

Society for Acute Medicine's Patients: Learning from Experience Report (SAM-PLER)

A service evaluation of patient reported experience in Acute Medicine – establishing the feasibility of a quality improvement collaborative

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Abstract

Patient reported experience measures (PREMS) are a key part of measured quality. There is no tool currently used in the UK in Acute Medicine.

On the 8th of September 2022 10 units based in England, Scotland and Wales collected data for the validated PREM, alongside the EQ-5D and variables from the Society for Acute Medicine's Benchmarking Audit (SAMBA) dataset.

365 patients were screened, 200 were included (55%): 159 patients from AMUs and 41 from SDEC units. Overall experience of patients was rated 8.5/10, patients rated their experience of safety, trust and listening highly.

Collection of PREMS was feasible. Further research is required to link experience to clinical outcome and explore tools that capture experience of patients with altered mental status.

Keywords

Acute Medicine, Quality, of Life, Patient reported experience measure, Patient reported outcome measure

Background

Delivery of high-quality care to patients presenting to hospital with acute medical problems is vital to ensure that patients receive the right assessment, diagnosis and treatment as quickly as possible. Quality in Acute Medicine is measured through a suite of metrics. These metrics most often comprise mortality, readmission rates, or time-based measures of intervals within the patient pathway through acute services; patients' views are not commonly reported.¹

The importance of Patient Reported Outcome Measures (PROMS) and Patient Reported Experience Measures (PREMS)² is increasingly recognised within the United Kingdom, and is now mandated within Wales. Measurement of patient experience is linked to improved clinical safety and effectiveness.³ While there are comprehensive systems to measure in other settings, to date no measures have been routinely used to review Acute Medicine services. Data from the Society for Acute Medicine Benchmarking Audit (SAMBA) incorporating the 'Friends and Family Test'⁴ has previously suggested that patient experience within acute medicine differed by age group, however the granularity of the data was low, and this measure was not designed specifically to address care within acute services.⁵

A PREMS⁶⁻⁸ most emergency department (ED) tool designed specifically for use in an acute care

setting (PRM-acute care), incorporating aspects of the initial diagnostic process, has been created and validated in the Netherlands. This has not been used in the UK previously, but a validated translation was published with the original publication. Disease or setting specific PREMS tools such as this are usually used in conjunction with a generic tool such as the EQ-5D.⁹

To establish the feasibility of reporting PREMS in Acute Medicine in the UK setting, the Society for Acute Medicine (SAM) Quality Improvement (QI) committee established a QI Collaborative of practicing clinicians in Acute Medicine. This collaborative performed a pilot service evaluation to assess feasibility of collecting PREMS within Acute Medical Units and Same Day Emergency Care units, and understand barriers and enablers for implementation into routine care.

Methods

Design

A prospective multi-centre feasibility test took place on the 8th September 2022.

Participating units were recruited by a mailshot from the Society for Acute Medicine via an online survey. Local approvals for participation in service evaluation were obtained at each participating site.

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Oversight of the service evaluation was provided by an online focus group of the principal investigators (nominated lead from each participating acute medicine service) and the SAM QI committee, alongside consultation with the CEDAR Health Technology Research Centre (<https://cedar.nhs.wales/>) on the appropriate format for the evaluation. The online focus group was utilised following the patient data collection period to reflect on the results and plan next steps.

We aimed for a sample of 10 units for the evaluation. It was expected that of 20-60 patients within each participating unit at the time of the evaluation, attrition would be one third.

Patient level data

For all included patients, collected data included the validated PRM-acute care experience measure, the EQ-5D, and the standard dataset from the Society for Acute Medicine Benchmarking Audit (SAMBA)¹⁰ providing the first assessment of performance against the Society for Acute Medicine's Clinical Quality Indicators (CQIs). Variables from SAMBA were included to allow comparison to aid evaluation of whether participating patients were likely to be representative of the overall population of patients attending acute medicine services. This included demographic factors such as age in grouped bands, sex, residence in nursing care facility, source of referral and location of initial assessment, clinical quality indicators for pathway intervals within acute medicine (Early Warning Score measurement within 30 minutes of hospital arrival, assessment by a clinician within 4 hours, and consultant physician review within 6 hours for daytime arrivals or 14 hours for out of hours arrivals) as well as acuity, measured by National Early Warning Score (NEWS2)¹¹ easily learnt and used, and widely implemented. The Acute Medicine Task Force1 that reported in 2007 noted that 'a number of basic assessment tools or "early warning scores" are currently in use nationwide' and commented that 'there is no justification for the continued use of multiple different early warning scores to assess illness severity'. It went on to recommend that '...the physiological assessment of all patients should be standardised across the NHS with the recording of a minimum clinical data set resulting in a 'NHS early warning (NEW on arrival and frailty, measured by Clinical Frailty Scale (CFS)).¹²

Participant Identification

Patients located within acute medicine services on the date of the service evaluation, either in the Acute Medical Unit (AMU) or Same Day Emergency Care (SDEC) unit, in beds, trolleys or chairs, were eligible for inclusion. Participating units aimed to recruit all eligible patients who physically attended these units on the day of the service evaluation. This included

patients who had spent the night in the AMU and were still present on the day of evaluation, and patients presenting to the SDEC unit any time before closing on the day.

Inclusion Criteria

- Patients who were cared for in an AMU or SDEC unit.
- Patients who presented with a suspected medical emergency.
- Participants who were willing and able to give verbal informed consent for participation.
- Aged 16 years or above.
- Patients who had been reviewed by a consultant physician or appropriate alternative (for example on a post-take ward round).

Exclusion Criteria

The participants were not entered into the service evaluation if ANY of the following applied:

- Patients who were actively dying or receiving end of life care.
- Patients on virtual ward or equivalent services, that were not physically present in hospital.
- Patients unable to provide informed consent
- Patients admitted for elective or semi-elective procedures

Recruitment

Participants were identified by their presence in the AMU or SDEC, approached by a member of their clinical team and verbal consent was taken. A recruitment log was kept by local investigator teams documenting reasons why potential participants were excluded from participation.

Informed Consent

Each participant agreed to participate in the service evaluation prior to answering the questions of the PREM tool and the EQ-5D. An information leaflet and a poster were available to participants and displayed on the unit on the day of the evaluation and the day prior to the evaluation. Only verbal consent was required, and this was recorded in the Case Report Form. Information leaflets were available in English and Welsh.

Statistics & Analysis

The service evaluation was limited to descriptive quantitative analysis methods.

The primary outcome was the number of patients able and willing to participate as a proportion of eligible patients.

Additional evaluation included reporting of outcomes of the items in the PREM and the EQ-5D as part of an anonymised dataset.

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Table 1. What is the feedback of the patients? Summary PREM questionnaire	
Question	Mean/Maximum
1. What was the severity of your symptoms on arrival at the department?	6.8/10
2. What was the severity of your symptoms at the time of the interview?	4.6/10
3. Did you understand the explanation in the department about the cause of your symptoms?	4.6/6
4. Do you understand why additional diagnostics and treatments were executed in the department?	5.0/6
5. Do you understand the next steps in the treatment of your condition, during admission or at home?	4.5/6
6. Did you feel reassured after your visit of the department?	4.8/6
7. Are you satisfied with the total length of stay in the department?	4.7/6
8. Did you feel safe during your visit in the department?	5.5/6
9. Did the healthcare professionals listen attentively to you, during your stay in the department?	5.4/6
10. Did you have trust in the expertise of the healthcare professionals in the department?	5.5/6
11. How would you grade the department in general?	8.5/10

Means are adjusted for sample size

Data management

Direct access was granted to authorised representatives from the Sponsor and host institutions for monitoring and/or audit of the service evaluation to ensure compliance with regulations.

Data was collected on paper case report forms and transcribed into excel spreadsheets in the participating organisations removing all identifiable data. Only summary data (n, mean) was reported to the collaborative of investigators.

Governance

This service evaluation did not require specific ethical approval, as confirmed by communication with the Health Research Authority.

The evaluation was conducted in accordance with the principles of the Declaration of Helsinki, General Data Protection Regulations (GDPR) and in accordance with relevant regulations and with Good Clinical Practice.

The protocol, participant information sheet and advertising materials were submitted to the Council of the Society for Acute Medicine for written approval.

Funding

The service evaluation received no specific funding; time was volunteered by investigators at each site.

Results

Recruitment

10 hospitals submitted data – this included 10 Acute Medical Units and 8 Same Day Emergency Care units. Not all units recruited in both locations.

Participants

365 patients were screened, 200 were included (55%): 159 patients from AMUs and 41 from SDECs. Hospitals submitted data from a median of 13 patients.

Of the patients who were screened and excluded, 18 patients (5%) were 'returners' attending a follow-up appointment in the participating units, 13 (4%) patients were unconscious, 78 (21%) were unable to give verbal consent for another reason and 56 (15%) were unwilling to take part.

44% of patients were female; 42% of patients were over the age of 70 years and 93% came from their own home.

63% of patients were referred from the Emergency Department (ED) and 26% from primary care, the remainder were referred from other sources.

The mean NEWS2 score was 1.7 and mean value for the clinical frailty scale 3.4.

Patterns of admission

12% of patients were admitted between midnight and 8:00 am, 28% between 8:00 and 12:00, 27% between 12:00 and 16:00, 22% between 16:00 and 20:00 and the final 11% between 20:00 and 24:00.

The duration of stay in the department for patients in the evaluation was less than 6 hours for 29%, 6-24 hours for 37% and more than 24 hours for a further 34%.

Quality indicators

Against the Clinical Quality Indicators of the Society for Acute Medicine 78% of patients had an Early Warning Score within 30 minutes of presentation, 73% had a first review by a medical practitioner within 4 hours and 32% had been seen by a consultant within 6 hours for daytime admissions and 14 hours for out-of-hours admissions.

Patient experience

Unit reported only the mean value to each question – these were accumulated and adjusted for sample size of each unit by multiplying the value with the number of included patients, adding all values and then dividing

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Table 2. Mean of PREMs reported by units

Unit	Setting	Symptoms on admission (of 10)	Symptoms at time of interview (of 10)	Explanations (of 6)	Test & treatments (of 6)	Next steps (of 6)	Reassurance (of 6)	Length of stay (of 6)	Safety (of 6)	Listening (of 6)	Trust (of 6)	Overall (of 10)
1	AMU	7.2	4.9	5.2	5.4	5.0	5.3	5.5	6.0	5.8	5.9	8.5
1	SDEC	5.7	4.5	5.5	5.7	5.7	5.4	5.6	6.0	6.0	5.8	9.3
2	AMU	7.7	5.6	4.9	5.4	5.6	5.7	5.0	5.7	5.9	5.7	9.0
2	SDEC	4.8	4.2	4.8	4.2	4.2	5.0	4.6	5.8	5.6	5.6	8.4
3	AMU	7.3	4.8	4.5	4.2	4.2	4.5	4.4	5.0	4.9	4.8	7.3
4	AMU	7.4	6.4	5.0	5.8	5.8	5.1	5.3	5.8	5.9	6.0	9.3
4	SDEC	4.0	2.4	3.3	5.2	4.2	4.8	5.5	6.0	5.8	6.0	8.7
5	AMU	7.4	5.4	3.9	4.8	3.4	4.1	3.8	5.2	4.6	5.2	8.1
5	SDEC	5.5	4.5	2.8	5.5	5.3	5.8	4.8	5.8	5.8	6.0	9.3
6	AMU	7.5	4.1	4.4	5.0	4.1	5.1	5.2	5.7	5.8	5.6	8.1
7	AMU	7.8	4.8	4.8	4.9	4.6	4.8	4.1	5.4	5.8	5.8	8.9
7	SDEC	4.3	4.3	4.7	5.3	5.0	5.0	3.8	5.3	5.5	5.5	8.2
8	AMU	6.6	4.2	4.6	4.6	4.0	5.1	4.9	5.8	5.7	5.9	9.3
9	AMU	7.2	3.8	4.8	5.0	4.3	4.5	4.9	5.2	4.8	5.1	8.8
9	SDEC	6.2	4.7	5.8	5.0	5.8	5.8	4.7	6.0	5.7	5.8	9.7
10	AMU	7.6	3.7	4.2	4.1	3.5	3.8	3.9	5.1	4.8	4.8	7.8
10	SDEC	n.k.	n.k.	5.0	6.0	5.0	5.0	3.0	6.0	6.0	5.0	7.0
All	AMUs	7.3	4.7	4.5	4.8	4.2	4.7	4.6	5.4	5.2	5.4	8.4
All	SDEC	5.2	4.1	4.9	5.3	5.2	5.3	5.0	5.9	5.8	5.8	9.0

by the number of overall participants (Table 1) and per unit (Table 2).

Mean severity of symptoms improved from 6.8/10 on arrival to 4.6/10 at the time of the interview. Patient felt overwhelmingly safe and listened to and trusted their treating team. The overall grading of departments was 8.5/10.

Health Status

Health Status as measured by the EuroQuol 5D questionnaire are summarized in the table below. The values are not adjusted for population (Table 3).

Focus group with local evaluation leads

An online Focus group was held with the local evaluation leads and Dr Sally Lewis from the Welsh Value Based Health Care Programme on the 4th of October.

Participants of the group were satisfied that the evaluation addresses an important need. Dr Lewis emphasised that measurement of PREMs and PROM is now policy in Wales and is written into legislation.

Leads shared their experience of collecting the data. While the questionnaires are designed for self-administration especially in those with visual impairment investigators assisted by reading out the

questionnaires. This might affect the answers of the patient and is not usual practice in the administration of PREMs or PROMs. For those unable to answer questions proxy measures provided by friends or family measures might be an important source of information.

There were suggestions to reword some of the questions for easier understanding using 'to what extent' as a request for grading.

Participants reflected on the fact that for some of the questions the answer is reliant on the relation of the patients with their clinician and in some on the global experience of care in the organisation. There might therefore be clustering of the results. Further evaluation should consider whether there is correlation of responses to questions that might suggest redundancy and could therefore whether shortening of the tool may be possible.

Members of the focus group expressed concern that patients might consider the experience of emergency care together as a whole i.e. the PREM might measure who referred them to the unit, how they got there as well as how the unit is experienced, including feedback on their experience in Emergency Medicine as well as within acute medicine services. Movement from a noisy crowded area such as parts of the Emergency

Table 3. What is the Health Status for the patients? EQ-5D	
Item	Mean
Mobility	2.4
Self-care	1.7
Usual activities	2.5
Pain discomfort	2.3
Anxiety /Depression	2.0
Health today	56/100

[Means are adjusted for sample size, all scales can take values from 0 to 5 with 0 being the best and 5 being the worst value for the health status parameter]

Department to a calmer space might be reflected in better experience of care.

Participants of the focus group wondered whether the questions about the length of stay question may be more appropriate for an acute assessment in the Emergency Department and less relevant for other settings.

The potentially transient and changing experience throughout the journey through the emergency care system might require a formal testing of the tool at different times: in the ambulance, on arrival to the emergency department, at time of referral to medicine, on transfer to the Acute Medical Unit, to a general ward and back home. This would require a formal research approach outside the scope of the current evaluation.

While the tool is validated in a comparable patient population in the Netherlands participants suggested that a formal validation in different settings would be helpful to explore cultural influences on experience. While a question about education was included in the survey, a more formal assessment of health literacy might be preferable.

A review of the domains in the tool was proposed to explore whether other tools with these domains are already being used in the UK. Some of the questions are generic and explore how much people feel involved in their care. There are generic PREMs for primary care and electronic data collection tools for some PREMs in secondary care. The International Consortium for Health Outcomes Measurements (ICHOM) has developed tools to measure autonomy and participation for older patients using a set of multiple questionnaires(13). These might again be challenging for those with cognitive impairment who are unlikely to be able to describe their experience using commonly used questionnaires and surveys(14).

Discussion

What we have shown

This is the first attempt to capture a more differentiated picture of patient reported experience in acute medicine. Completion of this PREM was successful

in just over half of the patients in the participating units. Patients’ symptoms improved from the time of presentation to the time of the first assessment. Many of the patients reported a positive experience. There seemed to be a trend towards better feedback from patients seen in SDEC but a formal analysis was not intended.

Participants of the investigator focus group felt that it is desirable to ask patients and families about their experience but raised questions about the best way to measure patient reported experience and outcomes: through interviews, questionnaires, mail shots, text messages or wall mounted QR codes, on the day of admission or a day, week or month later.

Strength and weakness

The format chosen for of the service evaluation was that of a community of practice(15); where people mutually guide each other through their understandings of the same problems in their areas of mutual interest. This format lends itself to the development of improvement across diverse clinical teams and organisations linked through a common purpose and responsibilities(16) and as an efficient way of knowledge sharing and influencing collective behaviour but requires vertical leadership to achieve impact(17).

The evaluation was only undertaken in a small number of units – albeit from hospitals in various settings, caring for inner city, urban and rural patients. In the absence of a formal statistical evaluation patient feedback did not seem to vary majorly between the units (table).

Sampling was pragmatic and some patient groups were not represented. A significant number of patients were unable to complete the assessments, either because of altered mental status (i.e. delirium or dementia) or severity of illness. Patients older than 70 years of age were less represented than in the national data set (18) from those managed on ambulatory pathways through Same Day Emergency Care (SDEC. This raises the possibility that the experience of a significant number of vulnerable patients might not be represented in the evaluation.

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We are cognisant that the presence of the patient in the acute medical units and SDECs might have influenced the way in which they reported their experience. As patients were asked about their experience before completion of their episode of care, this may impact their views; reported experience once the patient has been discharged from hospital or moved to another service, and had opportunity to reflect on their experience and understanding, may vary. In the same vein some of the experience that patients reported might have been coloured by care previously received in primary care or the Emergency Department.

Clinical implications

For improvement of quality and to inform set-up of services, feedback from service users is considered a necessary requirement. The present evaluation gives a first indication how acute medical units in the UK might be able to collect data on patient experience in their own environment.

Research implications

We have included a questionnaire of education in the current evaluation but a formal assessment of health literacy might be more appropriate to interpret the results of this type of audit. The SBSQ(19) marginal, or adequate health literacy based on the Short Test of Functional Health Literacy in Adults (S-TOFHLA) has been suggested as a screening tool by the OECD (2) due to its brevity with only three items: 'How confident are you filling out forms by yourself?', 'How often do you have someone (like a family member, friend, hospital/clinic worker or caregiver) help you read hospital materials?' and 'How often do you have problems learning about your medical condition because of difficulty understanding written information?'. Alternatively, a single item could be used to screen ("How often do you need to have someone help you when you read instructions,

pamphlets, or other written material from your doctor or pharmacy?") (20).

The tool used for the measurement of PREMs in the present evaluation was developed in a Dutch cohort presenting with acute medical concerns. Our data suggests the need for further research to understand possible differences between the UK and Dutch cohort, changes of feedback over time (i.e. from the first hours of admission all the way to the time post-discharge) and aspects of social inclusion. We are particularly concerned about the cohort of patients with cognitive impairment and the ability to capture their often challenging experience of acute and emergency care.

Conclusion

Collection of data on PREMs within acute medicine services is feasible but pathways to translate this data to change clinical service models remain unclear. Increased understanding is needed regarding how to capture the experience of those with altered mental status, dementia and learning disabilities, as well as how family and carer involvement might allow more holistic assessment of the quality of care.

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Conflicts of Interest

Nothing to declare

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