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Telematics and Informatics 22 (2005) 135–160
TELEMATICS AND INFORMATICS
www.elsevier.com/locate/tele

Next generation of methods and tools for team work based care in speech and language therapy

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Received 25 October 2003; received in revised form 6 April 2004; accepted 13 April 2004

Abstract

Speech and language therapists (SLTs) are faced daily with a diversity of speech and language disabilities, which are associated with a variety of conditions ranging from client groups with overall cognitive deficits to those with more specific difficulties. It is desirable that those working with such a range of problems and with such a demanding workload plan care efficiently. Therefore, the introduction of methodologies, reference models of work and tools, which significantly improve the effectiveness of therapy, are particularly welcome. This paper describes a web-based tool for diagnosis, treatment and e-Learning in the field of Language and Speech therapy. The system is an "easy to use" technology environment. It allows SLTs to find the optimum treatment for each patient, by incorporating different treatment actors. In addition, it also allows any non-specialist user—SLT, patient or helper (relative etc.)—to explore their creativity, by designing their own communication aid in an interactive manner, with the use of editors like: configuration and vocabulary. The system has been tested and piloted by potential users (SLTs and patients) in Greece and UK.
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Keywords: Telemedicine; Speech and language therapy; Intelligent interfaces; Agents; E-learning; Home care

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doi:10.1016/j.tele.2004.04.002

1. Introduction

Speech and language therapists (SLTS) are concerned with communication disorders. They treat all types of speech, voice, as well as spoken and written language disorders in children, adolescents, adults and the elderly. SLTs are responsible for the prevention, assessment, treatment and scientific study of human communication and associated disorders. In this context, communication encompasses all those processes associated with the comprehension and production of spoken and written language, as well as appropriate forms of non-verbal communication.

Increasingly, speech and language therapists are involved in prevention work (training and informing health professionals and health promotion) and in screening (early screening for language disorders in children). Through their work, speech and language therapists assist people to develop and utilize skills, which will enable them to participate and communicate in the educational, professional, social and cultural life of their community. They are also involved in disorders arising in the aging adult population, and in the field of illiteracy (through their specific areas of expertise). They collaborate with the patient's medical practitioner, their family, and educational, work or social contacts. They undertake a preliminary assessment, examining and assessing the disorders observed, identifying the cause as far as it is possible and making both diagnosis and prognosis; they then decide whether therapy is required. Using individual or group therapy, speech and language therapists draw on their clinical experience to employ techniques which will enable all clients to maximise their verbal or non-verbal communicative potential. The speech and language therapy process is illustrated in Fig. 1.

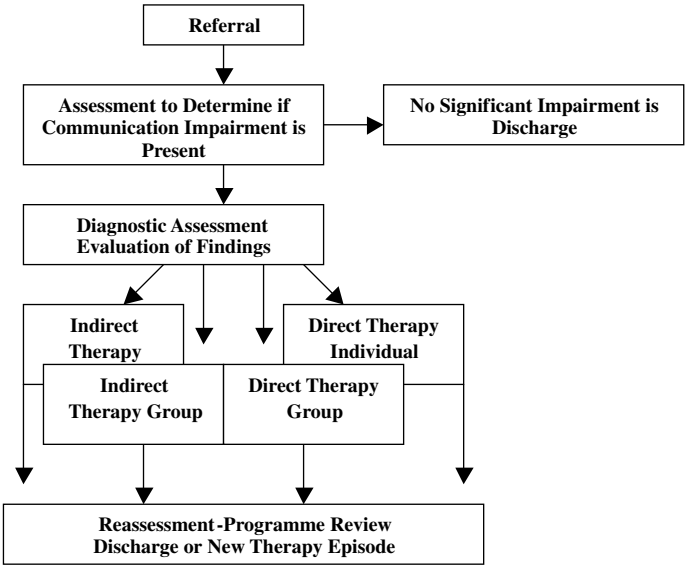

Fig. 1. The speech and language therapy process (Cholmáin and Leahy, 2000).

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