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# Minor head injury in the Republic of Ireland: evaluation of written information given at discharge from emergency departments

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► An Additional appendix is published online only. To view this please visit the journal online (<http://emj.bmj.com/>).

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## ABSTRACT

Most patients presenting to the emergency department with minor head injuries are discharged with written information. Here the quality of minor head injury discharge leaflets in the Republic of Ireland is evaluated against a nationally accepted template. There was great variability in leaflet content. Most provided minimal information on emergency symptoms but 60% contained no information on post-concussional symptoms. No leaflet was available in audio-format or languages other than English. Information provided in minor head injury leaflets should be improved and standardised across Ireland.

## INTRODUCTION

Of the 1.2 million emergency department (ED) attendances in Ireland every year,<sup>1</sup> up to 10% are due to head injuries.<sup>2</sup> Eighty per cent of patients with head injuries are discharged directly from the ED.<sup>2</sup> Written information should be used to supplement verbal discharge instructions<sup>3</sup> as intracranial haemorrhages are occasionally missed<sup>4</sup> even with CT scanning.<sup>5</sup> Furthermore, post-concussional symptoms (PCS) are common and may persist beyond 1 year post-injury in half of minor head injury (MHI) patients.<sup>6</sup> Although individual Irish EDs use different sources to inform protocols, many use UK derived advice.<sup>7</sup> In the UK, NICE and SIGN provide head injury guidelines that include templates for written discharge information.<sup>8,9</sup>

## METHODS

Irish hospitals with a full ED were identified on the Health Service Executive (Ireland) website. In 2009 we contacted the lead nurse at all 35 EDs, asking for their MHI discharge leaflet. A short questionnaire explored supplemental information on whether there were separate information leaflets for babies/toddlers, children, adults and carers; and if the leaflets were available in other languages, audio-format, large print or Braille. Non-responders were first followed up with another letter, then telephoned.

A comprehensive MHI leaflet was created based on NICE and SIGN guidelines<sup>8,9</sup> before any analysis was undertaken. Information provided in each leaflet was evaluated against this template leaflet, which contained four pieces of general advice, 11 emergency symptoms and action to take if these occur. Eight symptoms indicative of PCS were also listed, plus eight advice items to aid recovery. Leaflets scored one point per item out of a total of 31.

## RESULTS

All 35 (100%) EDs provided data and sent their leaflets. Sixteen EDs (46%) used separate leaflets for children, only one used a different leaflet for babies/toddlers. Nineteen (54%) provided separate information for carers, two did not provide a leaflet for the patient him/herself. No ED provided leaflets in Braille, audio-format or languages other than English, although two offered translation services. One ED offered their leaflet in large print.

The most comprehensive leaflet scored 26 out of 31, five scored 3 (mean score: 10.86, SD=7.43). Table 1 lists the provision of general advice. Table 2 details the inclusion of each emergency symptom. The mean number of emergency symptoms listed was 5.5 (range: 0–9, SD=2.59). Advice regarding vomiting was highly variable; 25 (71%) leaflets asked the patient to return to the ED if there is 'vomiting', others gave conditions such as 'continued', 'frequent' or 'excessive'. Twenty-seven (77%) EDs provided a direct-line telephone number.

Table 3 shows the number of leaflets containing each post-concussive symptom and advice to aid recovery. Two leaflets included all eight PCS symptoms, 21 (60%) contained none.

## DISCUSSION

Every ED in Ireland used written leaflets to give to MHI patients on discharge. There was considerable variability in the amount and quality of information provided. Many leaflets lacked important information, particularly regarding PCS features. These findings are consistent with UK studies.<sup>10</sup>

Fourteen leaflets (40%) were very brief, providing patients with four or fewer emergency symptoms which should trigger a return to the ED. However, the majority cited vomiting, severe headache, drowsiness and visual disturbances as causes for contacting or returning to the ED. Advice regarding specific symptoms was variable, particularly for

**Table 1** General advice

Advice item	Number (%) of MHI leaflets including this item (n=35)
Have a carer to stay with you:	16 (45.7)
For 24 h	4 (11.4)
For 48 h	1 (2.8)
For the next day or so	8 (22.9)
Unspecified	3 (8.5)
Show leaflet to a responsible adult	3 (8.5)
Stay near a telephone	10 (28.6)
Some symptoms are common	12 (34.3)

MHI, minor head injuries.

## Short report

**Table 2** Clinical events triggering a return to the ED

	Number (%) of leaflets including this feature (N=35)	Number (%) of leaflets including this feature (N=35)	
<b>Features of deteriorating GCS</b>		<b>Indications of basal skull fracture</b>	
Loss of consciousness or passed out suddenly	11 (31.4)	Fluid from ear or nose	11 (31.4)
Drowsiness or difficult to wake	30 (85.7)	<b>Focal neurology</b>	
Confused or disoriented	13 (37.1)	Limb weakness	15 (42.9)
<b>Features of increased ICP</b>		Visual problems	27 (77.1)
Severe headache	31 (88.6)	Hearing loss	0
Vomiting	33 (94.3)	<b>Advice on emergency features</b>	
Fit	18 (51.4)	If yes to any of these, ring or return to ED	19 (54.3)
<b>Neuropsychological impairment</b>		If worried about anything, ring ED	15 (42.9)
Speech slurred/problems with speech	2 (5.7)	ED telephone number given	27 (77.1)
		If worried, take patient straight back to ED	27 (77.1)

ED, emergency department; GCS, Glasgow Coma Scale; ICP, intracranial pressure.

vomiting. Present guidance recommends that any vomiting should trigger a return to the ED.<sup>8 9</sup>

Only 11 leaflets (31%) contained information on emergency features, PCS and general advice. Thirty-three (94%) included some emergency information, but 21 (60%) omitted PCS information. Only eight leaflets advised the patient to visit their family practitioner (GP) if symptoms persist. Provision of PCS information in leaflets may avoid unnecessary GP attendances.

Advice to aid recovery was provided by 21 (60%) leaflets, although half (48%) provided only one or two pieces of advice. Only 57% of EDs used leaflets advising patients to avoid alcohol.

None of the EDs provided leaflets in languages other than English or in audio-format. An inability to read or understand the information could delay recovery or lead to unnecessary reattendance to the ED.

**Table 3** Post-concussive features and advice to aid recovery

Item	Number (%) of MHI leaflets including this feature (n=35)
<b>Post-concussive features</b>	
Mild headache	14 (40)
Dizziness	11 (31.4)
Memory problems	10 (28.6)
Poor concentration	14 (40)
Irritability	6 (17.1)
Easily annoyed	7 (20)
Fatigue	13 (37.1)
Poor sleep	10 (28.6)
<b>Advice to aid recovery</b>	
Don't worry if you have any of these (PCS) symptoms	2 (5.7)
These symptoms should clear up in time without treatment	7 (20)
If symptoms persist see your GP	8 (22.9)
Take plenty of rest	12 (34.3)
Do not take any alcohol	20 (57.1)
Do not take drugs	2 (5.7)
Do not play contact sports	9 (25.7)
Do not drive until you feel you have completely recovered	3 (8.6)

MHI, minor head injuries; PCS, post-concussional symptoms.

**CONCLUSIONS**

Many MHI leaflets omit important information and there is wide variation between EDs. These leaflets should be improved and standardised. A comprehensive MHI leaflet (appendix 1) is now freely available from the NHS Evidence website,<sup>11</sup> and could be used across all Irish EDs.

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