

HOT SPOT



From the editor's desk

By Cyril Danjoux, MD, FRCPC, and Edward Chow, MBBS, MSc, FRCPC

We are pleased to bring you this special issue of the Rapid Response Radiotherapy Program newsletter **Hot Spot** marking our fifth year. To produce this educational newsletter required the dedication of our editorial board, the hard work of our contributors, financial support from our sponsors, and constructive suggestions from our readers. The gentle reminders of our secretary-treasurer and

publisher made sure that each issue was a quality product delivered on time. We would like to thank all who have made **Hot Spot** a reality, and who have generously donated their time and energy.

On this special occasion, we decided to mail this special issue not only to our regular readers, but also to all family physicians in Canada. **Oncology Exchange**, a new Canadian oncology journal, agreed to have this issue added to its mailing list. Your opinion is important to help us improve the quality of our newsletter. We would appreciate you completing and faxing us the one-page

survey accompanying this newsletter.

Previous issues of the newsletter are available on-line at <http://www.tsrcc.on.ca/RRRP.htm>.

We hope that with the help of our readers, we can make the next five years of **Hot Spot** even more exciting and educational than the first. We look forward to your comments and suggestions.

Congratulations on fifth year

On behalf of everyone at TSRCC I would like to extend our congratulations to **Hot Spot** on your fifth year of publication.

In those first five years you have done an extraordinary job providing meaningful information on palliative care to those in the greater Toronto area and beyond. The newsletter has been a wonderful forum to exchange ideas, recognize new discoveries, highlight innovative programs and services, and honour some of the excellent examples of quality care occurring every day at TSRCC. It has grown to become a valuable resource facilitating communication between referring physicians and the TSRCC team.

A comprehensive cancer treatment centre is a large and multifaceted

organization that is often overflowing with information. **Hot Spot** helps us stay in touch with those in the community who provide supportive care to our patients.

We would also like to welcome all of the new subscribers throughout Ontario and the rest of Canada, and hope that the information provided is informative and helps you in your practice. We encourage you to share your ideas and experiences with the rest of the community.

The RRRP is an important TSRCC initiative. We appreciate the hard work of all those involved in the creation of the newsletter, and look forward to many more informative issues in the years to come.

Dr. Carol Sawka, MD, FRCPC,
VP, Regional Cancer Services, TSRCC

On the occasion of the fifth year of **Hot Spot**, I would like to extend my congratulations to the RRRP team for its dedication to educational innovations. There is a developing understanding of how complex the continuing education/knowledge translation field really is. Consensus exists that multi-modal teaching approaches, sustained over time and involving the entire practice context (such as the health care team and the health professionals in the community), are key elements to a successful strategy to improve patient care through the application of evidence-based principles of care. In addition, feedback mechanisms are increasingly seen as important adjuncts to success. The RRRP exemplifies all of

these principles. It showcases the strategic direction for education at the Toronto-Sunnybrook Regional Cancer Centre by being interprofessional in practice, by focusing on the needs of the health professional learners, and by extending its reach to the broader community. On a personal note, I have always looked forward to the arrival of **Hot Spot**, both for its provocative and insightful articles and for the superbly helpful (and collectible) education inserts. I look forward to the next five (and more) years!

Peeter Poldre, MD, EdD, FRCPC,
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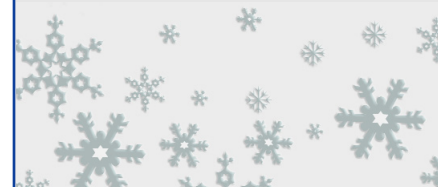
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Suffering, healing and the wounded healer

By Mary L.S. Vachon, RN, PhD

In *A Place of Healing: Working with Suffering in Living And Dying* (Oxford University Press, 2000), Dr. Michael Kearney, a hospice physician from Dublin, Ireland writes that we may speak of curing another's pain, but an individual's suffering is beyond pain and is the experience that results from damage to the whole person.

Healing can occur within suffering. Healing is defined as "the process of becoming psychologically and spiritually more integrated and whole: a phenomenon which enables persons to become more completely themselves and more fully alive". This experience can happen in the presence of death; people can die healed. One husband said, "During the last six months of my wife's life, she became a person she had never allowed herself to be before. She unfroze and became warm and loving. That was the best time of our marriage."

Such healing can only come from the depths of the individual's psyche. Caregivers can, however, help to create the environment that might foster inner healing within the palliative patient. "In practice this happens when a combination of effective care and human companionship helps to establish a secure, inner space for that person to be in. The process is further facilitated if the carers themselves have found ways of staying with and being in their own experience of suffering".

In *The Wounded Healer*, the theologian Henri Nouwen (Doubleday, 1972) hypothesized that successful caregivers

are often 'wounded healers', with wounds sustained either in childhood, adulthood or both. In trying to heal their own wounds, these caregivers were drawn, consciously or not, to healing others. The concept of the Wounded Healer derives from ancient universal shamanic stories of Paleolithic times. These stories are of tribal priests, "the original wounded healers, whose ability to heal others was seen as being directly linked to their having journeyed in depth into their own wounded selves".

Sulmasy (*The Healer's Calling*, Paulist Press, 1997), a physician, philosopher and Franciscan friar, contends, "All health care professionals are wounded healers. They cannot escape suffering themselves. Moments of pain, loneliness, fatigue, and sacrifice are intrinsic to the human condition. The physician or nurse's own bleeding can become the source of the compassion in the healer's art...The physician's or nurse's wounds can become resources for healing" (p. 48). Wounded healers must not, however, become so overwhelmed with the suffering of others that they are unable to offer effective care. "Competence remains the first act of compassion. Wounded healers do not ask their patients for help, but recognize the unity between their own neediness and the needs of their patients. Wounded healers issue an invitation to patients to enter into the space of the healing relationship".

Kearney (2000) writes of the healer-patient archetype: "The sick man seeks an external healer, but at the same time the intra-psycho healer is activated. We often refer to this intra-psycho healer in the ill as the 'healing factor'... The physician

within the patient himself and its healing action is as great as that of the doctor who appears on the scene externally. Neither wounds nor diseases can heal without the curative action of the inner healer". However, much as the patient has a physician within him or herself, so too does the caregiver have a patient inside him or herself. If the caregiver has the impression that weakness, illness and wounds belong only to the patient, and the caregiver is secure against them, "the poor creatures known as patients live in a world completely different from his own. He develops into a physician without wounds and can no longer constellate the healing factor in his patients".

Kearney (2000) uses the new physics to describe the integration between the traditional medical model and the healing model that can be applied in palliative care and its relevance to the relationship between the caregiver and the patient. "(t)he quantum idea that ours is a participatory universe has implications for carers. Although there are still subjects and objects within the healing model, the boundaries may not be as clear as they were within the medical model. Caring now becomes a dynamic event. While the roles of 'carer' and 'patient' remain, there is also an interweaving of the two. The term 'clinical objectivity' is joined by that of 'clinical subjectivity', acknowledging a shared dimension to the healing encounter.

Mary Vachon, RN, PhD, is a psychotherapist in private practice. She can be reached at maryvachon@sympatico.ca.

More fifth year congratulations

It is my pleasure to extend my congratulations on the fifth year of publication of **Hot Spot**, the quarterly newsletter of the Rapid Response Radiotherapy Program (RRRP) at the Toronto Sunnybrook Regional Cancer Centre/Sunnybrook & Women's College Health Sciences Centre. The newsletter has been well-received by referring physicians and palliative health care workers. We have seen an increasing number of health care professionals requesting to be included on the mailing list. **Hot Spot** contains regular articles on ethics, psychosocial issues, research and historical vignettes. An education insert provides quick access to clinically relevant information for the busy physician. **Hot Spot** is an excellent example of our commitment to continuing medical education, information-sharing and communication

with the health care community. This newsletter reflects the aim of the Department of Radiation Oncology to inform and educate health care professionals. I support the decision of the editorial board to expand the readership to family physicians and palliative health care workers, and I welcome all the new subscribers.

The RRRP was developed initially to address the needs of patients requiring palliative radiotherapy. It was the first program in Canada to offer a fast track option to patients who required urgent palliative radiotherapy. Patients are usually seen, planned and treated on the same day. From a single clinic in 1996, it has expanded to a multidisciplinary program with daily clinics in an academic environment that provides educational and research opportunities. Recently, the

radiation oncologists of the RRRP in collaboration with the orthopedic surgeons and palliative care physicians initiated a multidisciplinary bone metastases clinic to evaluate and treat patients with painful or symptomatic bone metastases. This is a unique program with bench to bedside research and educational projects.

Best wishes to all those involved with **Hot Spot** as they plan what promises to be another successful year for this excellent newsletter! I hope that you find the information in **Hot Spot** useful in your practice and look forward to future issues.

Shun Wong, MD, FRCPC, Professor and Chair, Department of Radiation Oncology, Sunnybrook & Women's College Health Sciences Centre; Head, Radiation Treatment Programs, TSRCC

Advance care planning – update and practical tips

By Scott Berry, MD, FRCPC

A case

You have just admitted a 74-year-old woman with metastatic breast cancer who has presented at the hospital with pneumonia and delirium. She needs antibiotics and may need admission to the intensive care unit if her respiratory condition deteriorates any further. She is not competent to make any decisions regarding medical treatment at the time of admission. Her husband is there, but when you talk to him, he tells you that he and his wife have never talked about whether she would want to be on a “breathing machine” if she became very ill.

Have you found yourself in a situation like this? It is not uncommon and is very distressing for everyone involved. Can we prevent situations like this? The answer is yes, if we engage our patients in the process of “advance care planning”. Advance care planning is a “process of communication among patients, health care providers, their families, and important others regarding the kind of care that will be considered appropriate when the patient cannot make decisions”.

Traditional assumptions and new concepts

Traditionally, advance care planning was thought to help people prepare for incapacity, and the focus was on the patient-doctor relationship and on written forms (like living wills or powers of attorney for personal care). However, qualitative studies have forced us to re-examine some of our previous assumptions about advance care planning. These studies revealed that, from a patient’s perspective, the important issues are achieving a sense of control, relieving burdens on their loved ones, and strengthening relationships with their families. When patients were presented with advance directive documents, most liked them and used them as a basis for discussions with their families about dying. However, most never completed the documents and many did not discuss the documents with their doctors because they saw it as a “private matter”.

Practical tips – how can you help?

How can we translate these research findings into action?

First, and most importantly – raise the issue! You may want to use a living will document as a tool to initiate the discussion, or for your patient to use as a basis of

discussions with their families. Living wills are available on The University of Toronto Joint Centre for Bioethics website (www.utoronto.ca/jcb). General living wills are available in English, French and Italian, and cancer- and HIV-focused living wills are also available. Remember though, the focus should be on the discussions and not the forms.

Although the timing of these discussions is a matter of individual discretion, I usually find the earlier, the better.

Second – encourage discussions with loved ones (and don’t be surprised if they don’t want to talk to you!) – these discussions are where patients are going to derive most of their satisfaction. These discussions will also be important to practitioners. Loved ones who have talked about a patient’s wishes around dying should be able to advise you better about treatment decisions if the patient becomes incapable.

Finally, it is important to be sensitive to cultural issues – some cultures’ perceptions of death and dying may require a different approach to discussing the dying process.

Take the first steps to avoid the distressing scenario described at the beginning of this article – make the time to engage your patients in the process of advance care planning!

Historical Vignette:

A century of radiation therapy in Canada

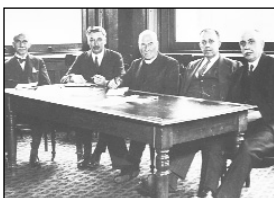
By Charles Hayter, MA, MD, FRCPC

1902: Dr Abraham Groves of Fergus, Ontario, reports the successful relief of symptoms from uterine cancer with the use of x-rays.

1910: Dr William Aikins, right, opens a Radium Institute on Bloor Street in Toronto and treats more than 3,000 patients from across Canada.



1932: An Ontario Royal Commission (right) recommends the centralization of radiotherapy in specialized cancer clinics in a few cities.



1947: The Ontario Cancer Treatment and Research Foundation (OCTRF) is formed to oversee and coordinate cancer treatment in Ontario; OCTRF cancer clinics are initially opened in Kingston, London, Ottawa, Hamilton, and Windsor.

1950: Dr Vera Peters of Toronto, seen at right with an early Cobalt-60 machine, reports on the cure of Hodgkin’s Disease using radiation.



1951: The first treatment in the world using Cobalt-60 is given in London, Ontario.

1958: Opening of the Princess Margaret Hospital, Toronto, right.



1997: Formation of Cancer Care Ontario (replaces the OCTRF).

2003: Over 20,000 patients are treated with radiotherapy in nine treatment centres across the province, photos at right.



Below - one of the first radiation treatments for breast cancer in 1903.



Research Corner

By *Rebecca Wong, MB, ChB, MSc, FRCPC*

What have we been up to?

In celebration of the fifth year of **Hot Spot**, we bring to you some of the highlights of the research conducted by the palliative radiotherapy programs at the University of Toronto (Rapid Response Radiotherapy Program at Toronto Sunnybrook Regional Cancer Centre & Palliative Radiotherapy Program at Princess Margaret Hospital).

Improving our understanding of the patients' perspectives is important at all levels, from how services are being delivered to how clinical trials are being designed. A pilot study by Andersson et al found almost 35% of patients referred to the palliative program thought their cancer may be curable and almost 80% have very little understanding of what radiotherapy is about! Poor understanding or refusal to accept the palliative nature of their illness complicates the coping process and ultimately quality of life.

Wong et al conducted a needs assessment for informational needs in patients living with advanced cancer. Our patients tell us that, of greatest priority, they require information on symptom management such as pain and fatigue, and the types of home palliative care resources that are available to facilitate care at home. A "one-on-one" strategy and short written material were the most preferred sources of information for our patient population. We intuitively expect our perspective on life to be very different when faced with a life-threatening illness. How does it change? It is still poorly understood. How do we answer the question, "What would you do, doctor?" Szumacher et al found that the majority of patients wish to be actively or collaboratively involved in treatment decision-making. Wong et al found the likelihood of pain relief more important than duration of pain relief in making treatment choices. These observations are just beginning to improve our understanding of the perspectives of patients living with advanced cancer.

Methodology in palliative radiotherapy research is the cornerstone for our academic program in palliative radiotherapy. Research requires outcomes. They depend on our patients good will to provide them. How can this be done

effectively for both the patient and the researcher in the context of patients living with advanced cancer? Telephone follow-up has been studied by our group. When outcomes are confined to the short and intermediate term, phone follow-up is effective in reducing attrition rates, although there remain concerns that the sickest patients cannot be accounted for with this strategy. Pain relief is one of the most important outcomes in palliative radiotherapy, and remains a challenge to document. Chow & Wu et al led the development of an international consensus on how to report pain outcome for future trials. Life expectancy is frequently a major factor in decision-making, as well as an important eligibility criteria for many studies. The ability of physicians to predict this has been consistently poor. Chow et al explored the concept of a clinical prognostic model for life expectancy for palliative patients which is being further validated. Patient satisfaction with their care and the health care team is crucial. A validated tool is expected to be an important part of research in this area. Loblaw & Bezjak et al developed a patient satisfaction questionnaire with strong psychometric properties, which has been incorporated into several trial designs.

Bone metastases are the most common indication for palliative radiotherapy, and also the topic that has been most intensively studied by our group. Chow et al led a survey of Canadian practice pattern on the use of radiotherapy. Barton et al explored technical aspects of radiotherapy prescription for spinal metastases. This work has modified clinical practice for many. Wu et al published a systematic review which provides the most comprehensive piece of evidence that single fraction of radiotherapy for bone metastases is equivalent to multiple fractions when pain relief alone is the primary objective of therapy. Attempts at augmenting the response from radiotherapy alone by adding a single dose of pamidronate did not show an advantage, while vertebroplasty has provided valuable benefits for well-selected patients with spinal metastases.

Brain metastases are perhaps the site of disease with the greatest morbidity and strike the greatest fear among patients. The lack of useful, practical, clinically relevant assessment tools has hampered efforts to understand the management of this disease. Bezjak et al documented, in a longitudinal study using contemporary outcome measures, 55% of patients have either died or progressed at one month, with 19% showing improvement or resolution of symptoms. This data has heightened the urgency to better define subgroups where RT is unlikely to be useful, and to design alternative strategies to augment clinical outcomes. RSR 13 (a synthetic allosteric modifier of hemoglobin) and altered fractionation are a just a few strategies actively being studied by our groups.

Palliation of locally advanced lung cancer was one of the priority topics identified in a Canadian palliative radiotherapy meeting in 1995. Bezjak et al led and completed a study through NCIC CTG. Her study documented improvement of outcome and survival with fractionated over single fraction radiotherapy in the subgroup of patients with good performance status. The study also provided contemporary data on symptom response.

It would be impossible to showcase all our accomplishments over the past five years. The above is just some of the highlights, based on published works, selected by the author to provide a thematic perspective. Journey with us into the next five years!

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Theratronics - a division of MDS Nordion

By Larry Librach, MD, CCFP, FCFP

Cancer pain is common but not inevitable. It is a complex biopsychosocial experience with a number of complex and poorly understood pathophysiologic processes. Prevalence in advanced disease is 70-90%. Most cancer pain can be managed successfully.

The CAR_xE approach

- C**omprehensive Care Considerations
- A**ssessment
- R_x**-Management
- E**valuation

Comprehensive Care Considerations

1. Successful pain management requires attention to the physical, psychological, social and spiritual components or factors of “total pain”.
2. Educate patient and family.
 - Ensure their active participation in the pain management plan.
 - Education through conversations that may need to be repeated and through supportive literature that is comprehensive and comprehensible.
3. Be flexible in your approach. Template or algorithmic guidelines need to be tempered by patient factors and physician reflective experience.
4. Use an interdisciplinary team effectively.
5. Develop standards of pain control that may effectively prevent unnecessary suffering.

Assessment

Appropriate assessment of a patient’s “total” pain will lead to effective management. The pain history remains the key to understanding the patient’s pain and directing the management scheme. It is of clinical importance to try and distinguish the types or components of a patient’s pain since this assessment has clinical management implications in the use of analgesics, adjuvant drugs and other analgesic modalities.

R_x-Management

1. Educate patient and family
2. Follow basic principles

- Investigate wisely and effectively.
- Treat immediately. Do not delay treatment.
- Use pain diary and objective measures of pain control
- Understand the pharmacology of analgesics and adjuvant medications.
- Match the analgesic to the severity of pain i.e. use strong analgesics for moderate to severe pain.
- Give medication orally whenever possible - possible in the majority of patients.
- Give medication regularly according to its analgesic duration of effect.
- Always prescribe a breakthrough dose.
- Titrate the dose upwards daily using immediate release analgesics until pain is relieved or intractable adverse effects occur.
- Always consider adjuvant modalities and medication in every patient.
- Take a preventive approach to avoid adverse effects of the medication.
- Consult local pain and palliative care resources.

3. Choosing the appropriate analgesic

Basic issues

- Most patients with progressive cancer have severe pain. Match the analgesic to the severity of pain.
- There is no good clinical evidence documenting significant differences between the various potent opioids, either in analgesic efficacy, or adverse effects.

Effective treatment requires a clear understanding of the pharmacology, potential impact, and adverse effects associated with each of the analgesics prescribed, and how these may vary from patient to patient.

Non-opioid analgesics

There are three types of non-opioid analgesics: salicylates, acetaminophen and non-steroidal anti-inflammatory drugs. They are useful alone only for mild pain. For moderate or severe pain, use opioids. Limited evidence for the specific use of NSAIDs in bone pain.

Opioid analgesics

Opioid analgesics (formerly termed “narcotic” analgesics) are potent safe medications to use for the treatment of moderate to severe pain. The perception that the administration of opioids and analgesics for pain management causes addiction is a prevalent myth that inhibits adequate pain control.

Table One: Opioids

NB: These dosage equivalents of immediate release opioids to morphine 10mg s.c. have been based mainly on single dose studies. They are guidelines only in patients requiring chronic administration. See text for further information.

Drug	Dose s.c. (mg)	Dose p.o. (mg)	Dose Frequency
USEFUL WEAK OPIOIDS			
codeine	120	200mg	q4h
oxycodone combination products	n/a	2 tabs	q4h
NOT RECOMMENDED			
dextropropoxyphene	n/a	n/a	n/a
meperidine			
USEFUL STRONG OPIOIDS			
fentanyl (transdermal)	n/a	25µg/hr	every 2-3 days
heroin ¹	6	12-20	q4h
oxycodone	n/a	5-10mg	q4h
hydromorphone	2	4-6	q4h
methadone ²	xx	xx	xx
morphine	10	20-30	q4h
NOT RECOMMENDED			
butorphanol *	2	n/a	q3-4h
levorphanol	2	4	q6h
meperidine ³	75	200-300	q2-3h
nalbuphine *	10	n/a	q3-6h
oxymorphone	1.5	5 (p.r.)	q4h
pentazocine *	60	180	q3-4h

1 not available in Canada for oral use

2 recommended only if familiar with the special features of this drug

3 should be used for short term in acute pain only

* agonist-antagonist drugs

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Adverse effects of opioids

- Opioids have predictable common side-effects.
- Fear of unwanted effects, especially nausea and constipation, is a major reason for avoiding taking these analgesics.
- When using opioids include identification of these fears and prevention of the most common side effects.
- Adverse effects of opioids can be managed. Patients generally develop within a brief period pharmacologic tolerance to all but constipation.

Adverse effects of opioids

Common	Less Frequent	Rare
<ul style="list-style-type: none"> • constipation • nausea • sedation • dry mouth 	<ul style="list-style-type: none"> • urinary retention • pruritus • severe myoclonus • confusion • psychotomimetic effects such as hallucinations & nightmares • postural hypotension • vertigo 	<ul style="list-style-type: none"> • allergy • respiratory depression

Choosing the right dose

Important:

- The following sections describe dosage guidelines using morphine as the strong opioid of choice. For other opioids, use the dose suggested in the preceding table.
- All strong opioids are equally effective. There is little evidence to support a difference in adverse effects or analgesic efficacy for any of these potent drugs.
- In the face of significant renal failure and decreased renal clearance, morphine is NOT the drug of choice.

For opioid-naïve patient, or if the patient is on small doses of weak opioids, begin with immediate release morphine, hydromorphone or oxycodone orally (10-20mg morphine equivalence q4h). Reduce dose if patient is very elderly or frail or in renal failure if morphine is the choice.

Starting doses of potent opioids in opioid-naïve patients

10-20mg IR morphine q4h. 2-4mg IR hydromorphone q4h.
5-10mg IR oxycodone q4h. 25µg transdermal fentanyl

For patient on strong opioids but response is ineffective or the drug has been given PRN, calculate total daily dose of opioid in morphine equivalence orally, increase by 25% and divide by six to get the suggested initial four-hourly dose.
Example: if a patient takes 20mg q4h of morphine and has had six doses of 10mg of breakthrough morphine, the total daily dose is 180mg. If the pain is still not controlled add 25% i.e. 45mg to give 225mg. Therefore the next regular dose will be 225/6=36mg and the breakthrough dose about 25-50% of that dose i.e. 10-20mg q1h PRN

For patients with unstable or poorly controlled pain

- Titrate the dose of immediate-release opioids upwards until pain is mostly controlled. Titration can be done daily. Calculate the total daily dose of opioid including regular doses and breakthrough. The new regular dose equals this total daily dose plus a 25% increase to account for pain that is not controlled:
- A double dose at bedtime is safe so patient does not have to wake up for middle of the night dose.
- Prescribe a breakthrough dose of 50-100% of the regular q4h oral dose of immediate release opioid (5-15% of the 24 hour total dose). Can be given orally every hour if necessary (1/2 hr parenterally) so that up to three doses can be given in between each regular dose.
- Increase the dose after four dosage intervals or at least daily until pain is well-controlled. This requires daily monitoring of patients by the physician, nurse and family.
- When the patient is stable, switch to a sustained-release preparation, every eight-12 hours for best control and ease of administration.
- Breakthrough dose should always be of the same immediate release opioid.
- Take a preventive approach to managing side-effects as described below.
- Adjust the dose of morphine and place the patient on PRN immediate-release morphine if the patient is in severe renal failure or in liver failure.

IMPORTANT: Remember that opioid refills must be by written or faxed prescription.

“Breakthrough pain”

- Transitory flares of pain can be expected both at rest and during movement.
- If breakthrough pain lasts longer than a few minutes, extra doses of analgesics, “breakthrough or rescue doses”, will likely provide additional relief.
- To be effective and to minimize the risk of adverse effects, consider an immediate-release preparation of the same opioid that is in use for routine dosing.
- For transdermal fentanyl, use an alternative short-acting opioid, e.g. morphine or hydromorphone, as the rescue dose.

Breakthrough dose guidelines

1. For each breakthrough dose, offer 5% to 15% of the 24-hour dose.
2. Codeine, hydrocodone, morphine, oxycodone, and hydromorphone all behave similarly. And therefore, **an extra breakthrough dose can be offered:**
 - **once every hour** if administered **orally**, or possibly less frequently for frail patients,
 - **every 30 minutes** if administered **subcutaneous**
 - **every 10 to 15 minutes** if administered **intravenously**.

Longer intervals between breakthrough doses only prolong a patient’s pain unnecessarily.
3. Fentanyl: see chart

Transdermal fentanyl: Guidelines for use

Transdermal fentanyl is an effective way of delivering potent opioids. Dosage equivalence recommended by the manufacturer are rough guidelines only. Response seems very individualized, as it is to all strong opioids.

Current recommended initial transdermal fentanyl dose guidelines

Oral 24-hour morphine (mg)	Transdermal fentanyl (µg/h)	Oral 24-hour morphine	Transdermal fentanyl (µg/h)
45-134	25	585-674	175
135-224	50	675-764	200
225-314	75	765-854	225
315-404	100	855-944	250
405-494	125	945-1034	275
495-584	150	1035-1124	300

Dosage increases should usually only occur at 2-3 day intervals. It often takes at least 24 hours to reach a steady state after the patch is first applied and with dose increases. A maximum dose of 300-400µg/hr is suggested. Breakthrough doses of another potent opioid must be used.

Severe pain emergencies – finding the right dose

Rapid pain escalation is unusual and suggests something major is happening, e.g. impending fracture, intraperitoneal bleeding, etc. Titrate with parenteral drugs. The subcutaneous route is best, especially by continuous infusion.

Evaluation

1. Pain outcomes must be evaluated in each patient.
2. Outcomes to be evaluated include:
 - Pain level.
 - Adverse effects of medication.
 - Patient and family knowledge of and participation in pain management.
 - Development of other pains.
 - Monitor progression of pain that may signal complications such as impending fracture or spinal cord compression.
3. The care plan should specifically state a monitoring plan by the interdisciplinary team.
4. Access to care providers should be on a 24 hour per day basis.
5. Programs, agencies and institutions should regularly evaluate pain management against set standards.

Adapted from the Pain Module of the Ian Anderson Education Program in End-of-Life Care.