

# SPEECH PATHOLOGIST'S CLINICAL PATHWAY FOR COMMUNICATION CHANGES WITH ALS

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The most recent PDF version of this pathway can be downloaded from the following websites:  
[www.dukespeechandhearing.com](http://www.dukespeechandhearing.com)  
[www.aac-rerc.com](http://www.aac-rerc.com)

This clinician's pathway is a guide for speech pathologists assisting patients that have communication changes with ALS. It identifies the team, assessment, treatments and intervention, medications, activity, and patient education for each stage of communication change. This clinician's pathway is only a guide. The care that you provide may be changed to meet your patients' individual needs.

Strive to make your patient's care and visits a positive experience. Encourage your patient to ask the team members any questions about speech changes, options to make communication easier, or ways to enhance communication.

### Notes

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### DISCLAIMER






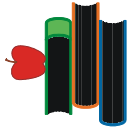
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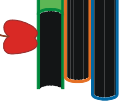
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Any comments or input related to this clinical pathway should be directed to Frank DeRuyter, PhD at [frank.deruyter@duke.edu](mailto:frank.deruyter@duke.edu)

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CARE PATH	EXPLANATION
<b>THE ALS TEAM</b> 	<p>Some or all of the following members may be a part of the ALS team:</p> <ul style="list-style-type: none"> <li>• Physician(s), nurse, physician assistant, and/or nurse</li> <li>• Speech-language pathologist (SLP), occupational therapist (OT), physical therapist (PT), rehabilitation engineer (RE), dietician (RD), assistive technology (AT) specialists</li> <li>• Muscular Dystrophy Association (MDA)/Amyotrophic Lateral Sclerosis Association (ALSA) Representative(s) and/or a social worker (SW)</li> <li>• Vendors and insurance company case managers</li> </ul>
<b>ASSESSMENT</b> 	<p>Throughout the disease, the patient's muscle function changes. The patient may be asked to schedule tests to determine changes in their muscles and ways to maximize the use of their muscles. This will likely include muscles of speech, swallowing, and respiration.</p>
<b>TREATMENTS/ INTERVENTION</b> 	<p>There are a variety of treatments that will become important to the patient throughout the course of the disease. These may include compensatory strategies, augmentative communication device / speech generating device (AC/DISGD), adaptive devices, breathing equipment, and/or procedures to treat increased salivations and maintain nutrition. Exercises to target strengthening muscles DO NOT help; rather they cause muscles to become more tired.</p>
<b>MEDICATIONS</b> 	<p>In some cases, medications may be available to assist with problems such as increased saliva or changes in muscle mass. The patient will need to speak with their physician.</p> <p>At some point, the patient may notice problems swallowing when they are tired or stressed. Refer to the "Patient's Clinical Pathway for Swallowing Associated with ALS" for more information.</p>
<b>ACTIVITY</b> 	<p>The patient should be encouraged to continue participating in enjoyable activities. Work with your patient to identify ways to conserve energy and manage stress so they are able to remain as independent as possible.</p>
<b>PATIENT EDUCATION</b> 	<p>Staff will explain to the patient and their family what to expect and how to cope with changes in communication and/or swallowing. It is important that they ask questions and get information that helps them plan and prepare for changes. Refer to the "Patient's Clinical Pathway for Swallowing Associated with ALS" for more information.</p>

CARE PATH	STAGE 1 NORMAL SPEECH PROCESSES	STAGE 2 DETECTABLE SPEECH DISTURBANCE	STAGE 3 REDUCTION IN SPEECH INTELLIGIBILITY	STAGE 4 USE OF AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (AAC)	STAGE 5 NO FUNCTIONAL SPEECH
<b>THE ALS TEAM</b> 	<ul style="list-style-type: none"> <li>Speech-language pathologist (SLP)</li> <li>Social worker (SW)</li> <li>Nurse, nurse practitioner</li> <li>Occupational Therapist (OT)</li> <li>Physical Therapist (PT)</li> <li>Assistive Technology (AT) Specialist</li> <li>Rehabilitation Engineer (RE)</li> <li>ALS/AMDA representative</li> <li>Physician(s)</li> </ul>	<ul style="list-style-type: none"> <li>SLP</li> <li>SW</li> <li>Nurse, nurse practitioner</li> <li>Occupational Therapist (OT)</li> <li>Physical Therapist (PT)</li> <li>Assistive Technology (AT) Specialist</li> <li>Rehabilitation Engineer (RE)</li> <li>ALS/AMDA representative</li> <li>Physician(s)</li> </ul>	<ul style="list-style-type: none"> <li>SLP</li> <li>SW</li> <li>Nurse, nurse practitioner</li> <li>OT/PT</li> <li>AT Specialist</li> <li>RE</li> <li>ALS/AMDA representative</li> <li>Physician(s)</li> <li>Vendor</li> <li>Insurance Case Manager</li> </ul>	<ul style="list-style-type: none"> <li>SLP</li> <li>SW</li> <li>Nurse, nurse practitioner</li> <li>OT/PT</li> <li>AT Specialist</li> <li>RE</li> <li>ALS/AMDA representative</li> <li>Physician(s)</li> <li>Vendor</li> <li>Insurance Case Manager</li> </ul>	<ul style="list-style-type: none"> <li>SLP</li> <li>SW</li> <li>Nurse, nurse practitioner</li> <li>OT/PT</li> <li>AT Specialist</li> <li>RE</li> <li>ALS/AMDA representative</li> <li>Physician(s)</li> <li>Vendor</li> <li>Insurance Case Manager</li> </ul>
<b>ASSESSMENT</b> 	<ul style="list-style-type: none"> <li>Informal observation of speech function</li> <li>Perform oral-motor exam</li> <li>Interview to include questioning patient/family of any changes in speech related to fatigue and/or different times of day</li> <li>Gather baseline data on rate and intelligibility (e.g., <i>Sentence Intelligibility Test</i>)</li> </ul>	<ul style="list-style-type: none"> <li>Analyze intelligibility and rate of speech (e.g., <i>Sentence Intelligibility Test</i>)</li> <li>Perform oral-motor exam</li> <li>Identify patient's communication needs: <ul style="list-style-type: none"> <li>Partners</li> <li>Environment</li> <li>Content</li> </ul> </li> <li>Identify speech subsystem(s) affected: <ul style="list-style-type: none"> <li>Resonance</li> <li>Articulation</li> <li>Phonation</li> <li>Respiration</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 2, plus</li> <li>Initiate AAC assessment with appropriate specialist(s)</li> <li>Determine daily communication needs: <ul style="list-style-type: none"> <li>Verbal &amp;/or written communication</li> <li>Contexts (phone, groups, 1:1, email...)</li> <li>Partners, Content</li> </ul> </li> <li>Determine Strengths/ Weakness: <ul style="list-style-type: none"> <li>Language, Cognition, Motor, Sensory</li> <li>Technology experience/ interest</li> <li>Motivation for high tech AAC</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 3, plus</li> <li>Continue to assess for low and high tech options that: <ul style="list-style-type: none"> <li>The patient will be able to use</li> <li>The patient will be motivated to use</li> <li>Will meet the patient's daily communication needs</li> </ul> </li> <li>Complete AAC evaluation with device selection, and obtain funding as needed</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 4, plus</li> <li>Continue to assess changing daily communication access needs</li> <li>Assess efficiency and effectiveness of current system <ul style="list-style-type: none"> <li>When/ where is it used?</li> <li>How often?</li> <li>With whom?</li> <li>Any modifications needed?</li> <li>Other tools needed?</li> </ul> </li> </ul>
<b>TREATMENTS/ INTERVENTION</b> 	<ul style="list-style-type: none"> <li>Increase awareness of potential changes in speech and overall disease progression</li> <li>Review spectrum of treatment options throughout disease progression</li> <li>Provide info re: local support group and community resources</li> <li>Provide info re: ALS resources</li> <li>Discuss voice banking</li> </ul>	<ul style="list-style-type: none"> <li>Establish compensatory strategies for both the speaker and the listener. For example: <ul style="list-style-type: none"> <li>Speaker strategies: <ul style="list-style-type: none"> <li>Slow down</li> <li>Overarticulate</li> <li>Increase use of gestures</li> </ul> </li> <li>Listener strategies: <ul style="list-style-type: none"> <li>Maximize hearing abilities</li> <li>Minimize environmental distractions</li> <li>Speak face-to-face</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Continue to encourage compensatory strategies such as: <ul style="list-style-type: none"> <li>Slow rate, increase volume</li> <li>Gestures, body language</li> <li>Letter/word/phrase board/</li> <li>Writing system</li> <li>Partner assisted scanning</li> </ul> </li> <li>Consider low tech options if applicable <ul style="list-style-type: none"> <li>Voice amplifier</li> <li>Palatal lift</li> </ul> </li> <li>Initiate evaluation of ACD/ISGD options if applicable</li> </ul>	<ul style="list-style-type: none"> <li>Continue to use and implement compensatory strategies <ul style="list-style-type: none"> <li>Letter/word/phrase board</li> <li>Writing system</li> <li>Partner assisted scanning</li> <li>Eye gaze boards</li> </ul> </li> <li>Training on use of ACD/ISGD</li> </ul>	<ul style="list-style-type: none"> <li>Continue to modify communication system to ensure it meets changing communication needs with appropriate high and low tech tools and successful access methods</li> </ul>
<b>MEDICATIONS</b> 	<ul style="list-style-type: none"> <li>If needed, encourage the patient to talk with their physician about medications that may help them manage saliva production.</li> </ul>	<ul style="list-style-type: none"> <li>If needed, encourage the patient to talk with their physician about medications that may help them manage saliva production.</li> </ul>	<ul style="list-style-type: none"> <li>If needed, encourage the patient to talk with their physician about medications that may help them manage saliva production.</li> </ul>	<ul style="list-style-type: none"> <li>If needed, encourage the patient to talk with their physician about medications that may help them manage saliva production.</li> </ul>	<ul style="list-style-type: none"> <li>If needed, encourage the patient to talk with their physician about medications that may help them manage saliva production.</li> </ul>
<b>ACTIVITY</b> 	<ul style="list-style-type: none"> <li>Discuss energy conservation strategies and technologies</li> <li>Encourage participation, if not independence, in activities</li> </ul>	<ul style="list-style-type: none"> <li>Encourage use of energy saving strategies, including: <ul style="list-style-type: none"> <li>Eliminate all strengthening exercises, including tongue and lip exercises</li> <li>Schedule and plan activities around energy level</li> <li>Plan lengthy conversations for a time when you feel you have the most energy</li> <li>Focus energy on enjoyable activities</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Continue to encourage and suggest energy saving ideas</li> </ul>	<ul style="list-style-type: none"> <li>Continue to encourage and suggest energy saving ideas</li> </ul>	<ul style="list-style-type: none"> <li>Continue to encourage and suggest energy saving ideas</li> </ul>
<b>PATIENT EDUCATION</b> 	<ul style="list-style-type: none"> <li>Train in awareness of potential changes in speech and overall disease progression</li> <li>Review spectrum of treatment options throughout disease progression</li> <li>Provide info re: local support groups</li> <li>Provide info re: ALS resources</li> <li>Discuss voice banking</li> <li>Provide information regarding immediate eligibility of SSDiB benefits</li> </ul>	<ul style="list-style-type: none"> <li>Provide relevant information from Stages 1-2 plus <ul style="list-style-type: none"> <li>Discuss expected communication changes in Stage 4</li> <li>Further discuss low-tech options from Stage 2</li> <li>Discuss criteria for further SLP intervention</li> <li>Emphasize the idea that augmentative communication supplements speech; it does not replace it</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Provide relevant information from Stages 1-3 plus <ul style="list-style-type: none"> <li>Discuss expected communication changes in Stage 5</li> <li>If the patient has an ACD/ISGD, discuss the possible need for different access (switch access, scanning, etc.), as physical status declines</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Provide relevant information from Stages 1-4 plus <ul style="list-style-type: none"> <li>Discuss use of low tech as a backup or in addition to high tech options</li> <li>Explain partner assisted scanning</li> <li>Establish reliable yes/no</li> <li>Encourage continued participation in communication to maintain or improve: <ul style="list-style-type: none"> <li>Social closeness</li> <li>Basic wants/needs</li> <li>Information transfer</li> <li>Social etiquette</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Provide relevant information from Stages 1-4 plus <ul style="list-style-type: none"> <li>Discuss use of low tech as a backup or in addition to high tech options</li> <li>Explain partner assisted scanning</li> <li>Establish reliable yes/no</li> <li>Encourage continued participation in communication to maintain or improve: <ul style="list-style-type: none"> <li>Social closeness</li> <li>Basic wants/needs</li> <li>Information transfer</li> <li>Social etiquette</li> </ul> </li> </ul> </li> </ul>