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ORIGINAL ARTICLE

Developing a clinical pathway for the identification and management of anxiety and depression in adult cancer patients: an online Delphi consensus process

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Abstract

Purpose People with cancer and their families experience high levels of psychological morbidity. However, many cancer services do not routinely screen patients for anxiety and depression, and there are no standardized clinical referral pathways. This study aimed to establish consensus on elements of a draft clinical pathway tailored to the Australian context.

Methods A two-round Delphi study was conducted to gain consensus among Australian oncology and psycho-oncology clinicians about the validity of 39 items that form the basis of a clinical pathway that includes screening, assessment, referral and stepped care management of anxiety and depression in the context of cancer. The expert panel comprised 87 multidisciplinary clinician members of the Australian Psycho-oncology Co-operative Research Group (PoCoG). Respondents rated their level of agreement with each statement on a 5-point Likert scale. Consensus was defined as >80 % of respondents scoring within 2 points on the Likert scale.

Results Consensus was reached for 21 of 39 items, and a further 15 items approached consensus except for specific contextual factors, after two Delphi rounds. Formal screening for anxiety and depression, a stepped care model of management and recommendations for inclusion of length of treatment and time to review were endorsed. Consensus was not reached on items related to roles and responsibilities, particularly those not applicable across cancer settings.

Conclusions This study identified a core set of evidence- and consensus-based principles considered essential to a stepped care model of care incorporating identification, referral and management of anxiety and depression in adult cancer patients.

Keywords Cancer · Oncology · Anxiety · Depression · Clinical pathways · Screening

Background

A cancer diagnosis impacts on patients' psychological as well as physical functioning. The point prevalence estimate for any mood disorder in cancer patients is 20.7 %, for anxiety disorders is 10.3 %, and for adjustment disorders is 19.4 % [1]. Early detection and treatment of anxiety and depression symptoms not only reduce patient suffering and the likelihood of developing a major mood disorder but also directly impact on the health service through increased treatment adherence and lower health service utilisation [2]. However, despite being readily treatable and having a strong evidence base for interventions [3–5], anxiety/depression are often undetected and overlooked and their severity underestimated [6] in busy cancer services.

To address under-detection of psychological distress, routine screening of all cancer patients using validated, reliable,

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objective measures is internationally endorsed [7] and demonstrated to be feasible and acceptable within the cancer setting [8]. Canada has established that national screening for distress in the cancer setting can be implemented [9]. Screening programs at a regional level have also been implemented successfully [10], yet in many countries, screening is not standard practice and is highly variable where it does occur. Reasons for not screening are multifactorial [11], but lack of referral guidance is reported by clinicians to be a major deterrent [12]. A number of systematic reviews also report appropriate care after screening to be the most significant predictor of improved patient outcomes [13–15].

Clinical pathways (multidisciplinary management plans that standardise care [16]), combined with audit and staff training, have the potential to increase the occurrence, accuracy and consistency of distress screening and management, and therefore patient outcomes [17]. Existing international clinical practice guidelines [18–21] have raised awareness and acceptance of psychosocial care as integral to multi-disciplinary care but lack the specific guidance that is the hallmark of effective clinical pathways, and evidence-based tailored implementation strategies to embed recommended strategies into routine care [22]. Our group is developing an evidence-based stepped care clinical pathway for managing anxiety and depression in cancer patients. An initial draft, based on existing literature, reviews and guidelines, was refined after extensive feedback from semi-structured interviews with 12 multidisciplinary experts [23]. This process identified some uncertainties regarding key elements of the pathway.

Therefore, the aim of this study was to engage a large and representative group of health professionals providing clinical care for cancer patients to reach consensus on a clinical pathway for the identification and management of anxiety/depression in adult cancer patients. Frontline clinical staff rather than researchers were approached, as successful implementation requires the pathways to be clinically relevant and reflective of existing services and resources.

Methods

Participants

Participants were selected from the membership database of the Psycho-oncology Co-operative Clinical Trials Group (PoCoG), a national cancer clinical trials group in Australia comprising over 1100 clinicians and/or researchers from multiple disciplines interested in psycho-oncology. *PoCoG membership comprises approximately 36% psychology, 11.5% nursing, 9.4% medical, 7.6% social work, 3.8% palliative care and 1.7% psychiatry. Initial participant selection was based on even representation across disciplines.*

Health professionals were eligible for the study if they were clinically active, working primarily in oncology in Australia and able to respond to the first round of the survey within 6 weeks. Approximately 247 health professionals were purposefully sampled to include a range of (a) disciplines (medical and radiation oncologists, nurses, psychologists, social workers, palliative care physicians, psychiatrists, general practitioners and cancer surgeons), (b) genders, (c) Australian states and territories and (d) rural/regional and metropolitan settings.

Design

An initial draft pathway was developed, guided by existing literature, reviews and guidelines. This was refined after extensive feedback from semi-structured interviews with 12 multidisciplinary experts [23]. *This process identified some uncertainty around key recommendations made by the pathway.* The key elements fell into six domains: (1) adapting and implementing the pathways into the Australian cancer care system, (2) formalised screening, (3) identification and severity assessment of anxiety/depression, (4) a stepped care model of referral/management, (5) monitoring and care coordination and (6) professional roles. *Thirty-nine statements comprising areas of uncertainty with each of the domains were developed by a multidisciplinary advisory committee* (*see* Fig. 1 *and* Table 2). *Each statement was framed to elicit an agreement/disagreement response from survey participants, with accompanying free text to encourage participants to comment on the underlying reasons for their response.*

Potential participants were invited to participate via email providing a link to the password-protected online survey (Limesurvey, version 1.91). Participants consented online and completed demographic questions prior to completing the 20-min survey. In each round of feedback, participants indicated their agreement with each item on a 5-point Likert scale from strongly disagree to strongly agree. Participants were also able to provide comments for each individual item.

Consensus for an item was defined as 80 % or more of respondents rating the item within 2 points on the scale [24]. Participants were asked to re-rate items that failed to reach consensus in light of group responses, in subsequent rounds, until sufficient feedback had been received. Non-responders were e-mailed up to three reminders over 3 weeks for each round.

The study was approved by University of Sydney ethics committee.

Data analysis

Results were analysed in total and per discipline. Descriptive statistics were used to report level of consensus. A two-tailed Kruskal-Wallis exact test (p values<.05 were considered

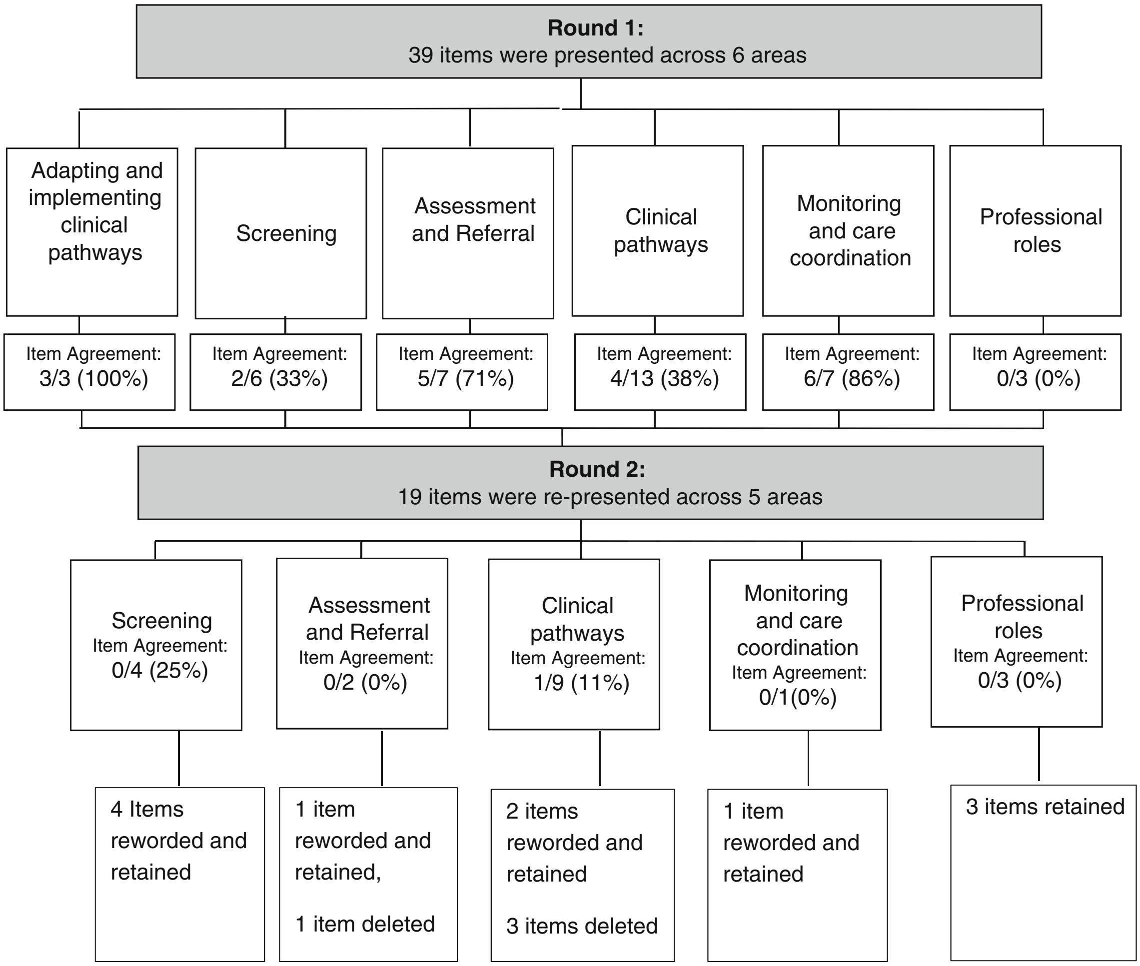

Fig. 1 Delphi consensus process

statistically significant) was used to assess inter-discipline differences for items that failed to reach consensus. Data were analysed using SPSS Statistics 20 (IBM., Armonk, NY, USA). Free text comments for individual items were content-analysed to further explore participant responses.

Results

Of 247 potentially eligible participants approached via e-mail, 87 (35.2 %) completed the first round and 60 (69 %) completed a second round of the Delphi survey. The expert panel was multidisciplinary, provided national representation, were mostly employed in the public hospital system and based at a tertiary referral cancer centre, and had worked in oncology an average of 13.6 years (range 1.5–18 years; SD 8.0) (see Table 1). There were no significant differences between responders and non-responders in terms of *gender*, *discipline or state of residence. No further demographic information was collected from non-participating clinicians*.

Figure 1 provides an overview of the consensus process. Thirty-nine items were presented in round 1, and 19 in round 2. Eighteen items remained unresolved at the end of round 2. The research team reviewed responses to these items together with qualitative responses, and four items were accepted as resolved as they approached the consensus definition (75–78 % agreement). There was broad agreement for a further 11 items, although there was some disagreement regarding specific contexts; these were resolved with contextual re-wording. Subsequently, the multidisciplinary stakeholder advisory committee verified that these revised items reflected the comments provided as part of the qualitative feedback. There was no consensus for two items, related to practical and spiritual concerns and their relationship to anxiety/depression. Following consultation with the advisory committee, these items were judged non-essential and removed from the pathway. Two rounds of feedback were judged sufficient, as further rounds were thought unlikely to result in change.

Table 2 presents individual items grouped by domain and the level of consensus for each item in descending order. Table 3 presents the inter-discipline differences for items where consensus was not reached. Each set of items is discussed below.

Table 1 Sample characteristics

Variable		Number	Percentage of respondents
Gender	Male	16	18
	Female	71	82
Discipline	Nurse/cancer care coordinator	18	20.0
	Psychologist	16	17.8
	Social worker	14	15.6
	Medical oncologist	13	14.4
	Palliative care physician	4	4.4
	Radiation oncologist	2	2.2
	Surgeon	8	8.9
	Psychiatrist	4	4.4
	GP	1	1.1
	Other*	10	11.1
Work setting	Tertiary referral cancer centre	50	54.3
	District/local hospital	15	16.3
	Non-inpatient cancer treatment centre	6	6.5
	Non-hospital based	5	5.4
	Other	16	17.4
Public/private	Private	10	11.5
	Public	58	66.7
	Both	17	19.5
	Other	2	2.3
State	NSW/ACT	45	42.4
	VIC	32	30.2
	QLD	14	13.2
	SA	6	5.7
	WA	8	7.6
	TAS	1	0.9

*Includes non-oncology medical, community palliative care nursing, counsellor/group therapist, supportive care manger

Adapting and implementing clinical pathways in the local setting

Greater than 90 % agreement was reached on the three items in this domain. Participants agreed that key members of the treatment team should decide together how best to adapt and implement the pathways in their own institution or clinical setting and that local resources, such as available staff and budgets, as well as patient characteristics, need to be considered in adapting the pathways.

Screening for anxiety/depression

Consensus was reached on 2/6 items in this domain: that screening should be routinely implemented and formalised. A third item, specifying that a specific staff should be formally responsible for screening, *but* that all staff ask patients about distress and alert designated staff about potentially distressed patients, narrowly missed our consensus threshold.

On three items, no consensus was reached, related to specific methods of screening which could be viewed as prescriptive. There was 50 % agreement that a two-step approach was the most appropriate. Some thought that a clinical interview was more appropriate to identify the level and nature of anxiety/depression, with considerable inter-professional disagreement on this item (Table 3). Nurses were most likely to endorse a two-step screening assessment (79 %, $x=3.7$; SD 1.2), psychologists least likely to endorse this (20 %, $x=2.5$; SD 1.4), and medical practitioner ratings were in between (45 %, $x=3.1$; SD 1.1).

No consensus was reached for the cancer nurse coordinator (CNC) being the most appropriate person to be responsible for screening. Some cited the high workload of CNCs, or noted that CNCs may not see all patients, and had variable mental health experience and training. While the rating of agreement was comparable across most discipline groups (40–45 %), the exception was among the social workers (22 %), suggesting differing perceptions of roles across disciplines.

There was also no consensus for the Edmonton Symptom Assessment System (ESAS) [25] being the most appropriate screening tool. Some noted that the ESAS was not well known, while other screening tools, such as the distress thermometer [26], were more familiar and being used in clinical practice. Again, there was considerable inter-disciplinary variation (Table 3), with those endorsing the ESAS ranging from 7 % by nurses, 22 % by social workers, 25 % by oncology medical disciplines, and 40 % by psychologists, to 57 % from the mixed group of 'other' disciplines, although this difference was not statistically significant.

Assessment and referral

Strong consensus was reached on 5/7 items in this domain (Table 2), including accommodating patient preferences, patient education to maximise uptake of services, normalising distress following diagnosis and treatment, further assessment to clarify the nature and severity of anxiety/depression, and discussing screening results with patients.

Participants largely disagreed about whether screening and subsequent assessment should be carried out simultaneously by the same staff member or sequentially. Nurses viewed simultaneous screening and assessment more favourably than other professional groups (3.7 vs 2.7, Kruskal-Wallis, $p<.018$). This disagreement arose from concern that while nurses were likely to conduct screening, they are not specifically trained to conduct in-depth psychological assessments.

Table 2 Overall level of consensus for each item presented

Response category • Individual items[b]	Level of consensus (%)	Mean r ating[a] (SD)	Median rating[a]	Consensus round
Adapting and implementing clinical pathways				
• Key team members need to tailor pathway for their institution	90.8	4.2 (.93)	4.0	1
• Tailoring should take into consideration resources available	90.8	4.3 (.86)	4.0	1
• Tailoring should take into consideration the specific patient population (e.g., cultural background and health literacy)	90.8	4.2 (.89)	4.0	1
Screening				
• Routine screening should occur at key points in patient journey, e.g., at treatment completion and relapse	85.1	4.1 (.87)	4.0	1
• Screening for distress should occur at least once, e.g., shortly after diagnosis and before treatment commences	80.5	4.1 (.87)	4.0	1
• Specific staff member(s) need to be clearly designated as responsible for screening (all other staff should routinely enquire about distress and alert designated staff about potentially distressed patients)	78.3	3.7 (1.11)	4.0	2
• Two-step screening should be used: (1) brief screening tool to identify potentially distressed individuals; (2) second, more detailed tool to confirm and identify source of distress	50.0	3.1 (1.19)	3.5	N/A
• Cancer nurse coordinators are most appropriate staff members to be responsible for screening, referral and follow up if available	40.0	3.1 (.99)	3.0	N/A
• The most appropriate screening tool is the ESAS	21.7	3.0 (.77)	3.0	N/A
Assessment and referral				
• A range of service options should be offered to distressed patients to accommodate patient preferences	97.7	4.3 (.62)	4.0	1
• Patient education is needed to help encourage uptake of referral	95.4	4.3 (.32)	4.0	1
• If screening identifies possible distress, an assessment is needed to characterise the problem and guide appropriate referral	94.3	4.3 (.72)	4.0	1
• Patient education is required to normalize distress after cancer diagnosis	94.3	4.5 (.72)	5.0	1
• The results of any screening tool must be discussed with the patient	89.7	4.2 (.89)	4.0	1
• Screening and assessment should be carried out simultaneously, by the same staff member	33.3	2.9 (1.07)	3.0	N/A
• Screening and assessment should be carried out sequentially, by different staff members	21.7	2.6 (.99)	2.0	N/A
Clinical pathway				
• Evidence should guide length of treatment and time to review, but ultimately, clinicians should decide this, based on individual patient need	89.7	3.9 (.77)	4.0	1
• Patients appearing moderately to severely distressed should to be referred to a specialized mental health professional	83.9	3.9(.91)	4.0	1
• A stepped care model is appropriate for managing distress in cancer patients	83.3	3.9 (.75)	4.0	2
• Low distress is best addressed by nursing staff, oncologists and/or GPs (depending on availability, patient preference and frequency of contact)	78.3	3.6 (.94)	4.0	N/A
• The specific treatment used will be determined by individual clinician	76.7	3.7 (.72)	4.0	N/A
• Treatment options recommended in the clinical pathways are appropriate	75	3.6 (.76)	4.0	N/A
• Practical and spiritual concerns overlap with depression and anxiety—therefore should be treated together	63.3	3.5 (.81)	4.0	N/A
• Recommended time frames for treatment and review should not be included in the clinical pathway	35.0	2.9 (1.02)	3.0	N/A
• In regional and rural areas, the general practitioner can treat moderate to severe distress	31.7	2.9 (.92)	3.0	N/A
• Practical and spiritual concerns are different to depression and anxiety—should be treated separately	26.7	2.8 (.99)	3.0	N/A
• A stepped care model is too rigid to accommodate variability in presentation of distress in cancer patients	11.7	2.5 (.72)	2.0	N/A
Monitoring and care coordination				
• During and/or at treatment completion, patient progress should be communicated to treatment team	94.3	4.1 (.73)	4.0	1
• Patient progress should be communicated to the care coordinator	88.5	4.1 (.62)	4.0	1
• Patient progress should be communicated to referring staff member	83.9	4.1 (.73)	4.0	1
• The person responsible for care coordination will depend on resources/staff available, point in the patient's cancer journey and patient preference	87.4	4.0 (.69)	4.0	1
• At lower distress levels, nurses, oncologists and GPs should monitor and follow up	86.2	3.9 (.73)	4.0	1
• At higher distress levels, specialized mental health professionals should monitor and follow up	86.2	3.9 (.84)	4.0	1
• One designated person should be responsible for care coordination	43.3	3.0 (.78)	3.0	N/A
Professional roles				
• The recommendations made for different professionals are appropriate	68.3	3.6 (.78)	4.0	N/A
• The recommendations made for different professionals are too restrictive	41.7	3.1 (.91)	3.0	N/A
• The proposed clinical pathway recommends an unrealistic level of involvement for GPs	40.0	3.1 (.10)	3.0	N/A

SD standard deviation, *N/A* not available, *ESAS* Edmonton Symptom Assessment System

[a] Ratings were from 1 (strongly disagree) to 5 (strongly agree)

[b] Items here are abbreviated

Table 3 Level of agreement based on discipline for items where consensus was not reached after two Delphi rounds

	Nurse (*n*=14)	Psychologist (*n*=10)	Social worker (*n*=9)	Oncology medical[a] (*n*=20)	Other[b] (*n*=7)
Response category • Individual items[c]	% Agreement *mean rating* (*SD*)	% Agreement *mean rating* (*SD*)	% Agreement *mean rating* (*SD*)	% Agreement *mean rating* (*SD*)	% Agreement *mean rating* (*SD*)
Screening • Two-step screening should be used: (1) brief screening tool to identify potentially distressed individuals; (2) second, more detailed tool to confirm and identify source of distress	78.6 *3.7* (*1.24*)	20.0 *2.5* (*1.35*)	66.7 2.4 (.88)	45.0 3.1 (1.05)	28.6 2.9 (1.34)
• Cancer nurse coordinators are most appropriate staff members to be responsible for screening, referral and follow-up if available	42.9 3.0 (1.41)	40.0 3.2 (.79)	22.2 2.6 (1.01)	45.0 3.3 (.73)	42.9 3.1 (.90)
• The most appropriate screening tool is the ESAS	7.1 2.86 (.66)	40.0 3.2 (.92)	22.2 2.8 (.97)	25.0 3.1 (.72)	57.1 3.1 (.69)
• Screening and assessment should be carried out simultaneously, by the same staff member	64.3 3.7 (.99)	30.0 2.9 (1.10)	11.1 2.2 (.83)	20.0 2.7 (.73)	42.9 2.9 (1.21)
• Screening and assessment should be carried out sequentially, by different staff members	21.4 2.1 (1.17)	30.0 2.8 (1.13)	33.3 2.7 (1.11)	10.0 2.6 (.75)	28.6 3.0 (.82)
Clinical pathways • Treatment options recommended by these clinical pathways are appropriate	78.6 3.9 (.53)	90.0 3.9 (.32)	55.6 3.0 (1.32)	92.9 3.7 (.57)	53.8 3.6 (.79)
• The specific treatment used will be determined by individual clinician	78.6 3.7 (.61)	80.0 3.9 (.57)	55.6 3.2 (1.17)	100 3.9 (.45)	68.5 3.6 (.79)
• Recommended time-frames for treatment and review should not be included in the clinical pathway	21.4 2.6 (1.09)	50.0 3.3 (1.06)	22.2 2.7 (.87)	35.0 2.8 (.93)	57.1 3.4 (1.13)
• Practical and spiritual concerns overlap with depression and anxiety—therefore should be treated together	78.6 3.6 (.74)	10.0 3.9 (.57)	66.7 3.8 (.97)	45.0 3.3 (.80)	57.1 3.3 (.95)
• In regional and rural areas, the general practitioner can treat moderate to severe distress	21.4 2.7 (.91)	10.0 2.6 (.84)	22.2 2.4 (.88)	40.0 3.2 (.89)	71.4 3.7 (.49)
• Practical and spiritual concerns are different to depression and anxiety—therefore should be treated separately	14.3 2.6 (.74)	20.0 2.7 (.82)	33.3 2.8 (1.4)	25.0 2.9 (1.05)	57.1 3.3 (.95)
• A stepped care model is too rigid to accommodate variability in presentation of distress in cancer patients	21.4 2.6 (.85)	10.0 2.4 (.70)	22.2 2.1 (.60)	10.0 2.55 (.69)	14.3 2.6 (.79)
Monitoring and care coordination • One designated person should be responsible for care coordination	57.1 3.2 (1.05)	30.0 2.7 (1.06)	55.6 3.2 (.97)	40.0 3.0 (.92)	28.6 3.1 (1.07)
• Low distress is best addressed by nursing staff, oncologists and/or GPs (depending on availability, patient preference and frequency of contact)	85.7 3.9 (.86)	80.0 3.9 (.88)	66.7 2.7 (1.32)	60.0 3.8 (.64)	84.6 3.7 (.76)
Professional roles • The recommendations made for different professionals are appropriate	78.6 3.8 (.89)	60.0 3.4 (.84)	77.8 3.8 (.83)	55.0 3.5 (.61)	57.1 3.9 (.9)
• The recommendations made for different professionals are too restrictive	57.1 3.3 (.91)	30.0 2.9 (.88)	33.3 3.2 (.97)	45.0 3.1 (.87)	28.6 2.7 (1.11)
• The proposed clinical pathway recommends an unrealistic level of involvement for GPs	42.9 3.4 (.94)	40.0 3.4 (.84)	77.8 3.7 (.71)	20.0 2.5 (.94)	42.9 3.1 (1.21)

Ratings were from 1 (strongly disagree) to 5 (strongly agree)

ESAS Edmonton Symptom Assessment System

[a] Oncology medical includes medical & radiation oncologists and oncological surgeons; palliative care physicians and psychiatrists

[b] Other: includes GP, non-oncology medical, community palliative care nursing, counsellor/group therapist, supportive care manger and consumer advocate

[c] Items here are abbreviated

Stepped care clinical pathway model

Consensus was reached for 5/13 items in this domain (Table 2). The consensus included reporting progress back to the treating team, length of treatment and review time being decided by the treating clinician, that nurses, oncologists and GPs are best placed to monitor and follow up lower levels of distress, while for moderate to severe distress, specialist mental health professionals assume the responsibility for ongoing monitoring and follow-up. There was also agreement that a stepped care model for managing anxiety/depression is appropriate.

Several factors related to management of distress narrowly missed our consensus threshold: that mild distress should be managed according to patient preference and staff availability, and that specific treatment should be at the clinician discretion and for the appropriateness of specific treatment options recommended.

In contrast, there was disagreement concerning whether practical and spiritual concerns overlap with anxiety and distress or should be treated separately, whether treatment time frames should be specified within the pathways, the role of the GP in treating moderate to severe distress in rural and regional areas, as well as very low agreement about whether the stepped care model is too rigid for variability in managing anxiety/depression in cancer patients. Inter-disciplinary disagreement on these items was not statistically significant.

Monitoring and care coordination

Consensus was reached for 6/7 items in this domain (Table 2), including reporting patient progress back to the treatment team and care coordinator and that the person responsible for coordination of care will depend on local staffing, resources, patient factors and preferences, and that nurses, oncologists and GPs should be responsible for monitoring and follow-up of those with lower levels of anxiety/depression, while specialised mental health professionals have this responsibility for those with high levels of anxiety/depression.

There was disagreement about whether one person should be designated as responsible for coordination of care for anxiety/depression, as not always being feasible, excluding valuable team management, while increasing the likelihood of some patients being overlooked.

Professional roles

There was disagreement for three items related to professional roles (Table 2), with only 68 % agreement for the different professional roles recommended. Free text comments indicated that individual psychosocial training, capacity and experience were more important than role designation at individual institutions. Some perceived that the role of nurses and social workers in psychosocial care was overstated, while others highlighted social workers' training in delivery of psychological counselling.

There was also disagreement with the recommended level of involvement by GPs, with concerns about availability, time constraints within a busy GP practice and skill level in delivery of psychosocial care. There were significant differences between disciplines (Table 3) about this (3.7 vs 3.1, Kruskal-Wallis, $p<.02$), with social workers reporting 78 % agreement that GP involvement was unrealistic, medical respondents reported only 20 % agreement, and other disciplines in between (40–43 %).

Discussion

This paper reports on consensus reached by key health professional stakeholders concerning components of a clinical pathway for the identification and management of anxiety and depression in adult cancer care. Our results confirmed multidisciplinary support for routine formal screening of anxiety/depression in oncology, combined with a stepped care model of treatment and review. A key factor in the successful translation of pathways into practice is ownership by all health professionals during the development phase [16].

Unlike clinical practice guidelines, pathways are most effective in facilitating change if they provide sufficient flexibility to enable treatment centres to adapt them for the local setting [27]. Feedback from stakeholders confirms that the content and recommendations within the pathway provided sufficient detail without being too rigid or prescriptive. Consistent with previous literature [28, 29], participants agreed that key members of each treatment team need to tailor the pathways together for their own institution/clinical setting, according to available resources, expertise and the needs of their patient population.

Inter-professional differences in understanding of specific aspects of specialist training were observed, and unsurprisingly, each discipline reflected on the pathway from their own professional role/perspective. For example, as a group, nurses were confident in their ability to assess level of anxiety/depression, while other professional groups suggested that social workers and psychologists needed to conduct more detailed assessments. Similarly, disagreement regarding the role of the general practitioner in managing moderate to severe anxiety/depression in rural and regional areas reflects the disparity in services available between metropolitan and regional centres and the role of the GP in the delivery of psychological care more generally. Local tailoring of the pathway based on an individual centre's staff experience and resourcing, as well as inclusion of education/training regarding roles and responsibilities and collaborative discussions with team members, as part of the structured implementation of the pathway at a local level, will address some of the inter-professional differences observed in this study.

There was little support for inclusion of practical and spiritual issues in the pathway, contrasting with recommendations from the clinical practice guidelines for psychosocial care [21]. The reason for this is unclear and may reflect health professionals' discomfort with exploring spiritual issues. Alternatively, health professionals may feel that this is better explored in an in-depth interview outside of the initial screening process.

The need for flexibility in pathway implementation was also evident in the lack of consensus on screening methods, specifically whether a formal clinical interview is required prior to referral. There was also little agreement regarding the recommendation of the ESAS [25] as a screening tool, due in part to unfamiliarity with the ESAS, and more familiarity with the distress thermometer [26]. Such a result is not surprising given that the study sample was drawn not from specialist psycho-oncologists but more broadly from oncology clinicians who may be unfamiliar with the psychometric properties of tools and base selection on familiarity with a measure or factors such as time and ease of completion. As part of implementation of the pathway, inclusion of education and training related to the relative merits of different screening tools will help clinicians to select an appropriate standardised screening measure.

A limitation of this study is that the findings are based on a sample of 87 Australian oncology professionals. Although the response rate was low, such response rates are common for web-based survey research [30], and oversampling was deliberately undertaken to ensure that the sample size was adequate for a Delphi study [31]. Furthermore, participants were purposively selected to represent the multidisciplinary diversity of health professionals providing cancer care in Australia. Despite this multidisciplinary sample potentially resulting in less consensus, we consider that the sample of active clinicians, rather than researchers or policy-makers, reflects the reality of multidisciplinary practice and is a strength of the study. Gaining consensus from clinicians has resulted in a pathway that reflects existing services and resources rather than a wish list of unfunded or unsustainable services. The model used in this study therefore provides a blueprint for other countries to utilise when developing local evidence-based clinical pathways, regardless of the level available psychosocial services.

Another limitation of the methodology utilised is the lack of interaction between participants, which prevented in-depth discussion to gain understanding of inter-disciplinary differences. However, we did provide written feedback to participants on others' comments, and they had the opportunity to comment again in the second round. Thus, we did receive feedback on inter-disciplinary issues.

Despite the limitations, our results confirm the proposed clinical pathway as a useful tool in improving implementation of screening and evidence-based interventions for anxiety and/or depression. Of course, reaching consensus regarding key features of the clinical pathway is only the first step in implementing a pathway. Work is ongoing to develop and evaluate an online version of the clinical pathway to facilitate easy access in cancer centres across Australia. This online version will incorporate resources and templates to assist centres to develop and document their local pathway. As part of this research program, we will also systematically evaluate and address barriers to implementation. Models of behaviour change and implementation science will guide strategies for system uptake. Implementation of routine distress screening programs in Canada and the USA provides practical guidance for successful implementation [9, 10, 32] as the barriers and facilitators identified were similar to those identified in our pilot research [23]. Recommendations related to active engagement with local teams and identification of local champions [16, 33] have informed our approach to local implementation. An educational outreach program, an important component of change management within health care [34], is also currently being piloted.

If successful, this program of work will integrate effective screening, detection and management of anxiety and depression into Australian cancer services, in a sustainable and effective manner that empowers patients and family members towards self-care, up-skills all health professionals in effective care, and allows psychosocial staff to focus on the most serious cases that need their expert input.

Conclusions

This study used a Delphi process to reach consensus about elements essential to the identification and management of anxiety and depression in adult cancer patients. Our findings confirm that clinicians are amenable to implementing a clinical pathway for anxiety and depression as part of standard practice in cancer care. The recommendation of a stepped care model was endorsed. The pathway now requires implementation and evaluation.

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Conflict of interest The authors confirm no conflict of interest to declare

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