Dos and Don’ts
For Submitting Forms for ASHA CEUs

DO
- Attend the entire 60 minutes of the live session
- Complete the Forms found in the reminder email sent by sherry.lukker@pearson.com
- Submit an Attendance Sheet (paper) or a completed form electronically
  - ASHA Participant Form
  - Evaluation Form

Mail all forms postmarked no later than Wednesday, April 26, 2017

Darlene Davis, Pearson
19500 Bulverde Road, #201
San Antonio, TX, 78259

Questions?
Email darlene.h.davis@pearson.com

DO NOT
- Mail CE forms that will be postmarked after Wednesday, April 26, 2017.
- Fax or email completed CE forms
- Send your CE forms directly to ASHA
- Submit CE forms for “partial credit” [not available]
- Submit CE forms for attending the webinar recording on PearsonClinical.com or speechandlanguage.com.

GFTA3
Spanish

Overview of the Goldman-Fristoe Test of Articulation-3
Spanish Edition (GFTA-3 Spanish)
April 12, 2017

Marie Sepulveda, MA CCC-SLP
Research Director, Speech and Language
Disclosures

Marie Sepulveda is the Research Director for the GFTA-3 Spanish. She is employed by Pearson Clinical Assessment.

There are no relevant non-financial relationships to disclose.

The Pearson Assessment Division, the sponsor of this webinar, develops and distributes assessment and intervention tools for speech-language pathologists. Course information will only cover information that pertains to the effective and appropriate use of GFTA-3 Spanish, which was developed by Pearson Clinical Assessment. No other assessments will be discussed.

Agenda

All times shown are U.S. Eastern.

1:00 to 1:05 pm   Introduction and Overview
1:05 to 1:25 pm   GFTA-3 Spanish Administration and Scoring Overview
1:25 to 1:40 pm   GFTA-3 Spanish Interpretation
1:40 to 1:55 pm   GFTA-3 Spanish Technical Information
1:55 to 2:00 pm   Q&A
Learning Objectives

1. List two ways that the GFTA-3 Spanish was developed to specifically address the developmental patterns of Spanish-speaking individuals.

2. Discuss one example of a case when dialect-sensitive scoring would be appropriate.

3. List at least two factors to consider when evaluating an examinee's error patterns on GFTA-3 Spanish.

GFTA-3 Spanish Overview
GFTA-3 Spanish: Overview

- Assess consonants in multiple contexts—every consonant error is scored
- Age appropriate art for ages 2:0 – 6:11 and 7:0 – 21:11
- Norm referenced scores
- Data about the emergence and mastery of speech sounds based on productions of Spanish speaking individuals
- Dialect-sensitive scoring for a wide range of Spanish dialects
- Rate intelligibility of connected speech
- Digital administration and scoring options
Art Examples

Unique to GFTA-3 Spanish
- fruta
- sopa
- foto

Art Shared by English and Spanish Editions
- pato
- mesa
- dientes

Two sets of test stimuli

2:0 - 6:11 yrs.

7:0 + yrs.
Two sets of test stimuli:
Example

2:0 - 6:11 yrs.

7:0 - 21:11 yrs.

---

Phoneme production is tested in multiple contexts

Examples of words testing prevocalic /m/
- mesa
- manzana
- durmiendo

Examples of words testing postvocalic /s/
- nariz
- llaves
- tijeras
Who can administer this test?

Bilingual SLP

- Native or near native proficiency in Spanish
- Trained and experienced in administering and interpreting articulation tests
- Knowledgeable of speech sound disorders in the Spanish-speaking population
- Knowledgeable of Spanish phonological development and transcription using the International Phonetic Alphabet (IPA)
- Knowledgeable of pronunciation differences among speakers of Spanish dialects
Who can administer this test?

SLP collaborating with a bilingual professional

- The SLP is responsible for being familiar with
  - speech sound disorders in the Spanish speaking population
  - Spanish phonological development
  - transcription of the individual’s production of target words using the International Phonetic Alphabet (IPA)
  - dialectal differences
  - cultural considerations

- Collaborating with a bilingual speech-language pathology assistant (SLP-A) or other bilingual professional (e.g., psychologist, occupational or physical therapist, diagnostican, or teacher)

- The bilingual professional is trained on test administration, and administers the question prompts and suggested cues.

- For resources for working with bilingual professionals, see ASHA.org.

Sonidos-en-palabras

- 50 words
- Two sets of art stimuli
- Contents examined in prevocalic, intervocalic, and postvocalic contexts
- Measures 17 consonants (including 3 allophones), 11 R & L clusters
- Question Prompts and Suggested Cues
- Phonetic Error Analysis
Sonidos-en-palabras administration format

Present words and the examinee names the picture.

If a child doesn’t label a picture spontaneously, we provide a suggested cue.

You can provide a different cue that follows the format provided. If that doesn’t work, the child can imitate the target word.

Sonidos-en-palabras Score all consonants

<table>
<thead>
<tr>
<th>Item</th>
<th>Target Word</th>
<th>IPA Transcription</th>
<th>Response</th>
<th>Prew vocalic</th>
<th>Intervocalic</th>
<th>Post vocalic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pato</td>
<td>pato</td>
<td></td>
<td>p</td>
<td></td>
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<td>2</td>
<td>mesa</td>
<td>mesa</td>
<td></td>
<td>m</td>
<td>s</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>nariz</td>
<td>naris</td>
<td></td>
<td>n</td>
<td>r</td>
<td>s</td>
</tr>
<tr>
<td>4</td>
<td>vaca</td>
<td>baka</td>
<td></td>
<td>b</td>
<td>k</td>
<td></td>
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<tr>
<td>5</td>
<td>cama</td>
<td>kama</td>
<td></td>
<td>k</td>
<td></td>
<td>m</td>
</tr>
<tr>
<td>6</td>
<td>leche</td>
<td>lejfe</td>
<td></td>
<td>l</td>
<td>f</td>
<td></td>
</tr>
</tbody>
</table>
**Phonetic Error Analysis: Common Error Patterns: Place**

### Somos-en-palabras Phonetic Error Analysis

#### SINGLE CONSONANTS

<table>
<thead>
<tr>
<th></th>
<th>Prevoocal</th>
<th>Intervocal</th>
<th>Postvoocal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>p</strong></td>
<td>1 20</td>
<td>18 42</td>
<td></td>
</tr>
<tr>
<td><strong>b</strong></td>
<td>8 15</td>
<td>10 11 16 34</td>
<td></td>
</tr>
<tr>
<td><strong>t</strong></td>
<td>4 45 45</td>
<td>40 42 48</td>
<td></td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>37</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>

#### R AND L CLUSTERS

<table>
<thead>
<tr>
<th></th>
<th>Prevoocal</th>
<th>Intervocal</th>
<th>Postvoocal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>bl</strong></td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>br</strong></td>
<td>36</td>
<td></td>
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</tr>
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<td><strong>fl</strong></td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>fr</strong></td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>gl</strong></td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>gr</strong></td>
<td>37</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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### SINGLE CONSONANTS

<table>
<thead>
<tr>
<th></th>
<th>Prevoocal</th>
<th>Intervocal</th>
<th>Postvoocal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>p</strong></td>
<td>1 20</td>
<td>18 42</td>
<td></td>
</tr>
<tr>
<td><strong>b</strong></td>
<td>4 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>t</strong></td>
<td>8 15 36</td>
<td>10 11 16 34</td>
<td></td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>47 47</td>
<td>40 42 48</td>
<td></td>
</tr>
<tr>
<td><strong>k</strong></td>
<td>5 17 35 38</td>
<td>4 40</td>
<td></td>
</tr>
</tbody>
</table>

---

### Approximate Articulation

<table>
<thead>
<tr>
<th></th>
<th>Prevoocal</th>
<th>Intervocal</th>
<th>Postvoocal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>b</strong></td>
<td>9 20 32 38</td>
<td>13 45</td>
<td></td>
</tr>
</tbody>
</table>
Common Error Patterns: Manner

Phonetic Error Analysis lists phonemes arranged by:
- stops
- nasals
- approximants
- fricatives
- affricates
- liquids

Sonidos-en-palabras scores

- Standard scores
- Percentile ranks
- Age equivalents
- Growth scale values
Sonidos-en-oraciones

- Sentence imitation task
- One story for ages 4:0 to 6:11; the other for ages 7+
- Intelligibility score
- Report normative scores, including standard scores, percentile ranks, and age equivalents

Story for Ages 4:0 through 6:11
Una visita al parque

Story for Ages 7:0 to 21:11
No puedo abrir mis ojos

---

Sonidos-en-oraciones
Score all consonants in target words only

<table>
<thead>
<tr>
<th>Story Text</th>
<th>New</th>
<th>Target Word</th>
<th>RF Transcription</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedro trata de abrir los ojos, pero no puede.</td>
<td>ojos</td>
<td>ojos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cuando abre sus ojos un poco, ve que está durmiendo en su cama.</td>
<td>ojos</td>
<td>ojos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>El sol brilla fuertemente y lo obliga a cerrarlos otra vez.</td>
<td>sol</td>
<td>sol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>El sol brilla fuertemente y lo obliga a cerrarlos otra vez.</td>
<td>brilla</td>
<td>brilla</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Intelligibility Rating: 1 2 3 4
4 brilla brilla
Sonidos-en-oraciones
Phonetic Error Analysis

- Organized by stops, nasals, approximants, fricatives, affricates, liquids
- Not all phonemes are represented

Sonidos-en-oraciones
Intelligibility rating

Ya es de noche.

Intelligibility Rating: 1 2 3 4
## GFTA3 Spanish

### Sonidos-en-oraciones
Intelligibility rating

<table>
<thead>
<tr>
<th>Intelligence Rating Subtotals</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>NR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR</td>
<td>0</td>
<td></td>
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</tbody>
</table>

### GFTA-3 Spanish intelligibility rating summary

<table>
<thead>
<tr>
<th></th>
<th>Total of Good Ratings (1)</th>
<th>Total of Fair ratings (2-3)</th>
<th>Overall intelligibility Rating</th>
<th>Intelligibility Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>15</td>
<td>13</td>
<td>13</td>
<td>40</td>
</tr>
</tbody>
</table>

### Table C.1: Intelligibility Ratings of the Normative Sample by A.

<table>
<thead>
<tr>
<th>Intelligibility rating</th>
<th>4.5-4.5</th>
<th>4.5-4.11</th>
<th>5.5-4.11</th>
<th>6.0-4.11</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 50%</td>
<td>51.1</td>
<td>51.0</td>
<td>40.0</td>
<td>26.8</td>
</tr>
<tr>
<td>≥ 50%</td>
<td>48.9</td>
<td>49.0</td>
<td>60.0</td>
<td>73.2</td>
</tr>
</tbody>
</table>

### Dialect sensitive scoring

## APPENDIX D

### Examples of Dialectal Variations

<table>
<thead>
<tr>
<th>Pho neme</th>
<th>Allophones</th>
<th>Dialectal variations</th>
</tr>
</thead>
<tbody>
<tr>
<td>/b/</td>
<td>[b] after pause or nasal tone, [b] intervocalic, all other places</td>
<td>[v] [vka] → [bka]/</td>
</tr>
</tbody>
</table>
### Vowel Errors Observations

<table>
<thead>
<tr>
<th>Vowel</th>
<th>Observations</th>
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</thead>
<tbody>
<tr>
<td>a</td>
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</tbody>
</table>

### Observations and/or Concerns

Observations and/or Concerns (Oral Motor, Apraxia, Other)
Sonidos-en-oraciones results

- Standard scores
- Percentile ranks
- Age equivalents
- Growth scale values
- Intelligibility measure

Assess Stimulability

- Option of checking stimulability on error phonemes
Administration and Scoring Options

Q-interactive

Q-global

Print Kit

Interpreting GFTA-3 Spanish Results
Gender differences

- Separate norms for females and males through the entire age range (2:0 through 21:11)

- Mastery for all phonemes exhibited in singleton and cluster productions:
  - Females
    - Most sounds developed by 6:0 to 6:11
    - Late developing sounds (7:0 to 8:0+): x, ñ, tapped r and trilled r, pr
  - Males
    - Most sounds developed by 7:0 to 7:11
    - Late developing sounds (8:0+): tapped r and trilled r

Emergence and Mastery Data

- GFTA-3 Premise [English and Spanish editions]:
  Phonemes should be tested in multiple contexts because productions can be affected by surrounding vowels and consonants and the complexity of the word structure. Children begin to correctly produce phonemes at different ages, with a time period between emergence and mastery of sounds.

  Low standard scores indicate that a child’s speech is not comparable to age/gender peers.
All sound productions are not created equal

Even in single word productions, accurate pronunciation of the target phoneme is influenced by context
- simple vs. complex syllable shapes
- production changes when the target is next to other consonants, vowels or blends

Has speech sound developmental data really changed?

Emergence
- Age at which a phoneme is present (one or more correct productions) in the child’s repertoire.
- Reported as the ages at which 50%, 75% and 90% of children spontaneously produced a phoneme correctly one or more times on GFTA-3 Spanish, based on age and sex.

Mastery
- Ages at which 90% of the GFTA-3 normative sample (by sex) produced the phoneme with at least 85% accuracy.
Emergence Data: When should a child be able to say a sound one or more times on GFTA-3 Spanish?

Table PR1: "Present" in the Normative sample

GFTA-3: Emergence Data; % of girls producing the phoneme one or more times correctly (multiple opportunities)
Mastery Data: When should a child be able to say a sound correctly with at least 85% accuracy on GFTA-3 Spanish? Mastery (Females)

Table 1.1: Ages at which 85% of the Normative Sample Correctly Produced Consonants by Pronominal, Intenrospective, and Postentrospective Position (Females)

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>3.0</th>
<th>3.3</th>
<th>3.5</th>
<th>3.7</th>
<th>4.0</th>
<th>4.3</th>
<th>4.7</th>
<th>5.0</th>
<th>5.3</th>
<th>5.7</th>
<th>6.0</th>
<th>6.3</th>
<th>6.7</th>
<th>7.0</th>
<th>7.3</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

GFTA-3 data: 90% of girls producing the phoneme 85% or more correctly (multiple opportunities).

Excerpt from "Spanish Sound Developmental Chart." The complete chart is available from ErxYears.org at http://exryears.org/4d/0/spanish.pdf

Developmental data on this chart show the range of ages of sound acquisition beginning with emergence of consonant and blends to mastery (90% correct productions). Syllable sound position data is collapsed.

GFTA-3 Spanish data show a similar pattern using emergence at one or more correct productions (50% for most phonemes tested*) and an 85% criterion for mastery.

GFTA-3 Spanish data indicate that it is NOT common for children to go from not producing a phoneme to spontaneously producing a phoneme accurately 85% or more of the time.

Most children produce phonemes correctly in certain contexts (e.g., when produced in specific vowel or consonant combinations before exhibiting mastery (85% correct production).
### Ana, age 2:2

<table>
<thead>
<tr>
<th>Type of it</th>
<th>Raw Score</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>All /i/ productions and R clusters</td>
<td>30</td>
<td>109</td>
<td>72.6</td>
</tr>
<tr>
<td>All /i/ productions and R clusters</td>
<td>23</td>
<td>113</td>
<td>80.7</td>
</tr>
<tr>
<td>4 errors</td>
<td>4</td>
<td>106</td>
<td>99.2</td>
</tr>
<tr>
<td>2 errors</td>
<td>2</td>
<td>108</td>
<td>90.4</td>
</tr>
</tbody>
</table>

### Ana, age 4:2

<table>
<thead>
<tr>
<th>Type of it</th>
<th>Raw Score</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>All /i/ productions and R clusters</td>
<td>30</td>
<td>91</td>
<td>27.4</td>
</tr>
<tr>
<td>All /i/ productions and R clusters</td>
<td>23</td>
<td>94</td>
<td>34.5</td>
</tr>
<tr>
<td>4 errors</td>
<td>4</td>
<td>119</td>
<td>80.7</td>
</tr>
<tr>
<td>2 errors</td>
<td>2</td>
<td>122</td>
<td>92.0</td>
</tr>
</tbody>
</table>

### Ana, age 6:2

<table>
<thead>
<tr>
<th>Type of it</th>
<th>Raw Score</th>
<th>Standard Score</th>
<th>Percentile Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>All /i/ productions and R clusters</td>
<td>30</td>
<td>78</td>
<td>5.5</td>
</tr>
<tr>
<td>Only /i/ productions and R clusters</td>
<td>23</td>
<td>79</td>
<td>8.1</td>
</tr>
<tr>
<td>4 errors</td>
<td>4</td>
<td>99</td>
<td>55.3</td>
</tr>
<tr>
<td>2 errors</td>
<td>2</td>
<td>102</td>
<td>47.3</td>
</tr>
</tbody>
</table>

### What we know to be best practice

- The GFTA-3 Spanish score should never be the sole determiner for eligibility for services.
- The GFTA-3 Spanish score ≠ a comprehensive assessment.
  - The GFTA-3 Spanish score indicates how a child compares to same age/same gender peers.
  - The clinician determines appropriate next steps.
- GFTA-3 Spanish standard scores provide one part of the evidence you report as part of the comprehensive assessment.
Interpreting assessment results--what we know to be best practice

- Examine standard scores to determine how an individual functions relative to peers
- Examine emergence and mastery data to identify phonemes that
  - should be emerging in the individual's repertoire
  - should be mastered by individuals at the same age

in addition to....

...qualitative GFTA-3 Spanish data

Based on child's age/gender, note performance and/or improvements
- Phoneme inventory
- Correct/incorrect phoneme productions in different syllable shapes and word contexts
- Developmental patterns
- Stimulability
- Productions in connected speech
- Intelligibility in words and sentences
In addition to the GFTA-3 Spanish results, obtain data from any of the following

- Spontaneous connected speech sample
- Parent interview (behavior at home, concerns, priorities)
- Preschool teacher interview (academic/social emotional impact; participation in classroom)
- Observations with adults and peers
- Dynamic assessment to identify techniques that elicit correct productions

What should my recommendations be?
What are the recommendation options?

Parents and teachers want to know that their concerns about a child's speech are being addressed. But that doesn't necessarily mean that enrollment in therapy is the next step.

- Monitor the child's speech in the classroom
- Do a re-check in six months
  - Improvement?
  - New facilitating context(s) acquired independently?
  - Implications

- Classroom Articulation lab
- Parent strategies
- Placement in Speech and Language services
Standardization Sample

- 860 individuals and additional samples for reliability and validity studies.
  - For each 12-month age group from 2:0–7:11, the normative sample included a minimum of 100 individuals.
  - For each 24-month age group from 8:0–12:11, the normative sample included a minimum of 100 individuals.
  - For the oldest age band (13:0–21:11), the normative sample included 91 individuals.

Standardization Sample

The sample included individuals from a variety of socioeconomic groups and geographical regions.

In order to represent a wide variety of individuals who speak a wide variety of Spanish dialects, the sample included individuals who live in
  - the United States (71%)
  - Puerto Rico (13.6%), and
  - Mexico (4.7%).
Standardization Sample

Individuals tested in the US were from families whose country of origin was one or more countries in Central and South America, the Caribbean, and Spain—17 countries in all.

- Argentina
- Colombia
- Cuba
- Dominican Republic
- Ecuador
- El Salvador
- Guatemala
- Honduras
- Mexico
- Nicaragua
- Panama
- Paraguay
- Peru
- Puerto Rico
- Spain
- Uruguay
- Venezuela

Evidence of Reliability

- Internal Consistency (Total sample)
  - Sonidos en palabras
    - Females: .93
    - Males: .93
  - Sonidos en oraciones
    - Females: .90
    - Males: .92

- Test-Retest (corrected r)
  - Sonidos en palabras (Ages 2:6 to 7:11) .93
  - Sonidos en oraciones (Ages 4:0 to 7:11) .85
Evidence of Validity

Correlation with PLS-5 Spanish Articulation Screening
- Ages 2:6 to 7:11
- Corrected $r = .70$

Speech Sound Disorder (SSD) Compared to Matched Control
- Ages 4:0 to 8:11

<table>
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<tr>
<th>GFTA-3 Spanish</th>
<th>SSD Mean</th>
<th>SD</th>
<th>Matched Control Mean</th>
<th>SD</th>
<th>Difference</th>
<th>Standard Difference (effect size)</th>
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Sensitivity and Specificity
- Ages 2:6 to 7:11
- Optimal cut score: -1 SD (85)
- Sensitivity $.88$
  - Probability that individuals who identified with a speech sound disorder* have a speech sound disorder
- Specificity $.91$
  - Probability that individuals who do not have a speech sound disorder were correctly classified

*Based on a pool of 30 bilingual SLPs' determination of a speech sound disorder based on criteria they use in their practice:
- standardized test results
- language sample
- observations
- informal assessment

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Questions?

Dos and Don’ts
For Submitting Forms for ASHA CEUs

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• Attend the entire 60 minutes of the live session
• Complete the Forms found in the reminder email sent by sherry.lckmnr@pearson.com
• Submit an Attendance Sheet (pay if more than one person is using your log-in)
  – ASHA Participant Form
  – Evaluation Form

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Darlene Davis, Pearson
19500 Bulverde Road, #201
San Antonio, TX, 78259

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