To compensate for damage, the brain appears to have a neurological reserve – a finite capacity to reroute signals or adapt undamaged areas to take on new functions. 1, 2

Objective

To develop international consensus recommendations for improving diagnosis, management and access to treatment in MS based on advances in disease understanding

Methods

An international working group comprising clinicians, researchers, specialist nurses, health economists and representatives from patient groups conducted structured discussions and literature searches during 2015 to examine:

- the personal and economic impact of MS
- current practice in diagnosis, treatment and management
- definitions of disease activity and disability
- barriers to accessing disease-modifying therapies (DMTs).

- diagnostic criteria, treatment options, monitoring procedures and our understanding of multiple sclerosis (MS) are rapidly evolving.

- Relapsing MS is no longer considered to consist solely of episodic attacks on myelin in the central nervous system (CNS), diffuse damage to white and grey matter is ongoing throughout the disease course.

- To compensate for damage, the brain appears to have a neurological reserve – a finite capacity to reroute signals or adapt undamaged areas to take on new functions. 1, 2

The resulting recommendations for policy change (Figure 1) have been widely endorsed by professional and patient organizations.

1. Speed up referral and diagnosis
   - Significant delays often occur before a person with symptoms suggestive of MS sees a neurologist. Improved access to MS healthcare professionals and services is therefore required.
   - Neurologists with interest and expertise in MS are the healthcare professionals best placed to provide routine diagnosis and to establish an integrated multidisciplinary approach to specialist care and management.
   - Campaigns are needed to raise public and professional awareness of MS and the detrimental effect on brain health of delays in diagnosis and treatment.

2. Intervene early to maximise lifelong brain health
   - Cognitive impairment in early MS reduces quality of life, daily functioning and employability.
   - Preserving brain volume and cognitive reserve (the two components of neurological reserve) protects against long-term cognitive and disability progression 7, 8 in MS.
   - A clear treatment goal is to maximise neurological reserve, cognitive function and physical ability by reducing disease activity in order to preserve CNS tissue.
   - Using the term ‘brain health’ to describe neurological reserve can help people with MS to conceptualize their disease.
   - Start treatment at initial, early, optimal window.
   - Implement a shared decision-making process that:
     - embodies dialog between people with MS and healthcare professionals who consider all appropriate DMTs when initiating or switching treatment.

3. Monitor disease activity and treat to a target
   - Adopt clear management principles to identify treatment failure and enable timely switching (Figure 2).
   - Set explicit treatment targets.
   - Monitor disease activity proactively.
   - Collect and record data.
   - Adopt a definition of disease activity that includes all parameters predicting future relapses and disability progression, and evolves as the evidence base grows.
   - Perform MRI brain scans to monitor lesions and brain volume (if possible) at predelineated intervals and when necessary.
   - Record monitoring data formally in databases and registries to facilitate individual treatment decisions.

4. Act swiftly and generate evidence
   - Act swiftly on suboptimal control of disease activity by considering therapy switch to a DMT with a different mechanism of action.
   - Generate real-world evidence from the long-term experience of DMTs and therapeutic strategies for use by regulators, health technology assessors, payers and healthcare professionals.

5. Take a comprehensive economic approach to evaluating treatment cost-effectiveness
   - Act upon the impact of indirect and indirect costs – increases significantly as disability progresses. 9
   - The recommended therapeutic strategy (Figure 3) has the potential to reduce disability progression and avoid some of these long-term costs.
   - In many jurisdictions, however, access to DMTs is limited. In 14 upper-middle- and high-income countries, the proportion of people with MS receiving a DMT in 2013 was in the range of 13–60% (Figure 3). 3, 11
   - To improve access to treatment, the relevant bodies should consider all costs to all parties when conducting economic evaluations, not just those borne by healthcare and social services.
   - The continuing investigation, development and use of cost-effective therapeutic strategies and alternative financing models should be encouraged.

Conclusions

- Major policy changes are needed in order to translate advances in diagnostic criteria, treatment options, monitoring procedures and disease understanding into better outcomes.

- The overarching recommendations below aim to facilitate a therapeutic strategy involving proactive monitoring, shared decision-making, and improved treatment access.

- Minimise delays in the diagnosis of MS and in the time to treatment initiation.

- Set goals for treatment and ongoing management that will optimise outcomes for every person with MS.

- Consult the most robust evidence base possible when making treatment and management decisions.

- Formally record the results of monitoring to generate further real-world evidence.

- This emergent approach will enable MS healthcare professionals and other stakeholders to strive towards the highest possible standards of care.

To read the full report and consensus recommendations, visit: www.msbrainhealth.org

References


To read the full report and recommendations, visit: www.msbrainhealth.org