

What the Patients Say: A Study of Reactions to an Intensive Care Unit

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Abstract. One hundred consecutive patients were interviewed between the 3rd and 7th days, inclusive, of their discharge from an intensive care unit to a general ward. The patients' recall of events related to their admission to the ICU was generally poor, and 41% of them felt that they had been confused at some time during their stay though much of this seems to have passed unnoticed by the nursing staff. Lack of sleep was a problem to about a quarter of the patients and 75% of these thought that the inability to lie comfortably was a factor preventing sleep. Other factors included pain, anxiety and noise. The patients seemed satisfied whilst in the ICU, and less than half said they were pleased to return to a general ward.

Key words: Patient, Reactions, Intensive Care.

Intensive Care Units (ICUs) are often regarded as unpleasant places for their occupants. Several reports comment on adverse psychological sequelae in patients [8, 13, 4], ranging from apathy, loss of judgment and agitation to psychotic symptoms such as hallucinations and delirium. Mild manifestations of psychological change have been induced in healthy medical students subjected to an intensive care routine [5], which suggests that the ICU environment rather than the patients' underlying disease is responsible for disturbances in their behaviour. An ICU has many features which may cause patients to become confused [9, 10]; it deprives them of familiar faces and objects [12] and also may affect their sleep. It surrounds sick patients with bizarre machines, flashing lights, a great deal of noise [1] and strangely-dressed staff who may not talk to them. It is of interest, therefore, that, in a survey of patients' reactions to a stay in the ICU, Hewitt [7] found the majority satisfied both with the staff and with the care they received.

The present study of 100 consecutive patients passing through the ICU was undertaken to determine whether:

1. A different and more heterogeneous group of patients than that studied by Hewitt had similar reactions to an ICU and its staff.
2. These patients became confused during their stay in the Unit.
3. Loss of sleep was a significant problem, and, if so, which factors in particular prevented sleep.

Method

Patients who had been treated in the ICU at St Mary's Hospital were interviewed by three female medical students at some time between the 3rd and 7th day after their return to the general ward. The replies to a standard questionnaire, based on that of Hewitt, were compared with data bases kept by the nursing staff in the ICU.

At the end of the interview, the patients also completed an Eysenck Personality Inventory (EPI).

Patients were excluded from the study by death in or shortly after leaving the ICU or if:

1. Their grasp of the English language was insufficient to complete the questionnaire and EPI.
2. They were transferred to a different hospital or were discharged within a few days of leaving the ICU.
3. They were too young to understand or co-operate in the survey.
4. Their stay in the ICU was too short to be of influence, i.e. less than seven hours.
5. They were unconscious throughout their stay in the ICU, or remained too ill to be able to answer a questionnaire; thus most "drug overdoses" admitted to the ICU were excluded.

The survey was concluded when 100 patients had been interviewed. During this five month period there were a total of 206 patients admitted to the ICU. Therefore our conclusions relate to a selected group of "survivors" but we believe do not have less relevance on this account.

Table 1. Monitoring and support lines of 100 patients admitted to the ICU

	No. of patients
Electrocardiogram	99
Central venous catheter	50
Arterial line	20
Gastrostomy or jejeunostomy	22
Urinary catheter	68
Chest drain	38
Oxygen mask	94
Endotracheal tube	26
Tracheostomy	8
Artificial ventilation (IPPR)	22

Table 2. Accuracy of patients' estimate of duration of stay in ICU

Accuracy of estimate	Very good	Good	Fair	Inaccurate	No idea
No of patients	17	24	15	20	20

Very good = 12 % error. Good = 25 % error. Fair = 50% error.
Inaccurate = > 50% error

Background

The ICU admits about 40 patients per month, half of them after elective surgery. Much of this is cardiothoracic or vascular; general surgery accounts for the remainder. Only some 50 patients annually come to the Unit after urological, laryngeal or spinal surgery. Beds in the ICU are booked in advance for any patient for whom major surgery is planned, who is then visited pre-operatively by a member of the ICU nursing staff. In the present survey, 58 of the patients interviewed were booked admissions to the ICU.

The remainder of patients are admitted as emergencies, these are about half surgical and half medical. Because there is a coronary care unit in the hospital, few patients with myocardial infarction come to the ICU.

Results

Of the 100 patients interviewed, 99 were keen to help, though five of them had no recollection at all of the Unit. The remaining patient declined to continue answering half way through the interview. There were 65 males and 35 females. Twenty two required artificial ventilation. The other monitoring and support "lines" are shown in Table 1. The duration of stay in the Unit of these 100 patients ranged from seven hours to five days, with a mean of 39.6 h. Only five patients stayed for more than four days.

Table 2 shows the patients' estimation of their stay in the ICU. Twenty had no idea of how long they were there, and only 41 were able to give an accurate estimate.

Of the 22 patients who were ventilated artificially, only seven had any recollection of the experience. Of these, one made a fair estimate (< 50% error) and the other six inaccurate estimates of the duration of ventilation. Fifteen patients were ventilated for 12 h or less, six more for 12 - 14 h and one for 48 h. The mean period of ventilation was 14.59 h.

Table 3. Recollection of nursing staff

	No of patients marked positive	No of patients marked negative
Sympathetic	90	3
Too attentive	7	86
Efficient	92	1
Not easy to talk to	8	85
Thoughtful	92	1

Table 4. Recollection of medical staff

	No of patients positive reply	No of patients negative reply
Explain things enough	72	21
Considerate	90	3
Efficient	91	2
Discuss worrying details in front of you	6	87
Not around when needed	17	76

Seventy eight patients were never ventilated. Of these 11 thought incorrectly that they had been "on a breathing machine" and 41 had "no idea".

None of the patients reported feeling worried whilst on the ventilator; two remembered some discomfort and only one person had experienced pain.

None of the patients ventilated were able to recall being worried by tracheal toilet. However, of the 11 who incorrectly thought they had been ventilated, three reported feeling worried, nine had suffered discomfort, and six had felt pain. All of these 11 had been given oxygen by mask at some stage during their stay.

When asked to comment about the nursing staff over 90% replied that they were sympathetic, efficient and thoughtful (Table 3). Similar results were obtained to questions about the medical staff in the ICU. Some patients, though, found difficulty in remembering any of them (Table 4).

Of the 59 elective admissions to the ICU, only 32 could remember a pre-operative visit by a member of the nursing staff, though all had, in fact, received one.

Sixty nine thought that their relatives and friends were allowed to visit them enough. Nineteen said that they were not visited because either they did not wish for any visits, or their relatives lived too far away. Five claimed they were visited too frequently and one not enough. Eighty thought they were given adequate explanation and 14 felt they were not. However, 78 of the patients thought their relatives were given adequate explanation about their progress and 15 thought they were not. The nursing staff recorded that 26 patients were never visited, 11 rarely visited, 48 had visitors almost every day and 15 more than once a day. The number of visits received by each patient was less than those of patients in a general ward.

The replies obtained to questions concerning aspects of care which worried the patients whilst in the ICU are shown on Table 5. The most frequently marked worrying

Table 5. Patients' worries whilst in the ICU

	Not worried	Worried a little	Worried a lot
Physiotherapy	76	10	8
Handling and movement	81	7	6
Noise	82	8	4
Machinery and equipment	92	1	1
Tracheal toilet	87	4	3
Not getting enough sleep	76	10	8
Pain	62	22	10
Other	76	13	5

Table 6. Patients' estimate of time slept in hours/24 h

	No. of patients	Mean	Minimum	Maximum
Males	24	9.3	1	23
Females	11	13.7	4	23

factors were "pain", "not getting enough sleep", "physiotherapy" and "handling and movement". The total of patients marking "worried a lot" once or more was 15. The other worries were variable, e.g. discomfort caused by an endotracheal tube; domestic staff knocking a bed whilst cleaning.

Patients were asked if they were pleased to leave the ICU and go to a general ward. Forty nine patients said they were; thirty because it was a sign of satisfactory progress and 16 because they looked forward to more company. Three could give no particular reason. Forty four patients were **not** pleased to return to a general ward; twenty one because they thought the excellent nursing and medical attention they had received in the ICU would not be equalled, two patients because the general wards were far too noisy. Twenty one patients could give no specific reason.

Fifty seven could not recall any clear distinction between day and night at all, and only 27 were satisfied that they could.

Fifty five (33 male and 22 female) had no recollection of how long they slept. The mean duration of sleep and the range stated by those who could estimate the length of time slept are shown on Table 6. Objective assessment of the duration of sleep was made by the nursing staff; the mean duration was six and a half hours/24 hours for males and six hours/24 hours for females. (Range 1 to 9 hours/24 hours for all patients.)

Twenty four felt that they had had insufficient sleep whilst in the ICU. Half of these patients found tiredness a problem. Of the total number of patients interviewed, 33 complained of tiredness. The nursing staff thought that those complaining of tiredness slept as long as the rest. The factors preventing or disturbing sleep are shown on Table 7. The most frequent factor preventing sleep in those who admitted to "other problems" was the presence of an endotracheal tube, mentioned by five patients.

Twenty eight could recall having dreamt whilst in the ICU; 18 had unpleasant and 10 pleasant dreams.

Forty one thought they were confused at some time during their stay in the ICU. Five more, as mentioned

Table 7. Factors preventing or disturbing sleep

	Total no of patients (N = 100)	Patients also complaining of insufficient sleep (N = 24)
Inability to lie comfortably	55	18
Pain	41	15
Anxiety	18	9
Wearing a mask	17	5
Nurses doing observations	11	5
Noise of other patients	7	4
Noise of staff	10	3
Noise of equipment	7	3
Light	11	3
Other problems	15	0

earlier, had no recollection of their stay. The nurses recorded that three quarters of the patients were correctly orientated most of the time, but that half of them were drowsy for some of it. They observed frank confusion at some time in only five patients, two of whom belonged to the small group with no recollection of their time in the ICU.

Twelve listened to the wireless whilst in the ICU and five watched television. Only three who listened to the wireless, but four of those who watched television, could remember having done so. Five patients claimed they had listened to the wireless when it had not been offered to them. One person who had not watched television thought he had done so.

The overall "N" (neurotic) score from the Eynsenck Personality Inventory for all the people who complained about the four most worrying factors (Table 5) was ten. For the rest of the population the "N" score was nine. These results do not indicate neurotic tendencies in the more worried patients.

Discussion

The features which emerge from this survey are that the typical intensive care patient has poor recollection of his experience. True, he could back calculate the time he had spent in the unit, but retrograde amnesia in nearly 50%, hazy recollection of events in the ICU and a sense of confusion (often unappreciated by nursing staff) makes the experience of a survivor of the ICU fragmentary. This is not apparently related to the preadmission personality, but more to his serious illness, analgesic and sedative drugs – particularly in patients on IPPV – and lack of sleep. About a quarter of Hewitt's patients were worried by difficulty in resting or sleeping and our findings are not dissimilar. Prominent among causes of difficulty is the inability to be comfortable. Patients in an ICU are likely to be placed in a "crucifixion" position with an infusion of some kind in one arm and a sphygmomanometer cuff or arterial line strapped to the other. It is well nigh impossible for a patient immediately after major surgery to wriggle into the comfortable foetal position so many of us adopt for sleep. Those nursed in a sitting position often

slip down the bed to the chagrin of nurses and doctors but perhaps to their own greater comfort.

Of other factors pain was the most frequent source of worry to our patients and the second cause of sleeplessness. The findings point the obvious lesson that pain control is still a matter for further study.

We believe that the actual amount of sleep enjoyed by the patients was very much less than the nurses' assessment which was based on the only available criterion of "not obviously awake". In addition we believe that the patients' own estimates were confounded by the inability to distinguish between sleep and times of "non-sleep" which could not be recalled. Recent studies suggest that total sleep time/24 hours in this ICU is of the order of two hours/24 hours [2].

We noted with interest that nearly a third of the patients were able to recall dreams, in a situation when rapid eye movement (REM) sleep is markedly depressed [6, 8, 11].

It is gratifying that, as in Hewitt's earlier survey, so many patients expressed their satisfaction with the Unit's medical and nursing staff. The criticism most frequently voiced (by 21 patients) was that the medical staff did not give them sufficient explanation of their condition and its treatment. That this complaint was voiced by a larger number of our survey than in Hewitt's may be a reflection of the greater proportion of emergency admission in our series. On the other hand, it clearly indicates one area where there is room for improvement. The generally appreciative tone of the patients' comments on the ICU staff should not make the latter complacent; patients who recover from a serious illness might be expected to show gratitude to those who have cared for them. It is, nevertheless, encouraging to those who work in the ICU to discover that almost half the patients interviewed were sorry to leave for the general wards.

All would concede that the ICU environment is not normal. However, our results suggest that patients survive it well and that though their perceptions of their experience are abnormal, this may be no bad thing.

Copies of the questionnaire are available from Dr. Jennifer Jones, Department of Anaesthesia, St Mary's Hospital, Praed Street, London, W2.

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