
Short report

Accuracy of prediction of survival by different professional groups in a hospice

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Introduction

Prediction of prognosis in advanced cancer has been shown to be very unreliable.¹ Despite this, the issue of length of survival remains important both for patients and for relatives. Over the last few weeks or months of life both doctors and nurses are poor at predicting survival,² and even among doctors working in the same unit there is considerable variation.³ Recently it has been suggested that when probable survival is short, health workers who have closer and more prolonged contact with the dying patient may make more accurate predictions.⁴

This study examined the accuracy of prediction of survival by different professional groups in a hospice, both on admission and in the week before death.

Methods

We studied 41 consecutive admissions to Marie Curie Centre Fairmile. Data collected on patients who were eventually discharged (11 patients) were excluded from analysis. Five members of staff took part in estimating prognosis; a doctor (senior registrar), nursing sister, staff nurse, nursing auxiliary and a chaplain.

When a patient was admitted, the participants were asked to complete a form indicating on what date they thought the patient would die. Each week

the participants completed a similar form until the patient's discharge or death.

Initial and final (within one week of death) predictions were analysed and the relationship between the actual and predicted survival was calculated using Pearson correlation coefficient. Using a *t*-test, the standard error of each correlation was calculated to give an indication of significance of each coefficient.

Results

Predictions from 30 patients were analysed. All patients had a diagnosis of advanced malignant disease. The mean length of final admission was 27.4 days, median 17 days (range 3–68). The results are set out in Table 1. Figures 1 and 2 show the results at admission and at final prediction for the doctor, the nursing sister and the nursing auxiliary.

Discussion

This study confirms that prediction of survival at initial assessment is inaccurate; the slightly improved figures in this study may reflect the shorter mean length of survival in our patients.

The increased accuracy of the final prediction compared to the initial prediction demonstrates that the prediction of survival improves with time either because of increased knowledge of individual patients or with increasing illness. In this study all the clinical members of staff were able to predict

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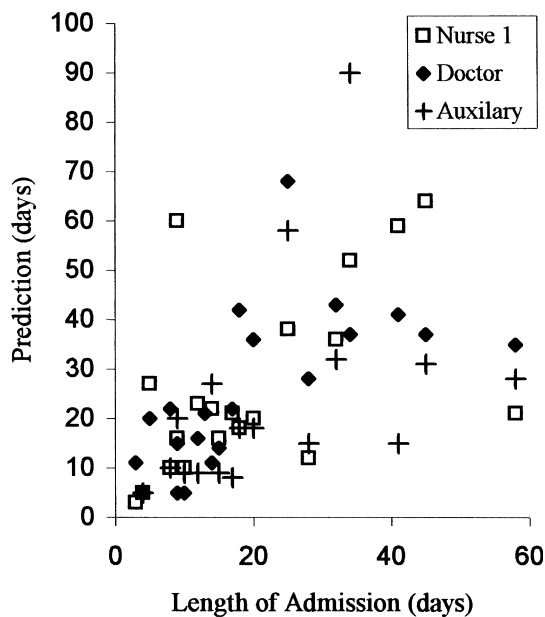


Figure 1 Actual versus predicted survival at time of admission.

Table 1 Correlation coefficients for predicted versus actual survival (P values in parentheses)

Staff member	Initial prediction	Final prediction
Doctor	0.72 (<0.001)	0.89 (<0.001)
Sister	0.44 (<0.02)	0.94 (<0.001)
Staff nurse	0.33 (<0.5)	0.89 (<0.001)
Chaplain	0.32 (<0.1)	0.61 (<0.01)
Auxiliary	0.31 (<0.1)	0.98 (<0.001)

imminent death with significant accuracy. However at this late stage it was the nursing auxiliary, not the doctor or trained nurses who was most accurate.

Most patients and relatives at an earlier stage in an illness will accept that it is impossible to make an accurate prediction and may at most need a measure of time, for example days to weeks or weeks to months, without a figure being attached. They find it helpful to know that the staff will be able to give them more accurate information as the patient becomes more ill.

The last few days of life pose additional burdens especially on families. It can be a significant time of adjustment for family members; it may be important not to let relatives get too tired; there may be issues of travelling for other family members. In this context it is useful to predict likely survival more confidently. Predicting survival in the last days of

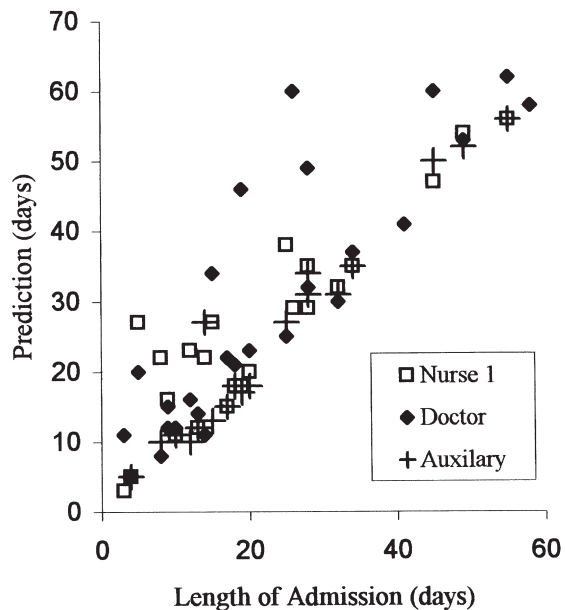


Figure 2 Actual versus predicted survival within one week of death.

life seems to be dependent on an intimate knowledge of patients gained by spending time with them rather than with their blood results. This study underlines the importance of team discussions on this issue: less senior members of the team may have a much better understanding of when a patient is near to death. If this is so, their expertise may be useful when trying to make predictions.

References

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