## SpeechPathology.com



# 2014 User Guide

### SpeechPathology.com

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## What Is SimuCase<sup>TM</sup>?

SimuCase is a web-based simulated case study application designed to support best practice in speech-language pathology. It provides numerous cases in multiple settings. This learning tool encourages the user to measure and improve clinical decision making in the area of assessment. Users might be university students, practicing speech-language pathologists, speech-language pathology assistants, or those who want more experience in with a specific type of case. The user practices screening, assessment, or intervention methods while interacting with virtual clients, family members, and professionals referred to as collaborators. By asking the right questions, collaborating with appropriate professionals, using proper tools, and interpreting data, the user can make a diagnosis, write recommendations, and send a report. Virtual simulations allow practice in a safe, nonthreatening environment and are intended to build knowledge, skill, and professional judgment—qualities that contribute to successful, competent clinicians.

#### An Integrated Curriculum: Using SimuCase in the Classroom

Simulations are powerful tools for learning with an untapped potential for formal education use in the field of speech-language pathology (Akilli & Cagiltay, 2006). When these simulations are blended with faculty instruction, research has shown significantly higher achievement results compared to students provided with traditional instruction (McGaghie, Siddall, Mazmanian, & Myers, 2009; Rieber, Boyce, & Assad, 1990). Thus, if SimuCase is structured as part of the curriculum, and feedback is provided via faculty and supervisors, it can enable learners to understand and transfer concepts more effectively than with a traditional curriculum alone. This facilitative instruction, combined with the experiential learning opportunities that SimuCase provides, creates a successful constructivist approach to teaching and learning.



Understanding that SimuCase is a simulated learning experience, users are encouraged to complete the simulation as many times as needed. The most powerful form of learning is through repeated practice. Therefore, users are encouraged to practice and learn from their mistakes and to spend as much time as needed working through a case. They should not be afraid to start over when mistakes are noted and they should not fear starting over often.

Williams and Jansen (2009, 2010) have shown that university students who completed a case multiple times or restarted a case when mistakes were made scored significantly higher compared to students who only completed a case one or two times (r = .60, n = 16, p = .01). Furthermore, students who spent several days working on a case using concentrated "thought time" after completing an online simulation scored significantly higher when compared to students who completed a simulation in one sitting (r = .52, n = 16, p = .05).

SimuCase can be used as a discussion tool with an entire class, used as a study tool for small groups of students, or can be used by individual users. In each of these learning environments, learners benefit from faculty support and feedback.

#### SimuCase with an Entire Class

SimuCase can be used in a large classroom setting simply by displaying SimuCase via an LCD projector and discussing the case as a class. This use allows students to work together and ask questions regarding the assessment process. This is an effective way to orient students to the SimuCase process, set expectations for learning and discuss all the topics and issues pertaining to a case. While this set up is ideal for group discussion and collaboration, it limits the amount of individual contribution to the assessment process.

#### SimuCase with a Small Group

SimuCase can also be used by small groups of students. Groups of two to three students can be assigned to work on a case and share their results within the classroom setting. In this way, students learn to work together and to share their individual experiences and ideas about a case. While students have additional support from their classroom peers, they are still challenged to work through a case and share their outcomes with other learners. Student groups can compete for "high scores" and share their successes and challenges. Faculty needs to be aware that when forming student groups, students with practicum experience may influence overall group performance.

#### Individual Use

SimuCase was primarily created for individual student use. Cases can be utilized to provide practice with new concepts, as well as provide remediation for learners struggling with specific ideas or skills. Students are encouraged to work through a simulated case multiple times. This application was created to allow the user to start and stop the assessment process as needed. A student can resume any case study or restart a case as needed. The Export Final Report function allows students to share their work with faculty and supervisors as they complete the assessment process.

#### SimuCase Case Categories

There are three categories of SimuCase experiences: screening, assessment and intervention cases. *Screening* cases are designed to improve the skill sets necessary for completion of a screen. These cases contain screenings for the user to practice the elements that contribute to a comprehensive screening protocol. *Assessment* cases encourage the student to exercise the clinical decision-making skills required for a full client assessment. The student is expected to interact with family and other professionals to gather information pertinent to the case, as well as administer assessments to make a diagnosis and provide recommendations. Finally, *Intervention* cases are designed to provide learners the opportunity to improve interventions skills; each case includes intervention activities that allow for practice of treatment methods.

Please note that all cases are created based on true patients and crafted to adhere to the state guidelines for where they reside.

#### Working, Saving and Submitting a Case

For each of the three case types, there are key functions that are similar as students work through a case: the clipboard, saving/exiting a case, and submitting a case.

#### Using the Clipboard

The **Clipboard** allows recording of data throughout a simulation. This is a feature designed to help organize user data; use of the clipboard is not scored. Decisions made throughout the case are added automatically from each of the tools. Additional notes can be entered by clicking the **Add Entry** button. Users can also delete notes in the Clipboard. The Clipboard can be enlarged while working in it by clicking the box in the upper-right corner.

Clipboard	Print Print	
I Referral li	nformation	
	Referred By: Supervising Speech-Language Pathologist Referred Information: You are a speech-language pathology assistant and assigned to work with Anna. Anna is a 4 year-old girl with single sound errors. Please complete your intervention and then report your findings to your supervising SLP.	
General l	nformation 🗸	
User Note:	+ Add Entry	
Add Ne Content:	w Entry	
	Discard Changes Save	

The Clipboard offers the option for users to enter General Information. This is an optional feature that allows users to record behavioral objectives such as conditions, student behavior and performance criteria. The user can add, edit, or delete text in the general information section at any time prior to submitting the case. All notes in the Clipboard are included in the final report so decisions made during the case can be reviewed once the case is submitted. As a reminder, use of the Clipboard is not scored.

#### Save/Exit

SimuCase has an auto-save function so the user does not need to worry about saving data while working within a case. To exit the program, select **Save/Exit**, and then choose from the following options:

Save My Progress and Exit—this feature allows the user to save all work with the case and to exit the program. Saved cases are listed in a user's pending course page.

Forget My Progress and Exit—this feature allows the user to exit and restart a case.

Return to Current Case—this feature allows the user to go back into the current case.



#### Submitting the Case

A simulation is not complete until the user chooses **Submit Case**—the final step in the simulation process. When clicking Submit Case, results regarding the user's competencies in each of the areas of decision making associated with the case type are provided.

In addition, the amount of time spent in the case is indicated, although is not a part of competency scoring. The time indicated is an estimate and includes the time it might have taken to complete a screening or assessment activity. Although time spent on a case is not considered in the competency scoring, the issue of time spent on a case is a good point of discussion for any of the cases included in SimuCase.

The user can view a printed report of his or her competencies and all clinical decisions he or she made throughout a case by **Exporting Final Report**. This final report is a PDF summarizing all actions taken within the simulation. The user's competency scores are also listed. Completed cases are saved on a user's Completed Case Transcript.

#### Client Name: Latreece

Examination Date: January 14, 2013

iii	Case History	55%		
2	Collaborators	28%		
had	Assessments	36%		
â	Diagnosis	57%		
æ	Recommendations	80%		
Ö	Completion Time	771 Minutes		
	YOUR SCORE	51.2%	Export Final Repo	t
	Overall Co	ompetency Rating	9	
	Deve	loping Competency		Export a PDF of all decisions made in a
	EMERGING	DEVELOPING	MASTERING	case
	Scoring Mode	Supplemental Activities		
			Restart the Simulation	Select a New Case

## SimuCase<sup>™</sup> Technical Requirements

SimuCase is cloud-based application with minimal technical requirements: a web browser and a high-speed Internet connection. For optimal performance we recommend the following:

Supported Internet Browsers: Safari version 5.0 or higher, Firefox version 6.0 or higher, Internet Explorer 9.0 or higher, Chrome version 14.0 or higher

To insure compatibility, users can select the **Browser Test** found on the SimuCase drop down menu to test the required browser settings



To verify the ability of your system to playback media (i.e. audio and video files) within the SimuCase application, the Browser Test page also includes automatic playback of a video file. You should see and hear the virtual patient introduction.



# **SimuCase is a mobile compatible application**. Supported devices include Apple and Android products, such as iPad and Motorola Xoom.

## SimuCase Browser Test

Additional recommendations for optimal performance of SimuCase include:

- JavaScript must be enabled
- Adobe Acrobat Reader (free from <u>get.adobe.com/reader/</u>
- Headphones are optional but highly recommended

We are here to help you! If additional technical support is needed, please contact SpeechPathology.com customer service at 1-800-242-5183 between the hours of 7 AM and 7 PM ET. You may also contact our support team via email at <u>simucase@speechpathology.com</u>

## SimuCase Frequently Asked Questions

#### Where Does the Case Content Come From?

SimuCase content has been provided by families from a variety of hospitals, schools, and clinics across the United States, including Cincinnati Children's Hospital Medical Center (CCHMC), the Cleveland Hearing and Speech Center, and numerous university clinics. Each case was created from an actual case submitted by a practicing speech-language pathologist. Please note that all cases are created based on true patients and crafted to adhere to the state guidelines for where they reside.

Once a case is created, at least two reviewers with expertise in the disorder area review the case content to insure evidence-based practices. Each reviewer evaluates scoring information and provides approval prior to release of a case.

#### How Long Should It Take a User to Complete a Case?

Understanding that SimuCase is a simulated case study experience for the speech-language assessment process, it should take users several hours to successfully complete a case. Since this experience is similar to the diagnostic process, users should expect to spend approximately 1-3 hours working through the diagnostic process.

#### Can a case be completed more than once?

YES! One of the greatest advantages of simulation is the opportunity for repeated practice. Learners should be encouraged to start over when dissatisfied with decisions or scoring.

#### Can students work on more than one case at a time?

YES! Each case is stored and scored independently within the SpeechPathology.com user account.

#### How does scoring work?

Scoring is based on the strength of the decisions students make within each section of a case. In general, students earn points for good, reflective decisions and lost points for poor decisions (rejected decisions). There are also decisions that are judged as acceptable, which results in no points awarded or subtracted. The points earned in each section are added together to determine the overall competency level of the student. The following scale is utilized to assign a competency measure:

- 90% or higher overall score = Mastering
- 70-89% overall score = Developing
- Lower than 70% overall score = Emerging

#### Are there any supplemental activities available?

YES! SimuCase assessment cases also include Supplemental Activities for use. These activities give you the option to:

- Create a Comprehensive Diagnostic Report—to develop your writing and reporting skills
- Create an Individualized Educational Program (IEP)—based on forms provided by the Ohio Department of Education
- Create an Evaluation Team Report (ETR)—based on forms provided by the Ohio Department of Education
- Create a Lesson Plan
- Create an Intervention Plan based on the assessment results, areas of concerns, and recommendations of the case

Click **Supplemental Activities** on the Results page to access these activities. All forms are provided in PDF format and can be downloaded to a local drive for printing and use.

## **Screening Cases**

*Screening* cases are designed to improve the skill sets necessary for completion of a screen. These cases contain screenings for the user to practice the elements that contribute to a comprehensive screening protocol. Please note that all cases are created based on true patients and crafted to adhere to the state guidelines for where they reside.

The following cases in the library are considered screening cases:

• Ben – speech, language and hearing screen – age 5

#### The SimuCase Screening Tools

The majority of SimuCase tools are presented in the toolbar at the top of the opening screen. Referral, Collaborators, Screening/Assessments, Screening Results, Summary, Save/Exit, and Submit Case are easy to access via the toolbar. An additional tool, the Clipboard, is open at the bottom of the screen and helps users organize the information they gather about the case. When first opening a case, the Clipboard will be active and the referral information will be open. The following sections walk you through the purpose and function of each of the menus in the toolbar.



#### Referral

The **Referral** tool allows the user to interact with the supervising speech-language pathologist to find out more information pertaining to the case. The user may select questions or type questions in the Ask Questions box. These responses can be viewed and printed at any time. All videos allow the user to adjust the volume, play at full screen, replay, rewind, pause, or stop.



#### Collaborators

The user can consult other family members and various professionals who may be working with the client using the **Collaborators** tool. Once chosen, a collaborator makes an opening remark; but then the collaboration occurs via typing questions to the chosen collaborator. Some collaborators will send a report to the user. Reports are sent as PDF files to the Clipboard, where they can be opened. For these custom cases, users must collaborate with the supervising speech-language pathologist to both gain and share information regarding the case.



#### Screening/Assessments

The **Screening/Assessments** tool allows the user to choose from a variety of screening and assessment measures. Users can print a PDF of all available assessment measures. Printing this PDF allows the user to plan ahead for an efficient session (much like what is required in the real world).



For all screening/assessment tools, users are expected to know the age range and appropriateness of an approach and activity; an inappropriate choice (e.g., due to age range) will result in negative points and affect the user's overall competency rating. Screening/Assessment tools are available in a number of formats. Computer-driven assessments are those that the computer automatically provides results. Users simply select the component they wish to utilize. When clicking **Administer**, a summary of the results of the assessment appears in the Interaction box. More detailed results of the screening or assessment are placed in the Clipboard. The user may add to the details in the Clipboard regarding any of the screenings or assessments at any time by clicking **Add Entry.** 



User-driven screenings/assessments are those that the user controls and all selections are interactive. The user observes, scores, and reports the response accuracy of the client. In some cases, the user-driven treatment is a graded assessment. Graded assessments are interactive and require the user to answer questions that are graded for accuracy. The number of questions tied to each response is variable and the user must answer all questions to advance through the graded assessment. Graded assessments results are NOT included in the clipboard, but will be reported on the results page and the final exported report at the completion of the case.



When clicking **Administer**, user-driven screenings/assessments play a video so the user can practice conducting the screening/assessment, scoring, and reporting. All videos allow the user to adjust the volume, play at full screen, replay, rewind, pause, or stop. Once the user completes an analysis, the data or results obtained may be entered into the clipboard. All screenings/assessments may be re-administered at any time, however, this extra time and effort affects the user's overall time.

## Screening Results

The **Screening Results** tool allows the user to indicate outcome of the screening. After making selections, the user clicks **Select**.

		SCREENING RESULTS		SUBMIT CASE
Hearing Screening Results Speech and Language Screening Results	Client Name: Ben Speech and Language Screen Results	× ing en		00:05:32
	<ul> <li>Fail Speech and Language Screer</li> <li>Refer for full Speech and Languag</li> <li>Evaluation</li> </ul>	e		
		Select	PE A QUESTION OR RE	ESPONSE

#### Summary

In addition to reporting screening results, the **Summary** tool allows the user to write a short narrative regarding the client's screening outcome. These details should include the results and if further evaluation is warranted. Scoring is based on the use of relevant key words included in the narrative. After keying in the summary, the user clicks **Save Summary**. The summary can be edited at any time until the case is submitted.

REFERRAL		SCREENING/ASSESSMENTS		LTS SUMMARY	SUBMIT CASE
Client Nam Type sur	COLLABORATORS	SCREENING/ASSESSMENTS	SCREENING RESU		<ul> <li>SUBMIT CASE</li> <li>00:06:19</li> </ul>
		Discard Changes Sav	e Summary	TYPE A QUESTION OR	RESPONSE

#### How Does SimuCase Screening Case Scoring Work?

Understanding that SimuCase is a simulated learning experience, users are encouraged to complete the simulation as many times as needed. The most powerful form of learning is through repeated practice. Therefore, users are encouraged to practice and learn from their mistakes and to spend as much time as needed working through a case. As they work through the case, if many mistakes are made, students are encouraged to begin again. They should not be worried about restarting a case for learning purposes.

SimuCase scoring is rated based on strength of decision-making skills. The following describes how decisions within each competency are scored.

#### Referral

Questions are rated based on strength of decision-making skills when gathering referral information. Users must be selective in the questions chosen. If questions are repeated or are redundant, points may be deducted (redundancy is not the best use of the user's, client's, or caregiver's time). Some questions may be irrelevant and score 0 points; other questions may be inappropriate for the case and will score negative points.

#### Collaborators

Points are awarded for identifying appropriate collaborators for a case and for asking relevant questions. Points are deducted for selecting inappropriate team collaborators. Once a collaborator is chosen, the user can ask the collaborator questions to obtain additional information about the case. Scoring is based on key words so users should keep their questions concise. Users are not deducted points for asking too many questions or the wrong questions of an appropriate collaborator.

#### Screening/Assessments

Points are awarded for administering appropriate screening/assessments. Each case has numerous possibilities for outcomes but it is the combination of screening/assessments that is scored.

In screening/assessments, users are deducted points for:

- Selecting inappropriate screening or assessment activity based on the case information
- Selecting an unnecessary screening or assessment activity
- Selecting an age-inappropriate screening or assessment activity
- Selecting two or more screening or assessment activities that measure the same outcome

#### **Screening Results**

Points are awarded for selecting the appropriate outcome for speech, language, and hearing screen. Points are deducted for each inappropriate selection.

#### Summary

Points are awarded for providing general statements regarding the outcome of the screening. Scoring is based on key word matching so users can keep their summary statements concise and phrase-like and address outcome and if further evaluation is warranted. However, as an instructor you can require a more formal summary and it will not affect scoring as long as a key word is entered.

#### **Areas Not Scored**

As mentioned previously, the final competency score and rating are calculated based solely on the decisions of the user. Use of the Clipboard is **not** scored. This is an optional feature that assists users with the treatment process. Graded assessment results are reported separately on the results page and within the final exported report, but are **not** included in the calculation of the final competency score or competency rating. The time it takes to complete a case is measured but is also **not** scored. The timer indicates total simulation play time. This can be defined as the time spent in the simulation, which helps users monitor their efficiency in making case decisions. Note that the estimated time it takes to complete specific treatment activities is included in the time spent in the simulation.

#### The SimuCase Competency Rating

A user's overall competency in screening a particular client is rated and indicated on the Results screen. The Results screen displays a user's overall performance in each of these areas:

- Referral
- Collaborators
- Screenings/Assessments
- Screening Results
- Summary

If a user earns a 90% or higher overall score, the Mastering competency rating is earned. If a user earns an overall score of 70-89% a Developing competency rating is earned. If a user fails to earn at least 70% an Emerging competency rating is earned.

## **Assessment Cases**

**Assessment** cases encourage the student to exercise the clinical decision-making skills required for a full client assessment. The student is expected to interact with family and other professionals to gather information pertinent to the case, as well as administer assessments to make a diagnosis and provide recommendations. Please note that all cases are created based on true patients and crafted to adhere to the state guidelines for where they reside.

The following cases in the library are considered assessment cases:

- Kara Lynn—Phonology—Age 3:6
- Latreece—Language and Literacy—Age 8
- Doug—Traumatic Brain Injury—Age 14
- Molly—Fluency—Age 11
- Carley—Language and Fluency—Age 3
- Colt—Voice—Age 12
- Oliver—Cognitive Disability/Dysphagia/AAC—Age 3
- Deon—Social and Emotional—Age 10
- Dora—Spanish Language Disorder—Age 3
- Felix—Bilingual Language Disorder—Age 7

### The SimuCase Assessment Tools

The majority of SimuCase tools are presented in the toolbar at the top of the opening screen. Case History, Collaborators, Assessments, Diagnosis, Recommendations, Save/Exit, and Submit Case are easy to access via the toolbar. An additional tool, the Clipboard is open at the bottom of the screen and helps users organize the information they gather about the case. When first opening a case, the Clipboard will be active and the referral information will be open. The following sections walk you through the purpose and function of each of the menus in the toolbar.



#### **Case History**

The **Case History** tool allows the user to interact with a virtual client or caregiver (e.g., a parent). By choosing a category of questions and then directly selecting questions within the category, the virtual client or caregiver responds. When a caregiver provides Case History responses, users can ask follow-up or probing questions by typing the question into the **Ask Parent a Question** box. As questions are asked, responses are placed in the user's Clipboard as though the user is taking notes. These responses can be viewed and printed at any time.



#### Collaborators

The user can consult other family members and various professionals who may be working with the client using the **Collaborators** tool. Once chosen, a collaborator makes an opening remark; but then the collaboration occurs via typing questions to the chosen collaborator. Some collaborators will send a report to the user. Reports are sent as PDF files to the Clipboard, where they can be opened.



#### Assessments

The **Assessments** tool allows the user to choose from a variety of resources—including both standardized tests and non-standardized tests and procedures—with which to evaluate the client. The assessment options are categorized by the domain or area of assessment (e.g., Articulation and Phonology, Fluency, Classroom Performance) and by subcategories within those areas. Users can print a PDF of all available assessment options categorized by domain and subcategories. Printing this PDF allows the user to plan ahead for an efficient assessment (much like what is required in the real world).



For all assessment tools, a brief description of the test or procedure is given as well as the reference/source. Users are expected to know the age range and appropriateness of an assessment tool; an inappropriate choice (e.g., due to age range, area of assessment) will result in negative points and affect the user's overall competency rating. A link to the Reference List is provided so users can refer to the original source for more information, including how to conduct a procedure and/or how to interpret results.

Administration of assessments is either computer driven or user driven. Computer-driven assessments are those that the computer automatically provides results. Users simply select the component they wish to assess, then the test or subtest they wish to administer. When clicking **Administer**, a summary of the results of the assessment appears in the Interaction box. More detailed results of the assessment are placed in the Clipboard. The user may add to the details in the Clipboard regarding any of the assessments at any time by clicking **Add Entry.** 



User-driven assessments are those that the user controls. The user observes, scores, analyzes, and interprets results. Examples of user-driven assessments include procedures to analyze a speech sample, a language sample, a play session, an interview, or an oral mechanism exam.

The user-driven assessments include blank forms to download and use when conducting the procedure and analysis. When clicking **Administer**, many user-driven assessments have a video file play so the user can practice conducting the procedure, the scoring, and the analysis. All videos allow the user to adjust the volume, play at full screen, replay, rewind, pause, or stop. Other user-driven assessment tools do not provide a video or audio file for analysis. Rather a checklist, written language sample, etc. is downloaded to the Clipboard for analysis. Once the

user completes an analysis, the data or results obtained can be entered into the clipboard. All assessments may be re-administered at any time, however, this extra time and effort affects the user's overall time.



#### Diagnosis

The **Diagnosis** tool allows the user to indicate a diagnosis. Categories and subcategories of diagnoses are provided as choices. Cases may have multiple diagnoses so users need to be thorough in their choices. Cases may also have no area of concern. Once choosing the categories/subcategories of diagnoses or indicating no concern, the user clicks **Select**.

DIAGNOSIS		×	00
AAC/Augmentative	Client Name: Latreece	Î	
Communication	Aphasia		
Aphasia	🔲 Anomia	E	
Apraxia	🔲 Broca's Aphasia		
Articulation/ Phonology/ Speech Disorders	Conduction Aphasia		
Attention/Behavioral	🔲 Global Aphasia		- Her
Autism/Social/Emotional	🔲 Wernicke's Aphasia	ASK PARE	NT A QUESTION
Central Auditory Processing	Select		

#### Recommendations

In addition to making a diagnosis, the **Recommendations** tool allows the user to write specific recommendations for the client. If intervention is required, that recommendation must be made as well as specific recommendations for remediation. Select **Add Another** 

**Recommendation** to add more than one recommendation per case. Once keying in all recommendations, the user clicks **Save Recommendations**. Recommendations can be added or deleted at any time until the case is submitted.



#### How Does SimuCase Assessment Case Scoring Work?

Understanding that SimuCase is a simulated learning experience, users are encouraged to complete the simulation as many times as needed. The most powerful form of learning is through repeated practice. Therefore, users are encouraged to practice and learn from their mistakes and to spend as much time as needed working through a case. They should not be afraid to start over when mistakes are noted and they should not fear starting over often.

SimuCase scoring is rated based on strength of decision-making skills. The following describes how decisions within each competency are scored.

#### **Case History**

Questions are rated based on strength of decision-making skills. Users must be selective in the questions chosen. If questions are repeated or are redundant when a question was already asked, points may be deducted (redundancy is not the best use of the user's, client's, or caregiver's time). Some questions may be irrelevant and score 0 points; other questions may be inappropriate for the case and will score negative points. Follow-up questions that gain additional information may be awarded additional points. Scoring for follow-up questions is based key words in the question. Each case has additional follow-up questions that will gain points toward the competency score and the key words will trigger a response from the interviewee.

#### Collaborators

Points are awarded for identifying appropriate collaborators for a case and for asking relevant questions. Points are deducted for selecting inappropriate team collaborators. Once a collaborator is chosen, the user can ask the collaborator questions to obtain additional information about the case. Scoring is based on key words so users can keep their questions concise. Users are not deducted points for asking too many questions or the wrong questions of an appropriate collaborator.

#### Assessments

Points are awarded for administering appropriate standardized or non-standardized assessments. Each case has numerous possibilities for assessments but it is the combination of assessments that is scored.

In assessments, users are deducted points for:

- Selecting inappropriate assessments based on the information and topic area (e.g., a stuttering assessment for a language case)
- Selecting an unnecessary assessment
- Selecting an age-inappropriate assessment (e.g., selecting the *Clinical Evaluation of Language Functions-Preschool* for an adolescent student)
- Selecting two or more assessments that measure the same outcome (CAAP and the HAPP-3)

#### Diagnosis

Points are awarded for identifying areas of concern for a given case. Each case study can contain one or several areas of concern or diagnoses. Each of these areas needs to be selected based on assessment results in order to show competency. Points are deducted for each inappropriate diagnosis identified. Note that the outcome of a case can also have no area of concern.

#### Recommendations

Points are awarded for providing general recommendations for each case. Scoring is based on key word matching so users can keep their recommendations concise and phrase-like (e.g., qualify for services, hearing re- evaluation, monitor speech development, phonological awareness). However, as an instructor you can require more formal recommendations and it will not affect scoring as long as a key word is entered.

#### Areas Not Scored

Use of the Clipboard is **not** scored. This is an optional feature that assists users with the assessment process. The time it takes to complete a case is measured but is also not scored.

The timer indicates total simulation play time. This can be defined as the time spent in the simulation, which helps users monitor their efficiency in making case decisions. Note that the estimated time it takes to administer specific tests and procedures is included in the time spent in the simulation.

#### The SimuCase Competency Rating

A user's overall competency in assessing a particular case is rated and indicated on the Results screen. The Results screen displays a user's overall performance in each of these areas:

- Case History
- Collaborators
- Assessments
- Diagnosis
- Recommendations

If a user earns a 90% or higher overall score, the Mastering competency rating is earned. If a user earns an overall score of 70-89% a Developing competency rating is earned. If a user fails to earn at least 70% an Emerging competency rating is earned.

#### Scoring Model

On the Results page, click **Scoring Model** to review an example of the breakdown of the skills for each case. Competencies are based on the American Speech-Language-Hearing Association's (2009) Knowledge and Skills Acquisition (KASA) standards. Each case has customized KASA competencies to track user performance.

## **Intervention Cases**

*Intervention* cases are designed to provide learners the opportunity to improve interventions skills; each case includes intervention activities that allow for practice of treatment methods. Please note that all cases are created based on true patients and crafted to adhere to the state guidelines for where they reside.

The following cases in the library are considered intervention cases:

Anna – Articulation – age 3:3

#### The SimuCase Intervention Tools

The majority of SimuCase tools are presented in the toolbar at the top of the opening screen. Baseline Data, Collaborators, Treatment, Client Progress, Summary, Save/Exit, and Submit Case are easy to access via the toolbar. An additional tool, the Clipboard, is open at the bottom of the screen and helps users organize the information they gather about the case. When first opening a case, the Clipboard will be active and the referral information will be open. The following sections walk you through the purpose and function of each of the menus in the toolbar.



#### **Baseline Data**

The **Baseline Data** tool allows the user to interact with the virtual client. By choosing a category of questions (i.e. language samples) and then directly selecting questions within the category, the virtual client responds. The user may also type questions in the Ask Questions box. These responses can be viewed and printed at any time. All videos allow the user to adjust the volume, play at full screen, replay, rewind, pause, or stop.



#### Collaborators

The user can consult other family members and various professionals who may be working with the client using the **Collaborators** tool. Once chosen, a collaborator makes an opening remark; but then the collaboration occurs via typing questions to the chosen collaborator. Some collaborators will send a report to the user. Reports are sent as PDF files to the Clipboard, where they can be opened. For these custom cases, users must collaborate with the supervising speech-language pathologist to both gain and share information regarding the case.



#### Treatments

The **Treatment** tool allows the user to choose from a variety of treatment activities which to evaluate the client. The treatment approach options are categorized by type of activity and each activity includes a variety of intervention techniques. Users can print a PDF of all available treatment options categorized by activity and approaches. Printing this PDF allows the user to plan ahead for an efficient treatment session (much like what is required in the real world).



For all treatment tools, users are expected to know the age range and appropriateness of an approach and activity; an inappropriate choice (e.g., due to age range) will result in negative points and affect the user's overall competency rating. Treatment tools are available in a number of formats. Computer-driven treatments are those that the computer automatically provides results. Users simply select the component they wish to utilize. When clicking **Administer**, a summary of the results of the treatment appears in the Interaction box. More detailed results of the treatment are placed in the Clipboard. The user may add to the details in the Clipboard regarding any of the treatments at any time by clicking **Add Entry.** 



User-driven treatments are those that the user controls and all selections are interactive. The user observes, scores, and reports the response accuracy of the client. In some cases, the user-driven treatment is a graded assessment. Graded assessments require the user to answer questions for each response. The number of questions tied to each response is variable and the user must answer all questions to advance through the graded assessment. Graded assessments results are NOT included in the clipboard, but will be reported on the results page and the final exported report at the completion of the case.



When clicking **Administer**, user-driven treatments play a video so the user can practice conducting the technique, the scoring, and the reporting. All videos allow the user to adjust the volume, play at full screen, replay, rewind, pause, or stop. Once the user completes an analysis, the data or results obtained may be entered into the clipboard. All treatments may be readministered at any time, however, this extra time and effort affects the user's overall time.

#### **Client Progress**

The **Client Progress** tool allows the user to indicate the accuracy for completed treatment activities. The user is expected to indicate the appropriate level of accuracy, take home activities, and indicate if the objectives were or were not met for the sessions. After making selections, the user clicks **Select**.

BASELINE DATA   🤽 COL		PROGRESS	SUMMARY	SUBMIT CASE	
	RESS 👩 Help	8		01:55:11	
/b/ Initial Position Word Level	Client Name: Anna				
/k/ Initial Position Word Level	/m/ Initial Position Word Level				
/k/ Isolation	/m/ Initial Position Word Level 10% accuracy				
/k/ Sentence Level	/m/ Initial Position Word Level 20%		é		
/m/ Initial Position Word Level	accuracy				
/p/ Initial Position Word Level	Im/ Initial Position Word Level 30% accuracy		<b>&gt;</b>		
Objectives	/m/ Initial Position Word Level 40% accuracy		ASK ANNA A QUE	STION	
Take-Home Activity	/m/ Initial Position Word Level 50% accuracy				
	/m/ Initial Position Word Level 60% accuracy				

#### Summary

In addition to reporting client progress, the **Summary** tool allows the user to write specific details regarding the client's session. These details should include the objectives met, accuracy relative to the achievable level of progress and follow-up steps to report to the supervising speech-language pathologist. Scoring is based on the use of relevant key words included in the narrative. After keying in the summary, the user clicks **Save Summary**. The summary can be edited at any time until the case is submitted.



#### How Does SimuCase Intervention Case Scoring Work?

Understanding that SimuCase is a simulated learning experience, users are encouraged to complete the simulation as many times as needed. The most powerful form of learning is through repeated practice. Therefore, users are encouraged to practice and learn from their mistakes and to spend as much time as needed working through a case. As they work through the case, if many mistakes are made, students are encouraged to begin again. They should not be worried about restarting a case for learning purposes.

SimuCase scoring is rated based on strength of decision-making skills. The following describes how decisions within each competency are scored.

#### **Baseline Information**

Questions are rated based on strength of decision-making skills when gathering language samples. Users must be selective in the questions chosen. If questions are repeated or are redundant, points may be deducted (redundancy is not the best use of the user's, client's, or caregiver's time). Some questions may be irrelevant and score 0 points; other questions may be inappropriate for the case and will score negative points.

#### Collaborators

Points are awarded for identifying appropriate collaborators for a case and for asking relevant questions. Points are deducted for selecting inappropriate team collaborators. Once a collaborator is chosen, the user can ask the collaborator questions to obtain additional information about the case. Scoring is based on key words so users should keep their questions concise. Users are not deducted points for asking too many questions or the wrong questions of an appropriate collaborator.

#### Treatments

Points are awarded for administering appropriate treatment activities. Each case has numerous possibilities for treatments but it is the combination of activities that is scored. In treatments, users are deducted points for:

Selecting inappropriate treatment activity based on the case information

- Selecting an unnecessary treatment activity
- Selecting an age-inappropriate treatment activity
- Selecting two or more treatment activities that measure the same outcome

#### **Client Progress**

Points are awarded for identifying the accuracy for an appropriate level of targeting the sound(s) in question for a given client, appropriate take home activities and the correct status of objectives. Points are deducted for each inappropriate selection.

#### Summary

Points are awarded for providing general statements regarding the progress of the client for each case. Scoring is based on key word matching so users can keep their summary statements concise and phrase-like and address met objectives, accuracy and follow-up steps. However, as an instructor you can require a more formal summary and it will not affect scoring as long as a key word is entered.

#### Areas Not Scored

As mentioned previously, the final competency score and rating are calculated based solely on the decisions of the user. Use of the Clipboard is **not** scored. This is an optional feature that assists users with the treatment process. Graded assessment results are reported separately on the results page and within the final exported report, but are **not** included in the calculation of the final competency score or competency rating. The time it takes to complete a case is measured but is also **not** scored. The timer indicates total simulation play-time. This can be defined as the time spent in the simulation that helps users monitor their efficiency in making case decisions. Note that the estimated time it takes to complete specific treatment activities is included in the time spent in the simulation.

#### The SimuCase Competency Rating

A user's overall competency in treating a particular client is rated and indicated on the Results screen. The Results screen displays a user's overall performance in each of these areas:

- Baseline Information
- Collaborators
- Treatments
- Client Progress
- Summary

If a user earns a 90% or higher overall score, the Mastering competency rating is earned. If a user earns an overall score of 70-89% a Developing competency rating is earned. If a user fails to earn at least 70% an Emerging competency rating is earned.

#### References

- Akilli, G.K., & Cagiltay, K. (2006). An instructional design/development model for game-like learning environments: The FIDGE model. In M. Pivec (Ed.), *Affective and emotional aspects of human-computer interaction game-based and innovative learning approaches* (Vol. 1, pp. 93-112). Amsterdam, The Netherlands: IOS Press.
- American Speech-Language-Hearing Association. (2009). *Knowledge and skills acquisition* (KASA) summary form for certification in speech-language pathology. Retrieved from <u>www.asha.org</u>
- McGaghie, W.C., Siddall, V.J., Mazmanian, P.E., & Myers, J. (2009). Simulation in undergraduate and graduate medical education: Implications for CME. *Chest*, *135*(3 Suppl.), 62S-68S.
- Rieber, L.P., Boyce, M., & Assad, C. (1990). The effects of computer animation on adult learning and retrieval tasks. *Journal of Computer-Based Instruction*, 17(2), 46-50.
- Williams, S., & Jansen, L. (2009, November). *Introduction to Simu-Case*<sup>™</sup>. Presentation at the annual convention of the American Speech-Language-Hearing Association, New Orleans, LA.
- Williams, S., & Jansen, L. (2010, April). *SimuCase<sup>™</sup>: Interactive case studies for student assessment*. Presentation at the annual conference of the Council of Academic Programs in Communication Sciences and Disorders, Austin, TX.
- Williams, S., Lewis, B., & Buchner, M. (2006). Creation and implementation of an interactive immersive virtual reality simulation program for training CASE students: Best practice diagnostic procedures for children with speech-language disorders. Unpublished paper, CASE Western University, Cleveland, OH.