choice of definition may identify different people and patterns of pain severity. If remote monitoring of flares is to inform clinical practice and research, it is important to understand the implications of these choices.

Objectives: Investigate the frequency of pain flares from daily pain symptoms under various definitions in a population with chronic pain.

Methods: Participants with chronic (≥3 months) musculoskeletal pain in the smartphone study Cloudy with a Chance of Pain reported daily pain severity and impact of pain on a 5-point scale. Pain flares were defined in five ways: 1. Worse than average: pain severity higher than personal median 2. Above threshold: pain value 4 or 5 3. Move to above threshold: pain value 1 or 2 or 3 yesterday to 4 or 5 today 4. Absolute change: 2-point increase in pain since yesterday 5. Composite: 2-point increase in pain severity since yesterday and impact 4 or 5 Daily pain-flare rate was calculated by dividing the number of pain flares by the number of days a pain flare would have been possible, hereafter called at-risk days (def. 1+2: total days of symptom entry; def. 3 to 5: days of data entry for which participant also entered data on preceding day). Monthly pain-flare rates per person were calculated by multiplying the rate by 30.

Results: The study smartphone app was downloaded by 13,256 people. After excluding people that never reported pain severity (n=2020), did not complete the baseline questionnaire (n=947), stayed in the study for less than 7 days (n=3418), and reported non-musculoskeletal chronic pain (n=728), 6143 were eligible for analysis.

Abstract OP0072 – Table 1. Participants with pain flares and monthly pain flare rates under 5 definitions

<table>
<thead>
<tr>
<th>Participants with 1 flare</th>
<th>Flares</th>
<th>Monthly pain flare rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worse than average</td>
<td>5304 (86.3)</td>
<td>1 09 616</td>
</tr>
<tr>
<td>Above threshold</td>
<td>5627 (91.6)</td>
<td>1 18 596</td>
</tr>
<tr>
<td>Move to above threshold</td>
<td>4246 (69.1)</td>
<td>33 661</td>
</tr>
<tr>
<td>Absolute change</td>
<td>3940 (64.1)</td>
<td>22 173</td>
</tr>
<tr>
<td>Composite</td>
<td>2577 (42.0)</td>
<td>9531</td>
</tr>
</tbody>
</table>

Table 1 shows that the portion of eligible people with at least one pain flare varies by definition, with 42% reporting at least one pain flare according to the most restrictive classification criterion. Depending on the criterion used, the monthly pain-flare rate per ranges from 0.9 to 8.7. Under the worse than average and above threshold definition, most participants have more than 10 pain flares per month (figure 1). Under the two most stringent definitions, most participants have between 0 and 3 pain flares per month.

Conclusions: The five plausible definitions for a pain flare are demonstrated to generate quite different flare rates throughout time. Pain flares in people with chronic musculoskeletal pain, however, remain common even as classification criteria become increasingly strict. As daily data collection of patient-generated data becomes possible, careful thought must be given to flares should best be defined for clinical practice and research.

REFERENCES:

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OP0073

CENTRAL SENSITISATION PREDICTS FATIGUE INDEPENDENTLY OF MUSCULOSKELETAL PAIN

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Background: Fatigue is a common musculoskeletal (MSK) pain comorbidity that is associated with increased healthcare use and poor quality of life. Central sensitisation (CS), the amplification of sensory input across multiple systems, has been associated with MSK pain. It has been hypothesised that similar mechanisms may explain the co-occurrence of fatigue, but data are conflicting.

Objectives: To test the hypothesis that CS was associated with the presence of fatigue, and to establish whether the relationship was independent of the relationship between MSK pain and fatigue.

Methods: 2456 participants in a prospective cohort study completed a baseline questionnaire collecting data on fatigue (Chalder Fatigue Scale, score 0–33 (CFS); pain (body map, score range 0–44); demographics (date of birth, sex); Rapid Assessment of Physical Activity (RAPA); analgesic use; and mental health (Hospital Anxiety and Depression (HAD) scale). During a clinic visit a random sample of participants (n=290, 11.8%) had a wind-up ratio test (the perceived intensity of a single 250mN pinprick/intensity of a series of 10 pinpricks) at the thenar eminence of the right hand (WUR-H) and dorsum of the left foot (WUR-F) to assess CS, and bioelectric impedance (Tanita BC-418 Segmental Body

Disclosure of Interest: None declared