# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Contents</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LIST OF FIGURES</td>
<td>i</td>
</tr>
<tr>
<td></td>
<td>LIST OF TABLES</td>
<td>iii</td>
</tr>
<tr>
<td></td>
<td>LIST OF ABBREVIATIONS</td>
<td>v</td>
</tr>
<tr>
<td>1</td>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1.1</td>
<td>Antibiotics and antimicrobials</td>
<td>1</td>
</tr>
<tr>
<td>1.2</td>
<td>Antimicrobial resistance</td>
<td>3</td>
</tr>
<tr>
<td>1.3</td>
<td>Surgical site infections</td>
<td>11</td>
</tr>
<tr>
<td>1.4</td>
<td>Post operative wound infections in gastrointestinal surgeries</td>
<td>12</td>
</tr>
<tr>
<td>1.5</td>
<td>Motivation for the present work</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>Aim and objectives</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>Prevalence and antimicrobial sensitivity of bacterial pathogens in an Indian rural teaching hospital</td>
<td>15</td>
</tr>
<tr>
<td>3.1</td>
<td>Introduction</td>
<td>15</td>
</tr>
<tr>
<td>3.2</td>
<td>Subjects and methods</td>
<td>16</td>
</tr>
<tr>
<td>3.3</td>
<td>Results and discussion</td>
<td>17</td>
</tr>
<tr>
<td>3.4</td>
<td>Conclusion</td>
<td>23</td>
</tr>
<tr>
<td>4</td>
<td>Study of antimicrobial sensitivity and resistance of pathogens isolated from postoperative wound infection</td>
<td>24</td>
</tr>
<tr>
<td>4.1</td>
<td>Introduction</td>
<td>24</td>
</tr>
<tr>
<td>4.2</td>
<td>Subjects and methods</td>
<td>27</td>
</tr>
<tr>
<td>4.3</td>
<td>Results and discussion</td>
<td>27</td>
</tr>
<tr>
<td>4.4</td>
<td>Conclusion</td>
<td>32</td>
</tr>
<tr>
<td>5</td>
<td>Study on use of antimicrobials in post-operative wound infections after gastrointestinal surgery – Baseline study</td>
<td>33</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5.1</td>
<td>Introduction</td>
<td>33</td>
</tr>
<tr>
<td>5.2</td>
<td>Subjects and methods</td>
<td>35</td>
</tr>
<tr>
<td>5.3</td>
<td>Results and discussion</td>
<td>37</td>
</tr>
<tr>
<td>5.4</td>
<td>Conclusion</td>
<td>55</td>
</tr>
<tr>
<td>6</td>
<td>Study on use of antimicrobials in post-operative wound infections after gastrointestinal surgery – intervention study</td>
<td>58</td>
</tr>
<tr>
<td>6.1</td>
<td>Introduction</td>
<td>58</td>
</tr>
<tr>
<td>6.2</td>
<td>Subjects and methods</td>
<td>59</td>
</tr>
<tr>
<td>6.3</td>
<td>Results and discussion</td>
<td>67</td>
</tr>
<tr>
<td>6.4</td>
<td>Conclusion</td>
<td>81</td>
</tr>
<tr>
<td>7</td>
<td>Summary and conclusion</td>
<td>84</td>
</tr>
<tr>
<td>8</td>
<td>References</td>
<td>87</td>
</tr>
<tr>
<td>Annexure 1</td>
<td>Institutional human ethics committee certificate</td>
<td></td>
</tr>
<tr>
<td>Annexure 2</td>
<td>List of publications</td>
<td></td>
</tr>
<tr>
<td>Annexure 3</td>
<td>Data collection form</td>
<td></td>
</tr>
<tr>
<td>Annexure 4</td>
<td>Patient written consent form</td>
<td></td>
</tr>
</tbody>
</table>