

Routine screening for psychological distress on an Australian inpatient haematology and oncology ward: impact on use of psychosocial services

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As it is a potentially fatal illness, cancer can cause immense psychological distress to those living with it.¹ When patients need to be hospitalised to establish a diagnosis, begin treatment or receive palliative care, the loss of involvement in family, work or leisure roles can compound the distress experienced.²

Between 35% and 47% of cancer patients experience significant psychological distress, with a higher prevalence in conditions where the risk of death is increased.^{3,4} Psychological distress can worsen compliance with treatment and physical and social outcomes after treatment, and can even affect health service use and the overall cost of care.^{5,6} While sadness, anxiety and grief are normal reactive emotions to experiencing cancer,⁷ when these emotions are experienced with an intensity that worsens engagement with and outcomes of treatment, tailored psychosocial intervention is needed.⁸

Despite the potential that psychological distress has to worsen patient outcomes, many patients are reluctant to report their feelings of distress to health care providers.⁹ In many cases, patients are not routinely asked about the presence of distress by medical and nursing staff.^{10,11} The use of structured screening measures to standardise the assessment of distress is even less common,¹² with the consequence that many patients experiencing significant distress are not identified and provided with appropriate psychosocial support.¹³

To improve the identification and treatment of psychological distress by cancer services, routine screening using validated measures has been recommended by the National Comprehensive Cancer Network through its clinical practice guidelines.¹⁴ A number of screening programs have been conducted internationally.¹³ Well validated psychological measures such as the Hospital Anxiety and Depression Scale (HADS)¹⁵ and 18-item version of the Brief Symptom Inventory (BSI-18)¹⁶ have been used, but the time required to complete them often restricts their use in providing routine inpatient clinical care.

The Distress Thermometer (DT) and Problem Checklist (PC) were developed to

ABSTRACT

Objective: To describe the outcomes and clinical experience of a 12-week pilot study of routine distress screening of newly admitted patients to an acute haematology and oncology ward.

Design, patients and setting: Bedside measurement of psychological distress, and collection of demographic and clinical data for 115 newly admitted patients in an acute haematology and oncology ward of The Alfred hospital in Melbourne between 5 June and 25 August 2006.

Main outcome measures: Psychosocial distress as measured by the Distress Thermometer and Problem Checklist, and 18-item Brief Symptom Inventory; rate of referral to psychology and social work services in the 12 weeks before and 12 weeks during the pilot study; ward staff feedback on the benefits and challenges associated with routine distress screening.

Results: 51% of patients were identified as being significantly distressed, of whom 47% had not received psychosocial support before screening. A significantly higher number of emotional and physical problems were reported by significantly distressed patients. Referrals to psychology and social work services during the pilot study increased, highlighting that screening directed more patients into care. Staff were generally positive about the ability of routine screening to help them care for their patients, and most agreed that some form of routine screening should continue.

Conclusion: The use of routine distress screening by inpatient cancer services can significantly improve their capacity to offer psychosocial care.

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efficiently and reliably measure distress and factors contributing to distress.^{14–17} Consisting of a single item rated on the scale of 0 (no distress) to 10 (extreme distress), the DT provides a global measure of distress severity. To identify sources of distress, the PC then asks (requiring a yes or no response) if the patient is experiencing problems relating to the five domains: practical, family, emotional, spiritual/religious, or physical.¹⁴ The DT has been used with patients undergoing treatment for prostate cancer¹⁷ and bone marrow transplant,^{18,19} and the use of the DT to screen for distress in a North American radiation oncology clinic improved patient satisfaction with the sensitivity of care.²⁰ However, a large pooled analysis of ultra-short screening methods for distress in cancer found that the specificity of measures such as the DT is at best modest.²¹ The DT was better able to exclude someone as not being significantly distressed than accurately detect someone with significant distress. An additional complication is that there has been no formal validation of the PC. The

concurrent use of a more diagnostically valid measure such as the BSI-18 may therefore improve case identification.

Despite being used extensively internationally, there have been no previously published studies of the use of the DT for routine screening for distress in an Australian inpatient cancer service. Thus, our aim in this study was to detail a quality improvement project that was implemented to improve the provision of psychosocial care within the inpatient haematology and oncology ward of The Alfred hospital in Melbourne. Routine distress screening using the DT and BSI-18 was implemented, along with clear referral pathways to ensure that patients experiencing significant distress were offered appropriate psychosocial support.

METHODS

The Alfred operates a 34-bed adult inpatient ward (Ward 7 East) that provides symptom management and active treatment for patients with a range of cancers, most com-

1 Referral pathway on the basis of the Distress Thermometer and 18-item Brief Symptom Inventory

Distress Thermometer

< 5

≥ 5

Educate patient about options for psychosocial support.

Care is provided as normal, but psychosocial referral is provided if the patient later becomes distressed.

Referral on the basis of the Problem Checklist:

- Physical — Nursing
- Spiritual/religious — Pastoral care
- Family/practical — Social work
- Emotional
 - Depression or past psychiatric history — Psychological services
 - Other emotional problem or past contact with social work services — Social work

18-item Brief Symptom Inventory

Refer to Psychological services if a person has:

- A Global Severity Index *t* score ≥ 63; or
- A *t* score ≥ 63 on two or more Brief Symptom Inventory subscales, based on adult community norms.*

NOTE: A response of moderate–extremely on Item 17 (thoughts of ending your life) requires URGENT referral to Psychological services.

*Criteria identifying a “case” on the 18-item Brief Symptom Inventory. ◆

monly leukaemia, lymphoma, solid mass tumours and to a lesser extent myeloma. Two social workers (one working part time) and a part-time psychologist are employed by the ward, with additional support being available from a grief counsellor and pastoral care worker on request.

Routine distress screening was implemented in this ward as a 12-week pilot project between 5 June and 25 August 2006, with patients providing informed consent before participating; ethics approval was granted by The Alfred Human Research Ethics Committee. Project oversight was provided by an implementation committee involving senior nursing and allied health ward staff. Education about the project was provided to all ward staff, and a psychology project officer conducted bedside screening of newly admitted patients. Findings from screening with the DT, PC and BSI-18 were summarised in patients’ medical records, with details of significantly distressed patients being emailed to senior nursing and appropriate allied health staff each day.

The DT was used as the primary screening measure, with the BSI-18 used to assess

depression and anxiety in more detail. For the DT, a cut-off score of either 4^{18,20} or 5¹⁷ out of 10 has been proposed to suggest moderate–severe distress. In our pilot study, as psychosocial staff availability was limited, we used a cut-off of 5 to limit referrals to patients who were more severely distressed. Referral pathways were determined by responses on the PC and BSI-18 as well as answers to a question about previous engagement with psychosocial support staff (Box 1).

Three methods were used to evaluate the pilot study.

Auditing patient demographics and distress levels: Consenting patients completed the DT and BSI-18 as well as a brief psychosocial screening test detailing age, sex, living situation, years since diagnosis and psychiatric history.

Comparing psychosocial referral rates: The numbers of referrals of patients on Ward 7 East to social workers and psychologists were audited from the hospital referral database for 12 weeks (from 5 June to 25 August) and the 12 weeks immediately before the pilot study commenced (from 13 March to 2 June).

Collecting staff feedback: A brief anonymous feedback questionnaire was developed and circulated to ward staff in the weeks after completion of the pilot study, asking questions (with responses listed on a Likert scale or requiring yes or no answers) to determine their understanding of the project aims and processes. Staff members were also asked about whether they had read the screening summaries, whether screening helped them in working with their patients, whether screening helped to identify distressed patients and the causes of their distress, and helped to direct them into psychosocial support, and whether screening should continue on the ward.

Statistical analyses

To compare the changes in the frequency of referrals to psychology and social work during the two time periods being compared, χ^2 tests of goodness of fit were used. Independent samples *t* tests were used to compare the total number of PC problems experienced by people who were or were not identified as being significantly distressed.

RESULTS

Of 168 patients admitted to the ward during the 12-week pilot, 115 completed screening. Of the 53 patients not screened, 20 were discharged before screening could be completed, 16 were in an acute confusional state or too unwell, 10 did not speak English and seven declined to participate.

The 115 screened patients were aged from 19 to 83 years. Most were male, lived with a partner and were no longer working, and 17% reported experiencing a previous psychiatric illness (Box 2).

Screening test results

A summary of screening test outcomes is shown in Box 3; 51% of patients were identified as being significantly distressed on either the DT or BSI-18. Using a score of 5 out of 10 as the threshold on the DT, 49% of screened patients were significantly distressed. On the BSI-18, 21% were identified as a “case”, with three patients being identified as cases on the BSI but not the DT. Of the significantly distressed patients, 28 (47%) had not been referred for psychosocial support before screening.

On the PC, 33% of patients reported experiencing at least one practical problem, 11% family problems, 80% emotional problems, 4% spiritual or religious problems and 94% physical problems. Box 4 displays the frequency of problems reported by patients

2 Demographic and clinical characteristics of the 115 screened patients

Characteristic	Value
Mean age in years (SD)	55.0 (15.9)
Sex (No. [%])	
Male	78 (68%)
Female	37 (32%)
Living situation (No. [%])	
Partner	50 (44%)
Partner and children	29 (25%)
Alone	24 (21%)
Shared or with other family	12 (10%)
Employment status (No. [%])	
Working	41 (36%)
Not working	74 (64%)
Cancer diagnosis (No. [%])	
Leukaemia	43 (37%)
Lymphoma	21 (18%)
Urological or gastrointestinal tumours	18 (16%)
Multiple myeloma	14 (12%)
Lung cancer	7 (6%)
Breast cancer	4 (4%)
Brain tumour	4 (4%)
Throat cancer	3 (3%)
Skin cancer	1 (1%)
Mean years since cancer diagnosis (SD)	28 (4.6)
Past history of a psychiatric illness (No. [%])	20 (17%)

with or without significant distress. Independent samples *t* tests found that a significantly higher number of emotional (mean distressed patients, 3.3±1.8; mean non-distressed patients, 1.3±1.4; *P*<0.001) and physical (mean distressed patients, 7.7±3.3; mean non-distressed patients, 4.9±3.2; *P*<0.001) problems were reported by distressed patients. The number of practical (mean distressed patients, 0.7±1.1; mean non-distressed patients, 0.4±0.7; *P*=0.07), family (mean distressed patients, 0.3±0.6; mean non-distressed patients, 0.1±0.3; *P*=0.05) and religious (mean distressed patients, 0.03±0.2; mean non-distressed patients, 0.1±0.2; *P*=0.61) problems was not significantly different.

Changes to referrals to psychosocial services during the pilot study

Routine distress screening resulted in significantly increased numbers of psychology referrals (preceding 12 weeks, 14; pilot-

3 Level of distress as identified by the Distress Thermometer and 18-item Brief Symptom Inventory

Screening measure domain	Mean score (SD)	No. (%) significantly distressed
Distress Thermometer (<i>n</i> = 115)	4.2 (2.8)	56 (49%)
Brief Symptom Inventory — 18 item (<i>n</i> = 113)		
Somatisation community <i>t</i> score	57.6 (8.8)	39 (35%)
Depression community <i>t</i> score	51.7 (8.8)	19 (17%)
Anxiety community <i>t</i> score	51.2 (9.5)	17 (15%)
Global Severity Index <i>t</i> score	55.0 (8.4)	21 (19%)
Brief Symptom Inventory “case”*		24 (21%)

* Criteria identifying a Brief Symptom Inventory case were a Global Severity Index *t* score ≥63, or a *t* score ≥63 on two or more Brief Symptom Inventory subscales, based on adult community norms. ♦

4 Most common problems within each Problem Checklist domain reported by patients with and without significant distress

Problem Checklist domain	Significantly distressed (<i>n</i> = 59)	Not significantly distressed (<i>n</i> = 56)
Practical		
Finance	15 (25%)	9 (16%)
Housing	9 (15%)	3 (5%)
Transport	7 (12%)	5 (9%)
Family		
Dealing with children	7 (12%)	3 (5%)
Dealing with partner	8 (14%)	1 (2%)
Emotional		
Worry	45 (76%)	18 (32%)
Nervousness	36 (61%)	13 (23%)
Fear	36 (61%)	11 (20%)
Sadness	32 (54%)	15 (27%)
Depression	20 (34%)	4 (7%)
Spiritual/religious	2 (3%)	3 (5%)
Physical		
Fatigue	46 (78%)	30 (54%)
Eating	36 (61%)	26 (46%)
Sleep	34 (58%)	24 (43%)
Getting around	34 (58%)	18 (32%)
Nausea	29 (49%)	19 (34%)
Pain	28 (48%)	12 (21%)
Breathing	26 (44%)	11 (20%)
Memory/concentration	21 (36%)	15 (27%)
Skin dry/itchy	21 (36%)	15 (27%)
Fever	20 (34%)	13 (23%)

study 12 weeks, 27; $\chi^2(1)$, 4.12; *P*=0.04) and a trend for an increase in social work referrals (preceding 12 weeks, 141; pilot-study 12 weeks, 174; $\chi^2(1)$, 3.46; *P*=0.06).

Staff experience of the pilot study

Feedback was provided by 16 nursing and three allied health staff (a response rate of

45% of nursing and allied health staff on the ward). About 56% reported that screening was “very” helpful for them in thinking about how to work with patients. Using a three-point Likert scale (yes, unsure, no), most staff agreed that screening helped to identify distress (81%) and its causes (75%), and to refer distressed patients to appropri-

ate psychosocial support (88%). About 94% said routine distress screening should continue beyond the pilot. Qualitative feedback highlighted that nursing staff benefited from the pilot, but wanted a greater role in conducting the distress screening, as the tools prompted patients to discuss issues that otherwise were often not raised. For allied health staff, the ability to know who needed follow-up for specific distress experiences (eg, anxiety, depression, practical) was helpful. Some concern was expressed about ensuring adequate psychosocial staff to support a potentially increased need.

DISCUSSION

Our finding that 51% of patients of an inpatient haematology and oncology ward were identified as being significantly distressed is consistent with previous estimates.²² Our BSI-18 assessment which showed that 17% of patients were experiencing significantly elevated scores on the depression subscale is consistent with previous research, while our finding of 15% reporting significant levels of anxiety is slightly lower than previous research (24%).⁴ A significantly higher number of physical and emotional problems were reported by significantly distressed patients, and there was a trend for a higher number of family problems. Distress may therefore be caused by a range of issues, requiring nursing and psychosocial clinicians to work together to address the full range of patient concerns.⁹ The implementation of routine distress screening and communicating any referrals made based on that screening facilitated the involvement of psychosocial clinicians in patient care. The importance of routine screening is highlighted by our finding that 47% of significantly distressed patients had not been referred for psychosocial support before screening.

In general, nursing and allied health staff were positive about the benefits of the screening project. At least 75% of staff said that screening during the project helped to identify significantly distressed patients and the causes of patient distress, and to direct distressed patients into appropriate psychosocial support. Even more encouraging, almost 94% of staff said that routine distress screening should be incorporated into routine clinical practice beyond the pilot study. As nurse-led distress screening has previously been found to improve patient perceptions of care sensitivity,²⁰ it was determined that the DT would be incorporated into

routine nursing practice on the ward; this has continued for at least 2 years since the pilot study.

Psychosocial staffing levels were raised as a potential issue. Routine screening increased referrals to both psychology and social work services. Ensuring sufficient availability of psychosocial staff with different clinical expertise was therefore critical to meeting patients' needs. A further issue was the level of support required by carers or family members of admitted patients. Previous research has found that 47% of partners of cancer patients experience moderate to severe distress (DT score, ≥ 4).²³ With families and partners in many cases providing care and emotional support both during and following the admission, providing psychosocial support to families and partners as well as patients is important for maximising quality of life for the patients and those who support them.²⁴

Our report has some limitations. The first is that the pilot study only ran for 12 weeks, limiting the number of patients screened. However, the proportions of patients identified as being significantly distressed on the DT or reporting significant anxiety or depressive symptoms on the BSI are largely consistent with previous findings.^{4,18,19} Thus, our study provides further support for the importance of psychological distress as a key area of intervention for cancer services.¹³

Further discussion about the design of the screening program is also warranted. Because of the limited availability of psychosocial staff on the ward (two social workers and one part-time psychologist), a DT cut-off score of 5 out of 10 was used instead of the 4 out of 10 recommended previously.^{18,19} We selected the higher score to limit referrals to patients with more severe distress. However, this may have been the reason why three patients identified as cases on the BSI-18 were not identified as cases on the DT. Because of the onerous nature of longer psychological questionnaires for patients who are not distressed, a two-phase screening process has been proposed.²¹ The first phase could use an ultra-short screening measure such as the DT. Although the use of the accompanying PC has not yet been validated, anecdotal feedback from staff suggested that the PC was useful for identifying why patients were distressed. The second phase of screening could use a more diagnostically valid measure, potentially administered by psychosocial clinicians as part of their initial assessment.

Adoption of this two-phase screening approach is dependent on the first phase being adequately sensitive to detect all significantly distressed patients. Careful selection of the screening tool and the threshold used, while considering psychosocial staff availability, is important to ensure that significantly distressed patients are supported, without overloading clinicians and compromising overall care.

In summary, our 12-week pilot study of routine distress screening with the DT and BSI-18 of patients in an inpatient haematology and oncology ward confirmed that not only was significant distress very common, but that screening improved the identification of distress and causes of distress and helped staff in working with their patients. Establishing clear referral pathways that were, in part, determined by the screening measures also enabled more efficient and appropriate psychosocial support to be provided.

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COMPETING INTERESTS

Lynda Katona and Sue De Bono received funding from the Southern Melbourne Integrated Cancer Service for conducting this study; they both also hold ongoing clinical positions with The Alfred hospital. Stuart Lee was employed by The Alfred hospital as a project officer to work on this project. Katrina Lewis holds an ongoing clinical position with The Alfred hospital.

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