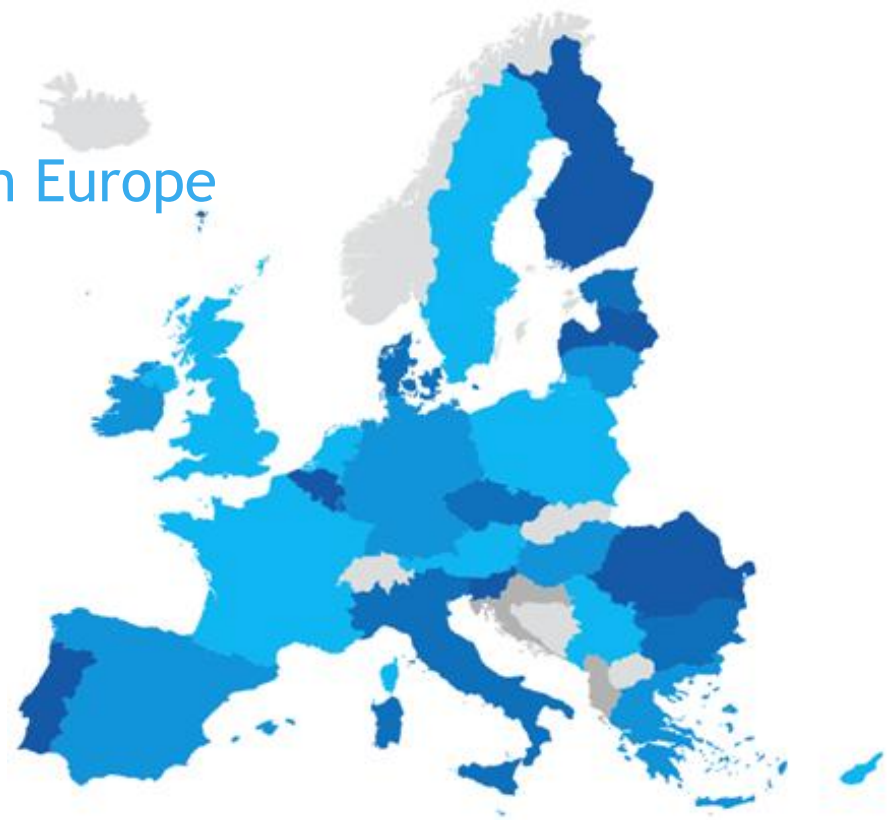




Musculoskeletal Health in Europe Core Indicators



Introduction

The aim of eumusc.net project is to raise and harmonise quality of care and enable equity (environmental, social, gender and geographical) of care of rheumatic diseases and other musculoskeletal conditions across the Member States by developing and operationalising a relevant health surveillance and information system. This will lead to improved musculoskeletal health for all.

A specific objective is to provide updated and harmonised information on health, social, employment and economic impact of musculoskeletal conditions across all Member States at month 11, also through the development of an assessment tool. For this, a set of core indicators of musculoskeletal health have been developed with recommendations of how to collect them and with what frequency. This data will provide the opportunity to compare the state of musculoskeletal health across Member States and drive policies for improvement.

Data on the state of musculoskeletal health across Europe in 2012 is available at http://www.eumusc.net/workpackages_wp4.cfm

Methodology

The set of core indicators was developed by a working group of the eumusc.net project with representatives from 11 EU Member States. This group conducted a review of previous work on indicators for MSC and a review of national, European and international indicator sets for relevance to MSC. Experts were consulted including those from the UK Department of Health, the Centre for Public Health Forecasting and Fit for Work on development of the core indicator set. A criteria was developed for selection of indicators to include in a core set. The group reviewed the availability and accessibility of data from national, European and international data sets and drew up a draft set of core indicators. The core set was agreed following consultation with the wider eumusc network (representing 22 organisations across the EU).

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Self reported activity limiting musculoskeletal pain (plus region)
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem.
Definition	Prevalence of self reported musculoskeletal pain limiting daily activities per 1,000 population a) in last 4 weeks b) in last 4 weeks which has lasted for 3 months or more.
Data source currently	Not currently available in European Health Interview Survey (EHIS)
Method of measurement currently	Similar questions included in some national health surveys e.g. Austria, France but does not exactly correspond to above definition, differences in time period etc. For example Austrian survey: Have you had substantial pain in at least one part of your body in the past 12 months? In the past 12 months, have you been absent from work for reasons of pain? Have you had pain in this part of your body in the past seven days? Have you had pain in this part of your body for longer than three months?
Data available currently	Similar health survey data available in some countries e.g. Austria, France but does not exactly correspond to above definition, differences in time period etc.
Examples of data	Data on regionalised body pain in past 12 months; regionalised body pain in last 12 months that has lasted for 3 months or more. http://www.statistik-austria.com/web_de/statistiken/gesundheit/gesundheitszustand/chronische_krankheiten/index.html
Data source preferred for future	EHIS - new question (see below)
Method of measurement preferred for future	In the last 4 weeks have you had any pain or discomfort affecting your muscles, joints, neck or back which affected your ability to carry out your activities of daily living? Yes / No Has this problem lasted for 3 months or more. Yes/No
Recommendation for current use	Use national survey data where available or use EHIS existing question: To what extent have you experienced physical pain during the last four weeks?
Unit of measure	Number of prevalent cases per 1,000 respondents analyzed by 10 year age group, gender, education, occupation
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Not currently available in EHIS but available in some non-EHIS surveys . Prevalence of general musculoskeletal pain is an ECHI indicator.

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Low back disorder
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem.
Definition	Prevalence of self reported low back disorder or other chronic back defect per 1,000 population; Age standardised 12 month prevalence low back disorder or other chronic back defect per 1,000 population using WHO European Standard Population.
Data source currently	Standard EHIS questionnaire
Method of measurement currently	EHIS questions HS.4-HS.6: Do you have or have you ever had low back disorder or other chronic back defect? Was this disease/condition diagnosed by a medical doctor? Have you had this disease/condition in the past 12 months?
Data available currently	% respondents ever had low back disorder (LBD). % respondents had LBD in past 12 months. % of respondents with LBD who had it diagnosed by a medical doctor.
Examples of data	http://www.ine.es/jaxi/tabla.do?path=/t15/p420/a2009/p04/l1/&file=02007.px&type=pcaxis&L=1
Data source preferred for future	EHIS - new question (see below)
Method of measurement preferred for future	In the last 4 weeks have you had any pain or discomfort affecting your muscles, joints, neck or back which affected your ability to carry out your activities of daily living? Yes / No Has this problem lasted for 3 months or more? Yes/No Region indicated as low back
Recommendation for current use	EHIS existing questions
Unit of measure	Number of prevalent cases per 1000 respondents analyzed by 10 year age group, gender, education, occupation ; Age standardised 12 month prevalence using WHO European Standard Population.
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Good comparability

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Low back disorder supplementary
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem.
Definition	Prevalence of LBD as according to defined diagnostic criteria
Data source currently	Peer reviewed literature
Method of measurement currently	As defined in individual studies
Data available currently	Prevalence data as defined in individual studies
Examples of data	http://www.ncbi.nlm.nih.gov/pubmed/12750654
Data source preferred for future	Peer reviewed literature
Method of measurement preferred for future	As defined in individual studies
Recommendation for current use	Peer reviewed literature
Unit of measure	Prevalence per 1,000 population (by age and/or gender where data available)
Periodicity of primary collection	Varied periodicity
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Published peer reviewed literature and systematic reviews from Global Burden of Disease project used to augment routine survey data. In 2011 GBD data available for EU countries with data collection period ranging from 1981-2009

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Neck disorder
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem.
Definition	Prevalence of self reported doctor diagnosed neck disorder of other chronic neck defect per 1,000 population; Age standardised 12 month prevalence per 1,000 population using WHO European Standard Population.
Data source currently	Standard EHIS questionnaire
Method of measurement currently	EHIS questions HS.4-HS.6: Do you have or have you ever had neck disorder or other chronic neck defect? Was this disease/condition diagnosed by a medical doctor? Have you had this disease/condition in the past 12 months?
Data available currently	% respondents ever had ND. % respondents had ND in past 12 months. % of respondents with ND who had it diagnosed by a medical doctor.
Examples of data	http://www.ine.es/jaxi/tabla.do?path=/t15/p420/a2009/p04/l1/&file=02007.px&type=pcaxis&L=1
Data source preferred for future	EHIS - new question (see below)
Method of measurement preferred for future	In the last 4 weeks have you had any pain or discomfort affecting your muscles, joints, neck or back which affected your ability to carry out your activities of daily living? Yes / No Has this problem lasted for 3 months or more? Yes/No Region indicated as neck
Recommendation for current use	EHIS existing questions
Unit of measure	Number of prevalent cases per 1,000 respondents analyzed by 10 year age group, gender, education, occupation ; Age standardised 12 month prevalence using WHO European Standard Population
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Good comparability

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Neck disorder supplementary
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem.
Definition	Prevalence of ND as according to defined diagnostic criteria
Data source currently	Peer reviewed literature
Method of measurement currently	As defined in individual studies
Data available currently	Prevalence data as defined in individual studies
Examples of data	http://www.ncbi.nlm.nih.gov/pubmed/18204402
Data source preferred for future	Peer reviewed literature
Method of measurement preferred for future	As defined in individual studies
Recommendation for current use	Peer reviewed literature
Unit of measure	Prevalence per 1,000 population (by age and/or gender where data available)
Periodicity of primary collection	Varied periodicity
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Published peer reviewed literature and systematic reviews from Global Burden of Disease project used to augment routine survey data. In 2011 GBD data available for EU countries with data collection period ranging from 1981-2009

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Rheumatoid arthritis
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem
Definition	Prevalence of self reported doctor diagnosed rheumatoid arthritis per 1,000 population; Age standardised 12 month prevalence rheumatoid arthritis per 1,000 population using WHO European Standard Population.
Data source currently	Standard EHIS questionnaire
Method of measurement currently	EHIS questions HS.4-HS.6: Do you have or have you ever had Rheumatoid arthritis (inflammation of the joints)? Was this disease/condition diagnosed by a medical doctor? Have you had this disease/condition in the past 12 months?
Data available currently	% respondents ever had RA. % respondents had RA in past 12 months. % of respondents with RA who had it diagnosed by a medical doctor.
Examples of data	http://www.statistik-austria.com/web_de/statistiken/gesundheit/gesundheitszustand/chronische_krankheiten/index.html
Data source preferred for future	EHIS - new question (see below)
Method of measurement preferred for future	In the last 4 weeks have you had any pain or discomfort affecting your muscles, joints, neck or back which affected your ability to carry out your activities of daily living? Yes / No Has this problem lasted for 3 months or more? Yes/No For this problem have you been told by a medical doctor what the diagnosis is? Yes/No Diagnosis = Rheumatoid Arthritis
Recommendation for current use	EHIS existing questions
Unit of measure	Number of prevalent cases per 1,000 respondents analyzed by 10 year age group, gender, education, occupation ; Age standardised 12 month prevalence using WHO European Standard Population
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Good comparability

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Rheumatoid arthritis supplementary
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem
Definition	Prevalence of RA as according to defined diagnostic criteria
Data source currently	Peer reviewed literature
Method of measurement currently	As defined in individual studies
Data available currently	Prevalence data as defined in individual studies
Examples of data	http://rheumatology.oxfordjournals.org/content/41/7/793.full.pdf+html
Data source preferred for future	Peer reviewed literature
Method of measurement preferred for future	As defined in individual studies
Recommendation for current use	Peer reviewed literature
Unit of measure	Prevalence per 1,000 population (by age and/or gender where data available)
Periodicity of primary collection	Varied periodicity
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Published peer reviewed literature and systematic reviews from Global Burden of Disease project used to augment routine survey data. In 2011 GBD data available for EU countries with data collection period ranging from 1981-2009

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Osteoarthritis
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem
Definition	Prevalence of self reported doctor diagnosed osteoarthritis per 1,000 population; Age standardised 12 month prevalence osteoarthritis per 1,000 population using WHO European Standard Population.
Data source currently	Standard EHIS questionnaire
Method of measurement currently	EHIS questions HS.4-HS.6: Do you have or have you ever had Osteoarthritis arthrosis (joint degeneration)? Was this disease/condition diagnosed by a medical doctor? Have you had this disease/condition in the past 12 months?
Data available currently	% respondents ever had OA. % respondents had OA in past 12 months. % of respondents with OA who had it diagnosed by a medical doctor.
Examples of data	http://www.statistik-austria.com/web_de/statistiken/gesundheit/gesundheitszustand/chronische_krankheiten/index.html
Data source preferred for future	EHIS - new question (see below)
Method of measurement preferred for future	In the last 4 weeks have you had any pain or discomfort affecting your muscles, joints, neck or back which affected your ability to carry out your activities of daily living? Yes / No Has this problem lasted for 3 months or more? Yes/No For this problem have you been told by a medical doctor what the diagnosis is? Yes/No Diagnosis = Osteoarthritis
Recommendation for current use	EHIS existing questions
Unit of measure	Number of prevalent cases per 1,000 respondents analyzed by 10 year age group, gender, education, occupation ; Age standardised 12 month prevalence using WHO European Standard Population
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Good comparability

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Osteoarthritis supplementary
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem
Definition	Prevalence of OA as according to defined diagnostic criteria
Data source currently	Peer reviewed literature
Method of measurement currently	As defined in individual studies
Data available currently	Prevalence data as defined in individual studies
Examples of data	http://www.ncbi.nlm.nih.gov/pubmed/16483904
Data source preferred for future	Peer reviewed literature
Method of measurement preferred for future	As defined in individual studies
Recommendation for current use	Peer reviewed literature
Unit of measure	Prevalence per 1,000 population (by age and/or gender where data available)
Periodicity of primary collection	Varied periodicity
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Published peer reviewed literature and systematic reviews from Global Burden of Disease project used to augment routine survey data. In 2011 GBD data available for EU countries with data collection period ranging from 1981-2009

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Osteoarthritis hip
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem
Definition	Prevalence of self reported doctor diagnosed osteoarthritis hip per 1,000 population; Age standardised 12 month prevalence osteoarthritis hip per 1,000 population using WHO European Standard Population.
Data source currently	Not currently available in EHIS
Method of measurement currently	Not currently measured in EHIS
Data available currently	EHIS data not currently available
Examples of data	EHIS data not currently available
Data source preferred for future	EHIS - new question (see below)
Method of measurement preferred for future	In the last 4 weeks have you had any pain or discomfort affecting your muscles, joints, neck or back which affected your ability to carry out your activities of daily living? Yes / No Has this problem lasted for 3 months or more? Yes/No For this problem have you been told by a medical doctor what the diagnosis is? Yes/No Diagnosis = Osteoarthritis; Region = Hip
Recommendation for current use	Osteoarthritis hip supplementary indicator (see next column)
Unit of measure	Number of prevalent cases per 1,000 respondents analyzed by 10 year age group, gender, education, occupation ; Age standardised 12 month prevalence using WHO European Standard Population
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Osteoarthritis hip supplementary
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem
Definition	Prevalence of OA hip as according to defined diagnostic criteria
Data source currently	Peer reviewed literature
Method of measurement currently	As defined in individual studies
Data available currently	Prevalence data as defined in individual studies
Examples of data	http://www.ncbi.nlm.nih.gov/pubmed/17143985
Data source preferred for future	Peer reviewed literature
Method of measurement preferred for future	As defined in individual studies
Recommendation for current use	Peer reviewed literature
Unit of measure	Prevalence per 1,000 population (by age and/or gender where data available)
Periodicity of primary collection	Varied periodicity
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Published peer reviewed literature and systematic reviews from Global Burden of Disease project used to augment routine survey data. In 2011 GBD data available for EU countries with data collection period ranging from 1981-2009

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Osteoarthritis knee
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem
Definition	Prevalence of self reported doctor diagnosed osteoarthritis knee per 1,000 population; Age standardised 12 month prevalence osteoarthritis knee per 1,000 population using WHO European Standard Population.
Data source currently	Not currently available in EHIS
Method of measurement currently	Not currently measured in EHIS
Data available currently	EHIS data not currently available
Examples of data	EHIS data not currently available
Data source preferred for future	EHIS - new question (see below)
Method of measurement preferred for future	In the last 4 weeks have you had any pain or discomfort affecting your muscles, joints, neck or back which affected your ability to carry out your activities of daily living? Yes / No Has this problem lasted for 3 months or more? Yes/No For this problem have you been told by a medical doctor what the diagnosis is? Yes/No Diagnosis = Osteoarthritis; Region = Knee
Recommendation for current use	Osteoarthritis knee supplementary indicator (see next column)
Unit of measure	Number of prevalent cases per 1,000 respondents analyzed by 10 year age group, gender, education, occupation ; Age standardised 12 month prevalence using WHO European Standard Population
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Osteoarthritis knee supplementary
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem
Definition	Prevalence of OA knee as according to defined diagnostic criteria
Data source currently	Peer reviewed literature
Method of measurement currently	As defined in individual studies
Data available currently	Prevalence data as defined in individual studies
Examples of data	http://www.ncbi.nlm.nih.gov/pubmed/9709175
Data source preferred for future	Peer reviewed literature
Method of measurement preferred for future	As defined in individual studies
Recommendation for current use	Peer reviewed literature
Unit of measure	Prevalence per 1,000 population (by age and/or gender where data available)
Periodicity of primary collection	Varied periodicity
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Published peer reviewed literature and systematic reviews from Global Burden of Disease project used to augment routine survey data. In 2011 GBD data available for EU countries with data collection period ranging from 1981-2009

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Osteoarthritis Hand
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation
Definition	Prevalence of self reported doctor diagnosed osteoarthritis hand per 1,000 population; Age standardised 12 month prevalence osteoarthritis hand per 1,000 population using WHO European Standard Population.
Data source currently	Not currently available in EHIS
Method of measurement currently	Not currently measured in EHIS
Data available currently	EHIS data not currently available
Examples of data	EHIS data not currently available
Data source preferred for future	EHIS - new question (see below)
Method of measurement preferred for future	In the last 4 weeks have you had any pain or discomfort affecting your muscles, joints, neck or back which affected your ability to carry out your activities of daily living? Yes / No Has this problem lasted for 3 months or more? Yes/No For this problem have you been told by a medical doctor what the diagnosis is? Yes/No Diagnosis = Osteoarthritis; Region = Hand
Recommendation for current use	Osteoarthritis hand supplementary indicator (see next column)
Unit of measure	Number of prevalent cases per 1,000 respondents analyzed by 10 year age group, gender, education, occupation ; Age standardised 12 month prevalence using WHO European Standard Population
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Osteoarthritis Hand supplementary
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation
Definition	Prevalence of OA hand as according to defined diagnostic criteria
Data source currently	Peer reviewed literature
Method of measurement currently	As defined in individual studies
Data available currently	Prevalence data as defined in individual studies
Examples of data	http://www.ncbi.nlm.nih.gov/pubmed/17143985
Data source preferred for future	Peer reviewed literature
Method of measurement preferred for future	As defined in individual studies
Recommendation for current use	Peer reviewed literature
Unit of measure	Prevalence per 1,000 population (by age and/or gender where data available)
Periodicity of primary collection	Varied periodicity
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Published peer reviewed literature and systematic reviews from Global Burden of Disease project used to augment routine survey data. In 2011 GBD data available for EU countries with data collection period ranging from 1981-2009

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Hip fracture
Rationale	Incidence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem
Definition	New cases self reported hip fracture per 1,000 population per annum
Data source currently	Available from EHIS, national surveys in some countries.
Method of measurement currently	Not part of standard EHIS. Where available e.g. Belgian Health Survey: Do you have or have you ever had broken hip? Was this disease/condition diagnosed by a medical doctor? Have you had this disease/condition in the past 12 months?
Data available currently	Not part of standard EHIS questionnaire, where available: % respondents ever had hip fracture. % respondents had hip fracture in past 12 months. % of respondents with hip fracture who had it diagnosed by a medical doctor.
Examples of data	http://www.wiv-isp.be/scripts92/broker.exe?_service=default&_program=phisia.chrondis08.sas
Data source preferred for future	EHIS - new question (see below)
Method of measurement preferred for future	Have you fractured or broken a bone as a result of a fall in the last 12 months? Yes / No If yes, was it your hip (proximal femur) ? Yes / No
Recommendation for current use	National statistics, registers.
Unit of measure	New cases self reported hip fracture per 1,000 population per annum analyzed by 5 year age group, gender, education, occupation and major risk factors
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Data currently only available from few countries.

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Hip fracture supplementary1
Rationale	Incidence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem
Definition	New cases hip fracture per 1,000 population per annum
Data source currently	National statistics, registers.
Method of measurement currently	New cases hip fracture per 1,000 population per annum from hospital admissions/discharge data ICD-10 S72.0, S72.1, S72.2
Data available currently	Incidence data: New cases hip fracture per 1,000 population per annum
Examples of data	http://www.shfa.scot.nhs.uk/
Data source preferred for future	National statistics, registers.
Method of measurement preferred for future	New cases hip fracture per 1,000 population per annum
Recommendation for current use	National statistics, registers.
Unit of measure	New cases hip fracture per 1,000 population per annum analyzed by 5 year age group, gender
Periodicity of primary collection	Annual
Periodicity of secondary collection / collation	Annual
Limitations and comments	Very good records in some countries. ICD-10 S72.0, S72.1, S72.2.

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Hip fracture supplementary2
Rationale	Incidence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem
Definition	New cases hip fracture per 1,000 population per annum
Data source currently	Peer reviewed literature
Method of measurement currently	As defined in individual studies
Data available currently	Incidence data as defined in individual studies
Examples of data	http://www.ncbi.nlm.nih.gov/pubmed/16603427
Data source preferred for future	Peer reviewed literature
Method of measurement preferred for future	As defined in individual studies
Recommendation for current use	National statistics, registers.
Unit of measure	New cases hip fracture per 1,000 population per annum
Periodicity of primary collection	Varied periodicity
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Published peer reviewed literature and systematic reviews.

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Osteoporosis: low bone density
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem.
Definition	Prevalence of OP as according to defined diagnostic criteria
Data source currently	Peer reviewed literature
Method of measurement currently	As defined in individual studies
Data available currently	Prevalence data as defined in individual studies
Examples of data	http://www.ncbi.nlm.nih.gov/pubmed/15197546
Data source preferred for future	Peer reviewed literature
Method of measurement preferred for future	Lifetime risks and 10-year probability for fractures are preferred measures of the burden of osteoporosis because they reflect an absolute risk rather than a relative risk based on low bone density values alone.
Recommendation for current use	Peer reviewed literature
Unit of measure	Prevalence per 1,000 population (by age and/or gender where data available)
Periodicity of primary collection	Varied periodicity
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Published peer reviewed literature used to augment routine survey data.

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Osteoporosis: low bone density supplementary
Rationale	Prevalence data to indicate extent of problem. Data needed for evaluation and health policy formulation – high burden health problem
Definition	Prevalence of self reported doctor diagnosed osteoporosis per 1,000 population; Age standardised 12 month prevalence osteoporosis per 1,000 population using WHO European Standard Population.
Data source currently	EHIS in some countries
Method of measurement currently	Not part of standard EHIS. Where included: Do you have or have you ever had Osteoporosis? Was this disease/condition diagnosed by a medical doctor? Have you had this disease/condition in the past 12 months?
Data available currently	Not part of standard EHIS questionnaire, where available: OP % respondents had OP in past 12 months % of respondents with OP who had it diagnosed by doctor. % respondents ever had
Examples of data	http://www.statistik-austria.com/web_de/statistiken/gesundheit/gesundheitszustand/chronische_krankheiten/index.html
Data source preferred for future	Peer reviewed literature
Method of measurement preferred for future	Peer reviewed literature
Recommendation for current use	Peer reviewed literature
Unit of measure	Number of prevalent cases per 1,000 respondents analyzed by 10 year age group, gender, education, occupation ; Age standardised 12 month prevalence using WHO European Standard Population
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Osteoporosis question included in EHIS in 9 countries at present. As osteoporosis is unsymptomatic unless a fragility fracture is sustained and bone density measured in a limited population physician diagnosis will underestimate numbers affected. Lifetime risks and 10-year probability for fractures are preferred measures of the burden of osteoporosis because they reflect an absolute risk rather than a relative risk based on low bone density values alone.

INCIDENCE & PREVALENCE of major musculoskeletal conditions

Indicator name	Musculoskeletal problems related to injuries and working environment
Rationale	General measure of affect of work on musculoskeletal health. Important because focuses on working population. Data needed for evaluation and health policy formulation particularly relating to occupational health .
Definition	Prevalence of self reported backache or muscular pain related to work
Data source currently	European Working Conditions Survey (EWCS)
Method of measurement currently	Survey of 'persons in employment' Does your work affect your health: backache Does your work affect your health: muscular pains
Data available currently	European Working Conditions Survey (EWCS)
Examples of data	http://www.eurofound.europa.eu/docs/ewco/4EWCS/ef0698/annexes.pdf (p. 12)
Data source preferred for future	European Working Conditions Survey (EWCS)
Method of measurement preferred for future	Survey of 'persons in employment' Does your work affect your health: backache Does your work affect your health: muscular pains
Recommendation for current use	European Working Conditions Survey (EWCS)
Unit of measure	Percent respondents reporting back ache or muscular pain related to work
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Survey of 'persons in employment'. Question relates to muscular pain and does not ask about joint pain.

HEALTH SERVICES UTILIZATION

Indicator name	Primary care visits related to diagnostic code
Rationale	Provides information on the burden of MSC on health services. Necessary for planning of prevention and health care policy.
Definition	% of annual primary care visits (all causes) that are due to MSC (as defined by ICD10 or ISHMT)
Data source currently	National routinely collected data on primary care visits by ICD10 or ISHMT
Method of measurement currently	National routinely collected data on primary care visits by ICD10 or ISHMT
Data available currently	National routinely collected data on primary care visits by ICD10 or ISHMT
Examples of data	http://statline.cbs.nl/StatWeb/selection/default.aspx?VW=T&DM=SLNL&PA=80193NED&D1=18-23,25-28,50-51,106-107,109-110,113-115,117,120&D2=0&D3=1-17&D4=0&D5=0,I&HDR=G3,G1,G4,G2&STB=T
Data source preferred for future	National routinely collected data on primary care visits by ICD10 or ISHMT
Method of measurement preferred for future	National routinely collected data on primary care visits by ICD10 or ISHMT
Recommendation for current use	National routinely collected data on primary care visits by ICD10 or ISHMT
Unit of measure	% of annual primary care visits (all causes) that are due to MSC (as defined by ICD10 or ISHMT)
Periodicity of primary collection	Annual
Periodicity of secondary collection / collation	Annual
Limitations and comments	Availability of national health statistics on primary care patient visits by diagnosis very variable between countries. Comparability problematic because of differences in nature and use of primary care services between countries

HOSPITAL SERVICES UTILISATION

Indicator name	Number in-patient days related to specific musculoskeletal diagnoses
Rationale	Measure of efficiency in use of health care resources. Indicator often used for health planning purposes.
Definition	Average Length Of Stay (ALOS) (total number of occupied hospital bed-days divided by the total number of admissions or discharges. LOS of one patient is date of discharge – date of admission)
Data source currently	WHO European Hospital Morbidity database Diseases of the musculoskeletal system and connective tissue. ISHMT: 1300 ICD-10 M00-99, S12,S22,S32,S42,S52, S62, S72, S82, S92
Method of measurement currently	Total number of occupied hospital bed-days divided by the total number of admissions or discharges. LOS of one patient is date of discharge – date of admission by ICD-10 code
Data available currently	Average Length Of Stay (ALOS) (total number of occupied hospital bed-days divided by the total number of admissions or discharges. LOS of one patient is date of discharge – date of admission) by ICD-10 M00-99, S12,S22,S32,S42,S52, S62, S72, S82, S92
Examples of data	http://data.euro.who.int/hmdb/index.php
Data source preferred for future	WHO European Hospital Morbidity Data. ECHIM indicator M00-99.
Method of measurement preferred for future	Total number of occupied hospital bed-days divided by the total number of admissions or discharges.
Recommendation for current use	WHO European Hospital Morbidity Data
Unit of measure	Average Length Of Stay (ALOS) (total number of occupied hospital bed-days divided by the total number of admissions or discharges. LOS of one patient is date of discharge – date of admission) by ICD-10 code
Periodicity of primary collection	Annual
Periodicity of secondary collection / collation	Annual
Limitations and comments	Does not include patients who do not remain overnight for some reason (e.g. death). An in-patient is a patient who is formally admitted (or 'hospitalised') to an institution for treatment and/or care and stays for a minimum of one night or more than 24 hours in the hospital or other institution providing in-patient care. (http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/Annexes/hlth_care_esms_an9.pdf) All else being equal a short ALOS will reduce the cost per discharge and shift care to less expensive post acute services. But shorter stays could lead to adverse health outcomes. National differences in the type of reimbursement system or health insurance plan may affect the patient length of stay in hospitals.

HOSPITAL SERVICES UTILISATION

In partnership with EULAR and 22 centres across Europe –
Supported by the EC Community Action in the Field of Health 2008-2013

Indicator name	Number of hospital in-patient discharges for musculoskeletal diagnoses
Rationale	Measure of the utilisation of hospital services for MSC and the burden of MSC on health services.
Definition	Number of hospital in-patient discharges from all hospitals during the given calendar year expressed per 1,000 population for diseases of the musculoskeletal system and connective tissue
Data source currently	WHO European Hospital Morbidity database Diseases of the musculoskeletal system and connective tissue. ICD-10 M00-99, S12,S22,S32,S42,S52, S62, S72, S82, S92
Method of measurement currently	Number of hospital in-patient discharges from all hospitals during the given calendar year expressed per 1,000 population by ICD-10 code
Data available currently	Number of hospital in-patient discharges from all hospitals during the given calendar year expressed per 1,000 population for ICD-10 M00-99, S12,S22,S32,S42,S52, S62, S72, S82, S92
Examples of data	http://data.euro.who.int/hmdb/index.php
Data source preferred for future	WHO European Hospital Morbidity Data
Method of measurement preferred for future	Number of hospital in-patient discharges from all hospitals during the given calendar year expressed per 1,000 population for diseases of the musculoskeletal system and connective tissue derived from national routinely collected data.
Recommendation for current use	WHO European Hospital Morbidity Data
Unit of measure	Number of hospital in-patient discharges from all hospitals during the given calendar year expressed per 1,000 population for diseases of the musculoskeletal system and connective tissue
Periodicity of primary collection	Annual
Periodicity of secondary collection / collation	Annual
Limitations and comments	International comparisons of hospital discharge statistics are complicated by differences in national health information systems. Discharges, rather than admissions, are used because hospital abstracts for in-patient care are based on information gathered at the time of discharge. A hospital discharge is the formal release of a patient from a hospital after a procedure or course of treatment. A discharge occurs whenever a patient leaves because of finalisation of treatment, signs out against medical advice, transfers to another health care institution or on death. A discharge can refer to in-patients or day cases. Transfers to another department within the same institution are excluded. Discharges by diagnosis refer to the principal diagnosis, i.e. the main condition diagnosed at the end of the hospitalisation (in-patients) or day treatment (day cases). The main condition is the one primarily responsible for the patient's need for treatment or investigation (for additional details, see International Statistical Classification of Diseases and related health problems – ICD-10 Volume 2). http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/Annexes/hlth_care_esms_an9.pdf

HOSPITAL SERVICES UTILISATION

Indicator name	Number of surgeries hip arthroplasty
Rationale	Volume of surgeries is product of prevalence and severity of condition and availability of appropriate medical resources
Definition	Number of hip replacements performed in hospital as in-patient surgery per 100,000 population
Data source currently	OECD Health Database 2009
Method of measurement currently	Number of hip replacements performed in hospital as in-patient surgery per 100,000 population
Data available currently	Number of hip replacements performed in hospital as in-patient surgery per 100,000 population
Examples of data	http://www.oecd.org/document/30/0,3746,en_2649_37407_12968734_1_1_1_37407,00.html
Data source preferred for future	OECD Health Database 2009
Method of measurement preferred for future	Numeration of hip replacement procedures performed in hospital as day cases or in-patient surgery per 100,000 population through national arthroplasty registers
Recommendation for current use	OECD Health Database 2009 and National arthroplasty registers
Unit of measure	Number of hip replacements performed in hospital as in-patient surgery per 100,000 population
Periodicity of primary collection	Annual
Limitations and comments	

HOSPITAL SERVICES UTILISATION

Indicator name	Number of surgeries hip arthroplasty supplementary
Rationale	Volume of surgeries is product of prevalence and severity of condition and availability of appropriate medical resources
Definition	Number of hip replacements performed in hospital as day cases or in-patient surgery per 100,000 population
Data source currently	National arthroplasty registers
Method of measurement currently	Number of hip replacements performed in hospital as day cases or in-patient surgery per 100,000 population; Example Denmark: the registered data include preoperative, operative, and postoperative information, prospectively collected using a standardized form. Registration of primary operations and revisions is compulsory.
Data available currently	Number of hip replacements performed in hospital as in-patient surgery per 100,000 population for countries where have registry
Examples of data	Danish Hip Arthroplasty Register http://www.dhr.dk/ENGLISH.htm
Data source preferred for future	National arthroplasty registers
Method of measurement preferred for future	Numeration of hip replacement procedures performed in hospital as day cases or in-patient surgery per 100,000 population through national arthroplasty registers
Recommendation for current use	OECD Health Database 2009 and National arthroplasty registers
Unit of measure	Number of hip replacements performed in hospital as day cases or in-patient surgery per 100,000 population
Periodicity of primary collection	Annual
Limitations and comments	Arthroplasty registers: Austria, Italy, Denmark, Finland, Romania, Slovakia, Sweden, Hungary, France, England, Scotland Czech Republic, Portugal

HOSPITAL SERVICES UTILISATION

Indicator name	Number of surgeries knee arthroplasty
Rationale	Volume of surgeries is product of prevalence and severity of condition and availability of appropriate medical resources
Definition	Knee replacement procedures performed in hospital as day cases or in-patient surgery per 100,000 population
Data source currently	OECD Health Database 2009
Method of measurement currently	Knee replacement procedures performed in hospital as day cases or in-patient surgery per 100,000 population
Data available currently	Number of knee replacements performed in hospital as in-patient surgery per 100,000 population
Examples of data	http://www.oecd.org/document/30/0,3746,en_2649_37407_12968734_1_1_1_37407,00.html
Data source preferred for future	OECD Health Database 2009
Method of measurement preferred for future	Numeration of knee replacement procedures performed in hospital as day cases or in-patient surgery per 100,000 population through national arthroplasty registers
Recommendation for current use	OECD Health Database 2009 and National arthroplasty registers
Unit of measure	Knee replacement procedures performed in hospital as day cases or in-patient surgery per 100,000 population
Periodicity of primary collection	Annual
Limitations and comments	

HOSPITAL SERVICES UTILISATION

Indicator name	Number of surgeries knee arthroplasty supplementary
Rationale	Volume of surgeries is product of prevalence and severity of condition and availability of appropriate medical resources
Definition	Knee replacement procedures performed in hospital as day cases or in-patient surgery per 100,000 population
Data source currently	National arthroplasty registers
Method of measurement currently	Number of knee replacements performed in hospital as day cases or in-patient surgery per 100,000 population; Example Denmark: the registered data include preoperative, operative, and postoperative information, prospectively collected using a standardized form. Registration of primary operations and revisions is compulsory.
Data available currently	Number of knee replacements performed in hospital as in-patient surgery per 100,000 population for countries where have registry
Examples of data	Danish Knee Arthroplasty Register http://www.dshk.org/DKR-frame.htm
Data source preferred for future	National arthroplasty registers
Method of measurement preferred for future	Numeration of knee replacement procedures performed in hospital as day cases or in-patient surgery per 100,000 population through national arthroplasty registers
Recommendation for current use	OECD Health Database 2009 and National arthroplasty registers
Unit of measure	Number of knee replacements performed in hospital as in-patient surgery per 100,000 population
Periodicity of primary collection	Annual
Limitations and comments	Arthroplasty registers: Austria, Italy, Denmark, Finland, Romania, Slovakia, Sweden, Hungary, France, England, Scotland Czech Republic, Portugal

HUMAN RESOURCES

Indicator name	Number of primary care physicians
Rationale	Assessment of availability (not necessarily accessibility) of health care services.
Definition	Number of General Practitioners per 100,000 inhabitants
Data source currently	Eurostat indicator; Data obtained from national administrative sources The total number of practising physicians (medical doctors) by 31 December of a given calendar year, per 100,000 inhabitants (end of year population). practising physicians provide services directly to patients.
Method of measurement currently	National routine collection of data on number of General Practitioners per 100,000 inhabitants
Data available currently	The total number of practising physicians (general practitioners) by 31 December of a given calendar year, per 100,000 inhabitants (end of year population). Practising physicians provide services directly to patients.
Examples of data	http://epp.eurostat.ec.europa.eu/portal/page/portal/health/public_health/data_public_health/database
Data source preferred for future	Eurostat
Method of measurement preferred for future	National routine collection of data on number of General Practitioners per 100,000 inhabitants
Recommendation for current use	Eurostat
Unit of measure	Practising General Practitioners per 100,000 inhabitants
Periodicity of primary collection	Annual
Periodicity of secondary collection / collation	Annual
Limitations and comments	<p>http://ws1100-2.cornwall.nhs.uk/cgi-bin/patience.cgi?id=20efed0e-ca59-4a89-80cc-c75fc7f9dd58 General practitioners (GPs) (ISCO 08 code: 2211) do not limit their practice to certain disease categories or methods of treatment, and may assume responsibility for the provision of continuing and comprehensive medical care to individuals, families and communities. It describes availability of staff for the whole country; may differ by region.</p> <p>Inclusion</p> <ul style="list-style-type: none"> - District medical doctors - therapists - Family medical practitioners - Primary health care physicians - Medical doctors (general) - Medical officers (general) - Resident medical officers specialising in general practice - Medical interns (general)

HUMAN RESOURCES

Indicator name	Number of rheumatologists
Rationale	Assessment of availability (not necessarily accessibility) of health care services.
Definition	Number Rheumatology specialists per 100,000 inhabitants
Data source currently	Eurostat indicator; Data obtained from national administrative sources. The total number of practising physicians (Rheumatologists) by 31 December of a given calendar year, per 100,000 inhabitants (end of year population). practising physicians provide services directly to patients.
Method of measurement currently	National routine collection of data on number Rheumatology specialists per 100,000 inhabitants
Data available currently	The total number of practising physicians (Rheumatologists) by 31 December of a given calendar year, per 100,000 inhabitants (end of year population). Practising physicians provide services directly to patients.
Examples of data	http://epp.eurostat.ec.europa.eu/portal/page/portal/health/public_health/data_public_health/database
Data source preferred for future	Eurostat
Method of measurement preferred for future	National routine collection of data on number Rheumatology specialists per 100,000 inhabitants
Recommendation for current use	Eurostat
Unit of measure	Practising Rheumatologists per 100,000 inhabitants
Periodicity of primary collection	Annual
Periodicity of secondary collection / collation	Annual
Limitations and comments	Practising physicians provide services directly to patients, tasks include: conducting medical examination and making diagnosis, prescribing medication and giving treatment for diagnosed illnesses, disorders or injuries, giving organized medical or surgical procedures. It describes availability of staff for the whole country; may differ by region. Eurostat notes on Physicians by speciality http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/Annexes/hlth_care_esms_an3.pdf

HUMAN RESOURCES

Indicator name	Number of orthopaedic surgeons
Rationale	Assessment of availability (not necessarily accessibility) of health care services.
Definition	Number Orthopaedic surgeons per 100,000 inhabitants
Data source currently	National statistics and professional organisations
Method of measurement currently	Aggregation of data from national routine statistics and professional organisations
Data available currently	Data available from national routine statistics and professional organisations varies includes: Number of licensed Orthopaedic surgeons per 100,000 inhabitants; Number of practising Orthopaedic surgeons per 100,000 inhabitants
Examples of data	http://www.statistik-austria.com/web_de/statistiken/gesundheit/gesundheitszustand/chronische_krankheiten/index.html
Data source preferred for future	National statistics and professional organisations
Method of measurement preferred for future	National routine collection of data on number Orthopaedic surgeons per 100,000 inhabitants available through EUROSTAT
Recommendation for current use	Data from national statistics and professional organisations
Unit of measure	Licensed Orthopaedic surgeons per 100,000 inhabitants
Periodicity of primary collection	Varied periodicity
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Some problems in obtaining comparable data between countries, some collect practising, others licensed etc. Availability of staff may differ by region. Current EUROSTAT data on number of surgeons not disaggregated to allow display of number of Orthopaedic surgeons per 100,000 inhabitants by country.

DISABILITY & SOCIAL CONSEQUENCE

Indicator name	Permanent work loss due to MSC
Rationale	To evaluate the social and economic burden of the condition for the society. Needed for planning and health care policy
Definition	Percentage of persons receiving disability pension who receive pension due to MSC (M00-99) in the past year
Data source currently	National statistics/registers
Method of measurement currently	Varies between countries
Data available currently	Varies between countries. May include only those enrolled in state sponsored pension scheme, or of limited age groups
Examples of data	Finnish Centre for Pensions and The Social Insurance Institution of Finland. Statistical Yearbook of Pensioners in Finland http://www.etk.fi/Page.aspx?Section=41764&Item=22145
Data source preferred for future	National statistics/registers
Method of measurement preferred for future	Percentage of persons receiving disability pension who receive pension due to MSC (ICD-10 codes M00-99 + S12,S22,S32,S42,S52, S62, S72, S82, S92) in the past year
Recommendation for current use	Data from national statistics/registers on percentage of persons receiving disability pension who receive pension due to MSC (M00-99) in the past year
Unit of measure	Number of persons receiving disability pension who receive pension due to MSC (M00-99) in the past year; Total number of persons receiving disability pension in the past year.
Periodicity of primary collection	Annual
Periodicity of secondary collection / collation	Annual
Limitations and comments	Comparison with other diagnoses and general population possible

DISABILITY & SOCIAL CONSEQUENCE

Indicator name	Temporary work loss according to cause / diagnostic code
Rationale	To evaluate the social and economic burden of MSC on society. Needed for planning and health care policy
Definition	Sick days per 1,000 people employed by diagnosis per annum (ICD-10 codes M00-99)
Data source currently	National statistics/registers
Method of measurement currently	Varies between countries
Data available currently	Varies between countries. May include only those enrolled in state sponsored pension scheme, or of limited age groups
Examples of data	German Federal Bureau of Statistics 2011 http://www.gbe-bund.de/oowa921-install/servlet/oowa/aw92/dboowasys921.xwdevkit/xwd_init?gbe.isgbetol/xs_start_neu/&p_aid=3&p_aid=12711910&nummer=685&p_sprache=E&p_indsp=-&p_aid=54153726 . http://www.statistik-austria.com/web_de/statistiken/gesundheit/gesundheitszustand/krankenstandstage/index.html
Data source preferred for future	National statistics/registers
Method of measurement preferred for future	Sick days per 1,000 people employed by diagnosis per annum by diagnosis (ICD-10 codes M00-99 + S12,S22,S32,S42,S52, S62, S72, S82, S92)
Recommendation for current use	Data from national statistics/registers on sick days per 1,000 people employed by diagnosis per annum by diagnosis (ICD-10 codes M00-99)
Unit of measure	Number of sick days per 1,000 people employed by diagnosis per annum
Periodicity of primary collection	Annual
Periodicity of secondary collection / collation	Annual
Limitations and comments	Comparison with other diagnoses and general population possible

HEALTH RELATED QUALITY OF LIFE

Indicator name	Generic HR-QOL
Rationale	To evaluate health-related quality of life for those with MSC.
Definition	Measure physical functioning, role limitations due to physical health, bodily pain, general health perceptions, vitality, social functioning, role limitations due to emotional problems, and mental health of those with MSC.
Data source currently	Standard EHIS questionnaire
Method of measurement currently	EHIS SF12 raw data selected for respondents with self reported RA, OA, back pain, neck pain, osteoporosis.
Data available currently	EHIS SF12 raw data selected for respondents with self reported RA, OA, back pain, neck pain, osteoporosis for 13 countries
Examples of data	http://www.wiv-isp.be/epidemiology/hisia/
Data source preferred for future	EHIS
Method of measurement preferred for future	SF12 scored data form EHIS respondents with self reported RA, OA, back pain, neck pain, osteoporosis
Recommendation for current use	EHIS SF12 raw data selected for respondents with self reported RA, OA, back pain, neck pain, osteoporosis
Unit of measure	SF12 scores derived from EHIS for physical functioning, role limitations due to physical health, bodily pain, general health perceptions, vitality, social functioning, role limitations due to emotional problems, and mental health
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Included in 13 EHIS SF36 yields an 8-scale profile of functional health and well-being scores as well as psychometrically-based physical and mental health summary measures and a preference-based health utility index. Measures eight domains of health: physical functioning, role limitations due to physical health, bodily pain, general health perceptions, vitality, social functioning, role limitations due to emotional problems, and mental health. The SF-12 contains 12 items from the SF-36 Health Survey. The SF-12 contains one or two items that measure each of the eight concepts included in the SF-36. As a brief, reliable measure of overall health status, the SF-12 has often been used in large population health surveys.

HEALTH RELATED QUALITY OF LIFE

Indicator name	Generic HR-QOL supplementary
Rationale	To evaluate health-related quality of life for those with MSC.
Definition	Measure physical functioning, role limitations due to physical health, bodily pain, general health perceptions, vitality, social functioning, role limitations due to emotional problems, and mental health of those with MSC.
Data source currently	Peer reviewed literature
Method of measurement currently	SF36, SF12, EQ5D
Data available currently	Peer reviewed literature
Examples of data	http://ard.bmj.com/content/63/6/723.abstract
Data source preferred for future	Peer reviewed literature
Method of measurement preferred for future	As existing
Recommendation for current use	Peer reviewed literature
Unit of measure	SF12, SF36 or EQ5 scores
Periodicity of primary collection	Varied periodicity
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Published peer reviewed literature and systematic reviews used to augment routine survey data.

CO-MORBIDITY

Indicator name	Obesity
Rationale	Excessive body weight predisposes to various MSC diseases e.g. osteoarthritis. Effective interventions exist to prevent and treat obesity. Many of the risks diminish with weight loss.
Definition	The percentage of respondents with a BMI of ≥ 30 .
Data source currently	Eurostat (EHIS data) 2004
Method of measurement currently	BMI derived from European Health Interview Survey (EHIS) questions BMI01: How tall are you? (cm), and BMI02: How much do you weight without clothes and shoes? (kg).
Data available currently	The percentage of respondents with a BMI of ≥ 30 .
Examples of data	http://epp.eurostat.ec.europa.eu/portal/page/portal/health/public_health/database
Data source preferred for future	Eurostat (EHIS/EHES data)
Method of measurement preferred for future	EHES rather than EHIS data on BMI
Recommendation for current use	EHIS existing questions
Unit of measure	Proportion of adult persons (18+) who are obese, i.e. whose body mass index (BMI) is ≥ 30 kg/m ² .
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Body mass index (BMI), or Quetelet index, is defined as the individual's body weight (in kilograms) divided by the square of their height (in metres). Data on BMI from surveys can suffer from bias as those who are very underweight tend to overestimate their weight and those who are very overweight tend to underestimate their weight. More accurate data is obtained through Health Examination Surveys, these have yet to be widely implemented across Europe. BMI is an ECHI indicator.

CO-MORBIDITY

Indicator name	Obesity MSC
Rationale	Excessive body weight predisposes to various MSC diseases e.g. osteoarthritis. Effective interventions exist to prevent and treat obesity. Many of the risks diminish with weight loss.
Definition	The percentage of respondents with a BMI of ≥ 30 who report having one or more MSC in past 12 months.
Data source currently	Standard EHIS questionnaire
Method of measurement currently	BMI derived from European Health Interview Survey (EHIS) questions BMI01: How tall are you? (cm), and BMI02: How much do you weigh without clothes and shoes? (kg). EHIS questions HS5-HS6: Rheumatoid arthritis (inflammation of the joints); Osteoarthritis; Low Back Disorder; Neck Disorder; Osteoporosis: in past 12 months; diagnosed by a medical doctor.
Data available currently	The percentage of respondents with BMI ≥ 30 who report having in past 12 months doctor diagnosed RA, OA, OP, lower back pain, neck pain
Examples of data	Available through analysis of EHIS or national health survey data sets
Data source preferred for future	EHIS
Method of measurement preferred for future	The percentage of respondents with BMI ≥ 30 who report having in past 12 months doctor diagnosed RA, OA, OP, lower back pain, neck pain
Recommendation for current use	EHIS raw data on the percentage of respondents with a BMI of ≥ 30 who report having one or more MSC in past 12 months.
Unit of measure	The percentage of respondents with a BMI of ≥ 30 who report having one or more MSC in past 12 months.
Periodicity of primary collection	5 yearly
Periodicity of secondary collection / collation	5 yearly
Limitations and comments	Good comparability

POPULATION HEALTH

Indicator name	Physical Activity Levels
Rationale	Physical activity is essential for good musculoskeletal health. This indicator is referring to the concept of “health-enhancing physical activity”.
Definition	Physical activity is defined as any bodily movement produced by skeletal muscle that results in energy expenditure. Time (mins/day or week) spent at health enhancing physical activity level (i.e. activity at moderate and vigorous intensity levels);
Data source currently	Standard EHIS questionnaire
Method of measurement currently	EHIS questions PE.1.–6: During the past 7 days, a) days and time devoted to vigorous physical activities. b) days and time devoted to moderate physical activities c) days and time spent walking.
Data available currently	No. days of vigorous physical activities in past 7 days per respondent; Time spent in past 7 days doing vigorous activities (in hours/minutes) per respondent; No. days of moderate physical activities in past 7 days per respondent; Time spent in past 7 days doing moderate activities (in hours/minutes) per respondent; No. days walked at least 10 minutes in past 7 days per respondent; Time spent walking in past 7 days (in hours/minutes) per respondent
Examples of data	http://www.wiv-isp.be/scripts92/broker.exe?_service=default&_program=phisia.physacti08.sas
Data source preferred for future	ECHI indicator currently being updated
Method of measurement preferred for future	
Recommendation for current use	EHIS data from questions PE.1-6
Unit of measure	The proportion of population performing moderate and vigorous physical activity (days and/or hours per week)
Periodicity of primary collection	physical activities. b) days and time devoted to moderate physical activities c) days and time
Periodicity of secondary collection / collation	spent walking. Precise operationalisation to be formulated.
Limitations and comments	Physical activity is defined as any bodily movement produced by skeletal muscles that results in energy expenditure above resting level (ECHI indicator). The International Physical Activity Questionnaire (IPAQ) is considered as the most advanced international approach to operationalise the dimensions of physical activity. The EHIS questions (PE.1.–6.) are an adaptation of the IPAQ but they have not been validated. Physical Activity is an ECHI indicator.

POPULATION HEALTH

Indicator name	Long-term restrictions in daily activities
Rationale	Widely used measure of general health, contributing to the evaluation of health problems, the burden of diseases and health needs at the population level
Definition	Proportion of people reporting that they have long-term restrictions in daily activities
Data source currently	EUROSTAT (EU-SILC)
Method of measurement currently	Self-perceived limitations in daily activities (activity restriction for at least the past 6 months) by sex, age and educational level (%) (hlth_silc_07)
Data available currently	Self-perceived limitations in daily activities (activity restriction for at least the past 6 months) by sex, age and educational level (%) (hlth_silc_07)
Examples of data	http://epp.eurostat.ec.europa.eu/portal/page/portal/health/public_health/data_public_health/database
Data source preferred for future	EUROSTAT (EU-SILC)
Method of measurement preferred for future	
Recommendation for current use	EUROSTAT (EU-SILC)
Unit of measure	Proportion of population reporting that they have long-term restrictions in daily activities
Periodicity of primary collection	Annual
Periodicity of secondary collection / collation	Annual
Limitations and comments	Proportion of people who answer “yes strongly limited” or “yes limited” to EU-SILC question: For at least the past 6 months, to what extent you have been limited because of a health problem in activities people usually do? (Answering categories; yes strongly limited, yes limited, no not limited). Numbers of people answering “yes strongly limited” or “yes limited” should be added and divided by the total number of people who were interviewed. (ECHI indicator)

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eumusc.net is an information and surveillance network promoting a comprehensive European strategy to optimise musculoskeletal health. It addresses the prevention and management of MSC's which is neither equitable nor a priority within most EU member states. It is focused on raising the awareness of musculoskeletal health and harmonising the care of rheumatic and musculoskeletal conditions.

The 3 year project that began in February 2010 is supported by the European Community (EC Community Action in the Field of Health 2008-2013), the project is a network of institutions, researchers and individuals in 22 organisations across 17 countries, working with and through EULAR.

eumusc.net: creating a web-based information resource to drive musculoskeletal health in Europe
www.eumusc.net



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