Acta Logopaedica (2024), Vol. 1 | 1–22
DOI: 10.58986/al.2024.17950

Acta Logopaedica

Original Article

Large variations in intensive speech-language rehabilitation post-stroke -descriptions of practices, and perceptions of barriers and enablers from 26 clinics in Sweden

Marika Schütz[1]*, Ingrid Henriksson[2], Trandur Ulfarsson[3], Ellika Schalling[1,4]

[1]Department of Public Health and Caring Sciences, Speech-Language Pathology, Uppsala University, Uppsala, Sweden; [2]Speech and Language Pathology Unit, Institute of Neuroscience and Physiology, Department of Health and Rehabilitation, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden; [3]Institute of Neuroscience and Physiology, Department of Clinical Neuroscience, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden; [4]Department of Clinical Sciences, Intervention and Technology, Division of Speech and Language Pathology, Karolinska Institutet, Stockholm, Sweden

*Corresponding author: Marika Schütz, Department of Public Health and Caring Sciences, Speech-Language Pathology, Uppsala University, Uppsala, Sweden. Email: marika.schutz@uu.se

Publication date: 25 April 2024

Abstract

Background: Intensive rehabilitation of aphasia is recommended in the national guidelines for stroke care, but is far from implemented in Swedish healthcare.

Aim: To explore current practice and detect barriers and enablers for intensive aphasia rehabilitation among Speech Language Pathologists (SLPs) before they were enrolled in a national intervention study.

Method: Thirty-six SLPs in 26 clinics answered a web-based questionnaire. Responses were processed using descriptive statistics and thematic analysis.

Result: Treatment intensity, duration and delivery format varied widely, and two-thirds offered intensive rehabilitation rarely or never. Thematic analysis generated the following five barriers: understaffing, patient factors, teamwork/scheduling, prioritization, and accessibility, and three enablers: increased staffing, planned intervention programmes, and comprehensive delivery formats.

Conclusions: Compliance with Swedish stroke guidelines for intensive aphasia rehabilitation is low, and the current practice varies widely between different clinics. Increasing SLPs in primary care and restructuring care by using planned and comprehensive intervention approaches are suggested to stimulate implementation.

Keywords: rehabilitation; stroke; aphasia; apraxia of speech; national guidelines;
ClinicalTrials.gov Identifier: NCT04957225.

Introduction

Stroke is a leading cause of disability and death worldwide (World Stroke Organisation, 2023). In Sweden, 20,228 stroke events were registered in 2021 (RIKSSTROKE [The Swedish Stroke Register], 2022). With almost 1 million care days annually, stroke is the disease that accounts for the highest number of care days in Swedish hospitals as reported by the Swedish Stroke Register (RIKSSTROKE, 2022). About half of all stroke survivors experience difficulties with speech, language, and/or communications (Mitchell *et al*., 2018), and 30% are diagnosed with aphasia (Grönberg *et al*., 2021). For an individual, aphasia has life-altering consequences, for many resulting in markedly reduced quality of life (Lam and Wodchis, 2010). While aphasia affects language functions, apraxia of speech (AOS) is a motor speech disorder that disrupts planning and/or programming of speech movements, resulting in impaired articulation and prosody. Comorbidity between acquired AOS and non-fluent aphasia is high, and is present in nearly 80% of AOS cases (Duffy, 2020).

Multiple studies have indicated intensity as an important factor in positive outcomes and neuroplasticity (Berthier and Pulvermüller, 2011; Breitenstein et al., 2017; Dignam *et al*., 2016). A systemic review with a meta-analysis of aphasia research data from 25 large trials with 959 individual participants reported the largest overall language and functional communication improvements when the intervention was distributed over 5 days weekly, up to a total of 50 hours (REhabilitation and recovery of peopLE with Aphasia after StrokE (RELEASE) Collaborators, 2022). The positive results from intensive rehabilitation have had a large impact on rehabilitation of speech and language in later years (Pierce et al., 2019), which is also reflected in the recommendation for intensive and individualized aphasia therapy in the top 10 multinational best practice recommendations for aphasia (Simmons-Mackie et al., 2016). Intensive Comprehensive Aphasia Programs (ICAPs) provide intensive treatment with a combination of delivery formats, such as individual treatment, group treatment, and computer training and information to people with aphasia and their next of kin (Rose et al., 2013). The programs contain activities to improve language function and are built on the principles driving neuroplasticity, such as intensity, repetition, specificity, salience, and transference (Crosson et al., 2019; Kleim and Jones, 2008) as well as activities aimed at improving functional communication (Babbitt et al., 2015). Although principles considered to promote neuroplasticity indicate that intensity matters, less intense and distributed practice may be preferred for rehabilitation of AOS (Ballard et al., 2015; Wambaugh et al., 2018). More research exploring intensive AOS rehabilitation is needed to cover different aspects, such as the effects of massed or distributed training combined with different intensity, timing, frequency, and length of rehabilitation periods (Wambaugh et al., 2018).

The Swedish National Board of Health and Welfare updated their national guidelines for stroke care in 2018 with the recommendation to prioritize intensive aphasia rehabilitation (> 4 hours per week) before less intense treatment (defined as 1–2 hour per week) (Socialstyrelsen, 2020). Communication partner training (CPT) is also prioritized in the new guidelines; both recommendations have priority 3, which means that these treatments *should* be offered before less intensive treatment that *can* be offered (priority 7) (Socialstyrelsen, 2020). Large variations are, however, shown in planned stroke rehabilitation after hospitalization between different regions in

Sweden (RIKSSTROKE, 2021). According to the statistics from the Swedish Stroke Register, only 62% of the stroke patients with self-reported speech problems had seen a Speech Language Pathologist (SLP) for evaluation or treatment 3 months post-stroke. Only a few places in Sweden offer intensive aphasia rehabilitation (Neuro, 2021; Palmquist, 2018) because many SLPs lack resources needed to comply with the prioritized recommendations (Persson et al., 2022). Continued out-patient rehabilitation with an SLP was planned for 1% of stroke patients at the time of discharge, with a variation in 0% and 5% between Swedish regions (RIKSSTROKE, 2021).

The health service delivery in Sweden is divided into five different units of care: National specialised medical care, regional healthcare, county healthcare, primary care, and community care. In an agreement called 'God och nära vård', between the Swedish state and Swedish municipalities and regions (SKR), the primary care is intended to be first level of care with available, accessible, and high-quality services provided close to the patients (Socialdepartementet et al., 2023), but availability of SLPs in primary care is limited (Palmquist, 2018).

The Multimodal Intensive Rehabilitation of Aphasia and Apraxia of speech (MIRAA) study is a project aiming to detect and map barriers and enablers for implementation of intensive treatment of speech and language post-stroke in Swedish healthcare, and to evaluate effects of intensive treatment. The study is a single blinded cluster randomized controlled trial (RCT) with two arms: direct intervention and waiting group, performed in naturalistic settings in participating clinics over the country. The MIRAA program is based on studies on neuroplasticity and extensive experience of ICAPs in clinical settings. The program is adapted to the Swedish healthcare following the Swedish national guidelines for stroke care (Socialstyrelsen, 2020). MIRAA is a modified form of an ICAP, targeting aphasia and/or AOS, with a goal level at 60 hours comprehensive intervention for 6 weeks.

The aim of this study was to explore current practice among SLPs subsequently enrolled in the MIRAA study with focus on treatment intensity and detecting potential barriers and enablers in relation to compliance with guidelines. Information was collected through a questionnaire before intervention started. The results from this questionnaire are presented here.

Materials and method

Material

The questionnaire was developed in Swedish by the authors following guidelines for the design of questionnaires in clinical trials (Edwards, 2010). Questions were created and reviewed by the researchers, piloted on six SLPs working with aphasia and/or AOS and redesigned in order to formulate the questions more precisely. For example, asking whether the SLPs had the *possibility to offer*, which tended to lead to false positive answers, was changed to asking whether they actually *offered* therapy. The questionnaire included five questions with predetermined response alternatives about caseloads, parts of the care chain in which the respondent worked, delivery format, treatment frequency, and whether intensive treatment was offered to the majority of their patients. In addition, there were three questions with open answers concerning treatment duration, barriers, and enablers for offering intensive

rehabilitation. Information regarding workload, geographic location and type of health care unit was also collected (Appendix 1).

Recruitment of participants

To recruit SLPs working with aphasia and/or AOS post-stroke from organizationally and geographically diverse clinics over Sweden to the subsequent MIRAA study, information was spread as follows: Through national and local aphasia network mailing lists, information in "Logopeden" the magazine for the Swedish professional organization of SLPs, in the Facebook group "Logopedgruppen", in the SLP forum, at information meetings at Karolinska Institutet and at a network meeting for SLPs in primary care, Västra Götaland. In addition, snowball sampling (Emerson 2015) was also used as contacted SLPs were invited to forward the invitation to participate to colleagues.

Data collection

The SLPs who had reported interest in partaking in the MIRAA study received an email with a link to an online questionnaire distributed with KI Survey, a tool for creating web-based questionnaires. Data was collected between December 2020 and May 2021. The respondents were instructed to answer questions on regular care based on their regular practice routines not taking the special solutions during the Covid-19 pandemic into consideration. In all, 42 answers were collected, six answers were omitted because these SLPs did not match the inclusion criteria partaking in the MIRAA intervention study and lacked demographic information (geographic location and type of healthcare unit), leaving the number of respondents enrolled in the study to 36 SLPs.

Data analysis

The close-ended questions were collected, compiled in Excel, and analysed using descriptive statistics. The free text responses were processed and compiled by the first author (MS) and processed inductively with thematic analysis (Braun and Clarke, 2006) in Excel (Appendix 2). Firstly, by reading and re-reading the free text answers, then translating the answers from Swedish to English, and generating initial categories and subcategories in a systematic fashion by assigning them different colours and collecting data to each category. Themes were then identified by grouping categories into potentially relevant themes and reviewing these themes by checking whether they corresponded to the underlying categories. The themes were then reviewed and refined, definitions and names for each theme were generated and illustrative quotes were selected and related back to the research questions corresponding to each theme. The thematic structure was then revised separately by the fourth author (ES), thereafter discussed with the first author, and in some cases renamed and finalized.

Ethical considerations

The study was conducted in accordance with the Declaration of Helsinki and was approved by The Ethical Review Authority nr 2020–07182 and registered in

ClinicalTrials.gov, Identifier: NCT04957225, https://clinicaltrials.gov/ct2/show/NCT04957225. Research leaders in the MIRAA study protect participants' personal data in accordance with confidentiality and the EU Data Protection Act (GDPR).

Results

Description of participants

In all, 36 SLPs from 26 clinics (16 clinics participating with 1 SLPs and 10 clinics participating with 2 SLPs) that accepted the invitation to participate in the MIRAA study responded to the questionnaire on the current practice. Geographic distributions are presented in a map (Figure 1) over Sweden, the highest concentration of participants was in the middle and southwestern part of the country. Special efforts were made to recruit participants from the northern half of Sweden by direct mail contact, but without success. Primary reason to decline participation in the MIRAA study was time restraint, serving as a barrier to partake in an intensive intervention study.

Figure 1. Geographic distribution of respondents marked with black dots; bigger dots represent higher concentration of SLPs. (With permission to use, Shutterstock standard licence, January 4, 2023, EPS.)

https://doi.org/10.58986/al.2024.17950

Table 1. Distribution over different types of care units in big cities (Stockholm, Gothenburg and Malmoe) and mid-sized or smaller towns.

Healthcare unit	*n* = 36	Big city	Mid-sized/smaller towns
Community care	0	0	0
Primary care	17	**16**	1
County healthcare	16	1	**15**
Regional healthcare	3	1	2
National specialized healthcare	0	0	0

Distribution over healthcare units

Primary care and county healthcare were the two most common units of healthcare represented in the study, followed by regional healthcare (see Table 1). The primary care clinicians worked mainly in teams with other health professionals and in some cases at SLP clinics. Most primary care SLPs were positioned in the two biggest cities (Stockholm and Gothenburg), and county healthcare was mainly found in mid-sized to smaller towns. SLPs in county healthcare worked mainly at the local hospital, usually covering both neuro teams and open day care. None of the respondent worked in national specialized healthcare or in community care.

Caseloads

The majority of respondents ($n = 33$ [92%]) worked mainly with neurological rehabilitation. Most of the SLPs worked in teams with a mixed caseload of dysphagia and neurogenic communication disorders, such as aphasia, dysarthria, AOS. and in a few cases cognitive-communicative disorder (CCD). In fact, only 8% had caseloads focusing mainly on rehabilitation of speech and language.

Frequency and duration of treatment

Less than one-third, 11 SLPs (31%) responded 'yes' to the question, whether they offer a majority of their patients with aphasia and/or AOS intensive rehabilitation (minimum of 4 hours/week) often, or always. SLPs in the primary care were able to offer intensive rehabilitation more often compared to county hospitals (see Figure 2).

The majority of SLPs (25, 61%) rehabilitated their patients on average between 1 and 3 hours per week (see Figure 3), seven SLPs (22%) rehabilitated their patients on average the recommended intensity of a minimum of 4 hour per week, and 4 SLPs (11%) offered their patients on an average of less than 1 hour of treatment weekly. No one offered highly intensive treatment with more than 10 hours per week.

As an adjunct question, the respondents were asked to define treatment duration in free text answers. Nine respondents left no response, while 27 SLPs gave highly varied responses that were analysed and resulted in the following three themes: (1) predefined rehabilitation periods, (2) patient-centred approach and (3) varied duration and high variability in clinical settings.

1. *Predefined rehabilitation periods:* Clinics with predefined periods varied between having predefined duration and frequency (e.g., 4 hours weekly for 3 weeks

https://doi.org/10.58986/al.2024.17950

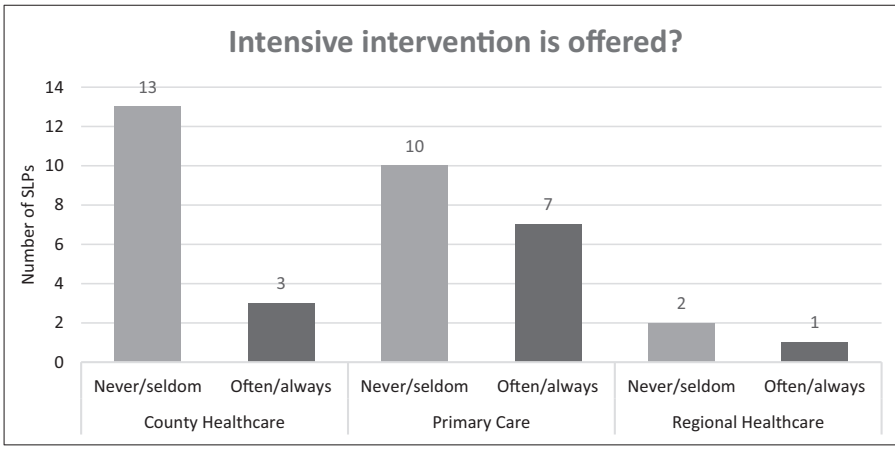

Figure 2. Distribution of responses to question five: "The majority of patients with aphasia and/or apraxia of speech are offered intensive speech-language intervention (at least 4 h/week) within the organization where I work", over the care units: primary care, county healthcare, regional healthcare, n = 36.

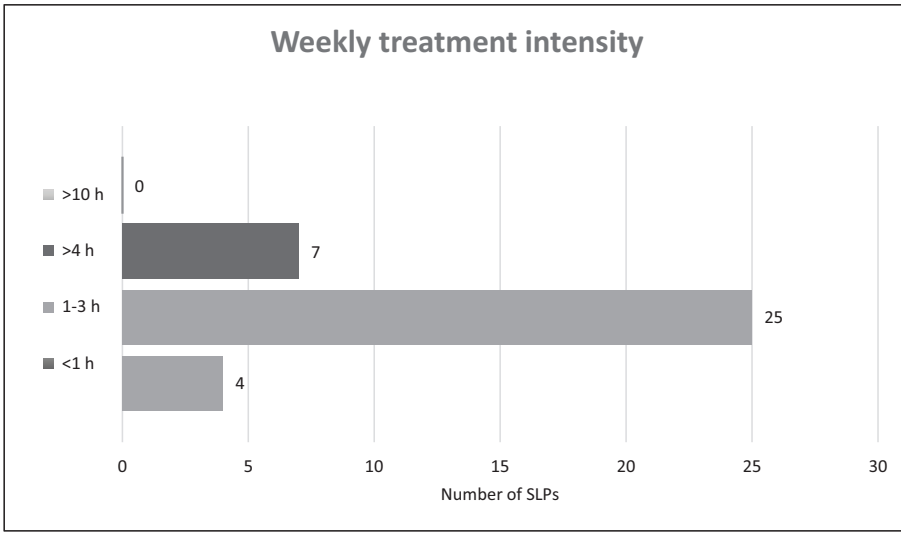

Figure 3. Distribution of responses to question 4: 'I see current patients with aphasia and/or apraxia of speech on average?' Less than 1 hour per week, about 1–3 hours per week, from 4 to 10 hours per week and more than 10 hours per week, n = 36.

or 25 days for 3 months), while others had periods more loosely defined in an approximate span of weeks (3–6 weeks, 5–8 weeks, and 8–12 weeks). In some cases, the SLP intervention was part of broader rehabilitation programs with a multidisciplinary approach.

2. *Highly flexible approach:* The duration of rehabilitation period was determined on a case-by-case basis, taking into consideration the patient's progress, stamina,

motivation, and response to intervention. The periods varied from a couple of weeks up to a year. Some patients got short and sporadic sessions, while others received more extended and intensive periods of therapy. Some SLPs covered the whole care chain, which influenced the duration and intensity of sessions, SLP09: 'Hard to say because the caseload stretches over inpatient and outpatient care'. Some clinics mainly gave rehabilitation in the subacute and early chronic phase (up to 8–12 months).

3. *Varied duration and high variability in the clinical settings:* Many SLPs found it hard to define how much rehabilitation their patients were offered. It varied a lot, and some didn't keep statistics over the number of appointments as was expressed, for example by SLP03: 'Difficult to say, we keep no statistics on this'. Frequency and duration depended on teamwork, case load, care chain, distance from clinic, and care format. Team dynamics and scheduling affected the treatment plan. Home rehab was less intensive due to factors, such as travel distance for SLPs.

Delivery format

The most common format offered in SLP rehabilitation was individual training (see Figure 4), all the 36 SLPs offered one-to-one treatment (100%). Group training was delivered by 12 SLPs (33%), often on an irregular basis. Home assignments with a specified program was reported by 27 SLPs (75%), CPT was administered by 15 SLPs (42%), and 11 SLPs (31%) offered a comprehensive program with a combination of delivery formats.

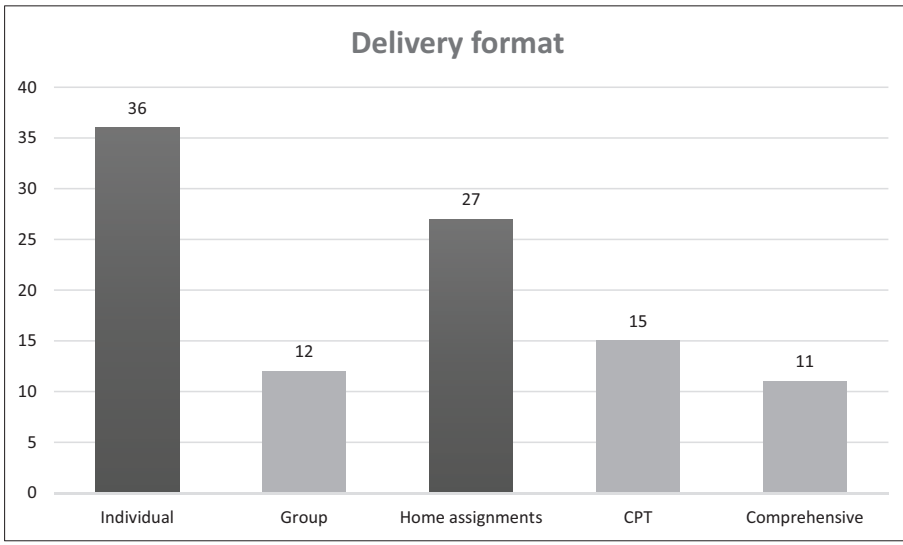

Figure 4. Distribution of responses by SLPs to question 3: 'I offer the following type of rehabilitation to people with aphasia and/or apraxia of speech'. Response alternatives were: individual training, group training, home training with assignments, and communication partner training (CPT). The comprehensive bar includes the SLPs that offered at least three of four delivery formats, n = 36.

Experienced barriers to intensive rehabilitation

Twenty-five free text answers regarding experienced barriers to offering intensive treatment were detected. The answers were qualitatively analysed, and five themes were generated: (1) understaffing, (2) patient factors, (3) teamwork/scheduling, (4) prioritization, and (5) accessibility.

1. *Understaffing:* A common reason for not being able to offer intensive rehabilitation was a result of limited resources with too large caseloads per clinician. The text answers described several different restrictions, mainly the caseload being too large for the individual SLP covering many different types of diagnosis and several parts of the care chain and too few SLP positions. SLPs at county hospitals are often responsible for patients in all phases of rehabilitation which affected the possibility to offer rehabilitation: 'Outpatients enrolled at the clinic are currently not scheduled for intensive intervention' (SLP09).
2. *Patient factors:* The SLPs described patients' personal factors as hindering participation in intensive rehabilitation. Sometimes the patient was offered intensive rehabilitation but declined because of cognitive status, fatigue, lack of motivation or time, and in some cases intensive treatment was not offered because the SLPs didn't believe that the person would be benefitted from intensive treatment: 'It is entirely dependent on the patient's insight and motivation'. (SLP20).
3. *Teamwork/scheduling:* The way teamwork was organised often made it difficult to offer intensive SLP treatment, since the patient was busy with rehabilitation by several different professionals at the same time: 'I follow the schedule that day-care rehab creates for its patients in cases where the patient is enrolled there, which means two sessions per week of one hour' (SLP09). Other barriers were that some SLPs worked part-time. SLPs at the county hospitals were often responsible for patients at all phases of the care chain which affected the possibility to schedule intensive rehabilitation.
4. *Prioritization:* Other conditions like dysphagia being prioritized and assessments given priority before administering treatment were reported, as for example by SLP32: 'A large part of the working time is taken up by assessments of swallowing ability, which is always prioritized'.
5. *Accessibility:* Long distance to and from the clinic was reported, and that home visits couldn't be as frequent and depended on whether there was a long journey: 'Difficult to achieve more often than twice a week due to financial compensation levels and frequent home visits/travel time.' (SLP16). One clinic mentioned difficulties to get in contact with patients.

Suggested enablers for increasing intensive rehabilitation

Half of the respondents had suggestions for changes that could increase possibilities to provide intensive rehabilitation. The answers were analysed qualitatively, and three themes were generated: (1) increase staffing and financial compensation, (2) implement pre-planned rehabilitation programs, and (3) use a comprehensive rehabilitation approach.

1. *Increase staffing and financial compensation:* Many SLPs suggested increased resources with more SLP-positions. To do this they suggested that adherence to

guidelines should be a priority for management to arrange meetings with the management and involved the union. The SLPs also suggested increased financial compensation to leverage intensive rehabilitation, as suggested by SLP16: 'Higher compensation for intensive treatment, like we receive when giving LSVT'.

2. *Implement pre-planned rehabilitation programs:* The SLPs suggested to schedule rehab with other professions in the team and plan intensive treatment for shorter periods. SLP14: 'Divide aphasia training into periods during the year and establish a waiting list with patients that are interested'. Reducing travel by co-scheduling rehabilitation: 'Schedule together with the rehab team for reduced travel to rehab'. (SLP13).
3. *Use a comprehensive rehabilitation approach:* Other common suggestions were connected to delivery format. Increased use of telerehabilitation was proposed: 'Use digital channels – for example, facetime that can be used in care homes/homes with the support of housing staff, or family. Then more people can cope with the treatment, when the transportation is experienced as too tiring'. Have more rehabilitation in groups, 'Treatment in a group so that it becomes more attractive to come here' (SLP13) and increase the amount of home assignments.

Discussion

The aim of this study was to explore current practices and detect experienced barriers and enablers for intensive speech–language rehabilitation post-stroke. Analysis of current practice among the 26 clinics partaking in the MIRAA study showed large variations in speech–language rehabilitation. We detected geographic variations, with SLPs in the northern half of Sweden and less densely populated areas having to decline partaking in the intensive intervention study due to time restraints. The most common levels of healthcare in the study were primary care and county healthcare units at county hospitals followed by regional healthcare at university clinics. SLPs in primary care were mainly found in the two biggest cities Stockholm and Gothenburg, while county healthcare was most common in mid-sized and smaller towns. These kinds of differences between different regions in Sweden are also reported by RIKSSTROKE (2021), reflecting a wide range of practice in stroke rehabilitation across the country. The uneven distribution of SLPs may result in poor quality of rehabilitation and patients not receiving adequate rehabilitation as reported by RIKSSTROKE (2022).

In this study, only 31% of the SLPs *offered* intensive rehabilitation often or always and 22% *rehabilitated* patients with the recommended intensity (>4 hours/weekly). These low numbers of compliance with the Swedish national guidelines for intensive aphasia rehabilitation is in line with the results from Persson et al. (2022) where 24% of the SLPs reported that they always applied intensive and individualized aphasia therapy. Treatment duration and frequency differed widely between different clinics, some used predefined rehabilitation periods, while other clinics had highly flexible and varying durations depending on the patient and workload. Delivery format also varied between different clinics, many clinics only offered one-to-one rehabilitation while others offered a more comprehensive approach with a combination of formats like one-to-one treatment, group intervention, combined with home assignments, and CPT. While an individualized and flexible approach has its advantages, this

study indicates that it also can lead to inconsistent care with lack of standardization, difficulties to plan rehab periods, unequal distribution of care, and lack of statistics. Teasell et al. (2009) showed that rehabilitation on an *ad hoc* basis with low control, high autonomy, and rooted practices resulted in significantly more time spent on administration, planning, and meetings. This type of quality loss might be prevented by implementing more strictly standardized and timed rehabilitation programs (Shrubsole et al., 2018).

This study indicates that the five barriers generated with thematic analysis affected all SLPs in different healthcare units but with some differences. Barrier one, understaffing with too many patients and a non-existent care chain affected SLPs at the regional and county hospitals mostly. Persson et al. (2022) detected a serious lack of SLP resources for people with aphasia in Sweden and raised the concern that there hadn't been a sufficient increase of SLP positions to implement the guidelines for aphasia rehabilitation from the Swedish National Board of Health and Welfare (Socialstyrelsen, 2020). The understaffing often led to another detected barrier, dysphagia and early assessments being prioritized at the cost of aphasia rehabilitation. Several studies have shown that the prioritization of dysphagia in medical care, especially in the acute and sub-acute phases, have a negative impact on the rehabilitation of communication disorders (Shrubsole et al., 2018; Trebilcock et al., 2019, s. 882). Since the SLPs at the Swedish county and regional hospitals often were part of several different care teams, they also had problems with scheduling intensive intervention. The accessibility to care was also affected by travel distances to and from the care unit. While SLPs in primary care were able to offer intensive rehabilitation more often compared to SLPs at the hospitals, they also experienced barriers to implementing intensive rehabilitation, mainly due to teamwork and scheduling, restricting the time the SLP could see the patient due to other ongoing interventions, and reduced accessibility to intensive rehabilitation due to time-consuming home visits. This study indicates that SLPs in primary care offer intensive rehabilitation more often, but it also indicates that speech–language therapy in primary care might be sparsely existent outside the two biggest cities of Stockholm and Gothenburg. This tendency is difficult to examine, since the primary care doesn't differentiate statistics on a number of different professions, including SLPs, working in primary care according to a report from the Swedish National Board of Health and Welfare (Socialstyrelsen, 2023a). It is important that SLPs are included in the ongoing primary healthcare reform 'Good and close care' (God och nära vård; Socialdepartementet, 2023) to secure adequate rehabilitation for people with severe communication deficits, such as aphasia and AOS, especially since this reform is planned to further reduce time for rehabilitation in the specialized healthcare (Socialstyrelsen, 2023b).

Many SLPs experienced patient personal factors like motivation, insight, or fatigue as hindering intensive treatment and these findings are in line with earlier studies (Gunning et al., 2017; Shrubsole et al., 2018). Personal factors need to be further explored to find optimal treatment protocols, both when it comes to strategies and patients' preferences, and the knowledge and attitudes of the SLPs. Studies have shown that the clinicians' and patients' attitudes can be a hinder to implementing intensive rehabilitation (Gunning et al., 2017; Trebilcock et al., 2019). In the continued work with the MIRAA study, we analyse perceived barriers and enablers among

the SLPs and patients after partaking in the MIRAA intervention to explore and compare both perspectives on implementing intensive rehabilitation.

Thematic analysis showed three major enablers suggested by the SLPs to facilitate intensive rehabilitation. One enabler was focused on resources and suggested more SLPs positions and enhanced financial reimbursement. Another suggested enabler was to implement pre-planned rehabilitation programs with waiting lists to enable intensive rehabilitation. This was in line with the studies showing that standardized programs counteract low control and rooted practices and result in more time spent on rehabilitation (Teasell et al., 2009). Studies have also shown that standardized programs with adherence to clinical guidelines lead to better outcomes (Hubbard et al., 2012). Apart from making planning easier and increase monitoring of patients, pre-planned programs are also beneficial for a more comprehensive rehabilitation approach. Instead of consecutively admitting patients to one-on-one treatment, the pre-planning gives the SLP the opportunity to collect patients in groups and offer group rehabilitation and plan an intensive period with different delivery formats. The respondents suggested a combination of digitalized training, homework, and group treatment as ways to increase intensity. Combining care at the clinic with telerehabilitation can be a time-saving and flexible approach, increasing the accessibility of care by reducing travel. Telerehabilitation has become more common and has been shown to be as effective as face-to-face therapy (Cacciante et al., 2021). Group training is a cost- and time-efficient rehabilitation format enabling social support and communication, and the group treatment Constraint Induced Aphasia Therapy (CIAT) (Pulvermüller et al., 2001) is one of the aphasia rehabilitation methods that currently has the largest evidence base (Shrubsole et al., 2018). The pre-planning of treatment can also benefit patients receiving intensive speech–language rehabilitation during shorter periods by including other professionals within the stroke team to reduce the barriers linked to teamwork/scheduling.

There may be some selection bias in the sample of respondents in this study, since they all enrolled to partake in an intensive rehabilitation study. The findings of low compliance are, however, transferable to the larger sample of 109 SLPs in Persson et al. (2022), showing that highly prioritized Swedish guidelines for aphasia rehabilitation after stroke are not followed. The detected barriers in this study are also found in several studies from other countries, showing that many barriers to intensive rehabilitation are similar in different countries.

Further studies are recommended to investigate how speech–language rehabilitation post-stroke is performed in Sweden. Many important factors are still largely unknown: the number of SLPs working with rehabilitation post-stroke, caseload, distribution, and frequency in different healthcare units over the country. Studies on effectiveness and quality of stroke rehabilitation need to incorporate information about organization of care in diverse health care systems (Putman and De Wit, 2009).

Conclusions

This study shows that current practice in speech–language rehabilitation for individuals with post-stroke aphasia and AOS is highly varied in frequency, duration, and delivery format with a low compliance to the prioritizations of intensive

rehabilitation and CPT in the Swedish national stroke guidelines. The five generated major barriers–understaffing, patient factors, teamwork/scheduling, prioritization, and accessibility–are in line with the studies from other countries.

This study provides suggestions for enablers to implement intensive rehabilitation by increasing resources with more SLP positions, especially in primary care centres, and to restructure existing care with pre-planned shorter intensive programs which enable comprehensive rehabilitation with time-saving group training, home assignments, digital rehabilitation, and CPT.

Politicians and other official bodies working with healthcare policy structure need to be made aware of the low compliance with the national guidelines for stroke care, and the speech-pathology care being offered at present. There is also a need to establish more detailed national clinical guidelines to promote pre-planned comprehensive programs with more specific recommendations on duration, frequency, content, and delivery formats.

Future studies are recommended to fill the knowledge gap on implementation of intensive speech–language rehabilitation post-stroke in Swedish healthcare.

Acknowledgements

We would like to thank all speech–language pathologists who participated in the study.

Declaration of interest statement

The authors report there are no competing interests to declare.

This work was supported by the Promobilia Foundation, The Stroke Foundation, The Swedish Aphasia Foundation, and Aina Börjessons Foundation for Speech-Language Pathology Research and Treatment.

ClinicalTrials.gov Identifier: NCT04957225, MIRAA - Implementation of Intensive Rehabilitation of Aphasia and/or Apraxia of Speech in Swedish Healthcare (MIRAA)

References

Babbitt, Edna M, Worrall, Linda and Cherney, Leora R. 2015. Structure, processes, and retrospective outcomes from an intensive comprehensive aphasia program. *American Journal of Speech-Language Pathology* 24(4), S854–S863.

Ballard, Kirrie J, Wambaugh, Julie L, Duffy, Joseph R, Layfield, Claire, Maas, Edwin, Mauszycki, Shannon and McNeil, Malcolm R. 2015. Treatment for acquired apraxia of speech: A systematic review of intervention research between 2004 and 2012. *American Journal of Speech-Language Pathology* 24(2), 316–337.

Berthier, Marcelo L and Pulvermüller, Friedemann. 2011. Neuroscience insights improve neurorehabilitation of poststroke aphasia. *Nature Reviews. Neurology* 7(2), 86–97.

Braun, Virginia and Clarke, Victoria. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3(2), 77–101.

Breitenstein, Caterina, Grewe, Tanja, Flöel, Agnes, Ziegler, Wolfram, Springer, Luise, Martus, Peter, Huber, Walter, et al. 2017. Intensive speech and language therapy in patients with chronic aphasia after stroke: a randomised, open-label, blinded-endpoint, controlled trial in a health-care setting. *The Lancet (British Edition)* 389(10078), 1528–1538.

Cacciante, Luisa, Kiper, Pawel, Garzon, Martina, Baldan, Francesca, Federico, Sara, Turolla, Andrea and Agostini, Michela. 2021. Telerehabilitation for people with aphasia: A systematic review and meta-analysis. *Journal of Communication Disorders* 92, 106111–106111.

Crosson, Bruce, Rodriguez, Amy, Copland, David, Fridriksson, Julius, Krishnamurthy, Lisa C, Meinzer, Marcus, Raymer, Anastasia M, Krishnamurthy, Venkatagiri and Leff, Alexander 2019. Neuroplasticity and aphasia treatments: New approaches for an old problem. *Journal of Neurology, Neurosurgery and Psychiatry* 90(10), 1147–1155.

Dignam, Jade, Rodriguez, Amy and Copland, David. 2016. Evidence for intensive aphasia therapy: Consideration of theories from neuroscience and cognitive psychology. *PM & R* 8(3), 254–267.

Duffy, Joseph R. 2020 *Motor Speech Disorders: Substrates, Differential Diagnosis, and Management,* 4. ed. St. Louis, MO: Elsevier Mosby, pp. 312.

Edwards, Phil. 2010. Questionnaires in clinical trials: Guidelines for optimal design and administration. *Current Controlled Trials in Cardiovascular Medicine* 11(1), 2–2.

Emerson, Robert Wall. 2015. Convenience sampling, random sampling, and snowball sampling: How does sampling affect the validity of research? *Journal of Visual Impairment & Blindness* 109(2), 164–168.

Grönberg, Angelina, Henriksson, Ingrid and Lindgren, Arne. 2021. Accuracy of NIH Stroke Scale for diagnosing aphasia. *Acta Neurologica Scandinavica* 143(4), 375–382.

Gunning, Dana, Wenke, Rachel, Ward, Elisabeth C, Chalk, Shannon, Lawrie, Melissa, Romano, Michelle, Edwards, Ann, Hobson, Tania and Cardell, E. 2017. Clinicians' perceptions of delivering new models of high intensity aphasia treatment. *Aphasiology* 31(4), 406–426.

Hubbard, Isobel J, Harris, Dawn, Kilkenny, Monique F, Faux, Steven G., Pollack, Michael R and Cadilhac, Dominique A. 2012. Adherence to clinical guidelines improves patient outcomes in Australian audit of stroke rehabilitation practice. *Archives of Physical Medicine and Rehabilitation* 93(6), 965–971.

Kleim, Jeffrey A and Jones, Theresa A. 2008. Principles of experience-dependent neural plasticity: Implications for rehabilitation after brain damage. *Journal of Speech, Language, and Hearing Research* 51(1), S225–S239.

Lam, Jonathan MC. and Wodchis, Walter P. 2010. The relationship of 60 disease diagnoses and 15 conditions to preference-based health-related quality of life in Ontario hospital-based long-term care residents. *Medical Care* 48(4), 380–387.

Mitchell, Claire, Bowen, Audrey, Gittins, Matthew, Vail, Andy, Conroy, Paul, Paley, Lizz, Bray, Ben and Tyson, Sarah. 2018. Prevalence of aphasia and co-occurrence of dysarthria: the UK Sentinel Stroke National Audit Programme. *Aphasiology* 32(Sup. 1), 145–146.

Neuro. 2021. Neurorapporten 2021 – Ojämlik tillgång till rehabilitering (Unequal access to rehabilitation), Neuro, Linköping (SE). https://neuro.se/forening/foereningar-a-oe/neuro-linkoeping/webbarkiv/neurorapporten-2021/ (10 Feb 2023).

Palmquist E. 2018. *Svenska logopeders omhaündertagande av personer med afasi och deras naürstående* (*Swedish speech language pathologist's care of people with aphasia and their relatives*), Degree project. Uppsala University, Uppsala, Sweden.

Persson, Klara, Brårdal, Rut, Karlsson, Fredrik, and Blom Johansson, M. 2022. Do best practice recommendations align with current aphasia practices in the Swedish care context: a national survey. *Aphasiology* 36(8), 903–920.

Pierce, John E, Menahemi-Falkov, Maya, O'Halloran, Robyn, Togher, Leanne and Rose, Miranda. 2019. Constraint and multimodal approaches to therapy for chronic aphasia: A systematic review and meta-analysis. *Neuropsychological Rehabilitation* 29(7), 1005–1041.

Pulvermüller, Friedemann, Neininger, Bettina, Elbert, Thomas, Mohr, Bettina, Rockstroh, Brigitte, Koebbel, Peter and Taub, E. 2001. Constraint-induced therapy of chronic aphasia after stroke. *Stroke* 32(7), 1621–1626.

Putman, Koen and De Wit, L. 2009. European comparison of stroke rehabilitation. *Topics in Stroke Rehabilitation* 16(1), 20–26.

REhabilitation and recovery of peopLE with Aphasia after StrokE (RELEASE) Collaborators. 2022. Dosage, intensity, and frequency of language therapy for aphasia: A systematic review-based, individual participant data network meta-analysis. *Stroke* 53(3), 956–967.

RIKSSTROKE (The Swedish Stroke Register). 2021. Quality of Swedish stroke care 2020 – A brief summary of data for the full year 2021. Umeå (SE). https://www.riksstroke.org/wp-content/uploads/2021/10/Arsrapport-2020-engelsk-sammanfattning.pdf.pdf (27 Aug 2023).

RIKSSTROKE (The Swedish Stroke Register). 2022. Quality of the Swedish stroke care 2021 – A brief summary of data for the full year 2021. Umeå (SE). https://www.riksstroke.org/wp-content/uploads/2022/11/Arsrapport-2021-engelsk-sammanfattning_final.pdf. (25 Aug 2023).

Rose, Miranda, Cherney, Leora and Worrall, L. 2013. Intensive comprehensive aphasia programs: An international survey of practice. *Topics in Stroke Rehabilitation* 20(5), 379–387.

Shrubsole, Kristine, Worrall, Linda and Power, E. 2018. Priorities for closing the evidence-practice gaps in poststroke aphasia rehabilitation: A scoping review. *Archives of Physical Medicine and Rehabilitation* 99(7), 1413–1423.e24.

Simmons-Mackie, Nina, Worrall, Linda, Murray, Laura L, Enderby, Pam, Rose, Miranda L, Paek, Eun Jin and Klippi, A. 2017. The top ten: Best practice recommendations for aphasia. *Aphasiology* 31(2), 131–151.

Socialdepartementet och SKR – Sveriges Kommuner och Regioner. 2023. God och nära vård 2023. En omställning av hälso-och sjukvården med primärvården som nav. (Good and close care in 2023. A restructuring of health care with primary care as the hub). https://www.regeringen.se/contentassets/f814b739c29447efb04753bfa37baa11/overenskommelse-mellan-staten-och-sveriges-kommuner-och-regioner-om-god-och-nara-vard-2023.pdf (19 Sept 2023).

Socialstyrelsen. 2020. Nationella riktlinjer för vård vid stroke, stöd för styrning och ledning (National Guidelines for Stroke Care, Updated 2020, Support for Management). Report for the National Board of Health and Welfare (SE). Report No. 2020-1-6545 Stockholm, Sweden.

Socialstyrelsen. 2023q. Hälso-och sjukvård i hemmet, kunskapsstöd för personcentrerad vård och rehabilitering (Healthcare in the home, knowledge support for person-centred care and rehabilitation), 2023-3-8458. https//www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/kunskapsstod/2023-3-8458.pdf (19 Sept 2023).

Socialstyrelsen. 2023b. Personalstatistik inom primaürvården, Delrapport 1 - en föürstudie (Personnel statistics in primary care, Interim report 1 – A preliminary study), 2023-3-8459. https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/statistik/2023-3-8459.pdf (29 Jan 2024).

Teasell, Robert, Meyer, Matthew J, McClure, Andrew, Pan, Cheng, Murie-Fernandez, Manuel, Foley, Norine, and Salter, K. 2009. Stroke rehabilitation: An international perspective. *Topics in Stroke Rehabilitation* 16(1), 44–56.

Trebilcock, Megan, Worrall, Linda, Ryan, Brooke, Shrubsole, Kirstine, Jagoe, Caroline, Simmons-Mackie, Nina, Bright, Felicity, Cruice, Madeline, Pritchard, Madeleine and Le Dorze, G. 2019. Increasing the intensity and comprehensiveness of aphasia services: Identification of key factors influencing implementation across six countries. *Aphasiology* 33(7), 865–887.

Wambaugh, Julie L., Wright, Sandra, Boss, Emily, Mauszycki, Shannon C, DeLong, Catherine, Hula, William and Doyle, Patrick J. 2018. Effects of treatment intensity on outcomes in acquired apraxia of speech. *American Journal of Speech-Language Pathology* 27(1S), 306–322.

World Stroke Organisation. 2023. Why stroke matters. Learn about stroke. http://www.world-stroke.org/world-stroke-day-campaign/why-stroke-matters/learn-about-stroke/ (27 Aug 2023).

Appendix 1
Digital questionnaire

Thank you for your interest in the MIRAA study. The following questions are for obtaining additional information about Swedish speech therapists' work with intensive rehabilitation. Participation in the study is voluntary and all information is anonymous.

1. I work with
   - ☐ Aphasia and/or apraxia of speech
   - ☐ Mixed speech therapy diagnoses

Comments:

2. I work in the following part of the care chain with people who have aphasia and/or apraxia of speech
   - ☐ Acute/subacute phase (0–6 months after stroke)
   - ☐ Chronic phase (more than 6 months after stroke)

Comments:

3. I offer the following type of rehabilitation to people with aphasia and/or apraxia of speech
   - ☐ Individual training
   - ☐ Group training
   - ☐ Home training with program
   - ☐ Communication partner training

Comments:

4. I see current patients with aphasia and/or speech apraxia on average
   - ☐ Less than 1 hour per week
   - ☐ About 1–3 hours per week
   - ☐ Between 4–10 hours per week
   - ☐ More than 10 hours per week

4b. Over how long (weeks) is intervention offered on an average?

5. The majority of patients with aphasia and/or speech praxia are offered intensive speech-language intervention (at least 4 hours/week) within the organization where I work
   - ☐ Always/often
   - ☐ Rarely/never

5b. Comments/example of priorities and barriers

6. I have suggestions for enablers that can improve the conditions for providing more intensive rehabilitation to people with aphasia and/or apraxia of speech.
   - ☐ Yes
   - ☐ No

6b. Suggestions for enablers:

Appendix 2
Thematic analysis, length of intervention periods, detected barriers, and suggested enablers

Quotes (Responses to question 4b. "Over how long (weeks) is intervention offered on an average?")	**Category**	**Theme**
Intensive periods of 3 weeks of four 1-hour visits per week.	Predefined length and intensity.	**Predefined rehabilitation periods:** Clinincs with predefined periods followed more or less strict intervention programs. Sometimes the intervention program had both predefined duration and frequency (4 hours/weekly for 3 weeks, or 25 days for 3 months), while others had periods more losely defined in an approximately span of weeks (3–6 weeks, 5–8 weeks, 8–12 weeks). In some cases, speech therapy was part of broader rehabilitation programs with a multidisciplinary approach. These programs can have a fixed duration, such as 25 days.
5–8 weeks.	Approximately predefined length.	
5–8 weeks. It has been possible to offer more than one hour weekly in periods.	Approximately predefined length.	
12 weeks, 4 visits à 30–60 min/week.	Predefined length and intensity.	
3–6 weeks.	Approximately predefined length.	
Approximately 12 weeks each period.	Predefined length	
8–12 weeks.	Approximately predefined length.	
The patient can be enrolled at the clinic for up to around 1.5 years, with more therapy in the first 6–8 months. In those months, a period usually lasts for 5–8 weeks. So, there may be a period when they have more (or less) intense contact than indicated above.	Different intensity of treatment over the care chain.	
3–5 months.	Approximately predefined length.	
8 weeks.	Predefined length.	
Patients go through a 25-day rehabilitation period (a period of about 3 months).	Predefined length.	
25 days of team-based intensive rehab, usually for 3 months.	Team-predefined length.	
It is entirely dependent on the patient's insight, motivation, and opportunities to benefit from speech therapy that determines how much contact we have.	Patient's insight and motivation.	**Patient-centred approach:** The therapy duration is determined on a case-by-case basis, taking into consideration the patient's progress, stamina, motivation, and response to therapy. The periods vary from a couple of weeks up to a year. Some patients get short and sporadic sessions, while others receive more extended and intensive periods of therapy.
Not limited in time, governed by need. For those who can handle more intensive periods, 3–4 periods are offered per year with 10–15 treatment sessions of 45 minutes over 2–3 weeks.	Patient's need and stamina.	
There is no fixed period of time, the need and the patient's motivation completely govern.	Patient's motivation and need.	
Number of weeks usually depends on the patient's stamina/ability to come to the clinic for treatment.	Patient's stamina/ability.	

Quotes (Responses to question 4b. "Over how long period (weeks) is intervention offered on an average?")	**Category**	**Theme**
According to patient's wish and stamina up to one year.	Patient's wish and stamina	Some patients receive therapy both as inpatients and outpatients, which can influence the duration and intensity of sessions. Some clinics mainly give rehabilitation in the subacute and early chronic phase (up to 8-12 months).
Individually, as needed.	Patient's needs	
Since I work in a neuro team, the number of occasions sometimes also depends on how often the patient meets the rest of the team.	Varies, depending on the team	**Varied duration and high variability in clinical setting:** Many SLPs found it hard to define how much rehabilitation their patients were offered. It varied a lot and some didn't keep statistics over number of appointments. Frequency and duration depended on team work, case load, care chain, distance from clinic and care format. Team dynamics and scheduling affected the treatment plan. Some patients received therapy both as inpatients and outpatients with the same SLP, which can have influenced the duration and intensity of sessions. Home rehab was less intensive due to factors such as travel distance.
If the patients live in our area, there is the option of continuing outpatient treatment. If they belong to another area, a referral is made to the local SLP.	Distance from clinic	
Hard to say, as the caseload stretch over inpatient and outpatient care.	Hard to say, cover the whole care chain	
At the moment I manage it myself. I have patients that I see 3-4 times a week and have done so for over a year.	Varies, up to the SLP	
It varies	Treatment periods varies	
Very difficult to estimate. But it usually happens that the patients are offered treatment periods of one occasion weekly for 3-5 weeks, then a longer break in a few months and then treatment again, etc.	Difficult to estimate	
Is offered in periods during several years, difficult to say how many weeks but many…	Difficult to say	
Varies depending on out-patient care.	Varies depending on out-patient care	
Home visits cannot be as intensive and also depend on whether there is a long journey.	Home rehab and travel distance affect	
Difficult to answer. It varies a lot and we keep no statistics on this.	Hard to say, it varies a lot	
Usually not at all, but sometimes we can offer patients to come 4 times a week. However, far from all patients get to see a speech therapist at all.	Varies, depending on workload	
At the speech therapy clinic, patients are received without a time limit.	Outpatients no time limits	

Quotes (Responses to question 5b. "Comments/example of priorities and barriers")	**Category**	**Themes**
Difficult to catch up as a SLP.	Too high caseload	**Understaffing:** A common reason for not being able to offer intensive rehabilitation is a result of limited resources with understaffing and too large caseloads per clinician.
Lack of speech therapy positions and high pressure on the clinic.	Lack of SLPs	
Due to the fact that we are only two SLPs (180%) for all neuropatients admitted to all care wards (so not only in neurowards, but medicine, geriatrics etc) and all outpatients within our catchment area. In addition, we must also be at hand for patients with difficult and unusual neurological diagnoses.	Only two SLPs in the care chain	
It does not work on existing resources.	Lack of resources	
It has occurred but is difficult to implement with our staffing approx. 1.2-1.4 SLP positions that work with this. (It has happened when we were at our most staffed).	Understaffing	
There is no space, as we have far too much patient intake.	Too many patients	
It does not work on existing resources. However, I will be changing workplaces and will be able to offer more intensive therapy after the move.	Lack of resources	
Currently, there are not that many patients who receive such intensive speech therapy intervention, but it will be possible to implement it in the future.	In the future	
Many of our patients cannot bear it to such a high extent either.	Fatigue/stamina	**Patient factors:** The SLPs describes patients' factors as hindering participation in intensive rehabilitation.
Intensive therapy is offered if the patient is […] able to carry out this intensive treatment. In other cases, support is offered in another form (e.g. counselling for relatives or staff at the residence).	Ability	
The number of weeks usually depends on the patient's ability/stamina to come to the clinic for treatment. However, I feel that many patients do not want/cannot bear/can come several times a week.	Ability/stamina	
It is entirely dependent on the patient's insight, motivation...	Insight/motivation	

Quotes (Responses to question 5b. "Comments/example of priorities and barriers")	**Category**	**Themes**
I follow the schedule that day care rehab creates for its patients in cases where the patient is enrolled there, which means two one-hour sessions per week.	Scheduling	**Teamwork/scheduling:** Teamwork often make it difficult to offer intensive SLP treatment since the patient is busy with rehabilitation by several different professionals at the same time.
Intensive intervention is offered, but as I work in a team, the patient often finds it difficult to prioritize coming to the SLP 4 hours/week at the same time as other interventions are ongoing.	Teamwork	
Right now not possible to offer intensive rehabilitation because the SLP works part-time.	Scheduling part-time	
Since I work in a neuro team, the number of occasions sometimes also depends on how often the patient meets the rest of the team.	Teamwork	
Mostly dysphagia. Also, within the neurologist's team, such as MS team, Movement team, etc.	Dysphagia/assessments	**Prioritization:** Dysphagia and assessments are given priority before administering treatment.
A large part of the working time is taken up by assessments of swallowing ability, which is always prioritized even if the patient has been assessed very recently while in hospital. We also provide LSVT treatment where the method requires 4 times a week.	Dysphagia + LSVT prioritized	
Dysphagia is prioritized in the inpatient unit where I work. If possible, 4 hours/week are offered. In outpatient care, where I also work, 4 h/week is rarely offered.	Dysphagia prioritized	
Home visits cannot be as intensive and also depend on whether there is a long journey.	Time consuming travel	**Accessibility:** Long distance to and from the clinic, and home visits cannot be as intensive because of travel time.
Difficult to achieve more often than twice a week due to compensation levels and frequent home visits/travel time.	Home visits/travel time	
We do not always come into contact with affected patients…	Come in contact	
…and opportunities to get to a SLP that determines how much contact we have.	Get to clinic	
Intensive therapy is offered if the patient is considered to be able to come to the clinic and has the stamina to carry out this intensive treatment. In other cases, support is offered in another form (e.g. counseling for relatives or staff at the residential care home facilities).	Come to the clinic	

Quotes (Responses to question 6b. "Suggestions for enablers")	**Categories**	**Themes**
More SLPs in the clinic.	More SLP positions	**Increase staffing and financial compensation:** Many SLPs suggested increased resources with more SLP-positions. To do this they suggested that following guidelines should be a priority for management, to arrange meetings with the management and involve the union.
Higher compensation for intensive treatment, as for example LSVT.	Economic compensation	
More SLPs within the team or in the teams for neurological injuries (which do not have a SLP), so you can coordinate more group activities and the like.	More SLP positions	
It is an organizational responsibility. I have initiated meetings with our manager…	Organizational responsibility	
…and will also get involved in the union.	The union	
Divide aphasia training into periods during the year and establish a waiting list of patients who are interested and have the conditions to carry out intensive training.	Schedule aphasia therapy and create a waiting list	**Implement pre-planned treatment approach:** The SLPs suggested to schedule rehab with other professions in the team and plan intensive treatment for shorter periods.
For patients at the speech therapy clinic, a schedule structure could be created to be able to receive patients for intensive treatment.	Create a schedule structure	
Collaboration with day rehab to extend patients' days of stay if intensive intervention is needed.	Reorganize length of rehab stay	
People who can handle intensive treatment are offered 4 hours/week for 3 weeks. Several treatment periods a year are offered, on average 2-3 periods.	Preplanned treatment	
Schedule together with the rehab team for reduced travel to rehab.	Co-schedule with rehab team	
Cooperation with other professions in the mobile stroke team	Cooperation stroketeam	
Intensive treatment for shorter periods. Establish with management that intensive aphasia treatment should be prioritized.	Prioritize intensive treatment	
Shorter treatment periods in that case	Shorter treatment periods	

Quotes (Responses to question 6b. "Suggestions for enablers")	**Categories**	**Themes**
Home visits and digital visits to reduce traveling for pat.	Home visits and digital visits	**Comprehensive format:** Increased use of telerehabilitation, have more rehabilitation in groups and increase the amount of home assignments.
Treatment in a group so that it becomes more "attractive" to come here.	Group training	
Group training (not during the pandemic)	Group training	
More structured home training with programs	Home training	
Increased digital visits.	Digital visits	
Easier transport to/from the SLP. Premises where people can be offered to work independently (under supervision) with digital training.	Digital training	
Premises where patients can be for most of the day (such as a Aphasia house) to have several rounds of training on the same day.	Aphasia house	
More digital visits.	Digital visits	
Information and guidance somewhere else, for example Afasiföreningen	Information at Afasiföreningen	
One could do better at assigning home tasks to patients between visits.	Home assignments	