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Olive Bennewith, David Gunnell, Tim Peters, Keith Hawton and Allan House

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Variations in the hospital management of self harm in adults in England: observational study

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More than 140 000 people present to hospital after an episode of self harm each year in England and Wales.[1] Improving the general hospital management of these people is a key area in preventing suicide.[2] Although professional consensus has been reached on how self harm services should be organised and delivered,[3] wide variations in care delivery have been reported in two regions in England.[4 5] Using a nationally representative sample, we investigated the variation in services and delivery of care for self harm patients in hospitals in England.

Participants, methods, and results

We selected a stratified random sample of 32 hospitals, four from each former health region (table and see bmj.com). At each hospital we interviewed two to five key emergency and psychiatric staff about hospital service structures and made arrangements with them to start audits of the processes of care. We assessed each hospital on 21 recommended self harm service standards (see table A on bmj.com).[3] In 2001-2 each hospital did a prospective eight week audit of their management of self harm (see bmj.com). Trust staff used emergency department, medical, and mental health records if audit data were incomplete.

A designated self harm or liaison service was available at 23 of the 32 hospitals. At 11 hospitals, more than half of the 21 recommended service structures were not in place (median score 12; range 7 to 20). The most commonly available aspects of service were guidelines for medical management (at 31 hospitals) and 24 hour access to specialist psychosocial assessments (at 30 hospitals) (see table A on bmj.com).

Guidelines for assessing the risk of suicide for use by staff in emergency departments were available at 17 hospitals. Only 14 hospitals had self harm service planning meetings with mental health services, emergency department, or medical staff. Routine contact with patients' general practitioners within 24 hours of discharge from emergency departments happened at only half of the hospitals. Service scale scores were weakly associated with hospital size (rank correlation 0.20, P = 0.28).

During the eight week audit, staff identified 4222 episodes of self harm. Hospitals varied widely in the proportion of attendances leading to a psychosocial assessment (median 55%; range 36% to 82%), hospital admission (42%; 22% to 83%), psychiatric admission (9.5%; 2.5% to 23.8%), and mental health follow up (51%; 35% to 82%). Using metaregression techniques, we found no significant difference in the proportion of assessments (55% *v* 58%; odds ratio 0.88; 95% confidence interval 0.56 to 1.38; P = 0.57), admissions (42% *v* 52%; 0.65; 0.37 to 1.13; P = 0.13), psychiatric admissions (10.5% *v* 11.4%; 0.89; 0.59 to 1.37; P = 0.61), or arrangements for follow up (53% *v* 56%; 0.91; 0.66 to 1.25, P = 0.54) between hospitals with and without a designated service. However, at hospitals with a designated service, assessments were considerably less likely to be undertaken by junior (training grade) psychiatrists alone (22% *v* 75%; 0.04; 0.01 to 0.14; P < 0.01).

Comment

Variability in organisation and provision of services for patients with self harm was striking. There was twofold variation across hospitals in levels of psychosocial assessment, fourfold variation in the proportion of

Details of the sampling process, a table, and the audit form are on bmj.com

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Variation in management of self harm patients across 32 English hospitals

Hospital size (No of acute beds 2000-1 to nearest 100)*	Service scale score (maximum 21)	No (%) receiving psychosocial assessment†‡	No (%) assessed by senior house officer in psychiatry alone§	No (%) admitted to hospital bed‡¶	No (%) admitted to a psychiatric bed‡**	No (%) referred for specialist mental health follow up‡††	No of self harm episodes during eight week audit
Hospitals with a designated self harm or liaison service							
600	11	174 (70.7)	1 (0.6)	149 (60.6)	13 (5.3)	128 (53.1)	246
400	11	91 (57.6)	0	77 (48.7)	11 (7.0)	81 (51.3)	158
400	11	66 (62.9)	21 (33.9)	58 (55.2)	4 (3.8)	55 (52.9)	105
1000	16	130 (48.5)	36 (34.6)	116 (43.5)	25 (9.6)	132 (51.0)	268
300	14.5	37 (44.1)	3 (10.0)	35 (41.7)	7 (8.3)	54 (64.3)	84
700	13.5	80 (55.2)	13 (24.5)	62 (42.5)	26 (17.9)	88 (61.1)	146
500	14	83 (60.6)	28 (38.9)	53 (38.7)	11 (8.2)	67 (49.6)	137
1000	8.5	118 (68.6)	3 (2.8)	120 (69.8)	9 (5.3)	83 (50.0)	172
300	14	40 (48.8)	0	42 (51.2)	2 (2.5)	32 (39.5)	82
600	7.5	43 (36.4)	0	30 (25.9)	10 (8.6)	76 (66.1)	118
1000	15.5	103 (50.2)	22 (23.7)	49 (24.4)	10 (5.0)	70 (34.7)	205
700	12	124 (70.5)	34 (34.3)	153 (83.2)	16 (9.6)	77 (46.1)	184
400	11.5	39 (38.2)	8 (36.4)	35 (34.0)	16 (16.0)	51 (51.5)	103
400	8.5	46 (35.7)	12 (35.3)	52 (40.0)	12 (9.2)	58 (45.3)	130
700	17.5	104 (55.0)§§	NA	59 (31.2)§§	29 (15.3)	95 (51.9)§§	189
800	13.5	97 (71.9)	11 (14.5)	40 (29.9)	19 (14.5)	63 (48.8)	135
400	8	32 (41.0)	0	17 (21.8)	12 (15.4)	31 (39.7)	78
700	7	69 (51.9)	¶¶	77 (57.5)	29 (22.7)	79 (63.2)	134
300	10.5	115 (71.9)	0	56 (35.0)	12 (7.5)	97 (61.0)	160
200	11	58 (55.8)	13 (31.0)	26 (25.0)	16 (15.4)	48 (46.2)	104
500	15.5	112 (44.8)	9 (11.1)	107 (42.5)	30 (12.1)	163 (66.5)	252
400	20	88 (65.2)	23 (32.4)	56 (41.5)	17 (12.6)	93 (68.9)	135
700	16	81 (54.7)	2 (3.0)	39 (26.4)	14 (9.5)	81 (55.4)	150
Summary: mean (range)	12.5 (7-20)	54.8% (35.7%-71.9%)	17.5% (0-38.9%)	42.2% (21.8%-83.2%)	10.5% (2.5%-22.7%)	52.9% (34.7%-68.9%)	151 (78-268)
Hospitals with no designated self harm or liaison service							
200	11.5	49 (76.6)	42 (95.5)	39 (60.9)	4 (6.3)	32 (50.0)	64
300	15	34 (53.1)	26 (100)	45 (70.3)	5 (7.9)	34 (54.0)	64
400	10	32 (42.1)	18 (90.0)	35 (44.3)	12 (15.2)	38 (48.7)	79
200	10	52 (76.5)	44 (100)	22 (32.9)	8 (11.4)	44 (63.8)	70
300	7.5	36 (49.3)‡‡	9 (33.3)‡‡	23 (31.5)‡‡	8 (11.3)‡‡	41 (56.9)‡‡	73‡‡
400	8	56 (67.5)	40 (90.9)	58 (69.1)	11 (13.3)	37 (44.6)	84
700	9.5	32 (38.1)	0	27 (32.1)	5 (6.0)	39 (47.6)	84
300	10	67 (81.7)	44 (91.7)	68 (82.9)	19 (23.8)	65 (82.3)	82
500	14	52 (36.4)	¶¶	70 (47.6)	11 (7.7)	72 (51.8)	147
Summary: mean (range)	10.6 (7.5-15)	57.9% (36.4%-81.7%)	75.2% (0-100%)	52.4% (31.5%-82.9%)	11.4% (6.0%-23.8%)	55.5% (44.6%-82.3%)	86 (64-147)

NA=not available.
*From Department of Health Hospital Activity Statistics.
†Data missing for 26/4033 (0.6%).
‡Information on missing data not available for 189 episodes where management data were provided by the hospital from a recent in-house audit.
§Data missing for 8/1736 (0.5%); because of missing data, the data shown are for episodes where the patient was not admitted to a psychiatric bed.
¶Data missing for 10/4033 (0.3%). **Data missing for 70/4033 (1.7%). ††Data missing for 100/4033 (2.5%). ‡‡Data for this hospital are for a six week period.
§§Data provided by the hospital from a recent in-house audit. ¶¶Data not included as missing for >10% episodes.

attendances leading to admission to a hospital bed, and 10-fold variation in the proportion admitted to a psychiatric bed, although for the latter we were unable to determine how many were readmissions of patients who had self harmed while already psychiatric inpatients.

There were wide variations in the implementation of the recommended service structures.[3] Although most hospitals had a designated self harm or liaison service, interdisciplinary working and service planning were less common. Future research should examine the relationships between the patient management and service structures described here and indicators of outcome such as repetition and suicide.

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Contributors: DG, TJP, AH, and KH initiated the study. All the authors contributed to the design of the study. OB recruited and visited the hospitals, interviewed staff, facilitated and monitored the audits. OB, DG, and TJP analysed the data. All the authors contributed to and edited the paper. DG and OB are guarantors.

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Multi Centre Research Ethics.

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