Clinical engagement with HoNOS

Project report prepared for NHS England as part of Healthy London Partnership and London Mental Health Transformation Programme

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EXECUTIVE SUMMARY

Background

Improving quality of mental health care is a priority for the NHS. To know if quality is improving, the outcomes of care must be known. Mental health services in the NHS routinely collect data that could be used to measure outcomes and improve the quality of the services they provide, including the Health of the Nation Outcome Scale (HoNOS). HoNOS is routinely collected in mental health services in England but is usually used to classify patients into clusters of similar symptoms and resource requirements (using the Mental Health Clustering Tool) rather than to assess outcomes. This project was commissioned to understand more about how clinicians engage with HoNOS as an outcome measure, with a view to improving practices around its use.

Research questions

What are elements of good practice in the use of HoNOS data by NHS mental health trusts? How can these good practices be implemented across other trusts, and embedded in the clinical culture, helping clinicians to engage with HoNOS as an outcome measure?

Methods

The research was conducted in two stages among mental health trusts in London along with Northumberland, Tyne and Wear, with the intention of identifying elements of good practice that could be applied to trusts elsewhere. Stage one consisted of an online survey of clinical and non-clinical staff at ten participating trusts, collecting information on understanding of and attitudes to HoNOS, as well as information on the processes

employed in its collection and documentation. Participants were also asked what other outcomes are collected in their organisations.

Stage two consisted of a series of eight focus groups, each conducted with staff members of a single trust, in which participants' views and experience of using HoNOS were explored, as well as their ideas on how to improve clinician engagement in the use of HoNOS as an outcome measure.

Current issues in relation to use of HoNOS

Variability across and within trusts

There is wide variation in how trusts currently engage with HoNOS. Implementing good practice at some trusts would require considerably more investment to equip them with the capacity to conduct those good practices. For example, some trusts have staff with a long history of engagement with HoNOS predating the introduction of cluster-based needs assessment, acting as champions of outcome measurement and promoting a good level of understanding among their colleagues. However, other trusts have few or none of these team members, and others reported that they had never used HoNOS before clustering was introduced, or that many of their staff had no idea of HoNOS as distinct from clustering.

High completion rates but data quality uncertain

Trusts consistently reported high levels of completion of mandated HoNOS scoring as part of the clustering process, with completion rates closely monitored and performance managed. However, the quality of the HoNOS data were largely unknown, with no routine quality checks or auditing of inter-rater reliability or validity of HoNOS scores apart from cluster validity checks. Participants highlighted variability in levels of training and experience of those completing HoNOS scores, as well as timing and frequency of scoring.

Training not a priority

While trusts offer training that covers HoNOS scoring as part of training on clustering, participants reported that training did not commonly address HoNOS as a distinct outcome measure separate from clustering. There were reports that some junior staff were required to complete HoNOS scores before they had necessarily completed the training, and that while HoNOS training had been a priority in the past, it was not a focus of recent attention. The online survey results showed limited or mixed knowledge of the training offered within the participants' own trust.

Clinicians disengaged

Participants commonly reported that clinicians viewed HoNOS as a bureaucratic, administrative tool rather than something with meaning to their clinical role, and that this was driven by HoNOS' association with clustering and performance management, the link to payment, and the lack of feedback.

A burden on overwhelmed frontline staff

HoNOS was seen to be a time-consuming activity taking clinicians away from their clinical roles, and that staff felt overwhelmed by the amount of data collection they were required to perform.

Problems with sustainability

Past efforts to engage clinicians in the use of HoNOS as an outcome measure, and to inform service improvement, have not been sustained due to the high input of time and effort required to conduct these activities. This problem may be addressed by finding ways to automate processes and build them into routine practice, to avoid either the requirement for additional dedicated analytical support, or adding to the administrative burden on busy clinicians.

Different motivations to use individual-level and aggregate data

There are separate motivations for using HoNOS at the *individual level* of a patient, as an outcome measure or for assessment of needs, compared with using *aggregate level* HoNOS data to inform service improvement or for monitoring of quality. Even where aggregate use is the primary goal, it may be necessary to improve clinicians' engagement with individual level use, in order to gain high-quality data. Without a clinical purpose for the data, collection and documentation of HoNOS data may be perfunctory.

An appetite to use HoNOS

Despite the range of problems associated with using HoNOS, participants expressed a willingness to see the situation improve and for HoNOS to be routinely employed as an outcome measure. They cited an ethical imperative to use the data, since it is and has been collected, and reported that past experience of using and feeding back HoNOS to clinical teams had been rewarding and useful.

Recommendations for introducing elements of good practice

1. Meaningful feedback of aggregate and individual-level data

Participants at all trusts highlighted the need for aggregate and individual-level HoNOS data to be fed back to clinicians, teams, and managers in a way that is timely, clinically meaningful, visually appealing, and easily interpretable. Efforts are underway at some trusts to build HoNOS data reporting into existing software. Challenges yet to be overcome include linking HoNOS to clinically relevant data to allow for meaningful comparisons to be made, difficulty interpreting scores, lack of consensus on the best approach to analyse HoNOS, and the human and technological resources needed for processing and presenting results.

2. *Rebrand HoNOS*

A common suggestion was that HoNOS needed to be rehabilitated as an outcome measure in the minds of clinicians. Approaches to this rebranding included: separating HoNOS from clustering; employing examples and vignettes to demonstrate how individual-level and aggregate HoNOS data can be used by clinicians; aiding the interpretation of HoNOS scores by providing a 'normal' range or clinical cut-offs; and making the HoNOS score part of the clinical consultation to inform practice.

3. *Improve training*

Ideas for improving HoNOS training included: emphasising HoNOS as distinct from clustering and educating staff about its use as an outcome measure; common training resources; and mandated refresher training.

4. *Rationalise and streamline data collection*

To reduce the data collection burden on clinicians and free up time for meaningful engagement with HoNOS, many trusts suggested that there should be a review of the data collection requirements and processes. This would including checking that all data collected were necessary, and looking for ways to introduce more efficient, possibly automated, methods of data collection.

5. *National and organisational leadership*

Clear and directive leadership was called for by many participants, to set expectations and standards, and channel efforts into a unified direction. Areas highlighted as needing leadership included maintaining consistency of direction by policymakers, selecting a standard method for analysis of HoNOS, and setting a shared set of goals and objectives around the role of outcomes measurement in mental health services. The need for buy-in from organisational leaders was also raised, since at present they are

incentivised to promote rates of completion of clustering, but not to engage with or demand meaningful use of outcome measures among their staff.

6. *Standardisation*

Standardising processes and practices across and within trusts would allow for economies of scale and resource sharing, as well as promoting clinically meaningful interpretation and comparison of HoNOS data from different settings. Areas which could benefit from a standard, shared approach include: timing and frequency of HoNOS scoring, methods for documentation of data, training materials, requirements for initial and refresher training, processes for accountability and audit to promote good quality data, consistency of disease classification and contextual information documented alongside HoNOS to allow for meaningful comparisons, resources for automating reports and providing feedback of HoNOS to teams and individual clinicians, and requirements for reporting data to commissioners and the NHS.

INTRODUCTION

Improving quality of mental health care is a priority for the NHS. To know if quality is improving, the outcomes of care must be known. Mental health services in the NHS routinely collect data that could be used to measure outcomes and improve the quality of the services they provide, including the Health of the Nation Outcome Scale (HoNOS). This project was commissioned to understand more about how clinicians engage with HoNOS as an outcome measure, with a view to improving practices around its use.

NHS mental health trusts face growing demand for their services and continued constraints on resources to meet the demand [2]. They need to know which of the services they provide are the most efficient at generating good outcomes for patients, in order to allocate available resources to achieve the most health benefit.

Mental health services in England are predominantly funded through block contracts, in which a fixed sum is paid for a set of services, such as provision of mental health services within a specified area. New models of payment (episodic payment and capitation) have been proposed that would incentivise trusts differently. These alternate payment approaches require that care quality and patient outcomes be measured and monitored to ensure that providers are delivering not only a sufficient quantity of service but also maintaining high quality of care. Under such arrangements, the payments trusts receive would be based on their performance as measured in terms of patient outcomes, with the intention that this will incentivise trusts to improve the quality of their services and improve patient outcomes [3].

The Health of the Nation Outcome Scale (HoNOS) is routinely collected in NHS mental health trusts and has therefore been proposed as an outcome to underpin new models of payment.

What is HoNOS?

HoNOS was originally developed by clinicians at the Royal College of Psychiatrists in the 1990s for use as a Clinician Rated Outcome Measure (CROM). It captures twelve domains of patients' health and social functioning [1] , each rated from 0 (no problems) to 4 (severe/ very severe problems), with the domains covering:

1. Overactive, aggressive, disruptive or agitated behaviour
2. Non-accidental self-injury
3. Problem drinking or drug-taking
4. Cognitive problems
5. Physical illness or disability problems
6. Problems associated with hallucinations and delusions
7. Problems with depressed mood
8. Other mental and behavioural problems
9. Problems with relationships
10. Problems with activities of daily living
11. Problems with living conditions
12. Problems with occupation and activities

To be used as an outcome measure, the most suitable approach is to measure change in HoNOS over time, requiring measurement at at least two distinct time points. A single HoNOS score for a patient would not function as an outcome measure, since there are

no reference ranges to interpret the level. Measuring HoNOS at the beginning of an episode of care and again after some time under treatment allows the change to be interpreted as improvement or deterioration, accounting for the patient's individual mix of symptoms and functional impairment.

There are different approaches to interpreting change in HoNOS score. The simplest is to look at the change in the total score, although this can be insensitive to change (for instance if one area improves and another deteriorates), and does not provide any insight into what has changed. To overcome this, all twelve domain scores can be examined for change, sometimes presented as a change in graphical profile, but this can be difficult to interpret due to the amount of information.

Classifying approaches have been developed to aid in the interpretation of change in HoNOS scores. For example, the four factor model groups the domains into similar 'factors' (personal wellbeing, emotional wellbeing, social wellbeing, and severe disturbance) [4]. The categorical change approach classifies the score on each domain as low (0-2) or high (3-4) and then examines whether the domain score changes category over time (e.g. high to low on domain 9, problems with relationships) [5]. The reliable and clinically significant change approach looks to see if changes show evidence that they are not just due to errors in measurement, and are of a magnitude to capture meaningful improvement [6].

HoNOS scores are good predictors of health care utilisation, and so a single measure can be used to classify the patient according to their level of need for services. Collection of HoNOS data by mental health services is now mandated as part of the Mental Health Services Dataset (MHSDS). It is used as part of the standard process of assessment and classification, termed 'clustering'. Clustering was developed to allocate patients to groups that would have similar resource requirements to be used as classification system or unit of activity for the new models of payment. The Mental Health Clustering Tool (MHCT) is used as standard across mental health trusts to assign patients to groups that are thought to have similar symptoms and needs for services. It combines the HoNOS and the Summary of Assessments of Risk and Need, and is to be completed by a clinician who knows the patient regarding their condition in the prior two weeks, and taking into account historical events. The first twelve questions

of the MHCT are formed by the HoNOS, but there is no distinct labelling of “HoNOS” as part of the tool when clinicians are completing the MHCT for a patient. Clinical staff working in mental health services undergo training in how to complete clustering, but not necessarily training in the HoNOS as a separate entity or outcome measure.

Although it was originally developed as an outcome measure, HoNOS is not in widespread use in the UK as an outcome measure distinct from the MHCT. There is currently no standard approach to measuring outcomes in mental health services in the NHS [7]. HoNOS can be used as an outcome measure at different levels of aggregation, either examining the progress of an *individual patient*, or to monitor trends in how *groups of patients* are progressing. At the individual level, HoNOS results can be used to inform care planning, or to evaluate the effectiveness of interventions [8], but there are mixed views on whether or not this is useful to the clinician or patient [9], and evidence shows that this is not often done [10]. Aggregate HoNOS data can be used to inform the evaluation and improvement of practices, often at a team or service level. For example, Crawford, Zoha [5] discuss the use of HoNOS to examine validity of admission practices, to monitor patterns of service effectiveness for different groups of patients, and to examine quality of care.

Implementing practices to routinely and efficiently measure, monitor and feedback outcomes could be a way to underpin improvement in outcomes, and help services to meet the expectations of those funding and commissioning their services [5].

METHODS

This research project was commissioned by NHS England as part of the Healthy London Partnership and London Mental Health Transformation Programme, which has representation from all mental health trusts across Greater London, in collaboration with the Northumberland, Tyne and Wear Mental Health Trust, leading to a total of ten participating trusts.

Project objective

To identify elements of good practice in the use of HoNOS data by mental health trusts, with a view to implementing good practices across trusts, focusing on clinical engagement with HoNOS.

The project was conducted in two stages. First, an online survey was used to gather information from members of clinical and non-clinical staff at each trust. Second, a series of focus groups were held with staff of each participating trust. The information from stage one was used to inform the discussions in stage two. The focus groups were recorded and transcribed, and qualitative thematic analysis performed to identify issues and practices around clinical engagement with HoNOS as an outcome measure.

Part 1: Online survey

The first stage of the project was to collect data across each of the ten trusts to gain an understanding of how clinicians, managers, and other staff within trusts view and use HoNOS. Along with information about the individual, such as their role and level of experience, the survey collected data on:

- Whether respondents were aware of and had completed HoNOS rater training, and whether they thought the training offered within their trust was different to standard cluster training.
- Process information on collection and documentation of HoNOS data in their trust, including who scores patients, how it is recorded, frequency and timing of scores, and other information documented alongside HoNOS, such as the person or team who conducted the rating, or whether it was collected as part of an MHCT.
- How they perceive HoNOS data to be used outside their organisation.
- Use of HoNOS data within their organisation, including whether it was fed back to individual clinicians or teams, either at the individual patient or aggregate level, which types of staff use the data and to what use they put it, and what systems were in place to help with analysis of HoNOS data.
- Methods for analysis of HoNOS data used in their service.
- Their perceptions of organisational culture regarding HoNOS, attitudes to it, quality of HoNOS data, and advantages and disadvantages of collecting HoNOS data.
- Barriers and facilitators to collecting and using HoNOS data, and suggestions about how it could be used to help their organisation.

A total of 70 participants across 10 trusts completed the online survey between December 2017 and February 2018. (See appendix 1 (page 46) for the full survey text.)

Part 2: Focus groups

The second part of the project was to conduct focus groups with members of staff at each trust. The purpose of the focus groups was to explore and gain deeper understanding of attitudes, beliefs, experiences, and ideas regarding the use of HoNOS as an outcome measure, with a particular focus on clinician engagement. All London trusts and NTW were offered the opportunity to participate, and each focus group was conducted by both members of the project team.

A total of 8 focus groups were conducted, each only with participants from a single trust, with 45 participants in all. Trusts that participated in the focus groups were: West London Mental Health NHS Trust (WL), East London NHS Foundation Trust (ELFT), Northumberland, Tyne and Wear NHS Foundation Trust (NTW), South West London & St George's Mental Health Trust (SWLSG), South London and Maudsley NHS Foundation Trust (SLAM), North East London NHS Foundation Trust (NEFLT), Central and North West London NHS Foundation Trust (CNWL), and Camden and Islington NHS foundation Trust (C&I).

Topics for discussion at the focus groups were informed by prior research regarding use of outcome measures in mental health [5, 7, 10]. A general discussion guide was developed (see appendix 2 (page 73)), and modified for each focus group based on that trust's online survey results from stage one. A series of open-ended questions explored attitudes to, beliefs about, and experience with HoNOS among participants, and asked them to reflect on the attitudes and beliefs of their colleagues. Participants were asked to discuss processes and systems involved in collection, documentation, and use of HoNOS data at their trust, and how these could be improved. The discussion was directed to explore the feedback of HoNOS data to clinicians about individual patients, and to teams about groups of patients. Participants were asked to share their ideas about how the use of HoNOS could be improved in their trust, considering clinical culture, processes and systems, technical capacity, training, and methods for use of data at different levels of the organisation. Finally, they were asked to vote on the list of

ideas for improvement generated by the group, with each person nominating their top priority for change.

Each focus group was recorded and transcribed verbatim. The transcriptions were reviewed, and analysed using established qualitative research methods [11]. Labels ('codes') were applied to phrases or sentences that captured relevant issues to the research question. The codes were partially determined in advance (a deductive approach) based on prior knowledge from the literature about issues likely to be of relevance, in relation to use of outcomes in mental health services [7], culture within NHS organisations [12], and innovation within healthcare service delivery [13]. Additional codes and themes were also allowed to emerge from the data (an inductive approach to analysis). Analysis was conducted in NVivo11. A coding framework which linked individual codes into groups (or 'themes') was developed prior to analysis and underwent modification as additional codes and themes emerged and relationships between them became apparent (see appendix 3 (page 76)).

Once the data were coded, a framework matrix was produced in which the coded phrases were charted in groups classified by column and row. The columns grouped data by theme, and the rows by trust. This allowed comparison of how similar or different themes were across trusts. The framework, and the original text from which the codes and themes arose, were then interpreted by the research team to produce lists of key issues and ideas for change arising from the focus group discussions, with quotes to illustrate these themes.

FINDINGS

Online survey results

While the online survey was able to provide direction on relevant issues for discussion in the focus groups, direct responses to questions about the processes of collecting and documenting HoNOS scores were difficult to interpret due to variation between staff members within a trust. This may suggest that practices vary within each trust, or that participants in the survey had differing levels of experience with HoNOS and some were unaware of usual processes.

Figure 1. Number of participants in online survey per participating trust

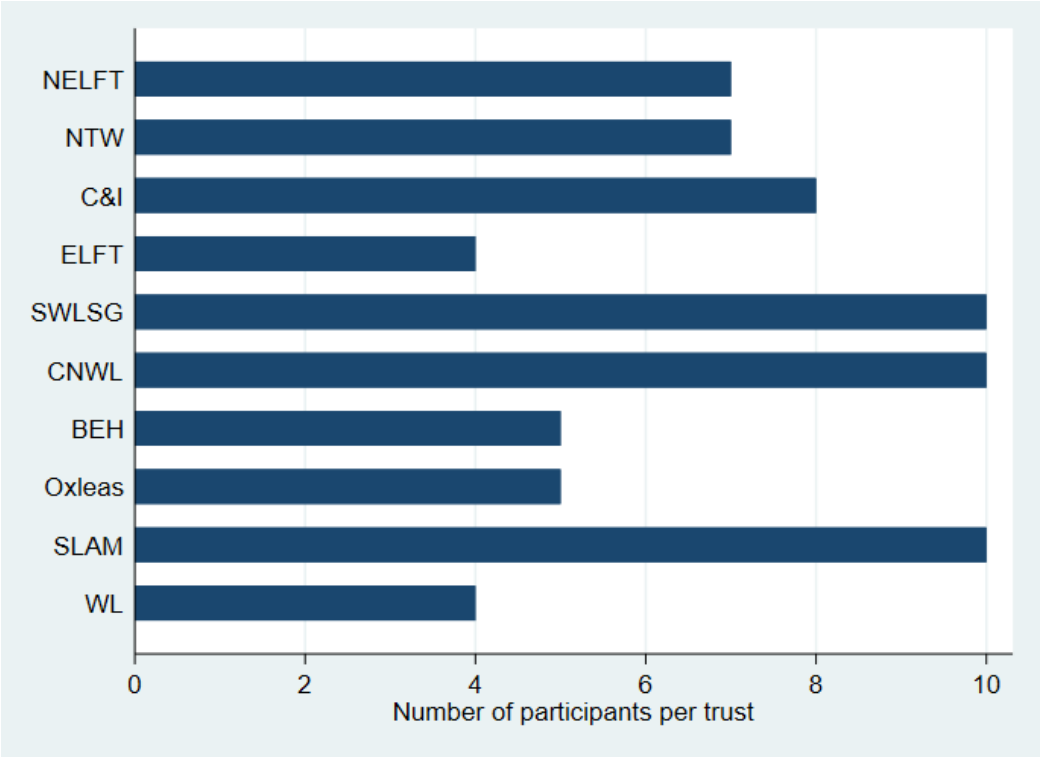
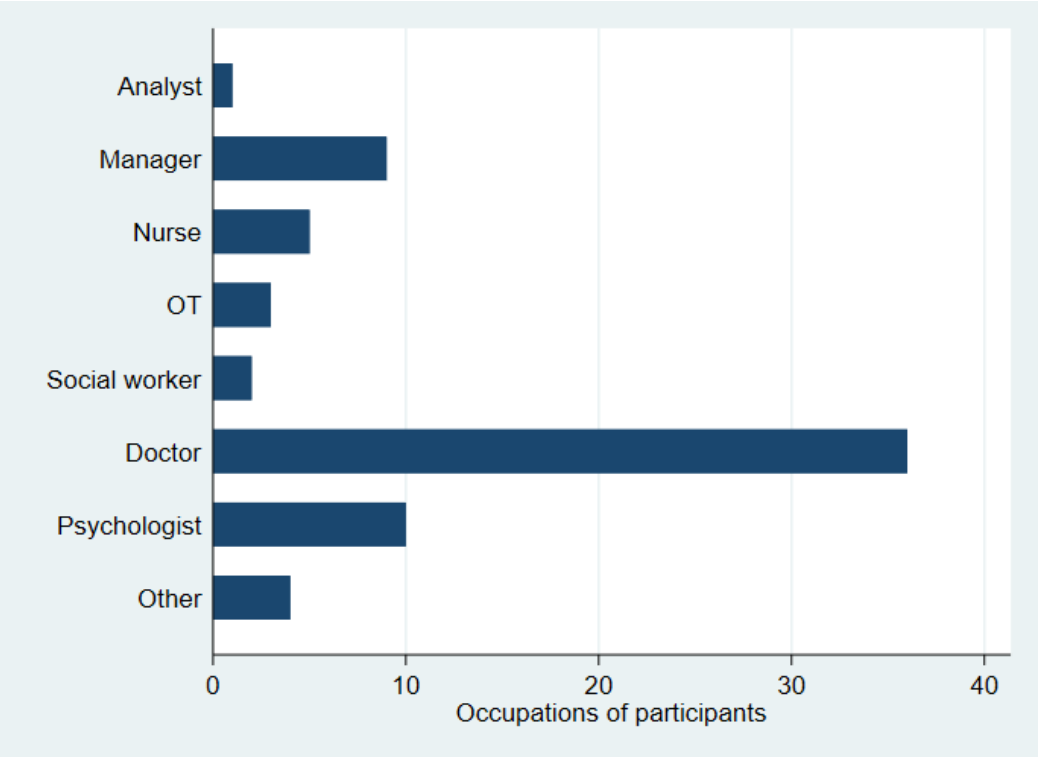


Figure 2. Occupations of online survey participants



Information was sought on other outcome measures currently in use in different types of services. The following outlines any measure reported to be used by at least one participant at a particular trust.

Figure 3. Outcome measures in use in adult outpatient services

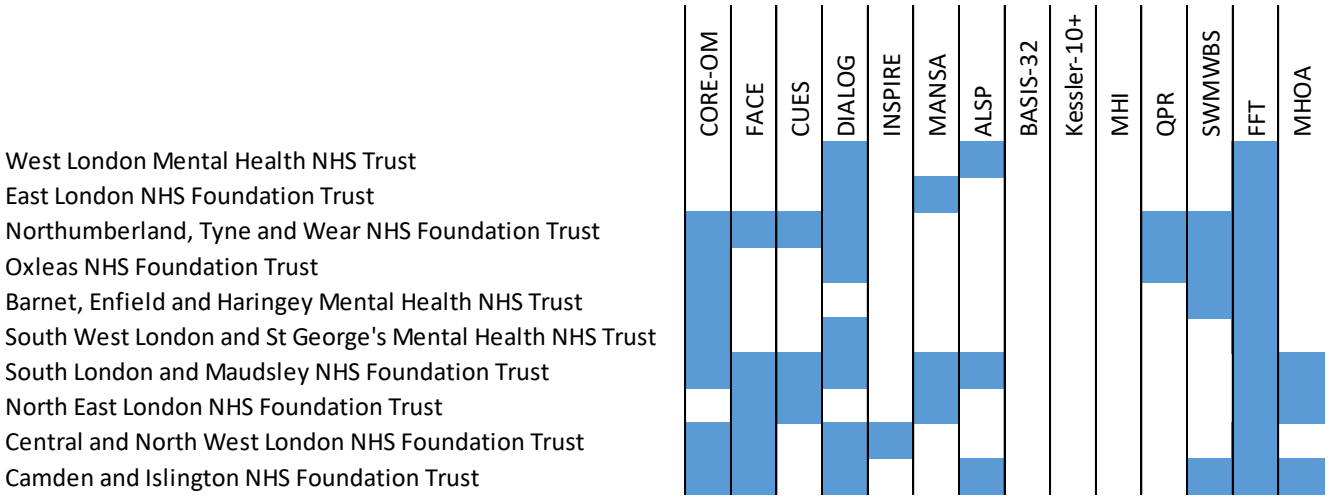


Figure 4. Outcome measures in use in adult inpatient services

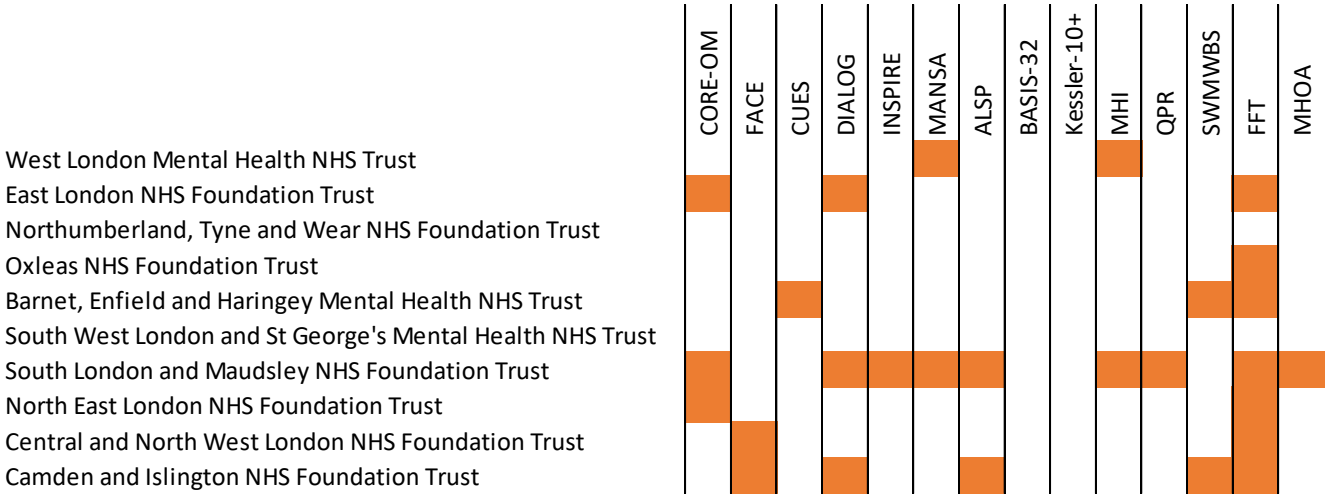


Figure 5. Outcome measures in use in CAMHS outpatient services

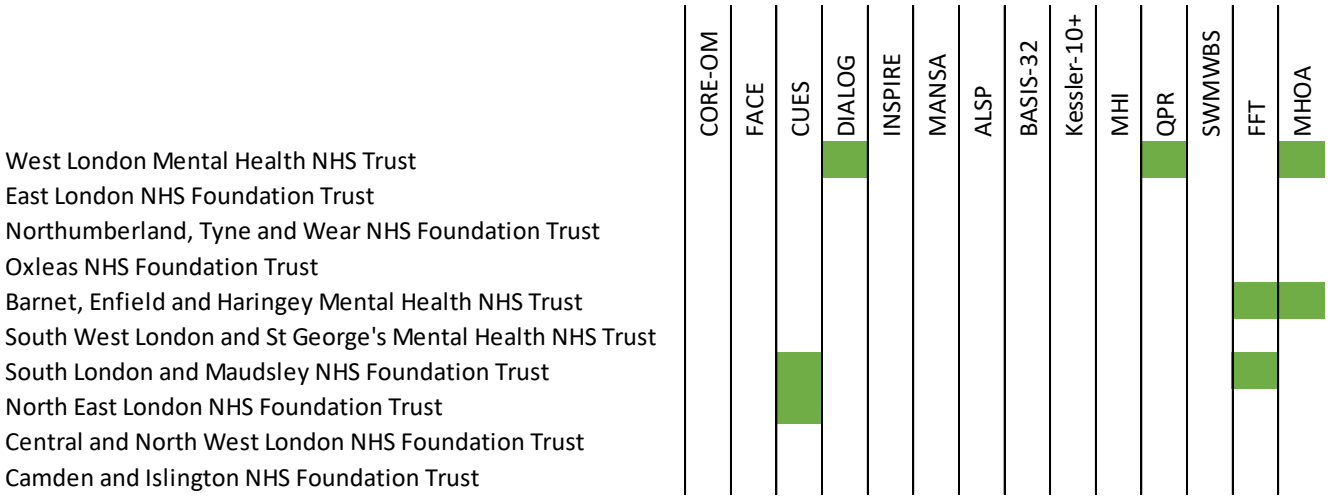
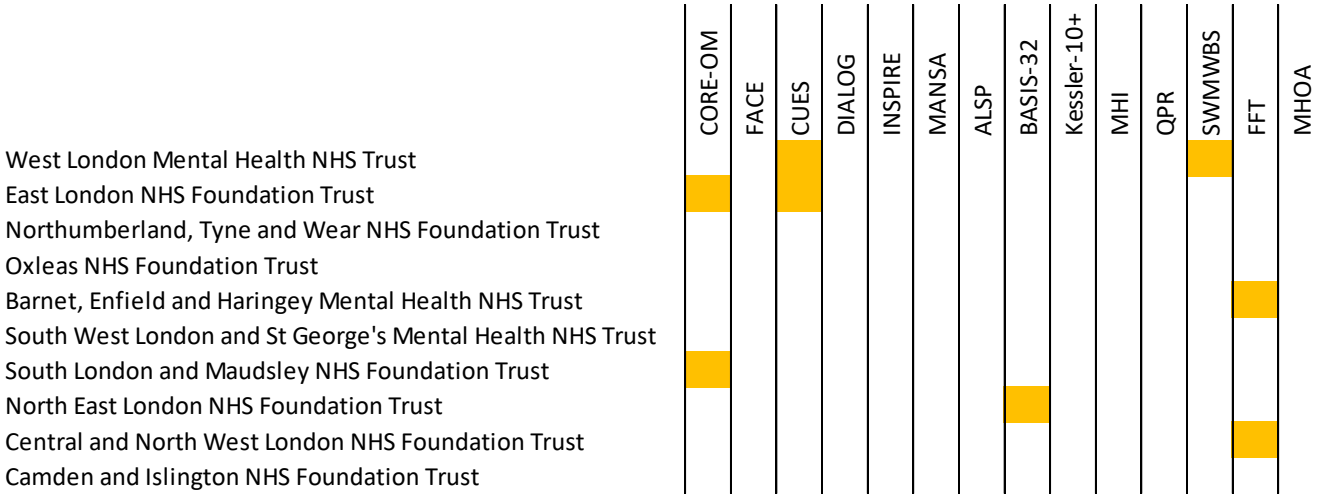


Figure 6. Outcome measures in use in CAMHS inpatient services



Focus group results

Analysis of the focus group discussions identified a range of issues around the current status of HoNOS in mental health trusts that were relevant to improvement of clinical engagement with HoNOS as an outcome measure, as well as a set of ideas, suggestions and aspirations for change.

These are presented separately, as current issues and elements of good practice, but the former fed into discussion of the latter, and often several issues or ideas were bound up together, so the results need to be considered as a whole.

CURRENT ISSUES

Variability across and within trusts

Levels of engagement with and use of HoNOS vary widely across, and even within trusts. In some organisations, HoNOS data is collected only as part of the mandatory clustering (needs assessment) stage, and is not examined as an outcome measure. Other organisations have a long history of using HoNOS data, to feedback to teams, for service improvement, and (to a lesser extent) as part of clinical practice with individual patients.

> *Prior to clustering, HoNOS was not something that the trust used.*
>
> Non-clinician NELFT

> *And indeed no-one ever refers to it as HoNOS. Everyone always refers to it as 'cluster', which I think is a bit of a shame actually, and I think is so tied up with this idea that we are doing it for money and the government asks us to do it.*
>
> Clinician, C&I

There were widespread reports of clinicians, particularly junior staff, having no understanding of HoNOS as an outcome measure, and that it was strongly enmeshed with the process of clustering at many sites. There are current projects ongoing at some trusts to build reports into existing software systems to promote and enable the use of HoNOS data by individual clinicians and teams.

> *I think there are clinicians in this organisation that don't understand that they administer the HoNOS as it is at present, every time they do a clustering… and I say that on the basis of conversations I've had with fairly senior clinicians*
>
> Clinician, NTW

High completion rates but data quality uncertain

Trusts consistently reported high levels of completion, and performance management to ensure that clustering is completed (which incorporates completion of a HoNOS score). Systems for monitoring and promoting completion include alerts, dashboard notifications, email reminders, and key performance indicators. However, participants reported that the systems did not provide the functionality they needed to use HoNOS data in relation to individual patients or groups of patients, such as seeing past scores or changes over time.

> *What we don't have access to is your individual patients' HoNOS ratings, going up or down, or even as…team performance, how your group of…patients are moving.*
>
> Clinician, ELFT

> *Clinical groups are supposed to conduct audits, but that's something that I don't think happens that much lately…in terms of the audit, it's probably more about compliance with some of the rules, rather than fully looking at the quality*
>
> Non-clinician, NTW

Monitoring of HoNOS and cluster data quality was less consistent, with reports of ad hoc audits, and no routine systems for monitoring data quality. There was wide variability in who conducts and records HoNOS scoring, from the most junior clinical staff to a multidisciplinary team. Clinicians reported that in conducting follow up or repeated scoring of patients, they had not infrequently come across scores of doubtful quality in the patient's history.

> *I think there is a lot of confusion about how we cluster…and people make a lot of errors, and I think that makes the data a lot less meaningful*
>
> Clinician, C&I

Timing and frequency of follow up scores also varies across teams and across trusts. Participants reported complying with mandated timing of cluster review periods, but some conducted additional reviews (either of clusters or HoNOS alone) at other times determined by service-specific rules.

Training not a priority

While each trust reported offering training that covered HoNOS scoring, this was often cluster training, rather than training specifically on the use of HoNOS as an outcome measure. The content of training was reported to sometimes be more focussed on getting patients into the 'right' cluster according to local rules, rather than on completing high quality scores.

> *There's a kind of standard set of PowerPoint slides…and there's exercises…And the HoNOS is mentioned within that, but the main focus is clustering and the MHCT*
>
> Clinician, NTW

> *We do all kinds of CPR training annually, and fire training, but we don't invest the same in (outcomes) training*
>
> Clinician, WL

There was a sense across trusts that outcome training had not been a focus of recent attention. Some trusts reported that new staff may be required to start scoring HoNOS before having completed any training. No trust reported any requirement for refresher training. There was some discussion about a previous attempt to develop an e-learning package of HoNOS training for use across London trusts, which had stalled for unknown reasons. It was felt that the lack of attention to training staff had compromised the reliability and quality of HoNOS data.

> *Because we haven't invested properly in training staff and supporting them…the (HoNOS) data is meaningless to me actually if I'm perfectly honest.*
>
> Clinician, ELFT

The online survey results provided a snapshot of the current HoNOS training landscape within trusts. With regard to completion of HoNOS rater training:

- 80% of participants reported completing HoNOS rater training
- Those who had not completed rater training were mostly (12/14) clinicians, and were scattered across almost all of the participating trusts

There appeared to be limited or mixed knowledge of the training offered within the participants' own trust, with different participants within the same trust responding differently to questions about the training offered – see table below.

Table 1: Responses to the question: Does your organisation provide HoNOS rater training?

Trust	No	Yes	Total
NELFT	0	7	7
NTW	2	5	7
C&I	1	7	8
ELFT	0	4	4
SWLSG	4	6	10
CNWL	3	7	10
BEH	3	2	5
Oxleas	1	4	5
SLAM	5	5	10
WL	1	3	4

Clinicians disengaged

A common attitude to collecting HoNOS data among clinicians was that it is a bureaucratic, administrative tool rather than something with meaning to their clinical role. This was felt to be particularly influenced by the link of HoNOS to clustering and the performance management of completion rates for clustering.

> *The association with clustering has in many ways tainted it as an outcome measure, and people now, I think, tend to perceive it as some sort of bureaucratic tool and burden, and have perhaps lost sight of the fact that actually before that it was a clinically derived outcome tool.*
>
> Clinician, CNWL

> *I don't think the CCGs really are looking at the data, certainly in terms of how they then interrogate it… The sorts of questions they are asking I think are not the sorts of questions that you would ask if you were looking at it as a meaningful clinical measure and wondering about the effectiveness of our service.*
>
> Clinician, C&I

The fact that frontline staff received no feedback of HoNOS data being used by those to whom it was reported, nor about the rationale for the data collection, added to the sense of futility in collecting it.

The link of HoNOS to clustering, payment and performance monitoring was felt to detract from the clinical meaning of HoNOS data.

> *I think a lot of people still see it as a performance measure, rather than as a qualitative outcome. So as long as they see it as tick box and feeding the beast, we're not really going to get the level of engagement*
>
> Clinician, CNWL

> *I think it is much easier to motivate in terms of patient rated outcomes... that will feel like a collaborative, useful therapeutic thing. It's much harder to motivate in something that feels like you're doing for reporting purposes*
>
> Clinician, SLAM

Frequently clinicians mentioned how much more positive they felt about patient reported outcome measures, since they could see a purpose for these in their clinical practice.

A burden on overwhelmed frontline staff

There were frequent comments that clinicians have too many data collection duties, and that scoring and documenting HoNOS interferes with their ability to perform their clinical roles.

> *We've got people who are very busy in their day to day job, they've been asked to do a lot of different things, they've been asked to fill out a lot of forms, a lot of documentation…everything has kind of got lost in the system*
>
> Non-clinician, NTW

> *I think we are at saturation point…whatever you do, you have to use what we're already doing, because we haven't got capacity to do anything new.*
>
> Non-clinician, NELFT

Some participants reported feeling overwhelmed by the amount of data they are required to collect and that better use should be made of existing data collection.

Some reflected that in order to produce high-quality HoNOS data, they would need to take substantial amounts of time away from seeing patients, and that they do not have the time for such activities given their patient loads. This was particularly a problem for clinicians working in teams with a high patient: staff ratio.

> *But I think there is also an issue of our time that is required to fill out these forms. And that's extra time that you would use if seeing a patient, if you're doing it in an accurate and true reflective way, and I don't think that is recognised by organisations or even commissioners. That actually doing this in a meaningful way takes time.*
>
> Clinician, SWLSG

Problems with sustainability

Focus group participants reported having been involved in or aware of past efforts to engage with HoNOS as an outcome measure, none of which were reported as ongoing over time.

Reasons why these activities were not sustained included:

> *Although at times we've worked hard on finding ways of feeding it back to frontline teams and helping people to make sense of it…with some exceptions it probably hasn't stuck*
>
> Clinician, CNWL

1. The formulation of HoNOS data into a format that is meaningful to team members requires quite a bit of work to interpret data from their 'raw' form.

> *It wasn't a sustainable system to have two people going round… about 320 teams…to do a lunchtime presentation once every year, six months or whatever, that's not a sustainable system*
>
> Clinician, SLAM

2. Efforts to collate, interpret, and present HoNOS data were driven by a champion of outcomes measurement, or HoNOS, and were dependent on that person (or few people) putting in extra work. This was not sustained after the person/ people moved on or after cuts to staffing meant that they were redirected to core activities.

> *We have had some loss of resource around outcomes…(staff) previously who did a lot of the collating HoNOS data and feeding it back to teams…At the moment we're not really able to fulfil that function*
>
> Clinician, SLAM

> *Resources are so tight, having the capacity to even think about doing a quality improvement project, which is quite time consuming and resource consuming, is quite difficult*
>
> Clinician, NEFLT

3. Activity was incentivised by an external driver, particularly a CQUIN (Commissioning for Quality and Innovation), in which a proportion of a trust's income was made dependant on meeting certain quality and innovation standards around HoNOS or outcome measurement. After the CQUIN was no longer in place, the activities were no longer incentivised and were deprioritised.

Different motivations to use individual-level and aggregate data

Participants discussed different objectives for using HoNOS at the level of an individual patient and for using aggregate data. The former is about using HoNOS as an outcome measure or for assessment of needs, to guide clinical practice with individual patients and evaluate the effectiveness of interventions. The latter uses the data to evaluate team performance, inform service improvement, or for monitoring of quality.

> *In terms of HoNOS…several things often get conflated which are different. So there's the need for individual clinicians to know whether, and for patients to know whether, their intervention is working. There's the need for teams to see whether they are getting people better…So there's the individual level, the team level, and then the whole issue of clusters and those outcomes linked to payment.*
>
> Clinician, SLAM

While trusts may be primarily interested in the use of aggregate data, this still relies on the collection of high-quality data. In the absence of a clinical purpose for the data, clinicians may document the data in a perfunctory manner, leading to problems with quality even if rates of completion are high. Therefore, to maintain high data standards for use at the aggregate level, trusts may need to facilitate clinicians' engagement with the data at the individual patient level.

An appetite to use HoNOS

Despite reporting disappointing past experiences and negative attitudes to current use of HoNOS, participants expressed the desire to see the situation improve so that HoNOS was put to use as an outcome measure.

> *I think it is a shame that there is this outcome measure at the heart of it that you could be actually using and getting some meaningful information out of, but we just don't*
>
> Clinician, C&I

> *We collect this data, so there's a moral obligation for us to be using it, to improve care, and it's a really good avenue for teams to have discussions about what's changed…a point of reflection*
>
> Non-clinician, SLAM

Some reflected on an ethical obligation to use the data since it is collected. Even though the shortcomings of HoNOS itself as an outcome measure were recognised, it was generally agreed that there was no better alternative measure.

Those who had been involved in past attempts to feedback or use HoNOS data reported positive and welcoming responses from their colleagues.

> *I think that when you show people the data and say 'look, here's some interesting comparisons, this score does seem to get lower in the course of an inpatient admission…isn't that fascinating, and this one doesn't, or this cluster group do seem to improve more than that one', people in my experience are fascinated by that, very engaged by that, very interested in it*
>
> Clinician, CNWL

RECOMMENDATIONS FOR INTRODUCING ELEMENTS OF GOOD PRACTICE

Focus group participants contributed many ideas, stories, and suggestions for how clinical engagement in the use of HoNOS in mental health services could be improved.

1. Meaningful feedback of aggregate and individual-level data

The most common priority for change was to see clinically meaningful, visually appealing, easily interpretable, low maintenance feedback of HoNOS data to clinicians, teams, and managers. Such feedback would allow clinicians to see the value in producing high-quality HoNOS data, and would facilitate service improvement and monitoring of service quality.

> *It's trying to make sure that we have data presented to teams and clinicians in a way that, 1: they can understand it, and 2: they can improve their practice of care, as individuals, and as teams, based on that data, and then because they get it regularly enough, hopefully they can see in time how they are impacted…sort of constant quality improvement.*
>
> Clinician, SLAM

A range of issues relating to feedback were mentioned by participants:

> *Paired HoNOS… the idea is that everybody would have a HoNOS completed as an initial assessment when they are accepted by any of our teams. So you can look at it by team, because if the HoNOS is collected, it starts with their contact, and then prior to discharge.*
>
> Clinician, SLAM

1. Repeated measures: Change over time was considered the most meaningful data to present, but this requires repeated scoring at clinically relevant time points and analysis of the change. Consistency in the timing of repeat scoring would facilitate comparison between patients and interpretation of the results, however the appropriate time period between scores is likely to be different for different teams.

2. Total HoNOS score is generally considered to be unhelpful as an outcome measure. Trusts employ (or have employed) various approaches to analysis, including the four-factor model, examining individual domain scores, or limiting to the most relevant domains for a particular condition.

> *Do we analyse per person, do we analyse per domain pooled, pooled individual domains over services, pool individual domains across all sorts of things?*
>
> Clinician, ELFT

> *It would be really nice if you could get some kind of visual representation of improvement…graphically within each individual item*
>
> Clinician, C&I

3. Visual or graphical depiction of scores was widely considered to be important, and that it needed to be easily interpretable by non-expert team members, rather than someone specially trained or experienced in HoNOS. Figures 7 and 8 are two examples of how some London trusts have presented individual-level HoNOS data in graphical form.

4. Those with experience in feeding HoNOS back to teams reported that it took considerable amounts of time and effort to produce such feedback, which made it unsustainable. Some trusts were actively involved in producing automated reports within their usual software to overcome this difficulty, but different approaches were being taken at different trusts.

> *I think there's a degree of automation that would make it more sustainable, and have more value in prompting teams to think about outcomes in general*
>
> Non-clinician, SLAM

Figure 7. Individual-level total HoNOS and four-factor model scores over time

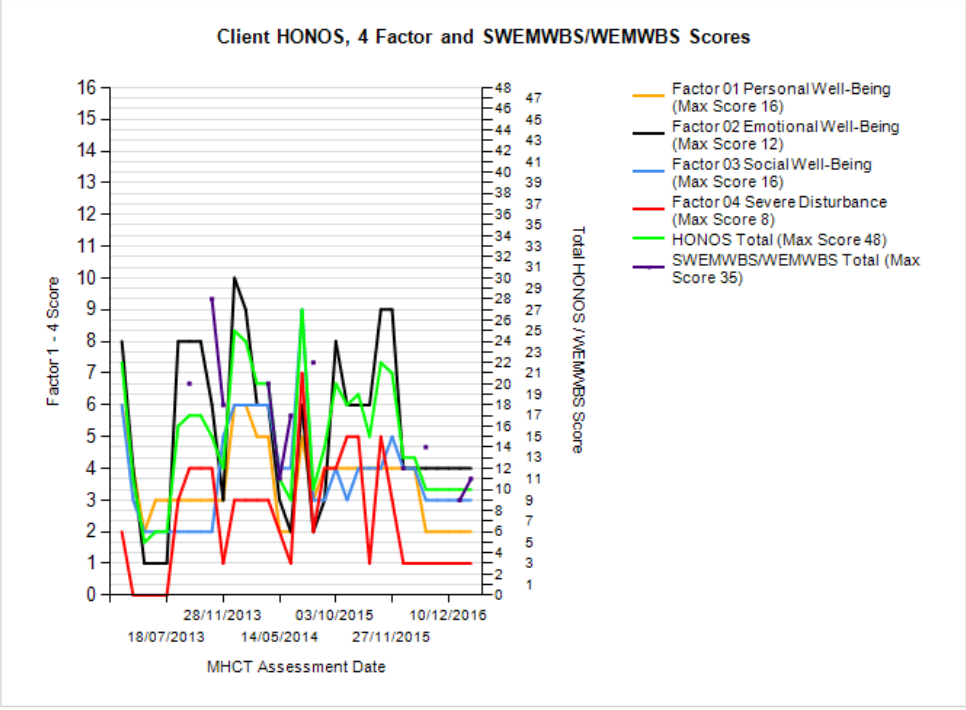
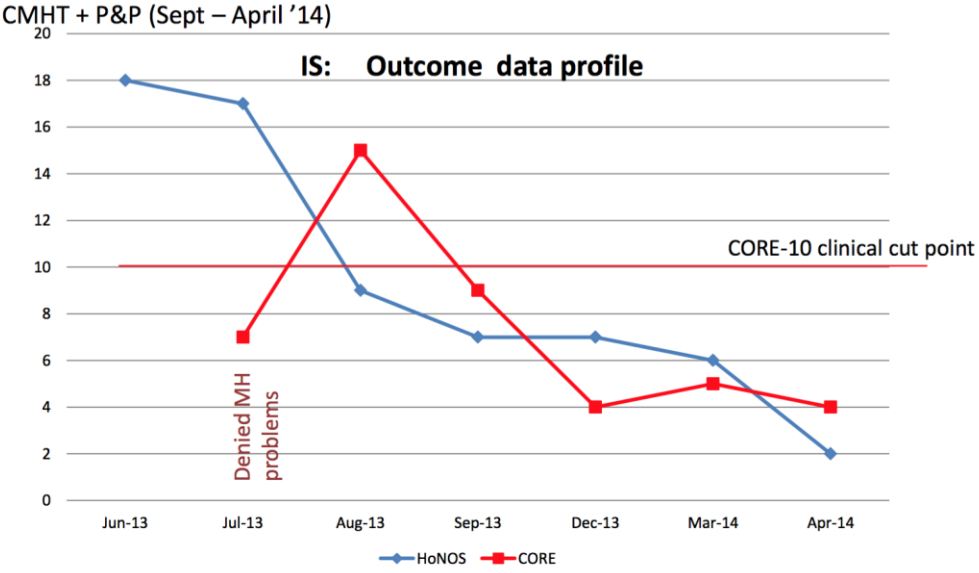


Figure 8. Individual-level total HoNOS scores over time

IS: 69 yr old widow. Attempted overdose/depression. Undergoing treatment of breast cancer. Conflict with family.

NB – Value of PATHWAY data - Liaison Ax; Inpatient admission (June – Sept '13); CMHT + P&P (Sept – April '14)



5. The timing of feedback was emphasised, that it needed to be at regular, timely intervals, as well as being available on demand.

> *Having it being something which is live and meaningful for the team I think would just make it more of an outcome measure. It is not an outcome measure at the moment. It just isn't.*
>
> Clinician, C&I

> *If, when it's coming time for CPA review or something, it pings up, and says 'by the way, here are some outcomes for this person over the last year that you might be interested in looking at'.*
>
> Clinician, CNWL

6. Caution was recommended in the interpretation of aggregate data in measuring service quality or team performance, since expectations for improvement in HoNOS should be considered in light of clinical context, and HoNOS may be less sensitive in some conditions and circumstances. Many focus group participants pointed out that for some patient groups, maintaining the same level of wellbeing (no change in HoNOS score) is a good outcome since it represents the absence of deterioration. Comparing performance of a team treating such a group of patients with that of a team treating patients expected to improve would lead to erroneous conclusions. Connecting HoNOS scores to clinically relevant data would contribute to meaningful interpretation of the data

> *For many clients you work very hard to keep the status quo, and it's actually how you articulate, that that's an achievement in itself. And that, unless you have the narrative, that can get lost.*
>
> Clinician, NTW

> *What we know about HoNOS changes is that they're much more sensitive in an inpatient, acute population than they are in a community or rehab population*
>
> Clinician, WL

2. Rebrand HoNOS

Linked to the issue of feedback was the need for clinicians to understand HoNOS as an outcome measure. While it was felt that feedback needed to be easily interpretable, focus group participants commonly stated that the perception of HoNOS as a clinically relevant outcome measure needed to be 'rehabilitated'.

1. Separating HoNOS from clustering in the minds of clinicians was felt to be a priority.

> *If we want to make it an outcome tool, then it needs to come off the piggyback of clustering, which has lost a lot of its currency*
>
> Clinician, ELFT

> *You want it to be outcome informed care…you don't want to just have something at the beginning and the end and go, how well did we do. You want something that goes…at the beginning, how are we doing, like you say with your blood sugars, that informs the care that you're giving, it doesn't just tell you how you've done at the end.*
>
> Clinician, SWLSG

2. It was suggested that clinicians could be helped to conceive of HoNOS as an outcome measure through the provision of vignettes or examples of how HoNOS has been used to inform service improvement. It was felt that showing teams their own HoNOS data and helping them to understand how it could be used to inform their practice, would initiate engagement with the process.

3. In terms of using HoNOS at the individual patient level, another suggestion was to provide clinicians with an equivalent to 'normal ranges' on a blood test, giving an idea (from existing data) of what change could be expected for patients in various categories.

> *We don't even know what is normal or abnormal…that's a big problem… you can't have a test where you don't know what's normal or abnormal… how do you feed that back?*
>
> Clinician, SWLSG

> *You can develop a care plan out of HoNOS because they are both generic tools and the advantage of being generic, non-disease-specific tools, is it can roughly mirror your consultation and consultation priorities and come out with target plans out of it.*
>
> Clinician, ELFT

4. Many participants also suggested that HoNOS would be more clinically relevant if it was part of the consultation, involving and informing patients of their outcomes.

> *Doing (HoNOS) in front of a patient where it feels relevant, for me, is one step forward in efficiency of data collection, so it's more relevant*
>
> Clinician, WL

3. Improve training

Several elements of training were suggested as areas for improvement:

One of the reasons I love doing the training is that … staff go, this is what I'm meant to be doing … I'm meant to be asking these questions. The questions are clinically relevant, and they're not just another tick box exercise that has to be done…every time we do the training we get that sort of feedback. This is really good because this is exactly what I'm doing in my clinical practice.

Clinician, SLAM

1. Current approaches to training emphasise clustering rather than HoNOS itself, and that the training should be restructured to educate clinicians about HoNOS as an outcome measure distinct from clustering.

2. Training should be made consistent. A common training package could be developed and shared across trusts, possibly in the form of e-learning

What we don't have, which I think could probably be useful is some sort of e-learning, or something like that package, because that would be a way to make sure at least everybody gets a dose of something consistent

Clinician, CNWL

We've suggested that we have annual mandatory training on Rio, and that you'd need…to pass that to keep your Rio card valid

Clinician, WL

3.Refresher training should be made mandatory to maintain standards, and that accountability in general around training standards and frequency was required.

4. Rationalise and streamline data collection

While improving clinicians' understanding of HoNOS and feeding their data back to them were thought to be ways of improving clinical engagement with HoNOS as an outcome measure, many focus group participants also discussed the overburdening of clinicians with data collection requirements.

> *If we're thinking about culture change, and what would facilitate outcomes collection… we need a system that cuts out the unnecessary data collection, a system that helps us do our work so that it streamlines…I think the only way you really change practice is if your systems drive you in that direction*
>
> Clinician, SWLSG

> *How can we just free up time, to be able to deliver face to face frontline care? So part of that process is looking at what's essential to do, and what is not as essential to do.*
>
> Non-clinician, NTW

Participants from multiple trusts reported feeling that much of the data collection was unnecessary. It was suggested that the amount of data to be documented by clinicians could be reconsidered and rationalised, so that only necessary data would be required.

In addition, methods for data collection could be revised, with automated processes built in or data collected by administrative staff rather than clinical team members.

> *I think the more you can make the routine stuff easier for people, the more likely they are to do the stuff that's actually important to change.*
>
> Clinician, C&I

5. National and organisational leadership

Focus group participants voiced a need for cohesive leadership on the issue of HoNOS, both at the national level and within individual trusts or services. Some reported that lack of agreement among national leaders in the sector was a barrier to meaningful change. Particular examples of disagreement included how HoNOS should be analysed and interpreted, and changing policy priorities over time undermining the ability of organisations to implement and embed useful strategies.

> *The other problem has been there have been four or five proposed ways to analyse HoNOS, and none of these have really been done on a routine basis, and NHS England or nobody central has actually taken a stand*
>
> Clinician, ELFT

> *The lack of national guidance about what outcome measures should be used…people actually seem terrified of recommending anything because there's always somebody who doesn't like that particular outcome measure, and gets hot under the collar and writes angry letters…*
>
> Clinician, SLAM

It was felt that clear standards would be helpful, or at least clear guidelines, preferably from a clinical body such as the Royal College of Psychiatrists. There was also a desire for various national bodies, including clinical groups and funders, to have a shared set of goals surrounding outcome measurement and its use in service improvement, and expectations about the link to payment. These agreed standards were felt to be important for sustainability of any changes to be made.

The need for organisational leadership was also a common discussion point, highlighting the need for senior management buy-in to the question of outcome measurement. At present, incentives do not tie to the need for meaningful outcome measurement in a way that necessarily reaches those in senior management of trusts, but only to the rates of completion of clustering scores. There was some discussion about the usefulness of financial incentives for motivating the clinical use of HoNOS, but it was felt these would be a way of connecting senior management to the issue.

> *Could you imagine a major retailer where people have to actually create their own systems for collecting in the sales figures and analysing it almost as a kind of private hobby, because they were interested, and the organisation not making it their business to facilitate that, and make it happen?*
>
> Clinician, CNWL

6. Standardisation

Part of national leadership could involve bringing in common standards at several points in the HoNOS process, so that practices were common across services within and across trusts. For example, this could be the setting of agreed best practice by clinical oversight bodies such as the Royal College of Psychiatrists, requirements from NHS or commissioners, or agreements among trusts themselves. Agreed expectations could improve data quality and allow for meaningful comparison across teams and services, and introduce efficiencies in sharing of resources and avoiding duplication of effort.

Standardisation could be applied to:

1. Disease classification and clustering to allow for comparison
2. Timing and frequency of repeated HoNOS scoring
3. Methods for documentation of data
4. Training standards, including refresher training
5. Shared training resources
6. Accountability and audit
7. Contextual information recorded with HoNOS scores to facilitate meaningful comparison and interpretation, such as diagnosis, demographic information, and treatment given
8. Reporting back to teams and within organisations (shared resources in automating reports)
9. Requirements for data reporting to commissioners and the NHS

> *It's also making sure you're comparing apples to apples…there doesn't seem to be a standard way of clustering psychosis… so the analogy would be, cancer is different in South West London to North West London*
>
> Clinician, SWLSG

> *If you're comparing the needs when people came in on HoNOS, to the needs on the way out, and you are trying to then do something about it, well you really need to also capture what was happening in between, your interventions… because if you didn't know what you were doing, then how do you possibly improve it?*
>
> Clinician, WL

REFERENCES

1. Wing, J., et al., *Health of the Nation Outcome Scales (HoNOS): research and development.* The British Journal of Psychiatry, 1998. **172**(1): p. 11-18.
2. Docherty, M. and G. Thornicroft, *Specialist mental health services in England in 2014: overview of funding, access and levels of care.* International journal of mental health systems, 2015. **9**(1): p. 34.
3. NHS Improvement. *New payment approaches for mental health services* 2017; Available from: https://improvement.nhs.uk/resources/new-payment-approaches/.
4. Preston, N.J., *The Health of the Nation Outcome Scales: Validating factorial structure and invariance across two health services.* Australian and New Zealand Journal of Psychiatry, 2000. **34**(3): p. 512-519.
5. Crawford, M.J., et al., *Improving the quality of mental health services using patient outcome data: making the most of HoNOS.* BJPsych bulletin, 2017. **41**(3): p. 172-176.
6. Parabiaghi, A., et al., *Assessing Reliable and Clinically Significant Change on Health of the Nation Outcome Scales: Method for Displaying Longitudinal Data.* Australian & New Zealand Journal of Psychiatry, 2005. **39**(8): p. 719-724.
7. Jacobs, R. and V. Moran, *Uptake of mandatory outcome measures in mental health services.* The Psychiatrist, 2010. **34**(8): p. 338-343.
8. James, M. and R. Kehoe, *Using the Health of the Nation Outcome Scales in clinical practice.* Psychiatric Bulletin, 1999. **23**(9): p. 536-538.
9. Pirkis, J.E., et al., *A review of the psychometric properties of the Health of the Nation Outcome Scales (HoNOS) family of measures.* Health and quality of life outcomes, 2005. **3**(1): p. 76.
10. Gilbody, S.M., A.O. House, and T.A. Sheldon, *Psychiatrists in the UK do not use outcomes measures: National survey.* The British Journal of Psychiatry, 2002. **180**(2): p. 101-103.
11. Gale, N.K., et al., *Using the framework method for the analysis of qualitative data in multi-disciplinary health research.* BMC medical research methodology, 2013. **13**(1): p. 117.
12. Dixon-Woods, M., et al., *Culture and behaviour in the English National Health Service: overview of lessons from a large multimethod study.* Bmj Quality & Safety, 2014. **23**(2): p. 106-115.
13. Greenhalgh, T., et al., *Diffusion of innovations in service organizations: systematic review and recommendations.* The Milbank Quarterly, 2004. **82**(4): p. 581-629.

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No ethical approval was needed to conduct this research as it is classified as service improvement.

APPENDICES

Appendix 1: Online survey

Use of HoNOS in mental health services

Start of Block: Introduction

About this survey

Thank you for taking the time to complete this survey. This survey is part of an overall research project that has been commissioned by the London Payment and Outcomes programme, which is part of the regional MH Transformation Programme delivered by HLP and NHS England. The University of York has been commissioned to undertake this piece of work on behalf of the London region and NTW.

The purpose is to understand how you and your organisation collect and use patient outcome measures, in particular the Health of the Nation Outcomes Scales (HoNOS). The project is looking at how mental health clinical teams use HoNOS as the standard clinical-rated outcome measure, with the aim of identifying useful practices that can be shared across services. We are interested to hear about your experience and views in this area.

You will be asked a range of questions about how HoNOS is collected, documented, analysed, and reported both within and outside your organisation. Please just answer the questions to the best of your knowledge, as people in a variety of roles will be asked to complete the survey and so you are likely to know more about some areas than others.

You will have received a request to complete this survey because you have permission from the senior management of your organisation to provide the information requested. The survey will take approximately 20 minutes to complete.

The results of this survey will help inform discussion at the focus group that will be organised

within your Trust in early 2018. The overall results will help inform the regional support offered to improve HoNOS completion, reporting and use. The findings of this study are intended to help your organisation and others to make the best possible use of HoNOS information and to support the development of clinical cultures that actively engage with outcomes information.

You will not be personally identified as the source of any information you provide, but it will be identified as arising from your Trust in the project report.

Thank you very much indeed for your involvement.

If you have any questions about participating in this survey, please contact Jemimah Ride from the Centre for Health Economics, University of York, at jemimah.ride@york.ac.uk. If you have any questions about the London Payment and Outcomes Programme, please contact Darren Vella at darrenvella@nhs.net.

Page Break

Instructions

This survey will take approximately 20 minutes to complete. There are 5 sections to complete overall.

The bar at the top of the page will indicate your progress through the survey. If you need to leave and come back to the survey, your responses will be saved. The survey will return you to the last page you completed, as long as you use the same computer and browser and don't clear your browser cookies.

The arrows at the bottom of the page will allow you to navigate back and forward through sections, except for some filtering questions where you will not be able to go back.

End of Block: Introduction

Start of Block: About respondent

First, we have some questions about you (1 of 5)

Within which trust are you based?

- West London Mental Health NHS Trust (1)
- East London NHS Foundation Trust (2)
- Northumberland, Tyne and Wear NHS Foundation Trust (3)
- Oxleas NHS Foundation Trust (4)
- Barnet, Enfield and Haringey Mental Health NHS Trust (5)
- South West London and St George's Mental Health NHS Trust (6)
- South London and Maudsley NHS Foundation Trust (7)
- North East London NHS Foundation Trust (8)
- Central and North West London NHS Foundation Trust (9)
- Camden and Islington NHS Foundation Trust (10)
- Tavistock and Portman NHS Foundation Trust (11)

What is your role in the organisation? (Select all that apply.)

- ☐ Nurse (1)
- ☐ Psychologist (2)
- ☐ Psychiatrist/ medical practitioner (3)
- ☐ Social worker (4)
- ☐ Occupational therapist (5)
- ☐ Support worker (6)
- ☐ Manager (7)
- ☐ Analyst (8)
- ☐ Contracting (9)
- ☐ Other, please specify (10) _____

How long have you worked for this organisation?

- ○ Less than a year (1)
- ○ 1-5 years (2)
- ○ More than 5 years (3)

What contact do you have with patients?

- ○ None (1)
- ○ Occasional (a few times per month) (2)
- ○ Frequent (a few times per week) (3)

Which of these roles do you perform in this organisation in relation to HoNOS? (Select all that apply.)

- ☐ I rate the HoNOS scores of individual patients (as a clinician or as part of a clinical team) (1)
- ☐ I record HoNOS scores of individual patients (2)
- ☐ I monitor or evaluate HoNOS scores of individual patients (3)
- ☐ I analyse data on the HoNOS scores of multiple patients (4)
- ☐ I report or feed back information on HoNOS within my organisation (5)
- ☐ I report information on HoNOS outside my organisation (6)
- ☐ Other, please specify (7) _____

Have you completed HoNOS rater training?

- Yes (1)
- No (2)

Does your organisation provide HoNOS rater training?

- Yes (1)
- No (2)

Display This Question:

If Does your organisation provide HoNOS rater training? = Yes

Is the training provided by your organisation different from the standard cluster training?

- Yes (1)
- No (2)
- Don't know (3)

End of Block: About respondent

Start of Block: About HoNOS management

Next are some questions about how your organisation manages HoNOS information (2 of 5)

Who rates and/or documents HoNOS scores in your service? (Select all that apply.)

- ☐ A psychiatrist (1)
- ☐ A nurse (2)
- ☐ A psychologist (3)
- ☐ A social worker (4)
- ☐ An occupational therapist (5)
- ☐ A multidisciplinary team (6)
- ☐ Other, please specify (7) _____

How is HoNOS information recorded? (Select all that apply.)

- ☐ Pen & paper only (1)
- ☐ Direct into computer/ electronic record (2)
- ☐ Pen & paper later transcribed into electronic record (3)
- ☐ Other, please specify (4) _____

How often is HoNOS documented for an individual patient? (Select all that apply.)

- ☐ At every visit (1)
- ☐ At the beginning and end of periods of care (either team/ward episode or full spell of care) (2)
- ☐ Once a year (3)
- ☐ Variable, no particular rule applied (4)
- ☐ At the patient's first visit or admission (either team/ward or spell admission) (5)
- ☐ When a care plan / CPA is written or reviewed (6)
- ☐ At the beginning and end of specified Cluster Review periods (7)
- ☐ Other, please specify (8) _____

What other information is collected at the time of rating HoNOS? (Select all that apply.)

- ☐ The name and/or role of the rater (1)
- ☐ Whether based on individual or team rating (2)
- ☐ Whether collected as part of Mental Health Clustering Tool (3)
- ☐ Other, please specify (4) _____

What happens to HoNOS ratings after they are recorded?

- ○ Only used for external reporting e.g. reporting to commissioners (1)
- ○ Used both for external reporting and within the service (2)

How do people outside your organisation use the HoNOS information from your organisation?

_____

Who (role) in your organisation is responsible for reporting HoNOS scores to those outside your organisation?

_____

End of Block: About HoNOS management

Start of Block: HoNOS used internally

How is HoNOS information used within the service? (Select all that apply.)

- ☐ Discussed among clinical team regarding an individual patient (1)
- ☐ Discussed, interpreted and/or analysed regarding multiple patients (at a clinical team, service or other aggregate level) (2)
- ☐ Fed back to individual patients (3)
- ☐ Repeated measures used to monitor progress (4)
- ☐ Discussed among managers and executives (5)
- ☐ Used in service evaluation or audit (6)
- ☐ Other, please specify (7) _____

Who in your organisation makes use of HoNOS information in their work? (Select all that apply.)

- ☐ Nurses (1)
- ☐ Psychologists (2)
- ☐ Psychiatrists (3)
- ☐ Social workers (4)
- ☐ Occupational therapists (5)
- ☐ Multidisciplinary clinical teams (6)
- ☐ Managers (7)
- ☐ Analysts (8)
- ☐ Contracting team (9)
- ☐ Other, please specify (10) _____

How do clinicians in your organisation use HoNOS information?

_____

How do managers in your organisation use HoNOS information?

_____

How do others in your organisation use HoNOS information?

_____

Is any software package used to help analyse or compare HoNOS scores over time or across patients? (e.g. Excel, SQL, Access, or specialist software)

- ○ Yes - if so, please specify (1)

_____

- ○ No (2)
- ○ I don't know (3)

Do you have any automated way of analysing HoNOS scores?

- ○ Yes - if so, please specify (1)

_____

- ○ No (2)
- ○ I don't know (3)

Does anyone in your organisation make visual presentations (graphs, charts, pictures) from HoNOS information?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Display This Question:

If Does anyone in your organisation make visual presentations (graphs, charts, pictures) from HoNOS... = Yes

What do these graphs, charts or pictures tell you?

_____

Display This Question:

If Does anyone in your organisation make visual presentations (graphs, charts, pictures) from HoNOS... = Yes

Who in your organisation (which role) makes these visual presentations from HoNOS information?

_____

In what form is HoNOS information reported or used within in your service/ organisation? (Select all that apply.)

- ☐ Total HoNOS scores (1)
- ☐ HoNOS sub-scale scores (2)
- ☐ 4-factor model (3)
- ☐ Reliable and clinically significant change (4)
- ☐ Graphs or charts (5)
- ☐ Analysed according to patient characteristics (6)
- ☐ Analysed according to treatment or provider characteristics (7)
- ☐ Comparison of individuals over time (8)
- ☐ Comparison of multiple individuals over time (9)
- ☐ Other, please specify (10) _____

Who is responsible for reporting HoNOS information within your service/ organisation? (Select all that apply.)

- [ ] Clinicians or clinical team (1)
- [ ] Analyst or analytics team (2)
- [ ] Manager/s (3)
- [ ] Other, please specify (4) _____
- [ ] Don't know (5)

How often is their own HoNOS information fed back to individual patients?

- ○ Never (1)
- ○ Sometimes (2)
- ○ About half the time (3)
- ○ Most of the time (4)
- ○ Always (5)
- ○ Don't know (6)

End of Block: HoNOS used internally

Start of Block: HoNOS not used internally

Why is HoNOS information not used internally within the organisation?

_____

_____

_____

_____

_____

End of Block: HoNOS not used internally

Start of Block: How HoNOS is viewed

Some questions about how HoNOS is viewed within your organisation (3 of 5)

How would you describe the organisational culture around the collection of HoNOS data?

_____

_____

_____

_____

_____

What do you think of the quality of HoNOS data in your organisation?

- ○ Excellent (1)
- ○ Good (2)
- ○ Average (3)
- ○ Poor (4)
- ○ Terrible (5)
- ○ Don't know (6)

How do the Board/ senior managers view HoNOS?

_____

_____

_____

_____

_____

What are the advantages of collecting HoNOS scores?

_____

_____

_____

_____

_____

What are the disadvantages of collecting HoNOS scores?

What are the key barriers to collecting and using HoNOS information?

What factors make it easier to collect and use HoNOS information?

How easy do you find it to interpret and use HoNOS information?

- ○ Easy (1)
- ○ Neither easy nor difficult (2)
- ○ Difficult (3)

How useful do you find it to interpret and use HoNOS information?

- ○ Very useful (1)
- ○ Somewhat useful (2)
- ○ Not useful (3)

End of Block: How HoNOS is viewed

Start of Block: Your ideas regarding HoNOS

Now we have some questions about your ideas regarding the use of HoNOS (4 of 5)

What are your suggestions or ideas about how HoNOS information could be used to help your organisation?

_____

_____

_____

_____

_____

What are your suggestions or ideas about how HoNOS information could be used outside your organisation?

What data should be routinely linked to HoNOS to provide context and casemix adjustment as part of feedback on HoNOS scores? (Select all that apply.)

- ☐ Socio-demographic characteristics (e.g. age, gender, ethnicity) - please specify (1)

_____

- ☐ Diagnosis (2)
- ☐ Severity - please specify how would this be measured (e.g. Mental Health Act) (3)

_____

- ☐ Cluster (4)
- ☐ Length of inpatient stay (5)
- ☐ Duration of treatment episode (6)
- ☐ The team or individual staff caring for the patient (7)
- ☐ Management approach, clinical pathway, treatment plan - please specify (8)

_____

- ☐ Other, please specify (9) _____

What support, processes or resources are needed to introduce feedback mechanisms in clinical teams? e.g. data analysts, informatics

_____

_____

_____

_____

_____

How do you think HoNOS could be embedded in clinical culture?

How do you think HoNOS data could be used to support continuous quality improvement in service delivery?

What education or training might be needed for clinical teams to better understand how clustering and HoNOS data are used and the importance of their collection?

End of Block: Your ideas regarding HoNOS

Start of Block: Non-HoNOS

Other outcome measures (5 of 5)

Does your organisation have an Organisational Outcomes Framework?

- Yes (1)
- No (2)
- Don't know (3)

Are any other patient outcome measures used in your organisation?

- Yes (1)
- No (2)

Display This Question:

If Are any other patient outcome measures used in your organisation? = Yes

What other outcome measures are used in each of the following contexts? (Select all that apply.)	CAMHS inpatient services (1)	CAMHS outpatient services (2)	Adult inpatient services (3)	Adult outpatient services (4)
CORE-OM (1)	○	○	○	○
FACE (2)	○	○	○	○
Carer and User Expectations of Services (CUES) (3)	○	○	○	○
DIALOG (4)	○	○	○	○
INSPIRE (5)	○	○	○	○
MANSA (6)	○	○	○	○
Abbreviated Life Skills Profile (7)	○	○	○	○
BASIS-32 (8)	○	○	○	○
Kessler-10+ (9)	○	○	○	○

Mental Health Inventory (10)	○	○	○	○
Questionnaire about the process of recovery (QPR) (11)	○	○	○	○
Short Warwick & Edinburgh Mental Well Being Scale (SWEMWBS) (12)	○	○	○	○
Friends and Family Test (13)	○	○	○	○
Mental Health Older Adults (MHOA) (14)	○	○	○	○
Other, please specify (15)	○	○	○	○

Is the Friends and Family Test the designated PREM for your organisation?

- ○ Yes (1)
- ○ No (2)
- ○ Don't know (3)

End of Block: Non-HoNOS

Start of Block: Finish

Is there any other information, comment or feedback that you would like to share?

_____

Thank you very much for your contribution to this research. The results will be fed back to you via your organisation, but if you have any questions, please contact Jemimah Ride at the Centre for Health Economics, University of York, by email:
jemimah.ride@york.ac.uk

End of Block: Finish

Appendix 2: Focus group discussion guide

Introduction

The purpose of this discussion is for us to understand how your organisation collects and uses patient outcome measures, particularly the HoNOS. It is part of a project looking at how mental health clinical teams use HoNOS and to identify useful practices that can be shared across services. We are interested to hear about your experience and views to help with this project.

You will not be personally identified as the source of any information you give us, but it will be identified as arising from your trust.

We will be recording this discussion and will use the transcribed notes to analyse the findings, we will not provide the transcripts to your organisation or any other person.

We anticipate this discussion will take around 90 minutes.

If you would like to get in touch with us after this interview, you can email us at jemimah.ride@york.ac.uk.

Does anyone have any questions before we get started?

Discussion

Introductions

First, we would like to get to know each other a little.

Let's go round the group, each introducing yourself by name and your role in the organisation, and what your involvement is with HoNOS.

Attitudes to HoNOS

We are interested in how you and your colleagues think about the HoNOS and what good or bad experiences you've had with it.

How is HoNOS viewed by you and others in your service?

How do the senior management in your organisation view HoNOS?

How has your organisation used (analysed, reported on) HoNOS?

We would like you to reflect on how things work using HoNOS in your organisation:

1. What works well about how you manage HoNOS data?
2. Can you give us an example using HoNOS information really well?
3. Can you give us an example of using HoNOS badly?

[Further prompts if not raised, including "If so/ if not, how/ why? Could you please give an example?"

- Do you think it is useful for clinicians and relevant to patient care?
- Do you think it can be useful for aspects of running the service?
    - Can it help to portray the complexity of patient needs?
    - Can it help with care planning?
    - Can it help with quality improvement?
- Some view HoNOS as purely administrative/ bureaucratic/ necessary only for management/ payment by results and having no clinical relevance.
    - What do you think of that view?
    - How do you think that could be changed?
- Are there any champions/ key supporters for HoNOS in your organisation?
- Do senior management encourage the use of HoNOS?
- Are staff in your organisation equipped with the resources they need to use HoNOS well?]

Collection and documentation

What do you think about how the collection and documentation of HoNOS for individual patients is done, and how it could be improved?

[Further prompts if not raised:

- Is the collection and documentation of HoNOS a burden on clinicians?
- Are there patient groups for whom HoNOS is particularly relevant or particularly irrelevant?
- Do you think it is better to have a uniform outcome measure or to use different measures for different groups/ services?]

Feedback

What do you think about feedback of HoNOS?

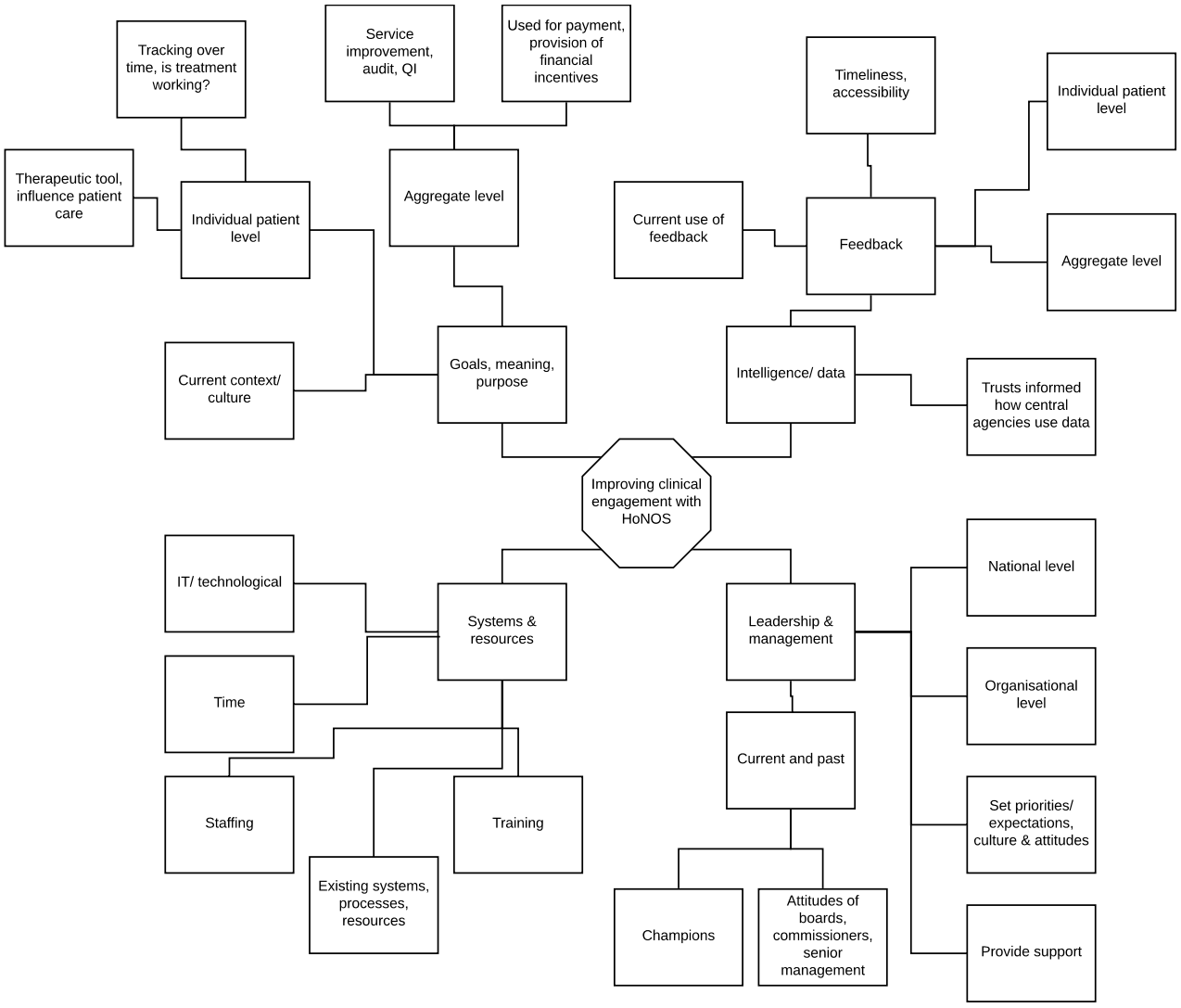
- To individual patients?
- To clinicians about individual patients?
- Within the service/ to teams about groups of patients?
- Do you have any good examples of how this has been done well?

Ideas and suggestions

Now we would like to explore your ideas and suggestions about using HoNOS:

1. What could be improved? What would help the better use of HoNOS?
2. How do you think HoNOS could be embedded in clinical culture? (Rather than being viewed as a bureaucratic tool, to be something that was useful to clinical practice.)
3. What IT system capacity or analysis could help clinicians?
4. What support/ processes/ resources would be needed to promote feedback in clinical teams e.g. data analysts, informatics?
5. How do you think HoNOS data could be used to support continuous quality improvement in service delivery?
6. What education/ training might be needed for clinical teams to better understand what clustering and HoNOS data are used for and the importance of their collection?

Lastly, if you could change one thing about the use of HoNOS in your organisation, what would it be?

- Write these up, and as a group agree on a ranking of priorities.

Appendix 3: Coding framework used for thematic analysis