Overview

Obstetric brachial plexus injury (OBPI) is a serious neonatal complication of shoulder dystocia which may be associated with excessive traction applied during delivery.\(^1\) In recognition of this, the Limbs & Things Force Monitoring System has been developed to create a better awareness amongst obstetric medical staff and trainees of the forces applied to the baby during delivery.

The system consists of an electronic strain gauge within the Force Monitoring Baby linked to a computer via an Interface Unit. On commencing a shoulder dystocia drill the computer program will record and plot the force applied through the baby’s neck on a graph, as well as the time taken during the delivery. It also allows each step or ‘intervention’ of the drill to be documented along the timeline as it is performed. Each drill can be saved to the computer and printed for trainee handouts at the end of a training session. This is an ideal method for assessing the trainee’s performance, comparing different sessions conducted over time.


Important information - Using the Product

To incorporate this software effectively within a training session you will require three people: an accoucheur (trainee), another to hold the baby in the Shoulder Dystocia position during delivery, and a computer operator.

Performance of other scenarios such as normal, breech and instrumental deliveries can be recorded within the same program. Please note that only the use of the timeline and interventions are relevant for these scenarios – the force monitoring only applies to shoulder dystocia drills.

Hardware and software setup

Before running a drill see the quick setup guide in the PROMPT Birthing Simulator Force Monitoring product manual or the instructions on the back of the software case.
1. Running a Drill

To run a drill go to the **Window** menu and select **Show Control Panel**.

In the **Control Panel** select the appropriate Delivery Scenario from the menu. (When selecting Shoulder Dystocia make sure the **Collect Force Data** box is ticked, otherwise no plot line will be displayed on the graph).

Click on the **Start** button to start the drill for your chosen Delivery Scenario.

The program is now collecting force data from the baby and displaying the plot line on the graph.
The list of Interventions associated with your chosen Delivery Scenario is now active.

To record on the graph when a specific Intervention is performed, click on the required Intervention from the list displayed in the Control Panel.

Each time an Intervention is clicked a colour coded flag will appear on the graph.
Once the drill has been completed click the **Stop** button on the Control Panel.

An example of a completed drill:

For ease of viewing you can **Zoom In** and **Zoom Out** of the graph. There is also a **Fit Graph** to screen button to quickly resize the graph.
2. Saving a drill

Save a drill by going to the File menu and selecting Save... or click on the Save drill icon.

Create a folder you wish to save the drill in and then name the drill.

To open previously saved drills go to the File menu and click on Open... or click on the Open drill icon.

To start a brand new drill go to the File menu and click on New... or click on the New drill icon.
Saving drill properties

Data relating to the trainee is saved with the graph.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Organisation</td>
<td></td>
</tr>
<tr>
<td>Job Title</td>
<td></td>
</tr>
<tr>
<td>Drill Number</td>
<td></td>
</tr>
</tbody>
</table>

Data is entered in the **Value** column within the **Properties** panel. Once the data has been entered save the drill to file (page 6).

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>J Southern</td>
</tr>
<tr>
<td>Organisation</td>
<td>Southmead Hospital</td>
</tr>
<tr>
<td>Job Title</td>
<td>SPR</td>
</tr>
<tr>
<td>Drill Number</td>
<td>1</td>
</tr>
</tbody>
</table>

Additional Properties and Values can be added and saved if required e.g. course title. Additional information can be entered in the **Notes** field at the bottom of the panel.

<table>
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<tr>
<td>Course</td>
<td>Labour Management</td>
</tr>
</tbody>
</table>

| Notes: | Good first attempt |
3. Printing a Drill

Drills saved to file can be printed out for reference, or as trainee handouts at the end of the training session. Each printout shows the graph with any Interventions recorded, the Delivery Scenario and any other data entered in the Properties Panel.

To print the drill go to the **File** menu and select **Print...** or click on the **Print** icon.

The printout can be previewed by going to the **File** menu and selecting **Print Preview...** or by clicking on the **Print Preview** icon.

Print preview example:
4. Editing Scenarios

The Scenario Editor allows for the addition, deletion and editing of Delivery Scenarios such as Normal Delivery, Breech, and Forceps.

To view the Scenario Editor go to the Edit menu and select Edit scenarios...

Select the Delivery Scenario you wish to edit or delete. You can also add a new Delivery Scenario at this stage.

The Add... button allows you to add new Delivery Scenarios with associated Interventions in the Scenario Properties window.
The **Edit...** button allows you to add, edit, delete or change the order of Interventions in the Scenario Properties window by selecting the Intervention then clicking the relevant action button.

To change the running order of any of the Interventions select the Intervention you wish to move and click the **Up** or **Down** button.

The **Delete...** button will remove the Delivery Scenario selected and its associated Interventions.
5. Settings

The Settings window allows you to change the overall configuration of the program such as the style of font, colour of the graph, colour of the background, the length of the drill and other default user properties.

To view the Settings window go to the Edit menu and select Edit Settings...

There are three sections within the Settings window:

- **Application** allows you to change the visual style of the graph and edit some basic startup options.

- **Drill Settings** allows you to edit the duration of the drill. It also gives you the option to display the entire timeline of the graph within the viewing window instead of having to scroll it through the window.

- **Drill Metadata** allows you to add, delete or edit the default settings shown in the Properties Panel (Page 7).
6. Factory settings

Certain default factory settings such as Scenarios can be restored. This is useful should a Scenario be accidentally deleted along with the associated list of Interventions.

Go to the **Edit** menu and select **Restore Factory Settings...**

![Edit menu screenshot]

**Note**

Any new Scenarios that you entered prior to the reset will be retained. They can be deleted on an individual basis by the user, if necessary.

Visit www.limbsandthings.com for the latest PROMPT Birthing Simulator product and software FAQ information.

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