Event report

West of England Academic Health Science Network

The deteriorating patient: let the numbers do the talking!

16 March 2017 - Cheltenham Chase Hotel, Brockworth, Gloucestershire

The West of England AHSN, on behalf of the West of England Patient Safety Collaborative, hosted the fifth event of the Deteriorating Patient programme on 16 March 2017.

This marked the two year anniversary of a programme which specifically focusses on promoting the use of the National Early Warning Score (NEWS) with acutely unwell patients in all health care settings across the region, and communicating this score at the point of patient handover between services.

Our aim is to improve patient safety by earlier recognition of the deteriorating patient, particularly those at risk of developing sepsis.

The event was attended by 102 delegates across 42 different organisations representing patients, primary and community care, out-of-hours GP services, mental health services, the ambulance and acute trusts from across our region, plus some additional interested parties from our neighbouring counties and AHSNs.

Our previous events have focussed on supporting the use of NEWS within our member organisations, and communicating NEWS at the handover of care. The focus of this event was to celebrate the progress we have made towards our programme aims and how data can both evidence our successes and identify focus for future work.

Let the numbers do the talking!

Anne Pullyblank, Clinical Director for Patient Safety at the West of England AHSN, welcomed delegates to the event and revisited the driver diagram for the programme.

A number of trusts and organisations from across the region then delivered short presentations on their work in support of our three primary drivers, using data to illustrate their achievements and successes, and to demonstrate where they still have challenges and areas of work on which to focus.

The full slides from the event are available to view here and here are some highlights from the presentations on the primary drivers for the **improved assessment/monitoring of patients condition within settings** and **improved response to deteriorating patients within settings**.

Progress with our primary drivers

North Bristol NHS Trust

- 100% of all 'majors' patients have a NEWS calculated on admission to ED
- Over 90% of inpatients have NEWS documented on the patient's observation charts
- Developed a Neuro NEWS observation chart which has been rolled out in neurology and neurosurgery wards

Royal United Hospitals Bath NHS Foundation Trust

- Steady increase in NEWS recorded within 1 hour of admission to ED over the course of 2016. From September to December 2016, this was audited at 100% of all patients
- NEWS recorded and accurate on inpatient wards is on average over 90%
- Cascade trainers and simulation model of training has worked really well for the Trust

Gloucestershire Hospitals NHS Foundation Trust

- Over 30% of calls to the Acute Care Response Team were raised for NEWS of 10 or more, suggesting a late call and inappropriate escalation
- The Trust is relaunching NEWS policy using the 4Rs: Record, Recognise, Report, Respond

University Hospitals Bristol NHS Foundation Trust

- Sustained levels of approximately 99% of inpatients have observations completed and NEWS correctly calculated
- No incidents of failure to recognise deterioration in the Emergency Department (ED) this winter despite the worst operational pressures to date
- Would be keen to lead a regional standardisation of Paediatric Early Warning Systems

Great Western Hospital NHS Foundation Trust

- 98% of inpatients have observations with NEWS calculated
- 99% of observations had NEWS calculated correctly every time
- A steady decline in the number of cardiac arrests per 1000 bed days (in January 2016 from an average of 1.3 down 0.6 in December 2016)

Avon and Wiltshire Mental Health Partnership NHS Trust

- 8.3% of patients decline to have their physical observations taken. This has led the Trust to develop a Non-Contact Physical Health Observation policy, which is currently being tested and audited across the organisation. The results of this should be available later on this year.

It was great to hear how each organisation approached their data audits, how they used and communicated their collected data across their organisations, what the data told them about how well they were doing with their change ideas, and how they used the data to improve the quality of care for their patients.

The plenary also received presentations from the South Western Ambulance Service NHS Foundation Trust (SWASFT) and Brisdoc on the work they have been doing to support the primary driver **improved communication of NEWS on transfer between settings**.

Electronic Care System

The SWASFT Electronic Care System (ECS) has the capability to automatically calculate NEWS on all patients attended by a response vehicle. 61.8% of all patients conveyed to hospital since April 2016 had a NEWS calculated and communicated at the point of handover of care. This figure is lower than expected given it is an automated electronic system.

However, it was explained that due to the configuration of the templates and patient assessment process, vital signs are inputted at different stages and time codes when embedded into the system.

The software doesn't automatically 'pick up' the data to calculate the NEWS if there is a time lag between entries of the vital signs information. SWASFT are going to revisit this in the next software update of the devices.

The data presented by SWASFT does appear to substantiate our understanding of NEWS in pre-hospital care. 93% of patients not conveyed to hospital had NEWS 1-4. Only 2.3% of patients not conveyed had a score of 7. SWASFT intend to analyse this cohort of patients further to see whether it was appropriate that they were left at home, for example if they were end-of-life patients.

Of the total number of patients for whom SWASFT calculated a NEWS, only 8.9 % had a score of 5-6 and 8.1% had a score of 7 and over which substantiates our understanding that only a small proportion of our population (cumulatively 17%) have NEWS greater than 5. These are the sickest patients and should be treated in acute care, conveyed urgently by ambulance.

This presentation was excellent in demonstrating that data can show where there is further work required to improve a system, but also where questions needs to be asked in relation to patient safety and care.

Out of hours

Brisdoc rounded off the session with a summary of the work of the Out of Hours GP service in Bristol, North Somerset and South Gloucestershire. Through a structured programme of education and training, resource development and staff empowerment (particularly call handler staff) the service has seen the number of admissions to acute care including a NEWS at handover steadily rise from 31% in April 2016 to 53% in January 2017. This is a very positive trajectory and we applaud Brisdoc for their efforts and commitment to the programme.

How can we make it easier?

We know that the recording of vital signs information and the automatic calculation of NEWS would be made simpler, and reduce human factors and errors, through electronic observation technology.

This would also support the automatic embedding of patient data in electronic Patient Record Systems so it can be electronically shared inter and intra organisations and be easily audited.

We invited two companies who are specifically working on this to attend our event and be available to demonstrate their products to delegates.

One was Snap40 who have developed a wearable device that can take all NEWS vital signs readings and calculate NEWS (every 30 seconds!) and send that information remotely to a receiving clinician.

The other was LiveObs who have been working with Code4Health (an NHS Digital supported scheme) who are looking to facilitate a community of members and contributors with the aim to identify the standards, requirements and a product roadmap for a leading open electronic observation solution available to all, and to commission the development and custodianship for a single open solution for improved patient outcomes.

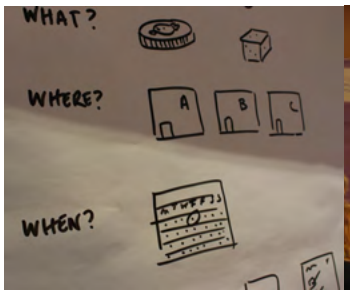
Further information on Snap40 can be found at www.snap40.com and LiveObs at code4health.org/LiveObs.

However, we know that a fully electronic solution is beyond some organisations current strategies and budgets, particularly those in community and primary care.

So in the meantime, the West of England AHSN has been working with the main electronic patient care record providers to develop standardised NEWS templates which are available for all our regional stakeholders.

To find out how to download the EMIS template, watch this video. We are working with a developer, Ardens, on a standardised SystmOne template. Instructions on how to access this will be issued via relevant CCGs over the next couple of weeks.

For further information on the functionality of the template, please use this contact.




Getting the data juices flowing!

Delegates broke out into workshops where they had been grouped into sectors – acute inpatient, primary and community care, and mental health and community inpatient. Each group was given a scenario which asked them to consider how they would audit whether NEWS was being routinely calculated, whether it was being calculated accurately, whether the responses to NEWS were appropriate (were patients being escalated in line with local policy?) and whether NEWS was being communicated at the points of handover of care, either into their organisation or within their organisation. Delegates were given a data collection plan template to help them consider how they would approach this task in their organisation. The task triggered some really fantastic discussions within the workshops. Common themes were:

Successes:

Staff engagement and enthusiasm. They see the value in NEWS as an objective tool to support their clinical judgement, and value the audit process to assess whether it is being used appropriately. Staff are engaged because they are involved, and the presentation of the data is a quick way to show them where they are doing well.

Identifying NEWS champions at organisation and ward/team level works well to maintain motivation and enthusiasm for the work.

Five is OK! Auditing for improvement doesn't have to be a huge task. Small, bite size audits completed at regular intervals provides better data than huge audits conducted infrequently. Auditing five sets of notes on a daily/weekly basis is not an onerous task, but over time will give you a good stock of data which you can analyse for trends.

Challenges:

Transient staff in the health service can affect the quality of care of patients, and therefore the quality of the data you are auditing.

Paper documentation means that auditing data requires time and resource.

So what? If you don't do something with the data and feed that back to staff, what is the point in collecting it?

Enablers:

Having analyst resource within your organisation to support the presentation of data will enable your organisation to interpret and present the data in a timely way to identify successes and where further focus is required.

Electronic observation equipment and electronic patient records.

Clear data sharing communication channels to ensure data is shared at executive, team and individual staff level either via corporate risk registers, visual displays, team meetings etc.

Good ideas to share:

Share. Share. Share! Share data results, share it quickly, share data collection top tips and methodology, share as much as you can! If staff across organisations can see the benefit in the work, then 'buy in' and enthusiasm for it will be achieved.

Linked to this, consider repositories for good practice so others can access tried and tested pieces of work, ie data collection templates, presentation documents etc.

Simulation training and running case scenarios not only supports the clinical implementation and accuracy of NEWS, but also supports the principle that data can evidence that the work each member of staff does to contribute to the wider programme and to patient safety.

An interesting observation from the workshops was that although the task set was discussed and considered, participants still seemed to find real value in coming together with other organisations from similar sectors across the region to discuss the detail of how they have implemented NEWS, where they are still facing challenges and sharing more practical tips on the clinical adoption and spread of the tool. These conversations didn't directly contribute to the completion of the workshop task, but were absolutely valuable and important. Some fantastic thoughts were shared, some of these were:

- To support the use of NEWS across the region, we have to make sure that staff have the right kit to take the observations and calculate the score.
- Electronic patient record systems need templates to support the recording of observations and automatically calculate scores. Access to electronic patient records should be facilitated: if a patient is seen in the home, then technology should be portable and taken to the patient. In rural areas, remote access signal remains a challenge.
- Electronic observation equipment will go a long way to support the accurate calculation of NEWS and reduce human factors risk.
- The patient is not just a number, but knowing their number helps. If a patient's 'baseline' NEWS is known, this information could be valuable to both the patient (we know our BMI, why don't we know our NEWS?) and other allied services such as social care or therapeutic services.
- We still have large groups of service providers who manage patients at risk of deterioration but may not use NEWS as a tool. For instance, Care and Nursing Home providers. Better assessment and stratification of risk with this cohort of patients could reduce unnecessary hospital admissions and improved patient outcomes and experience. This should be a real focus for the programme moving forward.

How do we know what success looks like?

The West of England AHSN has partnered with the National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care West (NIHR CLAHRC West) to carry out research which will serve to evaluate the use of early warning scores in pre-hospital settings.

At the event, the NIHR CLAHRC West presented on the methodology they intend to use to achieve this explaining the process for systematic review of existing literature, the qualitative aspects of the research which should give us a feel of how NEWS has been received as a clinical tool across a range of healthcare settings, and the quantitative work they hope to carry out to evidence and support our system-wide outcome measures. The results of the evaluation should be available to share in the autumn of 2017.

Reflection

At this two year juncture of the programme, the West of England AHSN team wanted to stop and take stock of whether we have supported our stakeholders in this programme sufficiently, where we could improve, and where our focus for the final year of the programme should be pointed.

We are acutely aware that the currency of this patient safety programme is the will of our clinical stakeholders to 'do the work with us', so we want to make sure that these teams feel adequately supported.

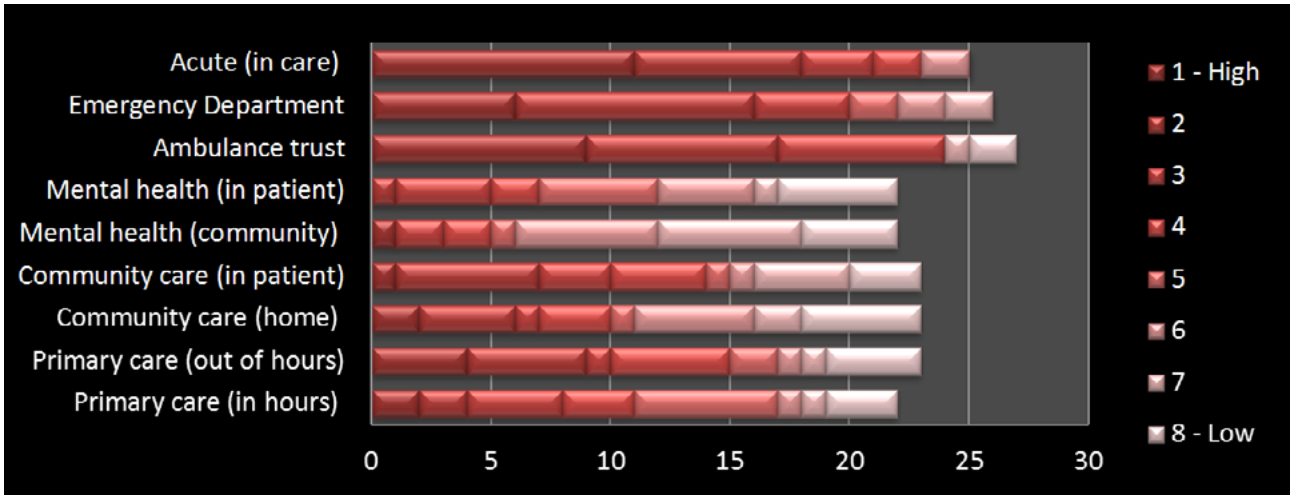
Delegates were asked to complete a programme evaluation form which asked them to reflect on how the programme has been structured, and ask their views on how they would like to engagewith the programme moving forward.

The general consensus was that there isn't anything West of England AHSN should be doing that it isn't already. Most delegates felt their organisation had received enough support from the West of England AHSN, the NEWS programme was adequately supported and facilitated, and that they had received enough support to evidence their work on NEWS.

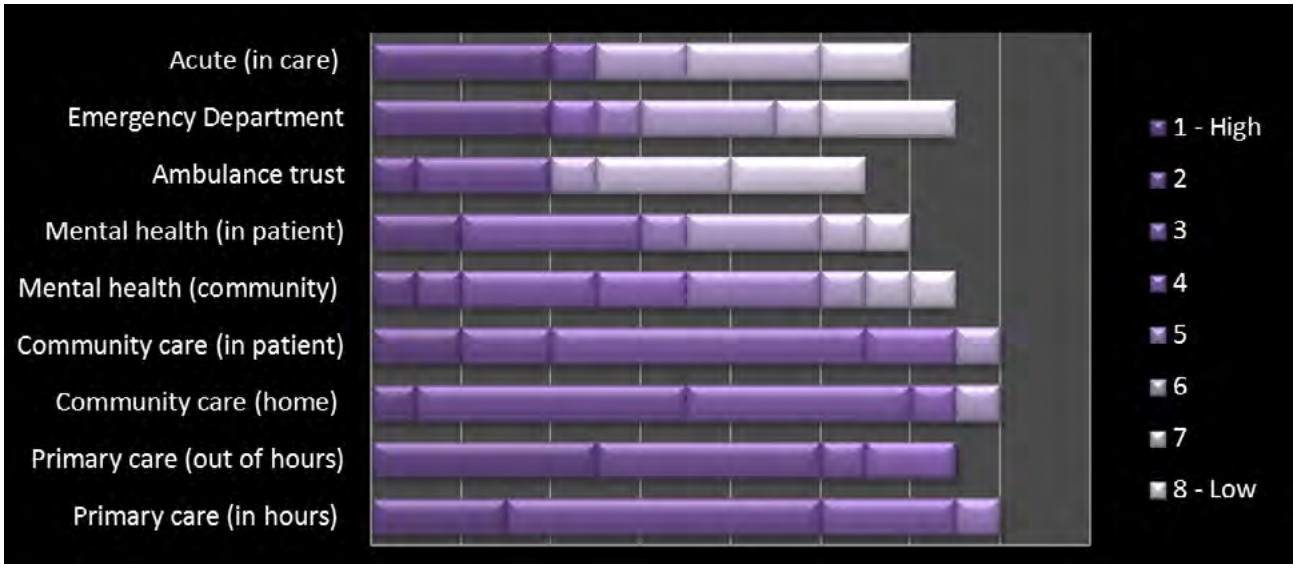
Ultimately they felt that NEWS has improved outcomes for the patient at risk of deterioration.

Our regional events scored on average 4 or 5 (5 denoting 'excellent') for relevance, information and networking. It was generally agreed that half day regional events were preferred to full days but more regular 'single topic' workshops would be welcome. There was also broad interest in more single-sector collaboratives across the programme.

We asked where delegates felt the programme had achieved the most impact so far on improving outcomes for patients.



We then asked where the focus should be to improve the future impact of the programme:



We will reflect on this feedback and consider our strategies for better engagement with our out-of-hospital colleagues across the region and how we can support and resource the idea of single sector collaboratives or specific topic workshops to increase engagement with these targeted groups.

We know the NEWS programme has had a positive impact on patients in the West of England. We are gathering an excellent library of patient stories where NEWS was used to assess a patient's acuity and appropriate action was then taken. One of these patient stories has been made into a short film (with a bit of in-kind support from some friends of the West of England AHSN!) and can be viewed at www.weahsn.net/news-film.

We encourage our stakeholder organisations to share this video with their organisation and colleagues as we feel it makes an elegant but compelling case for the use of NEWS across the urgent care pathway.

Farewell and final thoughts

A comment from Ellie Wetz, West of England Patient Safety Improvement Lead:

"I have had the privilege of working on this programme since its inception in 2015. It has been an honour to engage and work with every NHS service provider from across the region, and I have been humbled by your enthusiasm and commitment to the programme. We know that we have a moral and clinical obligation to improve patient safety for our population, and we believe that NEWS is one vehicle to do this. However, it doesn't mean that the journey is easy. We are pushing boundaries and applying the tool in relatively untested settings, but seeing positive outcomes for patients as a result. No other region throughout the country has taken a pan-system approach as we have but we are being commended for our efforts at a national level and sited as an exemplar region for our approach to the deteriorating patient.

"What I particularly noticed at the let the numbers do the talking event is that there is still huge value in giving our hard working colleagues from across the region the time and space to come together, share their thoughts and ideas and learn from one another on their organisations NEWS implementation programmes.

"Deborah Evans, my wise and observant Managing Director, has described this programme as a social movement – and I completely agree. The value in bringing cross-sector, cross region organisations together and offering them the opportunity to interact and freely discuss a common aim is not necessarily a measurable currency. However, I have witnessed relationships grow, contact details swapped, good ideas being shared and adopted and a willingness to collaborate between potentially competing organisations for the better care of their patients. In this sense it does feel like a social movement, and one I am very proud to have had a part in facilitating.

"The West of England AHSN remains completely committed to this programme and I know will continue to work hard to support our stakeholder organisations in the coming year. We will focus on providing evidence that the changes we have made have had an impact on patient safety but also ways in which we can support the further development of relationships and shared ways of working.

"I'm off to have a baby (my third, so I'm well practised!) but I intend to stay in close contact and look forward to hearing about future progress of the programme.

"Thank you all for your support and commitment over the last two years – it really has been an honour and privilege working with you."

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