

## The Case of David and Oral Health

### Case Scenario Narrative

Elizabeth is a 38-year-old single parent of two children. David, her youngest child who is now 8 years old, was diagnosed with mild to moderate quadriplegic spastic cerebral palsy at 3 months of age. David is able to communicate verbally with others. Her oldest child, Sarah, is a healthy, typically developing 15-year-old.

Elizabeth is employed as a mid-level executive with a national, food service industry company and has recently moved several hundred miles across the state as the result of an opportunity for a promotion within her company.

Elizabeth and her children are still settling in their new home after having relocated for a new job in a new town. David has begun to complain of a toothache. David has only been to the dentist a few times in the past. Mom is aware that David's home oral care is not the best, although she does her best to help him brush his teeth, as he has considerable difficulty performing optimal oral health care independently.

David's physical therapist where they previously lived provided Elizabeth with a recommendation for a physical therapist locally in their new hometown. Mom has arranged for an initial consultation for David with the new physical therapist and understands that the physical therapist works with a collaborative care team, which also includes an occupational therapist and speech-language pathologist.

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### Scene 1

#### **IPA focused behaviors:** *Communication and Respect*

**Narrative:** The physical therapist (PT), occupational therapist (OT), and speech-language-pathologist (SLP) have assessed David and are meeting together with the Mom as a team to discuss David's case. Since the family moved, David has been complaining of a toothache and his Mom notes that she will be making an appointment with a local dentist. The interprofessional team is discussing David's care plan in preparation for his visit with the dentist.

**Mom:** Thank you for taking the time to meet with me. I'm so overwhelmed since moving and starting a new job. I plan on making an appointment with a local dentist for David to have his tooth checked. I'm eager to hear what all of you have learned about David from your assessment.

**SLP:** Thanks for sharing this information Mom. I'll begin with my findings from speech-language pathology and my colleagues will follow. David can comprehend and follow directions and can express his needs or discomfort. It will be important to confirm that the dentist understands David's speech when they are communicating because his speech is more intelligible to his immediate family and less so to others outside of the family. There is also mild to moderate oral-motor defensiveness and a hypersensitive gag reflex. David also has a delayed swallow response with thin liquids and is at greater risk for penetration or aspiration if he is not sitting upright. The dentist will need to determine whether David can tolerate having instruments placed in his mouth during the procedure. Let's confirm with the dentist that he may need to address David's oral defensiveness and protection of the airway.

**OT:** That's a great idea! We should probably set up a conference call with the dentist so we can discuss our questions and concerns. David demonstrates poor distal control and fine motor dexterity. He would benefit from being seated at the sink when brushing his teeth as this provides some external proximal support. He has an adapted handle on his toothbrush and cup and uses a pump toothpaste dispenser. David is easily distracted and tends to rush through most activities. I suspect that he is most likely only brushing his front teeth at best. As reported in the speech-language-pathology evaluation, I have noted that David has oral hypersensitivity and brushing his teeth is an activity he is likely avoiding.

**PT:** Your OT evaluation findings are helpful and relevant to his motor control issues. David can walk independently for moderate distances with fair balance and uses an assistive device or ambulation when he fatigues later in the day. As an alternative when brushing his teeth, he could stand, since he demonstrates fair to good balance when working on an activity with support. David has a low tolerance to pain and responds to painful stimuli quickly. He also startles easily to loud noises, which can affect some aspects of his motor control. When seated, David needs to be in a chair with at least 90 degrees or more of hip flexion to maintain good posture; otherwise he may require a strap to keep his hips flexed while seated in the chair.

**Narrative:** The SLP, OT, and PT continue discussing their findings with the mother and answering her questions before the team moves on to discuss next steps.

**SLP:** Given our respective findings about David, we can schedule a videoconference with the dentist before David's initial dental visit.

**PT:** As a final step, let's prepare a prioritized list of the issues to share with the dentist to facilitate his visit with David.

**OT:** This sounds like a good plan in moving forward!

**Mom:** I am pleased we'll have an opportunity to talk with the dentist together as a team.

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## Scene 2

### IPA focused behaviors: *Accountability and Ethics*

**Narrative:** The interprofessional team is videoconferencing with the dentist prior to the dental examination using a secure line in compliance with HIPAA. There is the issue of tooth pain and the need to also conduct an oral health assessment for this patient.

### Video conference team members on the call



Physical Therapist



Speech Language Pathologist



Occupational Therapist



Dentist



Mom with David

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**Dentist:** Good morning everyone! I appreciate having a conference call with the team including speech-language-pathology, occupational therapy, physical therapy, and David's mom in preparation for David's initial dental examination. Your insight into David's daily routine and schedule, oral motor, communication, gross motor and fine motor capabilities will help to facilitate his overall dental care during his upcoming appointment.

**SLP:** Glad that we could get this scheduled. Let me begin with pertinent findings about David's communication capabilities. David comprehends verbal instructions comparable for his age and can express his needs including pain discomfort. However, his speech is moderately distorted. Dr. Stewart, you may have difficulty understanding David's speech at times. It may be helpful to frame your questions with limited response options (e.g., yes/no questions) to increase your understanding of David's speech. Alternately, Mom may be able to provide clarification as needed. It is not uncommon for family members to understand the patient's speech to a greater extent than unfamiliar listeners as they have often adapted to the articulation distortions, particularly in known contexts.

**Mom:** I can definitely be there to assist with understanding David's speech during his visit with you. David can get anxious when he visits the dentist.

**PT:** Dr Stewart, in terms of gross motor and motor control issues, David will be able to walk independently from the waiting room to the dentist's chair. He may require minimal assistance to pull his legs up into the reclining dental chair. Loud noises may set off a startle reflex in David so noises such a loud drill may cause him to suddenly move during the dental procedures. Let David know in advance when you will be using instruments that are loud to help minimize this response. Depending upon how long the procedure takes and what is performed, Mom may have to help David walk back to the waiting room. How long do you expect David to be in the dental chair for this examination?

**Dentist:** We will first be evaluating the acute issues that have been described. Although it's not possible to completely predict how much time, assuming that we have to conduct a general examination and will likely need to complete a filling, it's likely to take between 30-45 minutes.

**PT:** Depending upon the angle of the dental chair, he may have a tendency to slide down sitting in the chair for that length of time so he may need a strap or seat belt to keep him well positioned. He may also not be able to have the chair lowered all the way back. He may require his assistive device to walk back to the waiting room.

**OT:** Given the time anticipated, it's important to note that David is very easily distracted and will have limited tolerance for sitting. David will tend to hyperextend his neck to gain stability. This will make it challenging for him to swallow. If possible, try to encourage chin tuck.

**Mom:** It's true – David's ability to sit for a long time could be an issue. We will definitely need to provide support to be sure that he is comfortable and has the right positioning in the dental chair. What else do we need to think about?

**SLP:** David also has mild-to-moderate oral-motor defensiveness, a hypersensitive gag reflex, and a delayed swallow response with thin liquids. Dr Stewart, how will you manage these issues during the procedure?

**Dentist:** That's a very important safety concern. We will have the appropriate suction available to manage his oral secretions and the dental chair will not be lowered fully. I appreciate your expertise and insights about David that are very important to address during this visit. I'm well prepared to meet David's needs for this dental procedure. Additionally, I need assistance from the team with managing David's long-term dental hygiene at home.

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**OT:** Based on this information, can we talk about developing a plan for long-term management of David's oral hygiene, since David's care at home directly impacts you and the family?

**Mom:** This sounds like a great idea! Let's put our heads together to come up with a plan that works for all of us!

### Scene 3

**IPA focused behaviors:** *Altruism and Caring and Excellence*

**Narrative:** The team (i.e., dentist, SLP, OT, PT, and parent) is meeting together in person to collaboratively develop a plan of care for improved oral hygiene at home. David and his sister are in school during this team meeting.

**Mom:** Thanks for taking the time to meet with me again.

**Dentist:** We have successfully treated David's tooth, which was causing his discomfort. As a part of his examination, we noted that David's oral hygiene needs to be improved to prevent further problems with his oral health in the future.

**Mom:** Yeah....that would be great if possible. What will it take for this to happen? It takes David 60 minutes to get ready for school as well as 60 minutes to get ready for bed.

**Dentist:** Let's strategize together ways to help manage David's dental hygiene at home, given the amount of time it currently takes David to get ready for school and bed.

**OT:** Perhaps we can find ways to help David become more efficient in his dressing skills or other areas to enable time for dental hygiene in the morning before school and at night before bed? Does David's older sister help David get ready for school or bed? If not, is this something that she might be available to do with her brother?

**Mom:** Actually, I have never asked her to help, mostly because I do not want to impose on her as a 15-year old. I could ask her the question and see what she says?

**Dentist:** That sounds like a good idea. Does David currently use an electric or regular toothbrush? If an electric toothbrush could be used, it would enhance dental hygiene, potentially make it easier for David to manage over time and could save time as it is designed to function for two minutes while brushing. In addition, oral hygiene has been shown to be better using an electric toothbrush.

**SLP:** We could try working with David in speech-language therapy to desensitize him to the vibration of the toothbrush on his teeth and gums by first using face/lip vibration toys to reduce overall sensory defensiveness. He would likely need to do this prior to being comfortable putting an electric toothbrush in his mouth.

**OT:** If David tolerates the electric toothbrush, we can adapt the handle to improve his control.

**PT:** We could work on his ability to stand safely with support at the sink or sit while brushing his teeth. How does this sound so far?

**Mom:** This definitely sounds like a possibility. Now what about the time that it takes for David to get ready for school and bed?

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**OT:** Let's begin with David's morning routine. Can you describe his morning routine and what takes the most time?

**Mom:** Well, he is highly distractible and if the television or music is on, he tends to get distracted and off task. He also takes a long time selecting his clothes and getting dressed.

**PT:** Perhaps his sister might be willing to help him select his clothes the night before as a part of his bedtime routine?

**OT:** We would work on a strategy with a reward system to decrease the time taken to get dressed and select clothes and to eliminate television during this time to help him focus.

**SLP:** What might be a good reward for David to help motivate him?

**Mom:** Besides television and music, David likes playing video games! Where we used to live, the PT and OT used Wii Fit to work on his balance and coordination and he learned to like video games as a result!

**PT:** Maybe we can provide a reward during physical therapy, when he comes once a week, and has managed his morning and nighttime routine better and his oral hygiene. We can set aside time during this physical therapy to use the Wii Fit in the gym!

**SLP:** For more immediate rewards on a daily basis if he is ready earlier, he can listen to music at night before bed? Other ideas to motivate David with his home routine for oral care could be:

- Making a visual chart for completion of daily care tasks. It could be on an iPad to make him more interested.
- Making teeth brushing a family event so that he sees that everyone has to brush their teeth.
- Explaining the rationale for brushing teeth. David can understand age-appropriate explanations of why we need to brush our teeth to avoid painful teeth/procedures later!

**SLP:** So how does that sound Mom?

**Mom:** Can we try this for a couple of weeks and see how it goes before checking back in with the team?

**SLP, OT, PT, Dentist:** That sounds like a great plan!!!

**Mom:** Great! I'll give it a try!

**Narrative:** Dentist, SLP, PT, and OT conclude the meeting with David's Mom having a plan in place for oral hygiene with a follow up to be scheduled within 2-3 weeks to see how everything is going.

### References

1. National Institute of Dental and Craniofacial Research. (July 2009). Practical Oral Care for People with Cerebral Palsy. U.S. Department of Health and Human Services, National Institutes of Health: NIH Publication No. 09-5192. <https://www.nidcr.nih.gov/sites/default/files/2017-09/practical-oral-care-cerebral-palsy.pdf>
2. National Institute of Child Health and Human Development. (December 2016). Cerebral Palsy: Condition Information. U.S. Department of Health and Human Services, National Institutes of Health. <https://www.nichd.nih.gov/health/topics/cerebral-palsy/conditioninfo>