



TRAINING ROADMAP FOR

# SPEECH THERAPIST IN ACUTE CARE



MINISTRY OF HEALTH  
SINGAPORE



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# FOREWORD

Speech therapists (STs) play a crucial role in assessing, diagnosing, and treating individuals with communication and swallowing disorders across ages and work settings. STs working in acute care institutions in particular, must fulfil this core responsibility, while navigating a challenging environment where acute and possibly complex medical issues arise. They may treat individuals with pre-existing and/or acute medical conditions such as stroke, head trauma, seizures, cancer, which may occur alongside congenital conditions (e.g. cleft palate, Down Syndrome) and/or chronic diseases (e.g. COPD, dementia). These conditions all have some level of impact on communication and swallowing functions. When the conditions co-exist and interact, the complexity of assessing and treating the individuals increase. Furthermore the unpredictability and fast-paced acute care environment can create more challenges, which are even more daunting for new STs.

The training roadmap for Acute Care ST (I) and Acute Care ST (II) details the functions, key tasks, and competencies of the role of a ST working in an acute care environment. It also lists some potential training programmes for dysphagia to help a ST in this area of work, progress from novice to advanced levels of practice. Whilst this is not a comprehensive list, we hope that it will still be useful to guide STs and relevant stakeholders such as our healthcare counterparts and institutions, training providers, and funding agencies, in our training efforts to meet the evolving needs of the individuals we serve in the healthcare system.

to be continued on next page



# FOREWORD

continued

We would like to thank the MOH ST Panel members (both past and present) and subject matter experts in the ST community, who have all contributed to the development of this roadmap, over the past 6 years. Much time and effort have been spent to draw up this detailed roadmap and it is with the collective work put in by various individuals that this is possible.

Let us continue the good work of those who had come before us, keep abreast of the ever-evolving landscape in healthcare, and master the skills and knowledge needed to serve individuals in their healthcare journey!



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# TRAINING ROADMAP FOR SPEECH THERAPIST (ST) IN ACUTE CARE







# JOB ROLE DESCRIPTION AND PRE-REQUISITES

## Job Role Description

Acute care STs treat patients of all ages, from neonates to the elderly. Acute care STs serve paediatric and adult populations who have been admitted into acute healthcare settings including those in intensive care units. The acute care STs typically serve patients with acute and possibly complex medical issues affecting their ability to swallow and communicate (understand language, use cognitive processes, speech and language to express themselves). These individuals may have pre-existing and/or acute medical conditions such as stroke, head trauma, seizures, cancer, congenital conditions (e.g. cleft palate, Down Syndrome) and chronic diseases (e.g. COPD, dementia) that impact on their swallowing and communication functions. The acute care STs may work in both public and private acute care institutions.

## Job Role Pre-requisites

Job title	Acute Care ST (I)	Acute Care ST (II)
Qualifications	Basic ST qualification, i.e. Bachelor/Master of Science/Health Science (Speech and Language Pathology/Speech and Language Therapy/Speech Pathology)	
Type of work experience	0 years of service. No pre-requisite work experience.	1 year of service in acute care



# CRITICAL WORK FUNCTIONS AND KEY TASKS

Critical Work Functions	Key Tasks	
	Acute Care ST (I)	Acute Care ST (II)
<b>Acute care STs (I) are expected to demonstrate clinical bedside assessment and treatment skills in the following:</b>		
<b>1 Conduct Client Assessment and Therapy Planning</b>	<p>1.1. Perform clinical bedside swallowing assessment and identify the signs and symptoms of dysphagia, normal and abnormal swallowing anatomy and physiology.</p> <p>1.2. Determine individual's feeding / swallowing diagnosis and prognosis in order to make appropriate dietary (e.g. modified diets and enteral feeding) and therapeutic (e.g. compensatory vs. rehabilitative strategies) recommendations.</p> <p>1.3. Identify indications and contraindications specific to each patient for various non-instrumental and instrumental assessment procedures i.e. Videofluoroscopy study for swallowing (VFSS) and Fiberoptic endoscopy evaluation for swallowing (FEES).</p> <p>1.4. Identify signs of potential disorders in the upper aerodigestive tract and make referrals to appropriate medical personnel.</p> <p>1.5. Use technology to apply evidence-based practice and complement conventional therapy (e.g. surface electromyography (sEMG), IOWA Oral Performance Instrument (IOPI), Expiratory Muscle Strength Trainer (EMST), tele-health etc.</p>	



## CRITICAL WORK FUNCTIONS AND KEY TASKS

Critical Work Functions	Key Tasks	
	Acute Care ST (I)	Acute Care ST (II)
<p><b>2 Deliver Interventions</b></p>	<p>2.1. Assess, diagnose, and treat speech, language, social communication, cognitive-communication, voice, and fluency impairments/disorders in children and adults.</p> <p>2.2 Recommend Alternative Augmentative Communication (AAC) to any individual whose daily communication needs are not met by speech or writing, including aided/ unaided AAC, low technology/ high technology AAC</p> <p>2.3. Adopt tools such as electrolarynx for the restoration of speech.</p> <p>2.4. Consult with or participate in joint sessions with healthcare teams in conversations pertaining to mental capacity, discharge planning and/or discussions of care plans and return to work or school plans.</p>	<p>Tasks performed by ST in Acute Care (I) with the replacement of 2.3 with the following:</p> <p>2.3. Adopt tools such as speaking valves and electrolarynx for the restoration of speech.</p>





# CRITICAL WORK FUNCTIONS AND KEY TASKS

Critical Work Functions	Key Tasks	
	Acute Care ST (I)	Acute Care ST (II)
<b>3</b> Manage risk and quality	N.A.	<p>3.1. Provide swallowing and communication intervention to patients in the Intensive Care / High Dependency Units of the Surgical, Medical or any other specific disciplines.</p> <p>3.2. Perform developmentally or age-appropriate assessment of structure and function.</p> <p>3.3. Interpret patient's medical condition and progress for instance understanding the trend of vital signs, Glasgow Coma Scale (GCS), Arterial Blood Gases (ABG), secretion management etc.</p> <p>3.4. Hypothesize impact of previous/recent intubation (pertaining to length of time of intubation and time since extubation) on patient's communication and swallowing functions.</p> <p>3.5. Manage patient's feeding with presence of non-invasive ventilation.</p>



## CRITICAL WORK FUNCTIONS AND KEY TASKS

Critical Work Functions	Key Tasks	
	Acute Care ST (I)	Acute Care ST (II)
<b>3</b> Manage risk and quality (Cont'd)	N.A.	<p>3.6. Balance risks involved for recommendations of oral feeding with maximizing rehabilitation potential while considering critical care setting</p> <p>3.7. Treat feeding and swallowing disorders in collaboration with the multi-disciplinary team</p> <p>3.8. Recommend AAC or communication strategies when appropriate e.g. patients who are intubated.</p> <p>3.9. Conduct a full clinical examination of swallowing (including Modified Evan's blue dye test) and communication on tracheostomised patients with or without mechanical ventilation.</p> <p>3.10. Interpret the assessment findings and make appropriate recommendations and provide appropriate intervention, including safe feeding recommendation and speech options (i.e. finger occlusion, speaking valve, leak speech, above-cuff phonation, electrolarynx and AAC).</p>



# CRITICAL WORK FUNCTIONS AND KEY TASKS

Critical Work Functions	Key Tasks	
	Acute Care ST (I)	Acute Care ST (II)
<b>3</b> Manage risk and quality (Cont'd)	N.A.	<p>3.11. Identify different types of tracheostomy tubes, their components and settings to optimise communication and dysphagia intervention.</p> <p>3.12. Advise patient's suitability to deflate cuff and perform cuff deflation in collaboration with other members of the care team.</p> <p>3.13. Advise multidisciplinary team when to initiate spigotting protocol to wean off tracheostomy tube</p>





# CRITICAL WORK FUNCTIONS AND KEY TASKS

## Critical Work Functions

## Key Tasks

### 4 Participate in continuing education and research activities

Acute Care ST (I)	Acute Care ST (II) <sup>1</sup>
<p>4.1. Participate in discharge planning with other healthcare professionals</p>	<p>4.1. Develop clinical practice guidelines in collaboration with fellow colleagues for the assessment and rehabilitation of swallowing and communication for acute illnesses.</p> <p>4.2. Identify or develop suitable outcome measures in collaboration with fellow colleagues to assess effectiveness of service delivery within the acute setting.</p> <p>4.3. Participate in risk management and quality improvement initiatives to deliver safe and high-quality care.</p> <p>4.4. Participate in discharge planning with other healthcare professionals</p>
<p>4.2. Share profession-specific knowledge with students and other healthcare professionals.</p> <p>4.3. Promote education of public by conducting public awareness talks or running screening events.</p>	<p>4.5. Provide clinical education and supervision to ST and other healthcare professional students and colleagues.</p> <p>4.6. Promote education of public by conducting public awareness talks or running screening events.</p>

<sup>1</sup> 4.1, 4.3, under Acute Care ST (I) are common Key Tasks under both Acute Care ST (I) and (II).



# CRITICAL WORK FUNCTIONS AND KEY TASKS

## Critical Work Functions

## Key Tasks

### 4 Participate in continuing education and research activities (cont'd)

Acute Care ST (I)	Acute Care ST (II) <sup>2</sup>
<p>4.4. Appraise literature critically to inform clinical practice.</p> <p>4.5. Conduct research that is related to the normal or abnormal functions of human communication and swallowing, the processes underlying impaired function, and the development of new techniques for assessment and treatment. This research generates the evidence on which clinical practice is based.</p> <p>4.6 Perform research activities such as data collection and research writing e.g. posters and manuscripts.</p>	<p>4.7. Appraise literature critically to inform clinical practice.</p> <p>4.8. Conduct research that is related to the normal or abnormal functions of human communication and swallowing, the processes underlying impaired function, and the development of new techniques for assessment and treatment. This research generates the evidence on which clinical practice is based.</p> <p>4.9. Perform research activities such as data collection and research writing e.g. posters and manuscripts.</p> <p>4.10. Pilot innovative models of care.</p>

<sup>2</sup> 4.4 -4.6 under Acute Care ST (I) are common Key Tasks under both Acute Care ST (I) and (II).



## SKILLS AND COMPETENCIES

### Technical Skills & Competencies (“TSCs”)

	Acute Care (I)	Acute Care (II)
Client Assessment for Speech Therapy	Level 3	Level 4
Intervention Planning in Speech Therapy	Level 3	Level 4
Inter-professional Collaboration	Level 3	Level 4
Continuous Improvement Management	-	Level 4
Therapeutic Equipment Prescription in Speech Therapy	Level 3	Level 4
Therapy Intervention Implementation	Level 3	Level 4
Therapy Intervention Evaluation	Level 3	Level 4
Effective Client Communication	Level 3	Level 4
Health Promotion	Level 3	Level 4
Professional Consultation	-	Level 3
Clinical Teaching and Supervision	Level 3	Level 4
Research Proposal Development	Level 3	Level 4
Clinical Services Development	Level 3	Level 4
Audit Management	-	Level 3, 4

### Critical Core Skills (“CCSs”)

Acute Care (I)	Acute Care (II)
Adaptability (Basic)	Adaptability (Intermediate)
Learning Agility (Basic)	Learning Agility (Intermediate)
Decision Making (Basic)	Decision Making (Intermediate)
Influence (Basic)	Influence (Basic)
Collaboration (Basic)	Collaboration (Basic)

Refer to [Skills Future Singapore's \(SSG\) website](#) for more information on Critical Core Skills (“CCS”) and their reference documents.





# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

TSC Category: Patient Care		TSC: Client Assessment for Speech Therapy
<b>TSC Description</b>	Select and apply assessment methods and tools appropriate for clients and interpret findings	
<b>TSC Proficiency Level</b>	Level 3	Level 4*
<b>TSC Proficiency Description</b>	<p>Conduct evidence-based assessments of routine cases independently and seek guidance for assessment of complex and/or novel cases.</p> <p>Articulate new trends and evidence-based practices in client assessments</p>	<p>Conduct evidence-based assessments of routine and complex cases independently, demonstrating flexibility in selection and modification of assessment methods</p> <p>Provide guidance to junior therapists where necessary.</p> <p>Assist in the appraisal of new trends and evidence-based practices in client assessments</p>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Human anatomy and physiology</li> <li>• Pathophysiology of the clients' conditions relating to swallowing or communicating difficulties</li> <li>• Disorders of communication and swallowing</li> <li>• Possible contributing factors to communication or swallowing difficulty</li> <li>• Indications, contra-indications and precautions related to clients' conditions</li> <li>• Relevant medical or therapy history</li> <li>• Assessments relevant for communication and swallowing</li> <li>• Types of complex conditions in swallowing and communication disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Evidence-based assessment methods for complex disorders</li> <li>• Advanced clinical methods and techniques</li> </ul>

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

CONT'D

TSC Category: Patient Care		TSC: Client Assessment for Speech Therapy
TSC Proficiency Level	Level 3	Level 4*
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Identify purpose of interviews and structure the interviews to achieve required outcomes</li> <li>• Document assessment and case history findings appropriately</li> <li>• Seek help in interpretation of results in complex cases</li> <li>• Select appropriate and relevant assessments for routine and basic cases</li> <li>• Ensure clients' suitability for assessments</li> <li>• Plan and prioritise key assessment areas</li> <li>• Perform assessments for routine and basic cases</li> <li>• Analyse assessment results for routine and basic cases</li> <li>• Identify clients' suitability for further assessments</li> <li>• Adhere to clinical practice guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• Integrate or modify the assessment methods that would be relevant to the clients' cases</li> <li>• Analyse and interpret results for complex cases</li> <li>• Differentially diagnose complex communication and swallowing conditions</li> </ul>

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

TSC Category: Patient Care		TSC: Intervention Planning in Speech Therapy	
<b>TSC Description</b>	Plan interventions with appropriate treatment goals for clients		
<b>TSC Proficiency Level</b>	Level 3	Level 4*	
<b>TSC Proficiency Description</b>	Select and plan evidence-based interventions for routine cases independently. Seek guidance for selection and planning of interventions for complex and/or novel cases	Select and plan for evidence-based interventions for routine and complex cases independently. Demonstrate flexibility in the modification of intervention plans where necessary. Provide guidance to junior staff where necessary	
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Fundamentals of medical condition and multiple comorbidities and their potential effects on therapy interventions</li> <li>• Evidence-based intervention practices</li> <li>• Clinical reasoning to justify interventions</li> <li>• Multi-disciplinary approaches to therapy planning</li> <li>• Techniques to help clients to perform at the necessary level of function</li> <li>• Potential contraindications from therapy interventions administered</li> <li>• Clinical outcomes measures based on interventions administered</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced clinical methods and techniques in specific domain areas</li> </ul>	

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities





# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

CONT'D

TSC Category: Patient Care		TSC: Intervention Planning in Speech Therapy
TSC Proficiency Level	Level 3	Level 4*
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• World Health Organisation's International Classification of Functioning, Disability and Health Framework (WHO ICF framework)</li> <li>• Principles of specific, measurable, attainable, realistic, and timely (SMART) goals</li> <li>• Relevant outcome measures which can be used to track the effect of interventions</li> <li>• Clients' ability to learn, prognosis or intervention and ability to follow through new routines or techniques</li> <li>• Client-related factors that could impact achieving intervention goals</li> </ul>	
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Develop appropriate and effective evidence-based therapy plans</li> <li>• Provide relevant precaution measures of therapy interventions to clients</li> <li>• Successfully negotiate short-term and/or long-term goals with client</li> <li>• Ascertain clients' understanding of the problems and the intervention plans</li> </ul>	<ul style="list-style-type: none"> <li>• Assess clients' suitability to participate in the intervention plan being considered</li> <li>• Develop intervention plans that are evidence-based according to client assessment findings</li> <li>• Identify clients' motivation influences to implement plans</li> <li>• Integrate other health professionals or therapists' possible roles and assessment findings in intervention planning, if any</li> </ul>

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

CONT'D

● <b>TSC Category: Patient Care</b>	<b>TSC: Intervention Planning in Speech Therapy</b>	
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TSC Proficiency Level	Level 3	Level 4*
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Perform intervention planning based on organisational and/or departmental standards</li> <li>• Educate clients on rationale for interventions</li> <li>• Demonstrate appropriate prioritisations and client review frequency</li> <li>• Set specific, measurable, attainable, realistic, and timely (SMART) short-term and long-term goals in collaboration with client and/or family</li> <li>• Communicate intervention plans to clients and/or caregivers</li> <li>• Make referrals to other health professionals when necessary</li> <li>• Identify factors that may have an impact on client goals</li> <li>• Select appropriate measures that reflect achievement of goals set by clients</li> <li>• Consider client-related factors that impact achieving intervention goals</li> </ul>	<ul style="list-style-type: none"> <li>• Modify interventions accordingly in response to any client and/or therapy limitations or challenges</li> <li>• Plan for possible contingencies that may affect intervention plans</li> <li>• Discuss pros and cons and/or risks of suggested therapy interventions</li> <li>• Take holistic clinical view during intervention planning</li> </ul> <p style="font-size: small; margin-top: 20px;">* Level 4 assumes the fulfilment of Level 3 knowledge and abilities</p>



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

TSC Category: Stakeholder Engagement and Partnerships		TSC: Inter-professional Collaboration
<b>TSC Description</b>	Apply an integrated approach to coordinate and deliver inter-professional interventions to clients	
<b>TSC Proficiency Level</b>	Level 3	Level 4*
<b>TSC Proficiency Description</b>	Execute inter-professional interventions to provide holistic care to clients	Facilitate inter-professional interventions to provide integrated care to clients
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Principles of effective information exchange within the professional team</li> <li>• Various styles and methods of communication</li> <li>• Conflict resolution techniques</li> <li>• Healthcare sector referral processes</li> <li>• Current and relevant research, information and ideas for collaborative practices</li> </ul>	<ul style="list-style-type: none"> <li>• Techniques to develop processes and procedures to facilitate inter-professional cooperation</li> <li>• Strategies to drive collaborative practices within the team</li> </ul>
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Maintain effective communication channels to facilitate information exchange within the care team</li> <li>• Practice collaborative decision-making as part of healthcare team</li> <li>• Collaborate with inter-professional team members to achieve team goals</li> <li>• Adopt appropriate communication styles to meet the needs of the clients, families and team</li> <li>• Share constructive feedback to meet the needs of the clients, families and team</li> <li>• Apply conflict resolution techniques to address disagreements within the team</li> <li>• Make referrals to other services as appropriate</li> <li>• Access current and relevant research, information and ideas for collaborative practices</li> </ul>	<ul style="list-style-type: none"> <li>• Work closely with relevant stakeholders and/or agencies to deliver healthcare services</li> <li>• Review and develop processes and procedures to enhance collaborative practices as an inter-professional team</li> <li>• Develop goals, objectives and expectations for inter-professional teams</li> <li>• Facilitate cooperative work practices and allocation of resources for the inter-professional team</li> </ul>

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities





# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

TSC Category: Quality and Patient Safety		TSC: Continuous Improvement Management
<b>TSC Description</b>	Apply continuous improvement processes to optimise operating cost, task efficiency and effectiveness in production, services and processes	
<b>TSC Proficiency Level</b>	Level 4	
<b>TSC Proficiency Description</b>	Facilitate the organisation's systems and processes related to continuous improvement	
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Continuous improvement principles</li> <li>• Continuous improvement systems, tools and techniques</li> <li>• Organisational structure, functions, resources, policies, procedures and culture</li> <li>• Internal and external benchmarking principles and practices</li> <li>• Methods in developing effective communication in continuous improvement messaging</li> <li>• Types of continuous improvement activities and the implementation approach</li> <li>• Measurement criteria for continuous improvement performance</li> <li>• Methods for process gaps analysis</li> </ul>	
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Execute and supervise initiatives for continuous improvement</li> <li>• Implement and review savings, productivity and service improvements</li> <li>• Validate continuous improvement initiatives and activities as planned</li> <li>• Update processes or procedures as a result of the continuous improvement</li> <li>• Monitor continuous improvement progress against the identified Key Performance Indicators (KPIs)</li> <li>• Review the performance improvement before and after the implementation to identify further improvement opportunities</li> <li>• Execute corrective actions for issues arising during the implementation of continuous improvement activities in accordance with organisational procedures</li> <li>• Develop innovative solutions to supplement gaps in organisational processes and functions</li> </ul>	



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

TSC Category: Patient Care		TSC: Therapeutic Equipment Prescription in Speech Therapy	
<b>TSC Description</b>	Prescribe the appropriate therapeutic aids, devices, and equipment as required by clients		
<b>TSC Proficiency Level</b>	Level 3	Level 4*	
<b>TSC Proficiency Description</b>	Prescribe assistive devices for routine cases independently and seek guidance for complex cases	Prescribe assistive devices for routine and complex cases independently. Provide guidance to junior staff where necessary	
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Evidence-based practices</li> <li>• Client education principles and procedures</li> <li>• Goal setting methods and principles</li> <li>• Types of assistive devices</li> <li>• Client capacity and performance considerations</li> <li>• Department guidelines and standards on effective prescription of assistive devices</li> <li>• Applicable components for the review of assistive device prescription</li> <li>• Factors related to the use and non-use of assistive equipment</li> <li>• Different alternatives of assistive equipment</li> <li>• Health and safety concerns in the prescription of assistive devices</li> <li>• Referral procedures for relevant funds and/or assistance schemes available</li> <li>• Referral procedures to relevant equipment resellers</li> <li>• Outcome measures related to therapeutic equipment</li> </ul>	<ul style="list-style-type: none"> <li>• New and emerging assistive devices in the market for different client groups</li> <li>• Current research on new and/or existing assistive devices</li> </ul>	

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

CONT'D

TSC Category: Patient Care		TSC: Therapeutic Equipment Prescription in Speech Therapy
TSC Proficiency Level	Level 3	Level 4*
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Identify problem areas in self-care and the need for assistive devices</li> <li>• Assess home, work, school and other relevant environments to determine appropriateness of assistive equipment prescribed</li> <li>• Establish goals with the clients and take baseline measures of functioning using tools appropriate to the goals</li> <li>• Determine clients and/or caregivers' acceptance and compliance to the use of assistive equipment</li> <li>• Identify the need for fund application, and trigger the necessary referral processes, if applicable</li> <li>• Explain and select appropriate assistive equipment in collaboration with clients and/or caregivers</li> <li>• Provide training to clients and caregivers on prescriptive devices prescribed</li> <li>• Ensure safety and health of clients is not compromised by using the prescribed assistive devices by monitoring and evaluating client performance with the assistive devices before prescription</li> <li>• Consult other specialists, where appropriate, about specific issues related to clients' needs</li> <li>• Account for possible client changes which may affect the efficacy of the prescription</li> <li>• Analyse possible factors which may result in non-use of assistive devices</li> <li>• Review goals with clients following prescription of assistive devices</li> </ul>	<ul style="list-style-type: none"> <li>• Design initial trials to determine if the assistive devices new in the market are suitable for client groups in terms of performance and safety</li> <li>• Audit the processes and effectiveness of the assistive device prescriptions</li> <li>• Use new assistive technology</li> <li>• Guide junior staff in assessment, evaluation, prescription and training on the use of assistive devices</li> </ul>

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities





# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

TSC Category: Patient Care		TSC: Therapy Intervention Implementation
<b>TSC Description</b>	Select and apply assessment methods and tools appropriate for clients and interpret findings	
<b>TSC Proficiency Level</b>	Level 3	Level 4*
<b>TSC Proficiency Description</b>	<p>Provide therapy interventions for routine cases independently and seek guidance for the provision of interventions for complex and/or novel cases.</p> <p>Articulate new trends and evidence-based practices in intervention implementation</p>	<p>Provide therapy interventions for both routine and complex cases independently. Provide guidance to junior therapists where necessary.</p> <p>Assist in the appraisal of new trends and evidence-based practices in intervention implementation</p>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Client care plans and goals developed for the clients</li> <li>• Evidence-based intervention approaches</li> <li>• Range of skills relevant to intervention techniques for routine and complex cases</li> <li>• Types of equipment and resources available for use in interventions</li> <li>• Appropriate use of assistive devices</li> <li>• Appropriate handling and/or positioning of clients for various intervention methods</li> <li>• Factors that will affect participation in therapy</li> <li>• Biopsychosocial approaches to enhance treatment effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• Range of skills relevant to intervention techniques for complex cases</li> <li>• Emerging therapy interventions for complex cases</li> <li>• Advanced clinical methods and techniques</li> </ul> <p><i>* Level 4 assumes the fulfilment of Level 3 knowledge and abilities</i></p>



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

CONT'D

TSC Category: Patient Care		TSC: Therapy Intervention Implementation
TSC Proficiency Level	Level 3	Level 4*
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Possible client reactions to prescribed interventions</li> <li>• Methods to modify activities or equipment to minimise risk for clients during interventions</li> <li>• Appropriate use of support personnel for various interventions</li> <li>• Acceptable timeframe in which to complete interventions</li> <li>• Workplace safety and health protocols and guidelines, policies and procedures for infection control and emergency response</li> <li>• Clinical incident management frameworks</li> <li>• Reporting and documentation procedures for client assessments and interventions</li> <li>• Contributing factors that will affect client participation</li> </ul>	
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Demonstrate clinical reasoning skills in conducting the appropriate interventions to achieve set therapy outcomes</li> <li>• Administer routine interventions independently in an effective and safe manner</li> <li>• Demonstrate safe handling of clients and equipment</li> <li>• Acknowledge and consider the impact and implications of the interventions on the clients and other relevant stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Apply advanced interventions</li> <li>• Use advanced clinical reasoning skills to modify interventions based on the integration of evaluation results, observation of client performance as well as safety issues</li> <li>• Facilitate inter-professional interventions, where applicable</li> <li>• Assist juniors as appropriate to manage incidents during interventions according to organisational procedures</li> </ul>

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

CONT'D

TSC Category: Patient Care		TSC: Therapy Intervention Implementation
TSC Proficiency Level	Level 3	Level 4*
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Demonstrate awareness and sensitivity to clients and/or caregivers during intervention</li> <li>• Demonstrate awareness of how the interventions impact upon client outcomes</li> <li>• Communicate goals, therapy approaches and training to clients and caregivers</li> <li>• Communicate clear and accurate instructions appropriate to the clients' level of understanding</li> <li>• Engage, motivate and counsel clients during the course of the interventions</li> <li>• Identify risk factors associated with the clients' conditions</li> <li>• Take prompt and appropriate actions in response to the clients' adverse reaction to interventions</li> <li>• Manage incidents during interventions according to organisational procedures</li> <li>• Adopt an inter-professional team approach in delivering interventions, where applicable</li> <li>• Provide recommendations for modification of activities, and methods to address client needs</li> <li>• Integrate new evidence-based interventions into existing practices, under guidance</li> </ul>	

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities





# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

TSC Category: Patient Care		TSC: Therapy Intervention Evaluation	
<b>TSC Description</b>	Evaluate the effectiveness of therapy interventions through the monitoring of progress and outcomes of client recovery, values and goals as well as clinical indicators		
<b>TSC Proficiency Level</b>	Level 3	Level 4*	
<b>TSC Proficiency Description</b>	<p>Monitor and evaluate intervention outcomes of routine cases independently.</p> <p>Seek guidance for modification of therapy goals for complex and/or novel cases</p>	<p>Monitor and evaluate intervention outcomes of routine and complex cases independently.</p> <p>Provide guidance to junior therapists where necessary</p>	
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Clinical outcome indicators in evaluating interventions administered</li> <li>• Department clinical standards</li> <li>• Key research for interventions</li> <li>• Factors that can affect the outcomes of the interventions provided</li> <li>• Expected outcomes for specific intervention approaches based on research</li> </ul>	<ul style="list-style-type: none"> <li>• Organisation policies, standards and guidelines pertaining to intervention evaluation</li> <li>• Methods to assess efficacy of therapy intervention</li> <li>• Specialised intervention methods and techniques</li> <li>• Validated standard for outcome measures</li> </ul>	
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Evaluate outcomes using appropriate outcome measures</li> <li>• Analyse possible reasons for variations between actual and expected outcomes</li> <li>• Develop alternative intervention strategies, including the rationale for application</li> <li>• Modify therapy goals as needed based on integration of findings from evaluations</li> <li>• Interpret results of intervention evaluation of other disciplines</li> <li>• Review recommendations for modification of activities and methods to address client needs</li> </ul>	<ul style="list-style-type: none"> <li>• Implement instruments and outcome measures that are valid, reliable and appropriate to monitor complex intervention plans</li> </ul>	

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

TSC Category: Patient Care		TSC: Effective Client Communication	
<b>TSC Description</b>	Demonstrate effective communicative skills when communicating with clients and caregivers		
<b>TSC Proficiency Level</b>	Level 3		Level 4*
<b>TSC Proficiency Description</b>	Communicate assessment results, intervention plans, outcomes to clients and/or caregivers for routine cases and seek guidance for complex and/or novel cases	Communicate assessment results, intervention plans, outcomes, service recovery plan to clients and caregivers for routine and complex cases independently. Provide guidance to junior therapists where necessary	
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Range of communication techniques</li> <li>• Methods to build trust and rapport with clients</li> <li>• Counselling techniques</li> <li>• Cultural considerations to be taken into account in client communication</li> <li>• Organisation guidelines and procedures on client communication</li> <li>• Ethical and legal considerations in the handling and communication of sensitive or confidential information</li> </ul>	<ul style="list-style-type: none"> <li>• Effective communication techniques</li> <li>• Negotiation techniques</li> <li>• Conflict management techniques</li> <li>• Types of service recovery</li> </ul>	

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

CONT'D

TSC Category: Patient Care		TSC: Effective Client Communication
TSC Proficiency Level	Level 3	Level 4*
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Engage in effective verbal communication and active listening skills</li> <li>• Adopt appropriate communication styles to achieve intended objectives with the intended audience</li> <li>• Communicate with clients and caregivers to deliver care and facilitate the understanding of clients' needs</li> <li>• Develop rapport with clients and caregivers</li> <li>• Explain clients' results and therapy plans in a clear and concise manner cognisant of the patients' health literacy</li> <li>• Discuss and negotiate therapy plans, goals and discharge plans with clients and/or caregivers</li> <li>• Use appropriate communication techniques to convey results, expected goals and outcomes to clients and caregivers</li> </ul>	<ul style="list-style-type: none"> <li>• Summarise and interpret client assessments for complex cases</li> <li>• Adapt verbal and non-verbal communication accordingly in challenging situations or situations that involve multiple and/or competing interests</li> <li>• Guide clients and caregivers to manage expectations and concerns</li> </ul>

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities





# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

● **TSC Category: Patient and/or Client Education and Health Promotion**    **TSC: Health Promotion**

<b>TSC Description</b>	Raise awareness to maintain and optimise health and well-being of clients	
<b>TSC Proficiency Level</b>	Level 3	Level 4*
<b>TSC Proficiency Description</b>	Implement health promotion activities to clients and general public	Develop health promotion activities for clients and the general public
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Behaviour patterns that lead to poor health, diseases, disabilities and early death</li> <li>• Habits and routines that promote the adoption and maintenance of healthy behaviours</li> <li>• Educational initiatives that contribute to health promotion</li> <li>• International Classification of Functioning, Disability and Health</li> </ul>	<ul style="list-style-type: none"> <li>• Principles of programme design and delivery</li> <li>• Principles of preventive healthcare</li> <li>• Current health promotion activities</li> <li>• Health promotion and health education strategies integrated into clinical practice</li> <li>• Public relations procedures and techniques for seeking sponsorship</li> </ul>
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Perform screening or assessments for health risks associated with dysphagia (e.g. nutrition, oral hygiene, medication) and communication disorders (e.g. mental health disorders)</li> <li>• Promote health and wellness</li> <li>• Demonstrate strategies to incorporate healthy habits and routines into daily activities</li> <li>• Generate solutions to personal and environmental barriers that limit clients from engaging in healthy activities</li> <li>• Identify and communicate risks that may lead to ill health</li> <li>• Plan health promotion activities with guidance</li> <li>• Participate in conducting health promotion activities, including public events</li> </ul>	<ul style="list-style-type: none"> <li>• Formulate and evaluate strategies for early identification of disorders or diseases</li> <li>• Design health promotion and education programmes</li> <li>• Provide guidance on a range of health promotion programmes and methods to staff</li> </ul>

*\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities*



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

● TSC Category: Stakeholder Engagement and Partnerships		TSC: Professional Consultation
<b>TSC Description</b>	Provide guidance or professional assistance in response to requests from the clients, other professionals, external organisations and the general public	
<b>TSC Proficiency Level</b>	Level 3	
<b>TSC Proficiency Description</b>	Provide professional knowledge and skills in engagements with peers and other healthcare service and healthcare professionals	
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Professional role in relation to healthcare sector professionals and other stakeholders</li> <li>• Active listening techniques</li> <li>• Principles for effective communication and interpersonal techniques</li> <li>• Importance of providing respectful customer service</li> <li>• Social and cultural sensitivities</li> <li>• Principles and practices of confidentiality</li> <li>• Application of theories and research when working with others to identify, formulate and solve specific problems or undertake specific tasks</li> <li>• Key collaborations and relationships in achieving shared goals</li> <li>• Processes of providing professional knowledge and advice, including the preparation and presentation of evidence in formal settings</li> <li>• Methods for establishing effective working relationships with other professionals</li> </ul>	



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

CONT'D

● TSC Category: Stakeholder Engagement and Partnerships

TSC: Professional Consultation

TSC Proficiency Level

Level 3

**Abilities**

- Analyse regular feedback from clients, supervisors and other healthcare sector professionals to discuss case processes and progress
- Establish rapport with clients
- Apply listening and verbal techniques to communicate with healthcare sector professionals to build effective workplace relationships
- Use sensitive language to communicate with people of diverse ages, backgrounds and cultures respectfully
- Articulate role and working capacity to clients
- Explain the theoretical framework, methods and theories relating to professional practice
- Explain client issues in simple and understandable terms for the clients and healthcare sector professionals
- Identify projects requiring collaboration with other healthcare sector professionals and organisations
- Communicate clear and relevant information about different forms of approaches and interventions
- Articulate role and working capacity of the profession to other healthcare sector professionals in systems they are working with





# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

TSC Category: People Development		TSC: Clinical Teaching and Supervision	
<b>TSC Description</b>	Provide clinical teaching and supervision to develop capabilities and competencies of students and professionals		
<b>TSC Proficiency Level</b>	Level 3	Level 4*	
<b>TSC Proficiency Description</b>	Support supervision of students and junior staff in developing their clinical skills, knowledge and competencies	Supervise staff in developing their clinical skills, knowledge and competencies	
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Assessment methods to determine students' or support care staff's competencies in performing delegated tasks</li> <li>• Curriculum requirements and learning outcomes defined by training institutions</li> <li>• Organisation's code of practice for support care staff</li> <li>• Guidelines and procedures on clinical teaching and/or on-the-job training</li> <li>• Clinical practice standards</li> <li>• Definition of clinical supervision</li> <li>• Stages in clinical supervision</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical teaching and supervision methods</li> <li>• Professional code of practice and relevant supervisory framework requirements and guidelines</li> <li>• Effective communication techniques and barriers to communication</li> <li>• Curriculum requirements and learning outcomes defined by Institutes of Higher Learning (IHLs)</li> <li>• Professional framework requirements and guidelines</li> <li>• Professional code of practice and clinical standards</li> <li>• Models and methods for evaluating clinical performance of the juniors</li> <li>• Learning preferences and teaching methods appropriate for each learning style</li> <li>• Important elements of clinical supervision</li> <li>• Methods of giving feedback</li> <li>• Adult learning and learning transfer principles</li> </ul>	

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

CONT'D

● **TSC Category: People Development**

**TSC: Clinical Teaching and Supervision**

TSC Proficiency Level	Level 3	Level 4*
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Give feedback to support learning</li> <li>• Assess, facilitate and teach students and support care staff in clinical areas</li> <li>• Recognise professional limitations and seek supervisors' feedback</li> <li>• Apply clinical teaching methods to facilitate learning</li> <li>• Seek support or flag up learners' issues to their supervisors</li> <li>• Recognise professional limitations and seek external guidance in domains or fields outside of professional practice or capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct on-the-job training programmes and clinical attachment programmes for students and staff</li> <li>• Establish clear learning expectations and goals</li> <li>• Provide feedback and performance reviews to support clinical learning</li> <li>• Guide clinical instructors or educators in developing clinical education programmes /staff in the department</li> <li>• Assess competencies of students/ staff</li> <li>• Apply differentiated instructional and presentational learning tools to engage different types of learners</li> <li>• Support the integration of evidence-based practice within the learning environments</li> <li>• Improve clinical learning environments</li> <li>• Contribute to development of competency-based assessments for clinical practice</li> </ul>

*\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities*



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

TSC Category: Evidence-based Practice		TSC: Research Proposal Development
<b>TSC Description</b>	Develop research questions, proposals and study protocols	
<b>TSC Proficiency Level</b>	Level 3	Level 4*
<b>TSC Proficiency Description</b>	Participate in small and/or simple research proposal development with guidance	Undertake small and/or simple research proposal development and provide guidance to junior researchers
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Current literature related to therapy</li> <li>• Research methods and processes</li> <li>• Search strategies and databases available</li> <li>• Research hypotheses formulation procedures</li> <li>• Research ethics</li> </ul>	<ul style="list-style-type: none"> <li>• Current therapy trends and issues which may benefit from research validation</li> <li>• Ongoing research initiatives and/or projects in the areas that are relevant to proposed research</li> <li>• Criteria or pre-requisites for securing funding</li> <li>• Clinical expertise in areas of research</li> </ul>
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Perform critical evaluation of current literature with guidance</li> <li>• Formulate research hypotheses and objectives with guidance</li> <li>• Translate research objectives and findings applicability to current issues in profession with guidance</li> <li>• Assist with developing proposals with good flow, tying together research objectives, methodologies and applicability</li> <li>• Contribute to designing participant flow processes with visit schedules, recruitment strategies, and time-points for sample taking</li> <li>• Contribute to research processes related to ethics, including participant information leaflets, and informed consent forms with guidance</li> </ul>	<ul style="list-style-type: none"> <li>• Develop proposals with good flow, tying together research objectives, methodologies and applicability</li> <li>• Design overall project plans for research projects according to evidence-based practice guidelines, including project management plans</li> <li>• Design participant flow processes with visit schedules, recruitment strategies, and time-points for sample taking</li> <li>• Design research processes related to ethics including participant information leaflets, and informed consent forms</li> <li>• Design practical communication plans to circulate information to participants and to other key research stakeholders</li> </ul>

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities





# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

TSC Category: Quality and Patient Safety		TSC: Clinical Services Development
<b>TSC Description</b>	Drive and maintain clinical excellence through development of services	
<b>TSC Proficiency Level</b>	Level 3	Level 4*
<b>TSC Proficiency Description</b>	Identify areas of clinical services that are lacking or require improvements and make suggestions on how to improve them	Facilitate improvement of clinical excellence through development of clinical services
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Current and new clinical services available within the organisation</li> <li>• Methods to collect client or patient feedback on clinical services</li> <li>• Principles of evidence-based practices</li> </ul>	<ul style="list-style-type: none"> <li>• Current and new clinical services available within and outside the organisation</li> <li>• Processes for review of existing clinical services</li> <li>• Piloting phases including efficacy trials</li> <li>• Tools for planning service/quality improvement such as process mapping, force field analysis, Plan-Do-Study-Act (PDSA)</li> <li>• Current approaches in service improvement such as Lean, Quality, Innovation, Productivity and Prevention (QIPP), Scrum</li> </ul>
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Provide feedback on areas of improvement for current clinical services offered</li> <li>• Collect staff and client feedback on clinical services</li> <li>• Support quality improvement projects related to clinical services</li> </ul>	<ul style="list-style-type: none"> <li>• Provide recommendations for improvements to clinical services based on feedback from clients/patients, other professionals as well as self-assessments for consideration by senior staff</li> <li>• Identify clinical needs and clinical service gaps</li> <li>• Conduct/lead quality improvement projects</li> </ul>

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities



# TECHNICAL SKILLS AND COMPETENCIES REFERENCE DOCUMENTS

TSC Category: Quality and Patient Safety		TSC: Audit Management
<b>TSC Description</b>	Ensure the quality of services adheres to standards and develop initiatives to enhance quality	
<b>TSC Proficiency Level</b>	Level 3	Level 4*
<b>TSC Proficiency Description</b>	Carry out audits to ensure quality of services delivered adheres to organisational and/or professional practices and standards	Lead audits to ensure quality of services delivered adheres to organisational and/or professional practices and standards
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>Principles of quality systems management and development</li> <li>Auditing principles and methods</li> <li>Regulatory requirements relating to audits</li> <li>Risk assessment methods</li> <li>Roles, responsibilities and limitations of audit team members</li> <li>Professional ethics and standards</li> <li>Ethical principles relating to auditing</li> </ul>	<ul style="list-style-type: none"> <li>Review and evaluation methods</li> <li>Audit processes and procedures</li> <li>Quality system accountability and practices within the organisation</li> <li>Different training methods and styles</li> </ul>
<b>Abilities</b>	<ul style="list-style-type: none"> <li>Identify audit scopes, according to organisational and/or practice requirements</li> <li>Identify types of information required for audits</li> <li>Conduct audits according to organisational and/or practice procedures</li> <li>Validate findings with auditees, according to organisational and/or practice requirements</li> <li>Document findings of audits for review</li> </ul>	<ul style="list-style-type: none"> <li>Lead team to conduct audits according to organisational and ethical procedures</li> <li>Analyse audit results to draw appropriate audit conclusions of services delivered</li> <li>Develop improvement plans based on audit findings</li> <li>Communicate and share information on audit findings</li> <li>Maintain quality documentation to meet quality standards and guidelines</li> <li>Obtain patient feedback to aid in clinical audits</li> </ul>

\* Level 4 assumes the fulfilment of Level 3 knowledge and abilities



## PROGRAM LISTING

The programs<sup>3</sup> below have been assessed by the MOH Panel for Speech Therapy to fulfil the evaluation that are harmonized with the MOH In-Service Scholarships. They are subjected to updates and serve as a reference only. Available training programs that are subsidized by Skills Future Singapore (SSG) will be listed on [SSG's website](#).

Program Title	Providers
Acute Care ST (I)	
<b>Core 1: Cardiovascular and Respiratory</b> 1. Dysphagia: Integrating Respiration And Deglutition 2. Cardiopulmonary Comorbidities in the Older Adult	1. Northern Speech Services (USA) 2. HomeCEUconnection by Colibri Healthcare
<b>Core 2: Dementia</b> 1. Making The Most Of Mealtime: Helping Older Adults Compensate For Sensory Impairment During Meals	1. Northern Speech Services (USA)
<b>Core 5: Parkinson</b> 1. Assessing Swallowing & Cough dysfunction in Patients with Parkinson's Disease 2. Managing Swallowing & Cough Dysfunction in Patients with Parkinson's Disease 3. Parkinson's Foundation Team Training	1. Medbridge 2. Medbridge 3. Parkinson's Foundation
<b>Supplementary 4: Progressive Degenerative Disorder</b> 1. ALS 3-part series: Impact on nutrition; advantages and disadvantages of exercise; medications and oral care 2. The Essentials: Dysphagia and Neuromuscular Disease	1. SpeechPathology.com 2. Medbridge
<b>Supplementary 5: Trauma Brain Injury and Spinal Cord Injury</b> 1. Swallowing and the Spine: Cervical Spine Disorders and Dysphagia 2. Dysphagia and Respiratory Concerns Following TBI	1. HomeCEUconnection 2. Northern Speech Services (USA)

<sup>3</sup>These programs must be supplemented with a hands-on component, such as on-the-job training provided by individual institutions.





## PROGRAM LISTING CONT'D

Program Title	Providers
Acute Care ST (II)	
<b>Core 1: Cardiovascular and Respiratory</b> 1. The Consequences of Critical Care on Swallowing	1. Medbridge
<b>Supplementary 2: Head and Neck Cancer</b> 1. The Essentials: Dysphagia and Head and Neck Cancer 2. Radiation Associated Dysphagia (RAD) Part 1: Etiology and Toxicity; Part 2: Evaluation & Management 3. Management of Total Laryngectomy: Rehabilitation to Survivorship	1. Medbridge 2. Medbridge 3. Medbridge
<b>Supplementary 3: Palliative Care</b> 1. Palliative Care Course for Therapists – Foundation and Profession specific (Speech Therapists)	1. Duke-NUS Lien Centre for Palliative Care

# ACKNOWLEDGEMENT

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# ACKNOWLEDGEMENT

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