

Patient Reported Outcome Measures (PROMs) Analysis of pre-operative scores

Welcome

Welcome to the first Yorkshire and the Humber Quality Observatory (YHQO) briefing. We were established by NHS Yorkshire and the Humber to provide information and guidance on the quality of NHS services in the region. We provide health intelligence support to the NHS Quality, Innovation, Productivity and Prevention (QIPP) agenda, helping to improve the quality and productivity of NHS services across the region. Our overall aim is to support clinicians and NHS organisations to deliver high quality care to their patients.

This first briefing focuses on Patient Reported Outcome Measures (PROMs), a data source which has the potential to inform improvement of services and reduce inequalities in the region.

Background

Data from the first collection of PROMs were released by the NHS Information Centre for Health and Social Care in April 2010, covering four procedures – hip replacement, knee replacement, groin hernia repair and varicose vein stripping. Since April 2009, patients undergoing these procedures have completed questionnaires, rating the severity of their symptoms before, and then several months after, the operation. Clearly, the real value of PROMs data will be in assessing patient-reported improvement in symptoms pre-operation to post. Post-operative data will be released in September 2010 and will be covered in a future briefing - in the meantime, this briefing summarises key findings from analysis of pre-operative data.

Key Messages

- Nationally, **there is a wide range of pre-operative ratings of severity of symptoms across PCTs** and this is equally true for Yorkshire and the Humber (YH). The data suggest that, compared to the national picture, PCTs in YH tend to operate later in the progression of the condition on knee replacement, hip replacement and groin hernia repair, and to operate earlier on varicose vein stripping.
- Nationally, the data suggest that **patients in more deprived areas are being operated on later in the progression of their condition**. There is some evidence that **those in more deprived areas are less likely to have an operation at all**. These findings are likely to be equally true for YH.

Points to note

The results should be treated with some caution.

Although the national sample size is large (67,000), on average across conditions, this represents only 37% of the 180,000 operations conducted from Apr-Dec 2009. At these relatively low coverage levels, there is an opportunity for systematic bias eg participation is voluntary and those from more deprived areas may be more reluctant to participate.

Also, PROMs are subjective ratings by patients, not objective measures. There may be further systematic bias across types of patients eg for the same objective severity of symptoms, younger people may rate them as more severe than older people.

Results

Range of ratings within a condition

Nationally, there is a wide range of pre-operative ratings for severity of symptoms across PCTs, suggesting that some PCTs are tending to operate later in the progression of the condition than others. This is also true within YH: for example, patient-reported pre-operative knee replacement symptoms are more severe in NHS Doncaster than in NHS North Yorkshire and York; hip replacement symptoms are more severe in North East Lincolnshire Care Trust Plus than in NHS Sheffield.

For varicose veins, in YH compared to other SHAs, patients have the least severe symptoms at the pre-operative stage. However, for the other three conditions, patients of YH PCTs tend to have relatively more severe symptoms before treatment.

Looking across all four procedures, the ranking of an individual PCT can vary considerably. In the table below, the highest quintile Q1, is the quintile where patient-reported symptoms are the least severe at the pre-operative stage; the lowest quintile, Q5 is where symptoms are most severe. Many PCTs fall into a higher quintile (less severe symptoms) for varicose veins than for other conditions. Note also differences within PCT, with NHS Hull for example, falling in Q2 for knee and Q5 for hip replacement.

| PCT | Quintiles | | | |
|---|-----------|-----|--------------|----------------|
| | Knee | Hip | Groin hernia | Varicose veins |
| NHS Doncaster | Q5 | Q5 | Q5 | Q2 |
| NHS Wakefield | Q5 | Q4 | Q1 | Q1 |
| NHS Barnsley | Q5 | Q5 | Q4 | Q1 |
| North East Lincolnshire Care Trust Plus | Q4 | Q5 | Q3 | Q1 |
| NHS Rotherham | Q4 | Q4 | Q5 | Q2 |
| NHS Leeds | Q4 | Q4 | Q3 | Q1 |
| NHS North Lincolnshire | Q4 | Q5 | Q5 | n/a |
| NHS Calderdale | Q3 | Q3 | Q1 | Q1 |
| NHS Bradford and Airedale | Q3 | Q3 | Q4 | Q3 |
| NHS Hull | Q2 | Q5 | Q4 | Q3 |
| NHS East Riding of Yorkshire | Q2 | Q4 | Q4 | Q2 |
| NHS Sheffield | Q2 | Q2 | Q4 | Q1 |
| NHS Kirklees | Q2 | Q2 | Q1 | Q1 |
| NHS North Yorkshire and York | Q1 | Q2 | Q1 | Q5 |

NHS North Lincolnshire varicose veins data not available due to sample size <30

Socio-economic deprivation

Nationally, there is a statistically significant correlation between deprivation and pre-operative severity of symptoms. At the pre-operative stage, patients living in more deprived areas tend to have more severe symptoms than those from less deprived areas; this suggests that they are being operated on later in the progression of their condition. The correlation is particularly strong for knee replacements and weaker for varicose vein stripping.

We could also hypothesise that patients from more deprived areas have lower expectations of health. If that were true, then for a given objective severity of symptoms, they would report them as less severe than an individual from a less deprived area. If this were so, then these results would actually understate the scale of the issue.

It is likely that all the above applies also to YH, but without access to data at individual patient level, sample-size issues prevent any conclusive analysis.

Nationally and regionally, there is also some evidence that there is an under-representation in people undergoing these operations from deprived areas within a PCT.

Further information

Please contact Scott Anderson by email: sa639@york.ac.uk



Yorkshire and the Humber
Quality Observatory

YHQO Yorkshire and Humber Quality Observatory

Innovation Centre, York Science Park
The University of York, Heslington
York YO10 5DG