

RHIMS Model to Teach Biomedical Waste Management to Medical Students

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Abstract:

Biomedical Waste Management is not only an important aspect in medical curriculum but its effective implementation into routine clinical practice is of paramount importance. Medical students are going to be crucial component of health care delivery system; therefore they should be well versed with basic aspects of biomedical waste management. Unfortunately several studies reported poor level of knowledge and practices about biomedical waste management among medical students in India.

Keywords: RHIMS, biomedical waste Management, medical students

Biomedical Waste Management is not only an important aspect in medical curriculum but its effective implementation into routine clinical practice is of paramount importance. Medical students are going to be crucial component of health care delivery system; therefore they should be well versed with basic aspects of biomedical waste management. Unfortunately several studies reported poor level of knowledge and practices about biomedical waste management among medical students in India.

We implemented '*RHIMS Model*' to sensitize 4th semester medical students from Bharati Vidyapeeth University Medical College, Pune about biomedical waste management. There were 144 students with 8 batches namely A1, A2, B1, B2, C1, C2, D1 and D2 who were posted at Community Medicine Department. Each batch consisted of 18 students. An intervention was conducted in their regular teaching activity and each batch was addressed separately.

RHIMS Model:

Relevance: Topic was introduced with structured 'Problem Based Scenario' on hospital waste management and opinions of students regarding solution of given problem were taken. After that students were oriented about relevance of topic to their future medical practice as well as Undergraduate and Postgraduate Entrance and other competitive examinations. Students were briefed about basic aspects of biomedical waste management like concept of BMW, categories of BMW, Colour coding of bags, biohazard symbol, disposal of BMW, documentation and training of staff etc.

Highlight Specific Learning Objectives (SLOs): SLOs for Biomedical waste management pertaining to all three domains (Cognitive, Psychomotor, and Affective) were displayed on white board *throughout*

the activity. It is common practice of the teachers to start their lectures with SLOs and immediately proceed to actual lecture content but there is no continuous exposure of SLOs to students during whole lecture. Exposing students with SLOs continuously throughout the lecture help them keep track of what they have learned and help them make connections and develop coherency between ideas, tasks and lessons.

Innovative Chit Method:

Few chits of paper were prepared and on each paper, name of biomedical waste e.g. syringes, outdated medicines, catheters, placenta etc. was written and all chits in folded form were kept in box and each student was asked to pick up one chit and identify relevant category out of all 10 biomedical waste categories.

Mnemonics Competition:

All 18 students were given 20 minutes to prepare two simple and easy to remember mnemonics to memorize all 10 biomedical waste categories and color coding of bags for disposal of biomedical waste. Each student was asked to prepare two mnemonics and present his/her mnemonic before the whole class. After presentation of all 18 students, 'Best Mnemonic' was chosen by expert panel of department and prize was given to the same.

Summary:

At the end of class, each student was asked to state 'Take Home Message' for biomedical waste management and also they were asked to write two page summary of whole lecture in their own words and prize was given for '*Best Summary*'

At the end, written open ended feedback was taken from students and all students appreciated and

gave positive feedback about this activity. Major aspects of feedback are as follows;

1. We clearly understood from SLOs what we are supposed to learn from today's activity.
2. Conducting mnemonic competition was the best part of activity.
3. Chit method was helpful to identify correct category of biomedical waste.
4. We can easily remember BMW categories and Colour coding with the help of mnemonics.
5. Summarizing all the points at the end was very helpful to us.
6. Innovative and useful approach to learn important topic like biomedical waste management.

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