

SPONDYLOSIS

Includes spondylopathies due to asymptomatic and symptomatic degenerative changes of the bony spine (M47 and M48); Does not include ankylosing spondylitis (M45), other inflammatory spondylopathies (M46)or spondylopathies in diseases classified elsewhere (M49)

Background

This case definition was developed by the Armed Forces Health Surveillance Branch (AFHSB) for the purpose of epidemiological surveillance of a condition important to military-associated populations. In the military, work-related injuries account for significant lost work time, health care costs, and disability compensation.¹

Clinical Description

Spondylosis, sometimes referred to as degenerative osteoarthritis, or osteoarthritis of the spine disease, typically occurs in later life and primarily involves the cervical and lumbosacral spine. Patients often complain of back pain that is increased by motion and associated with stiffness or limitation of motion. Pain may be prominent when x-ray findings are minimal; alternatively, large osteophytes may be seen in asymptomatic patients. If severe, the condition may cause pressure on nerve roots and spinal stenosis.²

Case Definition and Incidence Rules

For surveillance purposes, a case of spondylosis is defined as:

- *One hospitalization* with any of the defining diagnoses of spondylosis (see ICD9 and ICD10 code lists below) in *any* diagnostic position; or
- *Two outpatient medical encounters, within two years* of each other, with any of the defining diagnoses of spondylosis (see ICD9 and ICD10 code lists below) in *any* diagnostic position.

Incidence rules:

For individuals who meet the case definition:

- The incidence date is considered the date of the first hospitalization or outpatient medical encounter that includes a defining diagnosis of spondylosis.
- An individual is considered an incident case only *once per lifetime*.

Exclusions:

- None

¹ Feuerstein M, Berkowitz SM, Peck CA. Musculoskeletal-related disability in US Army personnel: prevalence, gender and military occupational specialties. *J Occup Environ Med.* 1997 Jan;39(1):68-78.

² Braunwald, E., Fauci, A., Longo, D. et al. 2008. *Harrison's Principles of Internal Medicine.* 17th ed. United States: McGraw-Hill Professional.



Codes

The following ICD9 and ICD10 codes are included in the case definition:

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Spondylosis	<i>M47 (spondylosis)</i>	<i>721 (spondylosis and allied disorders)</i>
	<i>M47.01 (anterior spinal artery compression syndromes...)</i>	721.1 (cervical spondylosis with myelopathy)
	- M47.011 (occipito-atlanto-axial region)	
	- M47.012 (cervical region)	
	- M47.013 (cervico thoracic region)	
	- M47.014 (thoracic region)	
	- M47.015 (thorocolumbar region)	
	- M47.016 (lumbar region)	
	- M47.019 (site unspecified)	
	<i>M47.02 (vertebral artery compression syndromes...)</i>	
	- M47.021 (occipito-atlanto-axial region)	
	- M47.022 (cervical region)	
	- M47.029 (site unspecified)	
	<i>M47.1 (other spondylosis with myelopathy...)</i>	721.1 (above) 721.4 (thoracic or lumbar spondylosis with myelopathy)
	- M47.10 (site unspecified)	- 721.41 (spondylosis with myelopathy, thoracic region)
	- M47.11 (occipito-atlanto-axial region)	- 721.42 (spondylosis with myelopathy, lumbar region)
	- M47.12 (cervical region)	721.9 (spondylosis of unspecified site)
	- M47.13 (cervicothoracic region)	- 721.91 (spondylosis of unspecified site, with myelopathy)
	- M47.14 (thoracic region)	
	- M47.15 (thoracolumbar region)	
	- M47.16 (lumbar region)	
	<i>M47.2 (other spondylosis with radiculopathy...)</i>	721.0 (cervical spondylosis without myelopathy)
	- M47.20 (site unspecified)	721.2 (thoracic spondylosis without myelopathy)
	- M47.21 (occipito-atlanto-axial region)	
	- M47.22 (cervical region)	

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- M47.23 (cervicothoracic region)	721.3 (lumbosacral spondylosis without myelopathy)	
- M47.24 (thoracic region)	721.90 (spondylosis of unspecified site, without mention of myelopathy)	
- M47.25 (thoracolumbar region)		
- M47.26 (lumbar region)		
- M47.27 (lumbosacral region)		
- M47.28 (sacral and sacrococcygeal region)		
<i>M47.8 (other spondylosis)</i>		721.[0, 2, 3, 90] (above)
- M47.81 (spondylosis without myelopathy or radiculopathy...)		
- M47.811 (occipito-atlanto-axial region)		
- M47.812 (cervical region)		
- M47.813 (cervicothoracic region)		
- M47.814 (thoracic region)		
- M47.815 (thoracolumbar region)		
- M47.816 (lumbar region)		
- M47.817 (lumbosacral region)		
- M47.818 (sacral and sarococcygeal region)		
- M47.819 (site unspecified)		
- M47.89 (other spondylosis)	721.[0, 2, 3, 90] (above)	
- M47.891 (occipito-atlanto-axial region)		
- M47.892 (cervical region)		
- M47.893 (cervicothoracic region)		
- M47.894 (thoracic region)		
- M47.895 (thoracolumbar region)		
- M47.896 (lumbar region)		
- M47.897 (lumbosacral region)		
- M47.898 (sacral and sarococcygeal region)		
- M47.899 (site unspecified)		
<i>M47.9 (spondylosis, unspecified)</i>		(continued on next page)



<i>M48 (other spondylopathies)</i>	
<i>M48.0 (spinal stenosis...)</i>	--
- M48.00 (site unspecified)	724.00 (spinal stenosis, unspecified region)
- M48.01 (occipito-atlanto-axial region)	723.0 (spinal stenosis of cervical region)
- M48.02 (cervical region)	
- M48.03 (cervicothracic region)	
- M48.04 (thoracic region)	724.01 (spinal stenosis, thoracic region)
- M48.05 (thoracolumbar region)	
- M48.06 (lumbar region...)	724.00 (spinal stenosis, other than cervical)
- M48.061 (without neurogenic claudication)	724.02 (spinal stenosis, with neurogenic claudication)
- M48.061 (with neurogenic claudication)	724.03 (spinal stenosis, with neurogenic claudication)
- M48.07 (lumbosacral region)	724.02 (above)
- M48.08 (sacral and sacrococcygeal region)	724.09 (spinal stenosis, other region)
<i>M48.1 (ankylosing hyperostosis [Forestier], site unspecified...)</i>	721.6 (ankylosing vertebral hyperostosis)
- M48.10 (site unspecified)	
- M48.11 (occipito-atlanto-axial region)	
- M48.12 (cervical region)	
- M48.13 (cervicothracic region)	
- M48.14 (thoracic region)	
- M48.15 (thoracolumbar region)	
- M48.16 (lumbar region)	
- M48.17 (lumbosacral region)	
- M48.18 (sacral and sarococcygeal region)	
- M48.19 (multiple sites in spine)	
<i>M48.2 (kissing spine...)</i>	721.5 (kissing spine)
- M48.20 (site unspecified)	
- M48.21 (occipito-atlanto-axial region)	
- M48.22 (cervical region)	
- M48.23 (cervicothracic region)	

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- M48.24 (thoracic region)	
- M48.25 (thoracolumbar region)	
- M48.26 (lumbar region)	
- M48.27 (lumbosacral region)	
<i>M48.3 (traumatic spondylopathy)</i>	721.7 (traumatic spondylopathy)
- M48.30 (site unspecified)	
- M48.31 (occipito-atlanto-axial region)	
- M48.32 (cervical region)	
- M48.33 (cervicothracic region)	
- M48.34 (thoracic region)	
- M48.35 (thoracolumbar region)	
- M48.36 (lumbar region)	
- M48.37 (lumbosacral region)	
- M48.38 (sacral and sacrococcygeal region)	
<i>M48.9 (spondylopathy, unspecified)</i>	721.8 (other allied disorders of spine)

Development and Revisions

- In October of 2017 the case definition was updated to include ICD10 codes.
- The case definition was developed by *Medical Surveillance Monthly Report (MSMR)* staff for use in a MSMR article on Spondylosis.³ The case definition was developed based on reviews of the ICD9 codes, the scientific literature, and previous AFHSC report requests.

Case Definition and Incidence Rule Rationale

- The symptoms of spondylosis present over time and health care providers may include the condition in the differential diagnosis for an individual prior to making a definitive diagnosis. As such, the case definition requires two outpatient visits to confirm a true case.

Code Set Determination and Rationale

- The intent of this case definition and code set is to capture spondylosis and spondylopathies due to asymptomatic and symptomatic degenerative changes of the bony spine (i.e., ICD10 M47 (spondylosis) and ICD10 M48 (other spondylopathies) / ICD9 721.xx, 723.xx, 724.xx).

The code set does not include inflammatory spondylopathies (i.e., ankylosing spondylitis (ICD10 M45), other inflammatory spondylopathies (ICD10 M46), spondylopathies in diseases classified

³ Armed Forces Health Surveillance Center. Osteoarthritis and Spondylosis, Active Component, U.S. Armed Forces, 2000-2009. *Medical Surveillance Monthly Report (MSMR)*. 2010 December; Vol 17 (12): 6-11.



elsewhere (ICD10 M49) and intervertebral disc disorders (ICD10 M51). Osteoarthritis of the spine is captured under M47. Traumatic spondylopathies are included.

- In October of 2017 ICD9 723.0 (spinal stenosis of the cervical region) and 724.0x (spinal stenosis, other than cervical) / ICD10 48.0^ (spinal stenosis) were added to the code set based on the rationale that most instances of spinal stenosis are the consequence of degenerative disease of the spine and that spinal stenosis is grouped under M48 (other spondylopathies) in the ICD10 code set.
- The code set used for the September 2016 MSMR article on osteoarthritis and spondylosis did not include all ICD10 codes for spondylosis. The omitted codes are included in this document and will be included in the code set for future analyses.
- To capture all possible descriptions and sequelae unique to spondylosis, the original ICD9 code set included all 721.xx codes

Reports

AFHSB reports on spondylosis in the following reports:

- Periodic *MSMR* Updates; most recent update September 2016.⁴

Review

Oct 2017	Case definition reviewed and updated by the AFHSB Surveillance Methods and Standards (SMS) working group.
Mar 2011	Case definition reviewed and adopted by AFHSC Surveillance Methods and Standards (SMS) working group.
Dec 2010	Case definition developed and reviewed by MSMR staff.

Comments

None

⁴ Armed Forces Health Surveillance Branch. Update: Osteoarthritis and Spondylosis, Active Component, U.S. Armed Forces, 2010-2015. *Medical Surveillance Monthly Report (MSMR)*. 2016 September; Vol 23(9): 9-13.

