Plagiarism - Report

Originality Assessment

14%

Overall Similarity

Date: Nov 23, 2023
Matches: 723 / 5323 words
Sources: 25

Remarks: Low similarity detected, check with your supervisor if changes are required.

Verify Report:

ENVIRONMENTAL SUSTAINABILITY AND WASTE MANAGEMENT PRACTICES

Ebenezer Nkansah Owiredu

Mental Health Authority, Ministry of Health Ghana

ABSTRACT

Background: The study aims to explore environmental sustainability and medical waste management practices in Ghanaian private hospitals in the Greater Accra Region. It also sought to determine if there is any form of collaboration between private hospitals and district assemblies in managing medical wastes.

Methods: A qualitative research approach with a cross-sectional study design was used to collect data from employees of the three private hospitals and the district assemblies. A structured interview guide was employed to gather data from 13 purposively selected participants.

Results: The findings of the study indicated that there is a collaboration between private hospitals and district assemblies with regard to medical wastes management activities.

Conclusions: It is recommended that policies on medical waste management are enforced to ensure sustainable healthcare waste management.

Keywords: Environmental sustainability, collaboration, medical waste, private hospitals, district assemblies

BACKGROUND OF THE STUDY

Sustainability is about the functions of the natural systems, and how it produces everything for the environment to remain in balance. The study emphasizes that sustainable healthcare wastes management is challenged with resources and lack of collaboration between stakeholders within the sector (Haq, 2011).

Waste management is an activity that involves all actions taken to manage waste from the beginning of waste generation until it is disposed of (Molina, 2002). However, in this thesis, waste management is considered to be all activities including waste generation, segregation, minimization, treatment, re-use and final disposal of waste. Ensuring th

e sustainability of the hospital environment in terms of waste management requires a collaborative effort of its stakeholders. Collaborative decision and policies could help reduce the environmental impact on the health care facilities and its operations (Jameton & McGuire, 2002).

In an attempt to address medical waste problems in the hospital setting globally, WHO in 1999 developed and published guidelines on health care waste management. The document is centred on the policy framework, waste reduction, recycling, treatment and disposal of healthcare waste (WHO, 2017). Wastes generated in hospitals are potentially harmful and can affect the health of patients of these facilities (WHO, 2005). However, about 85% of the total waste generated in the hospital are non-hazardous and can be managed like a domestic waste. Notwithstanding this, the remaining 15% being hazardous may be infectious, toxic or radioactive; hence requires a sustainable management policy to handle these wastes (MOH Ghana, 2006).

A study conducted by Accra Metropolitan Assembly in 1992 in six public hospitals in Greater Accra proved that an estimated 1.2 kg/bed/day of health care waste were generated. These figures were anticipated to be increased due to a rise in the number of health facilities and better standards of living. An estimate of over 5.2 tons of waste was generated daily, and if 15% of these wastes generated are infectious, more environmentally sustainable measures must be meted out to handle these wastes to ensure safe and green healthcare environment (MOH Ghana, 2006).

- Sustainable Medical Waste Management

Medical waste management efforts are vital not only to provide hospitals with a safe and sustainable

environment but also the provision of available solutions and best practices on medical waste management (Joseph, 2006). Furthermore, sustainable and proper medical waste management practices are very relevant and important in preventing the spread of infections, and should not be compromised since health facilities deal directly with human lives (WHO, 2017).

Sustainability is a process whereby society meets its current needs by creating a robust economy while respecting the need to maintain natural resources and protect the environment. Sustainability encompasses the principle that the present generation should make the natural environment more habitable for future generations to live in (Haq, 2011).

Basiago (1998) identified several elements of sustainability and these include Economic component, Ecological component, and Social component. Also, there are four principles of sustainability and these are Futurity, Ecological integrity, Social justice and Participation. The elements and principles of sustainability are important for establishing sustainable 1 medical waste management, as those elements not only provide direction to prevent environmental pollution due to medical waste generation but also encourage waste generators to derive economic incentives by managing their waste accordingly (Griffiths, 2006).

Furthermore, in terms of the social element of sustainability, a suitable 2 medical waste management policy is needed. This will promote the education and empowerment of the health care community, by increasing their awareness of, and concern for the development of attitudinal change, knowledge, skills and commitment (Haylamicheal et al., 2011). Participation is also important to establish the roles 1 and responsibilities of each actor in managing medical waste. It also raises awareness and commitment to achieving the goal of sustainable medical waste management by all stakeholders (Williams, 2013). According to Basiago (1998), about ecological principles, healthcare facilities managers must consider promoting the use of environmentally friendly products and technologies, such as mercury-free devices, autoclaving, and electron beam technology.

Harris, Pisa, Talioaga and Vezeau (2009) mentioned that challenges facing 8 sustainable health care environment are on the high side in developing countries than advanced countries. Their study attributed these phenomena to lack of infrastructure in hospitals to manage 9 medical waste disposal.

In a study by Patil and Shekdar (2001), it was noted that technology for 1 medical waste

management should be affordable for hospitals to purchase them for waste management.

- Collaboration for Medical Waste Management

The Ministry of Health, together with other agencies in 2006, came out with policy guidelines to address the issues of medical waste management in Ghana. The MOH, with the support of the Ghana Health Service, has the overall responsibility for implementation and monitoring of medical waste policy in the country (MOH, Ghana, 2006). Their role is also supported by district assemblies as well as the Environmental Protection Agency (EPA). Collaborative engagements have become the new paradigm in the health sector, particularly in the area of health care management (Bryson, Crosby & Stone, 2006). O'Leary and Vij, (2012) added that the attention is in these areas because of the complexity involved in managing medical wastes.

Existing literature has established that collaboration with stakeholders in the health care industry is important in managing waste generated during health services delivery (Jameton & Pierce, 2001). The collaboration can be in the form of a public-private partnership or between a government agency and a healthcare facility (Siltala, 2013). In this study collaboration is a joint effort and agreement between private hospital and district assemblies to ensure that medical wastes that are generated within hospitals are well managed to ensure quality healthcare delivery (Obirih-Opareh & Post, 2002). District assemblies have the mandate to ensure the cleanness of the environment at the community level (Obirih-Opareh & Post, 2002; MOH Ghana, 2006). Besides, the functions performed by district assemblies are complemented by the EPA. The EPA offers support to district assemblies in Ghana in the form of provision of technical advice, education and training among others to ensure proper sanitation in the community (Asante et al., 2013).

According to the MOH policy guidelines, each institution must have a safe place for disposal of medical waste. However, wastes that cannot be disposed of within the facility and requires external disposal should be done following the guidelines on off-site disposal stipulated in the policy guidelines. The policy also provides an avenue for a health facility without on-site waste management facility to arrange with the district assemblies for off-site disposal of their waste (MOH, Ghana, 2006).

Asante et al. (2013); Akum (2014) noted in their studies that per the MOH policy guidelines, each

hospital must have a Committee who will see to the management of their waste. The committee must ensure strict adherence to the procedures for managing healthcare waste. It is in line with this that Mohee (2005) recommended that hospitals should provide enough funds and logistics for efficient management of waste generated within the facility.

Statement of Research Problem

WHO (2005) has provided comprehensive guidelines and documents on policies regarding medical wastes. However, it seems many countries of the world have not yet adhered to this policy for many compelling reasons. Studies carried out in middle-income countries show that improper handling of medical wastes is due to lack of logistics and funds despite clear guidelines and policies on safe and sustainable medical waste management (Mbongwe, Mmereki & Magashula, 2008; Aseweh Abor, 2013; Asante, Yanful & Yaokumah, 2013). This has led to many hospitals disposing of these wastes without not complying with the relevant policies and guidelines, (MOH, Ghana, 2006; Mbongwe et al., 2008).

Furthermore, it appears there is little knowledge on proper medical wastes management to reduce the danger to staff and patients, as well to ensure sustainable healthcare environment in the developing countries (Abah & Ohimain, 2011). In the context of Africa, literature has established that poor management and eradication of waste greatly affect the health of staff and those who are directly exposed (MOH, 2006; Debere et al., 2013; Aseweh Abor, 2013). However, available evidence suggests that there are few studies on the proper management of healthcare wastes in Africa (Aseweh Abor, 2013; Abah & Ohimain, 2011).

In the context of Ghana, it seems few studies have been done on healthcare waste management (Aseweh Abor, 2013; Asante et al., 2013; Abah & Ohimain, 2011). Therefore, there is a need for studies into how the private hospitals manage their medical waste generated to ensure sustainable healthcare environment.

Furthermore, district assemblies in collaboration with other agencies are accountable for the day to day management of sanitation and waste at the community levels, of which the hospital situated within these communities may not be of exception (MOH Ghana, 2006; Asante et al., 2013).

Nevertheless, there seems to be a considerable gap concerning the collaboration between healthcare

facilities and the district assemblies in managing the medical wastes produced, mostly in private hospitals (Abah & Ohimain, 2011). The aim of the study is to explore ways of ensuring a sustainable health care environment in terms of medical wastes management practices as well as to ascertain if there is any form of collaboration between private hospitals and district assemblies in managing medical wastes.

METHODS

A qualitative research approach was used for this study for various imperative reasons. A qualitative approach is essential when there is a need to explore and understand the nature of a research topic under study (Kothari, 2004). The use of a qualitative approach helped the researcher to offer a relevant account of environmental sustainability and medical waste management practices in private hospitals in Ghana. A cross-sectional study design was used for the study to provide answers to the research questions. Maxwell (2012) echoed that data gathered during a cross-sectional study is from a pool of respondents with different attributes and demographics known as variables (that is; age, gender, education, geographical locations, ethnicity among others) to help address the research objectives.

Population, Sampling and Sampling Technique

Sampling is a selection process of fraction, piece, or segment representing a whole (Onwuegbuzie and Collins, 2017).The study adopted a purposive sampling technique. This technique ensures that information-rich individuals are recruited into the study (Patton, 2005). The institutions were selected based on the services they provide.

The hospitals were selected to ensure that various types of medical waste generated from different healthcare services are captured. Staffs with relevant experience on the subject matter were recruited for the study. The selection of district assemblies close to hospitals helped to assess the nature of

collaboration between these institutions with regards to hospital waste management practices.

- Sample Size

Three (3) private hospitals; FOCOS Orthopedic Hospital, Mother-Love Hospital, New Crystal Health Services as well as three (3) district assemblies namely; Ashaiman, Madina La Nkwatanang and Adentan Municipal assembly were sampled from the entire private hospitals and district assemblies in Greater Accra for the study. A total of 13 participants including doctors, nurses, environmental health officers, biomedical scientist and other staff working within the study area in the various departments were sampled out of a target population of 93.

According to Baker, Edward and Doidge (2012), the sample size in qualitative study can range between zero to a hundred and more. However, considering challenges in recruiting participants, difficulty in transcribing many data from interviews, a convenient sample size that may help to answer the research objectives may be sampled. This agrees with a study by Boddy (2016) which mentioned that sample size as low as one (1) can be justified for a qualitative study. Boddy (2016) further mentioned that sample size determination is contextual and partly based on the scientific paradigm under which the research is being conducted. Respondents with the relevant knowledge and experience related to the subject under investigation were sampled for the research (See Table 3.1 overleaf).

Table 3.1: Summary of Interviewed Respondents

Facility	Department	Staff strength	Sample size selected
Crystal Health Services	Male ward	8	1

Environmental Health department

5

1

Laboratory department

6

1

Administration Department

6

1

Mother Love hospital

Maternity ward

8

1

Laboratory department

4

1

Environmental department

4

1

Administration Department

5

1

Focus orthopedic hospital

Surgical dept.

8

1

Theater Unit

6

1

Laboratory department

9

21 1

Environmental Health department

6

1

Administration Department

8

1

Madina La Nkwatanang municipal assembly

Environmental Health department

3

1

Adenta municipal assembly

Environmental Health department

3

1

Ashaiman municipal assembly

Environmental Health department

4

1

TOTAL

93

13

Source: Authors Construct (2020)

 Data Collection Instruments

A structured interview guide was designed to gather vital data from the staff members at the selected hospitals and district assemblies. The researcher conducted a face-to-face interview with 3 health care professionals, administrators and environmental officers among others which lasted between 60-to- 90 minutes. Handwritten notes and recordings were taken during each interview by the researcher after taking permission from the respondents, which helped the researcher to track relevant points to refer to at a later date. 3 The use of in-depth interview assisted the researcher to obtain qualitative data on respondents understanding, experiences and interventions on environmental sustainability and medical waste management practices in hospitals. Again, the use of an interview guide in this study allowed the researcher to have direct contact with respondents which helped to elicit suggestions on medical wastes management issues in private hospital

The interviews were grouped into seven (7) sections. Categories of each question were structured either 3 to be answered by respondents from the private hospitals, the district assemblies or both. Category of sections and questions reflected the objectives of the study. This was done to gather data on environmental sustainability and 2 medical waste management practices in private hospitals in Ghana.

 Data Management and Analysis

Data collected were transcribed, sorted and evaluated using a thematic content analysis approach. To develop themes, the transcribed data were read over and over. Each set of data was compared with all other sets of 1 data to identify similarities and differences in the data set. Following the development of themes, codes were assigned to them. Coding was done to ensure that sub-themes were assigned similar codes. Consequently, themes with similar codes were put together 3 to have a unified theme. The write up was done based on the identified major themes.

 Validity and Reliability

Validity was ensured at the initial stage of the research by purposefully sampling the participants. A

conscious effort was made to interview both male and female healthcare professionals and sanitation officers directly involved in medical waste management and are permanently working in the private hospitals and the district assemblies under study. An explanation was offered to participants in the interview guide to ensure that they understand the questions. In situations where certain questions became unclear, they were reframed to make it clearer. All recorded interviews were transcribed into details, but quoted passages were adjusted to proper English grammar. After each transcription, the information was summarized based on the consistency of responses by informants and this helped to identify initial codes.

- Confidentiality

Interviews were conducted in an office to provide enough privacy and at the same time ensuring that participants were interviewed in a serene environment. Date, time and venue were set for the interviews at the convenience of the participants following their consent to be interviewed. Names of respondents and institutions under study were kept confidential as each institution and participants were given a pseudonym.

RESULTS

- Demographic Characteristics of Participants

Twenty-seven (13) participants whose activities and duties were related to medical waste management in the six (6) selected institutions were purposively sampled for this research. Three (3) participants were hospital administrators at the private hospitals, Four (4) respondents were professional Nurses selected from various hospitals engaged in the study, six (6) environmental health managers at the various hospitals and district assemblies were sampled.

The highest qualifications of the respondents were a master's degree while the least academic qualification was a basic education examination certificate in all fields. See table 4.1 overleaf.

Table 4.1: Demographic 3 Characteristics of Participants

Facility	Position	Years with organisation	Academic qualification
Crystal Health Services			
1. Doctor	5	Bachelor	
2. Nursing Officer	3	Bachelor	
3. Environmental Health Manager	3	Bachelor	
4. Laboratory technician	2	HND	
5. Sanitation Officer	3	BECE	
6. Hospital Orderly	2	WASSCE	
7. Staff Nurse	3	Diploma	

8. Hospital Administrator

5

Bachelor

Mother Love Hospital

9. Environmental Health Manager

4

Bachelor

10. Nursing Officer

7

Bachelor

11. Laboratory technician

HND

12. Hospital Orderly

4

BECE

13. Nurse

3

Diploma

14. Sanitation Officer

2

BECE

15. Hospital Administrator

3

Bachelor

16. Doctor

5

Bachelor

FOCUS Orthopaedic Hospital

17. Environmental Health Manager

5

Bachelor

18. Sanitation Officer

3

Bachelor

19. Biomedical scientist

2

Bachelor

20. Laboratory Technician

2

HND

21. Hospital Administrator

9

Masters

22. Nurse

7

Diploma

23. Hospital Orderly

3

BECE

24. Doctor

2

Masters

Madina La Nkwatanang municipal assembly

25. Environmental Health Manager

5

Masters

Adenta municipal assembly

26. Environmental Health Manager

6

Masters

Ashaiman municipal assembly

27. Environmental Health Manager

7

Masters

Source: Field data (2020)

To show the distinction between responses 3 of participants from the institutions used in the study, participants from the facilities were given pseudonyms of;

A. Respondents from Focus Orthopaedic Hospital

B. Respondents from Mother Love Hospital

C. Respondents from the New Crystal Health Service

D. Respondents from Ashaiman Municipal assembly

E. Respondents from Madina La Nkwatanang Municipal assembly

F. Respondents from Adentan Municipal assembly

Sustainable healthcare environment in terms 1 of medical waste management

 Policy on medical waste management

The study sought to find out if the hospitals have a policy on medical waste management. It further sought to find out activities that the hospitals engage in to ensure a sustainable environment. The findings revealed that not all private hospitals have a policy on medical waste management on their own. Nevertheless, hospitals without a policy on medical waste on their own have adopted the medical

waste policy by the Ministry of Health, Ghana.

Responses from participants at the hospitals were:

"There is no policy document developed by the institution on how medical wastes are managed".

An Environmental Health Officer from facility (B)

"…Well, I cannot tell because I have not seen one in the facility."

A Nurse from facility (C)

In spite of the absence of an institutional drafted policy on medical waste management, findings revealed that the hospitals have adopted the policy on medical waste management developed by the Ministry of Health, Ghana.

……." I do know that policy on medical waste management by the Ministry of Health, Ghana is used as a guideline for managing our medical wastes within the facility".

A laboratory technician from facility (B)

"The facility does not have a policy but it follows the policy on health care waste management developed by the Ministry of Health, Ghana."

Sanitation officer from facility (C)

Besides the above response, participants in a management position at the hospitals had this to add:

"….. For now no, but management is putting things in place to draft our policy on medical waste management".

A hospital administrator from facility (B)

Interestingly, the response of participants in another facility was different;

"Since there is a policy on medical waste management developed by the Ministry of Health, Ghana, management of the facility decided to adopt and use that one instead of developing one completely for the facility".

A hospital administrator from facility C)

From another hospital, the situation was different. The study revealed that there is a well-written policy on medical waste management to ensure sustainable healthcare environment.

Participants said that:

"We have a well-developed policy guideline which serves as a measure on how we handle and dispose of our medical waste. Again, this policy of ours does conform to the standard guidelines developed by the ministry of health, Ghana on medical waste management."

A hospital administrator from facility (A)

"….Yes, the hospital has policy guideline on medical waste management".

An environmental Health Officer from facility (A)

"As a hospital, we generate medical wastes and these wastes needs to be disposed of properly. How to treat, handle, transport, segregate it among others is well defined in our waste management policy."

A Nurse from facility (A)

technician from facility (A)

Environmental Sustainability Activities

According to the above sub-theme, participants were asked what kind of activities their facilities engage in to ensure environmental sustainability.

Respondent at the hospital has this to say:

"During procurement of both medical consumables and non-medical consumables, we take into account the environmental issues related to the item".

An environmental health officer from facility (B)

…. environmentally friendly product and commodities that have value for money are procured."

A hospital administrator from facility (C)

"With regards to the procurement of vehicles, generators and other equipment that emit fumes, we specify the level of emission in our tender document, to ensure those hazardous chemicals are not emitted into the environment."

A hospital administrator from facility (A)

Another opinion of respondents with regards to the environmental sustainability of the hospital was

captured in this way:

"We ensure that wastes generated within the hospital are disposed of within the accepted laws and regulations governing hospital waste management".

A sanitation officer from facility (B)

Sustainability of medical waste management activities

The diagram (figure 4.2 overleaf) shows the differences and similarities of the sustainability of medical waste management activities between the three private hospitals. Findings indicated that all the hospitals consider products that are environmentally friendly when procuring medical and non-medical consumables. Again it shows that only Focus Orthopaedic hospital has developed its own policy on medical waste management and it is in line with that of the Ministry of Health policy. However, the other two hospitals follow the policy guidelines on medical waste management developed by Ministry of Health, Ghana to guide their waste management activities.

Figure 4.2: Differences and similarities on the sustainability of medical waste management activities between the three private hospitals

4.4 Collaboration for Medical Waste Management

For collaborative agreement between district assemblies and private hospitals towards sustainable healthcare environment and medical waste management; Education and training, and Monitoring and supervision surfaced from the research as collaborative engagement between district assemblies and private hospitals. Participants revealed that education and training oftentimes correlate with good environmental and proper waste management. The findings shows that the more staffs are trained, the better they are likely to engage in good waste management practices.

At the district assembly, a response was given as follows,

" …… Training and educating the healthcare professional on a standard way of handling, treating and disposing of the medical waste generated is done routinely to equip the staff".

Environmental Health Manager from the District Assembly (D)

"These trainings are carried out due to the collaboration between district assembly and private hospitals to ensure a clean environment and prevent illness."

Environmental Health Manager from the District Assembly (F)

"….almost every year, we organise training for the staff at the environmental and sanitation unit of the hospital. This is to ensure that the staffs are constantly familiar with the modalities of proper healthcare waste management."

Environmental Health Manager from the District Assembly (E)

The importance of collaborative engagement was emphasized by a respondent at the district assembly.

"….this exercise offers us the opportunity to train the facilities on new modalities and procedures related to medical wastes."

Environmental Health Manager from the District Assembly (E)

The hospital management was engaged to find out if there is any collaboration between the hospitals and the district assemblies in terms of managing their wastes. The findings revealed that there is an agreed engagement between the private hospitals and the district assemblies on managing waste generated within the private hospitals.

Participants had his to say:

"An agreement has been reached with the district assembly and our hospital to periodically train our staff on new modalities of managing the medical waste generated."

A hospital administrator from the facility (B)

"Apart from training our staff, the district assembly also recommends to us private firms in medical waste management to help collect our wastes".

A hospital administrator from the facility (A)

At the hospitals, besides management members, participants were asked if they receive training on waste management from the district assemblies and how it has improved their knowledge and practice.

Participants responded that:

"Workshops are occasionally organised for us by the environmental, sanitation and health unit of the district assemblies."

Sanitation from the facility (C)

"We do receive training from the assembly on waste management, but I wish it is being done frequently, at least two (2) times a year. Am saying this because the knowledge acquired through the training helps us in the management of the wastes we generate."

Environmental health manager and Sanitation officer from the facility (B)

In another development, respondents mentioned the importance and positive impacts of the training on medical waste they receive from the district assemblies.

Responses were highlighted in these statements:

"…..The training we receive has improved my knowledge of wastes segregation and disposal."

A nurse from the facility (A)

… I must say that first I never segregate wastes well, but after we received training from the assembly, I have become an advocate of proper waste segregation before final disposal".

A sanitation officer from the facility (B)

Furthermore, regarding monitoring and supervision activity, findings revealed that hospitals waste management activities were being monitored and supervised by the environmental unit of the district assemblies.

At the district assembly, responses offered by participants regarding this engagement were:

"Monitoring and supervision of hospital waste management procedures are done occasionally to assess if the institution is adhering to the standard operating procedures for managing healthcare waste".

An Environmental Health Manager (D)

"……periodic monitoring of the wastes management procedures of the hospitals offers us the opportunity to correct any wrong practices".

An Environmental Health Manager (F)

Also, the essence of this activity was pointed out by respondents in these statements:

"……this exercise helps us to know the gaps and provide the necessary education and training to the hospitals."

An Environmental Health Manager (E)

To ascertain if the hospitals indeed are being monitored and supervised by the district assemblies, the respondent was interviewed in that regard. Findings revealed that medical waste practices within the private hospitals are monitored and supervised by the district assemblies.

Participants from the hospitals had this to say:

"Oftentimes, the district assemblies do an unannounced inspection of our waste management practices".

An Environmental Health Manager (A)

".....yes they come in to inspect if we adhere to standard measures for handling, treating and disposing of wastes generated."

Sanitation officer (B)

"I have seen the officials from the district assembly come off to the hospital occasionally to inspect how we handle and dispose of the wastes we generate".

A nurse (C)

"Officials from the assembly do visit our hospital to find out our waste management practices from time to time.

A hospital orderly (B)

In another development, Participants were asked if their institutions are punished if it is revealed that they are not complying with standards.

Environmental officers at the hospitals added their voices in this way;

"Cautions are given to us and we are asked to streamline our activities and practices to meet standard measures."

Sanitation officer (C)

"…NO, but they insist that the right practice is done should they see any anomalies".

Sanitation officer (B)

"….. I cannot say that they punish us in that regard, however, they correct us when we go wrong".

A hospital orderly (A)

"… They do not punish us; they educate us about the need to do adhere to the standard guidelines."

An Environmental Health Manager (C)

DISCUSSION

 Sustainable health care environment in terms of medical waste management practices

Abor (2013) opined that there is a guideline by the World Health Organisation on how medical waste in hospitals and other healthcare facilities can be sorted. This is done by grouping wastes into colour-coded bin or bags, with each container showcasing a different waste type. Nevertheless, findings of this study indicated that sorting is a challenge at the various facilities, and that this is partly attributed to the lack of standard bin for waste segregation. Mostly hazardous wastes are mixed up with general wastes. This agrees with a study by Akter (2000) indicating that there is a considerable lack of standardisation about effective sorting out of medical waste, hence making it difficult for healthcare professionals to exercise caution when disposing off medical wastes.

In another development MOH, Ghana (2006) and El-Salam (2010), note that there is a holistic plan and policy on medical waste management developed by Ministry of Health, Ghana and WHO. However, findings of this reveals that adherence to this policy is not strictly followed by the private hospitals. In this current study, some participants indicated that;

"Adherence to the Ministry Of Health Policy on medical waste management in our hospital is very low. This is partly due to inadequate funds to purchase the standard equipment for waste management."

This confirms a study by Williams (2013) and Asante et al. (2013) which argue that most hospitals do not adhere to guidelines and regulations regarding medical waste management.

 Collaboration for medical waste management

Concerning the collaborative engagement between the private hospitals and Madina La Nkwatanang, Adenta and Ashiaman Municipal Assemblies in medical waste management, the study revealed that the main collaborative agreement between the district assemblies and the selected hospitals were that of education and training, monitoring and supervision provided by the assemblies in waste management.

This current study reveals that good education and training help the hospital staff to engage in good medical waste management practices. This is in line with a study by Oteng-Ababio (2012) who illustrated that providing good education and training in medical waste management can help healthcare institutions to engage in efficient medical waste management practices. In this current study, findings further indicate that with training and education, staff became more competent in handling medical waste in their facilities.

As part of collaborative engagement, the study shows that district assemblies were offering supervisory and monitoring duties for private hospitals with regards to wastes management activities. In this regards one participant said that;

"Monitoring and supervision of hospital waste management procedure are monitored occasionally to assess if the institution is adhering to the standard operating procedures for managing healthcare waste".

Literature affirms that monitoring and supervision of hospitals medical waste procedures are crippled with lack of funds and logistics. This was indicated by respondents in the findings that;

"Such an important exercise and we cannot do it frequently due to lack of funds and logistics."

This affirms findings by Mohee (2005), which iterated that lack of funds and infrastructure bedeviled management of medical waste to efficiently ensure sustainable health care environment.

Conclusion

This research contributes to the existing literature on healthcare waste management in developing countries, especially Ghana. Also, the study provides the means to combat, the challenges confronting private facilities in healthcare waste management in Ghana as well as the importance of collaboration in the health sector and beyond. The findings of the study also justified fostering strong collaboration between private hospitals and district assemblies in ensuring a clean healthcare environment.

Sources

1	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7152398/ INTERNET	4%
2	https://www.mdpi.com/2313-4321/6/1/6 INTERNET	3%
3	https://www.cambridge.org/core/journals/advances-in-psychiatric-treatment/article/challenges-in-recruitment-of-research-participants/F0F19F5A888AD6382D55797F605B6099 INTERNET	1%
4	https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-021-10630-1 INTERNET	1%
5	https://pubmed.ncbi.nlm.nih.gov/33406119/ INTERNET	1%
6	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8107450/ INTERNET	<1%
7	https://sdg.iisd.org/commentary/guest-articles/safeguarding-rights-of-future-generations-for-long-term-sustainability/ INTERNET	<1%
8	https://www.who.int/news/item/12-10-2020-who-publishes-guidance-on-climate-resilient-and-environmentally-sustainable-health-care-facilities INTERNET	<1%
9	https://pubmed.ncbi.nlm.nih.gov/36429539/ INTERNET	<1%
10	https://www.cwsa.gov.gh/about-us/functions-of-cwsa/ INTERNET	<1%
11	https://www.emerald.com/insight/content/doi/10.1108/RAUSP-05-2019-0092/full/html INTERNET	<1%
12	https://www.emerald.com/insight/content/doi/10.1108/EJM-11-2020-0798/full/html INTERNET	<1%
13	https://www.weforum.org/publications/global-risks-report-2023/in-full/1-global-risks-2023-today-s-crisis/ INTERNET	<1%
14	https://moh.gov.gh/wp-content/uploads/2021/04/HEALTH-CARE-WASTE-MANAGEMENT-POLICY-Final.pdf INTERNET	<1%

15	https://ugspace.ug.edu.gh/bitstream/handle/123456789/38606/Modeling-clinical-and-nonclinical-determinants-of-intrapartum-stillbirths-in-singletons-in-six-public-hospitals-in-the-Greater-Accra-Region-of-Ghana-a-casecontrol-studyScientific-Reports.pdf?sequence=1 INTERNET	<1%
16	https://bmjopen.bmj.com/content/11/1/e044702 INTERNET	<1%
17	https://www.researchgate.net/publication/309213905_Sample_size_for_qualitative_research INTERNET	<1%
18	https://psycnet.apa.org/record/2016-50346-003 INTERNET	<1%
19	https://www.sciencedirect.com/science/article/pii/S2667010021002985 INTERNET	<1%
20	https://www.who.int/news-room/fact-sheets/detail/ageing-and-health INTERNET	<1%
21	https://www.slideshare.net/VineetaSingh33/environmental-health-70767665 INTERNET	<1%
22	https://thecontentauthority.com/blog/repeatedly-vs-frequently INTERNET	<1%
23	https://openwho.org/courses/IPC-WM-EN/items/4Cwyq3norpsRw5zOvcbJW1 INTERNET	<1%
24	https://sustainabledevelopment.un.org/content/documents/dsd/dsd_aofw_ni/ni_pdfs/NationalReports/ghana/Anku_SCD_Waste Mgt[1].pdf INTERNET	<1%
25	https://www.sciencedirect.com/science/article/pii/S2772912522000252 INTERNET	<1%

EXCLUDE CUSTOM MATCHES	OFF
EXCLUDE QUOTES	OFF
EXCLUDE BIBLIOGRAPHY	OFF