ONLINE THERAPY IN A LONG-TERM CARE SETTING:

Improving Patient Outcomes & Reducing Costs

Lingraphica®

How Lingraphica's online therapy software helped improve patient outcomes and satisfaction scores in a long-term care setting

L ingraphica has a proven track record of helping people with communication and cognitive challenges, including adults with acquired aphasia and related disorders.

Our studies document widespread benefits to using our offerings, including diminished impairment, improved functional communication, increased self-confidence, lowered cueing requirements, expanded locus of control, enhanced sense of autonomous agency, and high levels of satisfaction.

With a constantly changing healthcare setting, Lingraphica's research-backed and clinically supported offerings are now being used in new settings like long-term care and rehabilitation facilities, allowing for greater online therapy opportunities for patients and their clinicians.

In this study overview, we review how Lingraphica's online therapy software helped improve patient outcomes and quality measures in the long-term care setting.

The study overview is based on a white paper prepared for publication by Dr. Richard Steele in June 2016. As Lingraphica's Chief Scientist, Dr. Steele is responsible for the company's treatment technology as well as the research on its effectiveness. Prior to founding Lingraphica, he was a Research Health Scientist at the Rehabilitation Research and Development Center of the Palo Alto Veterans Administration Medical Center. He holds a BS in Physics from Stanford University and an MA and PhD in Slavic Languages and Linguistics from Harvard University. He holds three U.S. patents related to rehabilitation.

[long-term care]

Arrangements to provide support for the elderly are called Long-Term Care, and provided along a continuum:

Home Health delivers services in place, for clients with only modest support needs.

Supported Living Communities serve those who require more assistance, living in clustered home-like accommodations with access to communal dining and resident activities.

Skilled Nursing Facilities (SNFs) are residential facilities serving those who require daily assistance in Activities of Daily Living (ADLs) such as transfer, bathing, dressing, grooming, and Instrumental ADLs (I-ADLs), such as telephoning, doing laundry, and taking transport.

LONG-TERM CARE CHALLENGES

In today's changing healthcare system, care providers are facing numerous new challenges. With an aging population and more elderly adults turning to nursing facilities for long-term care, the U.S. healthcare system is increasing the standards of care applied in these settings. Long-term care administrators and clinicians are reporting new pressures, especially related to four critical business metrics:

Improving Patient Outcomes

Lowering Operating Costs

Maintaining Compliance with Medicare Standards

Increasing User Satisfaction

This document provides a case study between Lingraphica and Hallmark Rehabilitation ('Hallmark'), the operator of skilled nursing facilities (SNFs) in several states. Hallmark is now owned and operated by Genesis Rehabilitation. Together, Lingraphica and Hallmark deployed Lingraphica's TheraPath* offering to patients residing in Hallmark's facilities with the following three goals in mind:

1. To explore what happens **when online speech therapy exercises are used in ongoing** SNF operations, simultaneously in several states, with a focus on factors like acceptability to staff and clients, levels and types of user engagement over time, and responses.

2. To identify **the benefits to stakeholders involved**, including: SNF residents, clinical staff and care extenders, and operations administrators.

3. To determine **if the exercises provided a financial benefit** to both parties.

*The platform was called TalkPath Therapy at the time of the study.

Functional Maintenance Programs (FMPs) must be set up by clinical speech-language pathologists serving the clients, after proper assessments for this purpose. However, once in place, FMPs may be carried out by care extenders such as activity managers or family members.

There is no therapeutic dimension to FMPs, since the goal is not to promote improvement over time. Rather, as the designation Functional Maintenance Program suggests, the goal is to provide recipients opportunities for stimulation and engagement that may stave off the functional declines that often occur otherwise, triggered by feelings of neglect, isolation, abandonment, or the like.
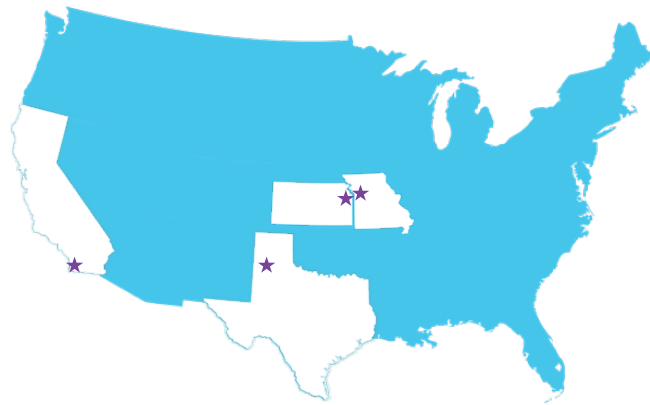
THE STUDY

Hallmark Rehabilitation selected four participating SNFs, which were located in different cities and states. At these sites, local staff selected residents who would receive one-month therapeutic intervention as study subjects. Subjects were included based on a combination of nursing referral, recent changes in scores on MDS appraisals, and diagnostic risk factors such as stroke or progressive neurodegenerative conditions.

Because we are dealing with a complex patient population, the goals included focus on functional expression, comprehension, responsive naming, problem solving, memory, and even reading comprehension.

Populations have become increasingly complex in the LTC setting, and that was seen with those who were included in this study. Many residents had diagnosis that included dementia, past CVA, Mental Status Change, depression, and anxiety.

Before starting the intervention, the treating therapist used TheraPath tasks to establish a baseline in the areas of listening, speaking, reading, and writing (exercises available at the time of the study). Additional cognitive exercises now available address memory, reasoning/problem-solving, and ADL themed tasks. The baseline allowed the clinician to find a starting point at the beginning of the study.

Best practices show that using this tool in-session before assigning exercises for a functional maintenance program (FMP) allows the client and the facilitator to orient to the program so it can be used successfully for the FMP. Each of the participants started out using laptops, however, some had access to iPads and continued to use those both during and after the pilot study.

Importantly, the study design also included the establishment and implementation of FMPs for participating facility residents.

Patients & Care Extenders Reported:

- ✔ Improved Mood
- ✔ Improved Cognitive Orientation
- ✔ Improved Auditory Comprehension
- ✔ Improved Expression
- ✔ Improved Memory Functioning
- ✔ Reduced risk factors associated with the prescription of psychotropic medications
- ✔ Increased Engagement of Patients and Care Extenders with TheraPath materials
- ✔ Increased Enthusiasm from Care Extenders using FMP with participants

OUR FINDINGS

This pilot study shows that representative residents of LTC facilities in the U.S. can benefit in important ways from the incorporation of TheraPath offerings. Our conclusions remain preliminary, pending larger-scale replication.

The investigation was designed to reflect real-world LTC settings, with their commonly encountered issues, usual clinical practices, and patient cohorts.

The benefits are shown to be both important and widespread. LTC residents showed, for example, mean improvements in both cognitive orientation and in mood, as reflected in mean score improvements from the BIMS and MOOD assessments done quarterly.

Additionally, they displayed better auditory comprehension, verbal expression, and memory function as apparent from mean score improvements, and NOMS scores, which were recorded by treating clinicians at the beginning and end of the one-month therapeutic intervention using TheraPath. In addition, the study showed the feasibility and desirability of having SLPs set up functional maintenance programs at the end of a therapeutic intervention. Overall, patients' psychological responses to these introductions were positive, so much so that we believe we reduced the risk factors associated with the prescription of psychotropic medications.

Clinicians Reported:

- ✔ Improved Tools to treat their clients
- ✔ Improved Tools to generate electronic medical records of performance
- ✔ Convenience of tool usage
- ✔ Effective FMP opportunities

Administrators Reported:

- ✔ Improved Tools to track clinician activities
- ✔ Improved Tools to track patient activities
- ✔ Improved Tools to track facility activities
- ✔ Improved Tools to compare facility activities
- ✔ Improved Tools to track changing client activities
- ✔ Improved Tools to track changing patient outcomes

The introduction of functional maintenance programs yielded a further benefit: it provided meaningful and rewarding roles for care extenders in supporting LTC residents. Care extenders are individuals who do not have professional healthcare training or clinical credentials of skilled LTC staff, but who provide important services. This includes: family members, activities managers, graduate students, and volunteers. In the case of the FMPs set up by the clinicians using TheraPath technologies, family members or activity managers could help clients set up materials, navigate tasks, understand responses, and share in enjoyment or surprise. Such activities, especially the latter ones, are typically highly appreciated by both LTC residents and family members.

For clinicians in these settings, TheraPath tools provide an additional set of empowering advantages.

Responses of LTC residents who use these highly stimulating, interactive, multimodal materials are positive, as they extend users' locus of control, promoting engagement in interface interactions. With regard to SLPs' clinical activities, TheraPath software provides automated reporting modules that help automatically document service delivery. And when skilled therapy is discontinued, the TheraPath technology represents an integral and key component of FMPs that were set up by SLPs for subsequent implementation by care extenders.

OUR SOLUTION

Given the widespread benefits – documented above – to SLPs and to those whom they serve in LTC settings, the question arises: who else in these settings would be candidates for TheraPath?

Arguably OTs and PTs in LTC settings represent such candidates, assuming tools and contents were massaged to target to their specialization areas. They work with the same clients, in the same settings, with broadly similar goals, alongside SLPs, like those involved in this study. One could also imagine administrators in such LTC facilities appreciating a tool that provides an overview to look at workforce deployment with a bird's-eye view, while also permitting them to drill down to lower levels of detail. Such tools would permit better management of resources, better reviews of performance, better comparisons of contributing components.

With a growing segment of the American population moving into old age, and the projection of a record number of elderly citizens in two decades, it is important to prepare adequately to meet the challenges they will pose.

Not all will move into LTC settings, but many will. Improving LTC operations to yield more efficient service delivery, improved outcomes, higher satisfaction levels, and lowered costs is imperative. Properly developing and exploiting technology is an essential element in achieving such results.

TheraPath℠

Ready to learn more about TheraPath and how it can help your facility?

Contact us today at 877-969-2420