Clinical Focus

Selecting Treatments and Monitoring Outcomes: The Circle of Evidence-Based Practice and Client-Centered Care in Treating a Preschool Child Who Stutters

Nan Bernstein Ratner^a

Purpose: The purpose of the present clinical forum is to compare how 2 clinicians might select among therapy options for a preschool-aged child who presents with stuttering close to onset.

Method: I discuss approaches to full evaluation of the child's profile, advisement of evidence-based practice options open to the family, the need for monitoring of the child's response, and selection of other approaches, if the child appears nonresponsive to the 1st-line approach.

Results: Although some researchers and clinicians appear to favor endorsement of a single recommended treatment for early stuttering, I do not find this approach helpful or consistent with newer mandates for patient-centered care.

I am also most comfortable recommending RESTART demands and capacities model as the 1st treatment approach, with parent consent, because its mechanism of action appears transparent and well-documented.

Conclusions: There are numerous well-supported intervention options for treating preschool children who stutter. No single therapy can possibly work for all clients. I discuss available options that I feel have sufficient evidence-based support for use with young children who stutter. I emphasize the need to consider more, not fewer, acceptable therapy options for children who do not respond positively to a selected treatment approach within a reasonable time frame.

Let us review the major features of the case that appear relevant for my decision making: Our referral is a 3;6-year-old boy named David. We are seeing him less than a year post-onset of stuttering symptoms, which is a positive prognostic indicator of spontaneous recovery (Yairi & Ambrose, 1999, 2005). The same body of research notes that boys achieve spontaneous recovery less often than girls—a negative prognostic feature. The Illinois Project and others have suggested that a history of late talking and poor phonology may contribute to a negative fluency prognosis, so I would feel compelled to examine this aspect of the case further.

The fact that the child spends the majority of his waking time with a caregiver other than his parents and that

his parents are quite busy at this point in their professional careers will require me to discuss the relative advantages of working with one of the adults in David's life to provide short, daily, home-based interactions, which, at his age, have the highest level of research support and should be preferable to taking the child to the speech-language pathologist for direct intervention during the typical work day. Home-based interventions are thought to have higher generalization potential because the child and parents work on speaking within the child's everyday environment. The other symptom that concerns me is the reportedly tense quality of his stuttered speech, which implies some level of awareness and frustration. If this child does not experience spontaneous recovery relatively soon, we will need to find an effective program to reduce the adverse impacts of stuttering on his well-being and that of his parents.

^aDepartment of Hearing and Speech Sciences, University of Maryland, College Park

Correspondence to Nan Bernstein Ratner: nratner@umd.edu

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Further Diagnostic Concerns

Prior to parent counseling to discuss options for David's care, I would conduct a further evaluation of the child, particularly a more in-depth analysis of his language

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and phonological skills. My rationale for all this is that language delays have poor prognosis for later achievement in both reading and academic performance (Dale & Hayiou-Thomas, 2013; Paul, 2000; Rescorla, 2009; Rescorla & Dale, 2013); arguably, such delays, if not addressed, could impose even more negative consequences on the child's future potential than the stuttering itself. We now know that late talkers do not "catch up," at least without intervention (Rescorla & Dale, 2013). However, concerns about the adequacy of a child's language development may be less easily benchmarked by parents than overt moments of stuttering.

More relevant to the case at hand, less well-developed language and phonological abilities also may have negative prognosis for spontaneous recovery from stuttering (to name representative findings from two separate labs: Ambrose, Yairi, Loucks, Seery, & Throneburg, 2015; Hollister, Van Horne, & Zebrowski, 2017; Leech, Ratner, Brown, & Weber, 2017; Spencer & Weber-Fox, 2014). Such work tends to suggest that children who display less-than-average skills in other areas of communication development may be at increased risk for continuing to stutter. Results of my further assessment are likely to shape my recommendations to David's parents. I may also need to think about additional therapy time that will need to be dedicated to treatment of additional concerns. If there are additional therapeutically relevant concerns about language ability, they may interact with the child's ability to be fluent during therapy tasks directed to the stuttering problem (Bernstein Ratner, 2005), as well as conversational attempts having the full range of linguistic and phonological complexity (Watson, Byrd, & Carlo, 2011; Wolk & LaSalle, 2015). If David also requires language intervention, the reverse is likely to be true as well—as we try to help him with more challenging language achievements, the child may find it more difficult to be fluent, as a large body of research suggests (see review by Hall, Wagovich, & Bernstein Ratner, 2007). Thus, therapy "lessons" may need to scaffold language activities from those that impose lower levels of challenge to those that further tax David's speech and language formulation skills in order to extend fluency into more challenging speaking tasks.

When Should Treatment Begin?

Given the relatively recent onset of stuttering, I would discuss the possibility of waiting to initiate a structured, direct intervention. I would do this after discussing results of my full evaluation and the appropriate known prognostic indicators to date. These include family history of persistent stuttering, age of onset, and speech and language skills. As the daughter of an insurance salesman, I would also remind parents that prognostic indicators are, of course, merely actuarial odds. As such, they are merely information that parents can mull over and balance in view of other information or feelings that they have regarding their child, the dimensions of the fluency disorder, and available time and financial commitment to therapy. Deferring

implementation of a structured intervention is definitely an option supported by the Lidcombe consortium:

"Given that waiting for a year apparently does not decrease responsiveness to the program, clinicians have the option of waiting for a period shorter than a year to see if natural recovery occurs" (Lidcombe consortium; as described in Lewis, Packman, Onslow, Simpson, & Jones, 2008, p. 141)

I would explicitly guide the parents through my opinion that this option is most reasonable only if the child is not frustrated or adversely impacted by disfluency. Contrary to some perceptions that very young children are unaware of their stuttering, Langevin, Packman, and Onslow (2010) noted frequent frustration, withdrawal from talking situations, and comments about speaking difficulty in preschoolers who stutter. In my personal opinion, child frustration should trigger immediate discussion about specific intervention. The parents may be frustrated as well, as Langevin et al. and Plexico and Burrus (2012) note. To this end, whether or not a formal, structured intervention is scheduled right away, I would begin to attempt to bind parental anxiety and improve parental locus of control, both of which are associated with more positive outcomes in children's chronic disease management (Ros, Hernandez, Graziano, & Bagner, 2016) by discussing palliative (symptom reducing) procedures for reducing the frequency of stuttering via what is typically termed *indirect therapy options*.

Thus, if the family chooses to defer structured intervention for a few months in hopes of spontaneous recovery, in the interim, we can use parental counseling to slow adult speech rate in conversation with the child and reduce turn-taking challenges (both have historical published support in reducing moments of disfluency in parent-child interactions, as noted by Davidow, Zaroogian, & Garcia-Barrera, 2016; see also Sawyer, Matteson, Hua, & Takahisa, 2017). I would also have the parents acknowledge moments of evident speech frustration because this principle is congruent with the Lidcombe Program (LP) feedback and is consistent with guidance to adults when children have difficulty with a range of functions in early development. Acknowledgment plays different roles in these two approaches: It can be viewed as providing more emotional support in the demands and capacities model (DCM) and creating shared parent-child awareness of speech difficulty in LP. My preference is to view acknowledgment as a hybrid of these positions—providing emotional support and the notion of shared work with the child in addressing his or her speech difficulty that is consistent with the larger psychological literature on the benefits of family-based treatment of developmental health problems. Finally, I would share that it is widely recognized that parental self-efficacy in the management of childhood disorders has positive impacts on the child's function (e.g., Mouton & Roskam, 2015): When parents are included in the treatment of their children, rather than relying solely on the guidance of professionals, outcomes tend to be superior.

I would also instruct the parents to chart the child's fluency profiles to gauge changes for better or worse on a daily basis, as originally developed by the LP (see examples at Australian Stuttering Research Centre, n.d.); among other useful outcomes, such "homework" and involvement increases parental self-efficacy and reduces parental anxiety (and indirectly that of the child); see Ros et al. (2016).

What Is Involved in Evidence-Based Practice (EBP) Decisions?

What Are Initial Options for Treatment of Stuttering in Preschool Children?

An Overview of Parent-Administered Therapy for Preschoolers

All of the major published, evidence-based programs to address stuttering in this age group are parent-administered or facilitated. Additionally, because of the suggested contexts of daily work, including protected talk time and scaffolded adult-child book reading, they can be excellent vehicles for language enrichment for all children (those with or without clinically relevant language concerns). Therefore, I might instruct how to enrich areas of language weakness (e.g., book reading with materials that can reinforce targets, such as growth of questions with popular early readers, cf., Bernstein Ratner, 2013; Zauche, Thul, Mahoney, & Stapel-Wax, 2016).

Regardless of what specific fluency treatment approach is taken, I see value in the need to strengthen language for a preschooler who stutters. The difficulty of language challenge is highly associated with frequency of stuttered events or speech-motor instability on experimental tasks, which can manipulate this level of challenge systematically (e.g., Bernstein Ratner & Sih, 1987; MacPherson & Smith, 2013; Zamani et al., 2016). This basic relationship is also recognized in the main tenets of the LP. The program asks parents to create enjoyable activities for verbal interaction that maximize the likelihood that the optimal ratio of fluent and disfluent moments is available for reinforcement and feedback (originally called *punishment* when the roots of the program were more clearly explicated in published articles [cf., Onslow, Costa, & Rue, 1990]). The originators and researchers associated with Lidcombe understand that there are certain language task demands associated with the general frequency of spontaneously disfluent speech. For example, in the manual (Packman et al., 2016, p. 8) the authors explicate that the presence of stuttering is determined to some degree by the length and complexity of the child's attempted utterance, as shown by a large body of research. Notably, they specify that professional supervision of the speech-language pathologist is required to enable the parent to develop enjoyable verbal interactions that can appraise the child's level of unambiguous stuttering over a range of expected verbal demands on the child. This is why I need to do more detailed assessment of the child's language skills in order to

maximally guide this process, should I select LP as the first intervention of choice.

Direct Treatment Options for David and His Family

I believe that the current evidence base offers multiple options for direct treatment of preschoolers who stutter that have reasonable levels of support, as well as two very robustly documented treatment programs. Among the promising approaches are Palin Parent-Child Interaction Therapy (Millard, Brown, Hertsberg, Hollister, & Zebrowski, 2015; Millard, Edwards, & Cook, 2009); family-focused therapy (Yaruss, Coleman, & Hammer, 2006); and Westmead, a syllable-timed speech-shaping therapy (Trajkovski et al., 2011). However, because they have much larger bodies of outcome data, the two options that I would recommend that the parents consider as first-line approaches are the following:

(a) The Rotterdam Evaluation Study of Stuttering Therapy in Preschool Children: A Randomized Trial (RESTART), on the basis of a DCM of stuttering (RESTART-DCM; de Sonnevile-Koedoot, Stolk, Rietveld, & Franken, 2015). This program's authors recently published a thoroughly peer-reviewed randomized clinical trial (RCT) of 199 children who were randomized to a head-to-head contrast of therapies: DCM versus LP (my second option, described below).

DCM stands for *demands and capacities model-based therapy*; its manual is available from Franken and Putker-de Bruijn (2007).

(b) The LP: The LP (program guide at Packman et al., 2016) clearly has abundant support in the published literature. I often explicitly refer to the LP during parent counseling if parents demonstrate any reluctance to acknowledge a child's ongoing stuttering and frustration with him or her because it provides strong evidence against the still-popular concern that it is best to ignore stuttering in preschoolers lest this interfere with spontaneous recovery. However, I will explicitly tell the parents that this is my second choice because although published data are positive for this approach, how it might work to help children's fluency is completely unknown, which concerns me. I will detail this and other concerns below.

Why Do I Rank RESTART-DCM Above Lidcombe for This Family?

Evidence Base

First, I want to reiterate that I am pleased that I have more than one approach to recommend with some confidence and a "backup plan" should the child not respond to my first choice or the parents disagree with my preference. Not every person responds to one approach to care, and we are far from knowing if one form of treatment for childhood stuttering surpasses others or even the rate of spontaneous recovery. Patient-centered care (PCC), the current medical mandate and guidance, emphasizes patient (and family) choice in the selection of health treatment options.

I place DCM above Lidcombe for a number of reasons, primarily resting on the quality of its RCT evidence, as well as its clearer mechanism of action. The recent RESTART RCT used a superior and best-defended standard for treatment evaluation—equipoise design—in which two treatments are compared, rather than treatment-versus-no-treatment design, which obviously sets a much lower standard for effects of intervention (Saxman, 2015). Lidcombe trials, conducted on much smaller patient groups, have not contrasted another therapy; they have only compared using LP against no therapy at all. The small individual studies are of some concern, even when combined in retrospect: The major RCT (Jones et al., 2005) enrolled roughly half of the declared recruitment goal (proposed “intent to treat” in their original approved statistical design). Currently, for an RCT, it is also ethically warranted to conduct clinical trials that include the “standard treatment” as one of the therapy arms. It can be argued, using Lidcombe’s own substantial publication record, that LP rather than wait list had to be the contrast treatment for the RESTART trial, as an ethical design (Stanley, 2007). No other published research has compared two stuttering interventions for preschool children: RESTART performed well in this design. In the future, this should be considered a standard practice in RCTs for early stuttering because we have strong evidence-based options to use rather than wait-list control.

The stronger RCT design for RESTART is paired with my concern that the quantity of publications reporting LP outcomes should not be considered indicators of superior quality of LP over DCM; despite the more than 85 publications authored by the original team and their affiliate researchers and clinicians over the years, the highest degree of adequately powered empirical support for LP comes from a book chapter (Onslow, Jones, Menzies, O’Brian, & Packman, 2012; rather than a peer-reviewed journal article) reporting a meta-analysis of 134 children from the LP team’s own publications. Thus, I find the single RCT by the RESTART team, reporting on 199 children randomized to either DCM or LP, with excellent fidelity checks on quality of intervention to be slightly more compelling than the outcome data for LP reported across numerous other publications.

The RESTART study actually provides strong and updated support for use of either LP or DCM because it found no difference in 18-month outcomes in children randomly assigned to the two programs and treated by carefully trained clinicians with verified fidelity to each program’s tenets and procedures. Thus, I am in the excellent position of being able to offer a family multiple evidence-based options for David’s treatment; this satisfies one of the aims of true EBP, which values patient preferences in therapy.

Mechanism of Action

Although I consider both DCM and LP to be roughly equivalent in their likely ability to help the child and consider both eligible for recommendation in this case, my preference is to start with the DCM treatment because it is

premised on a more multifactorial, individualized approach to each child’s profile with a “mechanism of action” consistent with my beliefs about the nature of stuttering.

Although I, like others, do not know what causes stuttering, I am challenged by concerns that Lidcombe is a program without an understood mechanism of action. When I treat, I would like to be able to articulate to patients or families how my therapy techniques are meant to induce behavioral change. To be sure, it may be acceptable to have a treatment that works well, even if we do not know why—despite its wide and effective use—and we do not know how “aspirin finds a headache” (Feldman, 2009). Also, in medicine, psychology, and education, many behavioral treatments that provide response-contingent feedback to change behavior make sense to me, if we are trying to control behaviors that are under a child’s control, such as nail biting or tantrums.

Stuttering seems somewhat different to me. Large numbers of published studies have detected both anatomical and physiological differences between adults who stutter and those who do not (see Chang, 2014, for a cogent summary of a rapidly growing body of literature), between stuttering and fluent children, and between persistent and recovered individuals who stutter. This research suggests a complex physiological basis for stuttering, albeit one that can be shaped to include additional behavioral, cognitive, and affective components as the child develops learned responses to the environment (see summary by Smith & Weber, 2016).

So, my dilemma is, if you do not “learn” to stutter, how does a behavioral contingency program work to successfully obliterate the disorder? Many have suggested that common factors, such as therapeutic alliance (Caughter & Dunsmuir, 2017), encouragement of self-efficacy in the parents who stutter and their children, and even the planned and graduated imposition of language challenge built into the parent–child interactions in LP (Bernstein Ratner & Guitar, 2006; Hayhow, 2011), could be responsible for children’s improvement. Certainly, that would explain the RESTART findings of no detectable difference between success rates of children receiving LP and DCM therapies.

Some advocates of LP suggest, as an explanatory mechanism, that Lidcombe praises (reinforces) fluent speech and, thus, increases its frequency. This is still not a plausible account, in my opinion. LP is operant and works on contingent praise and parental feedback that was formulated as a punishment response to extinguish the disfluent speech behavior. Simply punishing, however gently, is a behavior that research findings have led me to believe is grounded in poor integration among cortical systems does not cohere with my personal goal of understanding a treatment’s mechanism of action (Turkstra et al., 2016). In LP, the children are provided no guidance to help them figure out how not to stutter. Moreover, there are classic refutations of the hypothesis that parental attention to a behavior (such as LP does when urging parents to praise fluency) will increase its frequency, such as Bell and Ainsworth’s classic (1972) finding that promptly responding to infants’

crying tends to *reduce* it rather than increase its likelihood. This is undoubtedly because a large body of research over the years has shown that the complexities of human language in its natural communicative contexts are not really analogous to the behaviors that can be easily conditioned in animals, let alone people. When I search for comparable uses of operant conditioning in health treatment for other health or developmental problems, I find few references past the 1970s, with the major exception of LP and severe behavioral problems in children. Behaviors most responsive to operant conditioning tend to be those over which the subject has some measure of volitional control. Stuttering does not fit this requirement, in my view.

Critically, recent studies additionally question LP's purported mechanism of action. Recent work from the LP team itself shows no relationship between the accuracy of the operant contingencies and the child's fluency outcome (Donaghy et al., 2015). More recently, Swift et al. (2016, p. 22), working with members of the LP team, extended these findings and noted that "the results from the present study suggest that verbal contingencies for stuttering might not be contributing to the treatment in the way in which it is assumed." Both studies performed detailed analysis of LP parent-child interactions, using the LP team's own primary data. Simply put, the parental contingencies don't work.

The current research literature increasingly converges on a definition of *stuttering* as a neurologically based disorder that may carry a risk of genetic transmission, involving speech motor coordination; in people who stutter, speech coordination appears to be destabilized by language or dual task demand, among other stressors (Büchel & Sommer, 2004; Neef, Anwander, & Friederici, 2015; Smith & Weber, 2016). Thus, how do behavioral contingencies work to permanently reset this problem? So far, this question has not been asked, let alone answered.

In contrast, there is a large and diverse literature that has explored the benefits of component pieces of DCM therapy. These components are numerous but tailored to individual presentations of parent-child interaction. They include, as per the online manual, reducing fluency-disrupting influences in a child's environment and on task demands, in both experimental and natural settings in numerous ways (see, e.g., nonexhaustive examples from LaSalle, 2015; Ryan, 2000; Sawyer et al., 2017; Stephenson-Opal & Ratner, 1988). Some relate to adjustments in time pressure, both in terms of conversational flow and in terms of adult speech models. Some relate to adjustments in the linguistic components of parent-child interaction meant to strengthen children's syntactic and semantic skills, such as frequent use of recasting (Cleave, Becker, Curran, Van Horne, & Fey, 2015). Taken together, the components of the RESTART program borrow heavily from a highly researched and productive body of parent-child interaction literature that has produced enormous benefits when deployed in other areas of communication development and disorder in young children (see Bernstein Ratner, 2013, for a clinically relevant summary). Additionally, these modifications are directly related to known

weaknesses in the motor, linguistic, and other systems in children who stutter (cf., examples in Bauerly & Gottwald, 2009; Bernstein Ratner & Sih, 1987; Gaines, Runyan, & Meyers, 1991; MacPherson & Smith, 2013).

I think that Lidcombe, RESTART-DCM, and similar programs may work due to common factors, such as parent acknowledgment, protected talk time, scaffolded language interaction, and the development of self-efficacy in the child ("You can do this; try it"; Bernstein Ratner & Guitar, 2006). However, it is easier for me to understand my own recommendations and counsel parents in recommending a program, such as DCM, that works to problem-solve individual children's fluency aggravators and facilitators, using specific adjustments in environmental contexts for child conversation that have been individually validated as methods for reducing the frequency of stuttered events. In contrast, the only evident mechanism of action in LP is the frequency of contingent feedback. Historically, there has been no effort to show that the child's stuttering rate can be varied if the contingency schedule varies, a major premise of most operant interventions. The more recent reports by Donaghy et al. (2015) and Swift et al. (2016) leave me even less sure how LP works, even when I see successful outcomes.

I hope that we will continue to add to our body of successful treatment approaches for early stuttering because of its high spontaneous recovery rate, which complicates even the most positive of RCT findings. When 70%–80% of children appear to spontaneously recover from stuttering (Yairi & Ambrose, 2013), the sample size required to provide sufficient statistical power to distinguish between two treatment options is quite large. It is easy enough to find statistical calculators online to work this out in a somewhat simplistic fashion. Other fields have similar problems, as do our colleagues working with late-talking children and childhood seizure disorder (see Fawcett et al., 2007, for a representative consideration of how hard it is to document intervention effectiveness when people tend to get better even without intervention). Thus, the statistics problem for preschool stuttering is somewhat daunting.

What will it take to know how successful early stuttering therapies are? I will take the most conservative (smallest sample size) estimate I ran on a sample size calculator (Kane, 2016). If we believe that either treatment reduces the often-proposed likelihood of about 1% that a child will continue on to be an adult who stutters, against total effectiveness (0% in treated children), we need 100 children in a single-arm study against no treatment at all. That is one reason why I consider the LP program's self-authored meta-analysis adequately powered. However, if we compare two treatments and presume that one can boast that it halves the persistent rate to 0.5% and that the other totally cures stuttering (0% likelihood as an adult), we need more than 2,000 children per group. All of this is to say that the current debate over "best treatments" may be well ahead of our ability to know whether all current treatments may be hastening normal recovery from stuttering and just leaving high-risk children behind. In summary, because I am not

overjoyed with the strength of statistical evidence for even our two most strongly evidence-based treatments for young stuttering children, I feel that I should not limit my recommendations to a single option.

As noted earlier, both DCM and LP are parent-administered programs that require parent training and consultation, although daily activities are not lengthy and should be achievable even by parents with very busy schedules. The LP has been explored in numerous permutations over the more than two decades since its first successful reports, among them a telehealth delivery option (e.g., Lewis et al., 2008). Although RESTART is a much younger program, it is sufficiently similar in the scope of its parent education and counseling component, content of instruction notwithstanding, that I might explore a telehealth option of RESTART if scheduling problems emerge, given multiple reports of success with LP administered via telehealth systems or webcam (O'Brian, Smith, & Onslow, 2014).

The Joint Responsibility of Parents and Therapists in Selecting Therapies

Why My Recommendations Will Include More Than One Option: Client-Centered Care

As noted earlier, as a therapist, as an individual, and as a parent myself, I am uncomfortable with any recommendation that does not provide choice. Virtually nowhere in modern medicine are you given a single treatment option for a health challenge; this is something that the medical profession now seriously reckons with, particularly in its evaluation of patient choice, PCC, and RCTs. The emphasis on PCC across health interventions is growing daily and promises to improve on benefits of EBP (Epstein & Street, 2011). Current advisement cautions that

the most appropriate choice of outcome should reflect the benefit-to-harm balance for individual patients in the population sampled, not for the population as a whole or by considering benefits and harms separately. The societal value of medical decision making is determined by the potential effect on individual patients, who simultaneously experience both harms and benefits. (Kraemer, 2016, p. 7)

PCC is mindful that what seems to work for large numbers of people in large trials (as measured by mean responses) actually did not work for large numbers of individual patients; this is increasingly evident for pharmacological agents, which, in practice, may help fewer than one in four to 25 patients (Schork, 2015). This, in turn, has changed conversation in EBP from the primacy of the RCT to the need for “one-person trials” (Schork, 2015). Because patient response to recommended therapies may vary, along with their acceptability and side effects, increasingly, health providers recognize that patients should be given choices, both at the start and throughout a course of therapy.

Shared decision making is the “pinnacle of patient centered care” (Barry & Edgman-Levitan, 2012, p. 780),

who note that “for most medical decisions, however, more than one reasonable path forward exists.” In providing the patient with informed choice, EBP must now confront legislatively mandated PCC and patient options (Frank, Basch, & Selby, 2014).

Thus, I find the debate topic to recommend best choices in treating this child to be somewhat odd. I feel that we should have been charged to supply a list of possible options for working with this child and options that would remain available should the child not respond optimally to the first one chosen. *I believe that our clients and families need choices. They need more choices, not fewer choices, and they need to be enabled to make the right choices for their child and for their families.* A debate format seems to presume a single winner (at least it did back in the day when I was a collegiate debate coach). In contrast, modern medicine is not a zero sum game, where if one program seems effective in helping people, another program loses its own evidence of effectiveness. Further, treatment options are not irrevocable; if something does not seem to work, there needs to be a “Plan B.”

In my experience, choice is particularly important when recommending the LP. Personally, having counseled parents for a number of decades, I know that I am not alone in not understanding how Lidcombe treatment should help the child, although I gladly share with families the large literature that it does. Research has suggested that the acceptability of behavioral treatment components may be quite variable and that treatments endorsed by a therapist may not necessarily be viewed as acceptable to consumers (Kazdin, 1980; Reimers, Wacker, Derby, & Cooper, 1995). Reimers et al. observed that parents were generally happier with positive reinforcement than other aspects of operant intervention when trying to manage child behavior problems. In addition, they noted that parental ratings of the acceptability of behavioral interventions are influenced by the parents' causal attributions of their children's behavior. That is, if parents attribute their children's problematic behaviors to be the result of physical causes, rather than child choice, they may view behavioral interventions as less acceptable. Thus, I find that some parents are not happy with praise and correction as reasonable shapers of a behavior, such as stuttering. For these parents, I want to offer choices, particularly because the state of our knowledge regarding superiority of any one approach even over spontaneous recovery is at best preliminary.

No One Therapy Works for Everyone: Why EBP Does Not Stop With the Selection of a Therapy Approach

I believe that it is logically impossible that one treatment works equally well for all patients, let alone all children who stutter. What would you do if given only a single option for treatment of any health condition, from allergies to insomnia to cancer? What would you do if you were told that your insurance carrier or physician had decided

to only offer the treatment that they deemed to be of highest quality according to their criteria, even though a PubMed search clearly revealed other successful treatments? In posing this question, I am not talking about grasping at desperate straws. I am talking about clearly documented effective treatments that simply have fewer publications showing effectiveness but no studies that show lack of effectiveness. In other words, lesser amounts of evidence that something works is not evidence that something does not work. As a field, I would like us to reject the conclusion that any treatment with the larger body of research is the best treatment, even beyond my concern that most problems do not have a single best solution. That is not how EBP is supposed to work.

The Next Step is Monitoring Progress

Because it is reasonable to assume that no one therapy will work for everyone equally well, EBP does not end with selecting a therapy, although many diagrams of the process, including the one at the American Speech-Language-Hearing Association website (Mullen, n.d.), suggest this closed loop. Regardless of which first-line approach for direct therapy is chosen after mutual discussion between the therapist and the family, it is imperative to reevaluate response to the treatment after a predetermined period of time to ensure that the approach selected works for the actual client being treated (Fineout-Overholt & Johnston, 2007). I would choose an evidence-based time interval after which to reevaluate the child's progress. Based upon the RESTART trial data, which showed that children who would respond to the randomized assigned treatment primarily showed a response within 3 months (as measured by percentage of stuttered syllables [%SS], the primary outcome measure for LP and a major measure for DCM).

The benefits of reconsidering a therapy approach after monitoring therapy progress seem apparent to me. For example, consider data from a relatively recent published study of the effectiveness of LP in an American program (Guitar et al., 2015). A chart in that article showed that the range of time that it took for children to complete just Stage 1 of the LP extended to 96 weeks (almost two years ago) for at least one child in the study. This is beyond my personal comfort zone for continuing with my original plan for therapy. Even if I have faith in the evidence base of the LP program, something is not working optimally in this case. In the face of less-than-optimal response from the child or dissatisfaction with progress on the part of parents, I am willing to entertain other therapy options; this is why I want more therapies to show good promise, not one therapy to show best outcomes. For every average profile of performance reported for a therapy, some clients will do better, and some will do less well. I feel that it is important for me to be able to take single-subject outcome data and change my approach to the problem.

My personal opinion is that the best evidence that a clinician has is the evidence right in front of him or her (Bernstein Ratner, 2006, 2011). When things work, an

EBP has worked for your client as it worked for participants followed in a published report. When things do not work, it is time to investigate what has worked for other participants followed in other peer-reviewed reports. No medical or behavioral therapy works for everyone, and some patients even experience so-called *paradoxical responses*, in which a supposedly helpful intervention produces the opposite result (as in when a tranquilizer “hypes up” the patient, as has happened to me).

For me, the choice for this child and this family is what to recommend as a first-line approach to the problem and then what to do if, unfortunately, the child does not respond optimally. I believe that to do anything less disadvantages our clients and does not fulfill the spirit of EBP and its partner, PCC. I ask what you would do if you were David's parents and I had provided you with a single option for his care, then refused to change the approach, despite no improvement in his symptoms and despite dutifully fulfilling the therapy's guidelines.

Concluding Thoughts

In conclusion, my preference is to provide parents with options at all levels (when to begin structured intervention, which type of therapy might help David) to satisfy the dual requirements of both EBP and PCC. For direct therapy, my first-line recommendation for this family is either RESTART or Lidcombe, which appear to have equivalently good outcomes, according to published reports. As noted, I position RESTART somewhat higher in terms of evidence, coherence with my view of the nature of stuttering, and apparent mechanism of action. Many children respond well to both therapies, although it may remain to be seen whether either program really does better than extremely high rates of spontaneous recovery in the long run. I opt for explaining both to the family, explaining my personal preference, and also mentioning that even more options may be available if the child does not respond well to the first one we decide to try. Some clinicians are definitely more pessimistic about options available for treatment of early stuttering than I am (e.g., Bergþórsdóttir & Ingham, 2016).

After pondering the requested debate, I am more convinced than ever that what we need are better studies of who does better with what intervention approach (i.e., what works for whom; cf., Gargani & Donaldson, 2011; Norcross & Wampold, 2011), rather than what intervention approach “wins” some sort of evidentiary battle. Just because an approach has more publications does not mean it is more effective. We continually need alternatives in medicine for nonresponse, for paradoxical response, for patient preference, for therapist adherence, for therapist skill, and so on. To have alternatives and provide PCC, we should be looking for more good therapies, not ranking the few we have. That is how we serve our families best. The real goal of EBP seeks ever more evidence of what works, not evidence that only one thing works. The stubborn belief that only one approach works creates a conflict

of interest, in my opinion, between the clinician and the family.

I am not saying that a clinician should randomly flit among programs or components; well-researched therapy programs have carefully motivated and developed components, strategies, and sequentially ordered stages of implementation. What I am saying is that clinicians and parents need to do what is required of EBP: pick a documented approach that fits the facts of the case and coheres with what is known about the disorder to be treated, apply the therapy, and then evaluate the results. When a client is not responsive within an appropriate time frame, it is appropriate to reevaluate the choice of therapy.

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