

Managing Cancer-related Fatigue

Introduction

This module aims to assist health care professionals in developing an improved understanding of cancer-related fatigue in patients with whom they work. It will examine the multiple causes and mechanisms that are thought to contribute to the development of cancer-related fatigue and explore the effect that this symptom can have upon the lives of patients and their families. Readers will be directed to key literature to assist them in developing their understanding of a variety of practical strategies that can be adopted to assess and manage this symptom. Throughout this module readers will be encouraged to reflect upon their own practice, and consider ways in which they can better support people experiencing this symptom.

Undertaking this module should take approximately 8 hours, incorporating 5-6 hours of reading and activities and 2-3 hours of thinking and reflection.

Learning Objectives

The activities and content of this module are built around the following learning objectives:

- To gain increased insight into the lived experience of people with cancer-related fatigue
- To develop an awareness of the potential causes and mechanisms that lead to the development of cancer-related fatigue
- To develop skills in recognising and assessing cancer-related fatigue
- To develop skills and confidence in discussing the subject of cancer-related fatigue with people experiencing the symptom
- To develop a critical understanding of the practical strategies that can assist in managing and / or overcoming cancer-related fatigue
- To reflect critically upon our own approach to the management of cancer-related fatigue and examine potential ways in which this can be improved.

Background

Cancer-related fatigue is often reported to be the most frequently experienced and distressing symptom for people with cancer (Ahlberg et al, 2003). Cancer-related fatigue is known to affect individuals prior to, during and after their treatment and indeed many patients will experience problems with this symptom for many months, or even years following the completion of their treatment (Wagner & Cella, 2004). It is disturbing, therefore, that over the years, cancer-related fatigue has tended to be under-acknowledged and poorly managed by health professionals, thus leaving patients isolated and unsupported in coping with this symptom.

With the recent UK government focus on meeting the needs of people in 'living with and beyond cancer' (DOH, 2007) it is of very high importance that cancer-related fatigue is addressed in a more coordinated and effective manner. This presents a challenge for health professionals, as cancer-related fatigue is a complex symptom which has historically been poorly understood and is often regarded as difficult to manage. Promisingly, however, in recent years a growing body

of research has emerged, furthering our understanding of the multiple causes, mechanisms and strategies for the assessment and management of cancer-related fatigue. It is important that all health professionals working with people with cancer familiarise themselves with this research so as to develop an awareness and understanding of practical approaches in helping patients and their families to overcome or manage this symptom.

Exploring the impact of cancer-related fatigue

In order to understand the impact that cancer-related fatigue can have upon individuals who experience it, it is firstly useful to consider the differences between fatigue related to cancer and its treatment, and fatigue that occurs in the non-cancer population. When individuals feel fatigued from over-exertion or illness they will usually try to rest or sleep in order to renew their energy levels. This is a natural protective response in which the body aims to conserve energy whilst it recovers from the threat caused by over-exertion or illness. Interestingly, however, the majority of research indicates that increasing rest not only fails to improve fatigue in cancer, but instead can serve to exacerbate the problem. This is particularly problematic, given that many patients believe that increasing rest will help them overcome their fatigue, and health care professionals often reinforce this belief by advising them to do so.

Furthermore, research suggests that despite the high prevalence of the cancer-related fatigue and the considerable functional difficulties and distress that result from it, very few health professionals spend time discussing the potential implications and management of the symptom with their patients (Vogelzang et al, 1997; Stone et al, 2000). It seems, therefore, that patients are rarely given opportunities to discuss cancer-related fatigue with health professionals and when they do, the advice they are given is frequently unhelpful, or even counter productive. To help overcome this problem it is important for health professionals to have an awareness of the functional, social, and emotional problems that may result from cancer-related fatigue and in doing so endeavour to understand the unique meaning of fatigue upon the patients with whom they work.

Activity 1 (allow approximately 60 minutes)

Task 1: Critically examine the literature cited in the Background Reading section below in considering the following case scenario:

A patient's husband has spoken to you stating that he has heard that the course of radiotherapy that his wife is about to begin may result in her feeling a little tired. What information and advice might you offer to the patient's husband at this time?

Allow 30 minutes

Task 2: Critically explore online patient information websites (and other resources) and evaluate the quality of advice that they offer. What patient information resources might be useful to help you in speaking with your patient and her husband?

Allow 30 minutes

Thinking Point:

- Given many patients may assume or have been advised that resting more will help them to overcome cancer related fatigue, what thoughts, emotions and fears do you think they may experience if this results in their fatigue increasing?
- What can health care professionals do to better inform patients and their families about the symptom of fatigue?

Resources required to complete this activity

Useful websites

National Comprehensive Cancer Network

www.nccn.org

Cancerbackup

www.cancerbackup.org.uk

Cancerhelp UK

www.cancerhelp.org.uk/help/default.asp?page=10274

Dipex

www.dipex.org

Background reading

[Curt GA, Breitbart W, Cella D, Groopman JE, Horning SJ, Itri LM, Johnson DH, Miaskowski C, Scherr SL, Portenoy RK, Vogelzang NJ \(2000\) Impact of cancer-related fatigue on the lives of patients: new findings from the fatigue coalition. The Oncologist. 5: 353-360.](#)

Department of Health (2007) *Cancer Reform Strategy*. Her Majesty's Stationery Office, London, UK.

[Hofman, M, Ryan, J.L, Figueroa-Moseley, C.D, Jean-Pierre, P, Morrow, G.R, \(2007\) Cancer-Related Fatigue: The Scale of the Problem. The Oncologist. 12\(Suppl 1\): 4-10.](#)

Krishnasamy M (1997) Exploring the nature and impact of fatigue in advanced cancer. *International Journal of Palliative Nursing*. 3(3): 126-31.

Stone P, Richardson A, Ream E, Smith AG, Kerr DJ, Kearney N (2000) Cancer-related fatigue: Inevitable, unimportant and untreatable? Results of a multi-centre patient survey. *Annals of Oncology*. 11: 971-75.

Vogelzang NJ, Breitbart W, Cella D, Curt GA, Groopman JE, Horning SJ, Itri LM, Johnson DH, Scherr SL, Portenoy RK (1997) Patient, caregiver, and oncologist perceptions of cancer-related fatigue: results of a tri-part assessment survey. *Seminars in Haematology*. 34: 4-12.

Identifying the potential causes and mechanisms of cancer-related fatigue

Cancer-related fatigue is a complex multi-dimensional symptom. Despite increasing research into this symptom, the precise biological mechanisms that lead to the onset of cancer-related fatigue are, at present, poorly understood. Based on a review of the literature regarding fatigue in cancer, Ahlberg et al (2003) suggested a number of physiological factors that may contribute to the development of the symptom. These include:

- Anaemia
- Effects of cancer treatments (e.g. radiotherapy, chemotherapy, hormonal therapy)
- Cachexia (reduced hunger as a result of increased cytokine production, and loss of nutrients due to anorexia, nausea, vomiting or hypermetabolism)
- Tumour burden (size, site and stage of tumour, extent of metastatic disease)
- Increased production of cytokines (proteins involved in the generation of an immune response).

Additionally, a number of non-physiological factors are thought to contribute to the development and exacerbation of cancer-related fatigue. These include psychological factors (such as anxiety and depression), de-conditioning (as a result of reductions in activity levels), altered sleeping patterns, and alterations to pre-morbid roles and routines (Ahlberg, 2003; Hotopf, 2004).

Understanding the wide variety of both physiological and non-physiological determinants of cancer fatigue is valuable for health professionals as it will enable them to advise their patients on both short term and long term interventions that may assist them in the management of the symptom. It is important that health professionals are aware that whilst the multiple causes of fatigue mean that for the majority of patients no 'magic bullet' exists which will immediately resolve the problem, numerous behavioural, cognitive and psychological strategies can be adopted to empower patients to take increased control over the symptom.

Activity 2 (allow approximately 60 minutes)

Task 1: Critically appraise the evidence concerning the mechanisms that contribute to the onset of cancer-related fatigue discussed in the background reading below. How might you explain the causes of cancer-related fatigue to a patient experiencing the symptom? Think particularly about the language that you may need to use, to help your patient understand why they may feel the way that they do.

Resources required to complete this activity

Background reading

Ahlberg K, Ekman T, Gaston-Johansson F, Mock V (2003) Assessment and management of cancer-related fatigue in adults. *The Lancet*. 362(9384): 640-666.

Hotopf M (2004) Definitions, epidemiology and models of fatigue in the general population and in cancer. Chapter 1 in Armes J, Krishnasamy M, Higginson I (eds) *Fatigue in Cancer*. Oxford University Press, Oxford.

[Roscoe JA, Kaufman ME, Matteson-Rusby SE, Palesh OG, Ryan JL, Kohli S, Perlis ML, Morrow GR \(2007\) Cancer related fatigue and sleep disorders. *The Oncologist*. 12 \(suppl 1\): 35-42.7](#)

Thinking Point:

- Given the potentially multiple causes of cancer related fatigue, what implications may this have concerning the type of interventions that may need to be offered for its management?
- In your opinion, what priorities for research exist in helping us to better understand the mechanisms that result in cancer related fatigue?

Developing skills in assessing cancer-related fatigue

As discussed above, cancer-related fatigue is often overlooked and under-acknowledged by health professionals. Given that cancer-related fatigue is also regarded as the most frequently experienced and distressing symptom experienced by people with cancer, as health professionals we need to question what it is that prevents us from opening dialogue with our patients about this important symptom. Anecdotal evidence suggests that health professionals may avoid the subject of cancer-related fatigue because they feel uncomfortable discussing patient difficulties for which they are unable to identify an obvious, practical solution. However, some authors suggest that simply speaking with cancer patients about their fatigue, thus giving them the opportunity to explore their thoughts and fears about the issue can be therapeutic in itself (Krishnasamy, 1997).

The approach to which health professionals may assess the nature and severity of a patient's cancer-related fatigue is likely to vary depending upon the setting in which they work. Numerous multi-dimensional cancer fatigue assessment inventories can be found to aid this process. Useful comparisons of the properties of different measures have been conducted by Dittner, Wessely and Brown (2004), Piper in Frank-Stromborg and Olsen (2004) and Horng-Shiuann and McSweeney in Armes, Krishnasamy and Higginson (2004). Readers are directed to these sources for further information on this subject. When considering the use of validated, reliable assessment tools clinicians should, however, consider whether or not a formalised fatigue assessment is necessary in their setting. It is important that health professionals take into account the administrative burden that can result from the use of fatigue inventories, which may in effect, result in already fatigued patients becoming more so.

Wagner and Cella (2004) outline a number of cues that may indicate that a patient is experiencing cancer-related fatigue. These include increased need to rest disproportionate to activity levels, generalised weakness, reduced concentration, insomnia and / or sleep without feeling of restoration. A number of authors have suggested key questions which may help to guide health professionals in assessing their patients' fatigue. Portenoy and Itri (1999) recommend the use of the question "Are you fatigued?" which can be coupled with a 0-10 scale to gauge the severity of the symptom. Whilst such an approach might, to some, seem somewhat simplistic, it provides a useful, practical way of assessing the existence of fatigue that can be adopted by any health professional working in cancer care. Wagner and Cella (2004) suggest a number of other simple questions that may assist patients and health professionals to

better understand a patient's fatigue. They advise professionals to speak with patients about the onset, duration, severity, daily pattern, time course, exacerbating and reducing factors and distress related to their fatigue. It is hoped that in understanding the patterns of and factors that exacerbate or remediate fatigue, patients may gain an increased sense of control over the symptom.

Any assessment of fatigue should incorporate discussion relating to the functional impact of the symptom upon the patient's lifestyle (Winningham et al, 2001). Without a clear understanding of this, health professionals will develop a restricted view of the effects of the symptom upon their patient and will be unable to offer meaningful advice about ways in which the symptom can be managed in a manner that is reflective of the patient's unique needs.

Activity 3 (allow approximately 60 minutes)

Task 1: Identify and critically evaluate a number of formalised cancer-related fatigue assessment tools.

Links to two standardised fatigue assessment inventories (the Brief Fatigue Inventory and the Piper Fatigue Scale) are included in the resources section below. Consider whether or not the use of such a tool might be helpful in your work setting for assessing cancer-related fatigue. Would a less formal approach to fatigue assessment be as useful? Why / Why not?

Resources required to complete this activity

Useful websites

Piper Fatigue Scale

www.pdxinternational.com/docs/piper/Piper_Fatigue_Scale.PDF

Scoring the Piper Fatigue Scale

www.propax.com/survey/PFS_Scoring.PDF

Brief Fatigue Inventory

www.mdanderson.org/pdf/bfi.pdf

National Comprehensive Cancer Network

www.nccn.org

Cancerbackup

www.cancerbackup.org.uk/Home

Background reading

Borthwick D, Knowles G, McNamara S, O'Dea R, Stroner P (2003) Assessing fatigue and self-care strategies in patients receiving radiotherapy for non-small cell lung cancer. *European Journal of Oncology Nursing*. 7(4): 231-41.

[Dittner AJ, Wessely SC, Brown RG \(2004\) The assessment of fatigue. A practical guide for clinicians and researchers. *Journal of Psychosomatic Research*. 56, 157-70.](#)

Hornig-Shiuann W, McSweeney M (2004) The assessment and measurement of fatigue in people with cancer. Chapter 9 in Armes J, Krishnasamy M, Higginson I (eds) *Fatigue in Cancer*. Oxford University Press, Oxford.

[Jean-Pierre P, Figueroa-Moseley CD, Kohli S, Fiscella K, Palesh OG, Morrow GR, \(2007\) Assessment of Cancer-Related Fatigue: Implications for Clinical Diagnosis and Treatment. *The Oncologist*. 12\(Suppl 1\): 11-21.](#)

Krishnasamy M (1997) Exploring the nature and impact of fatigue in advanced cancer. *International Journal of Palliative Nursing*. 3(3): 126-31.

Piper BF (2004) Measuring Fatigue. Chapter 34 in Frank-Stromborg M and Olsen SJ (eds) *Instruments for Clinical Health-Care Research*. (3rd ed) Jones and Bartlett Publishers, Massachusetts.

[Portenoy R, Itri LM \(1999\) Cancer-Related Fatigue: Guidelines for Evaluation and Management. *The Oncologist*. 4: 1-10.](#)

Richardson A (1998) Measuring fatigue in patients with cancer. *Supportive Care in Cancer*. 6: 94-100.

Stone P, Richards M, A'Hern R, Hardy J (2000) A study to investigate the prevalence, severity and correlates of fatigue among patients with cancer in comparison with a control group of volunteers without cancer. *Annals of Oncology*. 11(5): 561-67.

Stone P, Richardson A, Ream E, Smith AG, Kerr DJ, Kearney N (2000) Cancer-related fatigue: Inevitable, unimportant and untreatable? Results of a multi-centre patient survey. *Annals of Oncology*. 11: 971-75.

Volgelzang NJ, Breitbart W, Cella D, Curt GA, Groopman JE, Horning SJ, Itri LM, Johnson DH, Scherr SL, Portenoy RK (1997) Patient, caregiver, and oncologist perceptions of cancer-related fatigue: results of a tri-part assessment survey. *Seminars in Haematology*. 34: 4-12.

Wagner LI, Cella D (2004) Fatigue and cancer: causes, prevalence and treatment approaches. *British Journal of Cancer*. 91: 822-828.

[Winningham ML \(2001\) Strategies for Managing Cancer-Related Fatigue Syndrome: A Rehabilitation Approach. *Cancer*. 92: 988-97.](#)

Thinking Point:

- Reflect upon your own practice when working with people with cancer. Do you routinely speak to your patients about whether they are experiencing cancer-related fatigue? What are the barriers that prevent you from doing this? How might these barriers be overcome?

Developing knowledge and skills regarding strategies for managing and or overcoming cancer-related fatigue

Given the wide range of factors that are thought to contribute to cancer-related fatigue, it makes intuitive sense that a number of different interventions may be required to help to overcome it. It is generally recommended that steps are taken to remediate any reversible physiological problems that may be causing a patient's fatigue (such as anaemia), before using additional strategies to combat residual fatigue (NCCN, 2008). Health professionals therefore need to be aware of the variety of strategies that can be used to facilitate patients in overcoming, or managing cancer-related fatigue. A number of approaches have been proposed within the literature including:

- Education
- Pharmacological interventions
- Nutritional interventions
- Graded exercise / activity
- Energy conservation
- Sleep hygiene and relaxation
- Restorative activities
- Psychological and social support
- Cognitive rehabilitation.

It is particularly important that health professionals work in partnership with patients and their families in order to explore each individual's unique experience of cancer-related fatigue, and customise their advice regarding its management accordingly. For example, patients with advanced disease may require a more compensatory approach to fatigue management with a focus on goal attainment and psychosocial support, where as a more rehabilitative, activity focussed approach may be appropriate for patients during, or following a course of treatment.

Health professionals should also consider the timing of the advice that they offer regarding fatigue management (Krishnasamy, 2004). They should be alert to the chance that suggestions which are offered whilst a patient is already fatigued to be difficult for that individual to retain and / or act upon due to the cognitive and psychological fatigue they are already experiencing. For this same reason, involving families and carers in the fatigue management process can be positive, as it increases the likelihood that patients will be able to take on board the recommendations that they are offered.

Activity 4 (allow approximately 2 hours)

Task 1: Critically examine the evidence surrounding both pharmacological and non-pharmacological interventions for the management of cancer-related fatigue.

Allow 60 minutes

Task 2: Investigate what fatigue management supportive interventions are available in the area where you work. What additional resources are available in your local community?

Allow 60 minutes

Resources required to complete this activity

Useful websites

National Comprehensive Cancer Network

www.nccn.org

Cancerbackup

www.cancerbackup.org.uk

Background reading

[Carroll, J.K, Kohli, S, Mustian, K.M, Roscoe, J.A, Morrow, G.R, \(2007\) Pharmacologic Treatment of Cancer-Related Fatigue. The Oncologist. 12 \(suppl 1\): 43-51.](#)

Krishnasamy M (2004) Commentary - Assessing fatigue and self-care strategies in patients receiving radiotherapy for non-small cell lung cancer, by Diana Borthwick, Gillian Knowles, Shane McNamara, Rita O'Dea, Paul Stroner. European Journal of Oncology Nursing. 8: 83-4.

[Mustian, K.M, Morrow, G.R, Carroll, J.K, Figueroa-Moseley, C.D, Jean-Pierre, P, Williams, G.C, \(2007\) Integrative Non-pharmacologic Behavioural Interventions for the Management of Cancer-Related Fatigue. The Oncologist. 12\(Suppl 1\): 52-67.](#)

[National Comprehensive Cancer Network \(2008\) NCCN Clinical Practice Guidelines in Oncology - Cancer-Related Fatigue. Version1.2008. National Comprehensive Cancer Network.](#)

[Roscoe JA, Kaufman ME, Matteson-Rusby SE, Palesh OG, Ryan JL, Kohli S, Perlis ML, Morrow GR \(2007\) Cancer-Related fatigue and sleep disorders. The Oncologist. 12 \(suppl 1\): 35-42.](#)

Thinking Point:

- What treatment and / or advice would you offer to a patient experiencing fatigue following their first cycle of chemotherapy for a condition such as breast cancer?
- How might this advice change if you were working with a person with very advanced disease who was approaching the end of life?
- If you work in an acute setting, where can you refer your patients for ongoing advice and support in your local area?

Discussion Board

The discussion board is a forum in which you can exchange ideas with other participants. This activity relates to the work you will have completed in earlier tasks and provides an opportunity for you to explore the difference in perspectives between the participants.

Discussion Board

When will it take place

For a 3 month period from date of publication of this article.

Which discussion thread

Management of cancer-related fatigue

What is expected of you as a participant

In particular consider the following:

- What needs to change within cancer services to ensure that the important issue of cancer-related fatigue is managed more effectively?
- What are the barriers against and agents for the development of improved support for people with cancer-related fatigue? How can these barriers be overcome?
- Where do you think that resources should be prioritised to help in overcoming cancer-related fatigue? For example should education of health professionals take precedence over research or support services? Why / Why not?

Summary of this module

By completing this module you should have developed an insight into the physical, psychological and social difficulties that are experienced by people with cancer as a result of cancer-related fatigue. You should have had an opportunity to reflect upon your own practice in assessing and advising patients regarding management of the symptom and considered ways in which this could be improved in the future. The discussion board activity is aimed at expanding your thinking beyond your own practice, to consider what changes may be needed at a local and national level if the issue of cancer-related fatigue is to be managed in a coordinated and effective manner.

On completion of this module you will have had the opportunity to:

- Understand the wide variety of potential physiological and psychosocial causes of cancer-related fatigue.
- Gained insight into the impact of cancer-related fatigue upon people's lives.
- Evaluated the merits of using formalised methods of assessing cancer-related fatigue, giving consideration as to whether these are useful and practical within your own setting.
- Examined the evidence underpinning a variety of approaches that may be used for the management of cancer-related fatigue and considered which approaches might be most appropriate for patients in the setting in which you work.
- Reflected upon your own practice with patients with cancer-related fatigue and explored what changes might need to occur to ensure this symptom is more effectively addressed in the future.

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