EUMUSC.NET
European Musculoskeletal Conditions Surveillance and Information Network

Facilitators of safe and effective rheumatic and musculoskeletal disease health care in Europe

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Rheumatic and Musculoskeletal Disorders
The Unmet Need

- Rheumatic and Musculoskeletal Disorders are common in all European countries
  - include joint diseases, spinal disorders, back and regional pain problems, osteoporosis and fragility fractures, and consequences of injuries and trauma
  - worst impact on quality of life of many chronic diseases
  - most common cause of severe long-term pain and physical disability
  - Affect 1 in 4 adults across Europe
- They are a major burden on health and social care
- There are effective ways of preventing and controlling musculoskeletal conditions but these are not being implemented with equity
- There is a lack of policies and priorities for musculoskeletal conditions

There is enormous unmet need and avoidable disability
The challenge
Implementing evidence-based care across Europe

• We know what standards of care people need to reduce the impact of RMDs but how do we ensure that there is equity of access to care and equity of outcome for people across Europe.
Recommending cost-effective interventions

- A common policy to prevent and control rheumatic and musculoskeletal conditions in Europe (funded by EU)
Differences in RA across countries

Figure. Mean values of DAS28, MD Global estimate and PROs in 21 countries in the QUEST-RA study.
Differences in joint replacement surgery for OA

Hip replacement, procedures per 100,000 population (in-patient) 2007

Source: Surgical procedures by ICD-9-CM, Hip replacement, Procedures per 100 000 population (in-patient). OECD Health Data 2009 - Version: November 09
EUMUSC.NET: Aims

• The aim of eumusc.net is to raise and harmonise quality of care and enable equity of care of rheumatic diseases and other musculoskeletal conditions across the Member States.

• by creating a health surveillance and information system that provides the evidence and tools to improve the implementation of best practice
EUMUSC.Net is an information and surveillance network of 22 institutions across 17 countries, supported by the European Community (EC Community Action in the Field of Health 2008-2013) and EULAR

Driving musculoskeletal health for Europe
EUMUSC.NET: aims of the project

**EUMUSC.NET** is raising and harmonising quality and equity of care across Europe by creating a **health surveillance and information system** that provides

- *Improved data and data sources for agreed indicators of the impact of RMDs* to enable comparable information, surveillance and identification of inequalities of outcome.

- *A sustainable health monitoring system*

- *Standards of care* people with OA and RA can expect

- *Health care quality indicators* to enable systems of care to be evaluated, best practice identified and improve *equity of care* across Europe

- *Identification of barriers to local implementation, recommendations to overcome them with examples of good practice* to enable the implementation of these standards

- *Recommendations to improve healthcare for RMDs across the EU*
Measure to improve

Providing the **evidence** to support implementation

- What is the burden across Europe and in Member States
  - “Musculoskeletal Health in Europe 2012”
  - Fact sheets for each Member State
- What standards of care should be provided to control this burden
  - Standards of care for the major musculoskeletal conditions of OA and RA based on evidence, current recommendations and best practice
The Improvement Cycle

The impact of RMD on individuals and society

Health Care Quality Indicators

Measure

Tune-up

Implement

Patient centred standards of care for OA and RA across Europe

Barriers and facilitators to implementation of selected standards of care

Driving musculoskeletal health for Europe
Providing the **evidence** to support implementation

- **What is the burden across Europe and In Member States**
  - “Musculoskeletal Health in Europe 2012”
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- **What standards of care should be provided to control this burden**
  - Standards of care for the major musculoskeletal conditions of OA and RA based on evidence, current recommendations and best practice
Musculoskeletal Health in Europe 2012

Full 200 page report and slide sets at http://www.eumusc.net/publications.cfm
Country Fact Sheets

- Key health statistics for each European country

### Demographic Information

- Population size: 62,300,000
- % of population over 65: 15.2

### Musculoskeletal Health Key Statistics - United Kingdom

- Prevalence of symptomatic osteoarthritis (ages 65-69): 4.2%
- Prevalence of gout: Male 2.2%, Female 0.8%
- % of workers reporting backache related to work: 16.5%
- Age-standardized Disability Adjusted Life Years (DALYs) per 100,000: 460 (73)

### Healthcare for musculoskeletal conditions

- No. of Rheumatologists: 2,097
- No. of orthopedic surgeons: 1,295
- No. of physiotherapists: 38,720

### Health Indexed Utilization Trends for United Kingdom

- Number of osteoarthritis cases: 3,475,000
- Number of knee replacement procedures per 100,000 population (inpatient admissions): 287.6 (average 2007-2009)
- Number of hip replacement procedures per 100,000 population (inpatient admissions): 246.4 (average 2007-2009)

### Driving musculoskeletal health for Europe

- eumusc.net
Sources of data

- **Surveys**
  - National (EHIS-based, others)
  - Research driven
- **Audits**
  - National
  - Research driven
- **National statistics**
  - Agencies
  - Health ministries

Surveillance network
The impact – the human and financial consequences

Numbers affected

Lower quality of life (pain, restriction of activities)

Health care costs

Caregiver time

Work disability

Social support

National economy

Health care system

Caregivers

Person

Driving musculoskeletal health for Europe
Years Lived with Disability (YLDs) %:
EU and EFTA countries by cause, 2010
Musculoskeletal conditions are the greatest cause of disability

29%
Years Lived with Disability (YLDs) %: EU and EFTA countries by cause and age, 2010

Musculoskeletal conditions are the greatest cause of disability, impacting on adults of all ages.
GBD 2010 change in Years Lived with Disability (YLDs) attributable to leading causes and risks between 1990 and 2010 in EU and EFTA Countries

<table>
<thead>
<tr>
<th>1990 Mean rank (95% UI)</th>
<th>2010 Mean rank (95% UI)</th>
<th>Median % change (95% UI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 (1-1)</td>
<td>1 Low back pain</td>
<td>14% (5 to 25)</td>
</tr>
<tr>
<td>2.0 (2-3)</td>
<td>2 Major depressive disorder</td>
<td>9% (-2 to 21)</td>
</tr>
<tr>
<td>3.8 (3-6)</td>
<td>3 Falls</td>
<td>38% (23 to 54)</td>
</tr>
<tr>
<td>4.4 (3-6)</td>
<td>4 Neck pain</td>
<td>13% (6 to 19)</td>
</tr>
<tr>
<td>4.6 (3-7)</td>
<td>5 Other musculoskeletal</td>
<td>16% (1 to 33)</td>
</tr>
<tr>
<td>5.7 (3-8)</td>
<td>6 Anxiety disorders</td>
<td>3% (-10 to 19)</td>
</tr>
<tr>
<td>7.3 (5-12)</td>
<td>7 Migraine</td>
<td>24% (9 to 43)</td>
</tr>
<tr>
<td>8.7 (6-12)</td>
<td>8 Diabetes</td>
<td>4% (-8 to 19)</td>
</tr>
<tr>
<td>9.1 (6-13)</td>
<td>9 COPD</td>
<td>16% (8 to 25)</td>
</tr>
<tr>
<td>10.8 (7-15)</td>
<td>10 Drug use disorders</td>
<td>61% (49 to 72)</td>
</tr>
<tr>
<td>12.2 (8-18)</td>
<td>11 Osteoarthritis</td>
<td>22% (9 to 38)</td>
</tr>
<tr>
<td>12.4 (9-18)</td>
<td>12 Drug use disorders</td>
<td>0% (-9 to 8)</td>
</tr>
<tr>
<td>13.4 (9-19)</td>
<td>13 Road injury</td>
<td>14% (-4 to 34)</td>
</tr>
<tr>
<td>15.2 (10-21)</td>
<td>14 Alcohol use disorders</td>
<td>4% (-2 to 10)</td>
</tr>
<tr>
<td>15.3 (8-22)</td>
<td>15 Other hearing loss</td>
<td>15% (-5 to 37)</td>
</tr>
<tr>
<td>15.8 (10-21)</td>
<td>16 Ischemic heart disease</td>
<td>7% (-9 to 25)</td>
</tr>
<tr>
<td>17.2 (13-21)</td>
<td>17 Alzheimer's disease</td>
<td>1% (-9 to 11)</td>
</tr>
<tr>
<td>18.3 (11-23)</td>
<td>18 Schizophrenia</td>
<td>15% (4 to 29)</td>
</tr>
<tr>
<td>18.4 (12-24)</td>
<td>19 Edentulism</td>
<td>4% (-9 to 18)</td>
</tr>
<tr>
<td>19.0 (12-25)</td>
<td>20 Bipolar disorder</td>
<td>10% (2 to 18)</td>
</tr>
<tr>
<td>19.9 (14-25)</td>
<td>21 Dysthymia</td>
<td>-29% (-36 to -22)</td>
</tr>
</tbody>
</table>

Back pain, neck pain, other MSKs and OA are leading causes of disability. Falls and road injuries are major causes of MSK problems (fractures) and subsequent disability.
In 2010, 38% of disability benefits claims in the UK were because of musculoskeletal conditions.

13% of the total workforce lost productive time due to a common pain condition.

20% of sickness absence was due to a musculoskeletal problem.
Providing the **evidence** to support implementation

- **What is the burden across Europe and in Member States**
  - “Musculoskeletal Health in Europe 2012”
  - Fact sheets for each Member State

- **What standards of care should be provided to control this burden**
  - Standards of care for the major musculoskeletal conditions of OA and RA based on evidence, current recommendations and best practice
The eumusc.net standards of care aim to ensure that health care professionals know what should be done for people with rheumatoid arthritis, and so that people with the condition know what standards of care they should receive. There are also checklists for people with rheumatoid arthritis to use to ensure they are receiving the most appropriate care.

These recommendations are based on existing Clinical Practice Guidelines and expert consensus. The standards focus on prevention, access to care, early treatment and management of established disease.
Example of Standard of Care for Osteoarthritis

Standard of Care
• People with symptoms of OA should be assessed at diagnosis and upon significant worsening for pain, function, physical activity, BMI and ability to do their tasks and work

Check List
• Do I have regular assessment concerning my symptoms and functioning in daily life?.
Example of Standard of Care for Rheumatoid Arthritis

**Standard of Care**
- People with RA should receive a treatment plan developed individually between them and their clinician at each visit.

**Check List**
- Have I received a treatment plan which includes explanation of my management, expected goals and outcomes and important contact details?
Providing **tools** to measure & benchmark

- Tools developed to measure and monitor the burden of musculoskeletal conditions within each country, and the quality of implementation of Standards of Care.
  - **Assessment tool** to measure the burden of musculoskeletal conditions
  - **Health Care Quality Indicators** to measure healthcare provision to deliver the **Standards of Care** that citizens should expect
- Measuring will enable a Member State to benchmark its position relative to other countries, help to identify areas for improvement and monitor change.
The Improvement Cycle

The impact of RMD on individuals and society

Patient centred standards of care for OA and RA across Europe

Barriers and facilitators to implementation of selected standards of care

Health Care Quality Indicators

The Improvement Cycle

Measure

Tune-up

Implement

Measure
Assessment tool to measure and monitor impact of rheumatic & musculoskeletal conditions

<table>
<thead>
<tr>
<th>Indicator name</th>
<th>Number in patient days</th>
<th>Reasonable</th>
<th>Description</th>
<th>Data source currently</th>
<th>Frequency</th>
<th>Data available currently</th>
<th>Data source preferred for future</th>
<th>Periodicity of primary collection</th>
<th>Periodicity of secondary collection / collection</th>
<th>Periodicity of primary collection / collection</th>
<th>Limitations and comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disability &amp; social consequence indicator</td>
<td>Permanent work loss due to MSD</td>
<td>To evaluate the social and economic burden of musculoskeletal disorders</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human resources indicator</td>
<td>Number of rheumatologic staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MSK health indicators: Major headings

- Incidence & prevalence of major RMD
- HR-QoL
- Co-morbidity
- Population health
- Human resources
Standardised question for HIS

- Needs to be included into Health Interview Surveys across Europe and into EHIS
Need for Standardised data

• Lack of comparable data on many aspects of musculoskeletal health
• Lack of linkage in surveys between health problem and any limitation of activities or participation

➢ Standardised indicators need integrating within established survey tools and formal data routine collection at the national level
Putting evidence into practice

- **Standards of care** to enable people to know what they should receive for the major musculoskeletal conditions of OA and RA
- Measuring if healthcare is providing the Standards of Care that people should expect through using **health care quality indicators**
- Measuring will enable any centre or Member State to benchmark its position relative to other countries and help to identify areas for improvement.
Health Care Quality Indicators to measure if Standards of Care being delivered

• The Health Care Quality Indicators assess:
  • Referrals process
  • Consultation process
  • Follow up assessments
  • Standardised assessment of disease & its impact on quality of life & participation
  • Optimising disease management
  • Documentation process
  • Self-Management advice
  • Treatment plans
  • Pharmacological therapy & safety
  • Physical therapy
  • Assistive device assessments
  • Professional education
Health Care Quality Indicators to measure if Standards of Care being delivered

Example
RA HCQI 1

If a patient presents with suspected rheumatoid arthritis (RA) then he/she should be referred to and seen by a specialist (preferably a rheumatologist) for confirmation of diagnosis within 6 weeks after the onset of symptoms.

Answer: x patients

Denominator: All patients with suspected RA referred to a specialist over the past 12 months.

Answer: x patients

Numerator/Denominator = Percentage of patients with suspected RA seen by a specialist within 6 weeks after onset of symptoms
The Improvement Cycle

The impact of RMD on individuals and society

Patient centred standards of care for OA and RA across Europe

Health Care Quality Indicators

Barriers and facilitators to implementation of selected standards of care

Measure

Tune-up

Implement
Facilitators to delivering Standards of Care

<table>
<thead>
<tr>
<th>Facilitator</th>
<th>Brief, additional explanation to participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility of recommendation</td>
<td>Easy to find</td>
</tr>
<tr>
<td>Knowledge</td>
<td>Education to understand content and importance of recommendation</td>
</tr>
<tr>
<td>Agreement with the content of the recommendation</td>
<td>Personal agreement</td>
</tr>
<tr>
<td>Cultural background</td>
<td>Shared attitudes, values, goals, religion</td>
</tr>
<tr>
<td>Personal attitude towards recommendation</td>
<td>Personal effort, drive, willingness to get engaged</td>
</tr>
<tr>
<td>Motivation</td>
<td>Personal motivation</td>
</tr>
<tr>
<td>Organization</td>
<td>Support of patient, professional, health-care organization</td>
</tr>
<tr>
<td>Environmental factors</td>
<td>Facilities and equipment</td>
</tr>
<tr>
<td>Time resources</td>
<td>Disposal of sufficient time</td>
</tr>
<tr>
<td>Economical resources</td>
<td>Disposal of sufficient money</td>
</tr>
<tr>
<td>Outcome expectancy</td>
<td>Belief that recommendation will be used</td>
</tr>
</tbody>
</table>

* over 70% agreement

Moe et al ARD 2014

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Driving musculoskeletal health for Europe
Recommendations of EUMUSC.NET to make change happen

Measure to Improve

The implementation of the tools will enable a country to:

• Accurately assess the burden of musculoskeletal conditions
• Understand the Standards of Care that their citizens should expect
• Measure the quality of healthcare it provides, relative to the Standards of care
• Set goals for improvements in the provision of healthcare
• Recognise barriers to achieving its goals for healthcare provision
• Measure progress towards equity of care by comparison with an EU good practice model
The next steps

- Start Measuring ➢ Burden and HCQI
- Compare ➢ Collate and compare
- Set Goals ➢ Identify what needs to improve
- Work to Improve ➢ Identify barriers and facilitators
- Strive for Equity ➢ Advocacy based on evidence

Disseminate information widely
Partners

- Royal Cornwall Hospital Trust (UK)
- Medizinische Universität Wien (AT)
- Lund University (SE)
- Diakonhjemmet sykehus AS (NO)
- Nederlandse Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek (NL)
- MENTOR TRAINING SA – VOCATIONAL TRAINING CENTRE (EL)
- Swedish Rheumatism Association (SE)
- Universitatea de Medicina si Farmacie Carol Davila Bucuresti (RO)
- Università degli Studi di Genova (IT)
- Fundacion Española de Reumatologia (ES)
- University Medical Center LJ (SI)
- University of Leeds (UK)
- Leiden Universitair Medisch Centrum (NL)
- Maastricht University (NL)

- University of Crete Research (EL)
- Revmatologický ústav and Clinic of Rheumatology 1st Medical Faculty Charles University (CZ)
- Hopital Cochin / Association de Recherche Clinique en Rhumatologie (FR)
- Bond - Reumapatiëntenbond (NL)
- Instytut Reumatologii (PL)
- Medcare Oy (FI)
- Dr I Cantacuzino Clinical Hospital (RO)
- Université Henri Poincaré, Nancy (FR)

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Collaborating Partners

- EULAR
- Lund University WHO Collaborating Centre for Evidence-Based Healthcare in Musculoskeletal Conditions (SE)
- Fundación para la Investigación Biomédica del Hospital Universitario La Paz (ES)
- Arthritis Care (UK)
- Hospital da Universidade
- Deutsches Rheuma-Forschungszentrum (DRFZ)
- Cyprus League against Rheumatism
- Centre for Rheumatic Diseases, University of Glasgow (UK)
- LSE Health and Social Care, London School of Economics (UK)
- The Lithuanian Arthritis Association
- Saint Antoine Hospital ReumaNet
- EFORT
- Fit for Work