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Knowledge And Awareness Of Biomedical Waste Management In The Field Of Dentistry

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ABSTRACT

Activity service health in practice doctor tooth produce waste medical can give rise to problem Serious If No managed with Good. Waste This own potency fot transmit agent infectious to human, so its management must done in a way carefully and appropriately with correct procedure. Study This use method literature review with narrative review approach. Secondary data used originate from published articles and journals between 2014 to 2024 and can accessed in form fulltext through the PubMed and Google Scholar databases. Appropriate article with criteria inclusion analyzed For compile conclusions and interpretations about knowledge and awareness to management waste biomedicine in field medical tooth. Study results show that knowledge and awareness about management waste biomedicine among practitioner medical tooth Still not enough adequate. Many houses sick and clinic still throw away waste medical with no way right, contributing to the spread disease infectious. Research also highlights importance education and training for officer health tooth in manage waste medical. Required integration curriculum management waste biomedicine in schools medical tooth as well as supervision strict from government for ensure management safe and effective waste. This matter important For protect health society and environment.

Keywords : Management Waste Biomedicine, Dentistry, Knowledge, Awareness, Public Health, Environment.

INTRODUCTION

Activity Health services in practice doctor tooth produce results side form waste medical can give rise to problem if No managed with Good. Waste medical as output material from activity service health potential transmit agent infectious to man (Cayo-Rojas et al., 2023) . Management waste medical good teeth started from separation waste with proper (segregating), waste packaged and labeled makes it easy do identification waste (cage), storing waste with appropriately and safely in the appropriate place (storing), transfer waste to authorized officers (transporting) and carry out extermination waste medical (disposing) (Akkajit et al., 2020; Deress et al., 2019; Letho et al., 2021; Peng et al., 2020).

Country with income low often No do separation hazardous and non-hazardous waste. Estimated as much as 16 billion injections that are done are done each year around the world, however equipment used like the needle and syringe are not thrown away with safe. Only 25.5% of doctors teeth that use a safety box for disposal waste things sharp. There error in disposal hazardous waste such as syringes, blades and ampoules in rubbish normal. Waste produced by the practice doctor relatively more teeth A little compared to provider service health other like for example House sick, though thereby The waste produced also causes serious problem for environment and health if No managed with Good. Amount waste generated by the practice doctor tooth of course No a lot, however with the more increase amount practice doctor existing teeth so accumulation waste medical products are produced become doubled double (Akkajit et al., 2020; Deress et al., 2019; Letho et al., 2021; Peng et al., 2020).

World Health Organization illustrates waste service health as discarded and non- discarded materials processed from activity service health, potentially transmit agent infectious to man. Disposal waste Proper medical care is very important for safety officer teeth and society general (Földes et al., 2016; Tondo et al., 2017; Tordjman et al., 2017). Waste biomedicine defined as every waste solid, or liquid including the container and each product between, which is generated during diagnosis, treatment, or immunization man or animal. Waste tooth is part from waste biomedicine dangerous. This includes various material like soaked cotton wool, sharp needles, extracted teeth, parts network body humans, and so on as usual contaminated with fluid body like blood and saliva. Practice medical teeth also produce a number of type waste others, like mercury, amalgam, and various solvent chemistry. If amalgam manipulation and product the waste No arranged in a way tight, p This can cause

pollution environment as well as exposure to work. Waste Teeth can too has two effects that is to environment and the health of people handling it waste the (Aljunaid & Kusumo, 2020)

Every institution have guidelines and protocols management waste biomedicine. Guidelines and protocols This must obeyed in a way tight in every level production, collection, transportation, storage, processing, and disposal. In level the production itself, waste biomedicine must separated to in pocket or given container code color. The right mechanism must developed for collect, transport, store, or throw away waste dangerous the for avoid serious Public Health consequences. All various parties involved level start from generation until disposal potential face risk serious health consequences. Group risk This covers doctors, nurses, officers maid, staff House sick, and workers who handle and dispose waste the. Facility service health must apply strict rules and regulations with proper training, because weakness in application regulations and lack thereof training for officer health, happens disposal waste biomedicine in a way haphazard (Singh et al., 2018). This article aim or study connection knowledge and awareness to management waste medical in field medical tooth. Expected later study This can become reference for officers in the field medical teeth to apply the procedure management waste medical with good and right, so that it is avoided from effect bad from management waste medical that is not Correct like transmission infection and so on.

METHOD

Research methods used in studies This is literature review with narrative review approach. Data used is secondary data that comes from from appropriate articles and journals with criteria inclusion. Reviewed literature covers publication 2014 to 2024 can accessed in form fulltext through the PubMed and Google Scholar databases. In the search process literature, researcher focus on the article journal written research in Indonesian and English. Article or appropriate journal criteria inclusion Then collected For analyzed more carry on. After relevant literature collected, researcher carry out the review and summary process to results existing research. Stage This involve identification and assessment critical to existing findings in articles the. Researcher gather information important from every article, evaluate methodology used, as well highlighting findings related major with knowledge and awareness to management waste biomedicine in field medical tooth . Result of study This Then arranged become article new one that describes conclusions and interpretations researcher based on analysis literature that has done.

RESULTS AND DISCUSSION

Waste resulting biomedicine from service clinical patients in all field health considered as problem Public health if No thrown away with Good. According to World Health Organization (WHO), waste dangerous donate about 20% contaminants for humans and the environment. Residue This can originate from object sharp, infectious, chemical and pharmaceutical. Remember problem related matters with environment this, management waste in abundance House hospitals, clinics, and facilities other Health services must held with Good. However, this is a worrying thing is in part big faculty Health sciences, there are future professional candidates who do not realize necessity matter This. Disposal waste teeth that don't appropriate can cause wound consequence object sharp, growing infection, and resistance bacteria to microorganisms certain (Kordi et al., 2023). Research conducted by Diaz-Soriano et al. (2020) showing that Peruvian Public University students have knowledge and awareness will necessity management and/ or cycle repeat product maintenance tooth waste adequate biomedicine, and not There is none variable related to what is studied that influences connection This in a way significant.

Research conducted by Cayo-Rojas et al. (2023) showing significant improvement doctor tooth in understanding and awareness they to disposal waste biomedicine as well as cycle reuse and use return ingredients tooth quick after intervention education, and p This observed in all category studied sociodemographics in study. However, knowledge This No saved after period two weeks' time on individuals studying at private universities, yet married, graduate, no own skill specifically, not teachers, and those who have lack of professional experience from 10 years. Based on results research obtained, is important For recommend that the school medical tooth integrate curriculum those who teach student about not quite enough answer social and caring environment. This matter must entered in curriculum from year First studies medical tooth For increase awareness among doctor future teeth about progress latest in disposal waste. Management Proper waste

is very important For minimize impact bad to environment, and every residents earth shoulder not quite enough answer This (Jamal et al., 2023) .

A number big waste biomedicine generated in practice medical teeth, which is dangerous for environment, as well for those who come to clinic, touch with material this, if No handled with appropriate (Rohatgi et al., 2023) . According to the WHO fact sheet, around 20% of waste is produced by various service units health reported dangerous. Rapid urbanization and growth resident has cause the more Lots amount House hospitals and clinics private. With increase facility service health, come on waste biomedicine in amount excessive. More situations serious in the future Possible arise Because toxicity and availability place disposal waste the. (awareness about management waste biomedical … students medical tooth India). Research conducted by Ranjan et al. (2016) , 44% of students medical tooth The same very No aware about management waste biomedical, 22% sufficient aware, 21% less aware, 7% aware, and 5% very aware. Likewise , presentations more participants high (61%) the same very No know about cycle reuse and reuse of waste biomedicine. Lack of knowledge among student medical tooth about management waste biomedicine and recycling repeat or use return material medical tooth. Remember impact to environment, management waste biomedicine need evaluation academic quick For increase awareness during course training (Ranjan et al., 2016).

Waste generated at home sick Medical education tooth similar with those produced at home other illnesses that include component waste general size and proportion waste more dangerous small. Professional tooth have risk more big For infected infection cross moment nurse patient. This matter proven from fact that part big pathogen man has isolated from mouth secrets. Hospital tooth use affected instruments and materials direct blood and saliva so that potential become source infection. Lots of ingredients chemistry like acrylic, material printing and mercury used For objective restoration Possible have impact to environment and human health If No handled with Correct .(Kapoor et al., 2014)

Waste service health is mixture heterogeneous consisting from various type material like remains medicine, material chemistry, tools medical used, as well object sharpener used in the treatment process patient . Because of its diverse and potential nature dangerous, management waste This becomes very difficult (Santhosh et al., 2023) . Management that doesn't appropriate can cause impact serious negative to health society and environment. Waste that is not managed with Good can pollute land, water, and air , as well increase risk exposure disease infectious for officer health and society general (Sahoo et al., 2024) . Problem main in management waste biomedicine moment This is practice disposal that is not right by many House Sick. Many houses still sick throw away waste they with method haphazard and haphazard, without obey safe and correct procedures (Takunda & Steven, 2023) . This matter contribute to spread disease Serious such as hepatitis and human immunodeficiency virus (HIV), which can infectious through contact with waste contaminated medical supplies . Lack of awareness and knowledge about importance management correct waste become factor The main thing that makes it worse problem This. Therefore that is necessary effort enhancement knowledge and awareness among power medical as well as implementation strict policy For ensure management waste safe and effective biomedicine (Kapoor et al., 2014).

The results of a review conducted by Kapoor et al. (2014) show that level knowledge and awareness subject No adequate and available enough variety big in practice and management about waste biomedicine between various study. Continuing education and training programs as well as course short about infection cross-over and management waste biomedicine is the right way For increase knowledge doctor dental and other staff working in various House sick Medical education tooth. Various demonstration programs must done for related personnel direct with waste biomedicine For increase level understanding and risk related. Management management waste biomedicine must applied in a way strict and monitored in a way systematic and simple by authorized bodies in India and developing countries other. Government agencies must responsible answer For provide service This for doctor practicing dentist as well as House Sick tooth (Kapoor et al., 2014)

Handling waste dangerous and safe is an integral part of control adequate infection. Worker tooth related must Enough trained in handling, storing, and disposing waste dangerous. Containing waste network human, blood, or fluid body like cloth wiper or bandage or material contaminated other must clearly labeled as waste clinical and separated from non- clinical waste. Research conducted by Mahdi et al. (2021) only half from assistant doctor tooth from research shows that they fully ensure handling waste safe and dangerous. According to Administration Occupational Health and Safety (OSHA), all personnel teeth, incl doctor teeth at risk caught on-site exposure work, you have to accept training refreshment initial and annual (Mahdi et al., 2021)

Sharp objects used including needle inject very use, needle syringes and cartridges considered anesthesia as waste very dangerous teethand is known related with injury impaled needles and contagion disease, esp for assistant doctor teeth, which is responsible answer on collection and disposal waste the. Waste the must separated in place origin and stored in a rigid, leak-proof, impervious place punctured and labeled as a box object sharp. Research conducted by Mahdi et al. (2021) only 32.9% of respondents reported has trained in handle and dispose object sharp. Findings in study they are relatively very bad in field This. Coded pocket color yellow ideally used For collection all waste infectious and carrier waste. Waste produced of amalgam must collected and sealed in a way separated until sent For recycled repeat, because contain mercury can give rise to problem health society and safety environment (Mahdi et al., 2021)

Practice medical tooth produce waste domestic and infectious poisonous. Waste congested potential teeth transmit is tissue pregnant wet blood or saliva, cloth gauze, roll cotton, sarong hand latex, needle injection, thread teeth, and knives surgery. Laboratory tooth handle potential objects infectious like bridge teeth and prostheses, matrix bands, molds teeth, candles, and notes interocclusal. Waste toxic substances produced in the laboratory including dental amalgam and waste metal heavy. Proper handling and disposal to potential waste infectious and toxic are very important for safety patients, professionals, society and the environment (Köhler et al., 2016; Ohishi et al., 2016; Yang et al., 2015). Research conducted by Haralur et al. (2016) to technician teeth, showing knowledge about management waste biomedicine Still not enough adequate throughout group, there are enough variety big in knowledge, facilities, handling and disposal waste biomedicine among technician teeth evaluated, required update curriculum, training program regular orientation and deployment management management waste strictly biomedical. There is a need urge For increase facility disposal in the laboratory Independent dentists and clinics tooth private For repair existing shortcomings. Monitoring agency need supervise application strict regulation management waste biomedicine in the company private (Haralur et al., 2016).

While the study presents important findings on biomedical waste management practices and awareness among dental health professionals, the discussion could benefit from a deeper integration with existing theoretical frameworks and previous empirical studies. Specifically, linking the observed knowledge gaps and practices to established models of behavioral change or organizational theory could enhance the interpretation of results. Furthermore, comparing these findings more extensively with similar studies in different geographic or institutional contexts would provide greater clarity on the generalizability and significance of the results. Addressing these connections would strengthen the theoretical grounding of the study, offering richer insights into the drivers of waste management behavior and informing more targeted intervention strategies.

CONCLUSION

Knowledge and awareness about management waste biomedicine among practice medical tooth Still not enough. It is hoped that school medical tooth enter in curriculum about management waste biomedical, for teach student about not quite enough answer social and caring environment and improve awareness among doctor tooth in disposal waste medical . Management management waste biomedicine must applied in a way strict and monitored in a way systematic in practice medical tooth good at home sick, practice independent doctor teeth, nor laboratory tooth. The government is also responsible answer For monitor in a way strict management waste resulting biomedicine from facility service health including practice medical tooth .

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