



"EU-HCWM"

Assessment and national report of Germany on the existing training provisions of professionals in the Healthcare Waste Management industry

REPORT: I



DEVELOPING AN EU STANDARDISED APPROACH TO VOCATIONAL QUALIFICATIONS IN HEALTHCARE WASTE

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CHAPTER 1 EXECUTIVE SUMMARY

The healthcare waste sector in Germany is well developed; also training and capacity building systems are introduced, however only partly legalized and standardized. The legal system is based on the European waste strategy and is supported by different national laws, guidelines and standards. Monitoring systems are set up and the generated waste streams are recorded.

In all hospitals waste management systems are in place and waste is segregated based on the European List of Waste. With less than 100g of potentially infectious waste per hospital inpatient per day, Germany has the lowest generation rate of potentially infectious waste in Europe and most probably in the world.

For environmental protection and infection prevention, in-house supervision procedures are mandatory. The already in 1977 issued ordinance on company waste management officers contributed to this good results. Hospitals and clinics have to appoint not only a person responsible for hygiene, but also a company appointee for waste management pursuant to §§ 54 ff. KrW-/AbfG in conjunction with the Ordinance on Company Waste Management Officers. This appointment must be executed in writing and communicated to the competent authority.

While the healthcare waste sector received a lot of attention during the last decade of the last century, during the last ten years the situation is stagnating on the achieved high level and the sector is receiving less attention.

CHAPTER 2 OVERVIEW OF THE HEALTH CARE SECTOR

2.1 General description of the Health Care System

During the last years, the German healthcare system has undergone a series of recent and controversial changes, implemented in an attempt to improve competition within the health sector and reduce its spiralling cost to the government. Since 2009, it is compulsory for all German citizens and long-term residents to have health insurance. This is normally the “Gesetzliche Krankenversicherung (GKV)” - the public statutory health insurance scheme (SHI). Those earning more than €49,500 can opt for a private health insurance plan. The responsibility for the health care system in Germany is shared between the Länder (states), the federal government and civil society organisations. According to the Federal Statistical Office (Statistisches Bundesamt), total health expenditure was €300.437 billion in 2012, or 11.4% of the German GDP.

Ambulatory general practice and specialist care is delivered by primary care physicians who work in solo practices. Hospitals play a limited role in this sector, providing few out-patient services. In 2010, there were 2,064 acute care hospitals in Germany, a majority of medical facilities are still not-for-profit and staffed by salaried doctors. Non-profit or community hospitals are usually run by religious orders affiliated with the Catholic or Protestant churches and are partially funded by the German church tax. In 2010, 30.5 per cent of hospitals were publically owned, 36.6 per cent were non-profit and 32.9 per cent were for-profit private. It is important to take into account hospital size and bed numbers, as 223,385 beds (48.3 per cent) are found in public hospitals, compared to 164,337 in non-profits (35.6 per cent) and only 74,735 (16.1 per cent) in for-profit facilities.

During the period 1991 and 2012, the total number of hospital beds decreased by 26%, from 832 to 615 beds per 100 000 inhabitants in 2010 and increased slightly again to 624 beds per 100 000 inhabitants in 2012. The number of acute care hospital beds and the occupancy rate are:

- 2009: 463176 beds, 76,2%
- 2010: 462457 beds, 76,1%
- 2011: 461022 beds, 75,9

2.2 Statistical data on the HCW System

The management of healthcare waste played an important role during the 90’s for the healthcare sector. Strict management schemes were introduced. By clear definitions and continuous training it was possible to lower the amounts of hazardous healthcare waste. During the last 10 years, healthcare waste management plays an less important factor for the healthcare sector and amounts of generated waste are increasing, Exemplarily, the waste generation for the waste code:

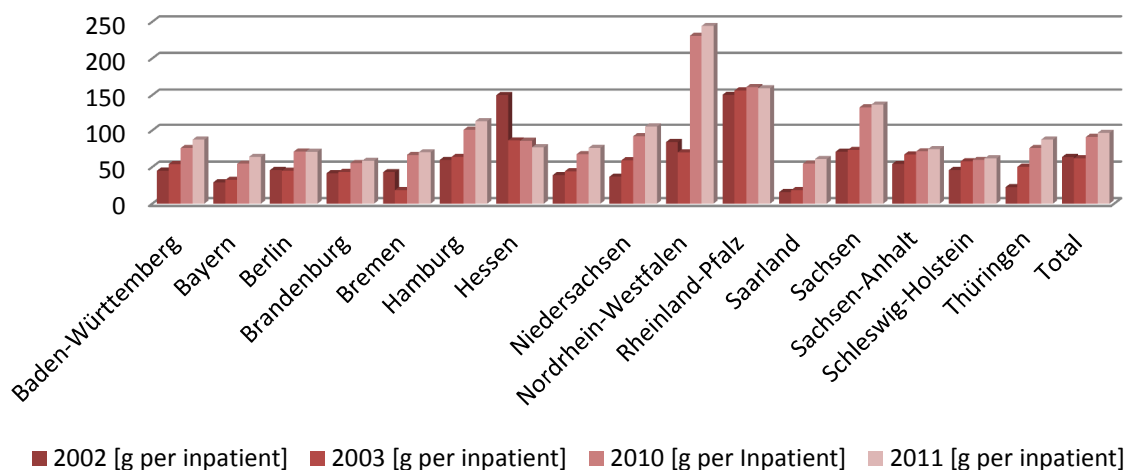
- 18 01 03* wastes whose collection and disposal is subject to special requirements in order to prevent infection

Is displayed in the following table and graphic:



German Country	2002 [g per inpatient]	2003 [g per inpatient]	2010 [g per Inpatient]	2011 [g per inpatient]
Baden-Württemberg	45	54	76	87
Bayern	29	32	54	64
Berlin	46	45	71	71
Brandenburg	41	43	55	59
Bremen	43	19	66	70
Hamburg	60	64	101	113
Hessen	150	86	86	77
Mecklenburg-Vorpommern	39	44	68	76
Niedersachsen	37	59	92	105
Nordrhein-Westfalen	84	70	231	244
Rheinland-Pfalz	150	156	161	159
Saarland	16	18	55	61
Sachsen	71	73	133	137
Sachsen-Anhalt	54	67	71	74
Schleswig-Holstein	46	58	60	62
Thüringen	22	50	76	87
Total	64	62	91	97

Healthcare waste development in Germany - 180103*



2.3 Legislation Applicable to HCWM

Germany has a long history in the management of waste and the first „Waste Disposal Law“ (Gesetz über die Beseitigung von Abfällen) was already issued in 1972. The importance of employing responsible person with adequate knowledge became soon visible and already in 1977 the Ordinance on Company Waste Management Officers (Verordnung über Betriebsbeauftragte für Abfall vom 26. Oktober 1977 (BGBl. I S. 1913)) was approved. This by-law regulated that operators of certain establishments need to appoint an employee as waste officer which included hospitals and clinics as well as operators of certain kind of waste treatment facilities, including healthcare waste incinerators.

Today the main waste law in Germany is the Closed Cycle Management Act (Kreislaufwirtschaftsgesetz, KrWg) which entered into force on 1 June 2012. §§53 and §§54 of the law requires that waste and hazardous waste collectors, carriers, dealer and brokers needs to command about the necessary requisite qualification and expert knowledge. §56 of the law requires that certified waste management facilities also employ staff which commands about the necessary requisite qualification and expert knowledge. Last but not least §§59 orders operators of establishments where regularly hazardous waste is generated (like hospitals) to appoint a company appointee for waste management (waste management officer).

The Federal Ministry for the Environment, Nature Conservation Building and Nuclear Safety is authorized, after hearing the parties concerned (§§ 68), by ordinance to prescribe the demands on the expertise and reliability of the waste management officer.

In Germany, no general healthcare waste law exist but the “Interpretive Guideline for the disposal of waste generated by health-care establishments - Communication no. 18 of the Joint Working Group of the German Federation/Federal States on Waste (LAGA)”. Despite that this is not a legal ordinance, this guideline is generally followed in all countries. The contents of this guideline includes:

- A) Goals and tasks
 - a. Unity of Environmental Protection, Occupational Safety and Health, Hygiene, Public Safety and Order
 - b. Regulatory Framework
 - c. Area of application
- B) Assignment and Classification of Waste
 - a. AVV [Waste Catalogue Ordinance] Chapter 18 Wastes from Human or Animal Health Care and/or related Research (except kitchen and restaurant waste not arising from immediate health care)
 - b. Other Health-Care Waste
- C) Requirements for a proper waste disposal
 - a. In-house requirements
 - b. External requirements
 - c. Information based on the Legislation relating to Hazardous Material
- D) Self-supervision
- E) Waste Management on the level of the German Federal States
- F) Final Provision



Based on the KrWG and the Ordinance on Company Waste Management Officers, this guideline recommends the appointment of waste officers for hospitals.

2.4 Hospital Waste Management – best practice

In 1983, over 554 small incineration plants were in operation at the hospitals in Germany. As these units did not reach new and increased emission limits, and as an upgrade showed to be not economical feasible, most of the incinerator were shut down in the late 80's until the early 90's. In the year 1996, only 10 on-site waste incinerators were left. The last on-site, small-scale incineration (SSI) plant, located at the University Hospital Heidelberg, was taken out of service in 2002. Today, infectious healthcare waste in Germany is either treated by on-site steam treatment systems or is treated in central, either steam based treatment facilities or large-scale, industrial type hazardous waste incinerators.

CHAPTER 3 SKILLS, COMPETENCES AND TRAINING OF INVOLVED PERSONNEL IN HEALTH CARE WASTE MANAGEMENT

3.1 Required Skills & Competences

According to the federal interpretive guideline in Germany (LAGA 18), hospitals and clinics have to appoint not only a person responsible for hygiene, but also a company appointee for waste management pursuant to §§ 59 KrWG in conjunction with the Ordinance on Company Waste Management Officers (the healthcare waste manager). This appointment must be executed in writing and communicated to the competent authority. The healthcare waste officer shall advocate the procurement of environmentally friendly products and procedures, develop strategies that help to avoid or recycle waste and take the necessary steps for a proper disposal of all generated wastes. He or she advises the management of the establishment on all matters that might be important for the closed substance cycle waste management and the waste disposal, in particular, on the planning and implementation of waste management measures. While doing so, not only the provisions of the waste legislation must be observed, but also the requirements of the other areas that are relevant for the environment, e.g. the water and soil protection or immission control. As far as occupational safety and health is concerned, a close cooperation with the person responsible for hygiene, the specialist for occupational safety and health and the company physician is necessary. The tasks of a healthcare waste officer include:

- The healthcare waste officer shall be obliged to inform the management and the staff members of the establishment about the risks for humans and the environment that might be associated with wastes and the measures to be taken. Such information must be given in a suitable form, e.g. within the framework of seminar trainings.
- The healthcare waste officer shall be obliged to track and supervise the on-site and off-site route of the waste until its final disposal and check the observation of the duty to provide and keep proof thereof. He or she shall be obliged to optimize disposal processes and cost.
- The healthcare waste officer shall be obliged to report to the management on a regular basis, at least once a year, with the report containing deficiencies/insufficiencies detected, remedial measures taken and the wastes generated and disposed of.
- The healthcare waste officer shall advise the management on matters that might be important for the closed substance cycle waste management and the waste disposal, in particular, on the planning of on-site waste treatment facilities.

To be able to perform these duties, the healthcare waste officer must be carefully chosen (qualification), officially appointed (determining his or her scope of competence), supported (e.g. through the provision of the respective resources, rooms, working hours, staff members, the facilitation of a participation in training and qualification courses) and be given a right to present his or her issues to the management.

Since hospitals and clinics as waste generators have full responsibility for the proper disposal of all wastes, the healthcare waste officer must be given the required time for the fulfilment of his duties. To avoid



corporate/organisational negligence, the Company Waste Management Officer shall be - to the necessary extent - exempt from other duties to execute these tasks.

Assigning him or her without an exemption from other duties should be avoided. For larger establishments (with more than 800 beds and a respective amount of generated waste), it is advisable to employ a full-time waste management officer. (cf. Waste Management Industry Concept in the publication "Branchenarbeit und Abfallmanagement" [Industry Work and Waste Management] on the website of the "Industrieabfallkoordinationsstelle Sachsen" [industrial waste coordination point Saxonia] - www.ik-sachsen.de)

3.2 Training Programmes Available for Health Care Waste Managers

As for waste managers, also for healthcare waste managers no formal standards exist. Private training companies exist however in different counties who received confirmation from the local responsible authorities that their training is recognized.

For example in the country Berlin, the company Rhenus Logistics is providing vocational training seminars for staff of healthcare facilities. The Senate Department for Urban Development and the Environment in Berlin confirmed that this training is acknowledged for Berlin to verify the required qualification. The training has a duration of 3 full days and contains all aspects of waste management, including the legal background, types and characteristic of waste generated in healthcare establishments, hygiene standards and applied waste management strategies.

3.3 National Qualification Framework – Nationally Accepted Qualifications for Waste Managers

The Federal Ministry for the Environment, Nature Conservation Building and Nuclear Safety has so far not issued an ordinance which describes the formal requirements for a vocational training to prove the requisite qualification for waste officers.

3.4 National Occupational Standards for Waste Management Qualifications (Healthcare Waste)

Do not exist

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