Health & Care Information Model:

nl.zorg.DAS-v1.1

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Content

1. nl.zorg.DAS-v1.1

DCM::CoderList	*
DCM::ContactInformation.Address	*
DCM::ContactInformation.Name	*
DCM::ContactInformation.Telecom	*
DCM::ContentAuthorList	*
DCM::CreationDate	26-03-2020
DCM::DeprecatedDate	
DCM::DescriptionLanguage	nl
DCM::EndorsingAuthority.Address	
DCM::EndorsingAuthority.Name	*
DCM::EndorsingAuthority.Telecom	
DCM::Id	2.16.840.1.113883.2.4.3.11.60.40.3.12.18
DCM::KeywordList	
DCM::LifecycleStatus	Final
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DCM::Supersedes	nl.zorg.DAS-v1.0
DCM::Version	1.1
HCIM::PublicationLanguage	EN

1.1 Revision History

Publicatieversie 1.0 (01-09-2020)

Publicatieversie 1.1 (01-12-2021)
Bevat: ZIB-1248, ZIB-1404, ZIB-1508, ZIB-1567.

1.2 Concept

The Disease Activity Score (DAS) is a combined index developed in Nijmegen around 1990 to measure disease activity in patients with rheumatoid arthritis (RA). It concerns a formula with 28 or 44 painful and swollen joints, a blood value for inflammation (BSE or CRP) and the overall experience of disease activity by the patient. The DAS results in a number between 0 and 10, which indicates how active rheumatoid arthritis is at present. The score has been validated for use in clinical trials in combination with the EULAR response criteria.

1.3 Mindmap

1.4 Purpose

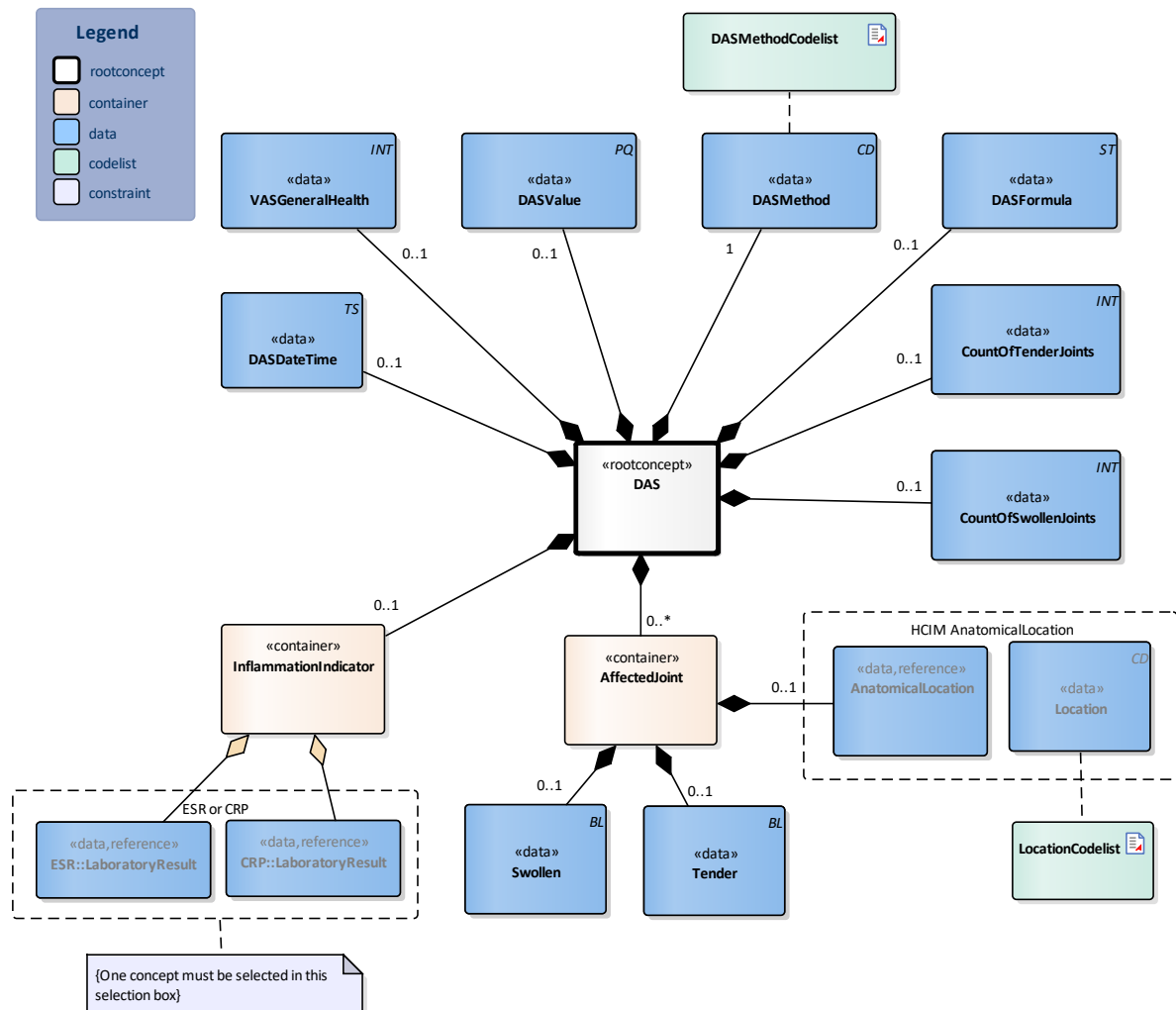In addition to frequent use in trials, the DAS is used to measure the disease activity of RA patients in daily clinical practice, supporting the "treat-to-target" strategy recommended in guidelines. The DAS is also used as an outcome measure for the care of RA patients in a national quality registration.

1.5 Patient Population

Adult patients with rheumatoid arthritis (RA).

1.6 Evidence Base

1.7 Information Model

«rootconcept»	DAS	
Definitie	Root concept of the information model.This root concept contains all data elements of the information model DAS.	
Datatype		
DCM::ConceptId	NL-CM:12.18.1	
DCM::DefinitionCode	SNOMED CT: 443349002 Disease activity score in rheumatoid arthritis	
Opties		

«data»	DASValue	
Definitie	The result (value).	
Datatype	PQ	
DCM::ConceptId	NL-CM:12.18.15	
DCM::DefinitionCode	SNOMED CT: 763259004 Disease Activity Score (observable entity)	
DCM::ExampleValue	5,27	
Opties		

«data»	DASMethod

Definitie	The specification of the DAS method used. There are different DAS scores. Each type has a different formula. DAS-28 or DAS-44 stands for 28 or 44 painful and swollen joints. One blood value for inflammation (a ESR or a CRP laboratory result) and the overall experience of disease activity by the patient via a Visual Analog Scale (VAS).	
Datatype	CD	
DCM::ConceptId	NL-CM:12.18.14	
DCM::DefinitionCode	SNOMED CT: 443349002 Disease activity score in rheumatoid arthritis	
DCM::ExampleValue	DAS-28 CRP	
DCM::ValueSet	DASMethodCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.18.2
Opties		

«data»	DASFormula	
Definitie	The specification of the type of DAS. There are different DAS scores. Each type has a different formula.	
Datatype	ST	
DCM::ConceptId	NL-CM:12.18.21	
Opties		

«container»	AffectedJoint	
Definitie	Container of the AffectedJoint concept.This container contains all data elements of the AffectedJoint concept.	
Datatype		
DCM::ConceptId	NL-CM:12.18.2	
DCM::DefinitionCode	SNOMED CT: 118952005 Joint finding	
DCM::ExampleValue	Wrist	
Opties		

«data»	AnatomicalLocation	
Definitie	Joints that are tender and/or swollen.	
Datatype		
DCM::ConceptId	NL-CM:12.18.16	
DCM::ExampleValue	Links	
DCM::ReferencedConceptId	NL-CM:20.7.1	This is a reference to the rootconcept of information model AnatomicLocation.
Opties		

«data»	Location	
Definitie	The location and laterality of joints in the body.	
Datatype	CD	
DCM::ConceptId	NL-CM:20.7.4	
DCM::DefinitionCode	SNOMED CT: 363698007 Finding site	
DCM::ValueSet	LocationCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.18.1
Opties		

«data»	Swollen	
Definitie	Swollen joint indicator.	
Datatype	BL	
DCM::ConceptId	NL-CM:12.18.4	

DCM::DefinitionCode	SNOMED CT: 271771009 Joint swelling	
DCM::ExampleValue	False	
Opties		

«data»	Tender	
Definitie	Tender joint indicator.	
Datatype	BL	
DCM::ConceptId	NL-CM:12.18.3	
DCM::DefinitionCode	SNOMED CT: 110288007 Tenderness of joint	
DCM::ExampleValue	True	
Opties		

«data»	CountOfTenderJoints	
Definitie	Count of tender joints as reported by the patient.	
Datatype	INT	
DCM::ConceptId	NL-CM:12.18.11	
DCM::DefinitionCode	SNOMED CT: 442521001 Tender joint count for rheumatoid arthritis assessment	
DCM::ExampleValue	10	
Opties		

«data»	CountOfSwollenJoints	
Definitie	Count of swollen joints.	
Datatype	INT	
DCM::ConceptId	NL-CM:12.18.12	
DCM::DefinitionCode	SNOMED CT: 442194005 Swollen joint count for rheumatoid arthritis assessment	
DCM::ExampleValue	20	
Opties		

«container»	InflammationIndicator	
Definitie	Container of the InflammationIndicator concept.This container contains all data elements of the InflammationIndicator concept.	
Datatype		
DCM::ConceptId	NL-CM:12.18.22	
Opties		

«data»	ESR::LaboratoryResult	
Definitie	The C-reactive protein (CRP) is a laboratory measurment valuable for determining the presence of inflammation or to monitor the effect of a medical treatment on the inflammation. The erythrocyte sedimentation rate (ESR or sed rate) is the rate at which red blood cells in anticoagulated whole blood descend in a standardized tube over a period of one hour. Both test results can be used to calculate the DAS.	
Datatype		
DCM::ConceptId	NL-CM:12.18.20	
DCM::DefinitionCode	LOINC: 4539-3 Erythrocyte sedimentation rate Zeta by Zetafuge	

DCM::DefinitionCode	LOINC: 4537-7 Erythrocyte sedimentation rate by Westergren method	
DCM::ExampleValue	20 (mm/hr)	
DCM::ReferencedConceptId	NL-CM:13.1.1	This is a reference to the rootconcept of information model LaboratoryTestResult.
Opties		

«data»	CRP::LaboratoryResult	
Definitie	The C-reactive protein (CRP) is a laboratory measurment valuable for determining the presence of inflammation or to monitor the effect of a medical treatment on the inflammation. The erythrocyte sedimentation rate (ESR or sed rate) is the rate at which red blood cells in anticoagulated whole blood descend in a standardized tube over a period of one hour. Both test results can be used to calculate the DAS.	
Datatype		
DCM::ConceptId	NL-CM:12.18.19	
DCM::DefinitionCode	LOINC: 30522-7 C reactive protein [Mass/volume] in Serum or Plasma by High sensitivity method	
DCM::DefinitionCode	LOINC: 1988-5 C reactive protein [Mass/volume] in Serum or Plasma	
DCM::ExampleValue	4 (mg/l)	
DCM::ReferencedConceptId	NL-CM:13.1.1	This is a reference to the rootconcept of information model LaboratoryTestResult.
Opties		

«data»	DASDateTime	
Definitie	The date and possibly time when the DAS score measurement was carried out.	
Datatype	TS	
DCM::ConceptId	NL-CM:12.18.17	
DCM::DefinitionCode	SNOMED CT: 439771001 Date of event	
Opties		

«data»	VASGeneralHealth	
Definitie	The VAS score for general health as experienced by the patient on a scale of 1 to 100	
Datatype	INT	
DCM::ConceptId	NL-CM:12.18.8	
DCM::DefinitionCode	SNOMED CT: 446661009 Visual analog scale score	
DCM::ExampleValue	68	
Opties		

«document»	DASMethodCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Extensible	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.18.2	

HCIM::ValueSetLanguage	--	
Opties		

DASMethodeCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.18.2		
Concept Name	**Concept Code**	**Coding Syst. Name**	**Coding System OID**		**Description**
DAS28 - CRP	117651000146103	SNOMED CT	2.16.840.1.113883.6.96		DAS 28-CRP
DAS28 - ESR	117661000146100	SNOMED CT	2.16.840.1.113883.6.96		DAS28-BSE
DAS44 - CRP	117681000146108	SNOMED CT	2.16.840.1.113883.6.96		DAS44-CRP
DAS44 - ESR	117691000146105	SNOMED CT	2.16.840.1.113883.6.96		DAS44-BSE

«document»	LocationCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Extensible	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.18.1	
HCIM::ValueSetLanguage	--	
Opties		

LocatieCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.18.1	
Concept Name	**Concept Code**	**Codesystem**	**Codesystem OID**	**Description**
Temporomandibular joint structure	53620006	SNOMED CT	2.16.840.1.113883.6.96	Kaakgewricht
Sternoclavicular joint structure	7844006	SNOMED CT	2.16.840.1.113883.6.96	Sternoclaviculair gewricht
Acromioclavicular joint structure	85856004	SNOMED CT	2.16.840.1.113883.6.96	Acromioclaviculair gewricht
Glenohumeral joint structure	85537004	SNOMED CT	2.16.840.1.113883.6.96	Schoudergewricht
Elbow joint structure	16953009	SNOMED CT	2.16.840.1.113883.6.96	Ellebooggewricht
Wrist joint structure	74670003	SNOMED CT	2.16.840.1.113883.6.96	Polsgewricht
Carpometacarpal joint structure of thumb	30099006	SNOMED CT	2.16.840.1.113883.6.96	Carpometacarpaal gewricht van duim
Metacarpophalangeal joint structure of thumb	56310002	SNOMED CT	2.16.840.1.113883.6.96	Metacarpofalangeaal gewricht van duim
Metacarpophalangeal joint structure of index finger	289002	SNOMED CT	2.16.840.1.113883.6.96	Metacarpofalangeaal gewricht van wijsvinger
Metacarpophalangeal joint structure of middle finger	6059006	SNOMED CT	2.16.840.1.113883.6.96	Metacarpofalangeaal gewricht van middelvinger
Metacarpophalangeal joint structure of ring finger	13822002	SNOMED CT	2.16.840.1.113883.6.96	Metacarpofalangeaal gewricht van ringvinger
Metacarpophalangeal joint structure of little finger	5493005	SNOMED CT	2.16.840.1.113883.6.96	Metacarpofalangeaal gewricht van pink
Structure of	115955008	SNOMED CT	2.16.840.1.113883.6.96	Interfalangeaal

interphalangeal joint of thumb				gewricht van duim
Structure of proximal interphalangeal joint of index finger	371270005	SNOMED CT	2.16.840.1.113883.6.96	Proximaal interfalangeaal gewricht van wijsvinger
Structure of proximal interphalangeal joint of middle finger	371263005	SNOMED CT	2.16.840.1.113883.6.96	Proximaal interfalangeaal gewricht van middelvinger
Structure of proximal interphalangeal joint of ring finger	371267006	SNOMED CT	2.16.840.1.113883.6.96	Proximaal interfalangeaal gewricht van ringvinger
Structure of proximal interphalangeal joint of little finger	371233001	SNOMED CT	2.16.840.1.113883.6.96	Proximaal interfalangeaal gewricht van pink
Structure of distal interphalangeal joint of index finger	371210002	SNOMED CT	2.16.840.1.113883.6.96	Distaal interfalangeaal gewricht van wijsvinger
Structure of distal interphalangeal joint of middle finger	371218009	SNOMED CT	2.16.840.1.113883.6.96	Distaal interfalangeaal gewricht van middelvinger
Structure of distal interphalangeal joint of ring finger	371204002	SNOMED CT	2.16.840.1.113883.6.96	Distaal interfalangeaal gewricht van ringvinger
Structure of distal interphalangeal joint of little finger	371202003	SNOMED CT	2.16.840.1.113883.6.96	Distaal interfalangeaal gewricht van pink
Sacroiliac joint structure	39723000	SNOMED CT	2.16.840.1.113883.6.96	Sacroiliacaal gewricht
Hip joint structure	24136001	SNOMED CT	2.16.840.1.113883.6.96	Heupgewricht
Knee joint structure	49076000	SNOMED CT	2.16.840.1.113883.6.96	Kniegewricht
Ankle joint structure	70258002	SNOMED CT	2.16.840.1.113883.6.96	Enkelgewricht
Intertarsal joint structure	27949001	SNOMED CT	2.16.840.1.113883.6.96	structuur van articulatio intertarsalis
First metatarsophalangeal joint structure	27824001	SNOMED CT	2.16.840.1.113883.6.96	Metatarsofalangeaal gewricht van grote teen
Metatarsophalangeal joint structure of second toe	71721008	SNOMED CT	2.16.840.1.113883.6.96	Metatarsofalangeaal gewricht van tweede teen
Metatarsophalangeal joint structure of third toe	81247008	SNOMED CT	2.16.840.1.113883.6.96	Metatarsofalangeaal gewricht van derde teen
Metatarsophalangeal joint structure of fourth toe	45230000	SNOMED CT	2.16.840.1.113883.6.96	Metatarsofalangeaal gewricht van vierde teen
Metatarsophalangeal joint structure of fifth toe	50133002	SNOMED CT	2.16.840.1.113883.6.96	Metatarsofalangeaal gewricht van kleine teen
Interphalangeal joint structure of great toe	363670009	SNOMED CT	2.16.840.1.113883.6.96	Interfalangeaal gewricht van grote

				teen
Proximal interphalangeal joint structure of second toe	371292009	SNOMED CT	2.16.840.1.113883.6.96	Proximaal interfalangeaal gewricht van tweede teen
Proximal interphalangeal joint structure of third toe	371255009	SNOMED CT	2.16.840.1.113883.6.96	Proximaal interfalangeaal gewricht van derde teen
Proximal interphalangeal joint structure of fourth toe	371288002	SNOMED CT	2.16.840.1.113883.6.96	Proximaal interfalangeaal gewricht van vierde teen
Proximal interphalangeal joint structure of fifth toe	371284000	SNOMED CT	2.16.840.1.113883.6.96	Proximaal interfalangeaal gewricht van kleine (vijfde) teen
Distal interphalangeal joint structure of second toe	371216008	SNOMED CT	2.16.840.1.113883.6.96	Distaal interfalangeaal gewricht van tweede teen
Distal interphalangeal joint structure of third toe	371219001	SNOMED CT	2.16.840.1.113883.6.96	Distaal interfalangeaal gewricht van derde teen
Distal interphalangeal joint structure of fourth toe	371205001	SNOMED CT	2.16.840.1.113883.6.96	Distaal interfalangeaal gewricht van vierde teen
Distal interphalangeal joint structure of fifth toe	371203008	SNOMED CT	2.16.840.1.113883.6.96	Distaal interfalangeaal gewricht van kleine (vijfde) teen

	Legend
Definitie	
Datatype	
Opties	

	Constraint
Definitie	One concept must be selected in this selection box
Datatype	
Opties	

1.8   Example Instances

DAS						
DatumTiid	Methode	Waarde	Aantal gewrichten		OntstekingIndicator	
			Pijnlijk	Gezwollen	BSE (mm/hr)	CRP (mg/l)
01/08/2020	DAS 28-CRP	5,34	8	2	20	
01/08/2020	DAS28-BSE	4,78	8	2		4

Aangedaan Gewricht	Pijnlijk		Gezwollen	
	L	R	L	R
Schoudergewricht				
Ellebooggewricht				
Polsgewricht				
Metacarpofalangeaal gewricht van:				
duim				
wijsvinger				
middelvinger				
ringvinger				
pink		x		
duim		x		
wijsvinger	x	x		x
middelvinger		x		
ringvinger	x	x		x
pink		x		
Kniegewricht				
Aantal pijnlijk	8			
Aantal gezwollen			2	

1.9 Instructions

1.10 Interpretation

1.11 Care Process

1.12 Example of the Instrument

1.13 Constraints

1.14 Issues

1.15 References

Informatie over het DAS instrument [Online] Beschikbaar op: https://www.das-score.nl/das28/en/ [Geraadpleegd: 8 oktober 2019]

1.16 Functional Model

1.17 Traceability to other Standards

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