Musculoskeletal Health and Care: Overview of Improvement Programmes

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Musculoskeletal Health and Care in the Context of the Long Term Plan (LTP)

- The Long-Term Plan sets out a vision for a sustainable and efficient NHS
- It recognises the growing prevalence of MSK conditions, their impact on physical and mental health services, on employment and the link to obesity and physical inactivity
- There is commitment to:
  - ✓ greater focus on prevention and population health to tacking health inequalities
  - ✓ address unmet need and delivering higher value interventions
  - ✓ reform and reconfigurations including Primary Care Networks (PCNs), reduce pressure on Emergency Care Services, redesign Outpatients and enhance use of Digital Technology
  - ✓ expand the number of physiotherapists working as MSK First Contact Practitioners in primary care networks (PCNs)
  - ✓ more investment in primary and community care
  - ✓ expansion of personalised care across the whole pathway of care
  - ✓ gaining greater clarity on existing targets (such as surgery waiting times) through the Clinical Standards Review
  - ✓ NHS organisations being Anchor Institutions for Health & Well-being at work

Integrated Care Systems

- Integrated Care Systems (ICSs) central to the delivery of the Long Term Plan - brings together local organisations to redesign care and improve population health, creating shared leadership and action.

- They are a pragmatic and practical way of delivering the 'triple integration' of:
  - ✓ primary and specialist care
  - ✓ physical and mental health services
  - ✓ health with social care

Neighbourhood – Primary Care Networks

- populations around 30-50,00
- GP, community services (pharmacist, paramedics, MSK First Contact Practitioners, social prescribers), Mental Health and social care

Place

- populations 0.5-1million
- collaborations between hospitals and other providers including Local As

System

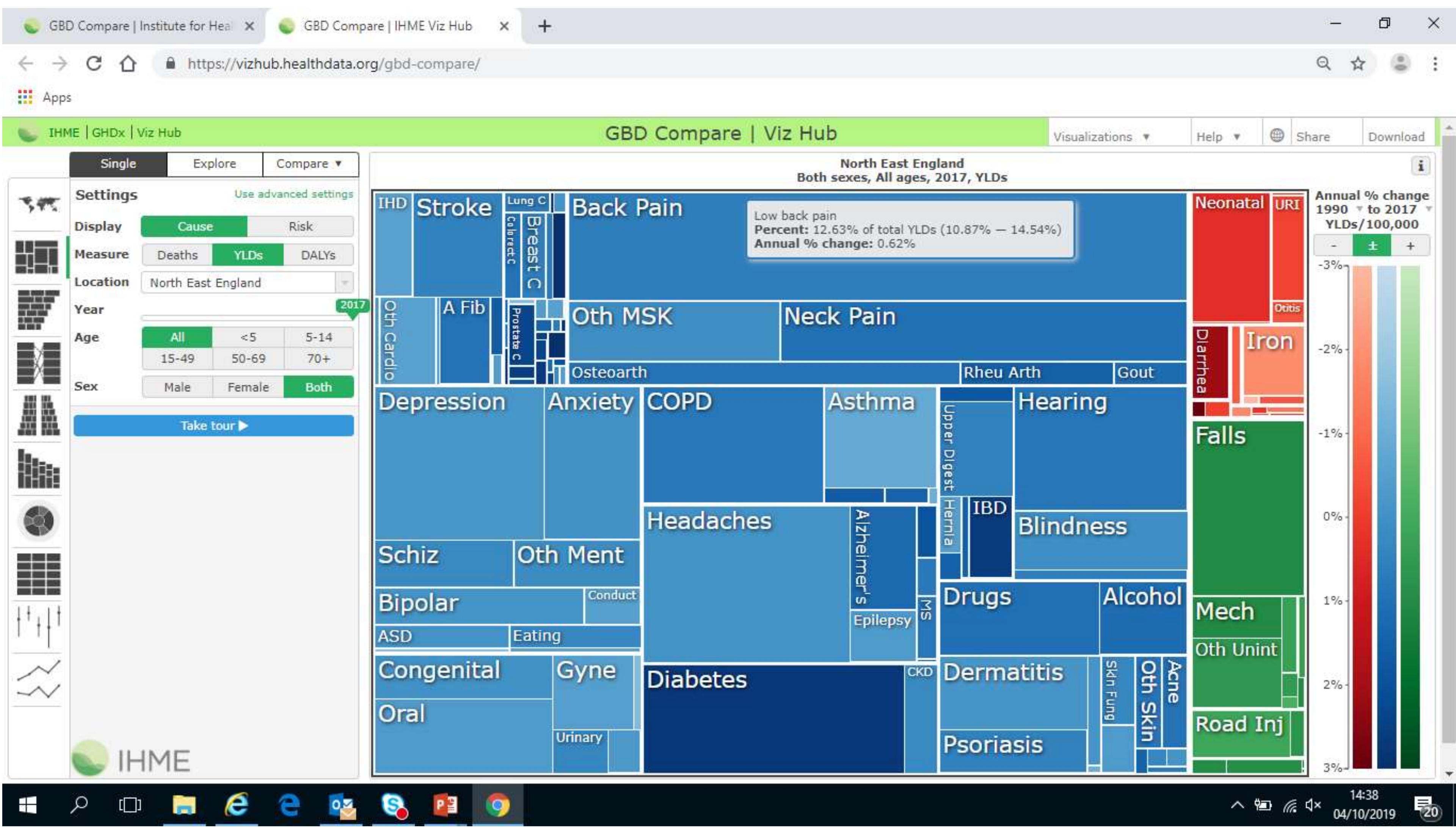
- What cannot be achieved more locally

Conditions of Musculoskeletal Pain

	Age	Progression	Prevalence	Impact	Main treatment	Treatment location	Risk factors
INFLAMMATORY CONDITIONS (e.g rheumatoid arthritis)	Affects any age.	Often rapid onset.	Common. (e.g. over 430,000 adults in the UK have rheumatoid arthritis).	Can affect and part of the body including skin, eye and internal organs.	Treated by suppressing the immune system.	Urgent specialist treatment needed usually provided in hospital outpatients.	Genetic factors, sex, smoking, obesity and diet.
CONDITIONS OF MSK PAIN (e.g osteoarthritis, back pain)	More common with rising age.	Gradual onset.	Very common. (e.g. 8.75 million people in the UK have sought treatment for osteoarthritis).	Affects the joints, spine and pain system.	Treated with physical activity and pain management, and in severe cases joint replacements.	Treatment based in primary care.	Age (late 40s onwards), sex, genetic factors, physical injury, obesity and previous joint illness or injury.
OSTEOPOROSIS AND FRAGILITY FRACTURES (e.g. fracture after fall from standing height)	Affects mainly older people.	Osteoporosis is a gradual weakening of bone. Fragility fractures are sudden discrete events.	Common. (e.g. 500,000 fragility fractures occur in the UK each year).	Hip, wrist and spinal bones are most common sites of fractures.	Medication to strengthen bones, falls prevention fracture treatment.	Prevention is based in primary and ambulatory care; fractures may require surgery.	Age, genetic factors, smoking, alcohol, inflammatory disorders, poor nutrition and low physical activity.

Global Burden of Disease – Years Lived with Disability

https://vizhub.healthdata.org/gbd-compare/



Burden of MSK across the Life Course

https://vizhub.healthdata.org/gbd-compare/

GBD Compare | Viz Hub

North East England, Both sexes, 2017

Settings
Display: Cause | Risk
Measure: Deaths | YLDs | DALYs
Location: North East England
Year: 2017
Sex: Male | Female | Both
Units: # | Rate | %

YLDs per 100,000

0-6 days, 7-27 days, 28-364 days, 1-4 years, 5-9 years, 10-14 years, 15-19 years, 20-24 years, 25-29 years, 30-34 years, 35-39 years, 40-44 years, 45-49 years, 50-54 years, 55-59 years, 60-64 years, 65-69 years, 70-74 years, 75-79 years, 80-84, 85-89, 90-94, 95+ years

HIV/AIDS & STIs
Respiratory infections & TB
Enteric infections
NTDs & malaria
Other infectious
Maternal & neonatal
Nutritional deficiencies
Neoplasms
Cardiovascular diseases
Chronic respiratory
Digestive diseases
Neurological disorders
Mental disorders
Substance use
Diabetes & CKD
Skin diseases
Sense organ diseases
Musculoskeletal disorders
Other non-communicable
Transport injuries
Unintentional inj
Self-harm & violence

Long Term Plan Focus on Healthy Life Expectancy

Healthy Life Expectancy at Birth, 2010-12 to 2015-17

Trend in healthy life expectancy at birth
Regions (and change in years)

Life expectancy at birth (years)

68
67
66
65
64
63
62
61
60
0

2010 - 12
2011 - 13
2012 - 14
2013 - 15
2014 - 16
2015 - 17

South East (+0.6)
South West (-0.4)
East of England (-0.6)
London (+0.8)
England (+0.2)
East Midlands (-0.6)
West Midlands (0.0)
Yorkshire & The Humber (+0.8)
North West (+0.2)
North East (-0.1)

Male healthy life expectancy at birth, 2015-17
Local authorities compared with England

Better than England
Similar to England
Worse than England

National Programmes involving MSK care

- **NHS England & NHS Improvement**
  - RightCare
  - GIRFT
  - Operational Productivity
  - Elective Care Transformation Programme
  - Evidence Based Interventions
  - Outpatients Transformation Programme
  - Personalised Care
  - Primary Care Networks
  - Ageing Well
  - Mental Health
  - Health and Work
- **Partner Organisations**
  - Public Health England
  - Arthritis and Musculoskeletal Alliance
  - Versus Arthritis
  - British Orthopaedic Association
  - British Society Rheumatology
  - Chartered Society of Physiotherapy
  - Royal Society of Osteoporosis
  - Academic Health Science Networks

Programmes across care pathway

	Prevention		**Problem Presents**		**Intervention**	
Programme	**Prevention & Health Improvement for Life Style Behaviours**	**Early detection of people at risk of osteoporosis, falls, osteoarthritis, inflammatory arthritis**	**Early diagnosis and management in primary care and community.**	**Referral pathways to secondary care**	**Operative Intervention (inc. day case injections)**	**Non-operative Interventions**
Public Health						
RightCare						
Personalised Care						
Elective Care Transformation Programme			**First Contact Practitioners**			
Evidence Based Interventions						
Specialised Commissioning						
GIRFT - Orthopaedics, Spinal Surgery, Rheumatology, APOM, Imaging & Radiology						
NHSI Op Prod						

PHE MSK Health 5-Year Strategy

MSK Health Improvement Programme themes:

- Work & Health – supporting employers and employees to understand benefits of good MSK health
- Evidence into practice – scale up evidence-based interventions (PHE MSK Return on Investment Tool). Incorporate MSK health messaging into existing products such as MECC, One You and All Our Health
- Data & Intelligence – developing MSK Fingertips tool to support commissioning and planning of resources
- Workforce – work with Faculty of Public Health, Health Education England and Royal Society of Public Health to develop wider public health workforce

Musculoskeletal Health:

A 5 year strategic framework for prevention across the lifecourse

Department of Health and Social care working with Public Health England and Department for Work and Pensions

System Collaborators

Fingertips - MSK Regional Comparison

Indicator	Period	England	North East region	County Durham	Darlington	Gateshead	Hartlepool	Middlesbrough	Newcastle upon Tyne	North Tyneside	Northumberland	Redcar and Cleveland	South Tyneside	Stockton-on-Tees	Sunderland
Percentage reporting a long term Musculoskeletal (MSK) problem New data	2017/18	17.0	22.1	23.8	19.7	20.8	26.9	20.8	18.6	20.5	22.9	23.7	23.4	20.9	23.9
Back pain prevalence in people of all ages	2012	16.9	18.0	18.3	17.9	18.1	18.3	16.9	16.1	18.1	18.9	18.7	18.3	17.5	18.1
Prevalence of hip osteoarthritis in people aged 45 and over	2012	10.9	11.3	11.4	11.3	11.1	11.8	11.3	10.6	10.9	11.3	11.4	11.5	10.9	11.7
Prevalence of knee osteoarthritis in people aged 45 and over	2012	18.2	19.2	19.7	19.3	18.8	20.3	19.2	17.5	18.5	19.1	19.8	19.7	18.5	20.3
Rheumatoid Arthritis: QOF prevalence (16+)	2017/18	0.7	0.9	0.9	0.9	1.2	0.9	0.7	0.6	0.9	1.2	0.8	0.9	0.7	0.8
Hip fractures in people aged 65 and over	2017/18	578	638	680	714	644	733	646	634	707	523	526	617	616	691
Percentage of adults who do any walking, at least five times per week	2014/15	50.6	51.2	51.4	55.2	48.1	53.7	48.6	47.3	52.1	54.5	52.3	53.7	47.7	51.7
Percentage of physically inactive adults	2017/18	22.2	26.6	29.2	27.4	23.2	29.5	30.5	22.0	29.0	23.8	24.3	27.1	26.7	28.0
Percentage of adults (aged 18+) classified as overweight or obese	2017/18	62.0	66.5	66.7	68.3	68.3	70.4	64.9	60.8	64.9	62.2	72.5	71.7	68.0	69.2

https://fingertips.phe.org.uk/profile/msk

MSK Fingertips – Hartlepool Local Authority View

Estimated patient populations

Compared with benchmark: Better · Similar · Worse · Not compared

Recent trends: – Could not be calculated · No significant change · Increasing / Getting worse · Increasing / Getting better · Decreasing / Getting worse · Decreasing / Getting better · Increasing · Decreasing

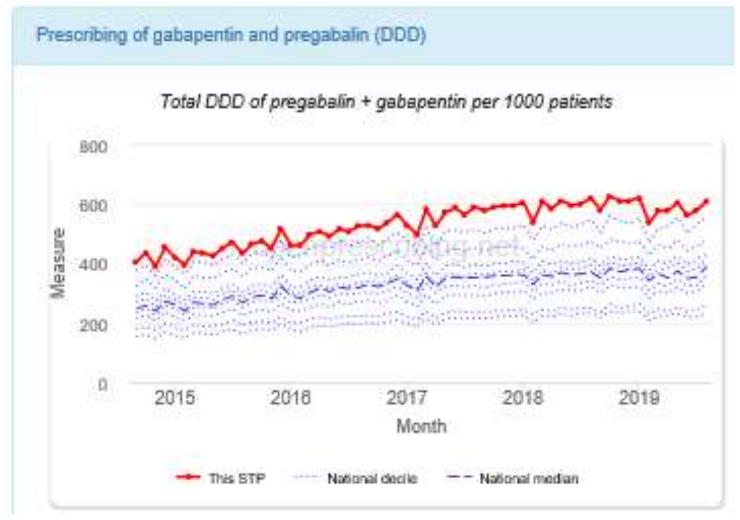
Export table as image · Export table as CSV file

Benchmark Value: Worst · 25th Percentile · 75th Percentile · Best

Indicator	Period	Hartlepool			Region	England	England		
		Recent Trend	Count	Value	Value	Value	Worst	Range	Best
% reporting a long term MSK problem	2017/18	–	-	26.9%	22.1%	17.0%	26.9%		8.6%
Back pain prevalence in people of all ages	2012	–	16,887	18.3%	18.0%	16.9%	20.2%		11.8%
Prevalence of hip osteoarthritis in people aged 45 and over	2012	–	4,867	11.8%	11.3%	10.9%	12.2%		9.6%
Prevalence of knee osteoarthritis in people aged 45 and over	2012	–	8,389	20.3%	19.2%	18.2%	20.9%		14.6%
Rheumatoid Arthritis: QOF prevalence (16+)	2017/18	➡	692	0.9%	0.9%	0.7%	1.2%		0.4%
Hip fractures in people aged 65 and over	2017/18	–	129	733	638	578	797		377
Percentage of adults who do any walking, at least five times per week	2014/15	–	-	53.7%	51.2%	50.6%	39.9%		68.1%
Percentage of physically inactive adults	2017/18	–	-	29.5%	26.6%	22.2%	37.1%		11.2%
Percentage of adults (aged 18+) classified as overweight or obese	2017/18	–	-	70.4%	66.5%	62.0%	74.4%		46.5%

https://fingertips.phe.org.uk/profile/msk

Primary Care Prescribing for Pain

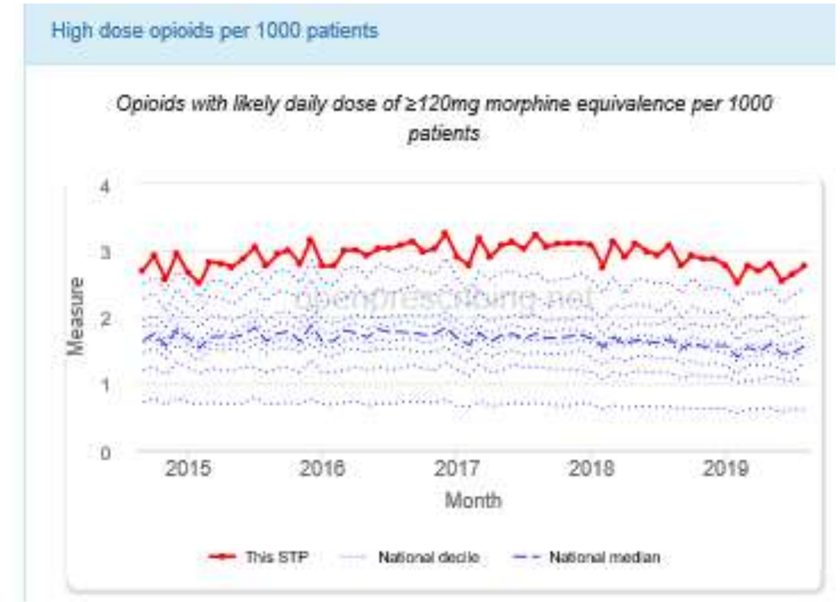


Prescribing of gabapentin and pregabalin (DDD) by CCGs in Cumbria and North East STP

Why it matters: Gabapentin and pregabalin are increasingly used in neuropathic and other types of pain, and use is rising rapidly in the NHS. There are also concerns about the potential for abuse and consequently both medicines have been reclassified legally (more information here). There appears to be no robust evidence for dose conversion between gabapentin and pregabalin. We have therefore chosen to use the Defined Daily Dose (DDD) for this measure. This is a similar dose ratio that Toth described in his paper on the substitution of gabapentin with pregabalin.

High dose opioids per 1000 patients by CCGs in Cumbria and North East STP

Why it matters: The Opioids Aware project seeks to improve prescribing of opioid analgesia. There is little evidence that opioids are helpful in long term pain, and the risk of harm increases significantly above 120mg morphine (or equivalent) per day, without much increase in benefit. We have assumed that if a patient is on regular doses of 120mg morphine a day or above that they are likely to have also had additional opioids for breakthrough pain. This is why we have set the threshold at ≥120mg morphine equivalence per day. The calculations are based on likely doses of long acting, regular opioids, for example morphine sulphate tablets or fentanyl patches. For example, we have assumed that MST 60mg tablets are “high dose”, as they are usually taken as one tablet twice daily (120mg daily dose), whereas MST 30mg are not, as the daily dose is 60mg. We have not included preparations used for breakthrough pain, e.g. Oramorph, or opioid injections which tend to be used more commonly in palliative care. We have calculated morphine equivalencies using the tables available from the Faculty of Pain Medicine, Royal College of Anaesthetists.



https://openprescribing.net/stp/E54000049/measures/

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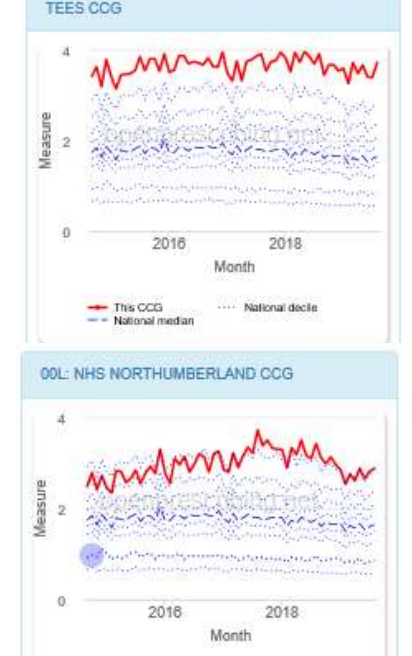

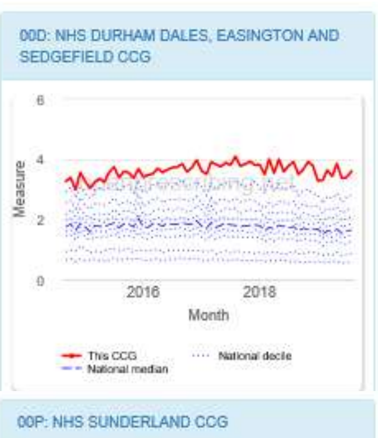

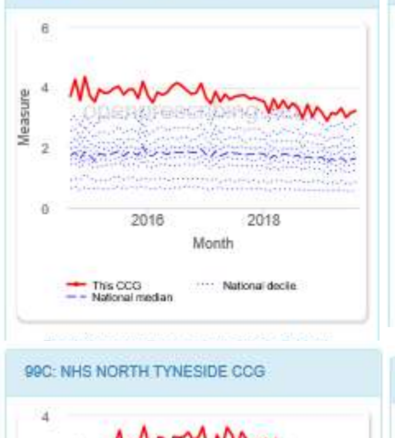

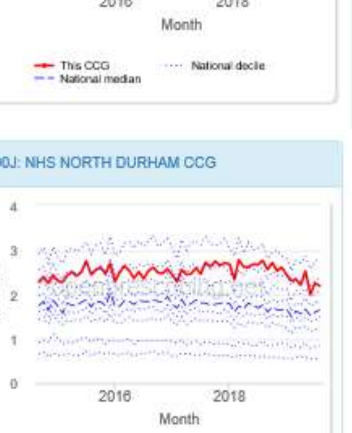

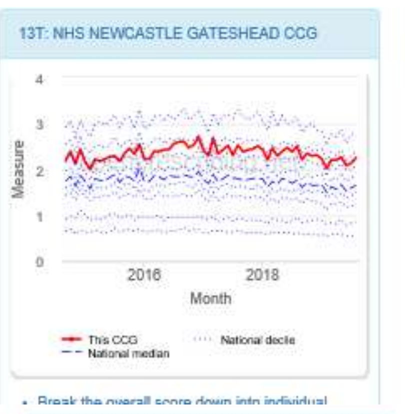

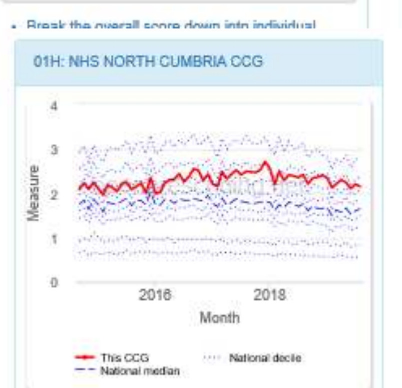

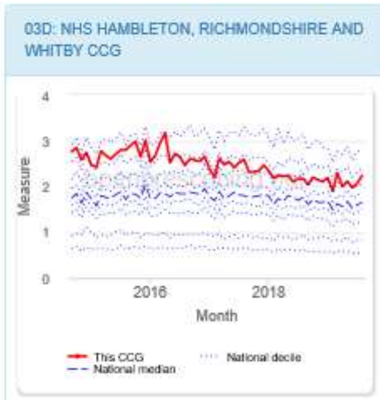

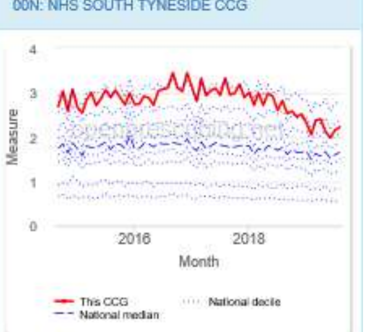

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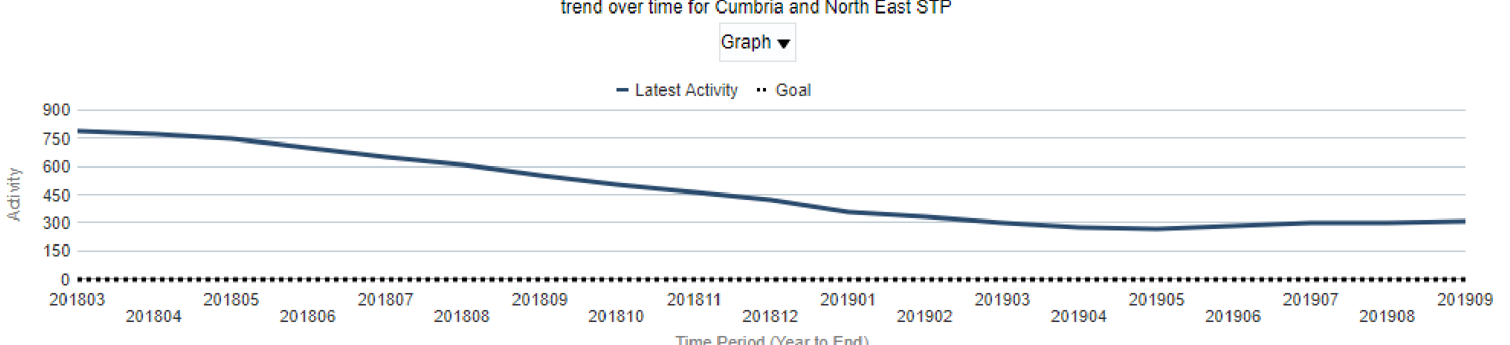
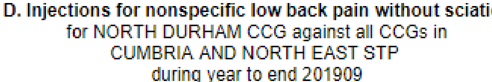
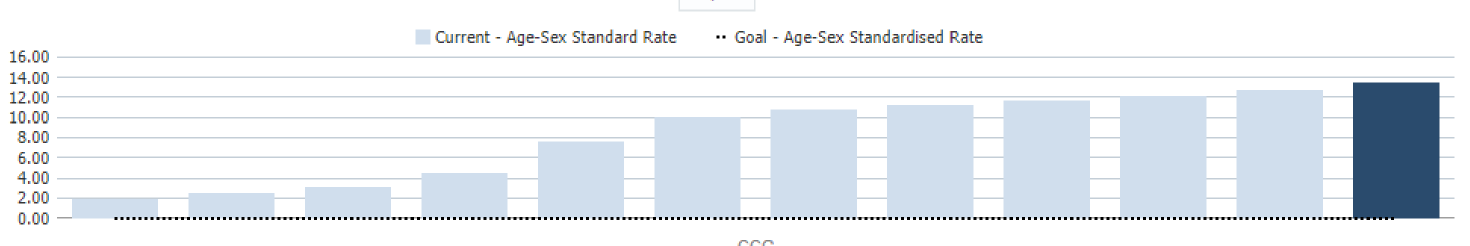
Evidence Based Interventions Dashboard – Back Injections







CCGs left to right
Age-Sex Rates per 100,00

- **Northumberland = 2.0**
- **Darlington = 2.6**
- **HAST = 3.2**
- **North Tyneside = 4.6**
- **HRW = 7.7**
- **DDES = 10.0**
- **North Cumbria = 10.8**
- **Newcastle Gateshead = 11.2**
- **South Tyneside = 11.70**
- **Sunderland = 12.1**
- **South Tees = 12.8**
- **North Durham =13.5**

The evidence-based interventions programme has been developed to help make sure patients are not offered unnecessary treatment on the NHS.

Injections for back pain without sciatica should not routinely be offered by in SY&B several hundred are done each year.

EBI Dashboard to track activity available on ePACT2

Provider Name	Spells
SPIRE WASHINGTON HOSPITAL	97
SOUTH TEES HOSPITALS NHS FOUNDATION TRUST	63
THE NEWCASTLE UPON TYNE HOSPITALS NHS FOUNDATION TRUST	54
SOUTH TYNESIDE AND SUNDERLAND NHS FOUNDATION TRUST	25
TYNESIDE SURGICAL SERVICES	23
NORTH CUMBRIA UNIVERSITY HOSPITALS NHS TRUST	22

Plus 10 NHS & Private
Providers <8 each (total 24)

Admissions for Non-Specific Back & Radicular Pain

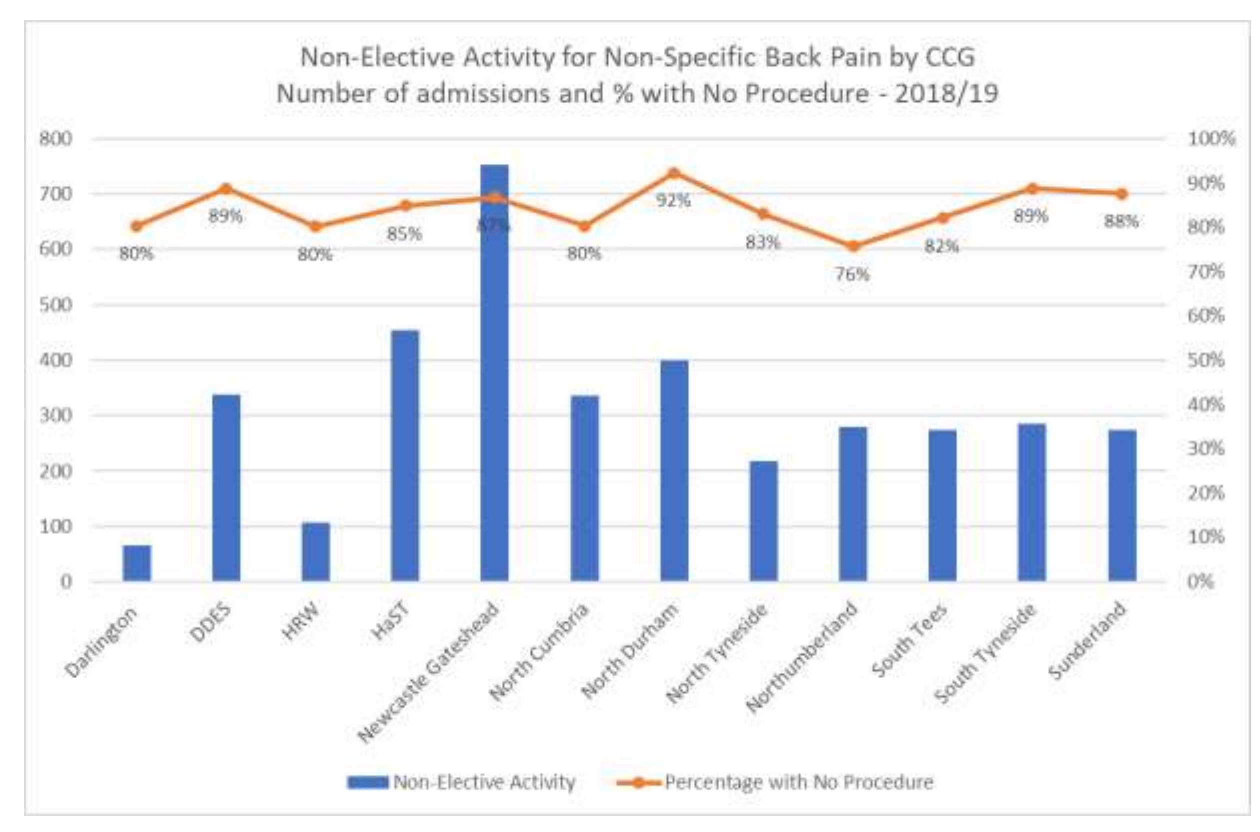
North East and North Cumbria - Non-Specific Back Pain Admissions

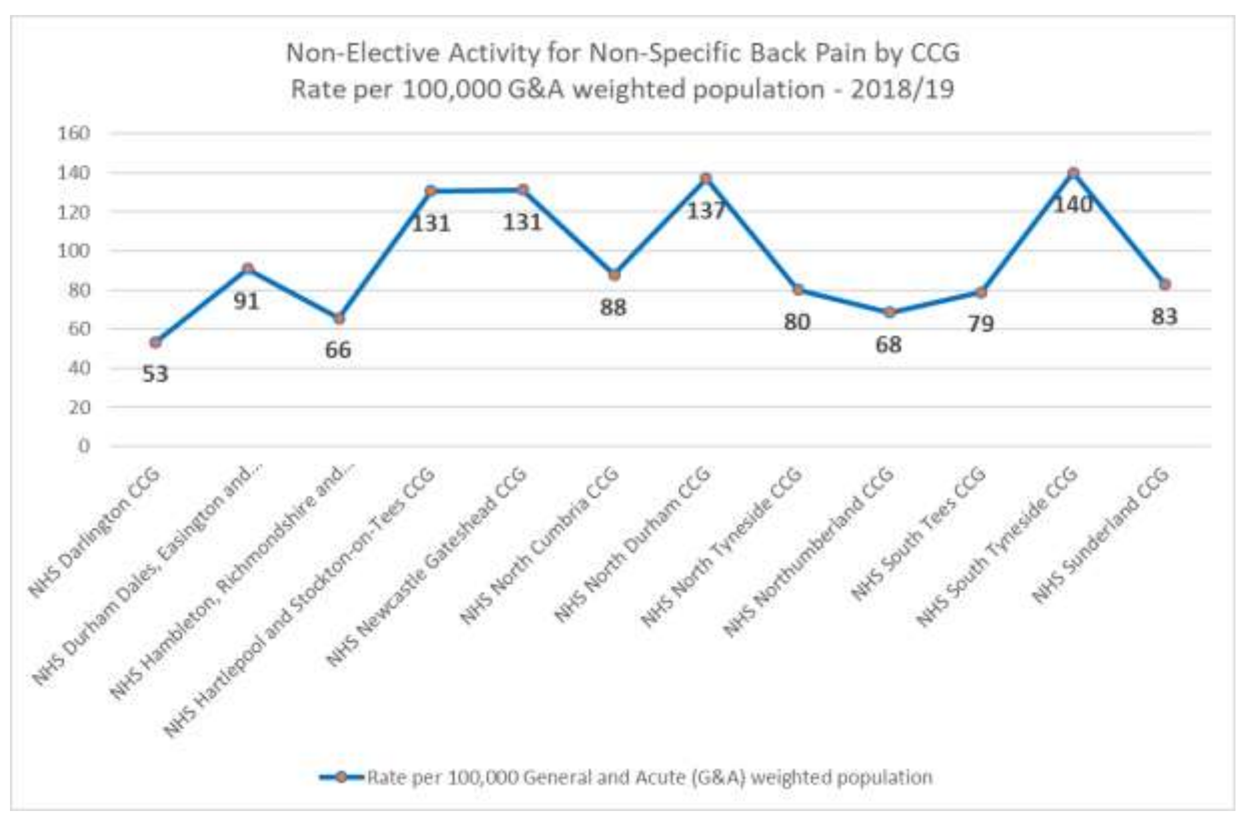
6000
5000
4000
3000
2000
1000
0

2014/2015
2015/2016
2016/2017
2017/2018
2018/2019

- A577: Injection of therapeutic substance around spinal nerve root
- V544: Injection around spinal facet of spine
- NULL
- A522: Therapeutic sacral epidural injection
- V255: Primary posterior decompression of lumbar spine NEC
- A521: Therapeutic lumbar epidural injection
- W903: Injection of therapeutic substance into joint
- V485: Radiofrequency controlled thermal denervation of spinal facet joint of lumbar vertebra
- A735: Injection of therapeutic substance around peripheral nerve
- V486: Denervation of spinal facet joint of lumbar vertebra NEC
- V254: Primary posterior laminectomy decompression of lumbar spine

Admissions for Non-Specific Back & Radicular Pain by CCG





Admissions for Non-Specific Back & Radicular Pain by Acute Trust Provider

Non-Elective Activity for Non-Specific Back Pain by Acute Trust
Number of admisisons and % with No Procedure - 2018/19

Acute Trust	Percentage with No Procedure
Newcastle Hospitals	75%
County Durham and Darlington	98%
North Tees and Hartlepool	85%
South Tees Hospitals	77%
Northumbria Healthcare	83%
City Hospitals Sunderland	87%
South Tyneside	94%
Gateshead Health	96%
North Cumbria University Hospitals	94%

Non-Elective Activity | Percentage with No Procedure

Newcastle Hospitals has the majority of non-elective admissions for non-specific back and radicular pain.

Newcastle and South Tees are more likely to undertake procedures but a high proportion have no procedures undertaken during their non-elective admissions.

High Impact Interventions

- **STarT Back tool** - a stratified care approach that can be successfully embedded into normal primary care. It matches patients to treatments based on prognosis or risk of poor clinical outcome. (https://startback.hfac.keele.ac.uk/)

- **Back Skills Training (BeST)** - focuses on ‘undoing’ beliefs about low back pain, and provides skills to become more active, despite pain. The programme was developed by experts in psychology, physiotherapy, cognitive-behavioural therapy, and people with long-standing low back pain. (https://www.futurelearn.com/courses/back-skills-training-programme)

- **Joint Pain Advice** - model of care is a safe and cost effective alternative to GP consultations. Involving a series of face-to-face consultations, Advisors work collaboratively with people with hip and/or knee osteoarthritis and/or back pain, focusing on supporting self-management. (https://healthinnovationnetwork.com/projects/joint-pain-advisor-exploring-a-new-model-of-care-for-chronic-joint-pain/)

- **ESCAPE Pain** - rehabilitation programme for people with chronic joint pain which integrates self-management and coping strategies with an exercise regimen individualised for each participant (https://escape-pain.org/)

- **First Contact Physiotherapy Practitioners** - First Contact Physiotherapists (FCPs) are advanced practitioners working within primary care with extensive expertise in the clinical assessment, diagnosis and management of musculoskeletal (MSK) conditions. FCPs see patients with (suspected or diagnosed) MSK conditions as the first point of contact, instead of a GP, and can be accessed directly by contacting the practice’s reception. (https://www.csp.org.uk/publications/guide-implementing-physiotherapy-services-general-practice)

Supporting System Improvement for Conditions of Musculoskeletal Pain in North East and North Cumbria

NHS

Need to bring together improvement work across regional workstreams:

- Orthopaedic Alliance
- Spinal Surgery Network
- Regional Back Pain Programme
- AHSN Regional Opioid Strategy Group
- Better Health at Work Award
- MSK First Contact Practitioner emerging workforce in Primary Care Networks

Need to identify other relevant workstreams and intelligence to support this improvement work.