

### **Arthritis Research UK response to Health and Sport Committee draft Budget 2018-19 Call for Views**

1. Arthritis Research UK welcomes the opportunity to respond to the Health and Sport Committee Call for Views on the draft Budget 2018-19.<sup>1</sup>
2. Arthritis Research UK invests in breakthrough treatments, the best information and vital support for everyone affected by arthritis. We combine cutting edge research and the expertise of people with arthritis to make everyday life better for all 10 million people with these conditions in the UK.<sup>2</sup> We are currently funding £16.7 million of research in Scotland, across 38 different projects.
3. It is estimated that nearly 700,000 people in Scotland live with osteoarthritis, 44,000 people with rheumatoid arthritis and over one million with back pain.<sup>3</sup> Furthermore, 1 in 5 people in Scotland live with chronic pain,<sup>4</sup> and 1 in 20 experience severe disabling chronic pain with the most common sites of chronic pain being the back and the joints.<sup>5</sup>
4. Musculoskeletal conditions have a substantial impact on Health and Social Care services. The NHS spend on the annual musculoskeletal health budget in Scotland is £353 million.<sup>6</sup> This is the amongst the ten largest NHS Annual Programme Budgets in Scotland. In 2012/13 there were over 600,000 consultations with a GP or practice employed nurse due to back pain in Scotland.<sup>7</sup> In Scotland back and neck pain are in the top 10 most frequent conditions seen by GPs.<sup>8</sup>
5. **Summary points:**
  - I. **The Scottish Health and Sport Budget should:**
    - ensure that local and national provision for physical activity continues to be prioritised, and that Health and Social Care systems support people with musculoskeletal conditions to be physically active in their everyday lives.
    - reflect the changing landscape of health and employability, including the impact of welfare reform. This means investing in targeted support for people with arthritis to access/retain employment, including negotiating and accessing appropriate benefits.
    - consider the work agenda in relation to health and social care by ensuring services support people with musculoskeletal conditions with timely access to the services and interventions that help them to stay in or return to work.
    - include detailed spending plans to ensure that research is supported, and outputs tested and implemented, within health and social care settings in Scotland.
  - II. **The Scottish Health and Sport Budget should support Health Boards so that adequate resource is allocated to:**
    - achieve mandated targets, especially those related to physiotherapy, chronic pain, rheumatology outpatient appointments and falls and fracture-related care Standards of Care.
    - include detailed spending plans for multimorbidity, including support for local- and national-level identification and data collection, as well as greater awareness of painful musculoskeletal conditions.
  - III. **Data is essential in driving improvement in musculoskeletal health at a local and national level. Data can generate an iterative process of improvement in the quality of health and care services and ultimately in outcomes. By providing information on the healthcare system, data - and the health intelligence it generates - enables questions to be raised, problems identified and priorities set. The budget should therefore:**
    - support systematic collection, publication and linkage of data, with appropriate governance related to musculoskeletal conditions across all health and social care settings to continuously drive improvement in outcomes for people with these conditions.
  - IV. **Integration Authorities must appropriately capture the burden of, and be inclusive of, people with musculoskeletal conditions in their plans. They should report their spend on musculoskeletal health and care services and collect data about musculoskeletal health using appropriate indicators.**

**Consultation questions:**

- 1. Do you consider that the Scottish Government's health and sport budget for 2017-18 reflects its stated priorities (as set out in the National Performance Framework, the LDP standards and the National health and wellbeing outcomes)? If not, how could the budget be adjusted to better reflect priorities?**
- 2. For the health and sport budget for 2018-19 where do you suggest any additional resources could be most effectively deployed and where could any further savings be found? What evidence supports your views?**

**Physical activity**

6. Increasing participation in physical activity is one of Arthritis Research UK's key public health priorities as there is a strong link between physical activity, maintaining a healthy weight and the risk of developing a musculoskeletal condition. Physical activity is an important part of self-management for people with musculoskeletal conditions and can help reduce pain, disease progression and disability.
7. We welcome the Scottish Government's commitment to increasing the levels of physical activity both as a National Performance Indicator and through previous national strategies.<sup>9,10</sup> In particular, we are very supportive of the Government's ambition to 'achieve 50% of all adults aged over 16 and 80% of all children aged 16 and under meeting the minimum recommended levels of physical activity by 2022.'<sup>11</sup> However, we note that performance against this indicator has not improved and the total physical activity, sport and legacy budget was reduced in 2017-18 from 2016-17.<sup>12</sup>
8. Data from the Scottish Health Survey 2015 detailed that only 63% of adults aged 16 and over met the current moderate/vigorous physical activity guideline of 150 minutes a week.<sup>13</sup> There has been no significant change to this proportion since 2012. In addition, over 58% of people with musculoskeletal conditions in Scotland do not meet the physical activity guidelines, compared to 37% of the general population<sup>14</sup> and we are concerned this gap could increase.
9. Increasing physical activity links to the National Performance Framework strategic objectives and National Health and Wellbeing Outcomes related to helping people live longer, healthier lives and maintaining their independence. However, people with musculoskeletal conditions face barriers to being physically active, such as finding suitable activities, facilities and health professionals who understand their condition. Physical activity intervention programmes can provide a supportive environment where people with musculoskeletal conditions can exercise safely and appropriately for their condition and build their confidence to also be independently physically active (see box).
10. We are therefore keen to work with the Government to ensure that suitable physical activity programmes are available for people with musculoskeletal conditions. **The Budget should ensure that local and national provision for physical activity continues to be prioritised, and ensure that Health and Social Care systems support people with musculoskeletal conditions to be physically active in their everyday lives.**

Arthritis Research UK funded the development of a walking intervention programme at the University of Aberdeen called Walk with Ease (originally developed in the USA by the Arthritis Foundation) specifically designed for people with arthritis and musculoskeletal conditions. It has been shown to be effective in reducing arthritis-related symptoms and improving physical function when delivered in either a group or self-directed format.<sup>15</sup>

**Obesity and health inequalities**

11. Musculoskeletal problems constitute one of the greatest threats to the health of people who are obese. Obesity substantially increases the risk of osteoarthritis and other musculoskeletal conditions such as back pain, gout and to some extent rheumatoid arthritis. The risk of developing knee osteoarthritis appears to be similar to the association between high blood pressure and type 2 diabetes.<sup>16</sup> Obese people are more than twice as likely to develop osteoarthritis of the knee,<sup>17</sup> and more than two out of three knee replacements and one in four hip replacements in middle-aged women in the UK are attributable to obesity.<sup>18</sup>
12. Overweight and obese children are more likely to become obese adults, and have a higher risk of morbidity, disability and premature mortality in adulthood.<sup>19</sup> Data from 2012/13 showed that 24.4% of

children from the most deprived areas of Scotland were at risk of being overweight (including obesity) compared to 17.8% of children from the least deprived areas.<sup>20</sup> We therefore welcome the commitment to a Child and Adolescent Health and Wellbeing Strategy, the forthcoming Diet and Obesity Strategy<sup>21</sup> and the objective in the National Performance Framework that *our children have the best start in life and are ready to succeed* alongside the National Indicator to *increase the proportion of healthy weight children*<sup>22</sup> which we are pleased to see has improved.

13. A key part of maintaining a healthy weight is to ensure children and adults meet physical activity guidelines. Over 90% of adult bone mass is accumulated during childhood and adolescence,<sup>23</sup> therefore keeping children physically active is a key part of preventative health, as they are more likely to stay physically active as adults, and are at a reduced risk of fracture. However, in 2015, just under three-quarters (73%) of children met the guideline on physical activity (including school-based activity), a similar proportion to that seen in 2008 (71%).<sup>24</sup> **The Budget should support greater promotion of the benefits of physical activity for both children and adults, and resources should be targeted at reducing the gap in participation amongst socioeconomic groups whilst also ensuring that access to weight management programmes is equitable across local authorities.**

### ***Musculoskeletal health and supporting the Scottish workforce***

14. The National Outcomes in the Performance Framework includes the ambition to: *Live in a Scotland that is the most attractive place for doing business in Europe*, and for Scotland to: *Realise [its] full economic potential with more and better employment opportunities for [its] people.*<sup>25</sup>
15. These goals are dependent in part on the availability of a healthy, productive population. Productivity will be impacted by the changing Scottish demographic, with people living and working for longer. The prevalence of arthritis is forecast to increase due to this ageing population, and growing levels of obesity and physical inactivity, which are all major risk factors in the development of a musculoskeletal condition.<sup>26</sup> These factors will act as a barrier to the ambitions of the Performance Framework if unaddressed, with over 30 million working days lost due to musculoskeletal conditions in the UK each year,<sup>27</sup> and the employment rate among people with arthritis already 20% lower than those with no condition or disability.<sup>28</sup> Musculoskeletal conditions also make up nearly one third of Personal Independence Payment (PIP) claims in Scotland, reflecting the importance of this constituency in the welfare reform agenda and its impact on access to work.<sup>29</sup>
16. A report by Arthritis Care Scotland based on a survey of people with arthritis found that for around two thirds of respondents, pain and fatigue affect capabilities, half have physical limitations which can restrict capacity to carry out physical tasks, and more than half need to take time off work for medical appointments or sickness absence.<sup>30</sup> The National Rheumatoid Arthritis Society's 2010 Survey 'RA and Work' highlighted that over half of the respondents said they were not in employment as they had given up work early as a result of rheumatoid arthritis.<sup>31</sup>
17. However, research has demonstrated that targeted, early intervention can help to treat and prevent musculoskeletal conditions, increasing the rate at which people can return to work. Arthritis Research UK has supported research focused on improving health and producing wider societal savings through increased productivity and reduced ongoing healthcare costs (see box). **The Budget should reflect the changing landscape of health and employability, including the impact of welfare reform. This means investing in targeted support for people with arthritis to access/retain employment, including negotiating and accessing appropriate benefits.**

**The Budget needs to consider the work agenda in relation to health and social care by ensuring healthcare services support people with musculoskeletal conditions with timely access to the services and interventions that help them to stay in or return to work.**

Back pain is a major cause of ill-health, and in 2012/13 there were over 600,000 consultations with a GP or practice employed nurse due to back pain in Scotland. STarT Back is a tool developed by the Arthritis Research UK Primary Care Centre that stratifies people with back pain into three groups enabling clinicians to deliver more targeted interventions.<sup>32</sup> This model has been demonstrated to result in greater health benefits, alongside an average saving to the NHS in England of £34.39 per patient and societal savings of £657 per person, and is a component of triage within Scottish direct access referral services.

## Research

18. The NHS in Scotland is among the largest publicly-funded healthcare systems in the world, and is a key asset to the life sciences research sector, providing a 'real-world' environment in which to carry out clinical trials, cohort studies and amass crucial longitudinal data. This is reflected in the Scottish Government's Health and Social Care Research Strategy, which sets out its ambitions to build on its current research involvement and assets,<sup>33</sup> and supports the achievement of Indicators in the National Performance Framework related to research and development, knowledge exchange and skills improvement.<sup>34</sup>
19. Research charities like Arthritis Research UK can help to address barriers to innovation that are encountered in health and social care, and accelerate development of new treatments and therapies. We are currently funding £16.7 million of research in Scotland, across 38 different projects, many of which are carried out in partnership with, or take place in, the Scottish NHS. There is an opportunity for charities and health and social care providers to engage in partnerships to support innovation, improving the quality of services and outcomes, tackling inequalities, and enabling research activity. Therefore, **the Budget should include detailed spending plans to ensure that research is supported and outputs tested and implemented within health and social care settings in Scotland.**

20.

Fibromyalgia is a chronic condition that causes widespread pain in the muscles, tendons and ligaments. It is important to manage the symptoms of the chronic widespread pain as quickly as possible because the longer pain lasts, the less likelihood there is of being able to successfully treat it. Arthritis Research UK-funded researchers have previously discovered that fibromyalgia patients experienced long-lasting improvements in their symptoms when they received a form of talking therapy called cognitive behaviour therapy by telephone (CBT). This team are now working with three NHS Scotland Health Boards, carrying out a trial to investigate whether telephone CBT can also prevent the development of chronic pain.<sup>35</sup>

## Support for locally implemented targets

21. **Recognition of musculoskeletal conditions:** We welcome the commitment in the draft budget to *improve services and outcomes for people with heart disease, stroke, cancer, diabetes, rare diseases and other long term conditions through our focus on the whole patient pathway, earlier referral, speedier diagnosis and clinically effective treatments and follow up.*<sup>36</sup> However, given that musculoskeletal conditions are the leading cause of long-standing illness in Scotland,<sup>37</sup> we would like to see this recognised as a distinct category rather than as part of other long-term conditions.
22. **Tackling inequality:** Although prevalent across all areas of society, musculoskeletal conditions have a greater prevalence in the most deprived communities in Scotland (where 23% of the adult population have a musculoskeletal condition) compared to the least deprived areas (where 15% are affected). Tackling poor musculoskeletal health will in the long-term both improve individual health outcomes and reduce the costs to NHS Scotland and to society, supporting the Scottish Government's National Outcome Strategic Objective to *have tackled the significant inequalities in Scottish society.*
23. **Access to Allied Health Professionals:** In its 2015 document 'Allied Health Professionals – Musculoskeletal Waiting Times in NHS Scotland' the Scottish Government set a target that from 1st April 2016 at least 90% of patients would receive a first clinical out-patient appointment with an Allied Health Professional (AHP) for musculoskeletal conditions within 4 weeks from referral (either self-referral or by a health or social care professional).<sup>38</sup> Quarterly reports on waiting times are published and for the quarter ending 30 September 2016, only 53.2% of patients who had a first clinical appointment with an AHP musculoskeletal service were seen within 4 weeks.<sup>39</sup> Furthermore, data from the Chartered Society of Physiotherapists showed that from 2015 to September 2016 the number of patients waiting more than 16 weeks for physiotherapy has risen from around 6% to 20% of patients.<sup>40</sup> **The Budget should ensure that local health boards are supported to meet the target that patients receive a first clinical out-patient appointment with an Allied Health Professional (AHP) for musculoskeletal conditions within 4 weeks from referral.**
24. **Chronic pain services:** We welcome the Local Delivery Plan standard that: *90 per cent of planned/elective patients commence treatment within 18 weeks of referral.*<sup>41</sup> However, we know that performance varies widely between Health Boards in terms of meeting the target. One in five people in Scotland live with chronic pain and one in 20 experience severe disabling chronic pain with the most common sites being the back and the joints.<sup>42</sup> Data for the quarter ending December 2016 shows that of the 12 NHS Boards that conduct pain clinics only half met the 18-week target.<sup>43</sup>

**The Scottish Government should ensure that local health boards meet the target that 90% of patients requiring chronic pain services are seen within 18 weeks from referral and we would also like local health boards to capture data on psychological support between initial and follow-up appointments.**

25. **Outpatient appointments:** We welcome the Local Delivery Plan standard that: *95 per cent of patients to wait no longer than 12 weeks from referral (all sources) to a first outpatient appointment (measured on month end Census). Boards to work towards 100 per cent.*<sup>44</sup> This includes appointments at a consultant-led clinic for people waiting to see a rheumatologist. The British Society of Rheumatology's 2016 report 'Rheumatology in Scotland 'The State of Play' details that although *average* waiting times for a new rheumatology outpatient appointment have decreased since 2012, the number of people waiting over 16 weeks has increased annually since 2013.<sup>45</sup> For people with suspected rheumatoid arthritis, early diagnosis is crucial so that patients are referred to rheumatologists and treatment can start as soon as possible. **The Budget should ensure that health boards are adequately supported to meet the Local Deliver Plan commitments.**
26. **Fracture Liaison Services:** We welcome the Government's ambition to reduce the number of falls per 1,000 of the population age 65 plus through the national improvement programme<sup>46</sup> and as part of the National Health and Wellbeing Outcome 2: *People, including those with disabilities or long term conditions, or who are frail, are able to live, as far as reasonably practicable, independently and at home or in a homely setting in their community.*<sup>47</sup> This is particularly important given that over the next 20 years the number of people over 75 in Scotland is likely to have increased by almost 60%.<sup>48</sup> Therefore **the Budget should support local health boards to ensure that they meet the updated Scottish Standards of Care for Hip Fracture Patients<sup>49</sup> and increase the availability of Fracture Liaison Services.**

#### **Multimorbidity**

27. A Strategic Objective of the Scottish Government is to address inequalities in society, including those in health and social care, as outlined in the National Performance Framework.<sup>50</sup> Indeed, although the most recent Scottish Government report on health inequalities states that a number of measures of inequality have decreased in recent years, the picture is much more mixed in relation to morbidity indicators.<sup>51</sup> Therefore we welcome the decision to include a measure of 'limiting long-term conditions' for the first time in these annual reports. This data has highlighted that in the period 2008/2009 to 2014/2015 there was a 6% increase in the number of adults reporting one of these conditions. Over the same seven-year period, the 'gap' in the prevalence of long term conditions increased between those in the most and least deprived areas (8.1% increase), and between those in the highest and lowest income deciles (7.8% increase). It was also reported that those in the lowest income decile were 2.6 times more likely to report a limiting long term condition than those in the highest, illustrating the inequality associated with long-term morbid conditions like arthritis.<sup>52</sup>
28. Furthermore, it is now common for people to live with two or more long-term conditions, or multimorbidity.<sup>53</sup> There is a strong association between multimorbidity and inequality in Scotland: people in the most deprived areas develop multimorbidity 10–15 years earlier compared to those in the least deprived.<sup>54</sup> People with multimorbidity rely more heavily on health and care services, and in Scotland, the prevalence of people with multimorbidity increases from 64.9% among those aged 65–84 years, to 81.5% among those aged 85 years or over.
29. In relation to arthritis, by age 65, almost 5 out of 10 people with a heart, lung or mental health problem will also have a musculoskeletal condition,<sup>55</sup> and 4 out of 5 people with osteoarthritis have at least one other long-term condition such as hypertension or cardiovascular disease.<sup>56</sup> Furthermore, in people with multimorbidity, the presence of any long-term condition is associated with a reduction in quality of life, but if arthritis or back pain is present as one of the conditions, the impact is even greater.<sup>57</sup> Reflecting this growing priority area, **the Budget should include detailed spending plans for multimorbidity, including support for local- and national-level identification and data collection, as well as greater awareness of painful musculoskeletal conditions.**

#### **Consultation questions:**

- 3. Is sufficient information available to support scrutiny of the Scottish Government's health and sport budget? If not, what additional information would help support budget scrutiny?**

30. In order to accurately assess the impact of previous budgets, it would be beneficial to ensure regular, comprehensive data collection and reporting across the health and social care landscape. In relation to people with arthritis, the Scottish Government's health and social aims can be supported through improvement in the system-wide availability, quality and analysis of musculoskeletal data.<sup>58</sup> While there are currently a limited number of mandated targets against which certain musculoskeletal healthcare services are monitored,<sup>59</sup> NHS Scotland does not undertake comprehensive collection of epidemiological, clinical activity or outcome data for musculoskeletal conditions, three areas where data is essential to drive improvements in health outcomes and patient experience (see box).<sup>60</sup> **The Budget should support systematic collection, publication and linkage of data, with appropriate governance related to musculoskeletal conditions across all health and social care settings to continuously drive improvement in outcomes for people with these conditions.**

The Arthritis Research UK **Musculoskeletal Calculator** is a series of prevalence models developed in collaboration with Imperial College London and estimates the prevalence of back pain and osteoarthritis of the hip and knee in England, and will also feature Scottish data in the near future.<sup>53</sup> The bespoke data packs developed through the Calculator can be used to support local service planners identify opportunities for improvement in terms of spend and outcomes by comparing their data with that of other local areas. The tool is also useful for those conducting research into musculoskeletal conditions, policy makers at a local and national level and members of the public

**Consultation questions:**

- 4. What impact has the integration of health and social care budgets had on ensuring resources are directed at achieving the Scottish Government's desired outcomes?**

31. The majority of integration of health and social care budget spend relates to the activities of the Integrated Authorities, formed following the recommendations of the Christie report.<sup>61</sup> As each Integration Authority has developed a unique Strategic Commissioning Plan for their area, there is likely to be variation in the planned provision for people with musculoskeletal conditions. The Strategic Commissioning Plans were published in April 2016 and performance reports for the first year are due to be published by July 2017. We will be seeking to ensure that **Integration Authorities have appropriately captured the burden of, and are inclusive of, people with musculoskeletal conditions in their plans. They should report their spend on musculoskeletal health and care service and collect data about musculoskeletal health using appropriate indicators**, such as the Arthritis Research UK Recommended MSK Indicator Set.<sup>62</sup>

**For further information on this submission please contact:**

**Dr James O'Malley**

Policy Manager

Arthritis Research UK

t: 0207 307 2260

e: [j.omalley@arthritisresearchuk.org](mailto:j.omalley@arthritisresearchuk.org)

**Tim Marshall**

Policy Officer

Arthritis Research UK

t: 0207 307 2218

e: [t.marshall@arthritisresearchuk.org](mailto:t.marshall@arthritisresearchuk.org)

1 Health and Sport Committee (2017). Draft Budget 2018-19. Available on-line at: <http://www.parliament.scot/parliamentarybusiness/CurrentCommittees/105300.aspx>

2 Arthritis Research UK. Accessed on-line at: <http://www.arthritisresearchuk.org>

3 Arthritis Research UK (2017). MSK Calculator data

4 International Association for the Study of Pain (2012). Classification of Chronic Pain, Second Edition (Revised).

---

<http://www.iasp-pain.org/PublicationsNews/Content.aspx?ItemNumber=1673&navItemNumber=677>

5 Smith B (2016). Chronic Pain in Scotland: Highlighting the need for chronic pain services in 2016 and beyond. <http://chronicpainscotland.org/wp-content/uploads/2016/05/Chronic-Pain-in-Scotland-v1-4-Briefing-and-Background-Paper.pdf>

6 NHS Scotland (2015). Programme budget category code 15: Musculoskeletal conditions 2011/2 Problems of the Musculoskeletal System <http://www.gov.scot/Publications/2015/08/4735/4>

7 Information Services Division Scotland. Back Pain. Available on-line at: <http://www.isdscotland.org/Health-Topics/General-Practice/GP-Consultations/Health-Conditions/Back-Pain/>

8 Arthritis and Musculoskeletal Alliance (2012). The musculoskeletal map of Scotland. <http://arma.uk.net/wp-content/uploads/2013/03/Scotland-Musculoskeletal-map-FINAL-2012-2.pdf>

9 Such as 'Let's Make Scotland More Active' The Scottish Government (2003). Five-year review of 'Let's Make Scotland More Active' – A strategy for physical activity The Scottish Government (2009)

10 The Scottish Government (2014). 'A More Active Scotland: Building a Legacy from the Commonwealth Games

11 The Scottish Government (2003). Let's Make Scotland More Active <http://www.gov.scot/Resource/Doc/47032/0017726.pdf>

12 Scottish Government (2017). <http://www.gov.scot/Publications/2016/12/6610/7>

13 The Scottish Government (2016) The Scottish Health Survey 2015

14 Arthritis Research UK (2016). Analysis of the Scottish Health Survey 2015

15 University of Aberdeen (2017.) <https://www.abdn.ac.uk/iahs/research/epidemiology/walk-with-ease-1287.php>

16 Kearns K et al (2014). Chronic disease burden associated with overweight and obesity in Ireland: the effects of a small BMI reduction at population level. BMC Public Health 14134

17 Blagojevic M et al (2010). Risk factors for onset of osteoarthritis of the knee in older adults: a systematic review and meta-analysis. Osteoarthritis Cartilage 18(1): 24-33

18 Liu B et al. (2007) Relationship of height, weight and body mass index to the risk of hip and knee replacements in middle-aged women. Rheumatology (Oxford) 46 (5): 861-867

19 [https://www.noo.org.uk/NOO\\_about\\_obesity/obesity\\_and\\_health/health\\_risk\\_child](https://www.noo.org.uk/NOO_about_obesity/obesity_and_health/health_risk_child)

20 SPICe Briefing Obesity in Scotland (2015). [http://www.parliament.scot/ResearchBriefingsAndFactsheets/S4/SB\\_15-01\\_Obesity\\_in\\_Scotland.pdf](http://www.parliament.scot/ResearchBriefingsAndFactsheets/S4/SB_15-01_Obesity_in_Scotland.pdf)

21 Scottish Government (2017). <http://www.gov.scot/Publications/2016/12/6610/7>

22 Scottish Government (2017). <http://www.gov.scot/Resource/0049/00497339.pdf>

23 Heaney R et al (2000). Peak bone mass. Osteoporosis Int 11(12): 984-1009

24 The Scottish Government (2016) The Scottish Health Survey 2015

25 Scottish Government (2016). National Performance Framework. Available online at: <http://www.gov.scot/About/Performance/purposestratobjis>

26 Arthritis Research UK (2014). Musculoskeletal health. A public health approach.

27 Office for National Statistics (2016). Estimate of the number of days of sickness absence taken: by reason, UK, 2013 to 2015

28 Arthritis Research UK (2016). Working with arthritis.

29 DWP (2016). Outturn and Forecast: March Statement 2016 and DWP Stat-Xplore

30 Arthritis Care Scotland (2016). Arthritis and Work: Results of a survey in Scotland. Available on-line at: [https://www.arthritiscare.org.uk/assets/000/001/754/Arthritis\\_and\\_Work\\_Survey\\_original.pdf](https://www.arthritiscare.org.uk/assets/000/001/754/Arthritis_and_Work_Survey_original.pdf)

31 National Rheumatoid Arthritis Society's (2010). <http://www.nras.org.uk/data/files/Publications/Scottish%20Survey%20Doc%202010.pdf>

32 Keele University <http://www.keele.ac.uk/sbst/>

33 Scottish Government (2015). Delivering Innovation through Research – Scottish Government Health and Social Care Research Strategy. Available on-line at: <http://www.gov.scot/Publications/2015/10/5164/downloads>

- 
- 34 Scottish Government (2016). National Performance Framework. Available online at: <http://www.gov.scot/About/Performance/purposestratobis>
- 35 University of Aberdeen (2016). The Maintaining Musculoskeletal Health Study (MAMMOTH). Information available on-line at: <https://clinicaltrials.gov/show/NCT02668003>
- 36 Scottish Government (2017) <http://www.gov.scot/Publications/2016/12/6610/7>
- 37 The Scottish Government (2016). A National Clinical Strategy for Scotland. <http://www.gov.scot/Resource/0049/00494144.pdf>
- 38 Information Services Division Scotland (2016). AHP MSK Waiting-Times <http://www.isdscotland.org/Health-Topics/Waiting-Times/AHP-MSK/Publications/2016-06-21/Policy-Context/>
- 39 NHS National Services Scotland (2015). Allied Health Professionals – Musculoskeletal Waiting Times in NHS Scotland <https://www.isdscotland.org/Health-Topics/Waiting-Times/Publications/2015-12-15/2015-12-15-AHPMSK-Publication.pdf?14:07:17>
- 40 Information Services Division Scotland (2016). <http://www.isdscotland.org/Health-Topics/Waiting-Times/Publications/2016-12-13/2016-12-13-AHPMSK-Summary.pdf>
- 41 Scottish Government (2017) <http://www.gov.scot/Topics/Health/Quality-Improvement-Performance/NHS-Performance-Targets>
- 42 International Association for the Study of Pain. Classification of Chronic Pain, Second Edition (Revised). <http://www.iasp-pain.org/PublicationsNews/Content.aspx?ItemNumber=1673&navItemNumber=677>
- 43 NHS National Services Scotland (2015). Allied Health Professionals – Musculoskeletal Waiting Times in NHS Scotland <https://www.isdscotland.org/Health-Topics/Waiting-Times/Publications/2015-12-15/2015-12-15-AHPMSK-Publication.pdf?14:07:17>
- 44 Scottish Government (2017). <http://www.gov.scot/Topics/Health/Quality-Improvement-Performance/NHS-Performance-Targets>
- 45 British Society of Rheumatology (2016). 'Rheumatology in Scotland The State of Play' [http://www.rheumatology.org.uk/includes/documents/cm\\_docs/2016/b/1\\_bsr\\_scotland\\_policy\\_report.pdf](http://www.rheumatology.org.uk/includes/documents/cm_docs/2016/b/1_bsr_scotland_policy_report.pdf)
- 46 Scottish Government (2014). The Prevention and Management of Falls in the Community: A Framework for Action for Scotland 2014/2015 <http://www.gov.scot/Publications/2014/04/2038>
- 47 Scottish Government (2017) National Health and Wellbeing Outcomes <http://www.gov.scot/Topics/Health/Policy/Health-Social-Care-Integration/National-Health-WellbeingOutcomes>
- 48 The Scottish Government (2015). Achieving Sustainable Quality in Scotland's Healthcare: A '20:20' Vision. <http://www.gov.scot/Topics/Health/Policy/2020-Vision>
- 49 Scottish Government (2016). [http://www.shfa.scot.nhs.uk/\\_docs/20161109\\_SSC\\_for\\_Hip\\_Fracture\\_Patients.pdf](http://www.shfa.scot.nhs.uk/_docs/20161109_SSC_for_Hip_Fracture_Patients.pdf)
- 50 Scottish Government (2016). National Performance Framework. Available online at: <http://www.gov.scot/About/Performance/purposestratobis>
- 51 Scottish Government (2017). Long-term Monitoring of Health Inequalities. Available on-line at: <http://www.gov.scot/Topics/Statistics/Browse/Health/TrendHealthOutcome/Results>
- 52 Scottish Government (2017). Long-term Monitoring of Health Inequalities. Available on-line at: <http://www.gov.scot/Topics/Statistics/Browse/Health/TrendHealthOutcome/Results>
- 53 Scottish Government (2016). A National Clinical Strategy for Scotland. Available on-line at: <http://www.gov.scot/Publications/2016/02/8699>
- 54 Barnett K et al. (2012). Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *Lancet* 380(9836): 37–43.
- 55 NHS England (2014). GP Patient Survey. Analysis conducted by Arthritis Research UK.
- 56 Breedveld FC (2004). Osteoarthritis – the impact of a serious disease. *Rheumatology (Oxford)* 43 Suppl 1: i4–i8.
- 57 NHS England (2014). GP Patient Survey. Analysis conducted by Arthritis Research UK.
- 58 Arthritis Research UK (2017). Response to Technology and Innovation in the NHS Call for Views. Available on-line at: [http://www.parliament.scot/S5\\_HealthandSportCommittee/Inquiries/TINN037\\_Arthritis\\_Research\\_UK.pdf](http://www.parliament.scot/S5_HealthandSportCommittee/Inquiries/TINN037_Arthritis_Research_UK.pdf)
- 59 Information Services Division Scotland. <http://www.isdscotland.org/Health-Topics/Waiting-Times/>
- 60 Arthritis Research UK (2017). MSK Calculator data
- 61 Public Bodies (Joint Working) (Scotland) Act 2014 <http://www.legislation.gov.uk/asp/2014/9/contents/enacted>
- 62 Arthritis Research UK (2017) <http://www.arthritisresearchuk.org/policy-and-public-affairs/msk-indicators-professional.aspx>



