

The quality of patient experience of short-stay acute medical admissions: findings of the Adult Inpatient Survey in England

Paul Sullivan, Mary L Harris and Derek Bell

ABSTRACT – Introduction of the specialty of acute medicine and of acute medical units (AMUs) in the UK have been associated with improvements in mortality, length of stay and flow, but there is no literature on the patient experience during the early phase of acute medical admissions. We analysed the Adult Inpatient Survey (AIPS) findings for short-stay unscheduled medical admissions who did not move from their first admission ward (n=3325) and therefore are likely to have been managed entirely in the AMU. We compared these with short-stay emergencies in other specialties (n=3420) and short-stay scheduled admissions (n=10,347). Scheduled admissions reported a better experience for all survey items. Scores for unscheduled admissions were worse in medical patients compared with other specialties for pain control, privacy, involvement, information, and for a number of questions relating to information on discharge. The specialty of acute medicine should work to improve future patient experience.

KEY WORDS: Acute medicine, acute medical unit, patient experience, quality improvement

Introduction

The specialty of acute medicine was established to deliver high-quality outcomes for emergency medical admissions.^{1,2} There is evidence that the introduction of the acute medical model has been successful in improving mortality, length of stay and patient flow,³ but there is currently no literature describing patient experience for acute medical admissions. Patient experience was given the same emphasis as safety and clinical effectiveness in the 2008 Darzi report.⁴ It is one of three mandatory targets for improvement included in the 2012 Health and Social Care Act, and is emphasised strongly in the NHS Mandate.^{4,5,6} Calls for a more positive experience of healthcare come from diverse sources, including the Chief Nursing Officer, who has recently launched a 3-year strategy to increase compassion in the NHS, and the Prince of Wales, who has emphasised the importance of understanding and valuing the

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patient perspective.^{7,8} Most recently, media coverage of the Francis Report into care at Mid Staffordshire Trust has brought the issue of poor patient experience to the public's attention.⁹ Good patient experience, as well as being an end in its own right, has also been shown to be associated with better objective outcomes and safety.¹⁰

To improve patient experience, we need data to highlight areas most in need of change and to provide continuous feedback. Measurement for improvement is different from measurement for research or regulation. It can use less stringent sampling than research, and smaller samples than are often required for regulation, but it does need to be reproducible and accurate. Collecting such robust data on patient experience is technically exacting and requires instruments that have been validated in large cohorts of representative patients. Robust psychometric statistical methods are used to validate surveys, and provide assurance that a survey measures what it purports to and that results are reproducible and consistent.¹¹ The Adult Inpatient Survey (AIPS) is a validated UK derivative of the original Picker Survey, developed from extensive research into patients' priorities and in use since 1987.^{12,13} Its themes and questions are similar to the Hospital Consumers' Assessment of Healthcare Providers and Systems (HCAHPS) that is used to appraise hospitals offering Medicaid or Medicare services in the USA.¹⁴ The AIPS is required to be administered to a sample of 850 patients from all NHS acute trusts in England, and results are currently reported by organisation. Until 2010, the database included data on specialty attribution, enabling further analysis by specialty at national level and identification of themes that individual specialties should prioritise for improvement.

We have examined the results of the AIPS for a group of patients of interest to acute medicine. In order to isolate the effects of the acute phase of care, we have looked specifically at the experience of unscheduled medical admissions with length of stay (LOS) of 1–2 days, who remained on the initial admitting ward (group A). Over the last decade acute medical units (AMUs), which receive emergency medical patients from the emergency department or community, have become almost universal, with 98% of acute trusts in England reporting that they had an AMU in 2010.¹⁵ Patients in group A are therefore extremely likely to have received all of their inpatient care in an AMU. We compared AIPS results for group A with short-stay unscheduled admissions in other specialties (group B) and short-stay elective admissions (group C).

Methods

We analysed the results of the AIPS for 2010, which are available from the UK National Audit database.¹⁶ This is the most recent year

Table 1. Demographics of groups.

	Completed questionnaires	Male (%)	Age 16–35 years (%)	Age 36–50 years (%)	Age 51–65 years (%)	Age 66+ years (%)
Group A	3,325	44	8	16	25	51
Group B	3,420	43	22	23	26	29
Group C	10,347	44	9	9	32	40

that includes data on specialty attribution. Responses for each item were dichotomised into ‘problem’ and ‘no-problem’ scores, as recommended by the Picker Institute (Europe).¹⁷ Unequivocally positive responses counted as ‘no-problem’, and all other responses as ‘problem’. For example, for the question ‘When you had important questions to ask a doctor, did you get answers that you could understand?’, the response ‘yes, always’ was scored as ‘no problem’, and ‘yes, sometimes’ or ‘no’ were scored as ‘problem’. For the questions ‘How would you rate how well the doctors and nurses worked together?’ and ‘Overall, how would you rate the care that you received?’, the top three answers (‘excellent’, ‘very good’ and ‘good’) scored as ‘no problem’. Neutral responses such as ‘I had no need to ask’ were not allocated a score and were categorised as missing data. The publicly available data included patient-level data on length of stay, specialty, type of admission (scheduled/unscheduled), number of wards occupied during inpatient stay and admission to enhanced care units. All patients included had at least one overnight stay and a maximum length of stay of 2 days, and completed their stay on their first admission ward. Patients admitted to enhanced-care areas (intensive care, high dependency and coronary care) were excluded. Group A comprised unscheduled admissions, coded to medicine or geriatrics. These were considered very likely to have been on an AMU for their entire admission. Group B consisted of emergency admissions to specialties other than medicine (surgery, orthopaedics, renal, neurosurgery, obstetrics, gynaecology or oncology). Group C comprised elective admissions from any of the above specialties. Questions were omitted from analysis if not relevant to all groups (for example, those relating to surgical procedures).

Statistical analysis

We developed a multivariate logistic regression model for each question with the unadjusted dichotomous problem score as the dependent variable and patient-group, age and gender as predictor variables. We report the odds ratio of a ‘no-problem’ response for group A compared with group B, and group A with group C with confidence intervals ($\alpha = 0.05$ after Bonferroni correction). Analyses were performed using SAS statistical software version 9.2 (SAS Institute Inc, Cary, NC, USA).

Results

Table 1 shows the characteristics of the three groups. There were differences in the distribution of age groups, with substantially more elderly patients in the acute medicine group and more

patients in the youngest age band among emergency non-medical short-stay admissions. There was also a difference in gender distribution. Table 2 shows results for logistic regression for each survey question, expressed as the odds ratio with 95% confidence intervals for a ‘no-problem’ response when comparing group A vs group B, and group A vs group C. Group A scored significantly less well than group C for all items. Group A scored less well than group B for pain control, privacy, involvement in decisions and information provided, and for a number of questions relating to communication on discharge. In addition, many of the absolute results for group A invite attention, regardless of the outcome of comparisons. For example, when family members wanted to speak to a doctor, only 41% were able to achieve this, and 26% of responding patients describe inadequate privacy during consultations and 30% received conflicting information.

Discussion

We have re-analysed the national data to examine the results for a specific patient group that is relevant to acute medicine. Gender and age are known to influence scoring and these were not distributed equally in the three groups. We therefore accounted for these factors in a regression model, to make meaningful comparison between groups. The results for the short-stay acute medical admissions provide useful intelligence for the specialty of acute medicine and for those working in and leading AMUs and the medical admission process. Acute medical patients returned significantly lower scores than elective patients throughout the survey, and scored lower than other short-stay emergency admissions for pain control, privacy, involvement and information, and communication on discharge.

The specialty of acute medicine was introduced in response to perceived gaps in quality of care for medical admissions, and it has delivered on several areas. However, this study has shown that the experience of acute short-stay medical patients is worse than that reported by short-stay admissions to other acute specialties and scheduled admissions. Acute medicine is now maturing as an established mainstream specialty with a rapidly growing consultant body and widespread multidisciplinary engagement. This creates an opportunity to improve patient experience during the critical and often fraught early phase of emergency medical care. Different models of care, such as twice-daily consultant rounds for all AMU patients, more focus on communication, and easier access to professionals for families and carers, should be tested, developed and adopted in national guidance. Solutions are likely to be context-specific, and the capability to make local changes using established quality-improvement methods should be supported and disseminated within the specialty. The data presented here can be regarded as a national baseline to compare against future performance, and as a guide for the specialty as a whole to identify themes and priorities for improvement. It would be useful to have data at the level of individual hospital AMUs, but local numbers in the current national AIPS programme are too small to permit this. Following April 2013, the UK government’s mandate

**Table 2. Percentage of patients returning a ‘no-problem’ response by group (group A unadjusted, groups B and C adjusted for age and gender) and results of logistic regression for each question shown as the odds ratio for a no-problem response between groups A and B, and groups A and C, with a 95% confidence interval.**

Question	Responses coded as ‘no-problem’	Patients returning the ‘no-problem’ response in group A (%)	Odds ratio for ‘no-problem’ response (95% confidence interval in parentheses)	
			Group A vs B (B=reference group)	Group A vs C (C=reference group)
When you had important questions to ask a doctor, did you get answers that you could understand?	Yes, always	64	0.888 (0.749–1.053)	0.513 (0.446–0.590)
Did you have confidence and trust in the doctors treating you?	Yes, always	74	0.858 (0.715–1.029)	0.339 (0.289–0.397)
Did doctors talk in front of you as though you weren’t there?	No	73	0.857 (0.720–1.021)	0.397 (0.343–0.460)
When you had important questions to ask a nurse, did you get answers that you could understand?	Yes, always	65	0.949 (0.798–1.128)	0.655 (0.569–0.753)
Did you have confidence and trust in the nurses treating you?	Yes, always	74	1.005 (0.841–1.202)	0.718 (0.620–0.830)
Did nurses talk in front of you as though you weren’t there?	No	81	0.852 (0.697–1.042)	0.676 (0.576–0.793)
In your opinion, were there enough nurses on duty to care for you?	There were always or nearly always enough nurses	81	0.954 (0.815–1.117)	0.660 (0.583–0.748)
Sometimes, a member of staff will say one thing and another will say something quite different. Did this happen to you?	No	70	1.121 (0.949–1.324)	0.647 (0.565–0.742)
Were you involved as much as you wanted to be in decisions about your care and treatment?	Yes, definitely	46	0.816 (0.699–0.952)	0.495 (0.438–0.559)
How much information about your condition or treatment was given to you?	The right amount	74	0.789 (0.658–0.905)	0.449 (0.387–0.523)
If your family or someone close to you wanted to talk to a doctor, did they have enough opportunity to do so?	Yes, definitely	41	1.040 (0.855–1.265)	0.678 (0.582–0.790)
Were you given enough privacy when discussing your condition or treatment?	Yes, definitely	74	0.866 (0.717–1.048)	0.584 (0.501–0.680)
Were you given enough privacy when being examined or treated?	Yes, definitely	86	0.630 (0.700–0.984)	0.508 (0.419–0.615)
Do you think the hospital staff did everything they could to control the pain? (if in pain)	Yes, definitely	63	0.725 (0.634–0.828)	0.610 (0.542–0.687)
Did a member of staff tell you about the medication side effects to watch for when you went home?	Yes, completely	30	0.746 (0.604–0.922)	0.453 (0.383–0.537)
Were you told how to take your medication in a way you could understand?	Yes, completely	71	0.757 (0.600–0.955)	0.491 (0.406–0.593)
Were you given clear written or printed information about your medicine?	Yes, definitely	62	0.917 (0.760–1.107)	0.662 (0.570–0.770)
Did a member of staff tell you about any danger signals to watch for after you went home?	Yes, completely	32	0.909 (0.775–1.067)	0.568 (0.502–0.643)
Did the doctors and nurses give your family or someone close to you all the information they needed to help care for you?	Yes, completely	40	0.990 (0.806–1.216)	0.709 (0.605–0.831)
Did hospital staff tell you who to contact if you were worried about your condition or treatment after you left hospital?	Yes, definitely	66	0.692 (0.577–0.831)	0.421 (0.363–0.487)
Overall, do you feel you were treated with respect and dignity?	Yes, always	76	0.904 (0.776–1.051)	0.509 (0.448–0.578)
How would you rate how well the doctors and nurses worked together?	Excellent, very good, good	91	0.914 (0.753–1.109)	0.599 (0.518–0.694)



to commissioners requires that a short questionnaire including a single question on overall satisfaction, the 'friends and family test', is administered to all acute patients.⁶ Although this has the advantage of large numbers, it does not provide details on which details of care need to be improved. Some hospitals currently use AIPS and AIPS-derived surveys in large numbers to produce local data that can be used for improvement, but the administration and sampling may not be standardised, and the results may not be available externally or at the clinical front line, and so they do not permit valid cross-site comparison and may fail to drive local improvement. Nationally coordinated administration of AIPS to larger numbers of acute medical patients in each trust would provide feedback during local change initiatives, benchmarking against the best-performing units, and could be used with individual-clinician-level data for appraisal and revalidation.

This study has several limitations. The results of comparison between these different groups cannot be interpreted as necessarily reflecting differences in quality of care in these different clinical contexts, as there are many potential sources of bias, and the patient groups may have different needs and expectations. Instead, they are intended to be illustrative, to draw attention to areas that might be targeted for improvement resource, and to prompt learning from other clinical areas. In this study, we are unable to be certain how many of the patients in group A were cared for in AMUs or by acute medical teams, although, given the near-ubiquitous nature of the acute medical model among acute trusts in England, it is extremely likely that almost all of these patients satisfy one or both of these criteria. Dichotomisation of scores discards additional information contained in the data, such as the number of patients reporting worst care, but has the advantage of providing a measure that is easy to communicate and understand: the proportion of patients reporting best care.

We conclude that the nationally administered AIPS can provide detailed information on the overall quality of the patient experience for short-stay acute medical patients. There are absolute shortfalls in care that should be prioritised for change, and scores for acute short-stay patients are worse than for other patients, indicating likely potential for improvement. We recommend administration of the AIPS to larger numbers of patients at each site to provide information that is more detailed in order to guide local AMU teams. Patient experience should be prioritised by the specialty of acute medicine at national level to ensure the best possible results for this important healthcare outcome.

Acknowledgements

This article presents independent research commissioned by the National Institute for Health Research (NIHR) under the Collaborations for Leadership in Applied Health Research and Care

(CLAHRC) programme for North West London. The views expressed in this publication are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health.

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