

Supplemental Material S2. Results and edits for the ingredient label Delphi Rounds, listed in order of decreasing agreement after Round 4. Negative and positive numbers represent consensus towards the ingredient label being non-measurable/redundant versus measurable/unique, respectively. R4 = round 4; R5 = round 5; R6 = round 6; Dash = ingredient was not judged due to being deleted or incorporated into another ingredient(s) in a previous Round; Arrow = ingredient was not discussed during Round 5; C = ingredient was not judged on this construct due to attaining supra-majority consensus (≥ 8 out of 10 experts); E = edited by splitting into multiple ingredients or incorporating into another ingredient(s); D = deleted from list; X = exempt from expert measurability and uniqueness judgements; Gray shading = ingredient labels were not yet created, so they were not present in that round.

Ingredient	Measurable (# experts)			Unique (# experts)			Overlapping/ redundant targets mentioned in Round 4 by ≥ 3 experts	If incorporated into another ingredient, which ingredient
	R4	R5	R6	R4	R5	R6		
Phonation time	10	E	—	10	E	—	None	Provide opportunities to practice voicing, vocal fold adduction exercises
Provide voice amplification	10	C	C	9	C	C	None	Not applicable
Loudness glide	10	E	—	9	E	—	None	Provide opportunities to practice voicing, vocal fold adduction exercises
Modify the environment	10	E	—	8	E	—	None	Apply noise
Vocal fry	10	E	—	8	E	—	None	Provide opportunities to practice voicing
Pitch glide	10	E	—	7	E	—	Siren, vocalizes	Provide opportunities to practice voicing, vocal fold adduction exercises
Vocalizes	10	E	—	7	E	—	Siren, pitch glide	Provide opportunities to practice voicing, vocal fold adduction exercises
Yawn/sigh	10	E	—	7	E	—	Inverted megaphone	Provide opportunities to practice voicing
Semi-occluded vocal tract (SOVT) posture	10	C	C	-6	10	C	Inverted megaphone, lip trill, tongue trill, lip/tongue trill, siren, gargling	Not applicable
Lip trill	10	E	—	-6	E	—	SOVT, tongue trill, lip/tongue trill	SOVT
Inspiratory volume exercises	9	E	—	10	E	—	None	Provide opportunities to practice breathing
Expiratory volume exercises	9	E	—	10	E	—	None	Provide opportunities to practice breathing
Inspiratory rate exercises	9	E	—	10	E	—	None	Provide opportunities to practice breathing
Expiratory rate exercises	9	E	—	10	E	—	None	Provide opportunities to practice breathing
Inhalation phonation	9	E	—	9	E	—	None	Provide opportunities to practice voicing
Provide auditory masking	9	E	—	9	E	—	None	Apply noise
Inspiratory resistance exercises	9	C	C	8	C	C	None	Not applicable
Expiratory resistance exercises	9	C	C	8	C	C	None	Not applicable
Flow phonation	9	E	—	7	E	—	None	Provide opportunities to practice voicing
Inverted megaphone	9	E	—	-7	E	—	SOVT, yawn/sigh	SOVT
Tongue trill	9	E	—	-7	E	—	SOVT, lip trill, lip/tongue trill	SOVT
Topical numbing	8	C	C	10	C	C	None	Not applicable

Provide Pedagogy/Counseling information	8	E	—	10	E	—	None	Provide vocal hygiene information
Provide delayed auditory feedback	8	E	—	10	E	—	None	Apply noise
Half-swallow boom	8	E	—	8	E	—	None	Vocal fold adduction exercises
Vegetative vocalizations	8	E	—	7	E	—	None	Provide opportunities to practice voicing, vocal fold adduction exercises
Apply manual touch	8	E	—	7	E	—	None	Apply pressure
Provide effort cueing	8	E	—	5	E	—	Cue not otherwise specified	Feedback, volition ingredients
Apply pressure	8	10	C	-6	10	C	Hyoid pushback, thyroid pulldown, apply shaking, manual stretch, manual traction	Not applicable
Siren	8	E	—	-6	E	—	SOVT, pitch glide, vocalizes	Provide opportunities to practice voicing
Lip-tongue trill	8	E	—	-10	E	—	SOVT, lip trill, tongue trill	SOVT
Apply heat	7	→	9	10	C	C	None	Not applicable
Apply vibration	7	E	—	9	E	—	None	Apply pressure
Chewing	7	E	—	8	E	—	None	Provide opportunities to practice voicing
Provide auditory cueing	7	E	—	8	E	—	None	Feedback, volition ingredients, opportunities to practice sensory discrimination
Physically occlude ear	7	→	10	8	C	C	None	Not applicable
Gargling	7	E	—	7	E	—	SOVT	SOVT, provide opportunities to practice voicing, breathing
Inhale through constriction	7	E	—	7	E	—	Inspiratory/expiratory resistance	Provide opportunities to practice breathing
Exhale through constriction	7	E	—	7	E	—	Inspiratory/expiratory resistance	Provide opportunities to practice breathing
Apply stretch	7	E	—	6	E	—	Hyoid pushback, thyroid pulldown, apply shaking, manual pressure, manual traction	Apply pressure
Apply hyoid pushback	7	E	—	6	E	—	Thyroid pulldown, manual pressure, manual stretch, manual traction	Apply pressure
Apply thyroid pulldown	7	E	—	-7	E	—	Hyoid pushback, apply shaking, manual pressure, manual stretch, manual traction	Apply pressure
Provide auditory model	6	E	—	10	E	—	None	Feedback, volition ingredients, opportunities to practice sensory discrimination
Apply low level light therapy	6	→	7	10	C	C	None	Not applicable
Provide kinesthetic cueing	6	E	—	8	E	—	None	Feedback, volition ingredients, opportunities to practice sensory discrimination
Apply traction	6	E	—	5	E	—	Hyoid pushback, thyroid pulldown, apply shaking, manual pressure, manual stretch	Apply pressure

Apply shaking	5	E	—	9	E	—	None	Apply pressure
Apply cold	-6/D	—	—	10/D	—	—	None	Deleted – all experts said they never used this in voice therapy
Provide opportunities to practice voicing			10			8	Not present in Round 4	Not applicable
Apply noise			10			10	Not present in Round 4	Not applicable
Provide opportunities to practice sensory discrimination			9			10	Not present in Round 4	Not applicable
Provide opportunities to practice breathing			10			9	Not present in Round 4	Not applicable
Provide opportunities to practice alignment/posture			10			9	Not present in Round 4	Not applicable
Provide opportunities to practice modified levels of muscle activation			9			7	Not present in Round 4	Not applicable
Provide feedback			10			9	Not present in Round 4	Not applicable
Provide volition ingredients			X			X	Not present in Round 4	Not applicable
Provide vocal hygiene information			8			10	Not present in Round 4	Not applicable
Gross vocal fold adduction exercises			10			7	Not present in Round 4	Not applicable
