a self-administered questionnaire divided into three sections:

The first covered the socio-demographic characteristics of the participants, such as age, gender, profile and years of service.

The second addressed questions that asked participants to spontaneously list the NDs they were aware of, their attitudes towards the diagnosis of an ND, and their knowledge of the mandatory reporting process. Further questions were asked about their knowledge of the reporting tools available, who the report is made to and who is responsible for making the report. Finally, we asked questions about barriers to reporting, their need for training on ND and their suggestions for improving the reporting process.

Data were analysed using Jamovi V 1.6.15 software. Qualitative variables were described in terms of numbers and percentages, and quantitative variables were described in terms of means and standard deviations.

3. Results

A total of 123 health professional were included in the study, with a mean age of 30.7 years and a standard deviation of 8.1 years. Women and doctors in training, such as interns and residents, were the most represented, with 69.9% and 82.1% respectively. Participants' length of practice varied from 2 months to 37 years, with a median of 2 years (See Table 1).

Table 1. Description of study population.

	Number	%
Gender		
Female	86	69.9
Male	37	30.1
Profil		
Interns/resident	101	82.1
Teachers	10	8.1
Specialists	5	4.1
Nurses	5	4.1
Lab technicians	2	1.6

The majority of participants (98.4%) stated that they had heard of notifiable diseases (ND), and 86.2% were able to name at least one from our country's list. The NDs spontaneously mentioned by the participants were mainly meningitis (72.6%), tuberculosis (59.4% of cases), cholera (49.1%), HIV infection (35.8%), typhoid (31.1%), malaria (30.2%) and rabies (25.5%). The other diseases on the list adopted by our country seemed to be unknown to the participants. The average number of NDs correctly identified per participant was 4.75, with a standard deviation of 2.6, and almost a third (32.5% of participants) were able to identify only one or two NDs (See Table 2).

Table 2. NDs cited spontaneously by the study population.

	Number	%
Have knowledge of NDs (n = 123)		
Yes	121	98.4
No	2	1.6
Cite at least one of the NDs in the list (n = 123)		
Yes	106	86.2
No	17	13.8
Diseases spontaneously cited as ND (n = 106)		
Meningococcal meningitis	77	72.6
Tuberculosis	63	59.4
Cholera	52	49.1
Acquired immune deficiency syndrome (AIDS)/HIV	38	35.8
Typhoid fever	33	31.1
Malaria	32	30.2
Rabies	27	25.5
Pertussis (Whooping cough)	22	20.8
Leishmaniasis	22	20.8
Hepatitis	18	17.0
Poliomyelitis	14	13.2
Leptospirosis	14	13.2
Tetanus	13	12.3
Measles	13	12.3
Brucellosis	11	10.4
Diphtheria	10	9.4
Leprosy	10	8.5
Collective food poisoning	9	9.4
Influenza due to a new subtype of virus	8	7.5
Bilharzia	4	3.8
Hydatidosis	3	2.8
Syphilis	3	2.8
Plague	2	1.9
Yellow fever	2	1.9
Trachoma	2	0.9
Acute rheumatic fever (ARF)	2	1.9
Gonococcal or non-gonococcal male urethritis	1	1.9
Human anthrax	0	0.0
Exanthematic typhus	0	0.0

Continued

Recurrent fever	0	0.0
Gonococcal conjunctivitis in newborns	0	0.0
Creutzfeldt-Jacob disease and related illnesses	0	0.0
Severe acute respiratory syndrome	0	0.0
Crimean-Congo haemorrhagic fever	0	0.0
Rift Valley fever	0	0.0
West Nile fever	0	0.0
Average number of NDs spontaneously mentioned (mean, SD)	4,75	2.6
Number of NDs spontaneously mentioned (n = 106)		
≤ 2	39	32.5
[3] [4]	24	20.0
≥ 5	57	47.5

Participants who considered themselves to be involved in MDR represented 91.9% of cases, and 66.1% indicated that they knew the person responsible for MDR in their department. More than half of participants (52.6%) named the attending physician as the person responsible for case reporting. Of the means used to report, 82.0% reported using a reporting form. The proportion of participants who reported knowing to whom the notification should be sent was 35%. The epidemiology department was reported in 48.8% and the nosocomial infection control committee (NICC)) in 22% of cases. The main sources of information on MDR reported by participants were initial training (82.1%) and continuing training (17.9%). (See Table 3).

Table 3. Description of participants' knowledge of reporting procedures.

	Number	%
Do you consider yourself part of MDR process? (n = 123)		
Yes	113	91.9
No	10	8.1
Know the person responsible for the report (n = 118)		
Yes	78	66.1
No	40	33.9
Profile of the persons responsible for the report according to the participants (n = 76)		
Attending physician	40	52.6
Senior nurse	35	46.1
Head of department	10	13.2
Residents	5	6.6
Head doctor	3	3.9
Teachers	1	1.3
Laboratory staff	1	1.3

Continued

Means of reporting NDs (n = 89)		
Reporting form	73	82.0
Phone call	36	40.4
Mail	6	6.7
Telefax	4	4.5
Document on a paper register	2	2.2
Whatsapp	1	1.1
Knowing whom/where to declare? (n = 117)		
Yes	41	35.0
No	76	65.0
Reporting sites according to participants (n = 41)		
Epidemiology Department	20	48.8
Nosocomial Infection Control Committee (NICC)	9	22.0
Ministry of Health	5	12.2
Epidemiology and Disease Control Department	3	7.3
Hospital administration	2	4.9
Ministry of Health Delegation	2	4.9
Where you can get reporting forms? (n = 118)		
Yes	36	30.5
No	82	69.5
Time taken to report a case of NDs (mean/SD) (n = 65)	9,7	9.0
= < 10 min	52	80.0
>10 min	13	20 .0
Sources of information on the NDs (n = 106)		
Initial training	87	82.1
Continuing training	19	17.9
Awareness campaign	13	12.3
Other (caravans, self-training, colleagues from the department)	6	5.7

Of the participants in the study, 78 % reported that they had diagnosed an ND during their professional practice. The most common NDs diagnosed were meningitis (53.1%), tuberculosis (43.8%) and HIV infection or AIDS (20.8%). (See Table 4).

Table 4. NDs diagnosed by the participants during their professional practice.

	Number	Percentage (%)
Have you ever diagnosed a case of ND? (n = 123)		
Yes	96	78.0
No	27	22.0

Continued

NDs diagnosed by participants (n = 96)		
Meningococcal meningitis	51	53.1
Tuberculosis	42	43.8
Acquired immunodeficiency syndrome (AIDS)/HIV	20	20.8
Malaria	13	13.5
Pertussis (whooping cough)	12	12.5
Leishmaniasis	10	10.4
Typhoid fever	9	9.4
Rabies	9	9.4
Leptospirosis	6	6.3
Tetanus	4	4.2
Collective food poisoning (CFP)	4	4.2
Hepatitis	4	4.2
Cholera	3	3.1
Poliomyelitis	3	3.1
Measles	3	3.1
Influenza caused by a new virus subtype	3	3.1
Hydatidosis	3	3.1
Diphtheria	2	2.1
Yellow fever	1	1.0
Leprosy	1	1.0
Brucellosis	1	1.0
Creutzfeldt-Jacob disease and related diseases	1	1.0

A total of 79 of the participants stated that they had reported NDs, representing 82.3% of cases, and only 10 participants cited barriers to reporting NDs, such as forgetfulness (20% of cases) and availability of a responsible for reporting (40% of cases). In terms of who was responsible for reporting NDs in their department, 54.5% reported the resident or intern physician, 53.7% reported the senior nurse, 49.6% reported the head of department, and 10.6% had no idea who was responsible. (See Table 5)

Only 11.4% of participants considered themselves informed about reporting procedures, around a quarter (24.4%) were convinced that suspected cases should be reported before the diagnosis is confirmed and 38% stated that they rely on the laboratory to report NDs (Table 5).

According to the participants, the number of NDs reported during their careers varied widely, ranging from 0 to 2,000 cases, with a median of 3 cases. The most commonly reported NDs were tuberculosis, AIDS (or HIV infection) and malaria, with proportions of 29.1%, 15.2% and 13.9% of participants respectively. Notifi-

cation was made within 24 hours after diagnosis in 50% of participants. The most common method of notification was by post and telephone (58.9% and 52.1% respectively) (See Table 5).

Table 5. Description of participants' perceptions and attitudes towards NDs.

	Number	%
Did you report the NDs diagnosed (n = 96)		
Yes	79	82,3
No	17	17,7
Reasons for non-reporting (n = 10)		
I forgot	2	20.0
Someone else did it	4	40.0
Not aware of the procedure	5	50.0
Person responsible for the reporting in the participant's department (n = 123)		
Resident/Intern	67	54.5
Senior Nurse	66	53.7
Head of department	61	49.6
Consultant	29	23.6
Laboratory Staff	16	13.0
Disease Prevention Officer	14	11.4
Administrative staff	5	4.1
Nurse	4	3.3
Nobody	1	0.8
Unsure/don't know	13	10.6
Person to be made responsible for MRD according to participants (n = 117)		
Resident/Intern	76	65.0
Senior Nurse	66	56.4
Head of department	74	63.2
Consultant	55	47.0
Laboratory Staff	40	34.2
Disease Prevention Officer	37	31.6
Administrative staff	49	41.9
Nurse	48	41.0
Nobody	54	46.2
Unsure/don't know	53	45.3
Reporting of suspected cases before confirmation of diagnosis (n = 123)		
No	49	39.8
Yes	30	24.4
Sometimes	23	18.7
Don't know	21	17.1
Rely on the laboratory to report the case when sending a sample (n = 123)		
No	63	52.1
Yes	46	38.0
Sometimes	12	9.9

Continued

Feel informed about the reporting procedures (n = 123)		
No	109	88.6
Yes	14	11.4
Average number of NDs reported by participants during their career (median, min, max)	3	0 - 2000
Average number of ND cases reported by participants in the last two years (median, min, max)	2	0 - 600
NDs reported by participants (n = 79)		
Malaria	11	13.9
Leishmaniasis	7	8.9
Tuberculosis	23	29.1
Pertussis (whooping cough)	9	11.4
Hepatitis	3	3.8
Influenza (H1N1)	2	2.5
Typhoid fever	8	10.1
Leptospirosis	7	8.9
Rabies	6	7.6
Cholera	6	7.6
Collective food poisoning	2	2.5
Diphtheria	1	1.3
AIDS/HIV	12	15.2
Tetanus	1	1.3
Poliomyelitis	3	3.8
Time taken to declare ND (n = 78)		
Within 24 hours of diagnosis confirmation	39	50.0
24 - 48 hours	19	24.4
48 - 72 hours	8	10.3
One week	10	12.8
After two weeks	2	2.6
To whom/where did you report (n = 57)		
Head nurse of the department	26	45.6
Epidemiology Department	12	21.1
Nosocomial Infection Control Committee (NICC)	7	12.3
Hospital administration	5	8.8
Epidemiology and Disease Control Department	4	7.0
Other	3	5.3
Means used to report NDs (n = 73)		
Mail	43	58.9
Phone call	38	52.1
Reporting form	5	6.8
telefax	4	5.5
E-mail	4	5.5
By visiting the relevant department in person	2	2.7

Inadequate knowledge of the diseases to be reported and the reporting procedures were cited by 74.2% and 90.8% of participants respectively as the main bar-

riers to reporting NDs. Lack of tools to report and lack of feedback were mentioned by 49.2% and 50% respectively.

Participants made a number of recommendations to improve the reporting system for NDs, such as training of health professionals on NDs, establishment of clear reporting protocols and computerisation of the reporting process, which were mentioned by 75.7%, 12.2% and 10.8% of participants respectively (See Table 6).

Table 6. DN barriers according to participants.

	Number	%
Barriers stated by participants (n = 120)		
Lack of knowledge of which diseases should be reported	89	74.2
Ignorance of the reporting procedures	109	90.8
Ignorance of the role of the participant in the MRD	56	46.7
Lack of reporting tools	59	49.2
Lack of response (feedback)	60	50.0
No interest in epidemiological surveillance	47	39.2
Administrative nature of the task (reporting)	48	40.0
Too much time spent searching for the required information	35	29.2
Reporting is complex, involves several people	43	35.8
Time consuming	27	22.5
Unpaid task	13	10.8
The data reported is personal	20	16.7
Unnecessary for patient care	11	9.2
Participants' recommendations for the promotion of NDs reporting (n = 74)		
Training on NDs	56	75.7
Computerisation of the MRD process	8	10.8
Feedback	2	2.7
Clear protocol	9	12.2
Availability of reporting facilities	5	6.8
Establishment of a dedicated department	7	9.5

4. Discussion

A sample of 123 health professionals working in one of Morocco's largest university hospital centers was included in this study. There was a marked predominance of women and young doctors undergoing specialist training. Almost everyone said they had heard of NDs, but about a third (32.5%) could name only two or fewer NDs in our country. Meningitis (73.3%), tuberculosis (60%) and cholera (49.5%) were the main NDs known to our sample. More than half, and sometimes all, of the respondents were unaware of other diseases such as human anthrax,

exanthematous typhus, Creutzfeldt-Jacob disease and related diseases, severe acute respiratory syndrome, Crimean-Congo haemorrhagic fever, Rift Valley fever and West Nile fever. Our findings revealed that our participants lacked knowledge about reporting procedures, such as who is responsible for reporting, how and to whom NDs should be reported. In 75.7% of cases, participants expressed a need for training on NDs, while 74.2% reported that the main reason for non-reporting was a lack of knowledge about NDs.

The level of knowledge about NDs among health professionals varies significantly on a global scale. Some health professionals may have received specific training as part of their medical studies or continuing medical education, while others may not have been provided with accurate information about reporting procedures. The proportion of participants (98%) in our study population reporting awareness of NDs was slightly higher compared to the study conducted in UK that showed a percentage of 90% of doctors who were aware of the duty to notify, and 89 % in a study conducted in Nigeria, 87% in Germany and 84 in South Africa [12]-[15].

In general health professionals have a good knowledge of the common diseases that can be highly contagious and are the cause of epidemics. However, knowledge of less common diseases may vary. Our results confirm this finding, as the best-known NDs were meningitis, tuberculosis, typhoid, malaria and rabies, as it has been reported in the two studies conducted among general practitioners in Salisbury Hospital in England and final year medical students in a private medical college in Malaysia [14] [16].

Health professionals' knowledge of the list of notifiable diseases and their awareness of the reporting procedures are key factors in combating the under-reporting of NDs to the competent authorities [17]. Of the 36 notifiable diseases in our country, about 47.5% of our study population could name at least five, but almost a third of them could name only two or fewer, indicating a very low level of knowledge about the list of NDs. These results are similar to those found in the Nairobi study of nurses, 56% of whom knew fewer than 5 NDs [18]. Thomson *et al.* [15] found similar results, reporting a proportion of 47% of health professionals with insufficient or inadequate knowledge.

A good proportion (91.9%) of our study population considered themselves to be involved in MRD. Other studies of doctors at Salisbury Hospital in England and healthcare professionals in Johannesburg, South Africa, found that 74% and 87% of participants respectively were aware of their role in MRD [14] [15]. Participants who reported having managed or diagnosed NDs represented 78% of participants in our study. This result is consistent with a study in the United States, which revealed that 82% of healthcare providers reported managing patients with NDs and 98.4% of them felt responsible for reporting to health authorities [19].

With regard to the profile of the person responsible for reporting NDs, the responses varied widely. Residents and interns were the most commonly named by our participants, followed by the senior nurse and then the head of department.

This discrepancy in participants' responses, coupled with the very low proportion (11.4%) of individuals who considered themselves informed about the ND reporting process, confirms the lack of familiarity with reporting procedures in our study population. This finding contrasts with the study by Alshamari *et al.* in Saudi Arabia, where 84.3% of the population confirmed that they report NDs after diagnosis [20].

At 90.8% and 74.2% respectively, the main barriers to reporting NDs identified by participants were lack of knowledge of the list of NDs and unfamiliarity with the reporting procedure. These results are in line with other studies in Nigeria, Zimbabwe and Saudi Arabia [13] [18] [20]. The lack of feedback was a concern for 50% of our participants and for 30% of the participants in the Gauci *et al.* Study [17] MRD was perceived as a burdensome task by 29.2% of our participants. This supports the findings of Iwu *et al.* [13] with a proportion of 67% of its study population.

Of the participants who made recommendations to improve compliance with reporting of NDs, around three quarters suggested organising training for health professionals, establishing clear procedures and computerising reporting processes. The same needs were highlighted by participants in some studies [15] [17].

Our study is an overview of the knowledge and attitudes of health professionals at the IBN Rochd University Hospital in Casablanca towards NDs. The population studied is far from being representative of all health professionals in our country. Therefore, the results obtained cannot be generalised, especially since professionals from the private sector were not included. Nevertheless, the results obtained highlight a very marked lack of knowledge among university hospital staff, which calls for appropriate consideration of effective measures to improve the level of knowledge and adherence of professionals to the MRD. Several recommendations should be implemented to improve compliance and strengthen disease reporting. First, it is essential to improve continuing education by including specific modules on NDs, their importance and reporting procedures. In addition, raising awareness through information campaigns, educational materials, and regular reminders through institutional channels would help integrate these obligations into daily practice. Simplification of reporting procedures, such as the introduction of user-friendly digital platforms, would also reduce administrative barriers and encourage better compliance. Finally, ensuring adequate monitoring and support for healthcare professionals, including feedback on the impact of their reports, would strengthen their commitment and motivation to fulfill these obligations, ultimately contributing to more effective public health surveillance and response.

5. Conclusions

The results of this study show that healthcare professionals are aware of their role in reporting notifiable diseases. However, their knowledge of the reporting procedures and the list of notifiable diseases remains relatively low. These findings lead to an urgent need for reflection and action to implement clear procedures and

well-defined pathways to ensure complete reporting, as well as appropriate training for healthcare professionals to ensure their involvement in the surveillance of these diseases.

A successful MDR system depends to a large extent on health professionals' understanding of notifiable diseases, reporting procedures and the importance of this practice for public health. The aim of this study is, therefore, to explore health professionals' knowledge of the practice of mandatory reporting of diseases at the U.

Conflicts of Interest

The authors declare no conflicts of interest.

References

[1] Nsubuga, P., White, M.E., Thacker, S.B., *et al.* (2006) Public Health Surveillance: A Tool for Targeting and Monitoring Interventions. In: Jamison, D.T., Breman, J.G., Measham, A.R., *et al.*, Eds., *Disease Control Priorities in Developing Countries*, The International Bank for Reconstruction and Development/The World Bank. http://www.ncbi.nlm.nih.gov/books/NBK11770/

[2] Buehler, J.W., Hopkins, R.S., Overhage, J.M., *et al.* (2004) Framework for Evaluating Public Health Surveillance Systems for Early Detection of Outbreaks: Recommendations from the CDC Working Group. *MMWR Recommendations and Reports*, **53**, 1-11.

[3] Fauci, A.S., Lane, H.C. and Redfield, R.R. (2020) Covid-19—Navigating the Uncharted. *New England Journal of Medicine*, **382**, 1268-1269. https://doi.org/10.1056/nejme2002387

[4] Heymann, D.L. and Rodier, G.R. (1998) Global Surveillance of Communicable Diseases. *Emerging Infectious Diseases*, **4**, 362-365. https://doi.org/10.3201/eid0403.980305

[5] Thacker, S.B. and Berkelman, R.L. (1988) Public Health Surveillance in the United States. *Epidemiologic Reviews*, **10**, 164-190. https://doi.org/10.1093/oxfordjournals.epirev.a036021

[6] CDC (2023) Centers for Disease Control and Prevention (CDC): Principles of Epidemiology. Lesson 1. Section 11. https://archive.cdc.gov/www_cdc_gov/csels/dsepd/ss1978/lesson1/section11.html

[7] Antoniotti, S., Pellissier, V., Siméoni, M.C. and Manuel, C. (2002) Déclaration obligatoire des maladies infectieuses. *Santé Publique*, **14**, 165-178. https://doi.org/10.3917/spub.022.0165

[8] EHI55. https://www.ehinz.ac.nz/assets/Factsheets/Released-2011/EHI55-InternationalNotifiedDiseasesOutbreaksByCountry2008-2011-released201111.pdf

[9] WHO. International Health Regulations. https://www.who.int/health-topics/international-health-regulations

[10] Ministère de la santé du Maroc. Maladies à déclaration obligatoire.

[11] Haut commissariat au plan: Archives CND. http://archives.cnd.hcp.ma/uploads/news/018852.pdf

[12] Drysdale, S.F. (1994) Knowledge of Infectious Disease Reporting amongst Military

and Civilian Medical Officers. *Journal of the Royal Army Medical Corps*, **140**, 125-126. https://doi.org/10.1136/jramc-140-03-04

[13] Iwu, A., Diwe, K., Duru, C. and Uwakwe, K. (2016) Assessment of Disease Reporting among Health Care Workers in a South-Eastern State, Nigeria. *International Journal of Community Medicine and Public Health*, **3**, 2766-2774. https://doi.org/10.18203/2394-6040.ijcmph20163359

[14] Voss, S. (1992) How Much Do Doctors Know about the Notification of Infectious Diseases? *BMJ*, **304**, Article No. 755. https://doi.org/10.1136/bmj.304.6829.755

[15] Thompson, V., Shirinde, J. and Mbonane, T.P. (2022) Knowledge, Attitude and Practices on Notifiable Diseases among Environmental Health Practitioners in the City of Johannesburg: A Cross-Sectional Study. *Health SA Gesondheid*, **27**, 1-7. https://doi.org/10.4102/hsag.v27i0.1980

[16] Soe, H.K., Than, N., Lwin, H., Phyu, K., Htay, M.N., Moe, S., *et al.* (2018) Knowledge and Attitude of Mandatory Infectious Disease Notification among Final Year Medical Students. *Journal of Family Medicine and Primary Care*, **7**, 756-761. https://doi.org/10.4103/jfmpc.jfmpc_300_17

[17] Gauci, C., Gilles, H., O'Brien, S., Mamo, J. and Calleja, N. (2007) General Practitioners' Role in the Notification of Communicable Diseases—Study in Malta. *Eurosurveillance*, **12**, 5-6. https://doi.org/10.2807/esm.12.11.00745-en

[18] Mairosi, N., Tshuma, C., Juru, T.P., Gombe, N.T., Shambira, G. and Tshimanga, M. (2017) Evaluation of Notifiable Disease Surveillance System in Centenary District, Zimbabwe, 2016. *Open Journal of Epidemiology*, **7**, 251-261. https://doi.org/10.4236/ojepi.2017.73019

[19] Fill, M.A., Murphree, R. and Pettit, A.C. (2017) Health Care Provider Knowledge and Attitudes Regarding Reporting Diseases and Events to Public Health Authorities in Tennessee. *Journal of Public Health Management and Practice*, **23**, 581-588. https://doi.org/10.1097/phh.0000000000000492

[20] Alshamari, W.K., Aldawwas, K., Al Shammari, M.K., *et al.* (2023) Compliance of Healthcare Providers with the Notifiable Diseases Surveillance System in Riyadh, Saudi Arabia. *Cureus*, **15**, e41530.