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Interprofessional Communication of Prognosis: Teaching to Bridge the Gaps

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ABSTRACT

Context and Objectives: The communication of patient prognosis is an essential component of modern healthcare. Previous research has focussed on clinician-to-patient communication only, while the interaction between different professionals in a clinical setting remains relatively unexplored. The research reported here investigated how multidisciplinary clinicians (nursing, medicine and allied health) communicated prognosis information in these professional groups in an acute care setting.

Methods: A case series method was utilised with a sample of patients with haematological malignancies in an acute haematology ward in a metropolitan city of Australia. Data were provided by clinician interviews (nursing, medical and allied health) and patient notes. The data were examined in three individual case studies, which were then collectively analysed as an overarching case series.

Results: Thematic analysis of the case series resulted in three major findings for the study. The second finding that ‘Clinicians are unprepared to discuss prognosis’ was the focus of this paper. Identified barriers to prognosis communication were role delineations and a lack of shared values between disciplines. The state of unpreparedness has serious implications for how members of the staffing groups interact with patients and their families.

Conclusion: Overall, the findings offer support for the need for educational strategies to prepare pre-service health students (future clinicians) to discuss prognosis in clinical settings. Medical, nursing and allied health clinicians tend to discuss prognosis from either a psychosocial or scientific viewpoint. Pre-service health students may benefit from increased communication and
teamwork skills, familiarity with framing devices to understand and discuss prognosis and increased understanding of the roles and values of other health professions, in order to bridge communication gaps.

Key words: Health students, interprofessional learning, multidisciplinary, pre-registration, prognosis communication, teaching strategies

Introduction

Prognosis is used to anticipate and guide ‘what happens next’ for patients, or people who happen to be undergoing treatment for a medical condition. From our view, ‘people’ is the preferred term to avoid portraying individuals as just receivers of care (rather than active participants in life choices). However, ‘patient’ is used for ease of reading and appreciation of the common understanding amongst health professionals.

Patients are often dissatisfied with prognosis communication, affecting their contribution to treatment and lifestyle decisions1,2. Health clinicians (nursing, medical and allied health professionals) are key in providing information to patients. However, how clinicians access information and how they share it between themselves has received limited exploration3. Acute care settings are particularly vulnerable to information exchange issues, considering the complex and changeable health situations and variety of disciplines. Poorly informed decision-making may lead to unsatisfactory financial, emotional and physical consequences for patients and health carers. Research which identifies enablers and barriers that clinicians face in communicating prognosis between clinicians can contribute to curriculum design in the education of pre-service health students.

Context

There is increasing demand for ‘road ready’ health graduates4,5, simultaneously, with an expectation that communication skills come with experience, particularly in difficult scenarios such as prognosis or bad news6. Yet, the reality is that newly qualified clinicians will walk onto busy clinical wards and interact with patients and multidisciplinary clinicians about patients with complex prognosis situations, having had only limited clinical experience.

For this research, prognosis was considered to refer to the future, including likely events, implications for daily life, morbidity likelihood and the possible length of survival/time until death3,7-10. Patients require prognosis information in order to deal physically, emotionally and spiritually with their disease, make treatment decisions and plan life events11-14. Despite the importance of prognosis for patients and clinicians in making care decisions, the provision of prognosis information is often found to be unsatisfactory. Patients’ and relatives’ dissatisfaction with prognosis communication includes insufficient or contradictory information1,15-17 and/or poor timing or poor delivery1,2,16,18,19. Poor communication of prognosis may also negatively impact the facilitation of advance care planning20 and access to palliative care13, resulting in mismatched treatment choices21. Clinicians have also demonstrated dissatisfaction with prognosis communication, identified in burnout and retention issues22.

While all clinicians in a health context work with prognosis, the bulk of the literature available on prognosis focuses on physician to patient interactions, the physician most commonly being an oncologist. Most research papers are designed and published by physicians for physicians17,23-25. However, at times researchers utilise nurses to conduct the interviews with patients and relatives26.
So while the literature on prognosis is dominated by physicians\textsuperscript{3}, other clinicians are recognised to play important roles. For example, patients are most likely to ask nurses ‘what kind of pain can I expect’ and ‘what is likely to happen next’\textsuperscript{27}, which are prognosis-related questions.

There is some evidence that determining prognosis and the decisions which follow is a group process\textsuperscript{3}; therefore, the functioning of groups of health carers in relation to prognosis is important. Cott\textsuperscript{28} indicates that the increasing rhetoric of multidisciplinary teams is not demonstrated in clinical areas, where traditional models of hierarchical systems continue to prioritise physician dominance of decision-making. The need for further information about how clinicians communicate prognosis between each other, and what impacts prognosis information has on the care they provide, was the impetus for this research.

**Methods**

A case series involving thematic analysis was utilised to investigate how multidisciplinary clinicians (nursing, medicine and allied health) communicated prognosis with each other in an acute care setting. The case series involved patient notes and clinician interviews regarding three patient cases (Pam, Joyce and Fiona were pseudonyms chosen to protect identity). Communication and interaction are complex social phenomena that benefit from multiple angles of investigation; thus, a case study approach was suitable\textsuperscript{29,30}. By including a number of cases, the commonalities and specifics of each case can be identified and drawn from ‘those informants through whom the case can be known’\textsuperscript{29}.

Non-probability sampling was used to recruit participants for the study, as generalisation of the population concerned is not the intent of qualitative research. Purposive sampling of patients – those with a difficult prognosis situation involving haematological malignancies (leukaemia, lymphoma, myeloma and related blood disorders) - was chosen as it acknowledges ‘opportunities for intensive study’\textsuperscript{29} and ensures that the groups studied manifest the phenomenon of interest\textsuperscript{31}. These patients were identified by ward clinicians in conjunction with researcher KB. Difficulties in prognosis situations related to patient and family comprehension of the prognosis and changing circumstances affecting the prognosis (e.g. test results, treatment outcomes).

A convenience sample of clinicians was utilised to fit with the researcher’s schedule, with some purposive sampling to collect data from a range of experience levels representative of the characteristics of clinicians engaging with the patient. Nurse interviewees were chosen according to the allocation to the selected patient on the days the researcher was available. Doctor interviewees were chosen according to the medical teams responsible for the consented patient, and they reflected a range of experience; thus, information from a registrar, a resident, an intern and a specialist was gathered. Allied health (social work, dietetics, physiotherapy) clinicians were chosen according to their involvement with the case study patient and they presented a working knowledge of the case. Interviews took place in a convenient, confidential and non-threatening environment. Semi-structured, open-ended questions were flexible and designed to expand on the topics of prognosis communication between staff, and related to the consented patient’s case (Table 1). Participants chose to utilise the patients’ medical notes or their own hand-written notes.

In addition to the interview transcripts, data were also collected from the patient notes. The current admission notes for each patient were read by the researcher with a positive inclusive approach, with data collected on any prognosis indications (for example treatment planning, Not For Resuscitation orders, discussions about time-lines of treatment and expected outcomes, discussions about emotional outlook, death and coping).
Table 1: Semi-structured interview questions

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>What is, and how long have you been in your current role?</td>
</tr>
<tr>
<td>2.</td>
<td>How long have you been working in your discipline?</td>
</tr>
<tr>
<td>3.</td>
<td>We are talking about the care plan for?</td>
</tr>
<tr>
<td>4.</td>
<td>Can you please tell me about the patient?</td>
</tr>
<tr>
<td>5.</td>
<td>Can you tell me your opinion about what you think is the likely course of treatment and disease for this patient?</td>
</tr>
<tr>
<td>6.</td>
<td>Can you just explain what makes you think this?</td>
</tr>
<tr>
<td>7.</td>
<td>Have you yourself discussed their future with the patient?</td>
</tr>
<tr>
<td>8.</td>
<td>From your understanding, what do you think has been told to the patient?</td>
</tr>
<tr>
<td>9.</td>
<td>Can you talk around how the patient makes their treatment decisions?</td>
</tr>
<tr>
<td>10.</td>
<td>Have you discussed any of the above with other nurses or doctors?</td>
</tr>
<tr>
<td>11.</td>
<td>What do you think other nurses and doctors think of the patients’ future?</td>
</tr>
<tr>
<td>12.</td>
<td>Do you know if the opportunity for advanced care planning was introduced?</td>
</tr>
</tbody>
</table>

Data collection, coding, collation and analysis proceeded simultaneously from the beginning of the study (see Table 2). As Miles and Huberman32 state, ‘coding is analysis’. This simultaneous process of data collection and analysis involved consistent reflecting and revising meanings of what is going on29 and is typical of qualitative research33. Thematic analysis is an iterative process, working through multiple readings and successive codings of a text in order to identify and interpret major themes34. The texts in this case series were the interview transcripts and patient notes. Qualitative research principles of the criteria of rigour (credibility, fittingness, auditability and confirmability) were applied throughout the research process. These included participant feedback on themes and transcript analysis by an external (non-interviewer) researcher (PM). This process entailed multiple individual readings and coding, discussions about possible interpretations and meaning while always keeping in mind the perspective of the particular informant as each transcript was considered.

The location for the study was a 500-bed acute care teaching hospital in eastern Australia. Research access, resource and time constraints, as well as a suitable patient population suggested this hospital as the context for this research. The data were collected at a 23-bed acute cancer ward. Ethical approval was received from both the hospital and the University (ETH 9/05.689 and 06/72) and included collaboration and planning with senior members of each institution. While patients would have valuable contributions on the topic, collection of data from patients was outside the scope of this study.

Data regarding patient cases were collected until saturation of themes and sufficiency of data was observed35, which resulted in three cases. Of the three patients who were eligible participants and consented to involvement in the project, all were female, two were married and two were over the age of 40. The researcher acknowledges there are always further opportunities for insight36, and claiming ‘saturation’ may in fact be limiting the data to preconceived notions and not allowing for other unidentified themes to become apparent. However, with three patient notes and 20 interview transcriptions, comprehensive data were available for scrutiny. In addition, any further data would have been outside the scope of the researcher’s capacity to process within the allocated timeframe. The cases collected were considered to be ‘paradigmatic’, in that they ‘highlight the more general characteristics of the society in question’37. The cases appeared to exemplify what was common, and the researcher was informed by a medical clinician that they were ‘boring cases’, and reinforced by a nurse clinician who reported that they were very ‘run of the mill’ patients. So while generalisation is not necessary, the weight of the data and analysis is contextualised indicating that they are typical in the setting described, not exceptional cases.
Table 2: Research process for data collection and analysis

<table>
<thead>
<tr>
<th>Theme Development (Case Series)</th>
<th>Sub Themes (Individual Cases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview</td>
<td>Transcription of interview within case</td>
</tr>
<tr>
<td>Postscript comments</td>
<td>Grouping of key dialogue within case:</td>
</tr>
<tr>
<td></td>
<td>• recurring dialogue</td>
</tr>
<tr>
<td></td>
<td>• emphasis placed by clinicians on particular topics</td>
</tr>
<tr>
<td></td>
<td>• aspects not readily raised (hidden issues)</td>
</tr>
<tr>
<td>Codes developed for the groupings</td>
<td>Codes collated, interdependence of concepts considered, combined</td>
</tr>
<tr>
<td>Refining into themes across case series</td>
<td>Themes tested via triangulation</td>
</tr>
<tr>
<td></td>
<td>• against raw interview data</td>
</tr>
<tr>
<td></td>
<td>• against notes</td>
</tr>
<tr>
<td></td>
<td>• against another researcher</td>
</tr>
<tr>
<td></td>
<td>• against participants</td>
</tr>
<tr>
<td>Searched for negative/exceptional cases to test themes</td>
<td></td>
</tr>
</tbody>
</table>

A total of 20 one-on-one interviews with clinicians were conducted, taking an average of 20 minutes each. The interviewees provided written, informed consent and included ten nurses, eight doctors and two allied health clinicians. Their experience in their profession ranged from three months to 30 years, and had an average of one month relationship with the respective patient. There were seven clinicians for both Pam and Joyce’s cases, and six for Fiona. The focus of the interviews was on the particular patient the clinicians cared for. While the researcher did not know all the informants beforehand, her professional experience and familiarity with the area allowed her to quickly establish a rapport.

Findings

Three themes were revealed following analysis of the interviews and patient notes: 1) prognosis conjures death; 2) clinicians are unprepared to discuss prognosis, even with other colleagues; and 3) the pathway of clinician expectations. The second theme is explored in this paper; the other findings are described elsewhere. The data supporting the theme of unprepared clinicians fit into two distinct subgroups:

a. role delineations, related to a ‘need-to-know’ basis;

b. differences in psychosocial and scientific approaches to prognosis.

These findings are presented in detail with excerpts from the data and discussion. Quotes are repeated verbatim from transcripts, with clinicians identified according to the patient they cared for.

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a. Role delineations, related to a ‘need-to-know’ basis

The patient notes and the interviews revealed that medical clinicians understood and communicated prognosis among themselves and did not think it appropriate or necessary for other healthcare providers to be informed, as illustrated in the following interaction between the researcher and a medical informant:

The things you’ve been telling me about - have you had those conversations with other nurses or doctors? Not the nurses. But the registrar I talk to yeah. But not with the nurses…No.
And is there a reason for that?
Maybe for the privacy of the patient... I do not discuss with the nurses....because there’s no benefit. If nurses ask 'so what is the cause of that', I explain.....but otherwise I do not, I do not need to. (Doctor2-Pam).

Other clinicians raised the issues of changing and temporary staffing as reasons for difficulty in sharing information and developing continuity of patient care. The clinicians who ‘need to know’ were identified by one clinician as those who have ongoing communication over a period of time with the patient:

As for the Occupational therapist etc. I do not know and I do not care and I do not think it’s important....I do not see them as key people who are going to be involved in Pam’s care, who Pam aligns with as part of her journey…(Doctor1-Pam).

A concern was raised by other clinicians that when prognosis information is not available, they may be left in a difficult situation where they feel unable to respond to patients’ needs:

Yeah I think you do need to know because sometimes you can put your foot in it, and have to back pedal quite quickly.
(Nurse5-Pam).

I do not feel like....I’m contributing holistically. So were they to say – ‘oh you know, she’s got this chance, and this and this and this happens with this type of chemo’[chemotherapy] then I can form a picture, and it can be all more clear, and easier to look after the patient. [Otherwise] it’s a bit harder to look after the patient, to know where to go, or what to say, what to do. (Nurse1-Fiona).

Some clinicians commented that documentation of prognosis could be helpful in sharing pertinent patient information with other clinicians; however documentation was consistently described as inadequate. The nurses in particular seemed to be affected by the lack of communication of prognosis in the documentation. For example:

I do not know her prognosis. No one discussed it with me, and I couldn’t find it in the notes… So I had no idea. Being new on the ward, I have no idea what to expect – NHL [non-Hodgkin Lymphoma] – what does that mean? (Nurse1-Fiona).

Even [statistics], which are such a painless impersonal way of diagnosing someone in a note.....are very rarely written.
(Nurse2-Joyce).
The review of patient notes confirmed minimal prognosis information.

In summary, documentation and verbalisation of prognosis identified which clinicians thought which other clinicians ‘needed to know’ the patients’ prognosis. The consequential role delineations based on this separation of clinicians raised examples where clinicians and patients were inhibited by a lack of information, and some clinicians felt that patient care was negatively affected.

**b. Differences in psychosocial or scientific approaches to prognosis**

The data provided evidence that medical clinicians tended to support statistical understanding of prognosis (coded as a scientific approach). On the other hand, nursing and allied health were more concerned with how the patient was coping with that understanding, and how they were using that understanding to make plans for the future (coded as a psychosocial approach).

Clinicians emphasized that communication between colleagues was difficult if the approaches were different. The intertwined elements of the scientific and psychosocial were demonstrated by Pam, when she was able to laugh and eat toast when she was informed that her neutrophil count was rising. In this particular case, the doctors ‘had not bothered to tell Pam’ (Nurse2-Pam) of the rising neutrophil count until two days after it had risen. The nurse emphasized the importance of the psychosocial experience for the patient (feeling well enough to eat after days of anorexia and nausea), based on the patient understanding of a scientific aspect of prognosis (rising neutrophil count after chemotherapy, indicating recovery of bone marrow). However, the understanding of a patient experience was often not shared by clinicians of different disciplines. For example:

> Some of [the doctors] are only interested in the obs [observations] and vomits (Nurse2-Pam).

Another example of the polarization of the psychosocial from the scientific was when Pam’s treatment (bone marrow transplant) was delayed by two weeks so that she could attend her niece’s wedding, for whom she had made the bridal dress. The wedding was described by doctors as a ‘distraction’ and ‘one of these other things’ (Doctor1-Pam). These psychosocial ‘distractions’ did not hold the same weight for this medical clinician as the importance of scientific treatment.

**Discussion**

Prognosis information was found to be limited to those who ‘needed to know’. However, the judgements made in this study about who ‘needed to know’ may be challenged. Doctor2-Pam’s example can be disputed by referring to privacy statutes which do not prevent the sharing of patient information among team members. Doctor1-Pam made an assumption that patients would only choose to discuss prognosis with clinicians who have established a long-standing relationship. However, other clinicians described how an immediate rapport can develop which contributed to prognosis communication, as well as episodic opportunities related to time and patient preparedness (e.g. a patient in distress at three in the morning).

The role delineations formed by assumptions of ‘who needs to know’ prognosis directly affected the ability of other clinicians to provide adequate care. Fundamentally, more clinicians were seeking prognosis information than medical clinicians presumed. This has also been identified by Jenkins and colleagues, who found that many more professionals were involved in significant conversations with patients, which were unknown to the rest of the team.
The lack of documentation about prognosis confounded the clinicians’ attempts to meet patients’ needs. Delineations were made implicitly: clinicians needed to be able to read between the lines to establish the patients’ prognosis. Consequently, new or junior nurses seemed particularly affected. This is supported by seminal research where junior nurses were most likely to receive questions related to death and dying from patients. These clinicians learned to avoid the conversations through ‘legitimate ignorance’ and referred up the hierarchy. While this research is almost three decades old, similar issues are reflected in the current literature, which supports that ‘legitimate ignorance’ can still be claimed as the information is not readily available. The lack of prognosis information in the patient notes also affects intervention decisions. With insufficient information, more aggressive interventions are performed on patients, even those who are clearly dying.

The separation between the psychosocial and scientific spheres of patient experiences was raised as a negative by non-medical clinicians. In Pam’s example, it may have been that she was prioritizing her niece’s wedding over treatment because she understood the significance of the statistical figures for her prognosis. Focusing on the scientific aspects of care (as the medical clinicians were in Pam’s case) may contribute to mismatched treatment choices, and overlook patient life choices and preferences. Much of the ‘collusion’ highlighted in the prognosis communication literature was not about explicit statements made by clinicians in order to maintain hope or mislead a patient, but a reinforcement of the likelihood of cure and good outcomes by a focus on treatment and simultaneous avoidance of other topics. This separation of the disease prognosis with the individual’s prognosis raises serious implications for the decision-making involved in fitting disease and treatment into a person’s life.

The tendency to polarise prognosis into either scientific or psychosocial interpretations is likely a reflection of siloed work practices in healthcare. The current scientific dominance of prognosis is likely to mirror the medical dominance of healthcare. The research findings suggest that this dominance may lead to gaps in care provision. These findings complement the review by Carter and West on teamwork. They suggest that role ambiguity and conflict are linked up in the historical and structural attitudes of professions working within teams. Traditional professional education has played a role too. This background may be helpful as we try to understand the expressed lack of interest in what other clinicians think, feel or know and the raising of scientific or medical knowledge above other types of knowledge. The upshot of these emphases in care approaches and delivery means that many patient concerns and choices can be diminished.

**Implications for teaching:** To address the gaps in prognosis communication between clinicians, an understanding of the range of clinicians who need to know and integration of psychosocial and scientific aspects of patient care are suggested here. Early introduction of integrative teaching practices for health discipline may be valuable. Consequently the focus for implications arising from the findings is on the education of pre-service health professionals.

The distinctions in Table 3, drawn from analysis of the clinicians’ communication of prognosis, may offer a constructive framework to recognise and teach the two spheres of prognosis: scientific and psychosocial.

In order to utilise both scientific and psychosocial forms of prognosis, three primary factors could be considered in education: prognosis content; communication skills; and interprofessional learning (IPL). First, knowledge of scientific aspects of prognosis for common diseases and treatments is recommended as student learning outcomes for pre-service health students. Additionally, acknowledging that ‘prognosis’ goes beyond a ‘clinical prediction of survival’ may enable future clinicians to recognise the complexities of prediction. Clinicians need to be able to focus their prognosis care on individual patients, rather than applying generalisations to a group of patients.

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Table 3: Distinctions between scientific and psychosocial prognosis components

<table>
<thead>
<tr>
<th>Scientific prognosis</th>
<th>Psychosocial prognosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. the expected course of treatment</td>
<td>f. likely effects of the treatment and disease on the individual patients’ life now and in the future</td>
</tr>
<tr>
<td>b. possible other trials which could be utilised to treat disease progression</td>
<td>g. planning for the patient’s future, unrelated to the disease or treatment, such as weddings and holidays</td>
</tr>
<tr>
<td>c. statistics available related to disease and treatment</td>
<td></td>
</tr>
<tr>
<td>d. statistics available related to likely length of remission</td>
<td></td>
</tr>
<tr>
<td>e. the estimated timeline before death for that disease or particular patient</td>
<td></td>
</tr>
</tbody>
</table>

Second, psychosocial aspects of prognosis would benefit from curriculum attention to communication skills. Biomedical knowledge needs to be equally weighted with managing uncertainty and strong patient emotions. This is further supported by Murray et al., who noted that when patients ask questions about prognosis, such as ‘how long have I got?’, this may include deeper existential questions which cannot be addressed by statistical figures for life expectancy. It is also important to recognise that skills for ‘difficult communication’ are not learnt with experience, as is often presumed, but can actually be taught and retained.

Documentation of prognosis in patient notes offers broad communication with a range of clinicians. Not all clinicians should necessarily have prognostic conversations with all patients; however, clinicians should be enabled to discuss prognosis should the patient require information or support. In order for clinicians to be prepared to discuss prognosis with patients, clinicians specifically require information documenting what prognosis has been discussed, and the response of the patient and family.

Third, interprofessional learning (IPL) is a recent phenomenon which may improve patient-focussed care and clinician communication. IPL claims to improve the recognition of colleagues’ value systems, familiarity with role and function and, thereby, increase communication and collaboration between disciplines. However, IPL is an emerging concept which is difficult to implement or evaluate so the benefits are undetermined. The research reported here supports previous assertions that clinicians need to find ways to better integrate their work, and that it is more than just communication skills, but respect and value of the contribution of multiple disciplines.

Overall, in reviewing the literature, it is apparent that the estimation and definition of prognosis is challenging. The recommendation here of scientific and psychosocial aspects of prognosis adds to the complexity of the term. However, prognosis is not a simple concept, and should not be attempted to be communicated as such. Extensive research has been conducted in identifying that patients have great difficulty in understanding the meaning of prognostic statistics and recommend the use of both descriptive and numerical discussions. This has been reinforced relating to cardiopulmonary resuscitation orders.

The following framing devices may be useful in communicating prognosis information. Clinicians talked about prognosis in four ways: the disease in numbers; the disease in words; the specific patient in numbers; and the specific patient in words. An example of a doctor and a nurse’s descriptions for one patient is presented in Table 4.
Table 4: Numerical, descriptive, disease-specific and patient-specific descriptions of prognosis by clinicians

<table>
<thead>
<tr>
<th>Disease Prognosis (numbers)</th>
<th>Disease Prognosis (words)</th>
<th>Pam’s Prognosis (numbers)</th>
<th>Pam’s Prognosis (words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1-Pam</td>
<td>Its only about 3-5 years / As I said the median is only 3 or 5 years.</td>
<td>She certainly won’t be in 4-5 years time (going to her niece’s wedding).</td>
<td>Less than optimal / Her prognosis is not brilliant.</td>
</tr>
<tr>
<td>N3-Pam</td>
<td>4-5 years / 4,5,6 years</td>
<td>2-3 yrs / 2yrs</td>
<td>Aggressive. She will die from this disease. Once she does relapse she’ll be looking at the monoclonal antibodies. Or unless there’s some new trials that come up in the interim. Eventually this disease will get her.</td>
</tr>
</tbody>
</table>

There were a number of other framing devices applied by clinicians to describe the prognosis in a meaningful way. Often these framing devices were part of the clinicians’ process of estimating the patient’s prognosis. These can be seen in Table 5. These framing devices may offer useful tools for interdisciplinary discussion about prognosis.

Table 5: Framing devices used by clinicians to articulate prognosis

<table>
<thead>
<tr>
<th>Framing Device</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prognosis described in relation to other patients cared for by the clinicians</td>
<td>There’s a guy down the coast who has had the diagnosis for about 10 years, and he’s really well, really healthy. But there are others it can be only …you know…a few months (Nurse 2-Pam).</td>
</tr>
<tr>
<td>Prognosis described in relation to statistics or research on the treatment success and mortality</td>
<td>You can say you know the median survival for this condition is 5 years. That means that 50% of people will have died by the time of 5 years, and another 50% of people will carry on living beyond that time. So I do not know where on that wide spectrum she is going to be (Doctor 1-Pam).</td>
</tr>
<tr>
<td>Prognosis described in relation to the patient’s progress through the treatment</td>
<td>I guess hers [prognosis] is pretty serious because her whole process [of treatment] seemed a little quick…and I’m guessing that’s because of her disease. (Nurse 2-Pam).</td>
</tr>
<tr>
<td>Prognosis described in relation to the patient’s life</td>
<td>She’ll go home and have a nice Christmas, and then we’ll see her back next year, and she probably won’t respond to it as well…and she’ll get even sicker (Nurse 1-Pam).</td>
</tr>
<tr>
<td>Prognosis described in relation to fatality of the disease</td>
<td>Unfortunately despite even these treatments the majority of patients’ relapse and die of their disease. (Doctor 2-Joyce).</td>
</tr>
<tr>
<td>Prognosis described in relation to the patient’s specific type of disease</td>
<td>Philadelphia chromosome is always a poor prognosis with ALL [acute lymphoblastic leukaemia]. (Doctor1-Joyce).</td>
</tr>
</tbody>
</table>

Another framing context useful for prognosis discussions are illness trajectories\textsuperscript{14}, which have been described for patients with progressive chronic illness including cancer, organ failure, and the frail elderly or dementia trajectory. Clinicians can use these trajectories for practical planning of patient care and the promotion of empowerment and coping strategies with patients and families\textsuperscript{14}. Other educational approaches derived from this research which may aid pre-service health students to learn about prognosis are suggested in Table 6.
Table 6: Teaching prognosis to pre-service health students

<table>
<thead>
<tr>
<th>Common Presumption</th>
<th>Suggested Teaching Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prognosis means a numerical estimation of life expectancy</td>
<td>Prognosis refers to the future, including likely events, implications for daily life, morbidity likelihood and the possible length of survival/time until death</td>
</tr>
<tr>
<td>Prognosis is estimated by physicians, using medical knowledge</td>
<td>Prognosis includes scientific and psychosocial aspects of disease and illness, and is utilised by multidisciplinary clinicians to care for the patient</td>
</tr>
<tr>
<td>Prognosis is dependent on a scientific approach</td>
<td>Prognosis can be best understood using both scientific and psychosocial approaches</td>
</tr>
<tr>
<td>Prognosis equates to statistics about outcomes</td>
<td>There are multiple frames of reference to understand prognosis</td>
</tr>
<tr>
<td>Only experienced, specialist clinicians who have a long-standing relationship with the patient need to understand the prognosis</td>
<td>Many clinicians who come into contact with the patient see the need for prognosis information to facilitate appropriate patient care</td>
</tr>
<tr>
<td>Prognosis relates to disease</td>
<td>Prognosis relates to a person, and the impact of their disease and other comorbidities on their life</td>
</tr>
<tr>
<td>Prognosis is so changeable that estimations are not useful</td>
<td>Most diseases have a relatively predictable trajectory which can be helpful for patient and clinician understanding of likely future experiences</td>
</tr>
</tbody>
</table>

Summary

Clinicians are not prepared to discuss prognosis, even between themselves. Role delineations and a lack of shared values impinge on the sharing of prognosis information, which may negatively impact on patient outcomes. In order to improve clinician preparedness to discuss prognosis, pre-service health students could be taught prognosis acknowledging both scientific and psychosocial elements. Facilitation of improved documentation would expand the accessibility of the information for multidisciplinary clinicians. Additionally, recognising and teaching varied framing devices to discuss prognosis could be beneficial for pre-service health clinicians. If we are able to produce clinicians of the future who are better informed of patient prognosis and prepared for enhanced prognosis communication, we may be able to limit the risks and harm of mismatched treatment choices, patient access to palliative care, unnecessary aggressive interventions and, ultimately, improve patient and clinician satisfaction with care outcomes.

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