Getting Started: Typical Clinical Workflow

Molding the Mouthpiece ⟩ **Training** ⟩ **Determine Therapy Targets** ⟩ **Therapy Session**

1. Molding the Mouthpiece

Custom-molding the mouthpiece usually takes 10-20 minutes. It is important to take your time to get a good fit. *See Figure 1.* Ill-fitting mouthpieces will move around and **pressures will be less reliable**. Watch the mouthpiece molding video on **www.swallowsolutions.com/training** for a **step-by-step demonstration**, and refer to the mouthpiece molding guide.
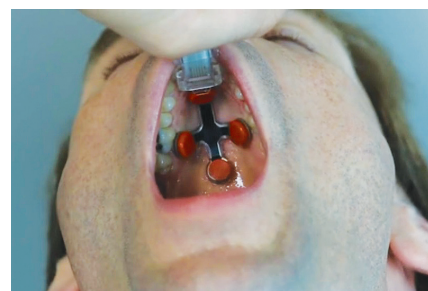

Figure 1. Properly molded mouthpiece.

Key aspects of a good mouthpiece fit are:

a. The **entire mouthpiece** is flush against the hard palate.

b. The **anterior upper teeth/gum** fit snugly between the movable teeth guides.

Helpful Hint: Look closely at the patient's hard palate and pre-mold the mouthpiece using your fingers first to get the shape in the general ball-park. Then make adjustments as needed. Use your gloved index finger and press on the center of the mouthpiece while in the patient's mouth.

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2. Training

Navigate to the **Clinician Home Page** by touching the logo in the upper left corner of any screen for 2 seconds. *See Figure 2.* **Tap the box** marked Training to enter the module.

Goals of Training:

a. Teach the patient to **press against the specific sensors** with their tongue. As they press against the sensor, the waveform will increase in amplitude.

b. Once the patient can successfully press against the sensor, ask them to hold the press for **3 seconds and then release.** Repeat this task with each sensor you plan to target until the patient can consistently press on command.

Figure 2. Training screen.

Helpful Hint: Pressing the back of the tongue against the back sensor can be challenging for some patients. Having the patient say words like 'hug' and 'hawk' can be facilitative. As they produce the sound, have them watch the waveform go up with the final /g/ and /k/. Once they can hit the sensor consistently, have them focus on holding the position for a 3-second press duration. Some patients learn to press the sensors in just a few tries and others require several sessions to learn the technique. Ultimately, you want the patient to be able to press each sensor without saying the words.

3. Setting the Protocol

Navigate back to the **Clinician Home Page** by touching the logo in the upper left corner of any screen for 2 seconds. **Tap the box** marked Protocol to enter the module. Watch the Setting Therapy Parameters video on **www.swallowsolutions.com/training** for a **demonstration**.
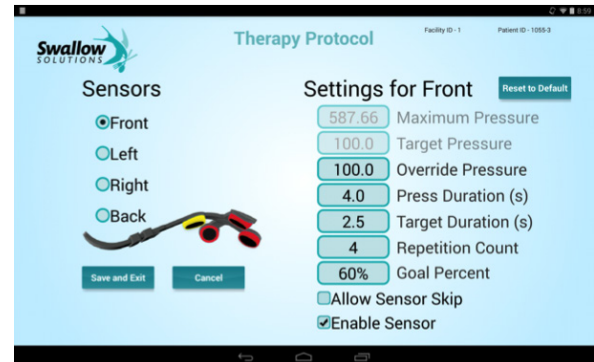
Figure 3. Training screen.

A therapy protocol has three critical aspects:

a. **Number of sensors enabled** – typically, patients strengthen using 2 of the 4 available sensors. To have a sensor be the focus of strengthening, choose the sensor name (front, left etc.) and check the box at the bottom marked 'Enable'. The device comes with the default settings of the front and back sensors enabled. If you plan to have the patient strengthen the front and back of the tongue (most common), you do not need to change any settings.

b. **Press duration** – do nothing with this now – we will come back to it. *See #5 Therapy.*

c. **Number of repetitions** – The default is 10 press repetitions. Typically, this is not changed, but you have the option to change this for each sensor.

> **Helpful Hint:** The front and back sensors are set as defaults because they are used most commonly. The left and right sensors are used primarily for patients with unilateral paresis and/or partial glossectomy.

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4. Determining Therapy Targets

Therapy targets are set in the Therapy module which is accessed via the **'Exit to Therapy' button** in the bottom right corner of the Clinician Home Page. Once there, you will be **automatically directed** to determine therapy targets if you are using a new mouthpiece. If you want to determine new therapy targets with an existing mouthpiece, tap the button with the target icon at the bottom of the therapy screen. Watch the Determining Therapy Targets video on **www.swallowsolutions.com/training** for a **demonstration**.
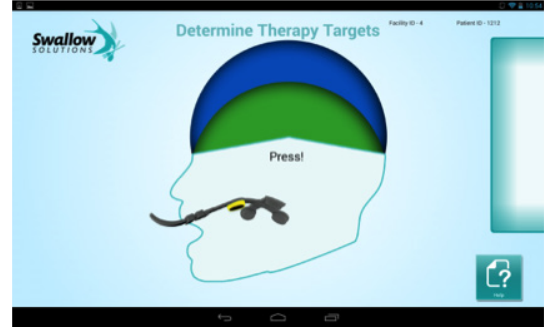

Figure 4. Training screen.

Key points about determining therapy targets:

a. The patient should be consistently able to complete the task **before starting this module**. *See #2 Training.*

b. The number of times the patient will be instructed to press as hard as they can against the sensor is **determined by the variability** of the values.

c. The Therapy Max may not be the highest pressure measured, but rather **represents the highest value** that can be consistently reached.

d. Once the Therapy Max is identified, that number will be used to **customize the therapy target** as a percentage of the max.

Helpful Hint: Allow patients to rest between maximum presses. If they get too fatigued, the variability will increase and the number of presses they will be instructed to complete will increase (becoming a vicious cycle). They will be instructed to press maximally no more than 9 times, but a well-trained and well-rested patient often identifies their Therapy Max in 4-5 presses. Recommended rest times are 30 - 60 seconds, but this may vary by patient. Use your clinical judgment.

5. Therapy

The Therapy module starts automatically when the SwallowSTRONG software opens. It also can be accessed **via the Clinician Home Page.** The program will provide **on-screen instructions** to the patient and clinician to complete the entire therapy process using the **customized therapy targets** determined in #4 above. See the Quick-start Therapy Guide for instructions to patients and watch the Setting Therapy Parameters video on **www.swallowsolutions.com/training** for a **demonstration**.

Figure 5. Therapy screen

Key points about therapy:

a. The program will **automatically instruct** the patient to complete tongue presses on sensors which are enabled and that have therapy targets. They should try to keep the **needle in the green zone.** *See Figure 3.*

b. The patient should be **instructed to rest** between presses for 10-20 seconds. If needed, a mandatory rest between presses can be added in the **Configuration Module** (accessed via the Clinician Home Page).

c. Start with a therapy practice session. It is at this session that the clinician will determine the **optimal press duration.** The press duration is the amount of time that the patient should keep the needle in the **'green zone'** to get a thumbs up. Basically, the clinician identifies the threshold for positive reinforcement. The longer the press duration, the more challenging the therapy. The press duration can be **accessed via the Protocol Module.** *See #3 above.*

> **Helpful Hint:** Setting an appropriate press duration for therapy is a key to success. Take your time to find a duration that is appropriate. Often the first practice therapy is completed in a second session (or next day) and not immediately after determining therapy Targets due to fatigue. Too long of a press duration and the patient will become frustrated. Best to err on the side of too short of a press duration. Remember, a shorter press duration does not mean the patient is working less, but rather getting reinforced more often. As a patient gains more lingual control which typically happens in the first 2 weeks, the press duration can be increased.

Additional clinical questions can be directed to **Jackie Hind, MS/CCC-SLP, BCS-S** at **jahind@swallowsolutions.com**, or view dates and times for Clinical Office Hours at **http://swallowsolutions.com/product-information/clinical-office-hours**

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