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Exhibition:

Afasiforbundet i Norge – www.afasi.no

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Weiller, Cornelius: How the brain changes when recovering from aphasia – plasticity and the dual loop model

University Hospital of Freiburg, Germany

In part one the advantages of a complete parallel dual loop system instead of a serial one stream model for the understanding of aphasia is given. Traditionally, brain processing of language is thought to be mediated by the arcuate fascicle (AF) connecting temporal, parietal and frontal cortex. However, linguistic, anatomical and modern imaging support a the hypothesis of a two route system, a dorsal along the AF one for sensorimotor mapping as in speech production and a ventral one along the extreme capsule/IFOF needed for comprehension. Syntax requires the integration of both streams. Lesions of patients mapping on the two streams differentiate symptoms and syndromes.

The second part deals with lessons learned from imaging of stroke patients for aphasia rehabilitation. Functions are organised in networks, there are multiple accesses to a network, which may be used for rehabilitation. The time course of brain reorganisation after stroke suggests that different approaches may be useful at different time points or phases after stroke. The dual loop model may also provide a theoretical frame for aphasia therapies as CIAT, group therapy or hints as “self-instruction” or “verbal instruction” by the therapist.

Starrfelt, Randi: Rehabilitation of alexia

University of Copenhagen, Denmark

Alexia is a disorder of reading that arises due to brain injury or brain disease in previously literate individuals. Alexia is commonly caused by focal lesions in the dominant hemisphere, but may also result from degenerative diseases like Alzheimer's disease. Alexia may accompany an aphasic syndrome (central alexias), or appear as a consequence of perceptual or attentional deficits (peripheral alexias). Both diagnosis and treatment of alexia is a challenge, and most patients with alexia do not regain premorbid reading skills even following years of training.

This talk will present the main forms of alexia, link them to models of the underlying cognitive and perceptual systems, and discuss treatment options. For most forms of alexia, there is little clear evidence for the effect of treatment, and possible ways to evaluate available evidence will be discussed through examples.

The central alexias have proven particularly difficult to treat, and little generalization is observed following training. Item specific effects may be attainable, however. For the peripheral alexias, (slightly) more evidence for treatment effects and even generalization is available. Hemianopic alexia – a condition caused by a visual field defect – is by far the condition most responsive to treatment. For pure alexia, a selective reading deficit which leaves writing and other language skills unaffected, there is some evidence for the effect of different treatments, and some tentative guidelines can be provided.

Overall, however, more studies are needed to inform rehabilitation efforts for acquired reading disorders, and the talk will end with suggestions about how relevant data may be collected in clinical practice.

Renvall, Kati: Which words to train? Functionally relevant items

University of Turku, Finland

The purpose of this presentation is to provide evidence of the meaning of “functionally relevant” in aphasiology, pinpoint challenges in identifying somehow “functional”, “relevant”, “useful” or “meaningful” items, and to provide guidance in the selection of lexical items for aphasia and word retrieval (anomia) therapy. The ultimate aim of the presentation is to promote discussion of ways to identify and select potentially useful lexical items for therapy. The presentation is largely based on two review papers by Renvall, Nickels, and Davidson (2013a, b).

A starting point for the presentation is that majority of aphasia treatment studies show positive effects for items practised in therapy but only minor gains for untreated items that are not exposed during the treatment (e.g., Wisenburn & Mahoney, 2009). While clinicians have always aimed to target treatment at items that are somehow “functionally relevant” for their clients, the recent results indicate even stronger need to determine what the most relevant items are and how to select them for different individuals. Interestingly, clinicians typically aim to treat items which are intuitively the most common for people in general but have no tools to identify objectively frequently used words. The existing aphasia or AAC literature does not provide much assistance in this matter. Moreover, in those treatment studies in which functionally relevant or individually chosen items have been used, the selection process has not been well described. It is also unclear why almost all reported therapy attempts are directed at concrete nouns and verbs although the most common words are abstract and include words from other word classes (e.g., adjectives and adverbs).

As concrete tools and specific instructions are lacking, one way forward could be use of frequency-based lists when seeking to identify potentially relevant items across individuals. Importantly, the same resources could also be used when trying to find more individually relevant sets of stimuli for treatment. The most important step, however, would be to publish different strategies as part of scientific experiments and thus increase knowledge on the most effective ways of selecting therapy items.

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Keynote speaker, Friday 12 June 2015

Howard, David: Treating nouns in aphasia: Is there generalisation?

Newcastle University & North East Aphasia Centre, UK

Keynote speaker, Friday 12 June 2015

Webster, Janet: Treating verbs in aphasia: How do we maximise generalisation?

Newcastle University, Speech and Language Sciences, UK

Verb retrieval difficulties are a common feature of aphasia, often co-occurring with and/or causing sentence production difficulties. This talk will describe treatment approaches for verbs, focusing on the outcome of intervention in terms of the direct effects of treatment and generalisation i.e. effects that extend beyond the focus of treatment. There will be a review of different types of treatment approaches:

- a) Single level treatments that treat verbs as single words
- b) Multi-level treatments that combine work on words and sentences
- c) Multi-level treatments that combine work on words, sentences and discourse

Treatment effects and generalisation will be considered along a linguistic continuum from words to sentences to connected speech. The factors impacting the outcome of treatment will be discussed, with a particular focus on the relationship between verb retrieval and sentence production. Finally, there will be consideration of how we can maximise the generalisation seen, potentially increasing the functional benefits of therapy for the person with aphasia.

Eriksson, Karin; Forsgren, E.; Hartelius, L.; Saldert, Ch.: Interaction-focused communication partner training with professional carers

University of Gothenburg, Institute of Neuroscience and Physiology, Division of Speech and Language Pathology, Sahlgrenska Academy & University of Gothenburg Centre for Person-Centred Care (GPCC), Sweden

Background: Studies show that care personnel consider communication important for good care (Wadsten, Engelholm, Fahlström, & Hägglund, 2009; Forsgren, Scott, Hartelius, & Saldert, 2015) but it has also emerged that care personnel working with adults with communication difficulties tend to control topic and type of conversation with little room for patients to initiate communication (Hersch, Godecke, Armstrong, Ciccone, & Bernhardt, 2014; Gordon, Ellis-Hill, & Ashburn, 2009). Several communication training programs focusing on professional carers has been carried out, but there is a lack of studies with an individualized approach.

Objective: To explore the effect of an interaction-focused communication partner training programme directed at enrolled nurses working with people with communication disorders in long-term residential care facilities.

Method: The study has a replicated single subject design with multiple baselines across individuals. It includes five dyads consisting of a person with aphasia (n=4) and a person with Parkinson's disease (n=1) and their conversation partners, an enrolled nurse (n=5) from five different municipal nursing homes. Video recordings of a pre-selected daily nursing situation were obtained at baseline, intervention and follow-up. These recordings were used in the planning and implementation of the intervention and for outcome assessments. The enrolled nurses and the speech and language pathologist together formulated individual goals to change particular communicative strategies. Outcome was measured in three ways. Assessors not otherwise involved in the study and blinded to in what phase the video recordings had been obtained rated the video recordings according to use of the targeted strategies. Self-reported goal attainment by the enrolled nurses was also collected as well as reports of perceived functional communication of the persons with communication disorder from all the participants.

Results: The blinded assessment of goal attainment showed an improved use of strategies for eight of 13 goals. The enrolled nurses also reported an increased use of strategies. The reports of perceived functional communication of the persons with communication disorder were mixed with the persons with communication disorder mostly reporting improvements while the enrolled nurses mostly reported the functional communication of the persons with communication disorder as more limited after intervention.

Discussion: An interaction-focused communication partner training program was successful in altering some targeted communicative behaviour of enrolled nurses. However, evaluation of this type of training poses specific challenges.

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Berg, Karianne: Goal setting – the contribution of people with aphasia

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Background: Through clinical guidelines for stroke rehabilitation and patient legislation in Norway there is an emphasis on the importance of involving clients in goal setting and clinical decision making as part of their rehabilitation process. A review conducted by Rosewilliams et al. [1] showed that there is a gap between the intentions of guidelines and legislation and the clinical practice when it comes to active involvement of stroke survivors. But it is important to note that people with aphasia and other cognitive impairments have to a large degree been excluded from these studies [2].

Objective: The objective of this study was to investigate how people with stroke induced aphasia experienced client participation during the process of goal-setting and clinical decision making in collaboration with their speech pathologists.

Method: A qualitative research approach using semi-structured interviews with 15 persons with mild to moderate stroke induced aphasia took part to gather in-depth information, focusing on the individual experiences. The interviews were transcribed verbatim and a qualitative analysis using Systematic Text Condensation was undertaken [3].

Results: The study identified three main categories and seven sub-categories describing how people with aphasia experienced client participation in goal setting and clinical decision making: Setting goals for rehabilitation (lack of common goals, several personal goals), Making plans for rehabilitation (diffuse what goes on in speech therapy, unclear future plans), Involvement (early rehabilitation, trusting the expert, wanting to be an active decision maker).

Conclusion: Despite the fact the these results showed that goal setting and clinical decision making was something many of the participants struggled to describe as collaborative they were in general satisfied with serviced delivered by the speech pathologists.

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Beeke, Suzanne: Conversation therapy for aphasia. How does it work? How do we show it works?

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www.ucl.ac.uk/betterconversations

The inability to use language effectively to converse, and thus to maintain personal relationships and interact with the environment has a major impact on everyday life, and can lead to social isolation, depression and reduced quality of life. This is not surprising; conversation is central to human relationships and constitutes our primary use of spoken language. In aphasia rehabilitation over recent years, conversation therapies have attracted much attention, and a systematic review has concluded that conversation training is effective for the non-aphasic conversation partner (Simmons-Mackie et al 2010). In their qualitative review of conversation therapy for aphasia, Simmons-Mackie et al (2014) note a marked variation in approaches, underpinning theory and reported outcome measures, and highlight a need for valid measures of natural conversation.

With conversation therapy becoming an established intervention method, aided by resources such as SPPARC (Lock et al 2001) and Better Conversations with Aphasia (Beeke et al 2013), research has begun ask questions such as: who does it work for, and how does it work? Both of these issues are closely linked to the challenge of reliably measuring the outcomes of conversation therapy. For example, studies have begun to train people with aphasia (not just their partners) to implement strategies in conversation (Beeke et al, 2015; Wilkinson et al, 2010), yet we still do not fully understand which factors influence whether they are able to learn to implement strategies in daily conversation. In addition, behaviour change research in health psychology is beginning to have an impact on our understanding of the mechanisms by which rehabilitation might change human behaviour; this addresses the problem of specifying the active ingredients of intervention. Factors of potential relevance include participants' capabilities (e.g. cognition), their motivations (e.g. identity, beliefs), and their opportunities (e.g. environment) (see Michie et al, 2011).

This talk will give an overview of approaches to conversation therapy, explore how conversation therapies may change behaviour, and discuss the challenge of outcome measurement, and consider the strength of the evidence base. The Better Conversations with Aphasia project and e-learning resource developed at University College London will be presented.

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Symposium 1: Involving people living with aphasia in care and therapy

Person centred care, user involvement or other similar terms describing active involvement of a client in information sharing and decision making through the health care system have in recent decades replaced a more paternalistic approach. However client participation is prerequisites by clients wanting to and capable of being active in their own recovery process. It is also prerequisites the professionals being willing to empower the clients to participate. Communication and collaboration between client and professional are key elements of this empowerment shift and good communication is vital in all client participation, regardless of medical condition. On the other hand research has shown that client participation in medical decision-making is highly dependent on the client's communication style and verbal ability.

In the symposia we will be presenting current Scandinavian research about involvement of people with aphasia. Different ways of facilitating involvement has been scrutinized and a variety of approaches all with the same aim of getting people with aphasia involved are presented. The first presentation will focus on the facilitation of patient involvement through training in supportive communication directed at medical students. The next contribution presents views and perceptions of speech-language therapists on the involvement of their clients with aphasia in the process of goal-setting and decision making prior to therapy. The third presentation similarly will focus on the decision making process in aphasia therapy, but based on interactions between the involved parties. Lastly the final contribution will focus on client involvement in evaluating the effects of communication intervention. Two different methods used with clients with severe aphasia will be presented.

Forsgren, Emma; Hartelius, Lena; Saldert, Charlotta: Training medical students in supportive communication

University of Gothenburg, Institute of Neuroscience and Physiology, Division of Speech and Language Pathology, Sahlgrenska Academy & University of Gothenburg Centre for Person-Centred Care (GPCC), Sweden

Background: Training of the conversation partner's ability to support communication with persons with aphasia has been proven to have a positive effect on communication (Simmons-Mackie et al. 2010), and studies focusing on training with health care staff (Sorin-Peters et al. 2010), as well as with health care students have been conducted (Legg et al. 2005). Even so, more research is needed to establish which methods may be effective in these types of interventions.

Objective: To explore the effect of a three hour workshop in supportive communication directed at medical students in two studies.

Method: In the first study 59 medical students participated, 33 received a lecture about communicative disability and another 26 students who in addition to this lecture participated in a workshop in supportive communication. The workshop included theoretical information as well as the opportunity to try different conversational strategies in role play with each other and with standardized patients. All students completed a questionnaire exploring knowledge about and attitude towards communication with people with speech and language disorders before and after the lecture or the workshop.

The second study included 69 medical students who participated in either just a lecture or a lecture and a workshop. In addition to all students completing a questionnaire, 15 students were video-recorded in interaction with a standardized patient before and after the workshop. These recordings were assessed by two trained, independent raters.

Results: Results from the first study showed that students in both groups reported that they felt they knew more about communication after the lecture or workshop compared to before. However the students who participated in the workshop also demonstrated a statistically significant increase in ability to choose adequate conversational strategies as well as a change in attitude towards communication with people with communication disorders. Preliminary results from the second study will be presented.

Discussion: An interactive workshop including training in using communicative strategies augments knowledge about supported communication, although it remains to be proven if the increased ability also is evident in actual conversational interaction.

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Berg, Karianne: Speech and language therapists' experience with client participation for people with aphasia

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Background: Although client participation in goal-setting and clinical decision making has been part of the Norwegian legislation and clinical guidelines for stroke rehabilitation for several years the evidence of whether these recommendations have been implemented into clinical rehabilitation practice is still scarce, especially in people with communication disorders. Studies have shown that communication and cognitive impairments are major barriers for involving clients in goal-setting, even if people with aphasia and speech and language therapists are barely included (Leach, Cornwell, Fleming, & Haines, 2009; Sugavanam, Mead, Bulley, Donaghy, & van Wijck, 2013). The question is whether speech and language therapists are more skilled at involving people with communication disorders?

Objective: The objective of this study was to investigate how speech and language therapists experienced client participation during the process of goal-setting and clinical decision making for people with aphasia after stroke.

Methods: Four semi-structured focus group interviews were conducted with a total of 20 speech and language therapists from different areas of Norway. The interviews were transcribed verbatim and a qualitative analysis using Systematic Text Condensation was undertaken (Malterud, 2012).

Results: Three different approaches to client participation were found; Client-oriented participation, next of kin oriented participation and professional-oriented participation, reflecting a wide definition of client participation from the speech and language therapists. Client-oriented participation was regarded as the gold standard. However, the three approaches were described as overlapping, but each held certain characteristics and depended on certain facilitators and barriers, with next of kin and tools made for enhancing collaborative goal-setting and clinical decision making as the most prominent facilitators and not surprisingly, the nature of aphasia as the most noticeable barrier.

Discussion: The results of this study showed that speech and language therapists choose approaches to participation according to the presence of barriers and facilitators. According to examples given client oriented participation was mainly offered clients with mild to moderate aphasia. It could be questioned whether the speech and language therapists think it is possible to overcome the barrier of language impairment for the clients with severe aphasia to be able to participate in goal setting and clinical decision making.

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Isaksen, Jytte: “Well, you are the one who decides”. Making shared decisions in aphasia rehabilitation

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Background: The objectives of shared decision making are for both the client and the professional to participate in exchange of information, discuss, negotiate and make decisions in genuine fellowship with the stated benefits of higher compliance, empowerment, increased client satisfaction and reduction of stress and anxiety (Charles, Gafni, & Whelan, 1997; Lawrence & Kinn, 2012). However barriers such as limited resources, unwillingness from either of the participants together with an unequal power balance are described (Légaré et al., 2008). Persons with aphasia have earlier expressed preferences for shared decision making, but how the participants actually manage the activity when aphasia is involved has not been investigated (Nordehn et al., 2006; Worrall et al., 2011).

Objective: The study aims to describe the complex premises present in speech-language therapists' effort to collaborate and reach agreement when making decisions about future therapy or termination of therapy with people with aphasia and their significant others and how the therapists handle these premises throughout sessions of outcome evaluation.

Methods: 34 sessions of outcome evaluation with speech-language therapists and people living with aphasia were video recorded and the 12 participating therapists were interviewed thereafter. Through content analysis of the interviews topics were identified concerning efforts to include clients in decision making as well difficulties in doing so. The findings were afterwards further clarified by ethnomethodological inspired microanalysis of selected video clips.

Results: The most notable finding was a deep-felt wish from all therapists to involve their clients despite language difficulties and other person-related barriers. The most prominent hindrance in practice was the interactional organization of the shared decision-making process, in which the therapists always took the lead and thereby made it hard for the clients to contribute to genuinely shared decisions.

Discussion: Regardless of the clinicians' heartfelt wish to collaborate and include their clients with aphasia in decision making about e.g. ending therapy or setting new goals, it proved to be difficult to integrate professional and personal views with the opinions of the clients.

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Rautakoski¹, Pirkko; Nykänen², Arja; Nykänen², Matti: Involving people with severe aphasia to evaluate the effects of an intervention

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Background: Evidence based practice (EBP) is a goal in clinical work. One of the three aspects Dollaghan (2007) outlines for EBP is the best available evidence concerning the preferences of a fully informed patient. These preferences are the clients' opinions on their communication, therapy goals and the effects of the intervention (Worrall, 2006). To enable clients with severe aphasia to give their opinions, modified methods can be used. These methods include for example interviews using multimodal communication methods, and measurements adapted with pictures and other visual adjustments (Dalemans et al., 2009).

Objective: To present two adapted methods to enable people with severe aphasia to evaluate effects of communication intervention.

Method: In study I 53 persons with aphasia evaluated, with a questionnaire adapted with pictures, if they benefitted from the training of different communication methods during a total communication intervention (Rautakoski, 2011). In study II 34 persons with aphasia participated on intervention concentrating on finding functional communication methods for a couple (Nykänen et al., 2013). They evaluated, with a questionnaire and combined multimodal interview, if the communication methods they trained during this intervention were useful in different communication situations.

Results: Study I: People with aphasia perceived that they did benefit from the total communication intervention quite a lot. The most benefit was experienced from training of speech and use of gestures and pointing, but also from the use of maps, wordlists and other material. Study II: People with aphasia experienced that the intervention was very helpful but a half year later this perception was not as strong any more ($p < .001$). The usefulness of the trained communication methods were perceived to be best when communicating with the partner at home but not as good when communicating with people outside the home.

Discussion: The two adapted methods used to enable people with severe aphasia to evaluate the effects of the communication intervention focus on different aspects. The method in the study I focuses on the concrete activity, the communication methods used, and the method in the study II focuses on participation. This difference reflects changes in the goals of the communication interventions.

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Symposium 2: Constraint induced language therapy (CILT) during the various stages of aphasia rehabilitation

Constraint induced language therapy (CILT) during the various stages of aphasia rehabilitation
About 2/3 of persons with aphasia following stroke have long term language difficulties (Pedersen et al 2004). Reviews of the aphasia research field show that there is no general treatment for aphasia. Based on existing studies it is impossible to predict when, whom or to which degree a person with aphasia will improve their language skills (Kelly et al 2010). However, the intensity of the treatment has been demonstrated as a positive factor (Brady et al 2012). Constraint induced language therapy (CILT) applies intensive treatment with shaping, role-modeling, relevance for daily living and interaction, resulting in positive outcomes for aphasia rehabilitation (Difrancesco et al., 2012).

The purpose of this symposium is to describe the application of CILT in two of the leading inpatient rehabilitation institutions in Scandinavia and the University of Helsinki. Hammel Neurocenter in Denmark works with patients in the sub-acute phase; Sunnaas rehabilitation hospital in Norway and the University of Helsinki include mainly chronic patients. The Finnish study combines transcranial magnetic stimulation and intensive language action therapy (ILAT, synonymous with CILT). The presentations will demonstrate how CILT is tailored to meet different patient needs during the various stages and how outcome is assessed, including the following sections:

- The description of preclinical interview and screening in order to meet inclusion criteria and match persons with aphasia to the CILT group based on approximately similar language skills, and how this correlates with the final group participation and outcomes.
- The description of CILT in sub-acute inpatient neurorehabilitation focusing on issues of applicability.
- The description of outcome results in the long term perspective by including linguistic and quality of life results from the follow-up testing.
- The description of a multi method approach exploring the treatment outcome with focus on video-recorded everyday conversations at home.

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**Becker^{1,2}, Frank; Theepan¹, Dilanee; Jensen², Ole Bjørn:
How to determine who should participate in a CILT- program, and who
should not? Experiences from pre-admission screening**

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Background: Constraint induced language therapy (CILT) is still a rather new form of aphasia treatment. Thus, there is further need to investigate which persons with aphasia do benefit from CILT and how and according to which criteria they should be selected.

At Sunnaas Rehabilitation Hospital, an intensive language training group program based on constraint induced language therapy (CILT) is established as a clinical routine (SunCIST; Kirmess et al 2012). Before admission, all patients are screened in an outpatient consultation which is either performed face-to-face or by telemedicine (videoconference). The primary aim of this consultation is to provide information about the program to the person with aphasia and caregivers, and to assess whether the patient meets the inclusion criteria. Furthermore, the consultation forms the basis for matching persons with aphasia into CILT groups based on their language skills.

Objective: To describe CILT pre-admission screening and present parameters from the screening relevant for participation in and outcome of SunCIST.

Methods: Data from approximately 150 persons with aphasia have been collected and are currently being analyzed. These data regard demographic and disease factors, everyday life functioning, endurance/fatigue, motivation, and current speech and language therapy. In addition, a short language assessment regarding repetition, object and picture naming, auditory comprehension and spontaneous speech is included in the pre-admission screening.

Results: We will present the abovementioned data summarized for all persons with aphasia who have participated in the screening. A special focus will be on the description of epidemiological data, medical characteristics, language function etc. for those patients who were admitted to our intensive language program, and those who were not, respectively. We will also look into possible differences regarding whether the outpatient consultation was performed face-to-face or by videoconference.

Discussion: By presenting and discussing data from pre-CILT screening, we hope to illuminate clinical practice and to contribute to a further understanding of the applicability of CILT.

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Kirmess^{1,2}, Melanie; Heiberg², Ellen K.; Kjeldaas², Hege; Krohn², Silje; Wennberg², Ulrika: The long term outcome of the SunCIST program

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Background: Sunnaas rehabilitation hospital offers an intensive aphasia program based on the principles of constraint induced language therapy (CILT) within a holistic, multi-disciplinary group setting, called SunCIST (Kirmess et al., 2012). SunCIST is carried out as a 3 week, inpatient intervention for groups of six patients, where each daily CILT group consists of three persons with aphasia and an experienced speech-language pathologist (SLP). In addition to CILT two to three hours a day, the program also focuses on psychosocial and physical aspects, as well as use of language skills in natural social situations.

Objective: The aim of this presentation is to investigate the long term outcome of participation in the SunCIST program at least one year after the original group treatment entry.

Methods: Participants include persons with aphasia minimum four months post onset, whereas the average of the sample has lived with aphasia for 2-3 years prior to participation. Exclusion criteria cover other neurological degenerative diseases; severe cognitive disabilities and severe auditory comprehension deficits that interfere with the purpose and understanding of such an intensive group treatment. A minimum amount of verbal production and repetition skills is required to be able to profit from the shaping by the SLP. All participants completed a standardized assessment protocol on the first and the last day of the program, and once during their stay a quality of life measure (SAQOL 39). At the follow-up (minimum 1 year post SunCIST participation) the same assessments are conducted. So far, more than 70 persons completed the SunCIST program and follow-up testing has started.

Results: Despite large variation in aphasia severity and individual differences in time post onset, the participants showed significant changes on the group level, as well as individual pre-post changes on at least one subtest. Participants evaluated SunCIST as a positive experience and useful approach. Expectations for the follow-up outcome consider the maintenance of the post test results or further improvement with respect to further rehabilitation progress for the persons with aphasia.

Discussion: The long term outcome of SunCIST has to be discussed in light of personal and environmental factors.

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Steensig, Inger; Christensen, Maria; Madsen, Janne; Frølund, Lisbeth: CIAT in sub-acute neurorehabilitation: Issues of applicability

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Background: Stroke patients with aphasia are more severely disabled than other stroke patients due to their communication deficits. The cost of stroke-related care is among the fastest growing in the health system leaving a need for evidence based practise. Constraint-induced language therapy (CILT) is an intensive, short-term, group-based speech and language therapy founded on a number of principles. Previous research indicates that CILT can lead to substantial and lasting improvements in language functions in chronic aphasia (Meinzer et al., 2012). A few recent studies have also shown a promising effect of CILT in sub-acute aphasia (e.g. Kirmess & Maher, 2010). However, the applicability of CILT is challenged by the conditions of rehabilitation in a sub-acute inpatient multidisciplinary setting.

Objective: The aim was to describe experiences with the applicability of CILT in stroke patients with aphasia in the frame of sub-acute, inpatient, multidisciplinary neurorehabilitation.

Methods: Stroke patients with sub-acute aphasia participated in CILT full time; 30 hours of CILT in ten weekdays, three hours a day. Experiences with the applicability were continually gathered by the speech and language pathologists conducting CILT.

Results: Different topics of applicability emerged: fatigue, timing, logistics, medication, prioritisation of rehabilitation needs and prioritisation of the resources of the speech and language pathologist.

Discussion: The results support the notion that CILT can be applied in sub-acute neurorehabilitation, and that the applicability can be increased by considering the emerged topics. Despite the challenges of applying CILT it is a rewarding method allowing evidence based language therapy in sub-acute neurorehabilitation.

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Asta Tuomenoksa, Anu Klippi: Changes in conversation following ILAT in chronic aphasia – preliminary results from two anomic cases

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Background: Recently, neuro-scientifically based aphasia rehabilitation methods which utilize brain plasticity have emerged, and results have shown that intensive rehabilitation can produce significant gains for example in subjects' naming ability. Aphasiologists and clinicians are, however, convinced that the ultimate goal for rehabilitation should be an improvement in the person with aphasia's (PWA) everyday communication. Since conversation is the most common linguistic activity in our everyday life, it has rightly become an important outcome measure for rehabilitation. This arises intriguing questions: can we improve PWAs' talk in conversation with neuro-oriented rehabilitation and which methods are suitable for documenting the change?

Objective: To combine a quantitative and a qualitative method to examine possible changes in conversation following neuro-oriented rehabilitation in chronic aphasia.

Methods: Our data was collected as a part of the research project Treatment-induced speech and language improvement and neuroplasticity after stroke, which is a randomized clinical control study conducted at the University of Helsinki. The study combines transcranial magnetic stimulation and 30 hours of intensive language action therapy (ILAT) during two weeks. In addition to administration of traditional language tests, the subjects video-recorded everyday conversations at their homes. The conversations were transcribed according to the conventions of conversation analysis (CA), which provides a qualitative and data-driven starting-point to the analysis. A quantitative analysis will also be combined by adapting POWERS.

Results: We present preliminary results of two subjects with anomic aphasia, who were randomized to ILAT rehabilitation only. One case show an increase in the proportion of verbs and nouns in everyday conversation following therapy, which correlate with similar gains in confrontation naming of actions and nouns. The other case show no progress in noun or verb usage in conversation. The amount of repair sequences did not show significant changes for either of the participants. However, the proportion of turns involving repair showed a decrease for both dyads following therapy. A closer look at the trouble sources causing the repair point to a decrease in problems of lexical retrieval.

Discussion: It seems that considering conversation as an outcome measure, it is fruitful to combine qualitative and quantitative analysis methods.

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Free orals session

Hanne, Sandra; Adelt, Anne; Stadie, Nicole: Treatment of sentence comprehension and production in aphasia: Is there cross-modal generalization?

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Background: Many individuals with aphasia (IWA) experience difficulties in sentence comprehension and production. Among the different treatment approaches proposed for sentence processing deficits, two methods have been studied extensively: Mapping Therapy, addressing comprehension deficits (e.g., Rochon & Reichmann, 2004) and Treatment of Underlying Forms (TUF), focussing more on production (e.g., Thompson & Shapiro, 2005; Stadie et al., 2008). There is evidence that both approaches result in practice effects and generalisation to untrained sentence types within the treated modality. Concerning cross-modal generalisation, the findings indicate that therapy targeting sentence comprehension has a positive impact on sentence production. However, this cross-modal link seems to be uni-directional since studies did not observe improvements in sentence comprehension following sentence production treatment (Schröder et al., 2014).

Objective: The aim of the present study was to investigate uni- and cross-modal treatment effects following sentence comprehension and production treatment.

Methods: We used a cross-over treatment study design with multiple baseline and control task to investigate treatment outcomes in two German-speaking IWA with agrammatic speech output and deficits in sentence comprehension. Sentence comprehension and production treatment were allocated in two successive treatment phases balanced across both IWA. Mapping Therapy combined with an acting-out task was administered for sentence comprehension treatment, whereas treatment of sentence production followed the German adaption of the TUF approach (Schröder et al., 2009). In both modalities, object relative clauses (ORCs) constituted the treated sentence structure.

Results: Both IWAs showed uni-modal practice effects as well as uni-modal generalisation to untrained exemplars of ORCs. These treatment effects were treatment specific as evidenced by stable performance in a functionally unrelated control task. However, uni-modal generalisation to untreated sentence structures (subject relative clauses and who-questions) did not occur. There was no cross-modal generalisation, i.e., we observed no improvements in sentence production following treatment of sentence comprehension and vice versa.

Discussion: The results will be discussed with respect to clinical implications for treatment of sentence comprehension and production in IWA. In addition, implications concerning theoretical assumptions about distinct and/or shared mechanisms involved in sentence comprehension and production will be reviewed.

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Ahlsen, Elisabeth: Interpreting recurrent gesture patterns in aphasia rehabilitation

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Background: In research about aphasia and the use of gesturing, there is a basic controversy between considering gestures as disordered as a consequence of the aphasia and considering gestures as potentially preserved and as a possible means for compensatory communication. The controversy is related to the views of language and speech as co-generated and intertwined or as two potentially separable but coordinated systems. Besides from addressing this controversy, research more directly related to aphasia rehabilitation has concerned teaching gesturing as strategy to persons with aphasia and very little speech output.

Objective: The present project addresses gesturing from the perspective of enhancing the ability of conversation partners to interpret spontaneous gesturing by persons with aphasia. The point of departure is the identification of the meaning (i.e. semantic-semiotic features) of recurrent patterns of gestures used by persons with as well as without aphasia in an empirical study. The objective is to describe recurrent patterns of gestures connected to semantic features, which are used by persons with and without aphasia, in order to present an inventory of frequently occurring gesture-meaning couplings. Increasing the awareness of these recurrent patterns is suggested as a way of enhancing the possibilities to interpret contributions made by persons with aphasia.

Methods: Two sets of clips of video-recorded spontaneous gestures were used for the analysis. Both sets of gestures were produced in situations of own communication management, i.e. operations of choice (hesitation, pause, word search etc.) and change (self-interruption, self-repetition, reformulation). The first set of 100 gestures was produced by persons without aphasia, the second set by persons with aphasia. The gestures were coded for expression and content, in relation to the context.

Results: A number of recurrent gesture patterns representing semantic/semiotic fields of content were identified. Most of them were used both by persons with aphasia and persons without aphasia, although potential differences are discussed.

Discussion: The fact that a set of recurrent gesture patterns can be linked to a set of semantic features suggests that awareness of such links can enhance the ability to interpret the communication of persons with aphasia.

Erlenkamp¹, Sonja; Becker^{1,2}, Frank: Gestures in aphasia rehabilitation: Strategic learning of efficient use of body language

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Background: Literature on the use of gestures in persons with aphasia (PWA) shows promising, but variable results. Several types of gesture therapy have been proposed and investigated; the main approach is to replace words by hand gestures (cf. Marshall 2006). This causes several challenges: in order to improve communication function, a large number of gestures have to be learned not only by the PWA, but also communication partners, thus providing only a limited functional vocabulary. Additionally, only hand gestures are used while facial expressions and other body language are often not included. Recent research has provided new insight into gestures and body language in general (McNeill 2005): Contrary to spoken utterances, gestures cannot be divided into smaller parts, and cannot be understood without their context in the communication situation (Erlenkamp 2009).

Objective: We have been developing a new rehabilitation program for the use of gestures in severe aphasia. Its main approach is to teach PWA and their communication partners not a set of gestures, but a strategy on how to use natural gestures in communication. The theoretical basis, its content and results will be presented.

: The program, called SunnGest, includes education of PWA and their relatives on different types of gestures and aims at increasing the combination of gestures functioning as each other's context. This new approach is based on strategic learning as a method to teach PWA's more efficient use of their natural body language, including different types of gestures and facial expressions. A variety of exercises have been developed for practicing the use of gestures. This program has been studied with a self developed assessment in a Master-thesis investigating three PWA's and three relatives' ability in gesturing.

Results: So far the program has proven feasible; PWAs and relatives gave feedback on the following aspects: positive influence on motivation, communication between relatives and PWAs, and higher confidence in attempting communication with others. In the test, five of six participants showed improved gesturing after the program.

Discussion: First results show that the new approach "SunnGest" is feasible and enhances the use of body language in severe aphasia. However, further research is warranted.

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Becker^{1,2}, Frank; Eikaas², Mariann; Scott Hagen², Maria; Løkken², Lillian; Pettersen², Tone Mari: Long term outcome of aphasia: recovery is not limited to the first months post stroke

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Background: Knowledge about long term outcome in persons with aphasia (PWA) is sparse and ambiguous; while some studies find no change or even decline of language function over the years following stroke, others report improvement. Most investigations use rather short follow-up periods and include few patients; many use rather crude aphasia measures. Possibly improved rehabilitation services might lead to more favorable recovery, and new insight into brain plasticity warrants a renewed focus on long term outcome.

Objective: To describe long term outcome in PWA.

Methods: We investigated 38 patients (17 women, 21 men) on average 88 days (between 10 and 154 days) and 5.6 years (between 4.1 and 6.9 years) post stroke. Average age at stroke was 54.2 years. PWA were assessed with the Norwegian Basic Aphasia Assessment (NGA), the Token test and the Stroke and Aphasia Quality of Life scale (SAQOL-39).

Results: On average, the summed NGA-score (“aphasia coefficient”) improved significantly from 118 to 169 points (maximum score 217); only 2 patients had lower scores at follow-up, 3 and 6 points respectively. Also Token test score improved significantly from 16.3 to 19.5. Those who received aphasia rehabilitation services at follow-up (n = 19), had experienced significantly more improvement than those who did not. Further analysis revealed significant increase in all NGA subtests, i.e. auditory comprehension, repetition, naming, written comprehension, reading, syntax, and writing. There was a significant positive correlation between quality of life and language function at follow-up. However, in a regression analysis, level of functioning in daily living – and not language function – at follow-up was the most relevant factor for quality of life. High aphasia coefficient early after stroke predicted good quality of life at follow-up.

Discussion: In one of the largest studies investigating long term outcome in PWA performed so far, we find significant improvement in aphasia assessment scores between 3 months and 5.6 years post stroke. The results indicate that recovery from aphasia is not limited to the first months post stroke. Quality of life at follow-up is affected by severity of aphasia, but probably even more by independency in daily living.

Poster session

1. Becker^{1,2}, Frank, Prag Øra¹, Hege: Aphasia telerehabilitation early post stroke – design of a randomized controlled trial

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Background: Telemedicine might improve post stroke aphasia rehabilitation services, especially in Norway with its geographical challenges and a shortage of educated speech and language therapists. However, literature on aphasia telerehabilitation is sparse. We have earlier performed a pilot project showing that language training via telemedicine is feasible with regard to technical, logistic, patient and data safety aspects, and that it is perceived as useful by both patients and therapists.

Objective: To present the study design of a randomized controlled trial of aphasia telerehabilitation.

Methods: Both groups will receive standard aphasia rehabilitation. In addition, in a randomized controlled clinical trial, the intervention group will receive speech and language therapy via telemedicine daily for 4 weeks, while the control group will not receive additional therapy as part of this study. The telemedicine language training will be performed via internet from Sunnaas Rehabilitation Hospital to a laptop in the patient's home, or at a community rehabilitation ward or alike. Cisco Jabber Video and the remote control software LogMeIn will be used. Inclusion criteria are recently acquired stroke (< 21 days) with aphasia, the main exclusion criterion is inability to perform intensive language therapy due to medical or cognitive reasons. 36 patients will be included in each group, and will be assessed before randomization, after 4 weeks, and further 3 months later. Outcome measures include the Norwegian Basic Aphasia Assessment (NGA), the Communicative Effectiveness Index (CETI), and the Stroke and Aphasia Quality of Life scale (SAQOL-39). Experiences of patients, relatives and therapists will be assessed using a questionnaire and semi-structured interviews with selected patients. Drop out and reasons for drop out will be registered.

Results: not applicable

Discussion: To our knowledge, the suggested study – which is planned to commence in 2015 – will be the first larger scale controlled clinical trial of aphasia telerehabilitation.

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2. Čunderlíková, Júlia; Csefalvay, Zsolt; Markova, Jana: Oral reading in Slovak speaking patients with stroke induced aphasia and Alzheimer's disease

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Background: Stroke-induced aphasia (SA) and Alzheimer's disease (AD) can both be associated with reading impairment. The vast majority of neuropsychological studies on acquired alexia were conducted in speakers of English, an orthographically deep language. Because the transparency of grapheme-phoneme correspondences may have an important influence on reading strategy, it remains to be determined whether the results obtained in these studies generalize to orthographically shallow languages such as Slovak.

Objective: The objective of this study was to compare the alexia profiles of Slovak SA and AD patients in order to determine whether there are quantitative and/or qualitative differences in reading disorders related to lesion etiology and explore whether Slovak patients demonstrate alexia syndromes similar to those described in orthographically deep languages.

Methods: We conducted a reading data collected from a cohort of patients diagnosed with SA (n=81) and AD (n= 75). AD patients were subdivid into mild, moderate, and severe subgroups. Oral reading was evaluated using a standardized Slovak language battery (Diagnostics of Aphasia, Alexia and Agraphia, Cséfalvay et al., 2007). Oral reading scores were derived from 20 regular words and 20 nonwords. Based on reading accuracy, participants were classified into four categories: phonological, global, mixed alexia and normal reading.

Results: A 2 X 2 ANOVA showed main effects of group (SA vs. AD), lexicality (words vs. nonwords) and a group x lexicality interaction. Follow-up comparisons with t-tests indicated that SA patients performed worse than AD for words and nonwords. The size of the lexicality effect was larger in SA patients. Both the SA and AD groups included individuals with phonological, mixed or global alexia. The prevalence of these reading disorders was 47% , 18%, and 18% in the SA group, the corresponding figures for the AD group were 13%, 15%, and 4%.

Discussion: The results revealed that oral reading in general was more impaired in SA patients compared to AD patients. However, despite differences in overall alexia severity, the pattern of reading impairment was qualitatively similar across the groups. Both the SA and AD groups included individuals with the profile of phonological alexia, characterized by a dissociation between accuracy in reading words compared to nonwords.

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3. Døli¹, Hedda; Andersen Helland^{1,2}, Wenche; Specht¹, Karsten: The role of lesion location and volume in patients with aphasia

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Background: Stroke is the third most common cause of death in Norway, and the most common reason for disability among elders. About 14.500 persons in Norway are affected by a stroke each year (Ellekjær & Selmer, 2007). About 1/3 of this population will experience aphasia after stroke (Helsedirektoratet, 2010). The role of lesion site and volume of lesion is a debated subject within aphasia research. Clinical research with newer brain imaging techniques can provide new insight to this multifaceted field of research.

Objective: The aim of the present study is to investigate the relationship between lesion location, lesion volume and aphasia severity in patients with acute ischemic stroke.

Methods: All patients underwent diffusion-weighted MRI (DWI-MRI) within 24 hours post onset of symptoms. The results from DWI-MRI have been analyzed using the Alberta Stroke Programme for Early CT score (ASPECTS). These results give a rough picture of stroke site and size. Language function was assessed using the Norwegian Basic Aphasia Assessment (Reinvang & Engvik, 1980) within one week post-stroke. Furthermore, a voxel-based lesion-symptom mapping (VBLSM) analysis is in preparation, to get more accurate results of lesion location and volume.

Results: Fifty-eight patients underwent DWI-MRI and were included in the study (mean age 66.5, SD: 14.6). The patients exhibit different aphasia symptoms and different degrees of aphasia (mean score on the aphasia test 151.6, SD: 69.8, range: 0-217). The preliminary results using the ASPECTS shows that infarctions within the left insula, the left frontal lobe, and the left temporal lobe have a strong association with aphasia post stroke. Furthermore, the results yield that the larger lesion sites the more severe aphasia.

Discussion: Preliminary findings confirm that infarctions within the insula, the frontal lobe, and temporal lobe cause aphasia post stroke in the explored patient group. It is expected that the planned voxel-wise analysis of the DWI-MRI data will result in more accurate and precise analysis of lesion location and lesion volume, and their relationship to the individual symptom spectrum.

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4. Erlenkamp¹, Sonja; Kirmess^{1,2}, Melanie; Bergersen¹, Hilde; Audestad¹, Solveig; Becker^{1,2}, Frank: Promoting evidence-based aphasia rehabilitation – guidelines at Sunnaas Rehabilitation Hospital

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Background: Aphasia rehabilitation should strive to be evidence-based, i.e. take into account research evidence as well as experience of persons with aphasia and rehabilitation personnel. Existing summarized knowledge in the field provides overall advice for clinical activities, but the evidence included in such documents is related to the context it was derived from. Thus, these recommendations have to be put in a local context.

Objective: To develop evidence-based guidelines for aphasia rehabilitation at Sunnaas Rehabilitation Hospital.

Methods: An aphasia resource group was formed at Sunnaas Rehabilitation Hospital to elaborate interdisciplinary guidelines for aphasia rehabilitation. The group – representing both clinical and research experience – consisted of a clinical linguist, speech and language therapists, medical doctors, a psychologist, and a nurse. National and international guidelines and systematic reviews were used in addition to targeted literature search to elaborate guidelines in a consensus process.

Results: The 27 page document includes a short introduction about evidence-based medicine, aphasia, and the organization of speech and language therapy services at our institution. Recommendations on assessment and treatment of aphasia represent the main part of the document. National guidelines on treatment and rehabilitation of stroke form the basis, but are extensively complemented by other experience- and evidence-based recommendations. A substantial part of the guidelines focuses on interdisciplinary measures, on how to communicate with persons with aphasia and on how to include aphasia rehabilitation in all rehabilitation efforts during the day. References to the research literature as well as web and other resources are given.

Discussion: The guidelines summarize well-known national and international guidelines and “translate” them into the local context of Sunnaas Rehabilitation Hospital, taking into account clinical and patient experiences. The process of elaborating the guidelines has led to a refined interdisciplinary understanding of what aphasia rehabilitation should include. Ongoing implementation will hopefully increase the quality of our services.

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5. Isaksen¹, Jytte; Randrup Jensen², Lise; Cruice³, Madeline; ten Kate³, Olivia; Eggers Viberg², Majken: Practitioners' perspectives on quality of life in aphasia rehabilitation in Denmark

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Background: The lack of a unified approach in aphasia therapy to understanding, assessment and management of aphasia means that there is no coherent picture of the current status of quality of life (QOL) within speech-language therapy. This is echoed on a global level at which there is very little evidence for how aphasia clinicians apply QOL in practice. In-depth studies are lacking, which address how the concept of QOL fits with clinicians' visions for their practice and with the organizational framework. As yet, there exists no agreed pathway to the inclusion of considerations of QOL into the practice of SLTs in Denmark or internationally. As such, measuring QOL, setting goals and working on these in therapy, as well as measuring one's efficacy in achieving these and being able to share results, is a difficult and disjointed process. In a system in which both time and resources are limited, it is likely that clinicians would choose to focus on an area in which they feel better trained and more able to make a difference.

Objective: This study reports on Danish SLTs knowledge and understanding of QOL in aphasia, including views on education and training in relation to preparedness for working on QOL, use of measures, and barriers to applying QOL in practice.

Methods: 14 Danish clinicians completed a 48-item questionnaire about their views, perspectives and practices regarding QOL. Descriptive statistics were used to characterize the numerical data, and content analysis was applied to text responses.

Results: The clinicians interpreted QOL as subjective wellbeing and participation, and explored it with most clients and relatives using informal methods, primarily conversation, for the purposes of identifying relevant goals to direct speech and language therapy treatment. Clinicians perceived a need for greater theoretical, practical and experiential knowledge regarding QOL. They also identified a need for translated QOL instruments and training in these measures in practice.

Discussion: Despite reported lack of knowledge about and tools for measuring QOL, Danish clinicians are applying QOL issues in their practice and perceive these issues as valuable and important in assessment and therapy. The findings have clear implications for tool development, and workforce education.

6. Juhl Pedersen, Jette: Occupational therapists' communication with patients with aphasia. A qualitative study with a mixed-methods design

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Background: Studies have shown that training healthcare staff in Supported Conversation for Adults with Aphasia (SCA) (Kagan, 1998) is effective in increasing patients with aphasia's communicative access in hospital settings (Simmons-Mackie et al., 2010). An implementation project was conducted at a hospital stroke unit in which the SCA-method was implemented. All staff members were included in the project, and the outcome for the nursing staff was reported by Jensen et al. (2015).

Objective: The current study is an evaluation of the outcome for the occupational therapists (OTs), and it aims to explore how the OTs use the SCA-method and what their experiences are with the method.

Methods: A qualitative mixed-methods design was used. Four OTs were observed communicating with patients with aphasia in different training sessions. Subsequently, the OTs participated in individual semi-structured interviews regarding their experiences with the SCA method. Data from the observations and the interviews were transcribed and analyzed separately.

Results: The OTs demonstrated a broad use of techniques and tools of the SCA-method during the observations. In revealing the patients' competencies, the observed techniques and tools included use of gestures, relevant keywords, short and simple sentences, closed-ended questions, and ample response time. Picture tools were only used once, complex sentences were occasionally observed, and the use of the techniques and tools were mostly observed before the actual training. In the interviews, the OTs described feeling more confident in communicating with the patients and using the techniques and tools in the conversations, after participating in the SCA-workshop. Challenges in using the method were attributed to lack of time, severe aphasia, making the method a part of the daily routines, and using the right keywords in the conversations.

Discussion: The results from the observations suggest that the OTs mainly use the SCA-method in conversations before the actual training, which is consistent with the descriptions in the interviews. Using a mixed-methods design strengthens the validity of the current study. However, the presence of the observer may have biased the results, and the small number of participants makes it difficult to draw overall conclusions.

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7. Knoph^{1,2}, Monica Norvik; Lind^{1,2}, Marianne; Simonsen², Hanne Gram: The impact of verb retrieval therapy in a bilingual speaker with fluent aphasia.

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Background: Verb production is more difficult than noun production for people with fluent aphasia (e.g. Mätzig, Druks, Masterson, & Vigliocco, 2009) and for bilingual speakers with aphasia (Faroqi-Shah, 2012). Although there is evidence that verb therapy can be effective, the evidence is slim, and further investigations of verb treatment in fluent aphasia are timely

Objective: The aim was to explore whether therapy in a late acquired language could result in improvement of trained and untrained verbs and improved narrative production in both languages.

Methods: The participant is a 74-year-old bilingual speaker (English (L1), Norwegian (L2)) suffering from moderate to severe fluent aphasia following a left hemisphere stroke. Two different treatment protocols were provided in an intensive schedule with 20-22 hours over two weeks each. Both protocols focused on the production of verbs in connected speech. The treatments consisted of a modified Semantic Feature Analysis (SFA) (e.g. Wambaugh, Mauszycki, & Wright, 2014) and communication-based treatment (e.g. Kempler & Goral, 2011), provided in the participant's L2. Outcome measures included the Bilingual Aphasia Test (BAT) (Paradis & Libben, 1987), an action-naming test and production of personal narratives. All assessments were conducted in both languages before and after each treatment block.

Results: In the treated language the total scores and the scores within semantics increased significantly post-treatment. The action-naming test showed significant improvement of trained verbs in Norwegian, however no significant improvement of untrained verbs in Norwegian was apparent. An improvement of verbs in untreated English was found. The narrative analysis showed an improvement in verb production and in some of the discourse variables in both languages.

Discussion: The results are consistent with findings of previous studies of SFA targeting verb production in monolinguals, where improvement of the trained items have been found (e.g. Wambaugh et al., 2014). Both SFA and communication-based therapy have been shown to have a positive effect on narrative production in non-fluent monolingual aphasia and multilingual non-fluent aphasia. This issue will be investigated and discussed in relation to the present case study. In addition all the results will be discussed in light of aphasia type and severity of the language impairment.

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8. Langborg Hejsel, Helle & Holmgaard, Sydelle: Can the Aphasia Impact Questionnaire support communication goal setting?

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Background: As speech therapists, we experience that many individuals with aphasia find it difficult to describe the communicative difficulties they experience and to set functional goals. Most say they want to speak 'just like before', but can not be more specific. We were interested in finding a more productive approach to use, when discussing communication and its impact on daily life, in order to allow us to set goals that will improve quality of life for our clients. We chose to trial The Aphasia Impact Questionnaire (AIQ), developed by Kate Swinburne and Sally McVicker (2012)*, as it is a reliable and valid measure, which people with aphasia can relate to (Swinburn, K. and McVicker, S. 2012**; Cruice, M and Swinburn, K, 2012).

Objective: To trial the AIQ with respect to communicative goal setting.

Methods: The AIQ was translated to Danish and trialled with 8 clients with aphasia, subsequent to stroke, prior to commencing speech therapy after discharge from hospital. The questionnaire consists of 20 questions that cover three domains: communication, participation and well being. The questionnaire can be administered at the start and end of therapy. It uses a pictorial five point rating scale, and each question is supported with a line drawing. The questionnaire was completed together with a speech therapist.

Results: The clients were able to relate to the questions, and the line drawings prompted them to think of and talk about, their experiences in concrete situations. The pictorial rating scale helped clients to reflect over their situation, thereby facilitating clients to verbalise communication goals that would make a difference in their life. The questionnaire did not help two clients, with limited insight into their situation, to set realistic goals.

Discussion: The questionnaire provides a structure that enables clients to formulate what they are experiencing. It also helps a broader exploration of the communicative challenges each client is facing, thereby helping clients and therapists when setting concrete and meaningful communicative goals. The clients reported that the AIQ was a useful tool for them. It functions best after a rapport has been established, and with clients who have some insight into their situation.

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Acknowledgements: We are grateful to Kate Swinburn and Sally McVicker, and Connect - the communication disability network, for giving us permission to translate the AIQ to Danish.

9. Randrup Jensen¹, Lise; Petersen², Annelise: Outcome of an interdisciplinary course in Supported Conversation for hospital staff: A questionnaire study

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Background: Involving patients with aphasia (PWAs) in their own treatment, care, and rehabilitation is a challenge for all health professionals working in a hospital setting. Supported Conversation for Adults with Aphasia (SCA)[1] has been found a successful as a method of increasing communication partners' ability to engage PWAs in conversation and exchange of information, also in interactions between PWA and health care professionals [2].

Objective: The study is part of a larger project concerned with adapting and implementing the SCA-method for use by staff members in the neurological department of a large hospital. The general implementation process and outcome for nursing staff on the stroke unit has been described previously [3]. The present study reports on the outcome of participating in an interdisciplinary course in the SCA-method for different professions from both stroke and general neurological wards.

Methods: 113 staff members were assigned to one of eleven SCA-courses given during a six month period. Each course had 10-12 participants and lasted 6 hours, including instruction in the SCA principles, video analysis, interdisciplinary group work, and practice sessions with PWAs. Participants included doctors, occupational and physical therapists, nurses and nursing assistants, and other staff groups. Self-assessed learning outcome was evaluated with a six-item questionnaire filled out by participants immediately before course attendance and 3-5 months afterwards.

Results: Of the 113 staff members, who filled out the pre-course questionnaire, 56 completed the post-course questionnaire. Preliminary statistical analyses show significant improvements in self-rated knowledge of aphasia, comfort and ease in communicating with PWA, and self-assessed ability to problem-solve when communication broke down. Differences in self-rating between health professions on the pre-questionnaire were diminished on the post-questionnaire. Other inter-professional differences in self-assessed ability to communicate with PWA will be explored in further analyses, including analyses of strategies reported by staff before and after course attendance.

Discussion: The results suggest that an interdisciplinary SCA-course may increase hospital staff's confidence and self-assessed ability to communicate and solve problems in their interaction with PWAs. However, bias due to low response rate on the post-questionnaire cannot be ruled out.

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10. Ribu, Ingeborg: Imageability and phonological neighborhood density effects in speech processing

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Title: Imageability and phonological neighborhood density effects in speech processing

Background: Both imageability (the ease of which a word gives rise to a sensory mental image) and phonological neighborhood density (PND; how many words that differ in one phoneme from a target word) has proven to affect the accuracy and response time of processing in experimental settings. The effects have not yet been studied together.

Objective: The objectives of this study was to investigate whether a) imageability and PND interact during speech processing (both production and perception), b) if the effects of the two measures are equally prominent, or if one is more prominent than the other, and c) if imageability and PND are similarly affecting production and perception in neurologically healthy speakers and speakers with aphasia.

Methods: A word list was composed to test words with the following four properties; high imageability + high PND, high imageability + low PND, low imageability + high PND, and low imageability + low PND. 60 words were used in a picture naming task to test production, and 64 words (32 real words + 32 non-words) were used in a lexical decision task to test perception. 3 speakers with aphasia and 30 neurologically healthy speakers participated in both tasks and were scored for reaction time and accuracy.

Results: The results show that there is no interaction between imageability and PND, and that PND is overruled by the imageability effects, both in production and perception of words. The speakers with aphasia showed similar results in both tasks.

Discussion: Although the results showed no statistically significant interaction between imageability and PND in production or perception, for either group, there is a tendency for high imageability words to be recognized and produced faster than low imageability words. Also, when the imageability is low, high PND slows down both recognition and also the production of words. The similar patterns observed across word groups and informant groups show us that there is a reason to study normal and atypical language behavior together. The results from this study can be taken to suggest that speech processing is controlled by the same mechanisms in speaker with acquired language impairments and neurologically healthy speakers.

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11. Stadie¹, Nicole; Schröder², Astrid; Burchert¹, Frank: The role of sentence comprehension during treatment of agrammatic sentence production

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Background: The architecture of cognitive models for sentence comprehension and production remains underspecified with respect to the question whether overlapping and/or distinct mechanisms are responsible for the comprehension and production of sentences (e.g. Mitchum et al., 2008). Do both modalities share cognitive processes or are there modality specific processing mechanisms for the comprehension and production of sentences? Aim of the present study was to investigate the relationship between sentence comprehension and production in the treatment of sentence production deficits in aphasia (Schröder et al., 2014).

Objective: The following questions were investigated:

- Are deficits in sentence production associated with impairments in comprehension?
- Does a generalization to the untreated modality (i.e., comprehension) occur after treatment of sentence production?
- What role does an unimpaired performance in sentence comprehension play in the treatment of sentence production?

Methods: The single case-series study involved seven participants with agrammatic speech in a chronic stage of aphasia (mean age: 53,0 years; range 33-67 years; mean time post onset = 9,0 years; range 3-15). The control group involved 30 participants (mean age: 52,5 years; range 23-77 years). Intervention focused on the production of complex sentences (who-questions/object-relative-clauses) with structured tasks focusing on word order of nouns and verbs in order to derive a non-canonical sentence structure from the underlying canonical sentence (Jacob & Thompson, 2000; Stadie et al., 2008). The comprehension of the trained sentences (in production) was not part of the treatment.

Results: The results can be summarized as follows: Prior to treatment: Three participants showed significant better performance in the comprehension than in production) of who-questions. For two of three participants there was a selective deficit in the production of who-questions, whereas comprehension performance for who-questions was unimpaired. After treatment: In five out of seven participants significant training effects in sentence production were not accompanied by improvements in sentence comprehension. Only participants with unimpaired sentence comprehension prior to treatment obtained generalization effects within the treated modality (production).

Discussion: The results will be discussed with respect to the concept of selective and/or shared processing mechanisms for sentence comprehension and production and particularly concerning clinical implications for the treatment of sentence production.

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12. Willer¹, L.; Pedersen^{2,3}, P. M.; Forchhammer², H. B.; Christensen¹, H.: An iPad-based Neuropsychological Screening Battery for Stroke Patients: Comparison with Traditional Neuropsychological Tests

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Background: Cognitive testing is important in sub-acute stroke for planning of rehabilitation and future support. The very diverse symptoms in stroke poses challenges for a test battery suitable for all patients, and the battery has to be short due to problems with fatigue. Finally, traditional neuropsychological tests are not well suited for bedside testing. We developed an iPad test battery, CABPad (1), to overcome these obstacles.

Objective: We have previously reported a study of the validity of CABPad with stroke patients as well as healthy age-matched controls tested twice, demonstrating sensitivity to cognitive deficits in stroke as well as ability to detect remission (2). In the current study, CABPad is validated by comparisons with traditional neuropsychological test.

Methods: 15 stroke patients were assessed at the stroke wards at Glostrup Hospital, Copenhagen. We selected a subset of the CABPad tests in order to shorten the time for testing (obtaining at total testing time of about 1½ hours). We found it less important to include verbal fluency and depression scoring as they are carried out very similar to traditional testing.

Results: Satisfactory correlations are found for most tests, with a few exceptions. The most convincing correlations are found for CABPad Symbol Digit Coding with WAIS-IV Coding ($r=0.91$, $p<0.001$); the Timed Neglect Test with BIT Star Cancellation ($r=0.81$, $p=0.001$), Comprehension with Western Aphasia Battery (WAB) IIb ($r=0.82$, $p<0.001$), and Naming with WAB IVa ($r=0.80$, $p<0.001$). The Working Memory Index (for symbols) correlates moderately with WMS-IV Symbol span ($r=0.59$, $p=0.04$) as well as with WAIS-IV Digit span ($r=0.65$, $P=0.02$). Non-significant correlations for Arrow Stroop with DKEFS Stroop are probably due to one test being verbal and the other nonverbal; and for Memory for Pattern Locations with WMS-IV Designs are probably due to some patients obtaining scores of 0 (difficulty in following the instructions).

Discussion: The adequate to excellent correlations of the majority of the subtests demonstrates the feasibility of the iPad for neuropsychological screening of stroke patients. The memory test may be improved with a video demonstration during instructions to help the most cognitively impaired patients cooperate.

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KOMMUNIKASJON for voksne med afasi



Cognitass: Enkel programvare for allsidig kommunikasjon med tekst, symboler og bilder.



Grid: Kommunikasjonsoppsett for de som trenger bilder istedenfor eller i tillegg til tekst.



Premium Afasi: Et moderne verktøy for kommunikasjon direkte mellom bruker og kommunikasjonspartner.

Ordletingsstrategi basert på individuelle ferdigheter

Cognita utvikler og selger hjelpemidler til mennesker med kognitive utfordringer. Vi er opptatt av at du, og den du bryr deg om, skal kunne kommunisere og bli forstått.