

Service Improvement Project

By Samuel Hodgson



Project Aim

“To improve and evaluate the efficiency of referrals to a specialist clinical team following early identification of problematic spasticity for patients admitted with an acute stroke”

Why?

- + National Guidelines
- + Gaps in current Service Provision
- + Evidence Base
 - + Increased prevalence (Glaess-Leistener et al, 2020)
 - + Positive impacts on early accurate identification and treatment with botulinum toxin (Lindsay et al, 2020)
 - + Significant cost impact throughout all phases of stroke care and long-term Health and Social Care (Raluy-Collado et al, 2020)

Urgent referral

Refer to a spasticity specialist
If both of the following criteria are met:

- Moderately, markedly or severely increased muscle stiffness across two or more joints^{a,1,2}
- Severe loss of sensorimotor function (e.g., severe decrease in surface sensation, impaired proprioception and severe motor dysfunction)^{b,3,4}

Next steps

- Urgently initiate physiotherapy (evaluation and treatment)
- Immediately refer the patient to a physician or other healthcare professional who is a spasticity specialist^{8,9}

Routine referral

Consult with the multidisciplinary team (MDT)

In the presence of mildly increased muscle tone across one joint and involuntary muscle contractions in the affected limb^{c,1} plus one or more of the following:

Reduced sensitivity on one side of the body and/or visual inattention^{d,1,5}

Weakness of the limbs and problems with function that cause difficulties with active range of motion and/or daily living^{1,2,6,7}

Lesion load in the corticospinal tract*, as seen on CT and / or MRI scan¹

Next steps

Initiate physiotherapy and consult with the MDT for advice^{9,10} If the patient is still under your care and symptoms do not resolve, refer them to a spasticity specialist and request that they assess the patient and decide if additional intervention is needed⁸

Periodic referral

Monitor periodically

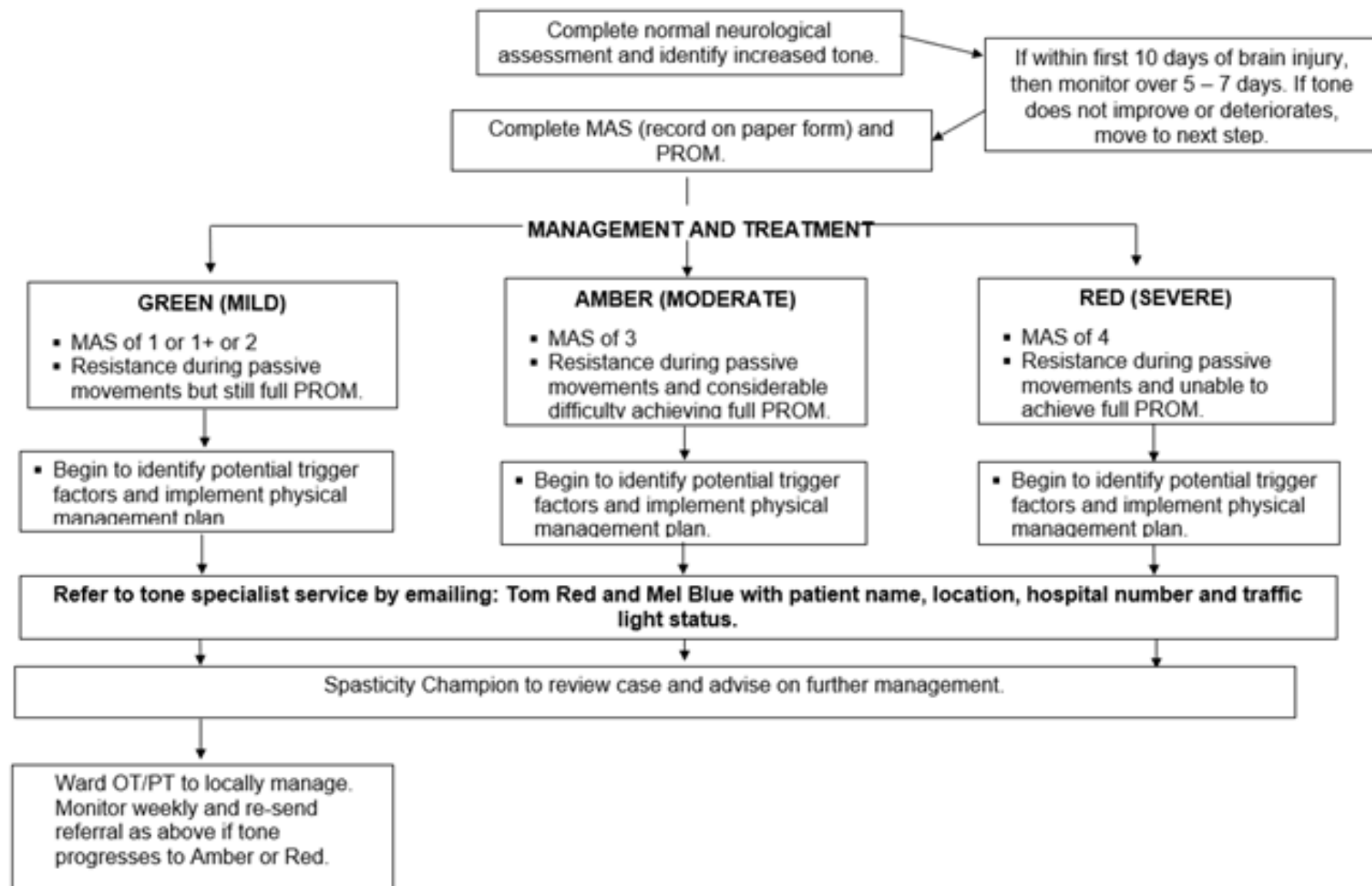
Monitor periodically (re-evaluate in three to six months) if the patient has persistent dexterity problems in the absence of increased tone*

Next steps

- Refer to a general physiotherapist or occupational therapist for treatment and/or a self-stretching programme⁸
- Patient should be evaluated within three months, and monitored by a physiotherapist or occupational therapist with experience in stroke management*
- Provide the patient and caregivers with information about post-stroke management and relevant contacts⁹

What did we do?

- + Stakeholder Focus Group
 - + Pre-existing paperwork took too long
 - + Lack of clarity about when spasticity becomes problematic
- + Implement a Training Package
 - + Documentation and referral processes
 - + Patient case studies
 - + Revised traffic light system

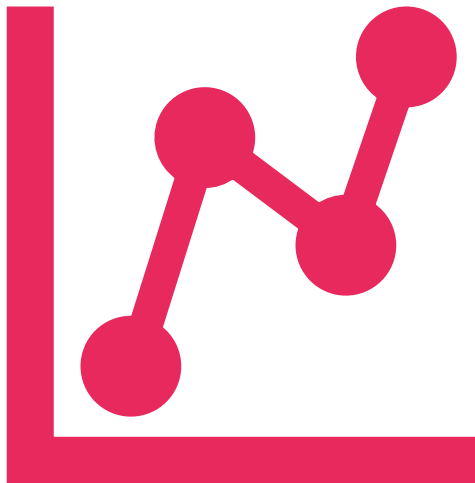


Measurable Outcomes

- + Primary Outcome: Reduce the time between identification of problematic spasticity and referral to a specialist team
 - + Quantative Data Collection
- + Secondary Outcome: To improve the confidence and knowledge of clinicians of how to identify problematic spasticity and when to refer to a specialist clinical team.
 - + Likert style confidence Questionnaires

What did our results show?

+ **PRE-SIP** - 26 patients (11 had a clear referral process) **7.6 days**



+ PRE-SIP (adjusted) **16.8 days**

+ POST SIP (11 referred, 6 problematic) **5 days**

What is the learning?

- + Achieved primary outcome
- + Post SIP stakeholder feedback (1 year follow up)
- + Pathway change - APP role

References

- + Barker, R., Ford, K. (2018) The Case for Employee Engagement in The NHS. *The Point of Care Foundation*. Available at: https://s16682.pcdn.co/wp-content/uploads/2018/09/Point_of_Care_Report_2018.pdf (Accessed on 05.09.23)
- + Bavikatte, G., Subramanian, G., Ashford, S., Allison, R. and Hicklin, D. (2021). Early Identification, Intervention and Management of Post-stroke Spasticity: Expert Consensus Recommendations. *Journal of Central Nervous System Disease*, 13(1-8)
- + Edwards, L., Ellis, B., Donnellan, C., Osman, H., Haboubi, N., Jones, M., Sunman, W., Pinnington, L. and Phillips, M.F. (2019). Prevalence of unmet needs for spasticity management in care home residents in the East Midlands, United Kingdom: a cross-sectional observational study. *Clinical Rehabilitation*, 33(11), pp.1819-1830.
- + Lindsay, C., Ispoglou, S., Helliwell, B., Hicklin, D., Sturman, S. and Pandyan, A. (2020). Can the early use of botulinum toxin in post stroke spasticity reduce contracture development? A randomised controlled trial. *Clinical Rehabilitation*, 35(3), 399:409.
- + Raluy-Callado, M., Cox, A., MacLachlan, S., Bakheit, A.M., Moore, A.P., Dinet, J. and Gabriel, S. (2018). A retrospective study to assess resource utilization and costs in patients with post-stroke spasticity in the United Kingdom. *Current Medical Research and Opinion*, 34(7), pp.1317-1324.