

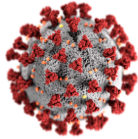
## EVENT DEFINITION FORM

**Event:** Transverse myelitis  
**Outcome/covariate:** Outcome  
**Version:** 1  
**Status:** final

### Contributing authors

authors	Role	Date
Miriam Sturkenboom	Initial coding and quick definition	March 2021
Leila Belbachir	Medical review	August 22, 2020
Carlos Duran	Review of tagging of possible and narrow	April 2021
Miriam Sturkenboom	Inclusion of codes used in final report	August 23, 2021

**Note this definition was developed rapidly after the notification of a TM case in the AZ trial**



## 1. Event definition

Based on information from NIH website, definition added since there were issues in the AZ trial<sup>1</sup>

Transverse myelitis is an inflammation of the spinal cord, the part of the central nervous system that sends impulses from the brain to nerves in the body. The term *myelitis* refers to inflammation of the spinal cord; *transverse* refers to the pattern of changes in sensation—there is often a band-like sensation across the trunk of the body, with sensory changes below.

Although some people recover from transverse myelitis with minor or no residual problems, the healing process may take months to years. Some individuals will have only one episode of transverse myelitis; other individuals may have a recurrence, especially if an underlying illness caused the disorder. There is no cure for transverse myelitis, but there are treatments to prevent or minimize permanent neurological deficits.

In some people, transverse myelitis represents the first symptom of an autoimmune or immune-mediated disease such as multiple sclerosis or neuromyelitis optica. “Partial” myelitis—affecting only a portion of the cord cross-section—is more characteristic of multiple sclerosis. Neuromyelitis optica is much more likely as an underlying condition when the myelitis is “complete” (causing severe paralysis and numbness on both sides of the spinal cord). Myelitis attacks with neuromyelitis optica spectrum disorder (NMOSD) tend to be more severe and are associated with less recovery than attacks with multiple sclerosis.

## 2. Synonyms / lay terms for the event

- Transverse myelitis
- Acute transverse myelitis
- Acute complete transverse myelitis
- Acute partial transverse myelitis
- Longitudinally extensive transverse myelitis
- Idiopathic transverse myelitis
- Secondary transverse myelitis

## 3. Laboratory tests that are specific for event

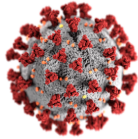
Based on NIH and Mayo Clinic<sup>2</sup>

Physicians diagnose transverse myelitis by taking a medical history and performing a thorough neurological examination. Tests that can indicate a diagnosis of transverse myelitis and rule out or evaluate underlying causes include:

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<sup>1</sup> <https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Fact-Sheets/Transverse-Myelitis-Fact-Sheet>

<sup>2</sup> <https://www.mayoclinic.org/diseases-conditions/transverse-myelitis/diagnosis-treatment/drc-20354730>



- **Blood tests** to rule out HIV infection and vitamin B12 deficiency. Blood is tested for the presence of autoantibodies (anti-aquaporin-4, anti-myelin oligodendrocyte) and antibodies associated with cancer (paraneoplastic antibodies).
- **Lumbar puncture and spinal fluid analysis** can identify more protein than usual in some people with transverse myelitis and leukocytes

If none of these tests suggests a specific cause, the person is presumed to have idiopathic transverse myelitis.

#### 4. Diagnostic tests that are specific for event

- **Magnetic resonance imaging (MRI)** A spinal MRI will almost always confirm the presence of a lesion within the spinal cord, whereas a brain MRI may provide clues to other underlying causes, especially MS. In some instances, computed tomography (CT) may be used to detect inflammation.

#### 5. Drugs that are used to treat event

Based on NIH & Mayo Clinic websites

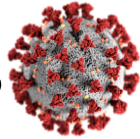
- **Intravenous corticosteroid drugs**
- **Plasma exchange therapy** (plasmapheresis)
- **Intravenous immunoglobulin (IVIG)**
- **Pain medicines** acetaminophen, ibuprofen, and naproxen. Nerve pain may be treated with certain antidepressant drugs (such as duloxetine), muscle relaxants (such as baclofen, tizanidine, or cyclobenzaprine), and anticonvulsant drugs (such as gabapentin or pregabalin).
- **Antiviral medications**
- **Medications can treat other symptoms and complications**, including incontinence, painful muscle contractions called tonic spasms, stiffness, sexual dysfunction, and depression

#### 6. Procedures used specific for event treatment

None

#### 7. Setting (outpatient specialist, in-hospital, GP, emergency room) where condition will be most frequently /reliably diagnosed

Emergency visits, hospital



## 8. Diagnosis codes or algorithms used in different papers to extract the events in Europe/USA: seek literature for papers that have studied this event, and see how they extracted/measured the event.

Non-identified using a quick search, it may have been included as part of MS

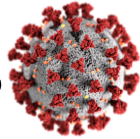
## 9. Codes used in ACCESS

Coding system	Code	Code name	Concept	Concept name	Algorithm
ICD10/CM	G36.0	Neuromyelitis optica [Devic]	C0027873	Neuromyelitis Optica	Possible
ICD10/CM	G37.3	Acute transverse myelitis NOS	C0270627	Myelitis, Acute Transverse	Narrow
ICD9CM	341.0	Neuromyelitis optica	C0027873	Neuromyelitis Optica	Possible
ICD9CM	341.2	Acute (transverse) myelitis	C0270627	Myelitis, Acute Transverse	Narrow
ICD9CM	341.20	Acute (transverse) myelitis NOS	C0270627	Myelitis, Acute Transverse	Narrow
ICD9CM	341.20	Acute (transverse) myelitis NOS	C0270627	Myelitis, Acute Transverse	Narrow
RCD2	F03..13	Transverse Myelitis			Narrow
RCD2	F037.	Transverse myelitis	C0026976	Myelitis, Transverse	Narrow
RCD2	F210.	Neuromyelitis optica	C0027873	Neuromyelitis Optica	Possible
SCTSPA	16631009	síndrome de mielopatía transversa	C0026976	Myelitis, Transverse	Narrow
SCTSPA	25044007	neuromielitis óptica	C0027873	Neuromyelitis Optica	Possible
SCTSPA	47000000	mielitis transversa aguda	C0270627	Myelitis, Acute Transverse	Narrow
SCTSPA	47000000	mielitis transversa aguda	C0270627	Myelitis, Acute Transverse	Narrow
SNOMEDCT_US	16631009	Transverse myelopathy syndrome	C0026976	Myelitis, Transverse	Narrow
SNOMEDCT_US	25044007	Neuromyelitis optica	C0027873	Neuromyelitis Optica	Possible
SNOMEDCT_US	47000000	Acute transverse myelitis	C0270627	Myelitis, Acute Transverse	Narrow
SNOMEDCT_US	47000000	Acute transverse myelitis	C0270627	Myelitis, Acute Transverse	Narrow
SNOMEDCT_US	192682002	Transverse myelitis	C0026976	Myelitis, Transverse	Narrow
SNOMEDCT_US	192732000	Varicella transverse myelitis			Narrow
SNOMEDCT_US	230197009	Acute viral transverse myelitis			Narrow
SNOMEDCT_US	230198004	Varicella transverse myelitis			Narrow
SNOMEDCT_US	230378004	Acute non-infective transverse myelitis			Narrow
SNOMEDCT_US	425756000	Idiopathic transverse myelitis			Narrow

## 10. Algorithm proposal

ACCESS

vACCine covid-19



monitoring readinESS

Narrow definition: including all Narrow labelled concepts

Broad definition: Including Narrow & Possible codes

## 11. References

<https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Fact-Sheets/Transverse-Myelitis-Fact-Sheet>

Tavasoli A, Tabrizi A. Acute Transverse Myelitis in Children, Literature Review. Iran J Child Neurol. 2018 Spring;12(2):7-16. PMID: 29696041; PMCID: PMC5904733.

Pandit L. Transverse myelitis spectrum disorders. Neurol India. 2009 Mar-Apr;57(2):126-33. doi: 10.4103/0028-3886.51278. PMID: 19439840.

<https://www.mayoclinic.org/diseases-conditions/transverse-myelitis/diagnosis-treatment/drc-20354730>