

## PARENT FACTSHEETS

### WHAT HAPPENS DURING A SLEEP STUDY WITH CPAP & BiLevel?

Please read this information sheet along with the “What Is a Sleep Study” information sheet.

**A sleep study is used to ensure that your child's machine is providing the best possible respiratory support, and we ask that you follow these requirements to make sure that we get the best possible information out of the sleep study.**

#### What time do I arrive?

We ask that you be within the centre at **4pm** so that daytime staff from the Melbourne Children's Sleep Centre (MCSC) who are very familiar with CPAP and BiLevel (VPAP, BiPap) treatment can spend some time checking your child's equipment and mask and preparing for the sleep study.

#### Checking of mask & machine during the afternoon

Staff will download the usage data (hours of use per day) from your machine if this is possible (depends on the type of machine your child is using). This information will be given to your doctor.

The staff will check that the mask is still fitting correctly. As children grow quickly, masks that fitted well several months ago may no longer be the best fitting mask. If the mask does not appear to be fitting well, or is uncomfortable, then staff may re-fit your child with a different mask. **A good fitting mask that is comfortable is one of the most important things in using CPAP/ BiLevel as it minimizes side effects and makes the treatment much easier to use.** The best fitting mask will be used for the sleep study and can be loaned to you to try at home for a few weeks before a decision is made as to whether you should change over to this type of mask.

The whole circuit of the system (the machine, tubing & mask) will be checked and any modifications to the circuit made. The staff will discuss any changes with you and explain why they are necessary. Occasionally systems may be set up differently depending on various factors including the type of mask being used. For example, some masks (“non-vented” masks) do not have any in-built ports (holes) that allow the air your child breathes out to escape and so an open port (hole) needs to be included elsewhere in the circuit to prevent your child re-breathing the same air and building up their level of carbon dioxide. Other masks (vented masks) do have in-built ports (holes) and having additional open ports (holes) elsewhere in the circuit creates unwanted leaks. If a vented mask is used the staff will make sure that all other ports are closed off to achieve the best respiratory support for your child.

**If you have any questions please ask the staff to explain the circuit to you.**

#### Which machine will be used?

For CPAP studies, the sleep centre will usually use a CPAP machine owned by MCSC as the settings can be changed via a remote control to reduce the times staff need to enter the bedroom during the night. This machine will begin on the same settings as what your child is used to at home. For bi-level studies, your child's own machine will usually be used as MCSC does not currently have a remote control that can be used for bi-level machines. This means that staff may

need to enter the bedroom frequently during the night to make changes. We apologize for any inconvenience that this may cause.

### Will changes be made to the machine settings overnight? USUALLY YES!!!

It is important to remember that the reason the sleep study is being conducted is to check your child's current breathing and sleep patterns, and to determine the best machine settings for your child. In order to determine the best settings, the staff will try different settings during the night. Your child's sleep physician will have given some instructions as to when to make some changes to your child's machine settings overnight. There are also some standard instructions MCSC staff follow for all children using CPAP & BiLevel treatment to try to get the best sleep and breathing patterns.

Not all of the changes made will necessarily improve your child's sleep and breathing patterns – sometimes it will make them worse or may even cause your child to wake up (i.e. If the pressure is too high for your child to tolerate). This is because every child is unique and their requirements are different – what works for one child may not necessarily work for the next. If your child wakes or your child's sleep and breathing seem worse the staff will again adjust settings.

Sometimes the sleep physician may specifically ask that no settings are changed overnight for various reasons. The staff will always follow the sleep physician's instructions and contact them if they are unclear about anything during the study.

If you have any questions the staff will be happy to discuss them with you.

**IMPORTANT:** Please be aware that overnight staff will NOT be able to tell you which settings are the best for your child as it takes analysis staff and doctors 4-6 hours to review the data to determine what the optimal (best) settings are.

### What will happen in the morning?

Your child's machine settings will be returned to the same settings as when you arrived. When your child's sleep study is analysed, a recommendation for the best settings for your child will be sent to your sleep physician, who will contact you to discuss these results and arrange for any necessary changes to your child's machine settings.

Dr Margot Davey (Director MCSC)  
Ms Rebecca Mihai NIV (Non Invasive Ventilation) Co-ordinator  
Melbourne Children's Sleep Centre Ph: 9594 5590

