Hospital Waste Management
A Guide for Self Assessment and Review

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Hospital Waste Management: A Guide for Self Assessment and Review

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To

My Family Members
and
Teachers
Preface

This book is a humble attempt to familiarize all medical and paramedical professionals with the importance of hospital waste management. The purpose of the book will be well served if the finer points are inculcated and brought into attitude. Indeed, the objective of this book is not to make the specialist but rather to serve as an appetizer for further reading on the subject.

Our own wrong habits make authorities to bring out various laws and rules which then force us to abide them, hence the book attempts to emphasize and to enhance the competency of the professionals by having proper knowledge about hospital waste and hazards associated with it.

Any waste, whatever it may be, should not be handled indiscriminately because it may lead patients as well as health care workers to catastrophic situation culminating to fatal infections. The situation further gets more difficult if negligence is done in treatment, reporting and preventing further occurrence.

I have tried to simplify the subject by presenting each topic in short answers form so that each question is well understood. I also tried to give line diagrams of complex processes and machines, thus making them easy to understand. However, it does not resist the reader to the classical reading scheme as one does not necessarily have to begin from first page and run through to the end. Attempts have been made to make every chapter complete in itself, therefore, it is possible to pick out single chapter without losing the track.

Shishir Basarkar
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I wish to express my sincere thanks and indebtedness to my entire teachers for their valuable teaching which made me capable to conceptualize and bring out this book.

I like to thank my family members who every time supported me.

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# Abbreviations

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<th>Abbreviation</th>
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<tbody>
<tr>
<td>BMWM</td>
<td>Biomedical Waste Management</td>
</tr>
<tr>
<td>CPCB</td>
<td>Central Pollution Control Board</td>
</tr>
<tr>
<td>SPCB</td>
<td>State Pollution Control Board</td>
</tr>
<tr>
<td>CBWTF</td>
<td>Common Biomedical Waste Treatment Facility</td>
</tr>
<tr>
<td>COD</td>
<td>Chemical Oxygen Demand</td>
</tr>
<tr>
<td>BOD</td>
<td>Biological Oxygen Demand</td>
</tr>
<tr>
<td>CE</td>
<td>Combustion Efficiency</td>
</tr>
<tr>
<td>PPM</td>
<td>Parts Per Million</td>
</tr>
<tr>
<td>RPM</td>
<td>Revolutions Per Minute</td>
</tr>
<tr>
<td>ETP</td>
<td>Effluent Treatment Plant</td>
</tr>
<tr>
<td>HBV</td>
<td>Hepatitis B Virus</td>
</tr>
<tr>
<td>HCV</td>
<td>Hepatitis C Virus</td>
</tr>
<tr>
<td>APCD</td>
<td>Air Pollution Control Device</td>
</tr>
<tr>
<td>PSI</td>
<td>Pounds Per Square Inch</td>
</tr>
<tr>
<td>HCW</td>
<td>Health Care Worker</td>
</tr>
<tr>
<td>EC</td>
<td>Exposure Code</td>
</tr>
<tr>
<td>SC</td>
<td>Status Code</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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Introduction

The serious concern of the health care facilities is the generation of Biomedical waste which is hazardous to health of community and people who are associated with handling of the waste. Various National and International environmental and health agencies have shown their concern towards these waste as they may cause serious infectious diseases like Hepatitis, tuberculosis and HIV/AIDS. Most of the hospitals do not have effective disposal system leading to complex problem of hygiene and sanitation in hospitals.

Hospital generated waste is disposed off illegally into the Municipal garbage and drainage system.

In developing countries very frequently the Municipal workers get pricking injuries from needles, sharps and broken glass pieces. The other infectious waste which creates complex environmental problem is radioactive waste which has prolonged half-life and needs very sophisticated and appropriate system for ultimate disposal.

Though the use of disposal items have reduced the rate of infection but at the same time has increased the volume of the waste which needs to be disposed properly.

Because of the concerns shown by National and International agencies the notification of the Biomedical Waste (Management and Handling) Rules, 1998 was brought out by Union Ministry of Environment and Forests under the provision of Environment (Protection) Act, 1986. Under these rules, all health care institutions are found to make necessary arrangements for proper handling and management of waste, failing of which, the head of the institution is liable for punishment.

Effective waste disposal can be achieved only by considering the various components of the waste management system and this should be made integral part of the hospital planning and designing of the hospital.