Abstract

Introduction: Globally, there is a lot of biomedical waste generated during the process of delivering health care services to people. These biomedical wastes produced pose a great health risks both to humans and the environment. To avert all these, there are international regulations on how to manage these biomedical wastes, but the situation in the Republic of South Sudan is rather different and alarming, exposing the entire population to health risks likewise the environment. Most health facilities practice poor handling and indiscriminate burning and dumping of medical wastes generated.

Main objective: The purpose of this study was therefore to establish the factors influencing biomedical waste management in the health facilities of Makal county.

Methodology: A descriptive cross-sectional study, comprising of both quantitative and qualitative methods of data collection were used to obtain data from 200 health care workers and 3 key informants from 3 health facilities of Detoma II Mobile Clinic, Melut PHCC and Kodok Hospital. A questionnaire-guide and an interview-guide were used to obtain quantitative and qualitative data respectively. Quantitative data was analysed using the Statistical Package for Social Sciences (SPSS) and the thematic content method for qualitative data.

Results: Level of education X^2 = 7.912, (95%, [CI: 1.143-2.113]), P-value = 0.003), Period in services at the job (X^2 = 6.412, **(**95%, [CI: 2.043-4.911]), P-value = 0.008) were the socio-demographic factor influencing biomedical waste management. Health care providers had low levels of knowledge regarding biomedical waste management, availability of skilled staff at the health facility (X^2=0.045, (95%, [CI:1.987-2.075]), p-value = 0.007), monitoring and evaluation for biomedical waste activities (X^2 =6.098, (95%, [CI:1.097-2.542]), P-value = 0.006) and availability of biomedical waste collection tools at the health facility (X^2 =8.097, (95%, [CI:1.054- 3975]), P-value = 0.0034) were health system factors that influenced management of biomedical waste and the involvement of the private sector in the management of biomedical waste was low due to lack of a private-public partnership.

Conclusions:

Level of education for health care workers and period of service at the job influenced proper management of biomedical waste among health care providers in Makal county, Upper Nile State in the Republic of South Sudan. Health care providers had low levels of knowledge regarding biomedical waste management due to limited training from the health facility administrators. Lack of skilled health care providers, inadequate level of monitoring and evaluation of biomedical management activities and unavailability of appropriate medical collection tools/equipment were the related factors that influenced proper management of biomedical waste among health facilities in Makal county. In addition to the above, the level of the private sectors involvement was low due to lack of a partnership with the government in an effort to properly manage biomedical waste in health facilities in Makal county. The private sectors were mainly engaged in collecting domestic waste from markets and homestead instead.

Recommendations:

The government of the Republic of South Sudan through the Ministry of Health should develop guidelines for proper biomedical waste management, adopt them and widely distribute them to the various health facilities in the country. For the rest of the counties in the Republic of South Sudan, the ministry of health should embark on rigorous training exercises to health care workers, administrators and managers and advocacy and awareness to the rest of the community members about the dangers associated with biomedical waste.