Conclusion

The challenge of being a compassionate presence for someone who is dying reaches new heights when that person is unresponsive and can no longer communicate. They cannot tell us how they feel emotionally, spiritually or physically, and while taking note of every alteration in demeanour and behaviour, family are often left wondering what each of these changes could mean. As Arnold Mindell suggests, we attempt to interpret the signals without knowing if what we assume is right and whether our actions are appropriate to the situation that confronts us.[1] I will illustrate this with a true story recounted by the recently deceased Ram Dass.

Ram Dass was a volunteer in a palliative care unit. Given his expertise and long involvement in compassionate care, he was the 'go to' person when challenging situations arose. On one occasion he was asked by nursing staff to work his magic on a man who was near to death. Despite this man's moribund state, he continued to make loud unintelligible sounds. Thinking he must be in pain, the nurses administered pain medication, but with no effect. They then increased his sedation, and again the noises continued. Out of desperation, they asked Ram Dass to help. He willingly obliged, but not knowing what to do he sat and observed the patient. After a short time he felt inspired to mimic the very same sounds made by the patient. In a matter of minutes, the patient stopped calling out, opened his eyes, and looking directly at Ram Dass, he said, 'Oh, you can see them too.' Following this, the man stopped calling out and died a short time later.

I wonder how each of us would have approached that or a similar situation. Most care providers are locked into a way of thinking called the biomedical model, where a medical cause is sought for any change – clinical or behavioural – and some form of treatment or intervention is prescribed. This approach works quite well when a person is able to verbalise their concerns and the effectiveness of treatment that may have been administered. It is, however, less reliable when the person is unresponsive, unable to communicate and where death is not only inevitable, but nigh.

Despite years of caring for unresponsive patients, I was often unsure of the cause and significance of symptoms such as restlessness, sighing respirations and groaning. When the normal approach of questioning and listening was no longer available, I sometimes prescribed treatment more in hope rather than any certainty of a good outcome. Generally, this approach had the desired effect, and while this eased both the family's and my concerns, I wondered if there may have been other 'powerful events' trying to happen that may have benefited from a less invasive approach. Knowing what I now know, I question how often restlessness in unresponsive patients is due to a non-physical cause such as an end-of-life dream or vision. In their book, *Doorways into Dying,* Ingrid Rose and Kay Ryan write:

> In many cases the importance of experiences such as visions, confusion, delirium, dementia, transpersonal dreams, conflicts, altered states of consciousness and spiritual phenomena are minimized or explained [away] as being part of the dying brain. We don't quite know how to address these phenomena and so they tend to get pushed aside, [medicated] and often ignored.[2]

Neither I nor the authors are suggesting that the biomedical model should be abandoned in those nearing death. What we are saying is that a more holistic, person-centred approach be adopted – an approach where intuition and nuanced observations are adjudged as valuable as any clinical assessment and where

care of the psyche and the soul are given equal status to care of the body. In saying this, I am reassured by the words of British immunologist and Nobel Prize winner Sir Peter Medawar, who said:

> There is a large and profoundly important scientific element in medicine, there is also an *indefinable artistry*, an *imaginative insight*, and medicine is born of a marriage between the two.[3]

According to Trisha Greenhalgh, Professor of Primary Health Care at University College Hospital, London,

> We are most intuitive when doing our regular work and dealing with patients whom we know well. In unfamiliar situations, we resort to a more formal and rational approach based on explicit professional rules. The skill of the expert is to respond to the subtle cues that signal a need to shift between the two approaches.[4]

It has long been known that the biomedical or curative model of care is lacking when cure is an unlikely outcome.[5] As far back as 1992, Michael Kearney alerted the palliative care community that they ran the risk of becoming mere 'symptomologists', forgoing the opportunity to explore a patient's experience of illness in a more holistic and intuitive way.[6] Despite these warnings, many patients continue to be cared for in a manner that is reflected in the words of one patients who said:

> It does seem bitterly sad that my fate, the fate of me, will be decided, indirectly, through the functioning of a fleshly envelope. I see the soul, thus entrapped, as being the great and ultimate casualty of cancer's mortal war.[7]

Caring for an unresponsive patient who is near to death asks more of a care provider than their clinical expertise and deductive skills. It also requires a willingness to listen to what their intuition is telling them and to integrate this in a balanced way with the principles that underlie evidence-based medicine.[3] This move to holistic, person-centred care depends not so much on what you know about your craft, but how much you know about yourself. The ongoing journey of self-knowledge can open our mind to possibilities we may not have considered, allowing us to see challenges as opportunities and to learn and grow. This open-minded approach to palliative and aged care prepares one for patient experiences that are potentially transformative, but which run the risk of going unseen and unheard, of being misdiagnosed or mistreated. How easy it is to misinterpret a word, a sign or an experience if we are unable to open ourselves to the mystery of dying.

Midwifing the death of another calls us to be present and aware, to serve with our head, heart and hands and to learn from our teachers – those who are dying.

References

References and Sources: Introduction

1. James, W. 1985. The Varieties of Religious Experiences (first published 1902), Penguin Classics, New York (p. 388).
2. Betty S. Are They Hallucinating or Are They Real? The Spirituality of Deathbed and Near-Death Visions. Omega 2006;53:37–49 (p. 48).
3. Smolin. L. 2019, Einstein's Unfinished Revolution, Penguin Press, New York (p. 275).

References and Sources: Chapter 1

1. James, W. 1985. The Varieties of Religious Experiences (first published 1902), Penguin Classics, New York (p. 388)
2. Nahm M, Greyson B, Kelley EW & Haraldsson E. Terminal Lucidity: A review and case collection. Archives of Gerontology and Geriatrics 2011;55:138–142
3. Mashour GA, Frank L, Batthyany A, et al. Paradoxical Lucidity: A potential paradigm shift for the neurobiology and treatment of severe dementias. Alzheimer's and Dementia 2019;15:1107–1114
4. MacLeod AD. Lightening up before death. Palliative and Supportive Care 2009;7:513–516
5. Smith SDM, Nicol KM, Devereux J & Cornbleet MA. Encounters with doctors: quantity and quality. Palliative Medicine 1999;13:217–223
6. Chalmers D. 2020. What is consciousness? https://www.youtube.com/watch?v=uKIk5AL16Bg
7. Zeman A. What do we mean by conscious and aware? Neuropsychological Rehabilitation 2006;16:356–376
8. Di Perri C, Stender J, Laureys S & Gosseries O. Functional neuroanatomy of disorders of consciousness. Epilepsy and Behavior 2014;30:28–32
9. Overgaard M & Overgaard R. Neural correlates of contents and levels of consciousness. Frontiers in Psychology 2010; October:1–4
10. Barbato M, Barclay G, Potter J, Yeo W & Chung J. Correlation between observational scales of sedation and comfort and Bispectral Index Scores. J of Pain and Symptom Management 2017;54:186–193
11. Wong S. Eight wonders of the human brain. New Scientist, June 2019:34–41
12. Rady MY & Verheijde JL. Neuroscience and awareness in the dying brain: implications for organ donation practices. J of Critical Care 2016;34:121–123
13. Sanders RD, Tononi G, Laureys S & Sleigh JW. Unresponsiveness ≠ Unconsciousness. Anaesthesiology 2012;116:946–959
14. Scheinin A, Kantonen O, Alkire M, Långsjö J, et al. et al. Foundations of human consciousness: Imagining the twilight zone. J of Neuroscience 2021;41:1769–1778
15. Noreika V, Jylhänkangas L, Móró L, Valli K, et al. Consciousness lost and found: Subjective experiences in an unresponsive state. Brain and Cognition 2011;77:327–334
16. https://abcnews.go.com/Health/teen-explains-life-coma/story?id=32473542

17. Schooler J, Smallword J, Christoff K, Handy TC, et al. Meta-awareness, perceptual decoupling and the wandering mind. Trends in Cognitive Science; 15:319–326
18. Nir Y, Massimini M, Boly M, Tontoni G. 2013. Neuroimaging of Consciousness (Eds. Cavanna AE, et al). Sleep and Consciousness (pp. 133–182). Springer-Verlag. Berlin
19. Blain-Moraes S, Racine E & Mashour GA. Consciousness and Personhood in Medical Care. Frontiers in Human Neuroscience 2016;12:1-6. doi: 10.3389/fnhum.2018.00306
20. Fins J. When No One Notices: Disorders of consciousness and the chronic vegetative state. Hastings Center Report 2019:49:14–17
21. Sunday Mail. October 8, 2006. (p. 52)
22. Pape TL-B, Rosenow JM, Steiner M, Parrish T, et al. Placebo-controlled trial of familiar auditory sensory training for acute severe traumatic brain injury: A preliminary report. Neurorehabilitation and Neural Repair 2015;29:537–547

References and Sources: Chapter 2

1. Barbato M, Barclay G, Potter J & Yeo W. Breakthrough medication in unresponsive palliative care patients. Journal of Pain and Symptom Management 2018;56:944–950
2. Barbato M, Barclay G, Potter J, Yeo W & Chung J. Correlation between observational scales of sedation and comfort and Bispectral Index scores. Journal of Pain and Symptom Management 2017;54:186–193
3. Dowling Singh K. 1998. The Grace in Dying. HarperCollins. San Francisco (pp. 108–109)
4. Lawrence, M. The Unconscious experience. American J of Critical Care 1995;4:227–232
5. Lawrence, M. 1997. In a World of Their Own. Bergin & Garvey, London
6. Lean G. A Matter of Life and Death. Sunday Mail October 8, 2006 (p. 52)
7. Sheen, L & Oates, J. A phenomenological study of medically induced consciousness in intensive care. Australian Critical Care 2005;18:25–32a
8. Claire Wineland. https://abcnews.go.com/Health/teen-explains-life-coma/story?id=32473542
9. Noreika V, Jylhänkangas L, Móró L, Valli K, et al. Consciousness lost and found: Subjective experiences in an unresponsive state. Brain and Cognition 2011;77:327–334
10. Kearney, M. 1996. Mortally Wounded. Marino Books: Dublin
11. Heyen MJ. The Healing Medicine in the Dreams and Visions of the Dying. Journal of Palliative Medicine 2019;22:456–458
12. Von Franz M-L. On Dreams and Death 1984. Shambhala. London
13. Kearney, M. 2000. A Place of Healing: Working with suffering in living and dying. Oxford University Press: Oxford (pages 31–35).
14. Fox KCR, Nijeboer S, Solomonova E, Domhoff GW & Christoff K. Dreaming and mind wandering: evidence from functional neuroimaging and first-person content reports. Frontiers in Human Neuroscience 2013;7:Article 412
15. Dowling Singh K. 1998. The Grace in Dying. HarperCollins. San Francisco (p. 25)
16. Mindell, A. Coma. 1989. Shambala Publications: Boston (p. 53).
17. Rose I & Ryan K. 2016. Doorways into Dying. Austin Macauley. London

References and Sources: Chapter 3

1. Wallace BA 2018. Fathoming the Mind. Wisdom Publications. Massachusetts (p. 44)
2. A. O'Connor T, Paterson C, Gibson J & Strickland C (2021). The conscious state of the dying patient: An integrative review. Palliative and Supportive Care, 1–13 https://doi.org/10.1017/S1478951521001541
3. Barbato M, Barclay G, Potter J, Yeo W & Chung J. Correlation between observational scales of sedation and comfort and Bispectral Index scores. Journal of Pain and Symptom Management 2017;54:186–193
4. Brinkkemper T, van Norel AM, Szadek KM, Loer SA, et al. The use of observational scales to monitor symptom control and depth of sedation in patients requiring palliative sedation. Palliative Medicine 2011;27:54–67. DOI: 10.1177/0269216311425421
5. Schooler JW, Smallwood J, Christoff K, Handy TC, et al. Meta-awareness, perceptual decoupling and the wandering mind. Trends in Cognitive Science 2011;15:319–326
6. Saey TH. You are who you are by default. Science News 2009;176:1–11
7. Zedelius CM, Schooler JW. The richness of inner experience: relating styles of daydreaming to creative process. Frontiers in Psychology 2015;6:2063 10.3389/fpsyg.2015.02063
8. Guldenmaud P, Vanhaudenhuyse A, Boly M, Laureys S, Soddu A. A default mode of brain function in altered states of consciousness. Archives Italiennes de Biologie 2012;150:107–121
9. Kearney M 1996. Mortally Wounded. Marino Books. Dublin (p. 56)
10. Sanders R, Tonini G, Laureys S & Sleigh JW. Unresponsiveness ≠ Unconsciousness. Anaesthesiology 2012;116:946–995
11. Scheinin A, Kantonen O, Alkire M, Långsjö J, et al. Foundations of human consciousness: Imagining the twilight zone. J of Neuroscience 2021;41:1769–1778
12. Martin W and N. 2011.The Caregiver's Tao Te Ching. New World Library. California, (page 26).
13. Claassens J, Doyle K, Matory A, Couch C et al. Detection of brain activation in unresponsive patients with acute brain injury. *N. Engl. J. Med.* 2019; 380:2497–2505
14. Giacino JT, Finns JJ, Laureys S & Schiff ND. Disorders of consciousness after acquired brain injury: the state of the science. Nat Rev Neurol 2014;19:99–114
15. Fins JJ. When No One Notices: Disorders of consciousness and the chronic vegetative state. Hastings Center Report 2019;49(4):14–17.
16. Barbato, M. Bispectral Index monitoring in Unconscious palliative care patients. J of Palliative Care 2001;17:102–108
17. Blundon EG, Gallagher RE & Ward LM. Electrophysiological evidence of preserved hearing at end of life. Scientific Reports 2020;10:10336
18. Baars BJ, Ramsøy TZ & Laureys S. Brain, conscious experience and the observing self. Trends in Neuroscience 2003;26:671–675
19. Pape TL-B, Rosenow J, Steiner M, Harton B, et al. Placebo-controlled trial of familiar auditory sensory training (FAST) for acute sever traumatic Brain Injury: A preliminary report. Neurorehabilitation and Neural Repair 2015;29:537–547
20. Chennu S and Bekinschtein TA. Arousal modulates auditory attention and awareness: insights from sleep, sedation and disorders of consciousness. Frontiers in Psychology 2012;3:1–9 doi: 10.3389/fpsyg.2012.00065

21. Brinkkemper T, van Norel AM, Szadek KM, Loer SA et al. The use of observational scales to monitor symptom control and depth of sedation in patients requiring palliative sedation: a systematic review. Palliative Med 2011;27:54–67.
22. Deschepper R, Laureys S, Idrissi SH, Poelaert J & Bilsen J. Palliative sedation: why we should be more concerned about the risks that patients experience an uncomfortable death. Pain 2013;154:1505–1508.

References and Sources: Chapter 4

1. The Nour Foundation. Experiencing Death: An Insider's Perspective. https://www.youtube.com/watch?v=zPCvuva2deU
2. Paulson S, Fenwick P, Neal M, Nelson K & Parnia S. Experiencing Death: an insider's perspective. Annals of the New York Academy of Sciences 2014;1330:40–57
3. BBC. Surgeons use cold to suspend life. https://www.bbc.com/news/health-11389464
4. Consciousness and the mystery of existence. https://www.youtube.com/watch?v=_2DyvF03isM
5. Harris A. 2019. Conscious. HarperCollins. New York (pp. 5–7)
6. Seth A. 2021. Being You: A new science of consciousness. Faber & Faber. London
7. Koch C, Massimini M, Boly M & Tonini G. Neural correlates of consciousness: progress and problems. Neuroscience Nature Reviews 2016;17:307–322
8. Humphrey N. 1992. A History of the Mind. Chatto Windus Ltd. London
9. Kerr C, Donnelly JP, Wright ST, Kuszczak SM, et al. End-of-life dreams and visions: a longitudinal study of hospice patients' experiences. Journal of Palliative Medicine 2014;17:296–303
10. Barrett W. 1986 (first published 1926). Deathbed Visions. The Aquarian Press. Wellingborough
11. Barbato M. 2016. Reflections of a Setting Sun. Griffin Press. Adelaide
12. Barbato M. Bispectral Index Monitoring in Unconscious Palliative Care Patients. Journal of Palliative Care 2001;17:102–108
13. Chawla LS, Akst S, Junker C, Jacobs B, Seneff MG. Surges of Electroencephalogram Activity at the Time of Death: A Case Series. Journal of Palliative Medicine 2009;12:1095–1100
14. Chawla LS, Terek M, Junker C, Akst S, et al. Characterization of end-of-life electroencephalographic surges in critically ill patients. Death studies 2017;6:385–392
15. Masman AD, van Dijk M, van Rosmalen J, Blussé van Oud-Albas HJ, et al. Bispectral Index Monitoring in Terminally Ill Patients. A validation study. Journal of Pain and Symptom Management 2016;52:212–220
16. Barbato M, Barclay G, Potter J & Yeo W. The Moment of Death. Journal of Pain and Symptom Management 2017;53:e1–e3
17. Auyong DB, Klein SM, Gan TJ, Roche AM, et al. Processed Electroencephalogram during Donation after Cardiac Death. Anaesthesia and Analgesia 2010;110:1428–1432
18. Borjigin J, Lee UC, Liu T, Pal D, et al. Surge of neurophysiological coherence and connectivity in the dying brain. PNAS 2013;110:14432–14437
19. Lee DE, Lee LC, Siu D, et al. Neural Correlates of Consciousness at Near-Electrocerebral Silence in an Asphyxial Cardiac Arrest Model. Brain Connectivity 2017;7:172–181
20. Vicente R, Rizzuto M, Sarica C, Yamamoto K et al. Enhanced Interplay of Neuronal Coherence and Coupling in the Dying Human Brain. Frontiers in Aging Neuroscience. 14:813531.doi: 10.3389/fnagi.2022.813531

21. Adyashanti. 2019. The Most Important Thing. Sounds True. Boulder Colorado (p. 148)
22. O'Donohue J. 1997. Anam Cara. HarperCollins. New York (p.217).

References and Sources: Chapter 5

1. Okon TR. "Nobody Understands." On a Cardinal Phenomenon of Palliative Care. Journal of Medicine and Philosophy 2006;31:13–46
2. Moody R. 1975. Life After Life. Mockingbird. Georgia
3. International Association for Near-Death Studies. https://iands.org/ndes/about-ndes/key-nde-facts21.html?start=1
4. Taylor C, 2016. Dying: a memoir. The Text Publishing Company. Melbourne
5. Greyson B & Stevenson I. The phenomenology of near-death experiences. Am. Journal of Psychiatry 1980;137:1193–1196
6. Bailey LW, and Yates J (eds). 1996. The Near-death Experience. Routledge. New York (pp. 207–230)
7. Greyson B. The near-death experience scale. The Journal of Nervous and Mental Disease 1983;171:369–375
8. Greyson B. Varieties of Near-Death Experience. Psychiatry 1993;56:390–399
9. Alexander E. Proof of Heaven 2012. Simon & Schuster. New York
10. Moorjani A. Dying to be Me 2012. Hay House Inc. New York
11. Greyson B. Dissociation in people who have near-death experiences. The Lancet 2000;355:460–463
12. Martial C, Cassol H, Laureys S & Gosseries O. Near-death experience as a probe to explore (disconnected) consciousness. Trends in Cognitive Sciences 2020;24:174–183
13. Blackmore S. 2003. Consciousness: An Introduction. Hodder & Stoughton. London (pp. 364–365)
14. Blackmore S. What do near-death experiences mean? https://www.youtube.com/watch?v=RnFmNAi5YU8
15. Betty LS. Are they hallucinating or are they real? The spirituality of deathbed and near-death visions. Omega 2006;53:37–49
16. Bailey LW, and Yates J (eds). 1996. The Near-death Experience. Routledge. New York (p. 37)
17. Irwin H. The End: A view from parapsychology. Death and Dying in Australia (Ed. A Kellehear) 2000. Oxford University Press South Melbourne
18. Greyson B, 2021. Aware. Penguin Random House. London (p. 11)
19. Dowling Singh K, 1998. The Grace in Dying. Harper. San Francisco (pp. 6–18)
20. Barrett W. 1986 (First edition 1926). Death-Bed Visions. The Aquarian Press. Wellingborough
21. Barker P. Working with the metaphor of life and death. Journal of Medical Ethics: Medical Humanities 2000;26:97–102
22. Dugan DO. Symbolic expressions of dying patients: Communications, not hallucinations. Nursing Forum 1989;24:18–27
23. Welman M & Faber PA. The dream in terminal illness: a Jungian formulation. Journal of Analytical Psychology 1992;37:61–81
24. Heyen MJ. The healing medicine in the dreams and visions of the dying. Journal of Palliative Medicine 2019;22:456–458

25. Kearney M. 1996. Mortally Wounded. Marino Books. Dublin (p. 56)
26. Eldred DN. 1982. The Psychodynamics of the Dying Process: An analysis of the dreams and paintings of a terminally ill woman. Union for Experimenting Colleges and Universities. Ohio
27. Osis K, Haraldsson E. 1977. At the Hour of Death. Hastings House. Norwalk, Connecticut
28. Willis-Brandon C. 2000. One Last Hug Before I Go. The Mystery and Meaning of Deathbed Visions. Health communications Inc. Florida
29. Sanders MA. 2007. Nearing Death Awareness. Jessica Kingsley Publications. London
30. Barbato M. 2009. Reflections of a Setting Sun. Griffin Press. Adelaide
31. Ethier AM. Death-related sensory experiences. Journal Paediatric Oncology Nursing 2005;22:104–111
32. Brayne S, Farnham C, Fenwick P. Deathbed phenomena and their effect on a palliative care team. American Journal of Hospice and Palliative Medicine 2006;23:17–23
33. Brayne S, Lovelace H, Fenwick P. End-of-life experiences and the dying process in a Gloucestershire nursing home as reported by nurses and care assistants. American Journal of Hospice and Palliative Medicine 2008;25:195–206
34. Mazzarino-Willett A. Deathbed phenomena: its role in peaceful death and terminal restlessness. American Journal of Hospice and Palliative Medicine 2010;27:127–133
35. Fenwick P, Lovelace H, Brayne S. Comfort for the dying: five years retrospective and one year prospective studies of end-of-life experiences. Archives of Gerentology and Geriatrics 2010;51:173–179
36. Kerr C, Donnelly JP, Wright ST, Kuszczak, et al. End-of-life dreams and visions. J of Palliative Medicine 2014;17:296–303
37. Morita T, Naito AS, Aoyama M, Ogawa A, et al. Nationwide Japanese survey about deathbed visions. Journal of Pin and Symptom management 2016;52:646–654
38. Morse M, Castillo P, Venecia D, Milstein J, Tyler DC. Childhood Near-Death Experiences. AJDC 1986;140:1110–1114
39. Komp D. 1992. A Window to Heaven: When children see life in death. Zondervan Pub., Michigan
40. Kübler-Ross. 1983. E. On Children and Death. Collier Books. New York
41. Sutherland C. 1995. Children of the light: The near-death experience of children. Bantam Books. Sydney
42. Morse M. Near-Death Experiences and Death-related Visions in Children: Implications for the Clinician. Current Problems in Paediatrics 1994;24:55-83. (p. 74)
43. Morse M, Castillo P, Venecia D, Milstein J & Tyler DC. Childhood near-death experiences. AJDC 1986;140:1110–1114
44. Levy K, Grant PC, Kerr CW. End-of-life Dreams and Visions in Paediatric Patients: A Case Study. Journal of Palliative Medicine 2020;23:1549–1551
45. Barbato M. Caring for the Living and the Dying 2010. Griffin Press. Adelaide (pp. 139–141)
46. Dowling Singh K. The Grace in Dying 1998. Harper. San Francisco (pp. 150–154)
47. Nahm M, Greyson B, Kelley EW & Haraldsson E. Terminal Lucidity: A review and case collection. Archives of gerontology and Geriatrics 2011;55:138–142
48. MacLeod AD. Lightening up before death. Palliative and Supportive Care 2009;7:513–516
49. Schreiber T & Bennett MJ. Identification and validation of pre-mortem surge. Journal of Hospice and Palliative Nursing2014;16:430–435

50. Mashour GA, Frank L, Batthyany A, Kolanowski AM, et al. Paradoxical Lucidity: A potential paradigm shift for the neurobiology and treatment of severe dementias. Alzheimer's and Dementia 2019;15:1107–1114
51. Nahm M & Greyson B. Terminal lucidity in patients with chronic schizophrenia and dementia. Journal of Nervous and Mental Disease 2009;197:942–944
52. Nahm M, Greyson B, Kelly EW & Haraldsson E. Terminal lucidity: a review and a case collection. Archives of Gerontology and Geriatrics 2012;55:138–142
53. Halford, H. (1833). Essays and Orations Read and Delivered at the Royal College of Physicians (2nd Ed.). London: John Murray
54. Schreiber, T & Mennett, M. Identification and validation of pre-mortem surge. J of Hospice and Palliative Nursing 2014;16:430–437
55. Lim C-Y, Park JY, Yoo KD, Kim HJ, et al. Terminal lucidity in the teaching hospital setting. Death Studies 2020;44:285–291
56. Kheirbeck RE. Terminal lucidity. Journal of Palliative Medicine 2019;22:1023
57. Barrett W. 1986 (first published 1926). Deathbed Visions. The Aquarian Press. Wellingborough
58. Osis K, Haraldsson E. 1977. At the Hour of Death. Hastings House. Norwalk, Connecticut.

References and Sources: Chapter 6

1. Mindell A. 1989. Coma. Shambhala Publications Inc. Boston (p. 10)
2. Lawrence, M. The Unconscious experience. American J of Critical Care 1995;4:227–232
3. Barbato M. Bispectral Index Monitoring in Unconscious Palliative Care Patients. Journal of Palliative Care 2001;17:102–108
4. Dalai Lama 2002. Advice on Dying. Rider. London (p. 58)
5. Wallace BA 2018. Fathoming the Mind. Wisdom Publications. Somerville MA (p. 44)
6. James W. 1985 (first published 1902). *The Varieties of Religious Experiences.* Penguin Classics: New York (p. 388)
7. Radin D. Mind and Matter. Institute of Noetic Sciences. https://noetic.org/experience/connections-live/#recording
8. The Conversation 20th July 2011. Can Consciousness be explained by quantum physics? https://theconversation.com/can-consciousness-be-explained-by-quantum-physics-my-research-takes-us-a-step-closer-to-finding-out-164582
9. Grof S & Halifax J. 1978. The Human Encounter with Death. Sequoia-Elsevier Publishing. New York (p. 20)
10. Barbato M, Barclay G, Potter J, Yeo W & Chung J. Correlation between observational scales of sedation and comfort and Bispectral Index scores. Journal of Pain and Symptom Management 2017;54:186–193
11. O'Connor T, Paterson C, Gibson J & Strickland C (2021). The conscious state of the dying patient: An integrative review. Palliative and Supportive Care, 1–13 https://doi.org/10.1017/S1478951521001541
12. Rose I & Ryan K. 2016. Doorways into Dying. Innovative teachings for end of life. Austin Macauley Publishers. London, (p. 31)
13. Dowling Singh K. The Grace in Dying 1998. Harper. San Francisco (p. 75)

References and Sources: Conclusion

1. Mindell A. 1989. Coma. Shambhala Publications Inc. Boston (p. 10)
2. Rose I & Ryan K. 2016. Doorways into Dying. Innovative teachings for end of life. Austin Macauley Publishers. London (p. 14)
3. Medawar PB. 1984. Pluto's Republic (incorporating Induction and Intuition in Scientific Thought). Oxford University Press. Oxford
4. Greenhalgh T. Intuition and Evidence – uneasy bedfellows? British Journal of General Practice 2002;52:395–400
5. Neuberger J. A Healthy view of dying. British Medical Journal 2003;327:207–208
6. Kearney M. Palliative medicine – just another specialty. Palliative Medicine 1992;6:39–46
7. Jones G. 1998. Magnanimous Despair. Boombana Publications. Mount Nebo (p. 105)

Appendix 1

The Bispectral Index Monitor

The Bispectral Index monitor is a small bedside instrument distributed in Australia by Covidien Pty Ltd. It is a non-invasive and validated means of determining the effect of sedative and anaesthetic medication on a patient's level of awareness. BIS scores range from 100 to 0 (see table below). Scores between 40 and 60 are common with palliative sedation, coma, deep sleep, anaesthesia and in those who are unresponsive at the end of life. The monitor is connected to the patient's forehead and analyses electrical activity from the front of the brain. It converts this signal into a score called the Bispectral score. The score is calculated every 15 to 30 seconds and a continuous moving one-hour record appears on the monitor screen.

Pictures courtesy of Covidien Pty Ltd

BIS score	Level of awareness
100	Awake
80	Drowsy or light sedation
70	Mild sedation
60	Sedation equivalent to anaesthesia
40	Deep hypnotic state
0	Brain death

NB. The BIS measures level of awareness NOT consciousness. There is no measure of consciousness nor can it be detected by any form of instrumentation