Every year, **1.14 million babies** die of Respiratory Distress Syndrome (RDS) globally. The majority of these deaths are preventable by the application of **Continuous Positive Airway Pressure (CPAP)**. However, due to the lack of supporting infrastructure, newborns in **low resource settings** often do not have timely access to CPAP. In India, over **50,000** newborns suffering from RDS die every year due to **inadequate care during transportation**.

### Solution

Saans is an affordable neonatal CPAP device designed specifically for low-resource settings. The device has multiple power options, including a patented manual mode. It is a durable, portable device which can be operated with minimal training. Saans is an effective short term CPAP solution for transport or hospital settings.

<table>
<thead>
<tr>
<th>Usable in transport</th>
<th>Usable in hospital settings</th>
<th>Multiple-Power options</th>
<th>Low skill requirement</th>
<th>Oxygen+Air mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Car icon]</td>
<td>![Hospital icon]</td>
<td>![Power icon]</td>
<td>![Person icon]</td>
<td>![Oxygen icon]</td>
</tr>
</tbody>
</table>

### Device features

- **Usable in transport**
- **Usable in hospital settings**
- **Multiple-Power options**
- **Low skill requirement**
- **Oxygen+Air mixture**

### Clinical Validation

Saans was deployed at a semi-urban healthcare facility in Hoskote, India, for a period of 4 months. 28 babies received CPAP therapy using the device.

Following are the results:

- **Average duration on the device**: 11.7 hours
- **Min time**: 15 minutes; **Maximum time**: 30 hours
- **Discharged after treatment with Saans**: 17 patients
- **Temporarily breathing support till the time ventilator was available**: 6 patients
- **Received breathing support through Saans and kept in NICU for further observation**: 5 patients
- **Breathing support during transportation**: 3 patients
- **Case of device related injury**: 0

### Problem

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### References: