Needlestick Safety Injection Devices Market, 2014 - 2024
4.2. SAFETY INJECTION DEVICES

This section outlines the various types of safety injection devices available in the market. These devices have been categorized into the following three types, which have been discussed in detail in the subsequent chapters.

1. **Safety syringes:** These are the syringe based safety devices in which the safety mechanism is integrated or associated with the syringe. Examples of safety syringes include BD Safety-Lok syringe developed by Becton Dickinson and Monoject safety syringes manufactured by Covidien.

2. **Safety needles:** These are the needle based safety devices in which the safety feature is associated with the needle. Examples of safety needles include BD Autoshield Duo-Pen needle developed by Becton Dickinson and Magellan Hypodermic Safety Needles developed by Covidien.

3. **Other add-on safety needle tools:** These comprise the stand-alone needle protection devices which can be used with the needle systems that do not have an integral engineered or attached safety mechanism. The add-on safety needle tools include the tip caps or other needle protectors that are usually packaged individually and can be attached with the conventional injection device during use. Examples of add-on safety needle devices include Point-Lok Needle Protection Device developed by Smiths Medical and Monoject Safety Syringes Tip Caps by Covidien.

Table 4.1 presents the list of safety injection devices available in the market along with their categorization into the above described three types.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the Device</th>
<th>Company</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Autosafe-Reflex Safety Needle</td>
<td>Autosafe-Reflex</td>
<td>Safety needle</td>
</tr>
<tr>
<td>2</td>
<td>BD Safety-Lok Syringe</td>
<td>Becton Dickinson</td>
<td>Safety syringe</td>
</tr>
<tr>
<td>3</td>
<td>BD Safety Glide Syringe for Insulin, TB and Allergy</td>
<td>Becton Dickinson</td>
<td>Safety syringe</td>
</tr>
<tr>
<td>4</td>
<td>BD Integra Syringe with Retracting PrecisionGlide Needle</td>
<td>Becton Dickinson</td>
<td>Safety syringe</td>
</tr>
<tr>
<td>5</td>
<td>BD Safety Glide Shielding Hypodermic Needle</td>
<td>Becton Dickinson</td>
<td>Safety needle</td>
</tr>
<tr>
<td>6</td>
<td>BD Eclipse</td>
<td>Becton Dickinson</td>
<td>Safety needle</td>
</tr>
<tr>
<td>7</td>
<td>BD AutoShield Duo Pen Needle</td>
<td>Becton Dickinson</td>
<td>Safety needle</td>
</tr>
<tr>
<td>8</td>
<td>BD AutoShield Pen Needle</td>
<td>Becton Dickinson</td>
<td>Safety needle</td>
</tr>
</tbody>
</table>

Complete list of 72 safety syringes, safety needles and add-on safety tools presented on Page 36, 37 and 38.
5.3. SAFETY SYRINGES: DISTRIBUTION BY TYPE OF SAFETY FEATURE

During our research, we identified 46 safety syringes. Figure 5.2 shows the distribution of safety syringes by the type of safety mechanism, i.e. into retractable and non-retractable syringes.

Figure 5.2 Safety Syringes: Distribution by Type

Out of 46 safety syringes that were identified during the research, 29 were found to be retractable, accounting for 63% of the total safety syringe devices. 17 safety syringes (the remaining 37%) are non-retractable in which the safety feature involves covering the needle with a shield or protector. The data reflects the increased focus on retractable syringes which undeniably is due to the numerous benefits that they offer to the users including enhanced safety, less time required for operation and ease of use.

Figure 5.3 Safety Syringes: Distribution by Mode of Activation

As can be observed from the figure, out of 29 retractable syringes, 17 are active (i.e. manually retractable) and 12 are passive, in which the needle is retracted automatically after administration.
5.7. MAPPING THE COMPETITIVE LANDSCAPE

As mentioned earlier, we identified 46 safety syringes during our research. Out of these 46 safety syringes, 17 have been analysed on their Product Competitiveness and relative Supplier Power. The primary purpose of this analysis is to assess these products which are influencing the present competitive landscape. It provides an approach to segregate the product portfolio while highlighting specific features for some of them.

Product Competitiveness is cumulative of the factors that include the technology used in the system, device popularity, user-friendliness, price (if available) and any other distinct feature. Similarly, Supplier Power is indicative of the parameters that illustrate the comparative position of several device manufacturers in terms of their relative strength in commercialising these devices. Proxy parameters which have been taken into account to do this ranking include annual revenues, number of employees etc. Figure 5.5 analyses 17 safety syringes that are distributed on the basis of product competitiveness along Y axis and on the basis of supplier power along X axis.

Figure 5.5 Safety Syringes: Product Competitiveness Analysis

Supplier Power increases from left to right; Product Competitiveness increases from bottom to top

Source: Roots Analysis

Actual 2 X 2 Matrix available in the full report; analysis continued on page 63, 64 and 65
6.5. SAFETY NEEDLES: ANALYSIS BY PRICE

Table 6.2 shows the prices of some of the safety needles arranged in descending order.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the Device</th>
<th>Company</th>
<th>Active/Passive</th>
<th>Price/Piece</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BD AutoShield Duo Pen Needle</td>
<td>Becton Dickinson</td>
<td>Passive</td>
<td>$1.00</td>
</tr>
<tr>
<td>2</td>
<td>Novo Nordisk NovoFine Autocover</td>
<td>Novo Nordisk A/S</td>
<td>Passive</td>
<td>$0.65</td>
</tr>
<tr>
<td>3</td>
<td>BD Safety Glide Shielding Hypodermic Needle</td>
<td>Becton Dickinson</td>
<td>Active</td>
<td>$0.41</td>
</tr>
<tr>
<td>4</td>
<td>Surguard3 Safety Hypodermic Needle</td>
<td>Terumo Medical Corp</td>
<td>Active</td>
<td>$0.41</td>
</tr>
<tr>
<td>5</td>
<td>Magellan Hypodermic Safety Needles</td>
<td>Covidien (Kendall Healthcare)</td>
<td>Active</td>
<td>$0.37</td>
</tr>
<tr>
<td>6</td>
<td>BD Eclipse</td>
<td>Becton Dickinson</td>
<td>Active</td>
<td>$0.28</td>
</tr>
<tr>
<td>7</td>
<td>SurGuard2 Safety Needle</td>
<td>Terumo Medical Corporation</td>
<td>Active</td>
<td>$0.25</td>
</tr>
</tbody>
</table>

Source: Roots Analysis

Similar to the safety syringes, the price of safety needles is also quite variable. In the sample dataset that we researched, prices ranged from USD 0.25 to USD 1.0. The table indicates that passive needles are more expensive than active needles owing to the obvious benefits such as automatic safety mechanism and consequent ease of use. One of the more expensive passive safety needle, developed by Becton Dickinson, is priced at USD 1.00. The pre-eminence of a passive safety technology also exists because most of the needlestick injuries occur in a few seconds after the syringe’s withdrawal. Figure 6.2 highlights this information in a pictorial representation.

Figure 6.2 Safety Needles: Analysis by Price

Source: Roots Analysis

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8.4. RETRACTABLE SAFETY SYRINGES MARKET, 2014-2024

Figure 8.5 and Figure 8.6 highlight our base scenario for the likely growth in number of retractable safety syringes. We firmly believe that the technological advancements and benefits of retractable syringes including ease of use and enhanced safety over the non-retractable syringes are likely to push the demand for retractable syringes higher. In addition, the improved economic advantages and the caregiver-friendly operation features are some other key reasons that will spur the growth of this segment. As a result, retractable safety syringes are likely to gain higher market share in the future. From an estimated XX billion syringes in 2014, we have forecasted the market to grow to XX billion and XX billion by 2019 and 2024 respectively.

Figure 8.5 Number of Retractable Safety Syringes, Short-Mid Term (2014-2019): Base Scenario (Billion Units)

Source: Roots Analysis

The details of the conservative and the optimistic scenarios are presented in Appendices. In these scenarios, we expect the market for retractable syringes to be worth XX billion units and XX billion units respectively.

As the market for retractable syringes evolves, the percentage composition of each of the three classes, high price, mid price and low price will undergo some variation. For instance, we have estimated the percentage composition for high-price retractable syringes to increase from XX% to XX% in the period 2014-2024.

Figure 8.8 and Figure 8.9 highlight our forecast for the retractable safety syringe market, in terms of value, over the next ten years. As can be observed from the figure, the market is likely to rise from

*Detailed market forecast (both in terms of value and volume) for various types of syringes available in Section 8 of the full report*
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