Occupational Health Systems across Selected Public Healthcare Facilities in the Philippines

Paul Michael R. Hernandez, Romeo R. Quizon, Guillano C. Lacsamana and Joanna I. Remaneses

Department of Environmental and Occupational Health, College of Public Health, University of the Philippines Manila

ABSTRACT

Objective. The study aimed to collect data on the occupational health systems implemented across selected healthcare facilities in the Philippines, including: (1) governance system for occupational health and safety (OHS), (2) OHS information systems, (3) OHS financing systems, (4) technology and related systems for OHS, (5) the OHS workforce, and (6) the delivery of OHS services.

Methods. The data were collected through a walkthrough survey of the selected facilities as well as through the review of records and relevant documents found in the facilities.

Results. Governance and financing systems for OHS are not present in any of the facilities. 3 out of the 13 hospitals studied have employee medical records, accident/incident reports while none of the 19 facilities have Workplace Environment Monitoring Reports (WEM), implying the lack of OHS information systems. Due to the lack of a financing mechanism for occupational health services, there is a lack of OHS technology in the facilities which include but are not limited to the presence of an Immunization and Post-Exposure Program (present in 7 out of 13 hospitals and none of the 6 RHUs studied). 1 out of 19 facilities reported to having personnel delegated for OHS activities in their facility. Lastly, 1 out of 19 facilities have emergency treatment and medical facilities for their employees, indicating inadequate OHS service delivery in the facilities studied.

Conclusions. Standards and laws such as the Philippine OHS Standards and Department of Health (DOH) Administrative Order (AO) 2012-0020 have provisions with regard to OHS in these facilities, and stricter implementation of these provisions could help in filling in the gaps in the OHS systems in these facilities. This will provide a healthy workforce capable of giving better healthcare services to the general population.

Key Words: occupational health services, employee health services, health care facilities, occupational health and safety, occupational health systems, occupational health management

Corresponding author: Paul Michael R. Hernandez, MD, MOH
Department of Environmental and Occupational Health
College of Public Health
University of the Philippines Manila
625 Pedro Gil Street, Ermita, Manila 1000 Philippines
Telephone: +632 5247102
Email: prhernandez@up.edu.ph

Introduction

According to the World Health Organization (WHO), a health system is composed of all organizations, people and actions whose primary intent is to promote, restore or maintain health. To achieve its goals, a health system needs to carry out some basic functions; these were identified and grouped by the WHO into a set of six essential building blocks, all of which are needed to improve health outcomes. Based on WHO's health system framework, these are: (1) good health services which could be delivered in the most efficient way possible, (2) a health workforce which must be in an optimum balance of sufficiency and competency in order to deliver quality services, (3) a health information system which could serve as a database for the different health determinants, (4) cost-effective medical products and technologies which are easily accessible to healthcare workers, (5) a health financing system which ensures that the budget for health is adequate to cater to the needs of the people accessing healthcare services, and (6) good leadership and governance, responsible for developing different policies and strategic frameworks to be able to suit the health system to the public's needs.[1] Table 1 discusses occupational health systems based on these six components in the local and global context. Furthermore, Table 2 shows what should be expected of an occupational health system in Philippine healthcare facilities based on the existing rules and regulations (The Philippine Occupational Safety and Health Standards and DOH Administrative Order 2012-0020).

Good leadership and governance in the context of OHS is the key to good workplace health promotion and protection policies. OHS committees are responsible in carrying out this task in their respective work areas. St. Vincent's Hospital in Sydney, Australia has an OHS policy which advocates best practices in health and safety through the incorporation of its workforce in the formulation of OHS programs in their hospital.[2,3] Public hospitals in Victoria, Australia also adhere to this policy through its blueprint in the formation of their OHS committees.[4] Other countries such as Ireland and the USA include the same OHS policies, with additional provisions such as: (1) the follow-up of staff who have been involved in violent incidents at work, (2) the administration of pre-employment medical examinations, (3) the maintenance of employee medical records, and (4) the administration of special medical examinations, such as

Table 1. Comparison of Local Occupational Health Systems with the Occupational Health System of Selected Countries, 2014

Occupational Health System Component	Local	Global (Selected Country)
Leadership and governance	Mandated by Rule 1040 of POSHS (Formation of a Health and Safety Committee and Health and Safety Policy)	Also mandated by standards, but includes additional advocacies for the provision of occupational health services and efficient OHS recordkeeping (Australia)
Health information systems	Mandated by Rule 1050 of POSHS (OHS recordkeeping) but noncompliance is evident	Also mandated by standards from government bodies concerned for OHS, noncompliance is also evident (Australia)
Health financing	*No studies found*	Countries with allotted portions of national budget for occupational health services (Liberia, New Zealand)
Medical products and technologies	Improved by DOH Healthcare Facilities Enhancement Program (HFEP), but implementation not 100% complete	General lack observed, leading to noncompliance with other OHS regulations (Australia) General lack also observed, especially in PPE of healthcare workers (HCWs) (India)
Personnel dedicated to OHS	Mandated by Rule 1030 of the POSHS and strengthened through DOH AO 2012-0020 *No studies found on compliance with this component*	Mandated by the OSHA, with additional designations not found in the local standards *No studies found on compliance with this component* (USA)
Occupational health service delivery	*No studies found*	Non-compliance due to lack of OHS resources (Australia) Non-compliance also due to lack of OHS resources, particularly noting low frequency of HCW physical examinations (India)

vaccination, health screening, biological monitoring, vision screening, tuberculin skin tests, and tuberculosis contact tracing for the staff.[5] These facilities also employ the use of Root Cause Analysis (RCA) as a method of analysis and evaluation of health and safety concerns in order to properly address these issues.[6] In the Philippines, Rule 1030 of the Philippine Occupational Safety and Health Standards (POSHS) mandates all industries to form their own OHS committees for the betterment of workers' health through the formulation of OHS policies and programs.

Financing mechanisms for OHS services are essential for the proper implementation of these services. Many government bodies worldwide have allotted specific percentages of their budget for OHS though this is OHS in all industries, not specifically healthcare industry OHS. Liberia allots less than 0.1% for OHS in their health budget, the majority of this going to logistical support.[7] New Zealand also allots a specific percentage (0.0033) of their GDP for OHS.[8] In the Philippines, no studies could be found regarding financing for occupational health services, much less OHS financing in its healthcare facilities.[9]

Personnel dedicated for occupational health are also important for the delivery of OHS services in their workplaces. The Occupational Safety and Health Administration (OSHA) in the USA includes these as their OHS personnel: (1) a medical doctor, (2) a doctor of osteopathy, (3) a registered nurse, (4) a physician assistant, (5) an emergency medical technician, and (6) a licensed vocational/practical nurse.[10] In the Philippines, the Labor Code and the Philippine Occupational Safety and Health Standards indicate that every facility must have OHS-trained staff to ensure healthy working conditions. In addition, a licensed nurse trained in OHS is qualified to be part of OHS personnel in a workplace, but must be accompanied by a doctor and a dentist with the same OHS training should the institution's workforce consists of at least 300 employees.[11] Additionally, Administrative Order 2012-0020 from the Department of Health mandates that the OHS committee of such facility may consist of the following depending on the workers' population and OHS needs: a Safety Officer, and Occupational Health Nurse, an Occupational Health Physician, and a First Aider. These persons are all subject to Rules 1030 and 1960 of the Occupational Safety and Health Standards (OSHS) set by DOLE, which are rules governing the formation of an OHS committee and the requirements which must be met by each member.[12] This order from the DOH was issued in 2012 but currently, no studies can be found supporting this implementation and its current situation in the country.

Cost-efficient medical products and technologies are relevant in the improvement of OHS, and the same proves true in the healthcare industry. In a position paper by the Partnership for European Research in Occupational Safety and Health (PEROSH), the need for advanced solutions regarding common issues in OHS, like the monitoring of different work environment parameters such as exposures to noise, chemical substances, and extremes of temperature, was specifically stated.[13] Immunization for healthcare facility workers should also be noted since healthcare facility workers are exposed to many biological agents. The Centers for Disease Control in the USA addresses this through strict extensive coverage of immunization for all healthcare facility employees in its hospitals through their respective Hospital Infection Control Units.[14]

Aside from technological systems and its related advancements, information systems in OHS could also be used to recognize and control workplace hazards. A study conducted by Lynch in the components of occupational health information systems yield these to include the linkage of four databases: job history, work site exposure,

Table 2. Components of an Occupational Health System According to Relevant Legislative Measures

Occupational Health System Component	Philippine Occupational Safety and Health Standards	Department of Health AO 2012-0020
Leadership and governance	Types and Composition (Rule 1040) Must have: 1. Manager – manager or authorized representative 2. Members – workers of the establishment 3. Secretary – safety officer The number of members, as well as their designations vary depending on the number of workers in the facility	Provided for the formation of OHS committees based on existing provisions of POSHS Rule 1040
Health information systems	Report Requirements (Rule 1050) 1. All work accidents to be reported using form DOLE/BWC/HSD-IP-6 2. When accident results in death or permanent total disability, the form in number 1 shall be used along with the notification of the Regional Labor Office within 24 hours after occurrence	*No specific provisions found regarding OHS recording and reporting*
Health financing	*No standards found for this component*	*No standards found for this component*
Medical products and technologies	*No standards found for this component*	*No standards found for this component*
Personnel dedicated to OHS	Training and Personnel Complement (Rule 1030) Must consist of an occupational health physician, occupational health nurse, dentist and first aider. The number of personnel and hours of work required of them depend on whether the workplace is hazardous or not (Rule 1010) and the number of workers.	Provided for the designation and training of OHS personnel based on existing provisions of POSHS Rule 1030 and 1960
Occupational health service delivery	Provision of occupational health services (Rule 1960) Ranges from the supply of first-aid medicines, and emergency treatment room, and an emergency clinic depending on the number of workers	Occupational health programs required to be established in healthcare facilities: 1. Mercury Elimination Program 2. Infection Control Program 3. Healthy Lifestyle Program 4. Emergency Preparedness Plan 5. Waste Management Program 6. TB in the Workplace Program 7. HIV/AIDS in the Workplace Program 8. Immunization and Post-Exposure Program 9. Fire Safety Program 10. Drug-Free Workplace Program 11. Personal Protective Equipment Program 12. Hazard Communication Program 13. Electrical Safety Program 14. Accident Investigation Program 15. Healthcare Facility Safety Program 16. Respiratory Protection Program 17. Industrial Hygiene Program 18. Health Surveillance Program 19. Ergonomics Program 20. Workplace Sanitation Program

environmental agents, and health and safety.[15] Local standards are set by the DOLE in their OSHS as to the reporting of health and safety issues, such as work-related accidents, incidents, and/or injuries through forms designed for each work-related morbidity. These standards are followed by healthcare facilities as mandated by DOH AO 2012-0020, along with advocating healthcare facility workers to actively report these statistics. This same AO also tasks the OHS Committee of each healthcare facility to review these reports. Though legal sanctions are made for the strict implementation of these standards, work-related mortalities and morbidities still occur at a high rate. This is aggravated by the lack of recordkeeping for OHS in different work establishments; a total of only 33.9% of establishments report work-related morbidities to the Bureau of Working Conditions.[16] This led to the passing of House Bill no. 2226 (An Act Criminalizing Non-Compliance with Occupational Safety and Health Standards) on August 2013.[17]

OHS service delivery is the final component of OHS systems which result from good implementation of the previous components. Healthcare facilities in different countries face issues in this particular OHS system component. In India, through a study conducted by Gupta and Upadhyay, a concern regarding the sufficient issuance of personal protective equipment (PPE) to employees was raised, along with the concern regarding the frequency of employee medical examinations. Only 60% of the healthcare facility workers who participated in the study believed that they are being issued sufficient PPEs, a relatively low number compared to the other variables the study

assessed.[18] The Victorian government in Australia faces the same issue, leading to a significant number of healthcare facility employees disregarding OHS procedures.[19] In the Philippine setting, the DOH is implementing its Health Facilities Enhancement Program (HFEP), wherein a specified budget is given to DOH hospitals of all levels for infrastructure improvements and the acquisition of new medical supplies and equipment. According to the DOH's 2011 report on the HFEP of Level 1 and 2 DOH Hospitals, most of the budget allocated goes to the improvement of the hospitals' infrastructure, such as its electrical system, the renovation and repair of the different clinical areas and administrative offices, and the construction of additional buildings for employees' clinics and various other ancillary departments.[20] Medical equipment and supply expenses, on the other hand, went to purchasing various medical equipment for the hospitals' clinical areas and laboratories.

Additional measures to improve OHS systems in healthcare facilities include the setting of healthcare facility-specific standards, which could be found in the Guidelines for Protecting the Safety and Health of Healthcare Workers, published by the National Institute of Occupational Safety and Health (NIOSH). Compiled in this manual are the standards needed to ensure OHS in healthcare facilities, including guidelines as to the handling of various equipment and materials in different sections of the hospital without inducing occupational morbidities or mortalities. Administrative interventions, such as the different programs which facilities could use to minimize these hazards are also explained in the manual, along with pointers in implementing these programs.[21]

Despite these measures, there are still emerging issues on OHS in the healthcare facility setting locally and worldwide. According to an overall assessment of OHS in Public Hospitals in Australia through the Victorian Auditor-General's report, the issues faced by the hospitals in this country as workplaces include: (1) the insufficient priority and accountability for OHS, mostly due to inadequate OHS resources and insufficient OHS training provided for the hospital staff, (2) the lack of information on OHS available to the hospital management due to the underreporting and inconsistent reporting of occupational accidents, incidents, and injuries, and (3) the lack of information on sector-wide OHS risks and emerging trends, due to the limitations of the different healthcare facilities to compare and contrast OHS practices amongst each other.[22]

The Philippines, through National Congresses on OHS, indicates that the main problem encountered in the country is the underreporting work-related accidents, injuries, and illnesses, resulting also in the inadequacy of the Department of Labor and Employment in providing policies addressing these safety hazards. Common reasons as to the inadequacy of reporting include the disaggregation of data regarding these injuries resulting in a tedious effort to report the overall statistics, lack of awareness of some companies of the OHS standards, and the lack of a system of reporting these statistics.[23] No studies could be found regarding OHS issues specific for healthcare facilities in the country. However, the Occupational Safety and Health Center of the Department of Labor and Employment (OSHC-DOLE) is continually implementing the Zero Accident Program, which intends to enhance the overall OHS services offered in the workplace through training, education, research, technical services, and policies. It also aims to integrate the workforce in the program by incorporating them with OHS experts in order to come up with programs most suitable for lessening occupational hazards which are specific to their line of work.[24]

Objectives

In line with the abovementioned OHS issues and current activities done in the local OHS system, this study was conducted with the following objectives:

General Objective:

To evaluate occupational health systems in selected healthcare facilities in the Philippines.

Specific Objectives:

1. To evaluate the six elements of the OHS system in selected hospitals
2. To evaluate the six elements of the OHS system in selected rural health units
3. To determine the OHS programs implemented in the selected healthcare facilities

Materials and Methods

A cross-sectional study design was employed in order to determine the current state of occupational health and safety system across selected public healthcare facilities in the Philippines. Review of pertinent documents were made to assess the study sites.

Study Sample

Inclusion criterion

The management of the selected healthcare facilities was willing to be included in the study sample after being properly advised by the officials of the National Center for Disease Prevention and Control (NCDPC), DOH in collaboration with pertinent officials of the National Center for Health Facility Development and the Bureau of Health Facilities and Services.

Sample

A total of 19 healthcare facilities were included in the study sample, specifically: 2 regional hospitals, 1 specialty hospital, 5 provincial hospitals, 2 district hospitals, 3

infirmaries and 6 government health centers or rural health units (RHUs).

Sites of the Study

The project involved the three major geographic divisions in the country: Luzon, Visayas, and Mindanao. For each major geographic division, two cities/provinces were pre-selected in consultation with the officials of the Environmental and Occupational Health Office, NCDPC, DOH. The criteria for selection were as follows: (1) ease of coordinating with the institution; (2) has a good catchment area; and (3) ease of access to the investigators.

Review of Pertinent Documents

The research team requested from the head of the healthcare facility or any of his/her designated representatives the following documents applicable to the healthcare facility: (a) Health and Safety Policy; (b) Document containing employees' demographic data; (c) Organizational Chart of OHS Committee or its equivalent; (d) Accident and/or Incident Reports; (e) Workplace Environment Monitoring (WEM) Reports; (f) Sanitary Permits; (g) Discharge Permits; (h) OHS Program documents; (i) other available documents (e.g. employees' Annual Medical Reports). The presence or absence of these documents were noted in the Walkthrough Survey (WTS) form. To satisfy the objectives of the study, records pertaining to the City/Municipal Health Offices in direct jurisdiction of the RHUs studied were also reviewed.

Adherence to Relevant Policies and Standards

The Philippine OSHS published by the DOLE identifies the minimum requirements for workplaces based on worker demographics. The data gathered from the identified activities described above were evaluated against these standards. The results of the hazard identification activities were also compared to the requirements stipulated in DOH AO 2012-0020 (Guidelines Governing the Occupational Health and Safety of Public Health Workers).

Data Processing

Microsoft® Excel® 2013 (15.0.4420.1017) was used for all data extracted from the walkthrough survey. Encoders were oriented and trained on how to use the software and they were supervised closely by the Project Consultants. Coding manuals were developed as reference for coding instructions.

Data Analysis and Interpretation

Frequency counts and percentage distributions were made. All the needed analysis tables, graphs, and statistical tests linked to the research questions were generated using Microsoft Excel. Other quantitative and qualitative data and information were cross-examined to establish the association.

Ethical/biosafety clearance

Technical and ethical reviews of this project proposal were initiated, managed, and followed up by the Philippine Council for Health Research and Development (PCHRD) with the Program Manager of DOH, who shall coordinate / implement the technical review. The research proposal was submitted to the National Ethics Review of the PCHRD-DOST for research ethics review and approval.

Results

From the original 19 study sites, two regional hospitals requested for ethical clearance from their institution's Research Ethics Board. Due to time constraints, the funding agency advised the investigators to change study sites. The two regional hospitals were replaced with another regional hospital and a specialty hospital, leading to a new study sample of 1 regional hospital, 2 specialty hospitals, 5 provincial hospitals, 2 district hospitals, 3 infirmaries and 6 government health centers or rural health units (RHUs).

Hospitals

Table 3 shows all the elements of OHS systems the project team has evaluated according to the six basic OHS system components in all the public hospitals included in the study sample.

None of the hospitals studied have a health and safety committee, leading to the subsequent lack of a health and safety policy in these hospitals. Note that even without an OHS committee, some hospitals present with activities and formal programs for OHS. Also, no financing systems for OHS have been observed, since review of relevant records show that no specific budget is allotted for OHS endeavors in their workplaces.

Information systems for OHS also is lacking in the facilities studied, which could be shown in the presence of relevant OHS records. 1 regional hospital and 2 district hospitals out of the 13 hospitals studied were able to show employee medical records while 1 district hospital was able to show accident/incident report forms.

In terms of medical supplies and equipment, 10 out of the 13 hospitals studied report to have adequate medicines for their employees, while 8 and 7 hospitals, respectively, reported that they have adequate medical supplies and equipment. Note that the Immunization and Post-Exposure Program (present as a formal program in 2 out of 13 hospitals) in the healthcare facilities studied is listed, which also relates to the medical products and technologies these facilities employ for their workers. The lack of WEM reports for all the hospitals studied further indicate the lack of relevant technologies for OHS in the facilities studied.

Table 3. Occupational Health and Safety Programs Implemented Across Selected Public Hospitals in the Philippines 2013-2014 (N=13)

OHS System Element	Healthcare Facilities																	
	Regional/Special Hospitals				TOTAL		Provincial Hospitals				TOTAL		District Hospitals				TOTAL	
	With		Without				With		Without				With		Without			
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Leadership and Governance																		
OHS Committee	0	0.00	3	100.00	3	100.00	0	0.00	5	100.00	5	100.00	0	0.00	0	0.00	5	100.00
OHS Policy	0	0.00	3	100.00	3	100.00	0	0.00	5	100.00	5	100.00	0	0.00	0	0.00	5	100.00
Health Information System																		
Employees' Medical Record	1	33.33	2	66.67	3	100.00	0	0.00	5	100.00	5	100.00	2	40.00	3	60.00	5	100.00
Accident or Incident Reporting System	0	0.00	3	100.00	3	100.00	0	0.00	5	100.00	5	100.00	1	20.00	4	80.00	5	100.00
Workplace Environment Monitoring Reports	0	0.00	3	100.00	3	100.00	0	0.00	5	100.00	5	100.00	0	0.00	5	100.00	5	100.00
Healthcare Financing																		
Budget allotted for OHS	0	0.00	3	100.00	3	100.00	0	0.00	5	100.00	5	100.00	0	0.00	5	100.00	5	100.00
Medical Products and Technologies																		
Medicines	3	100.00	0	0.00	3	100.00	4	80.00	1	20.00	5	100.00	3	60.00	2	40.00	5	100.00
Medical supplies	2	66.67	1	33.33	3	100.00	3	60.00	2	40.00	5	100.00	3	60.00	2	40.00	5	100.00
Medical equipment	2	66.67	1	33.33	3	100.00	3	60.00	2	40.00	5	100.00	2	40.00	3	60.00	5	100.00
Maintenance of medical equipment	3	100.00	0	0.00	3	100.00	3	60.00	2	40.00	5	100.00	2	40.00	3	60.00	5	100.00
Health Human Resource																		
Trained OHS personnel	1	33.33	2	66.67	3	100.00	0	0.00	5	100.00	5	100.00	0	0.00	0	0.00	3	100.00
OHS Service Delivery																		
Employee's Clinic	1	33.33	2	66.67	3	100.00	0	0.00	5	100.00	5	100.00	0	0.00	5	100.00	1	33.33
Pre-employment Medical Exam	3	100.00	0	0.00	3	100.00	5	100.00	0	0.00	5	100.00	4	80.00	1	20.00	5	100.00
Annual Physical Exam	3	100.00	0	0.00	3	100.00	0	0.00	5	100.00	5	100.00	1	20.00	4	80.00	5	100.00
Transfer Medical Exam	1	33.33	2	66.67	3	100.00	0	0.00	5	100.00	5	100.00	0	0.00	5	100.00	5	100.00
Separation Medical Exam	1	33.33	2	66.67	3	100.00	0	0.00	5	100.00	5	100.00	0	0.00	5	100.00	5	100.00
Special Medical Exams	0	0.00	3	100.00	3	100.00	0	0.00	5	100.00	5	100.00	1	20.00	4	80.00	5	100.00

The lack of OHS committees led to an overall lack of personnel designated to provide occupational health services in these facilities. Out of the 19 facilities studied, only 1 regional hospital has specified personnel for OHS in their facility.

Though there is a lack of OHS committees and personnel for the provision of occupational health services, there are still some hospitals which deliver occupational health services.

Rural Health Units

Table 4 shows all the elements of OHS systems the project team has evaluated according to the six basic OHS system components in all the rural health units included in the study sample. The corresponding municipal and city health offices were also visited by the project team to obtain the records needed for the OHS system elements the table.

Table 4. Occupational Health and Safety Programs Implemented Across Selected Rural Health Units in the Philippines 2013-2014 (N=6)

OHS System Element	Rural Health Units				TOTAL	
	With		Without			
	n	%	n	%	n	%
Leadership and Governance						
OHS Committee	0	0.00	6	100.00	6	100.00
OHS Policy	0	0.00	6	100.00	6	100.00
Health Information System						
Employees' Medical Records	0	0.00	6	100.00	6	100.00
Accident or Incident Reporting System	0	0.00	6	100.00	6	100.00
Workplace Environment Monitoring Reports	0	0.00	6	100.00	6	100.00
Healthcare Financing						
Budget allotted for OHS	0	0.00	6	100.00	6	100.00
Medical Products and Technologies						
Medicines	1	16.67	5	83.33	6	100.00
Medical supplies	1	16.67	5	83.33	6	100.00
Medical equipment	1	16.67	5	83.33	6	100.00
Maintenance of medical equipment	2	33.33	4	66.67	6	100.00
Health Human Resource						
Trained OHS personnel	0	0.00	6	100.00	6	100.00
OHS Service Delivery						
Employee's Clinic	0	0.00	6	100.00	6	100.00
Pre-employment Medical Exam	5	83.33	1	16.67	6	100.00
Annual Physical Exam	2	33.33	4	66.67	6	100.00
Transfer Medical Exam	0	0.00	6	100.00	6	100.00
Separation Medical Exam	0	0.00	6	100.00	6	100.00
Special Medical Exams	0	0.00	6	100.00	6	100.00

Table 5. Occupational Health Programs Implemented in Selected Public Healthcare Facilities in the Philippines (N=19)

Program	Number of Facilities						TOTAL	
	With Formal Program		Without Formal Program*		Without Program			
	n	%	n	%	n	%	n	%
Mercury Elimination	9	47.37	3	15.79	7	36.84	19	100.00
Infection Control	8	42.11	3	15.79	8	42.11	19	100.00
Healthy Lifestyle	5	26.32	2	10.53	12	63.16	19	100.00
Emergency Preparedness	5	26.32	1	5.26	13	68.42	19	100.00
Waste Management	4	21.05	1	5.26	14	73.68	19	100.00
TB in the Workplace	3	15.79	1	5.26	15	78.95	19	100.00
HIV/AIDS in the Workplace	3	15.79	1	5.26	15	78.95	19	100.00
Immunization and Post-Exposure	2	10.53	5	26.32	12	63.16	19	100.00
Fire Safety	2	10.53	4	21.05	13	68.42	19	100.00
Drug-Free Workplace	1	5.26	4	21.05	14	73.68	19	100.00
Personal Protective Equipment	1	5.26	2	10.53	16	84.21	19	100.00
Hazard Communication	1	5.26	1	5.26	17	89.47	19	100.00
Electrical Safety	1	5.26	1	5.26	17	89.47	19	100.00
Accident Investigation	1	5.26	0	0.00	18	94.74	19	100.00
Healthcare Facility Safety	0	0.00	2	10.53	17	89.47	19	100.00
Respiratory Protection	0	0.00	1	5.26	18	94.74	19	100.00
Industrial Hygiene	0	0.00	0	0.00	19	100.00	19	100.00
Health Surveillance	0	0.00	0	0.00	19	100.00	19	100.00

The occupational health systems of rural health units were evaluated taking into account the respective Municipal and City Health offices (MHO/CHO) in direct jurisdiction of their units.

There are no relevant documents for OHS which could be found in the rural health units and the city or municipal health offices in jurisdiction of these units. Walkthrough surveys and review of all current records the RHUs and MHO/CHOs possess revealed the presence of a formal program for Mercury Elimination (in 2 of 6 RHUs) and Infection Control (in 1 of 6 RHUs). Due to requirements of the MHOs and CHOs in the conduct of pre-employment and annual medical examinations, pre-employment medical examination is administered in 5 out of 6 RHUs, but only 2 out of 6 RHUs administer annual physical examinations. Other components of the OHS system are not present in all the RHUs due to the lack of relevant documents.

Discussion and Conclusion

The Philippine Occupational Safety and Health Standards and the DOH Administrative Order 2012-0020 were formulated for the strict implementation of occupational health measures across all types of industries including those engaged in the delivery of healthcare services. However, there is a general lack of awareness of these laws in the healthcare facilities studied as indicated by the absence of elements of an Occupational Health System. The devolution of the present healthcare system in the country might have contributed to this finding, as established in a study done by Grundy et. al. in 2003. This study assessed the impact of devolution in the Philippine healthcare system, noting that devolution indeed resulted to a breakdown of management systems between levels of government.[25] The breakdown of management systems indirectly results to poorer health policy dissemination, since the concept of management in the healthcare setting involves the proper management of health information systems. Should the facilities studied be oriented on the legislative measures on OHS for their workplaces, the six components of OHS systems for these facilities must have been established.

The first OHS system component the investigators observed to be lacking was in terms of leadership and governance through the formation of OHS committees. The investigators requested for a copy of the organizational chart of the OHS Committee and other related documents such as minutes of its meetings. The representative of the facilities instead responded with the presence of an Infection Control Unit and a Disaster Preparedness Committee. They thought that these units were equivalent to an OHS committee. This highlights the lack of awareness of the management of these facilities in terms of the different legislations for OHS in their facilities. Stemming from the lack of an OHS committee, financing for OHS services would be complicated due to the lack of a governing committee planning and budgeting these services. This proved true in the study, wherein none of the facilities have an established funding mechanism for their occupational health services.

Rules 1040 and 1960 of the POSHS govern the designation of personnel for OHS and how occupational health services must be delivered to the workforce. Due to the lack of awareness of the POSHS, the healthcare facilities studied do not comply with the minimum standards. Almost all of the healthcare facilities studied do not have any positions for the prescribed OHS personnel, much less the training of these personnel in basic occupational health and safety. This is very different from the global context considering that the minimum standards for OHS personnel are more elaborate as compared to the Philippine minimum standards.[10] The lack of a financing mechanism for OHS also contribute to the lack of dedicated OHS personnel. The lack of allocating budget for OHS services resulted in the absence of assigned personnel for these tasks. The investigators also requested for a list of personnel trained on OHS but none were available. Training personnel also requires budget allocation.

OHS recordkeeping is an important part in the establishment of a proper database for information management. However, records which are reviewed by the investigators in accordance with Rule 1050 of the POSHS, were lacking in these healthcare facilities in that only a few were able to present these records. This follows the trend of non-compliance in terms of recordkeeping for OHS in all industries in the Philippines.[16]

There are currently no standards by which one could assess the adequacy and appropriateness of medical supplies and equipment for employees, leading the investigators to observe in the walkthrough surveys done if the medicines and supplies could be availed by all employees of the healthcare facilities studied. Though findings show that there are adequate medicines, medical supplies and equipment for employees in these facilities, the investigators could not establish that these medicines and equipment are solely used for this purpose, as the walkthrough surveys yielded that these medicines and equipment are also the ones being used by the facilities for their patients and clientele.

The lack of an OHS committee results in the lack of a health and safety policy in these facilities. Due to the lack of this policy, no programs could be formulated with the common goal of promoting the health and safety of workers. Though the study results revealed that some facilities do have programs and documents pertaining to occupational health and safety, these are part of measures already implemented by the DOH in these facilities, including the Infection Control Program and the improvements brought about by the Healthcare Facilities Enhancement Program (HFEP). As with the OHS system component on medical products and technologies, the investigators could not establish that these programs are implemented for the employees in the facilities studied due to the lack of documentation for these programs in most of the facilities studied (in the form of formal written policies, documentation for program-related activities, etc.) For example, the Infection Control Program was implemented for the patients of the healthcare facilities studied.

A general lack in the six basic components of the OHS systems in healthcare facilities could be observed based on the results of the study, but it does not mean that the fault entirely lies within the healthcare facilities studied and their management systems. The laws provided for the health and safety of these workers also need extensive review and strict implementation. Rule 1960, which governs occupational health services in the POSHS, only provides specific guidelines as to the treatment of work-related injuries as well as rehabilitation of disabilities which may have been

incurred from work. Compensation mechanisms for these services are not clearly stated in this rule. Fortunately, the Bureau of Working Conditions of the DOLE involved in its current activities the review and revision of Rule 1960, which will eventually clarify the manner by which these occupational health services must be provided.[26]

The programs included in DOH AO 2012-0020 provide for an extensive means of ensuring that healthcare workers in the country are protected from hazards arising from their work, as well as the promotion of health and safety in the workplace. However, considering that this AO was implemented in 2012, stricter implementation must be done by the DOH.

Establishing a proper occupational health system in healthcare facilities in the country entails the creation of good governance systems, which could be addressed not only in the healthcare facility level but through the central health agency level. This can be done by improving the central agency's linkages to these facilities despite the effects brought about by the healthcare system devolution. Adequate knowledge of the healthcare facilities' management and its workers on OHS through training would also be helpful to address their lack of awareness in OHS. Proper training and information dissemination for OHS would lead to the subsequent improvement of OHS governance in these facilities that would eventually establish an occupational health system in their workplaces.

Acknowledgments

The authors acknowledge the funding from the Department of Health through the Grants-In-Aid Program of Philippine Council for Health Research and Development.

References

1. World Health Organization. Everybody's business: strengthening health systems to improve health outcomes: WHO's framework for action [Online]. [cited 2014 April]. Available from http://www.who.int/healthsystems/strategy/everybodys_business.pdf.
2. St. Vincents & Mater Health Sydney: Occupational Health and Safety [Online]. Sydney: [cited 2014 March]. Available from http://exwwwsvh.stvincents.com.au/index.php?option=com_content&task=view&id=314&Itemid=338.
3. St. Vincents & Mater Health Sydney: Occupational Health and Safety Policy [Online]. Sydney: 2011 [cited 2014 March]. Available from: http://exwwwsvh.stvincents.com.au/assets/files/pdf/D/oh&spolicy2008.pdf
4. Department of Human Services – Public Hospital Sector. Occupational health and safety management framework model. [Internet]. [Place unknown]: [date unknown]. Available from: http://health.vic.gov.au/ohs/mgtframe.pdf
5. Mercy University Hospital. Occupational Health [Online]. Available from http://www.muh.ie/index.php?option=com_content&view=article&id=107:occupational-health&catid=87:occupational-health&Itemid=93
6. UAB Occupational Health and Safety. Hospital Safety Committee [Online]. Available from http://www.uab.edu/ohs/hospital-safety-committee.
7. Ministry of Health and Social Welfare. National Environmental and Occupational Health Policy: A Guide to Action for Addressing the Environmental and Occupational Health Challenges Facing Liberia. Monrovia: Ministry of Health and Social Welfare. 2010.
8. Ministry of Business, Innovation and Employment. Occupational Health and Safety in New Zealand: NOHSAC: Technical Report 7. New Zealand: Ministry of Business, Innovation and Employment; 2005.
9. Department of Labor and Employment. Baldoz's challenge to the public: Help us monitor our livelihood programs. Philippines: Department of Labor and Employment. 2014.
10. Occupational Safety and Health Administration. The Occupational Health Professional's Services and Qualifications: Questions and Answers. United States: U.S. Department of Labor. 1999.
11. The Labor Code of the Philippines Presidential Decree No. 442, as Amended [Online]. Available from http://www.chanrobles.com/legal4labor4.htm
12. Department of Health. Administrative Order No. 2012-0020. Philippines: Department of Health; 2012.
13. Partnership for European Research in Occupational Safety and Health. New technologies as a field of action for OHS. Paris: Partnership for European Research in Occupational Safety and Health. 2005.
14. Centers for Disease Control. Guidelines for Environmental Infection Control in Health-Care Facilities [Online]. Available from http://www.cdc.gov/hicpac/pdf/guidelines/eic_in_hcf_03.pdf
15. Lynch JJ. Components of occupational health information systems. J Am Med Rec Assoc. 1986; 57(1):19-22
16. Philippine Statistics Authority. Occupational Safety and Health Practices in Establishments: 2010-2011. Philippines: Philippine Statistics Authority. 2014.
17. Sixteenth Congress. House Bill No. 2226. Philippines: House of Representatives. 2013.
18. Gupta A, Upadhyay D. Impact of Occupational Health Safety on Employee Satisfaction. ISJR 2012; 7:118-120
19. Doyle J. Occupational Health and Safety Risk in Public Hospitals [Online]. Available from http://www.audit.vic.gov.au/publications/20131128-OHS-in-Hospitals/20131128-OHS-in-Hospitals.pdf
20. Department of Health. List of Level 1 and 2 Department of Health Hospitals with Unimplemented Laws to be funded under the DOH CY 2011 Health Facilities Enhancement Program (HFEP). Philippines: Department of Health; 2011.
21. Gestal JJ. Occupational hazards in hospitals: accidents, radiation, exposure to noxious chemicals, drug addiction and psychic problems, and assault. Br J Ind Med. 1987; 44(8):510-20.
22. Workplace Health and Safety. Alberta's Occupational Health and Safety Regulations. Alberta: Alberta Human Resources and Employment. 2001.
23. Bureau of Working Conditions. Occupational Health and Safety Standards. Philippines: Department of Labor and Employment. 1989.
24. Occupational Safety and Health Center. 2006. National profile on occupational safety and health (Philippines) [Online]. 2006. [cited 2013 May]. Available from http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/policy/wcms_187818.pdf.
25. Grundy J, Healy V, Gorgolon L, Sandig E. Overview of devolution of health services in the Philippines. Rural and Remote Health 3 [Online] 2003. [cited 2014 Nov]. Available from http://pcij.org/stories/2005/devolution.pdf
26. Bureau of Working Conditions. Amendments to Rule 1960 [Online]. Philippines: [cited 2014 Nov]. Available from http://bwc.dole.gov.ph/programs/viewdetails.aspx?id=32