

Print Media Reporting of Health Care Waste Management in South Africa

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Abstract

The media has the ability to frame issues in a way that affects the attitudes and behaviour of the public in responding to policy issues. Given the ability of the media to frame issues in a way that influences policy-making and decision making more generally, an understanding of how the media frames issues relating to healthcare waste in community-based care (CBC) in South Africa could help inform policy-making about proper healthcare waste management (HCWM). However, it is unclear how the media frames issues relating to healthcare waste (HCW) in South Africa. We did not find any single published study on this theme. Therefore, this study aimed at exploring how print media reports on issues relating to HCW in South Africa. We sought to answer the following questions: 1) How do the print media frame problems related to healthcare waste management? 2) How do the media frame options related to healthcare waste management? Using the South African media database, a total of 189 news stories were retrieved from 20 newspapers. Analysis was conducted using content thematic analysis. The media frames revealed healthcare waste management problems as caused mainly by government even if the main perpetrators are waste contractors. There has been blame on the government for delaying in developing a national policy relating to HCWM and also for having inadequate HCW disposal and treatment facilities in the country. As a result, options for addressing the issue of illegal dumping were directed at the government. Options proposed to deal with the challenges include, developing of policies and providing HCW treatment and disposal facilities in the country. The most intriguing thing about the media frames is that, there was no mention of healthcare waste from homes. This raises questions as to whether HCW from homes is even considered as a policy issue in South Africa. The failure of the print media to propose options that include waste contractors who are the main perpetrators of illegal dumping and stockpiling, could lead to half solutions that masks the real problem and focuses on palliatives instead of focusing on all levels of society: mainly the government policy-makers, implementers, government agencies; waste management contractors; health facilities; individual healthcare workers; healthcare professionals; waste workers and cleaners in the health facilities that contribute to the problem.

Keywords: Home-based care, healthcare waste, healthcare waste management, print media frames, South Africa.

Introduction

Healthcare waste management (HCWM) is a global concern and was addressed in the Rio Declaration, Principle 10, which required all States to address environmental issues, promote public participation in decision making and access to information on hazardous materials and justice on environmental matters (UNEP, 1992). Healthcare waste (HCW) results from healthcare activities in major healthcare settings like hospitals, doctors' private practices, pharmaceutical manufacturing plants, research laboratories, nursing homes and minor sources such as ordinary homes where there is care of a patient (WHO, 2014). There are two categories of HCW: (1) hazardous waste which poses risks to the environment and the health of people. This waste comprises infectious waste, sharps, pathological, pharmaceutical, genotoxic, chemical and radioactive waste. Category (2) is non-hazardous waste which is waste that does not pose harm to the environment or people. Non-hazardous waste comprise of packaging material like cud boxes, office paper, cans and leftover food from kitchens (Santhanam, Norulaini & Omar, 2011). Proper management of HCW by the generators and handlers requires them to segregate, collect, provide adequate and secure onsite storage facilities, use of appropriate transport for ferrying HCW to the disposal sites, treatment of HCW before disposal as well as managing and monitoring of HCWM activities from the point of generation to the point of disposal (WHO, 2014). The major international policies that govern HCW are the WHO manual on the safe management of waste from health care facilities (WHO, 2014; Giroult, & Rushbrook (1999); the technical guidelines on environmentally sound management of biomedical and healthcare waste by UNEP (2003), and also a guide on management of solid healthcare waste at primary healthcare centers by UNEP, 2003; UNEP & WHO 2005). In line with the international HCWM guidelines, many low-and-middle-income countries (LMICs) have developed their own policies to govern HCW. For instance, South Africa has various policies that govern HCW. Prior to democratic rule which began in 1994, environmental management was neglected and was not seen as a priority environmental health policy issue (Cock, 2007). However, the South African government's approach to HCWM changed after the democratic government of the African

National Congress assumed power. The new government has developed various pieces of legislations such as the Constitution of the Republic of South Africa Act 108 of 1996 (South African Constitution, 1996), which is the main guiding policy document aimed at preventing environmental pollution and improving health, (South African Constitution, 1996), the National Environmental Management Waste Act No.59 of 2008 (Republic of South Africa 2008); which governs all waste in the country with the aim of protecting the health of the people and the environment, the Occupational Health and Safety Act 85 of 1993, which protects the safety of all health care providers and HCW handlers (Republic of South Africa, Occupational health Act, 1993), and the National Health Act, 61 of 2003 which advocates for a structured and quality uniform healthcare system (The South African Health Act, 2003). All relevant regulations relevant to HCWM are presented in table 1.

As of the year 2000, South Africa did not have any national policy governing HCW its constitution entrusts legislative power to the national (South African Constitution, 1996), and provincial levels of government (The South African Health Act, 2003). Thus, in the absence of a national policy, most of the provincial governments in South Africa took some initiatives to develop regulations that address HCW. These regulations include the Gauteng Health Waste Management Regulations passed in 2004 (Gauteng Provincial Integrated Strategy, 2004) and the Western Cape Management Draft Bill which was published for comments in 2005 (Western Cape Management Draft Bill, 2005). Additionally, the South African Standards Act of 2008 South African Standards Act (2008) mandates the establishment of a national body that develops, maintains and promotes the standardisation of services for the management system, product testing and certification in the country. The South African Bureau of Standards was established in 1945. The Bureau of Standards developed some standards (SANS 10248) in the year 2004 to help regulate HCW in the country Standards South Africa [SANS] (2004). However, it was not until four years later in 2008 that the National Health Care Waste Management Policy was drafted (National Health Care Waste Management Policy was drafted, 2008). Since then, this policy, which is still a draft document, has been the main legislation that governs HCW management in the country and it is supposed to be implemented together with the South African National Standards (SANS) codes of practice for managing HCW (SANS CODE, 2004)

Table 1: A summary of policies relevant to healthcare waste management in South Africa

Context of the policy	Name of the policy	Summary of the policy
International Policies	United Nations 1989 Basel Convention	Controls the transboundary movement and disposal of hazardous wastes.
	WHO 1999 First Edition Global Manual on Safe Management of Waste from Health Care facilities, (revised in 2014)	Regulates all waste from healthcare facilities globally
	UNEP 2003. Technical guidelines on the environmentally sound management of biomedical and healthcare wastes	Provides proper guidelines on how to manage healthcare waste for low resource communities
South African Policies	United Nations Environmental Program and World Health Organization 2007 Manual for healthcare waste management for Sub-Sahara	Manual with guidelines on health care waste management practices that are appropriate for sub-Saharan African
	Occupational Health and Safety Act 85 of 1995	Policy developed by the Department of Labour and provides guidelines on worker health safety and training
	Constitution of the Republic of South Africa Act 108 of 1996	It provides a right to a safe and clean environment for every person
	National Environmental Management Act 107 of 1998	Provides for the polluter must pay principal
	National Health Act, 61 of 2003	The Policy advocates for a structured and quality uniform healthcare system
	The South African Bureau of standards SANS CODE' 2004	Provides for the safe and effective management of healthcare waste aimed at reducing risks to humans and the environment
	Gauteng Health Waste Management Draft Bill 2004	The bill was passed in 2004 to regulate all healthcare waste management in Gauteng province
	Gauteng 2005 Integrated Strategy and Action Plan for Sustainable Health Care Risk Waste	Gauteng Provincial policy for sustainable management of healthcare waste
	Western Cape Health Care Waste Management Act of 2008 KwaZulu-Natal Provincial Health Care Risk Waste Management policy of 2008 The Health Care Risk Waste draft policy of 2008	Policy aimed at improving healthcare waste management in the province. A policy for improving healthcare waste management in the province. The national draft policy promulgated by the Department of Environmental Affairs to regulate healthcare waste in the country

In spite of the existence of the regulations that govern HCWM in South Africa, HCWM in hospitals and clinics is a growing problem (Schalkwyk, 2013). These healthcare facilities lack funding for HCWM programmes to manage the 45,000 tons of HCW that is generated annually in South Africa. As a result, various provincial governments contract private waste management agencies to manage HCW. Additionally, it is argued that the management of HCW by contractors makes it difficult to have tangible statistics and to provide proper HCW management practices in the country (Erasmus, Poluta & Weeks 2012). To support this argument, research has shown that there is improper management of HCW from point of generation to the point of disposal in the country (Nemathanga, Maringa &

Chimuka, 2008; Simonsen et al., 1999). In addition, there are insufficient technologies for managing HCW and as such HCW is burnt in the open and buried (Raphela, 2014; Abor, 2007; Akter, 2000). Other problems identified in the literature are the lack of training for health care providers and handlers (Akter, 2000 & Schalkwyk, 2013) and waste handlers rarely use proper protective gear (PPE) (Gabela, Knight, 2010). Improper management of HCW has adverse impacts on the health of the people, animals, affects the environment (Awodele, Adewoye, Oparah, 2016). Most policies on HCWM in South Africa only emphasize proper management of HCW from major health facilities such as hospitals and clinics but do not address how HCW should be managed from minor sources such as ordinary

homes where there is care of the patients within the communities. Yet the majority of the people living with HIV/AIDS and TB as well as other chronically ill patients receive care at home with the help of community health workers (Akintola, Lavis & Hoskins, 2015; Young, Busgeeth, 2010; De Maeseneer & Flinkenflogel, 2010). The current scaling up of community-based care (CBC) services as part of the government's primary health care re-engineering initiative (Akintola et al., 2015; Akintola, Gwelo, Labonte & Appadu, 2015; Schneider & Nxumalo, 2017) calls for researchers, policy makers and stakeholders to pay more attention to the HCW that is generated in ordinary homes in the communities.

The mass media is a podium that facilitates the public's opinion and expectations about policies. Mass media acts as a channel between the government and the public (Kingdon, 1995; Daw, Morgan, Collins & Abelson 2014) that can inform the public about government's actions and policies, and can also help convey the attitudes of the public to government officials (Entman, 2010). Through framing, the media decides what specific issues to cover at the expense of others (Akintola, Gwelo, Labonte & Appadu, 2015; Entman, 2010). Framing is a process where the media defines and constructs a political issue or public controversy (McCombs, 2014). The media can get and sustain the attention of the public over policy debates through framing or using rhetoric. Media framing aims at persuading particular audiences (Nelson, Oxley & Clawson, 1997). The media can use frames to identify policy problems, their causes, consequences and policy solutions to be sought, in a way that changes the attention paid to such issues (Entman 2010; Nelson, Oxley & Clawson, 1997; Hamshaw, Barnett & Luca, 2017). For example, Daku, Gibbs and Heymann (2012) in their study on Multi-Drug Resistant and Extensively Drug Resistant Tuberculosis (MDR and XDR, TB), found that media frames of blame on the patients for spreading MDR and XDR TB in South Africa ignored the role of social drivers in the spread of the disease. They argue that, such media framing of blame on an individual could influence policy-makers to develop policies that are person centered ignoring the problems emanating from the environment/society that shape individual behaviour or experiences. Thus, the news media can also frame issues in a way that draws attention to the players who are involved in the policy process and can also highlight their role in the decision making process (Nambiar, 2004).

Therefore, the media can play a role in setting policy agendas by focusing on specific social issues at the expense of others in such a way that influences politicians, policymakers and other policy actors to adopt particular options at the expense of others (Soroka, 2002). Of interest to our study is the ability of the media

to frame issues in a way that affects the attitudes and behaviour of the public in responding to policy issues (Soroka, 2002; Boaz, 2005; Wachs, Cooky, Messener, Dworkin, 2012). Given the ability of the media to frame issues in a way that influences policy-making and decision making more generally, an understanding of how the media frames issues relating to HCW in CBC, South Africa could help inform policy-making about proper HCWM in South Africa. During the apartheid era, South Africa's newspapers had restrictions for political reasons which were only freed by the adoption of the Constitution that supported the freedom of expression and by the press the after the democratic elections in 1994 (Cook, 2007). However, it is unclear how the media frames issues related to healthcare waste management in South Africa. We found no single published study on this theme. This study therefore aimed at exploring how print media reports on issues related to health care waste management in South Africa. We sought to answer the following questions: 1) How do the print media frame problems related to healthcare waste management and 2) How do the print media frame options related to healthcare waste management.

Methods

We used the South African media (SAMedia) database, which is the only media database available at the University of KwaZulu-Natal, to search for news stories for our analysis of print media framing of HCWM. The South African media database is compiled and maintained by the Institute for Contemporary History (INCH) located at the Free State University. The institute collects and scans newspaper cuttings and periodicals daily and then categorizes and indexes them into Afrikaans and English, before uploading them onto the database. Afrikaans and English are the official languages in the country and English newspapers are read by majority of the population because Afrikaans is considered as a language of the oppressors (Lavis et al., 2012). The SAMedia database contains various South African newspaper articles from the year 1978 onwards.

Newspaper Search and Selection Strategy

We developed a search strategy in order to help us retrieve newspapers from the South African media database that were relevant to our study. Using an iterative process that involved brainstorming and trial searches of the South African media database, we developed a set of explicit inclusion criteria, which are that, all newspapers to be included in the study must be:

1) classified as a South Africa newspaper, 2) published in English the language which the researcher were familiar with and 3) cover a healthcare waste issue. A total of 20 newspapers met the inclusion criteria (see Table 2) and were included in the study.

The search covered all news stories that were available in the South African media database from 1st January, 2004 to 31 December, 2014, a ten-year period after achieving twenty years of democracy.

Table 2: Characteristics of newspapers covered in the analysis

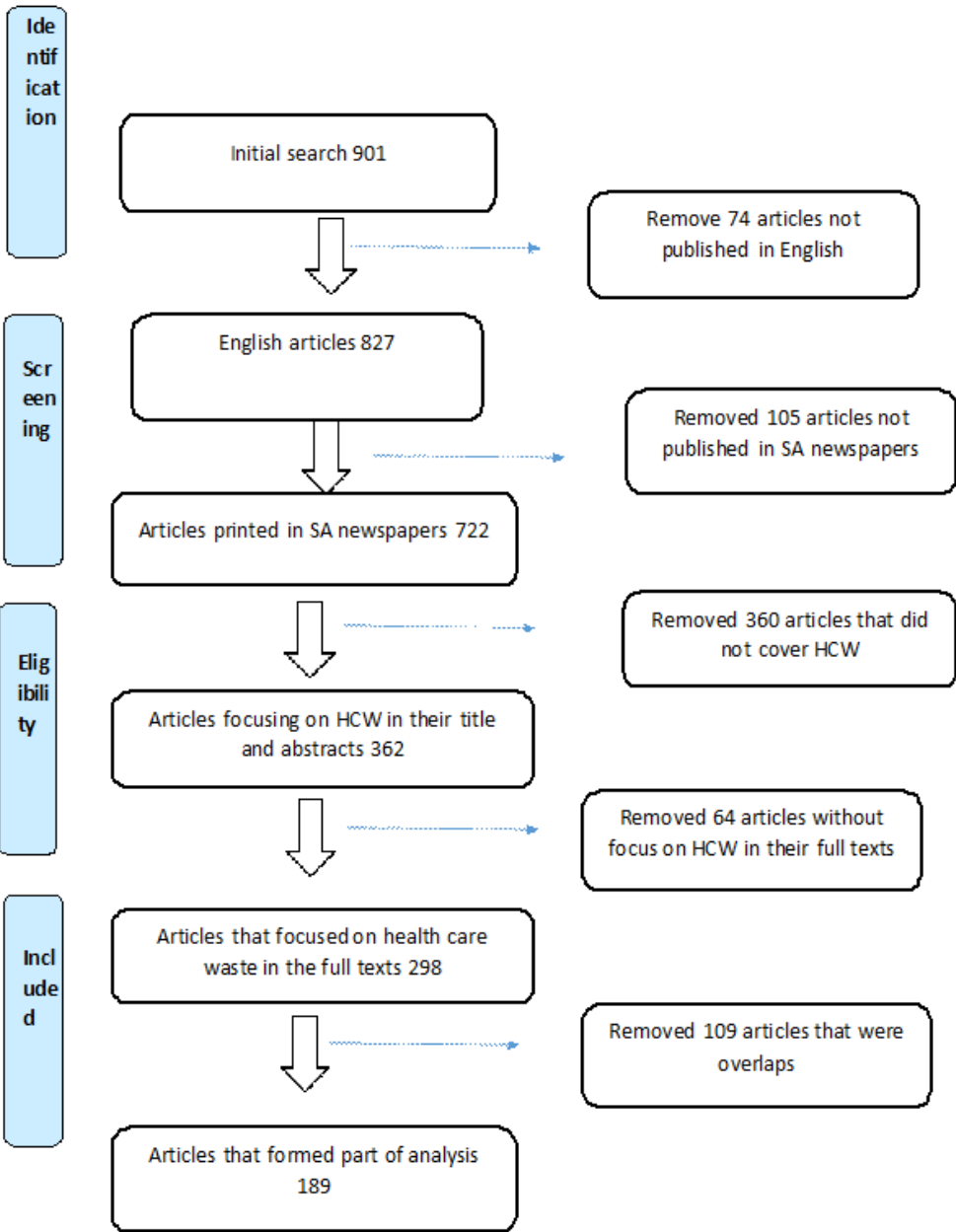
Geographical circulation of the newspaper	Name of the newspaper	Frequency	Publisher
1.National Newspapers			
	Citizen	Monday-Friday	Caxton & CTP
	City Press	Sunday	Media24
	Mail & Guardian	Weekly	M & G Media Ltd Johannesburg
	The New Age	Daily	TNA Media
	The Star	Monday-Saturday	Independent Newspapers Johannesburg
	The Sunday Independent	Weekly	Independent Newspapers Johannesburg
	The Times	Weekly	Avusa Media Ltd Johannesburg
	Sunday Times	Weekly	Avusa Media Ltd Johannesburg
	Sunday Tribune	Weekly	Independent Newspapers Johannesburg
	Sowetan	Daily	Avusa Media Ltd Johannesburg
2.Provincial Newspapers			
Eastern Cape	Daily Dispatch	Monday-Saturday	Avusa Media Ltd Johannesburg
	The Herald	Monday-Friday	Avusa Media Ltd Johannesburg
	Weekend Post	Weekly	Avusa Media Ltd Johannesburg
Gauteng	Pretoria New	Monday-Saturday	Independent Newspapers Johannesburg
KwaZulu-Natal	Business Day	Daily	BIDFM- Avusa Media Ltd Johannesburg
	Daily news	Daily	Independent Newspapers Johannesburg
	Independent on Saturday	Saturday	Independent Newspapers Johannesburg
	Witness	Daily	Media24
Western Cape	Cape Argus	Monday-Sunday	Independent Newspapers Johannesburg
	Cape Times	Daily	Independent Newspapers Johannesburg

Search Strategy for News Stories

We searched for news stories from the 20 newspapers using specific terms related to HCWM in South Africa. In our sample, we included news stories that had specific terms/concepts related to HCWM. Because we wanted to include a wide range of news stories on HCW, we searched for news stories that had used the keywords/search terms both in their titles and full texts. Relevant stories that were covered from all sections of newspapers were also selected if they met the explicit inclusion criteria. Two broad categories of concepts for the search were used. The first was: healthcare waste because this a broad concept that is widely known for describing waste that results from health care activities. The second category of concepts involved using the common terms from literature that are used in various contexts to refer to healthcare waste. These terms are clinical waste, hazardous waste, health care risk waste, hospital waste, infectious waste, medical waste, pathological waste, pharmaceutical waste, sharps, and used medical supplies.

Selection and Analysis of News Stories

We retrieved a total of 901 news stories from 20 South African newspapers. In order to remove news stories that were not relevant to the study, we developed a list of explicit exclusion criteria. First, from a total of 901 news stories, we removed 74 news stories that were published in languages other than English 827 remained. We then removed 105 stories published in non-SA news papers such as ‘The Nigerian publication’, ‘This Day’, ‘The Namibian publication’, and ‘The New Era’, 722 remained. From the SA newspapers, 360 articles that did not cover HCW were removed and 362 remained. All the 64 news stories that did not cover HCW in their full text were removed and 298 remain. We then removed 109 overlaps and 189 news stories remained for analysis. A summary is provided in figure 1.



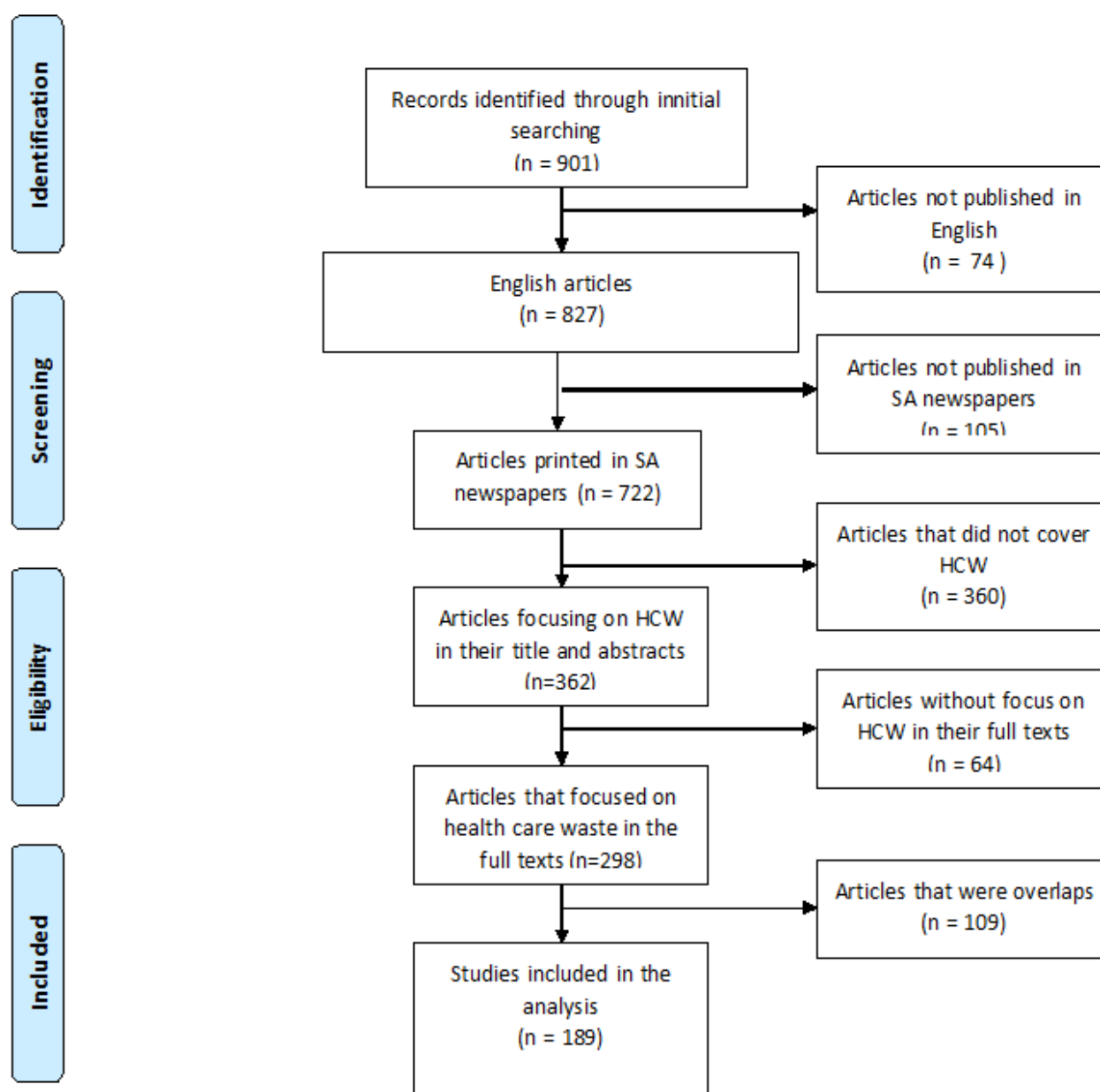


Figure 1: flow diagram showing search for news stories at each stage.

Data Analysis

We analysed the 189 news stories and adopted an approach to data analysis that struck a balance between a more structured deductive approach that uses pre-set themes and categories derived from existing theories. Thereafter, we used an inductive approach that starts with immersion in the data to generate themes. This was done because we were interested in the policy and public health relevance of media reporting of issues relating to health care waste management in South Africa. As such, we chose to draw on literature related to policy and public health systems to help develop concepts that could sensitize and guide us while conducting thematic analysis. Our analysis proceeded in two phases: in the first phase, we drew on existing literature on policy and health systems in particular, Kingdon's conceptualization of policy problems in the agenda setting process (Kingdon, 1995). We also used literature about the health policy process more generally (Lavis et al., 2012) to develop sensitizing concepts that served as prompts for our thematic analysis that followed in the second phase. Two groups

agreed upon by the two assessors (CMS and LH). These concepts were reviewed by the third assessor (OA) for accuracy. The first group of concepts dealt with issues relating to the nature of health policy problems (for example, what problems are identified? How are the problems being framed to motivate different stakeholders including policy makers? how did such information come to their attention?, at what level are the problems being defined? (i.e. who or what level of governance is responsible or should be held accountable for the problem?). The second group included concepts describing the nature of policy options proposed by the news stories to address the problems identified (i.e. what are the options being proposed and how are the options being framed, and at what level are the options being framed or defined?). In this second phase, we used the two concepts derived in the first phase as organizing categories for our data and proceeded to analyse the news stories following the six steps of thematic analysis proposed by Braun and Clarke (Braun & Clarke, 2006). Firstly, we read news stories in order to familiarise ourselves with the data. Secondly, we read the news stories a second time to identify and categorise the data into three organizing concepts: problems, their causes, and

options. In the third stage, codes were identified and generated. In the fourth step, all subthemes were identified from the codes. In the fifth stage, the sub-themes were grouped together and in the sixth stage, all themes were grouped together and presented in the results section. The analysis was conducted in an iterative manner by the two assessors (CMS & LH) and a third assessor (OA) helped in resolving discrepancies where the assessors could not reach consensus and in checking for accuracy.

Results

Characteristics of the newspapers and news stories

There were more news stories from the provincial newspapers with 56.6% than 43% from the national newspapers. The largest grouping 21.7% of news stories that were published in the provincial newspapers came from Eastern Cape, followed by 15.9% from the Western Cape, 15.3% from KwaZulu-Natal with 15.3% and least 3.7% from Gauteng province. With regards to the national newspapers, 9.5% of news stories were from The Star followed by 5.8% from the Sunday Tribune, 5.3% from The Citizen; The Sunday Times & The Times, 5.2% from City Press, 4.2% from Mail & Guardian and the least with 1.1% each were from The New Age, The Sunday Independent and Sowetan newspapers as summarized in table 3

Table 3. Characteristics of news stories on health care waste (N=189)

News Paper Source	Specific newspapers	Total	Percentage (%)
National newspapers		82	43.4
	Citizen	10	5.3
	City Press	9	5.2
	Mail & Guardian	8	4.2
	The New Age	2	1.1
	The Star	18	9.5
	Sunday Times	10	5.3
	Sunday Tribune	11	5.8
	The Sunday Independent	2	1.1
	The Times	10	5.3
	Sowetan	2	1.1
Provincial newspapers		107	56.6
Eastern Cape newspaper articles	Daily Dispatch	23	21.7
	The Herald	15	7.9
	Weekend Post	3	1.6
Gauteng newspaper articles	Pretoria News	7	3.7
KwaZulu-Natal newspaper articles	Business Day	6	15.3
	Daily News	10	5.3
	The Independent on Saturday	3	1.6
	The Witness	10	5.3
Western Cape newspaper articles	Cape Argus/Argus Weekend	20	15.9
	Cape Times	10	5.3

Publication of the news stories:

The news stories that were covered in this study were published between 2004 and 2014 as shown in figure 2. The number of news stories on healthcare waste were lower in 2006 and peaked in 2009 and dropped from 2010 to 2014 as shown in figure 2.

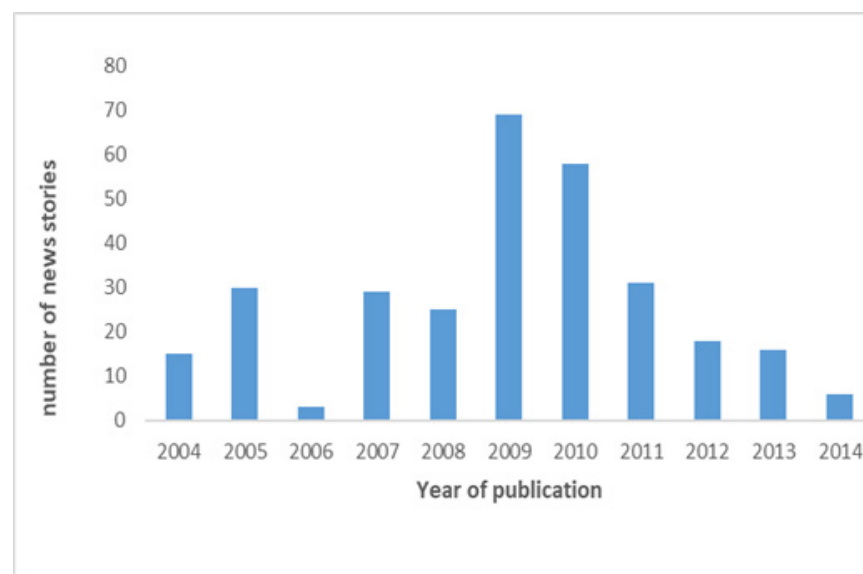


Figure 2: A Summary of news stories and year of publication

Presentation of the News Stories

The news stories will be presented under the two broad themes:
1) problems related to health care waste management and their causes; 2) options proposed for dealing with the problem.

In this section, all news stories' excerpts are italicised and presented in verbatim as written by specific newspapers. The summary of themes and sub-themes are presented in table 4 below.

Table 4: Summary of the themes generated from the news stories

Problem and causes		Options	
Problems	causes	Proposed solutions to the problems	What is already being done about problems
- Illegal dumping of health care waste	-There is lack of a national health care waste management policy; existing ones are fragmented and not implemented. -Insufficient treatment facilities -Lack of capital to handle HCW by government -Corrupt tender processes -Incompetence of contractors to handle health care waste	-Government should develop regulations or review the existing ones -Government should open more disposal sites.	-Development of a Health Care Waste Management Bill in Eastern Cape -Development of disposal sites and a waste management team was established in KwaZulu-Natal -Education awareness programmes
-Illegal storage and stock piling of health care waste	-Lack of capacity for storage of health care waste by contractors - Contractors face stiff competition and end up not honouring their contracts	-Government should monitor health care waste management.	-Raids: are conducted on the premises of the contractors. -Inspections and audits are conducted in hospitals
-Financial impropriety by department of health	Not mentioned	Not mentioned	Not mentioned
-No personal protective equipment for the waste handlers	- Incompetence of contractors to afford PPE for their workers	Not mentioned	Not mentioned
- Lack of segregation of health care waste.	-Incompetence of hospitals to segregate health care waste	Not mentioned	Not mentioned
-Use of inappropriate transport by contractors	-Incompetence of contractors to afford appropriate transport	Not mentioned	Not mentioned
-Re-use of HCW containers	a. Incompetence of contractors	Not mentioned	Not mentioned

Seven themes were identified from the news stories. The majority 36% of the news stories focused more on illegal dumping, illegal storage of HCW 21%, financial impropriety 14%, lack of PPE 11%, lack of segregation of HCW into infectious and non-infectious waste 9%, use of inappropriate transport for transporting HCW 5% and re-using of non-re-usable containers for HCW storing 4%. This information is summarised in 3.

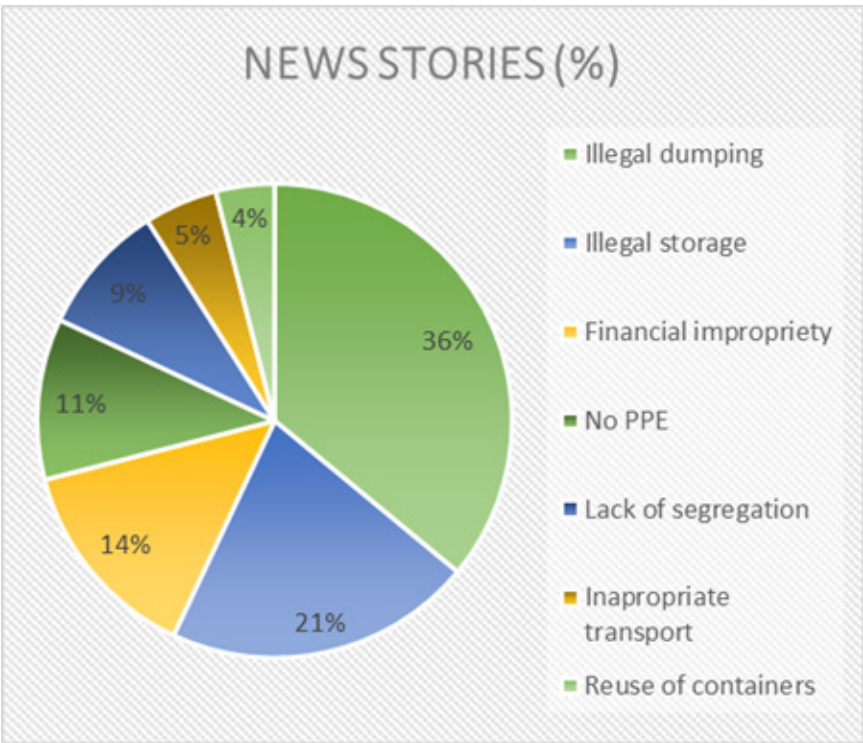


Figure 3. A summary of news stories that covered each theme

Problems and Causes

This theme will discuss the problems that are identified in the news stories, the level at which the problem is defined and who is blamed for the problem. The theme comprise nine sub-themes, illegal dumping of HCW, illegal storage of HCW, HCWM contractors operating without permits, corrupt tender processes, financial impropriety by the department of health, lack of personal protective equipment for waste handlers, lack of resources for HCWM, lack of segregation of HCW, use of inappropriate transport for HCW and re-use of HCW containers. The problems are discussed in detail below.

Illegal dumping of health care waste by waste management companies

This problem was reported by the overwhelming majority of news stories claiming that HCW is dumped on privately owned land, streets, in open veld, in municipal landfills, in residential areas and near school premises. The news stories portrayed the whistle blowers, usually residents, who discover the acts and

alert the media, the Health Department and the Municipality as heroes. Most newspapers attributed various negative consequences such as infestations of disease-causing organisms such as rats, flies and cockroaches to illegal dumping. The stench produced by the HCW is another effect highlighted by the media. Children were represented as being at risk of poor health because they were said to have been seen playing with HCW. Illegal dumps near homes were also framed as affecting landlords who claimed that prices of their properties went down due to the existence of illegal dumps close to their properties. Illegal dumps in residential areas were framed as attracting scavengers who also used such places for toileting. Waste scavengers were in turn seen as responsible for house break ins, in the residential areas.

The print media framed the issue of illegal dumping as caused mainly by the lack of a national policy to regulate HCWM in the country. The government is blamed for taking long to develop a national policy and for ‘dragging its feet’ on passing the national health care waste management draft policy into law. The blame on the government largely originates from the Democratic Alliance (DA), the main South African opposition party to the governing African National Congress (ANC). Further, news stories also emphasise that HCW is governed by provincial laws which are fragmented thereby causing a lack of uniformity in the implementation of the laws.

“The problem that we have as a country is that, currently, policies for medical waste are individually driven by nine provincial governments causing a substantial overload of regulation for service providers!...There is inconsistencies in implementing health care waste management laws in the country...”(The Saturday Weekend, 7th March, 2009)

The second cause of illegal dumping according to the news stories is a lack of financial and human capacity for HCWM at the national level.

“The total amount of waste generated in South Africa amount to 42200 tons per year but available commercial treatment facilities could only handle 31,690 tons per year...We do not have the financial capacity or skills to obtain more incinerators that cost millions of Euros...” (The Saturday Weekend Argus, 7th March, 2009)

The news stories recognized that large amounts of HCW are produced in the country yet there are only five incinerators available for treating HCW. The incinerators are only available in the Free State, Western Cape and Gauteng provinces. Therefore the provinces that do not have incinerators transport the HCW to

these provinces with the incinerators. One news story quoted a chairperson of an environmental activist group to support this claim:

“The fact that medical waste incinerators are failing is neither surprising or news...in provinces such as KwaZulu-Natal, North West, Limpopo, Mpumalanga, and Northern and Eastern Cape where no incineration capacity exists...health care risk waste is transported to Free state, Western Cape, or Gauteng to be incinerated” (The Sunday Tribune 6th March, 2011)

The news media reported that, one incinerator was built in KwaZulu-Natal province in the year 2012. The news story also portrayed the government as lacking financial capital to provide facilities needed for treating and disposing of HCW and therefore relies on private waste companies (contractors) to manage all HCW in the country. The government is also blamed for not having human resources in the Department of Health and the Department of Environmental Affairs and Tourism that can help to offer advice on how to handle and manage HCW. Hence the healthcare waste management sector is seen as being in ‘a national waste crisis’ (The Daily News 29th August, 2012). In emphasising the problem of lack of human resource, one news story reports:

“South Africa generates more medical waste than it can handle. This is a disaster! The government insists that waste must be handled properly yet there are few or no officials in the provincial departments with the expertise to offer advice on how the industry works.” (Business Day 7th March, 2013)

Thirdly, most news stories reported that the other cause of illegal dumping is corrupt tender processes. The news stories accused officials in the Department of Health, who are responsible for awarding contracts on waste management to the private companies, of corruption. The news stories framed the issue of corruption as very serious and wide spread, and as caused by lack of standards for awarding tenders to the waste management companies. They indicated that as a result, tenders are awarded based on the price that the waste management companies are willing to bid other than on their capabilities to provide HCWM services. One news story reported:

“...Policy oversights...dodgy tenders and the milky delineation of responsibility between the government and the government departments are the root of the problem (of illegal dumping)...” The Business Day, 14th, October, 2009 *“Members of the forum (the tender board) have been approached by waste disposal contractors who say: we will*

give you bigger margin if you bring the waste to our plant; there is a lack of compliance...” (The Sunday Tribune, 28th February, 2010)

It is also reported by a few news stories that due to lack of standards for awarding tenders by the Department of Health, there have been disputes between the waste management companies and the Department of Health. Some waste management companies have taken the Department of Health to court because of tender irregularities and in most cases the department has lost several court cases thereby wasting a lot of money which could have been invested in the HCWM sector. As highlighted by a political party member of one of the political parties, the news stories also claimed that because of corrupt tender processes, the companies that are awarded the contracts do not possess the requisite competencies and capacity to treat or dispose of waste appropriately.

“It costs millions to set up a plant... many of those contractors who submit contracts to process health care waste lack the capacity to do so legally...to survive you end up getting pulled into the web and it becomes a cartel with a big spider at the top” (Daily News, 3rd February, 2012)

Illegal Storage and Stockpiling of Health Care waste by Waste Management Companies

Most news stories framed this issue of illegal storage and stockpiling as a serious and rampant problem. Stories of illegal dumping are reported to the media by workers. Most newspapers also indicate that some contractors pile HCW for several weeks or months in warehouses producing a strong stench and affecting the waste workers. One news story revealed a particular waste company whose truck drivers told the news crew about the health and social impact of exposure to HCW:

“The smell of rotting human body parts is so potent; it had penetrated my skin and body. I go home at night and smell so bad that my wife makes me sleep in another room...” (The Star, 23rd February, 2009)

On the part of waste management contractors, the news stories blamed the problem of illegal storage of HCW on the lack of incinerating capacity to process HCW and lack of sufficient funds to own appropriate HCW storage facilities. This was said to have led to them storing HCW illegally in rented warehouses. The waste companies were portrayed as not having treatment facilities of their own and having to rely on the government facilities which are few and sometimes non-functional. This was

said to have led to backlogs with HCW treatment processes, ‘forcing’ the contractors to stock pile HCW.

“Waste companies were being forced to stockpile dangerous medical waste because the country’s legal incinerators could not cope...” (29th November, 2009).

Some news stories also had frames about some waste management companies being evicted for failing to pay their landlords the rents for the warehouses that they use to store waste. The evicted companies were framed as stockpiling the HCW in their own trucks that are meant for transporting purposes. There were also claims about how the trucks are handled. In the Northern Cape, there was a report about an instance where the vehicles used for storing waste was used to transport liquor to an end of year function.

“The trucks for the contractors are hardly ever washed. And when they are washed, it takes place at the provincial hospital without using any disinfectant to clean and sanitize the vehicles. At one stage the contractors used one of the trucks to collect liquor at a liquor store in Kimberly to have it transported for the end of year function.” (The Mail and Guardian, 9th June, 2011)

Most stories blamed the problem of stockpiling on stiff competition among HCWM companies.

“The bigger problem with waste management by the contractors is that the smaller emerging companies many of whom have won tenders by the Department of Health are squeezed by the well established players who have dominated the industry....so the smaller companies feel the heat...some of them have invested millions to set up specialist disposal plants but stiff competition makes them use short cuts and do illegal things.” (The Sunday Times, 2nd December, 2007)

Financial impropriety: A few newspapers also reported financial impropriety by the Department of Health (DOH). The DOH is responsible for awarding tenders and paying the contractors who are manage HCW across the country. Although no cause was identified as responsible for this problem, it is further reported that the D O H fails to pay the waste contractors who in turn find it difficult to keep their operations running. For example, news stories reported that there have been instances when the waste management companies have stopped collecting waste from all hospitals in protest. Such acts have been said to cause backlogs with waste management processes in most health care facilities. Some waste companies were portrayed as being on the verge of closing down due to the fact

that the DOH did not pay them for several months.

“We have not been paid since November and have been told we will only get the money in mid-April. The department promised payment of the debt.” (The Sunday Star, 17th April, 2010)

Lack of personal protective equipment (PPE) for workers:

One news story reported that some workers that are hired by some waste management companies are not provided with any PPE such as masks and gloves for use when handling waste. As a result, such workers felt that they were at risk of infections because they were pricked by needles while working. One worker claimed that he had become accustomed to the stench produced by the rotting waste:

“We have to use our bare hands to pick up everything that we find here and handle dangerous waste from hospitals...since I started here I have never been given anything [protective equipment] to wear. Initially it was difficult for me to withstand the stench but I am now used to it.” (The Star, 25th May, 2005)

Lack of segregation of health care waste: Some news stories reported that most hospitals in South Africa do not segregate healthcare waste into infectious and non-infectious categories. Most newspapers reported that such cases come to the attention of the public through anonymous ‘tip offs’ that are made to the media by ‘insiders’ (those working for the waste companies). The problem of lack of segregation was framed by one news story (the Daily News, 3rd of February, 2012) as more prevalent in KwaZulu-Natal province where 12 out of the 14 hospitals were said to be guilty of this practice. Most news stories framed this challenge as caused by incompetent waste management companies who give hospitals unmarked containers for storing HCW.

Hospitals are complaining about unmarked (waste) containers that were delivered to them by waste management companies” (Mail and Guardian, 9th June, 2011)

These news stories also report that due to lack of proper segregation of waste in hospitals, there have been cases where dead babies have been found by scavengers among general waste while another case of a leg floating in an abandoned and flooded boiler room was reported at one hospital. Another news story framed this issue as a big problem affecting all hospitals in the Eastern Cape Province. It is reported that the hospital administrations were trying to save money by rationalising services. The news stories reported that there were many instances

when the hospitals were never cleaned, wards and toilets were filthy and HCW was uncollected and seen lying around causing stench:

“The Livingstone Hospital has become a ‘ghost hospital’ which is ‘half closed’ because services there have been streamlined significantly.” (The Weekend Post, 17th September, 2005)

It is further reported that some nurses became fed up with unhygienic working conditions, and therefore went on a protest:

“Today the cleaners did not pitch for work, the floors and the wards are dirty. It is depressing. Our young doctors are refusing to work in the conditions and are leaving the country.” (The Weekend Post, 17th September, 2005)

Use of inappropriate transport: A few news stories reported that the lack of use of appropriate transport by waste management companies was a problem. Most of the waste management companies were said to have used open vans to transport HCW. The news stories framed the problem of use of inappropriate transport by waste companies as caused by a lack of finances to purchase the appropriate vehicles. It was reported that HCW was found on the highways.

“The companies that are awarded tenders do not have the right vehicles. The vehicles are not clearly identified as carrying hazardous waste, a legal requirement!” (The Mail and Guardian, 9th June, 2011)

“...Hazardous waste which fell from a moving truck along Port Elizabeth’s freeways shock motorists by causing obstruction...” (The Herald, 2nd February, 2004)

Reuse of containers for storing and transporting of anatomical waste: One news story reported that some contractors reused buckets containing anatomical waste which are supposed to be incinerated. They framed this issue as caused by incompetence of the waste management companies who do not have the appropriate equipment for managing HCW.

Options proposed or provided to address the problems relating to improper HCWM

The news stories identified three solutions to the problems of health care waste management all of which were directed at the government. These are the need for government to 1) develop regulations and/or review the existing ones, 2) open more

disposal sites and 3) monitor health care waste management. These themes are discussed together with the options that the government is providing to address the problems and these are: development of a health care waste management bill in the Eastern Cape, establishment of disposal sites and a waste management team in KwaZulu-Natal, education awareness programmes, raids, inspections and audits.

The government should develop regulations or review the existing regulations: Most news stories proposed solutions to deal with the issue of improper management of HCW across the country. To address the problem of illegal dumping in the Western Cape, one news story (The Cape Time, 26th November, 2007) claimed that a bill on HCWM (draft) in the Western Cape was initiated by the provincial government in 2005 in response to an incident of needle pricking caused by illegal dumping of HCW.

“The ‘years in making’ Western Cape Health Care Waste Management Act that will make dumping of medical waste a criminal offence will be signed by the Government. This legislation was initiated when more than 40 children had to go for an HIV test in 2005 for injecting themselves with discarded needles in Delft and Mitchells Plain...” (The Cape Time, 26 November, 2007)

After the bill on HCWM (draft) in the Western Cape was released for comments by the public in 2005, it was promulgated into law in 2007 and now it is called the Western Cape health Care Waste Management Act of 2007.

“This act will change the way in which the HCW is managed in the province...for the first time... there will be a uniform provincial standards for managing HCW...” (The Cape Time, 26th November, 2007)

Some news stories also reported that the KwaZulu-Natal provincial government opened a disposal sites in 2007 to address the issue of insufficient disposal and treatment facilities.

“The EnvironServ Company will now install a state-of-the-art facility using a thermal process...the decision to establish was made, because if such facilities were not established, HCW would continue to be transported to other provinces increasing the risk of exposure to communities...” (The Sunday Tribune, 22nd July, 2007)

Some news stories revealed that, to address the issue of illegal dumping of HCW, some partnerships between the governmental departments and environmental activist groups

were formed. Awareness campaigns are held to educate community health workers about HCWM and the implications for its improper disposal. A few newspapers also indicated that conferences and meetings were held to put together a HCWM strategy to regulate HCW in South Africa.

To address the problem of lack of segregation in KwaZulu-Natal province, one newspaper (the Daily News, 3rd February, 2012) indicated that the Department of Health created a waste manager post of which a waste manager in every district of the province is employed to oversee HCWM. A medical waste management strategy was also developed to regulate all HCW in the province. More importantly, there are committees responsible for overseeing all HCWM issues in the province. For example, the committee monitors the transportation of HCW from all clinics and is responsible for ensuring that there is transparency with the tender process for the HCW service contractors. All tenders are published in the provincial and national newspapers in order to promote compliance.

The government should monitor health care waste management: Some news stories suggested that the government should monitor all the HCW that is produced in the country.

“The government must create a specialised agency to oversee medical waste management which will be responsible for regulating medical waste disposal chain; it would enforce laws, create clear guidelines and keep records of medical care waste management activities.” (The Business Day, 14th October, 2009)

In order to ensure that waste management companies comply with the standard waste management procedures, most news stories report that random raids at the warehouses of the waste management companies are conducted by the Green Scorpions (the environmental management inspectors). Those that are found operating without permits are given 24 hours to shut down their operations and are fined. Companies that fail to pay the fines and persistent offenders are imprisoned for five to ten years, and those who stockpile are ordered to remove and dispose of the HCW within 24 hours. Companies that are found guilty of illegal dumping are given 24 hours to clean up. In situations where the offenders are not found, clean up sessions are organised by the government through the health unit in the municipality. The government officials also fence and monitor such areas after cleaning up. Some waste companies have had their contracts terminated by the Department of Health due to non-compliance.

“Wasteman, a waste management company that was allegedly

responsible for being the South Africa’s biggest medical waste dumper, was raided by the South African watch dog the ‘Green Scorpions’ in the last two weeks and has been ordered to shut down; the chief executive director has been arrested and charged for being a persistent offender.” (The Saturday Star, 17th April, 2010)

Inspections and audits by the Department of Health are carried out in hospitals to ensure that they comply with proper procedures of HCWM from point of generation to the point of disposal.

“Provincial Health Department spokesman expresses shock about problems at Livingstone hospital. ‘We promise inspections and audits will be carried out in all hospitals to ensure that this problem does not persist,’ said the provincial Health Department spokesperson.” (The Weekend Post, 17th September, 2005)

Discussion

This study explored how the media frame issues relating to problems and options about HCWM by 20 newspapers in South Africa. The implementation of policies in South Africa occurs at the provincial level. Thus, it justifies why there were more news stories in provincial newspapers than in national newspapers. Considering that a few national newspapers were also reporting on issues relating to HCWM, this could be an indication that HCWM is generating concern among policy-makers, stakeholders and actors at the national level. Alternatively, it can also be assumed that the national newspapers might be interested in covering HCWM issues in order to influence policy-makers to generate relevant policies for proper HCWM (Entman, 2010; Daku, Gibbs, & Heymann, 2012). It is striking that among all provinces, majority of the news stories were from the Eastern Cape Province and were reported by the major Eastern Cape newspapers: The Daily Dispatch and The Herald. At the time of research, the Eastern Cape was one of the five provinces that did not have a provincial policy on HCWM and a treatment plant for treating HCW before its disposal. Therefore, it is possible that it had more HCWM concerns due to a lack of a provincial policy on HCW and treatment plants for managing HCW.

Between 2004 and 2008, there were more stories about illegal dumping of HCW in various provinces by service providers and a decline in the news stories in 2006 which could have been caused by the development of provincial HCWM regulations around the country. While some news stories discussed the publishing of the Western Cape Waste Management Policy in 2007, none of them

discussed the national health care waste draft policy which was published for public comments in 2008. Although no policy was published in the year 2009, it is possible that the number of news stories peaked in this particular year because there was an annual report on healthcare waste which indicated that 800 tons of healthcare waste was illegally dumped around the country. Such publicity caused public protests around the country. Therefore, to address the problem of illegal dumping, The Environment Management Inspectors known as 'The Green Scorpions' together with Police Officers and Environmental Health Inspectors were tasked to conduct random raids and fine the waste management companies that were found guilty. Additionally, a conference was also held in May to try and address the problem. After the conference, there were news stories about awareness campaigns for the public concerning the effects of improper management of HCW. During this period, most of the news stories discussed the problems of HCWM, linking it to the lack of a national policy and/or a failure to implement existing policies. Such reporting is consistent with the gatekeeping literature which suggests that newspapers choose what issues to report based on the newsworthiness of the issue (Soroka, 2002). It is possible that the various policy developments which took place from 2004 to 2008 helped to sensitise the media to healthcare waste management issues in the country to the extent that media organizations considered it newsworthy. At the same time stakeholders might have been sensitized by these draft policies. These two factors may have contributed to an increase in the number of reports relating to healthcare waste management in 2009. It is intriguing to note that news stories began to decline from 2010 to 2014 yet in the year 2011, treatment and disposal facilities for healthcare waste were opened in KwaZulu-Natal specifically in Pietermaritzburg. In Cape Town, new non combustion technology machines for treating HCW were introduced in 2012. One could argue that the decline in the news stories could have been the fact that reporting on positive response to the problem of HCWM was not part of the agenda by the print media.

The most dominant representation in the news stories was on illegal dumping by HCWM companies/contractors. The WHO global health care waste manual (WHO, 2014; Prüss, Giroult, & Rushbrook, 1999) and the South African National Standards on HCW (SANS, 2004) prohibits illegal dumping of HCW due to its environmental and public health effects. While many studies have found that illegal dumping is widespread in South Africa and other low-and-middle-income countries (Raphela, 2014; Abor, 2007; Gabela & Knight, 2010) there is no literature on the perpetrators of illegal dumping. We are therefore unable to assess the accuracy of this frame. Therefore, this issue warrants empirical research that seeks to gain a deep understanding of illegal dumping of healthcare waste.

The media portrayed the waste management contractors as out of control because of their illegal practices. The contractors were portrayed in most of the news stories as engaging in illegal dumping and illegal storage and stockpiling of HCW, using inappropriate vehicles to transport health care waste and re-using containers used for anatomical waste which is supposed to be incinerated. Their activities were also represented as causing health hazards for the environment, residents of communities close to the sites where the illegal dumping of HCW occurs, and their own workers who are not provided with protective devices when handling health care waste. The print media's representation of contractors is that of villains whose activities have gone unchecked by government structures that are largely portrayed as 'looking the other way' while the contractors perpetrate their dastardly acts. Yet, the overarching dominant frame of the cause of the problems of health care waste management in South Africa was the government's lack of proper oversight and control of the waste management sector. The contractors were presented as operating in a very difficult environment caused by governments' inability to create the necessary enabling environment for proper health care waste management and for contractors to do their jobs properly these findings clearly depicts the ability of media to have power in agenda setting (Nambiar, 2002; Boaz, 2005).

Given the manner in which the cause of the problems of health care waste management was framed, the options for dealing with the problem were focused mainly at the level of government [namely the Department of Health and Department of Environmental Affairs]. News stories constructed the contractors' actions as being left to go unchecked and therefore proposed the development of appropriate regulations that will set up an agency to monitor contractors and enforce laws and regulations on the entire health care waste management chain. While the framing of solutions may sound logical and sensible, some news stories, at the same time, ironically portrayed contractors as victims of a system that was not conducive for them to carry out fair and proper waste disposal practices. They were portrayed as 'victims' of circumstances created by governments' lack of funding of the health care waste management sector. This, it was said, led to inadequate financial and human capacity for developing disposal sites and effectively managing the industry as a whole respectively. Government departments were accused of financial impropriety and waste contractors were said to be owed money by government which hampered their ability to comply with regulations. As a consequence, the options proposed were those designed to increase capacity for the incineration of health care waste across the country which most news stories said were only able to process only about 75% of the large volume of health care waste that is generated in the country and sometimes not functional.

There were also proposals for government to purchase modern non combustion technology for the treatment of health care waste.

In addition government was blamed for corrupt tender processes which led to the appointment of incompetent contractors. Government was also vilified for financial impropriety which led to delays in the payment of contractors which in turn further exacerbated their woes. There are studies that have found corruption as a major challenge that has dodged procurement processes in the public sector in South Africa (Ambe & Badenhorst-Weiss, 2012; Osei-Afoakwa, 2012). The authors of these studies argue that corruption in the government sector in South Africa is as a result of decentralization of public procurement. Although news stories constructed the issue of corruption as widespread in the health care waste management sector, we found no empirical research evidence on corruption in the health care waste management sector. Research that seeks to explore this issue would be a welcome contribution to knowledge on health care waste management.

By identifying the illegal and unprofessional practices of waste contractors but blaming government for their reprehensible activities and proposing options that focus mainly on the government, the print media creates a situation that indirectly absolves waste companies. While some news stories mentioned the need to monitor contractors closely, this was not the dominant frame. Further, rarely did the print media emphasise the legal and contractual as well as moral responsibility of the contractors as corporate entities to comply with existing laws and regulations. Instead, there was a strong emphasis on the need for government to do more for contractors and the industry. The SANS 10248 (2004) prohibits illegal dumping of healthcare waste and recommends that specific HCW must be disposed of in a specified manner. For example, anatomical waste must be dumped at an appropriate 'Class A' dumpsite where it must be burnt in a controlled manner. While the dominant representations of problems vilify both the contractors and government, the dominant representations of options have the potential to justify the malpractices of the contractors albeit indirectly thereby tacitly encouraging them to break the law.

Stockpiling by waste management companies is in contravention of the law in terms of the National Environmental Management Waste Act 59 of 2008 (National Environmental Management: Waste Act, 2008). The dominant media frame could lead to a fixation with narrow solutions that focuses on government's failures and responsibilities while neglecting the legal and

contractual obligations, and moral responsibilities of waste companies to deliver services within the confines of their contracts and the laws of the country which prohibit their illegal activities. The dominant media representations of government as the cause of the problem in the industry perhaps largely reflect the views of the opposition party the Democratic Alliance which dominated the coverage of the problems contained in the news stories. As Nelson and Oxley (Nelson, Oxley, & Clawson, 1997) argue, a frame could marginalize other frames of understanding. The frames used by the news stories in our sample could undermine the development of comprehensive solutions that holds the main perpetrators of the illegal activities to account for their actions.

Another dominant representation in the media is that of lack of a national healthcare waste management policy which has led to a fragmentation or 'provincialisation' of policies. A review of policy and literature shows that there is no national policy governing HCWM in South Africa (Nemathaga, Maringa, & Chimuka, 2008). The current national guiding document on healthcare waste management has been in draft form since 2008. Yet, studies by Van Schalkwyk (2013; Erasmus et al., 2012) argue that a lack of a national policy and the fragmentation of policies (i.e. development of policies by various provinces) on HCW management makes it difficult to have uniform implementation in the country and to quantify and monitor HCW.

The print media framing of the problem of fragmentation in policy on HCWM is consistent with empirical evidence on this issue. This media representation could potentially help influence and policy makers to take appropriate action (Akintola, Lavis & Hoskins, 2015; Kingdon, 1995). But as noted earlier, the problem of healthcare waste management cannot be focused on the government's policies alone but must include other levels of society that contribute to the problem. We now turn to the other levels contributing to the problem of waste management in the country as described by the news media.

The other dominant frame in the print media is the lack of segregation of HCW by healthcare facilities. The media frames this frame as an institutional (health care facilities) problem. The WHO global policy (WHO, 2014; Prüss, Giroult, & Rushbrook, 1999) the South African standards 'the SANS 10248 (2004), the South African Constitution (1996) and all South African provincial policies (Gauteng Provincial integrated strategy, 2004; Western Cape Provincial Health Care Waste Management, 2004), puts the responsibility on all waste generators of HCW to segregate waste. Healthcare institutions are given the responsibility to oversee all healthcare waste management

activities in order to ensure that HCW is properly managed. Evidence from low-and-middle-income countries and specifically South Africa, Nemathaga, Maringa, & Chimuka, 2008; Abor, 2007; Akter, 2000; Gabela & Knight, 2010). suggest that healthcare facilities do not segregate HCW because waste generators and handlers do not have skills to do so due to lack of training. However, the media rarely discussed the specific factors or individuals to be held accountable for this problem at the health facility (institutional) level. Some of the news stories blamed the waste companies for not supplying the hospitals with the appropriate facilities for segregating waste.

However, they did not identify who should be held accountable for non-segregation at the institutional level. It was not clear from the reports whether the problems of lack of segregation was caused by medical professionals, cleaning staff, the hospital management or contractors responsible for waste management. Factors like the level of knowledge and skills about segregation of health workers or waste handlers or the availability of the appropriate facilities needed for segregation at the facility level were rarely discussed. This makes it difficult to judge how consistent the news media frames are with the literature and could send confusing signals to policy-makers who are influenced by news media frames . (Daku, Gibbs, & Heymann, 2012). A few of the news stories blamed non-segregation of waste on the contractors for not supplying appropriate facilities. By blaming the problem of non-segregation on the waste companies, the media tends to deflect the responsibility for segregation to the companies. This is inconsistent with the provisions of the Constitution (1996) of the country and all other policies (WHO, 2014; Prüss, Giroult, & Rushbrook, 1999, Occupational Health and Safety Act 85 of 1993; National Health Act No. 61 of 2003) and standards on HCWM (SANS, 10248, 2004). This might absolve the hospitals and health professionals and lead to solutions that are not comprehensive enough for the dealing with the problem.

Completely absent from the media frames is a discussion of issues relating to HCW that emanates from homes in community-based care. The primary health care re-engineering model in South Africa which aims at providing basic home treatment, community assessment and campaigns on a national scale (Schneider & Nxumalo, 2017) will inevitably lead to an increase in the amount of nursing and care activities such as bathing patients, changing soiled nappies, cleaning and dressing their wounds, washing soiled clothes and beddings in the homes. These activities could potentially lead to an increase in the amount of HCW generated. While a previous analysis of the South African print media coverage of primary health indicate that the print media has covered the primary

and community health care was not covered by any news story. This raises questions as to whether HCW at the primary health care and community health care level is seen as an issue of concern by stakeholders and whether the print media considers this issue newsworthy (Soroka, 2002). The gate-keeping literature suggests that news that does not meet the criteria set for newsworthiness by media organizations are either not covered in the first place or discarded during gate-keeping process thereby helping to influence policy agendas by determining the news that is elevated and therefore that will get the attention of the policy-makers and stakeholders (Hamshaw, Barnett, & Lucas, 2017). The lack of coverage of health care waste management in community-based care portrays health care waste management as an issue that is solely at the level of health facilities.

Conclusion

The media framing of healthcare waste management problems as caused mainly by government, results into failure of the print media to propose options that includes waste contractors who are the main perpetrators of illegal dumping and stockpiling could lead to half solutions that masks the real problem and focuses on palliatives instead of focusing on all levels of society mainly the government policy makers and implementers; government agencies; waste contractors; health facilities; individual health care workers; health care professionals; waste workers and cleaners in the health facilities that contribute to this problem. While there is a lot of media reporting on health care waste management from hospitals in South Africa, nothing is mentioned about HCW that emanates from community-based care (CBC). This raises questions as to whether HCW from CBC is seen as important. Seeing that media is a podium for communicating policy issues, it could be used as a podium for sensitizing people about health care waste that comes from homes. For example, through awareness programmes collaborated by community-based organisations (CBOs) managers, community health workers, the waste handlers and community members and the municipality in the communities, people in the community will know the importance of HCW that originates from homes therefore, such awareness programmes could get the attention in media which in turn, media could be a podium used to get the attention of policy makers regarding policy initiatives for governing HCW from CBC.

Strengths and limitations

This study used rigorous and transparent methods throughout the entire process. The use of the South African media database allowed us to have a broad search strategy. The key terms that we used to search for the newspaper articles were reviewed thoroughly. The limitations of this study are: (a) most researchers that have conducted media analysis on health issues have used LexisNexis to identify newspapers for news stories. In this study, LexisNexis was not used because it was not accessible by the University of KwaZulu-Natal at the time of the research. The South African media database was the only reliable database at the time of research; (b) this study is only limited to the print media; other types of media like the television, radio and social media were not used due to limited resources at the time of research yet they could also play a role in reporting issues related to HCWM; (c) this study only focused on news stories that were covered in English and excluded those in the local languages which may be important sources of information therefore, further studies could be conducted to include all the media sources and various sources.

Authors Contribution

Lydia Hangulu, (LH) Conceptualised and wrote the manuscript, Cassidy Mae Shaw (CMS), Arnold Hamapa (AH), and Oswell Khondowe (OK), Collected data under the supervision of Olagoke Akintola, (OA). All authors reviewed the manuscript before submission.

Competing Interest

All authors declare that they have no competing interest

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