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Optimizing Rehab Minutes: A Focus on 'Functional Training'

In an earlier Application Note (*Implementing a NeuroGym Active Restorative Program in Eldercare*), it was suggested that many Long Term Care (LTC) and Post-Acute facilities wanting to pursue the goal of restoring and improving resident function, could implement a state-of-the-art program with a modest investment in equipment and personnel. Typically, though, the greatist barrier to the success of a restorative inititiative is the effective implementation and progression of the Physical Therapy program.

Although there is much research showing the effectiveness of advanced physical rehab and activity programs for LTC and post-acute populations, many facilities could benefit by maximizing available therapy minutes and making optimal use of those minutes for more functional rehab. **This requires:**

- An analysis of which overall rehab approach and equipment will result in the best functional improvements
- Learning new ways to maximize available rehab minutes by using more flexible strategies for how, when and where rehab is delivered

Review Rehab Approach & Equipment

Consider what has been already demonstrated in the field. The MOVE (Mobility of Vulnerable Elders) program[1] showed that regular sit-to-stand activity is ' a feasible and practical mobility intervention with the potential to improve or maintain functional mobility in frail and vulnerable elderly in LTC facilities'. Such a program is feasible in LTC or restorative care because it does not require much in the way of resources – if vulnerable elders are unable to follow the standing routine, a lower level of intervention is suggested. While the suggestion of increasing mobility whenever possible is good, a different tactic could be considered so that the many elderly residents who are not able to stand or walk could also achieve functional improvements.

For the elderly who cannot be a part of the typical standing program suggested by the MOVE initiative, rather than default to working on lower level skills such as bed mobility or transfers, it ***is*** still possible to implement an effective Sit-to-Stand program. An enabling environment can be provided by mobile equipment like the NeuroGym® Sit-to-Stand Trainer. This training tool is designed to provide the means for even extremely frail persons to actively re-train their ability to stand. Theoretically as well as empirically (see www.neurogymtech.com for the application note '*Improving Resident Mobility in Long Term Care: The Why and How*'), the outcome of such an approach can be expected to be as effective as it is in the case of the more able residents – clear and dramatic functional improvement.

Two other important factors interfere with the implementation of effective functional training in LTC or Restorative programs:

- The traditional organization and inter-disciplanary coordination of care
- The challenge to optimize a physical therapy session.

Effective functional training requires the optimization of training minutes. In a facility that provides physical and occupational therapy, restorative care, and nursing, this could be accomplished with a better **multi-disciplinary effort** to ensure that a particular functional training unit, for example Sit-to-Stand practice, is effectively delivered at all available levels. With education and coordination of the various rehabilitation services, a resident can achieve the desired training intensity, say – 2 hours per week of walking rather than than the 5-10 minutes that is typically available during a standard physical therapy session. Such elevated intensity leads to significant functional gains. This has been demonstrated with the NeuroGym® FIT (Functional Independence Training) program that has been successful at optimizing multi-disciplinary services in LTC facilities in Ontario (see www.neurogymtech.com for the application note '*Improving Quality Measures in Both Long and Short Term Settings*').

Optimizing Rehab Minutes

An additional challenge to be addressed is optimizing the effectiveness of the physical therapy session – typically a window of 15-20 minutes. A major reason why functional changes, such as regaining the ability to stand and transfer or regaining the strength and balance necessary to walk, are often not seen with traditional physical therapy in LTC, especially, is that these skills are not typically prioritized to the extent necessary to achieve significant improvement. ***With limited therapy minutes available, every effort must be made to maximize the effectiveness of the training.*** This means that many issues typically addressed during a physical therapy session with passive treatment (e.g. mild joint stiffness or mild pain symptoms) will need to be lowered in priority in favour of active, functional strength and mobility training. The interventions chosen by the physical therapist and the intensity with which they are delivered will have a direct impact on the degree of functional improvement achieved.

Even for therapists who do wish to focus on function, though, there is still the question of what technologies or tools to use to best facilitate functional improvement. To solve this clinical dilema, therapists will have to decide what tool will ultimately give them the most 'bang for their buck', in other words – ***what equipment will lead to the most functional gain with the least preparatory and training time?*** Typical options are an active/passive cycler, body weight support (BWS) treadmill, or a Bungee Mobility Trainer (BMT) (Figure 1).

Figure 1: Bungee Mobility Trainer

It is suggested that a BMT would be clearly superior in that regard compared to a primarily passive A/P cycler. When compared to the BWS treadmill, the BMT would also give the therapist far more 'net training time' and more options of mobility training.

Finally, for the therapist who has chosen to use NeuroGym® enabling equipment to improve the function of residents, there can still be a process of improving the ***efficiency of use*** of the tools. Remember, maximizing actual exercise time will help achieve optimal gain in function. In a recent emailer, we used the term 'process engineering' to describe this optimization process. With technical training and the corresponding ease of use, this can lead to increased **Resident Training Time (RTT)** spent on the various tools. For example, by taking greater advantage of the mobility of the NeuroGym® tools, many more residents could use the STS and BMT in a single day. All the NeuroGym® tools are mobile – they can be moved easily to the resident's room rather than using valuable rehab time moving the resident to a central training area.The RTT concept can then be stretched into nursing and restorative care time to build up a more effective and intensive training experience for the resident. High RTTs should be directly correlated with improvement in many MDS scores and with Quality Measures (QM), thus making it easier for the facility to target and track improved functional mobility.

In summary, the process of improving functional mobility in Post-Acute and LTC populations requires a comprehensive, focused approach to training that includes changes in both the content of the individual Physical Therapy sessions and the multi-disciplinary coordination and optimization of resident training time (RTT). It is suggested that RTT is tracked systematically in LTC facilities to better control the process of improving MDS scores and QMs.

REFERENCES

1. Slaughter, SE, Estabrooks, CA, Jones CA and Wagg, AS. Mobility of Vulnerable Elders (MOVE): study protocol to evaluate the implementation and outcomes of a mobility intervention in long-term care facilities. BMC Geriatrics 2011,11:84. Htt://www.biomedcentral.com/1471-2318/11/84

NEUROGYMTECH

www.neurogymtech.com
Neurogym Technologies Inc., 100 - 1050 Morrison Drive, Ottawa, Ontario, Canada K2H 8K7
T: 613.523.4148 | **TF**: 1.877.523.4148 (Canada & US) | **F**: 613.523.4148 | **E**: sales@neurogymtech.com