We report on a survey of speech-language pathologists (SLPs) concerning service delivery to preschoolers who have Speech Sound Disorders (SSD) and the types of interventions used. With respect to service delivery, we know that preschoolers are likely to be served in two group sessions per week (Mullen and Schooling, 2010). However, there appears to be little reported research about interventions for SSD used by SLPs in the United States, except that of Lof and Watson (2008), whose survey had a focus on the use of Non-Speech Oral Motor Exercises (NSOME). Given that the research base of phonological interventions for SSD has changed markedly over the years, it is important to know what interventions SLPs use in treating preschoolers who have SSD.

The primary research questions for the present survey are these:

• Which service delivery models do SLPs use with children ages 3 - 6 who have SSD?
• Which interventions for SSD do SLPs use with this population?

Method

We designed a survey to be used with the Axio electronic survey system, which was developed at Kansas State University. The survey covered eight areas relating to practice, but we present only four of them here:

• personal and demographic information
• scheduling and service delivery models
• types of named therapy approaches used (see Table 1)
• choosing treatment targets

In the summer of 2011 we emailed the survey to 2,395 SLPs who were selected from the ASHA membership database using systematic random sampling. Of these, 2084 emails were successfully delivered, and 489 (24%) of the surveys were attempted and provided usable data, while 379 (18%) of the surveys were completed in their entirety. Among the SLPs who responded, the number of years post Master’s degree ranged from 2 to 44 years, and the median was 15 years.

Results

The most important findings from the survey were these:

• Preschoolers with SSD typically receive 30 to 60 minutes of therapy per week, and that total is the same whether the child is seen alone, in a group, or in a combination of group and individual sessions. Furthermore, the groups often have 2-3 members, and the groups are typically heterogeneous, that is, not all the children have SSD.
• Traditional intervention is the most widely used intervention for preschoolers with SSD (82% of SLPs).
• Intervention that takes phonological processes into account is used frequently by a large majority of the respondents.
• NSOME are used frequently by less than one-third of the respondents.
• Certain phonological and other interventions, such as PROMPT, that have been published in approximately the past 25 years are neither familiar to, nor used by, many of the SLPs in this survey. Except for PROMPT, respondents who graduated recently with the Master’s degree are not more familiar with recent advances for treating speech sound disorders than respondents who graduated earlier.

Discussion

The survey has revealed two aspects of service delivery that may be problematic for the profession, namely that (a) the typical service delivery model is not one that is supported by research, and (b) that respondents may not be using the most efficacious or effective interventions for preschoolers with SSD. In addition, the finding that recent Master’s graduates are in most instances no more familiar with recent advances in phonological treatment than their longer-practicing peers is problematic.
The remedies for these problems are multifaceted, and they include both research and training:

1. Research into service delivery models is needed, particularly with phonological interventions in real-world settings. Investigation is needed into the optimal amount of time the child receives, into the efficacy of group therapy (including heterogeneous versus homogeneous groupings), and into the fairly common practice of treating two different areas of communication in the same amount of time, e.g. SSD and Phonological Awareness.

2. Clinical phonologists need to make the case for phonological interventions by providing manuals for intervention and offering inservice training to clinicians who serve preschoolers.

3. Administrators in facilities that serve preschoolers need to ensure that the SLPs working there have the training and materials they need to use phonological interventions.

4. Revision of classroom and clinical teaching in the area of clinical phonology may be needed. Again, exposure to various interventions would be aided by the availability of manuals.

### Table 1

<table>
<thead>
<tr>
<th>Named interventions included in the survey</th>
<th>Interventions available before 1985</th>
<th>Interventions available after 1985</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traditional (Van Riper, 1939; Van Riper &amp; Irwin, 1958)</td>
<td>Metaphon (Dean &amp; Howell, 1986; Howell &amp; Dean, 1991, 1994)</td>
</tr>
<tr>
<td></td>
<td>Sensory Motor (McDonald, 1964)</td>
<td>Maximal Opposotions (Gierut, 1989, 1990, 1992)</td>
</tr>
<tr>
<td></td>
<td>Distinctive Features (McReynolds, 1972; McReynolds &amp; Bennett, 1978)</td>
<td>Nonlinear (Bernhardt &amp;Stoel-Gammon, 1994; Bernhardt &amp;Stemberger, 2000)</td>
</tr>
<tr>
<td></td>
<td>Multiphonemic (McCabe &amp; Bradley, 1975)</td>
<td>PROMPT (Hayden &amp; Square, 1994; Hayden, 2006)</td>
</tr>
<tr>
<td></td>
<td>Minimal Pairs (Weiner, 1981; Blache, Parsons, &amp; Humphreys, 1981)</td>
<td>Multiple Oppositions (Williams, 2000a, 2000b)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Morphosyntactic (Tyler, 2002; Tyler, Lewis, Haskell, &amp; Tolbert, 2002)</td>
</tr>
</tbody>
</table>

**Note 1:** The citations shown above indicate the earliest publications (rather than an exhaustive list of sources) so as to provide an indication of the relative times that these interventions became available to SLPs.

**Note 2:** There was also a general category of “Commercially available programs, such as Earobics™ (Cognitive Concepts, 1997) and Easy Does It™ (Strode & Chamberlain, 1997).”

**Note 3:** The order shown is not the order in which the interventions were presented in the survey, which was mixed, nor were the citations included.
Acknowledgement:
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References


