MS Relapse Management Guidance

Multiple Sclerosis (MS) affects about 2% of the UK population. A majority of people with MS will at some stage experience a relapse and a few will experience multiple relapses over a short period of time. Each relapse will vary in impact and severity. Some will be minor nuisances whiles others can be devastating, taking months to recover and leading to permanent disability. The guidance provided here is a condensed version of the MS Trust – *Eight Steps to improving your relapse service* (MS Trust 2016). The guidelines are designed to help in the recognition of relapses and to aid with prompt treatment plans as included within 2014 NICE Guidelines on MS.

What is a relapse?
An MS relapse is defined as the onset of new symptoms (or the worsening of pre-existing symptoms) attributed to demyelinating disease which lasts for more than 24 hours, is preceded by neurological stability for at least 30 days from the onset of the previous relapse and which is not attributed to an infection, fever or significant metabolic disturbance.

Definition of an MS relapse
According the MS Trust documentation, a clinically significant relapse is defined as one of the following:

Any motor relapse
Any brainstem relapse
A sensory relapse, if it leads to functional impairment
A relapse leading to loss of bladder and bowel sphincter control
Optic neuritis
Intrusive pain which lasts more than 48 hours
A disabling relapse causing any or all of the following:
Affecting the person's ability to work
Affecting the person's activities of living
Affecting motor and or sensory function sufficiently to impair the capacity or reserve to care for themselves or others
Needing treatment or admission to hospital as a result of the relapse.

Relapses are caused by inflammatory activity within the central nervous system, which results in demyelination. The significance of a relapse is that it provides evidence of MS activity. Relapse activity needs to be monitored and reported so that disease modifying drug (DMD) therapy can be optimised to preserve brain activity and slow down disability progression.

Diagnosis of relapses
Relapses can be difficult to diagnose, as there are many other factors that present themselves similar to a relapse. It is important to ensure that a correct diagnosis is made and all of the following are eliminated as potential causes.

Heat and stress
Changes in heat and stress levels can worsen symptoms, by removing the triggers these should settle within 24 hours, if not relapse related.

Infection
In some cases the first indications of an infection is a worsening of MS symptoms. Infections need to be considered first as a potential cause of relapse-like symptoms as high dose steroids are contraindicated with an infection.

Minimal screening should involve a urine dipstick, a blood test to check ESR or CRP to rule out systemic infection.

Changes in medication
Adherence to medication should be discussed. Has any medication been missed or has a new medication been started? Some medications, for example, anti-spasmodics such as baclofen, will increase fatigue and weakness.

Disease Modifying Drugs
If a person is on a DMD then there is potentially a risk of disorders such as PML and advice should be sought from their MS neurologist. However, PML is rare and it is more likely to be a relapse. Some of the DMDs can cause a worsening of MS symptoms when first given (such as Mavenclad).

Progression of MS
This is difficult to differentiate from a relapse. The main difference in a relapse and progression will be the time and extent of recovery.

Menstrual cycle and menopause
MS symptoms appear to worsen 2 to 3 days before a period and then improve once bleeding has started.

Treatment
Once a diagnosis of a relapse has been established then a treatment plan should be discussed with the person so an informed decision can be made. Not all relapses have to be treated with steroids. There are other options and all should be considered (see below).

Admission to hospital is not required unless the relapse is sufficiently severe that the person is unable to manage in the community with the maximum support available. If admitted, they will need to be referred to the on-call medical team and will need a review by the MS nurse specialist / consultant neurologist. All significant relapse activity needs to be reported to the relevant MS nurse specialist /neurologist as this may affect the patient's DMD.

Treatment options can be:

No treatment
Methylprednisolone does not have any impact on long-term outcomes and does not need to be given for every relapse.

Symptom Management
Treating the symptoms can be more important to the person such as a course of physiotherapy or treatment of neuropathic pain.

Wait and see
Monitoring of the symptoms over a couple of days can inform your decision to treat with high dose steroids. If symptoms worsen then steroids could be considered.

Plasma Exchange
This is used in severe relapses which have not responded to high dose steroids.

Assessment of the needs for short-term care
Consider what local community services are available which can support in the community, avoiding the need for admission.

Using High Dose Steroids
Treatment with high dose steroids does not affect long-term outcomes or prognosis. Steroids will help speed up recovery and help ease the symptoms of a relapse, hopefully avoiding the need for hospitalisation.

Methylprednisolone can be given orally or intravenously (IV) and the research suggests there is little difference between the two routes. Therefore, oral steroids should be the first choice and IV methylprednisolone should only be prescribe in the following:

- If they failed to respond to oral steroids in the past
- If they cannot tolerate oral steroids
- If they need to be admitted due to the severity of their relapse symptoms.
- If they require close monitoring whilst taking steroids such as in diabetics or someone with a history of psychosis

A second course of steroids for a single relapse should not be given without discussion with the local neurologist. Frequent (more than three times a year) or prolonged courses of steroids should be avoided. Frequent use of high dose steroids raises the risk of osteoporosis and may need monitoring.

Steroids should be avoided during the first trimester of pregnancy and should only be considered after consultation with a neurologist.

It is essential that the person is fully aware on the pros and cons of taking high dose steroids and the potential side effects given as written information.

Pros
- Steroids can shorten relapse recovery
- Steroids ease the acute symptoms and can make the person feel better

Cons
- Steroids make no difference to the course of their MS
- Treatment with steroids will reduce any enhancement of active lesions on MRI scans for up to 7 to 9 weeks post treatment.
- There is a significant risk of side effects
- The likelihood of developing side effects increases with the frequency of use. Therefore their use should be limited to no more than three courses in one year.

Follow up
Post relapse a person should have a follow up appointment after 6 to 8 weeks. This is essential to monitor their recovery. This can be with the local MS nurse or a neurologist.

Management of Multiple Sclerosis in Primary and Secondary Care (2003).

Clinician checklist

- MS relapse causing distressing symptoms or an increased limitation on activities ?
- Presence of new neurological signs or MRI proven new MS lesions causing disability.
- Patient able to manage with available care in community ?
- If not - arrange admission to intermediate care facility / local hospital
- Clinical evidence of infection or other precipitant of relapse ? Treat underlying cause
- Patient wants treatment after discussion of pros & cons?
- Treat with: Oral Methylprednisolone 500mg for 5 days
  (See notes above if pregnant, diabetic or risk of gastritis / peptic ulcer disease)
- Inform local neurologist / MS nurse that steroid treatment has been required
- Follow-up patient - 4 weeks is usual.
- Refer to local services, e.g. MS nurse, therapists, neurologist, if ongoing symptoms or to review management options
- Evidence of UTI on Multistix test ? look for continued risk of UTI/ residual bladder volume and continence adviser/urological advice.

Patient Information Sheet – Treatment of an MS relapse

Your doctor / nurse feel that you are having a relapse of your MS and that treatment with a steroid, methylprednisolone is indicated.

Relapses are a relatively sudden (over hours or days) increase in symptoms or disability lasting more than 24 hours. Infections, particularly of the chest or urinary tract, can mimic a relapse and your doctor will assess you for these, as these are best managed by treating the infection rather than giving steroids.
Symptoms due to a relapse usually settle after a few weeks but can leave persisting problems. Steroids have been shown to help relapses settle more quickly but do not alter whether or not any problems will persist in the long-term.
Not all relapses require treatment and steroids are usually reserved for when symptoms are distressing or result in a limitation of your usual activities.

Steroids are not without side-effects, though these do not continue for long after the treatment is completed.

You MAY experience some of the following:

- Slight reddening or flushing of the face
- Swelling of the ankles
- Metallic taste in mouth
- Indigestion*
- Urinary tract infections, thrush, or sugar in the urine
- Mood alterations
- Altered sleep pattern
- Weight gain, increased appetite

* If you develop indigestion whilst taking the tablets you should inform your doctor as s/he may wish to give you antacid drugs, to help protect the stomach lining. This should also be taken if you are taking regular anti-inflammatory drugs, e.g. aspirin, ibuprofen, if you are on warfarin or if you already suffer with frequent indigestion or have a history of stomach ulcers.

Repeated courses of steroids can lead to thinning of the bones (osteoporosis) and you should not be given more than three courses of steroids a year. If your doctor is concerned about your risk of osteoporosis he may arrange a bone (DEXA) scan or give you dietary supplements of vitamin D and calcium.

You should also tell your doctor if you are diabetic (steroids will affect your sugar levels) or if there is a chance you may be pregnant.

If you have any further question please contact the person who has prescribed the medication or speak with your local MS nurse.