

Do You Hear What I Hear?: Quick Screening VPI in the Non-Medical Setting

Jamie D. Harding M.A., CCC-SLP
Cleveland Hearing & Speech Center
OSLHA 2009

What is VPI?

Velopharyngeal Insufficiency (structure)

vs.

Velopharyngeal Incompetence (function)

SUSPICION

Use Your Senses

- ✓ How does the client sound?
- ✓ How does the client look?
- ✓ Previous speech therapy/progress?

SCREENING & MONITORING PROGRESS

30 Minute Quick Screen

- ✓ Ask about symptoms
- ✓ Check visible structure
- ✓ Check for nasal air emission
- ✓ Listen for symptoms
- ✓ Check placements
- ✓ Probe facilitating techniques
- ✓ Record dysmorphology
- ✓ Refer appropriately

The VIP Quick Screen

Velopharyngeal Insufficiency Profile

Janie D. Harding M.A., CCC-SLP

NAME: _____ CAREGIVER: _____
 AGE: _____ GRADE: _____
 DATE: _____ PHONE: _____
 SLP: _____ CASE #/TEACHER: _____

ANAL HISTORY

REASONING & SCREENING

STANDARDIZED TESTING

INTELLIGIBILITY

COMPENSATORY ARTICULATIONS & OTHER SIGNS OF DYSFUNCTION

UNUSUAL VOCALS

UNUSUAL SILENCES

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Therapy history (speech/language, when, where, goals, school/private): _____

Medical history (surgeries, genetic testing, syndromes, health problems): _____

Surgical history (lip/palate repairs, tonsil/adenoid problems or removal, other): _____

Feeding history (reflux as infant, trouble feeding/gaining weight, loss of liquids out of nose): _____

Family history of speech, language, learning difficulties: _____

Ear history (hearing documented WNL, infections, PE): _____

Academic history (learning difficulties): _____

COMPENSATORY ARTICULATIONS & OTHER SIGNS OF DYSFUNCTION

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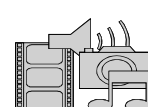
RESONANCE SCREENING

Stimulus	Nasal emission (visualized)	Nasal grimace, etc.	Nasal snort	Compensatory Articulations
"Poppy, poppy" / "People, people"				
"Tommy Tommy"				
"Put baby in the buggy"				
Three client count from 60-70				
Three client count from 70-79				
"Fill the yellow wheel"				
"How are you?"				
"How are you?" (three years)				

Perceived Nasality: "Mama made lemon juice" and "Bow can I play on a long train" (nose occluded and unoccluded)

(circle): Hyponasal Hyponasal Denasal Cul-de-sac Mixed

VIDEO



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COMPENSATORY ARTICULATIONS & OTHER SIGNS OF DYSFUNCTION

Weak/Omitted Consonants, Altered Rate, Short Utterance Length - due to reduced pressure

Aspirated Nasal Air Emission/Turbulence/Rattle (ANAE) - airflow released through the nose, trying to build internal pressure for pressure sounds

Posterior Nasal Fricative (PNF) - velar fricative made with tongue to velum while "flattening" or "covering" VP air replacing fricatives

Midline Palatal Stop (MPS) - a stop consonant produced tongue-to-middle of the hard palate replacing alveolar sounds

Velar Fricative (VF) - fricative made with back of tongue under velum replacing fricatives (and commonly sibilants)

Generalized Backing - vowel substitution for anterior vowels

Pharyngeal Stop (PS) - stop made with base of tongue to posterior pharyngeal wall replacing /k/ and /g/

Pharyngeal Fricative (PF) - fricative made with base of tongue to posterior pharyngeal wall replacing fricatives, affricates, and/or sibilants

Pharyngeal Affricate (PA) - pharyngeal fricative + glottal stop replacing affricates (and sometimes the sibilants)

Glottal Stop (GS) - glottal sound replacing stops or high pressure consonants replacing plosives (and sometimes fricatives and affricates)

At the (circle all that apply)... **Sound Word Sentence Conversation** ...level(s)



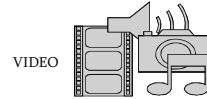
Obligatory or Compensatory Errors?

- ✓ Obligatory Errors = distortions caused by structure
- ✓ Compensatory Errors = substitutions caused by structure
- ✓ So, Compensatory Errors are placement errors
 - ✓ that may respond to TX



Weak/Omitted Consonants, Altered Rate, Short Utterance Length

- ✓ Due to reduced pressure
- ✓ "Marginal" VPI
- ✓ "Almost But Not Quite"
- ✓ "Sometimes But Not Always"



Weak/Omitted Consonants, Altered Rate, Short Utterance Length

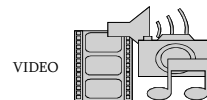
Your Turn!

- ✓ Try "house" as "houh"
- ✓ Try "My house is red" as "My houh is hre"



Nasal Air Emission/Turbulence/Rustle

- ✓ Airflow released through the nose
- ✓ Created after trying to build intra-oral pressure for pressure sounds



Nasal Air Emission/Turbulence/Rustle

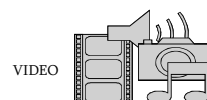
Your Turn!

- ✓ Try "puppy" as "NAE-puNAE-py"



Posterior Nasal Fricative (PNF)

- ✓ Turbulent fricative made with tongue to velum while "fluttering" or "snorting" VP valve
- ✓ Replacing fricatives





Posterior Nasal Fricative (PNF)

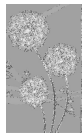
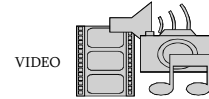
Your Turn!

- ✓ Try moving air out of your nose
- ✓ Add friction above velum
- ✓ Puff air out of nose with friction
- ✓ Try "pencil" as "pen-PNF-il"



Mid-dorsum Palatal Stop (MPS)

- ✓ Stop consonant produced tongue-to-middle of the hard palate
- ✓ Replacing alveolar sounds



Mid-dorsum Palatal Stop (MPS)

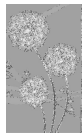
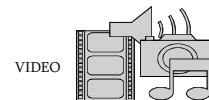
Your Turn!

- ✓ Try making /k/, /g/, /t/, or /d/ with your tongue in the middle of the palate
- ✓ Try "sun" as "MPS-un"



Velar Fricative (VF)

- ✓ Fricative made with back of tongue under velum
- ✓ Replacing fricatives (and commonly sibilants)



Velar Fricative (VF)

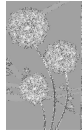
Your Turn!

- ✓ Try moving air out of mouth
- ✓ Add friction on the velum
- ✓ Try "slide" as "VF-slide"



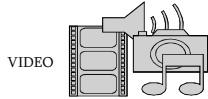
Generalized Backing

- ✓ A velar substitutions for anterior sounds



Pharyngeal Stop (PS)

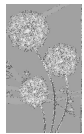
- ✓ Stop made with base of tongue to posterior pharyngeal wall
- ✓ Replacing /k/ and /g/



Pharyngeal Stop (PS)

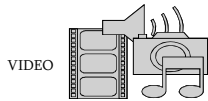
Your Turn!

- ✓ Try "clearing your throat"
- ✓ Feel the tongue-to-pharynx placement
- ✓ Stop air
- ✓ Try "cup" as "PS-up"



Pharyngeal Fricative (PF)

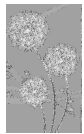
- ✓ Fricative made with base of tongue to posterior pharyngeal wall
- ✓ Replacing fricatives, affricates, and/or sibilants



Pharyngeal Fricative (PF)

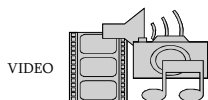
Your Turn!

- ✓ Try "clearing your throat"
- ✓ Feel the tongue-to-pharynx placement
- ✓ Create friction with the tongue and airstream
- ✓ Try "zipper" as "PF-ipper"



Glottal Stop (GS)

- ✓ Glottal sound replacing stops or high pressure consonants
- ✓ Replacing plosives (and sometimes fricatives and affricates)



Glottal Stop (GS)

Your Turn!

- ✓ Stop air at your glottis and release it
- ✓ Add voicing
- ✓ Try "teacher" as "GS-ea-GS-er"

The VIP Quick Screen

ORAL EXAMINATION (circle all that apply)

Oral Motor	Facial Tone	Lips	Hard Palate	Soft Palate
OK	OK	OK	OK	OK
Reduced coordination	Low tone	Cleft (unilateral/bilateral)	Cleft (unilateral/bilateral)	Bifid Uvula
Reduced movement	Spastic	Open Mouth Posture	High Vault	Refractory Movement
		Deviant	Heard (whistling)	Swallowing
			Discoloration	Wide Uvula
Other	Other	Other	Other	Other

The VIP Quick Screen

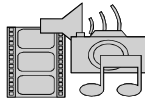
CRANIOFACIAL OBSERVATIONS (circle all that apply)

Head Size	OK	Macrocephalus	Microcephalus			
Facial Symmetry	OK	Hemifacial Microsomia	Midline	-	-	-
Hair	OK	Sparseness	Coarse	White Forelock	-	-
Eyes	OK	Hypertelorism (wide-set)	Proptosis (bulging)	Coloboma (hole in the retina)	Angled Palpebral Folds (eye lid or eye angle)	Epicardial Folds (hole in eye or heart)
Ears	OK	Microtia	Skin Tags	Alopecia	Low Set	Rotated
Nose	OK	Deviant Septum	Cleft Lip/Nose	-	-	-
Lips	OK	Cleft Lip	Notch in Upper Lip	Lip Pit in Lower Lip	-	-
Alveolar & Teeth	OK	Cleft Alveolus	Notch in Alveolus	Hypodontia (missing teeth)	Hypoplasia of Maxilla	Obvious Dental Caries
Lower Jaw	OK	Micrognathia (small jaw)	Macroglossia (enlarged tongue)	Prognathism (protruding lower jaw)	Class II Malocclusion (overbite)	Class III Malocclusion (underbite)
Tongue	OK	Large	Glossosoma (enlarged)	-	-	-
Neck	OK	Short Neck	Webbed Neck	-	-	-
Shoulders	OK	Raised Shoulder Blades	-	-	-	-
Hands	OK	Syndactyly (fused fingers)	Polydactyly (extra fingers)	Slender, Extra-long Fingers	-	-
Other						



Physical Morphology

VIDEO



Amie's Family
www.knechtcherollins.org



Physical Morphology Why is it important?

- ✓ Syndrome identification can be powerful
- ✓ Average age of Velocardiofacial Syndrome diagnosis is 9 years old!
- ✓ Variation in the features of this syndrome: cleft palate, usually of the soft palate; heart problems; similar faces (elongated face, almond-shaped eyes, wide nose, small ears); learning difficulties; eye problems; nasal regurgitation; otitis media; hypoparathyroidism (low levels of the parathyroid hormone that can result in seizures); immune system problems; weak muscles; short height; scoliosis; tapered fingers, and medial displacement of internal carotid arteries (25%).
- ✓ Cause: Deletion of DNA from chromosome 22 at q11.2 band
- ✓ Most common syndrome of cleft palate (130,000 in the US)
- ✓ Most common microdeletion syndrome in humans
- ✓ Most common syndrome expressing conotruncal heart anomalies

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CRANIOFACIAL OBSERVATIONS (circle all that apply)


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Neck	OK	Short Neck	Webbed Neck	-	-	-
Shoulders	OK	Raised Shoulder Blades	-	-	-	-
Hands	OK	Syndactyly (fused fingers)	Polydactyly (extra fingers)	Slender, Extra-long Fingers	-	-
Other						

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REFERRALS

Circle all that apply:
PRIMARY CARE PHYSICIAN
CRANIOFACIAL TEAM
Audiology
ENT
PLASTIC SURGEON
NEUROSCOPY/VIDEOFLUORESCOPY
GENETICS
DENTISTRY

USES OF the VELOPHARYNGEL INSUFFICIENCY PROFILE

- 
- ## Uses
- ✓ As a screening for those with suspected VPI
 - ✓ As part of a comprehensive speech evaluation when VPI is suspected
 - ✓ As a more complete referral form for clients to take to specialists
 - ✓ A measure of baseline data upon start of TX
 - ✓ An instrument to demonstrate small increments of change/progress during TX
 - ✓ As part of your discharge protocol for VPI clients

DOCUMENTING

- 
- ## Write It Down
- ✓ Take note of suspicious sounds, facial behaviors, dysmorphology, and resonance

REFERRING

TO TREAT OR NOT TO TREAT...



Obligatory or Compensatory Errors?

- ✓ Obligatory Errors = distortions caused by structure
- ✓ Compensatory Errors = substitutions caused by structure
- ✓ So, *Compensatory Errors are placement errors that may respond to TX*



Before 1st Palate Repair

- ✓ Facilitate normal speech and language
- ✓ Teach developmentally appropriate speech sounds and/or placements
- ✓ Closely monitor ME health
- ✓ Newest research suggests repair before 12 months = best speech outcomes



Before Surgical Revision

- ✓ Placement, placement, placement!
- ✓ Prevention/elimination of compensatory articulations
- ✓ Teach nasal vs. oral airflow



After Palatal Revision

- ✓ Work on oral airflow
- ✓ Traditional speech therapy
- ✓ Elimination of compensatory articulations, if present

REFERENCES & RESOURCES

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- <http://www.teachercollins.org>
- <http://craniofacialcenter.uiowa.edu>