



The science of immortality:
Have we gone too far?

Magnolia Cardona, *PhD, MPH, MBBS*

Health Services Researcher and patient advocate

**Australians offered
chance to cheat death by
freezing bodies**



**You only live twice:
Cheating death with
cryonics**



Bendigo woman Kerry Robertson becomes first Victorian to use Voluntary Assisted Dying Act

Updated 5 Aug 2019, 3:51pm



“Before this happened I was afraid of death, but Mum was incredibly brave and the way that she died gave me a whole new perspective on death itself,” she said.



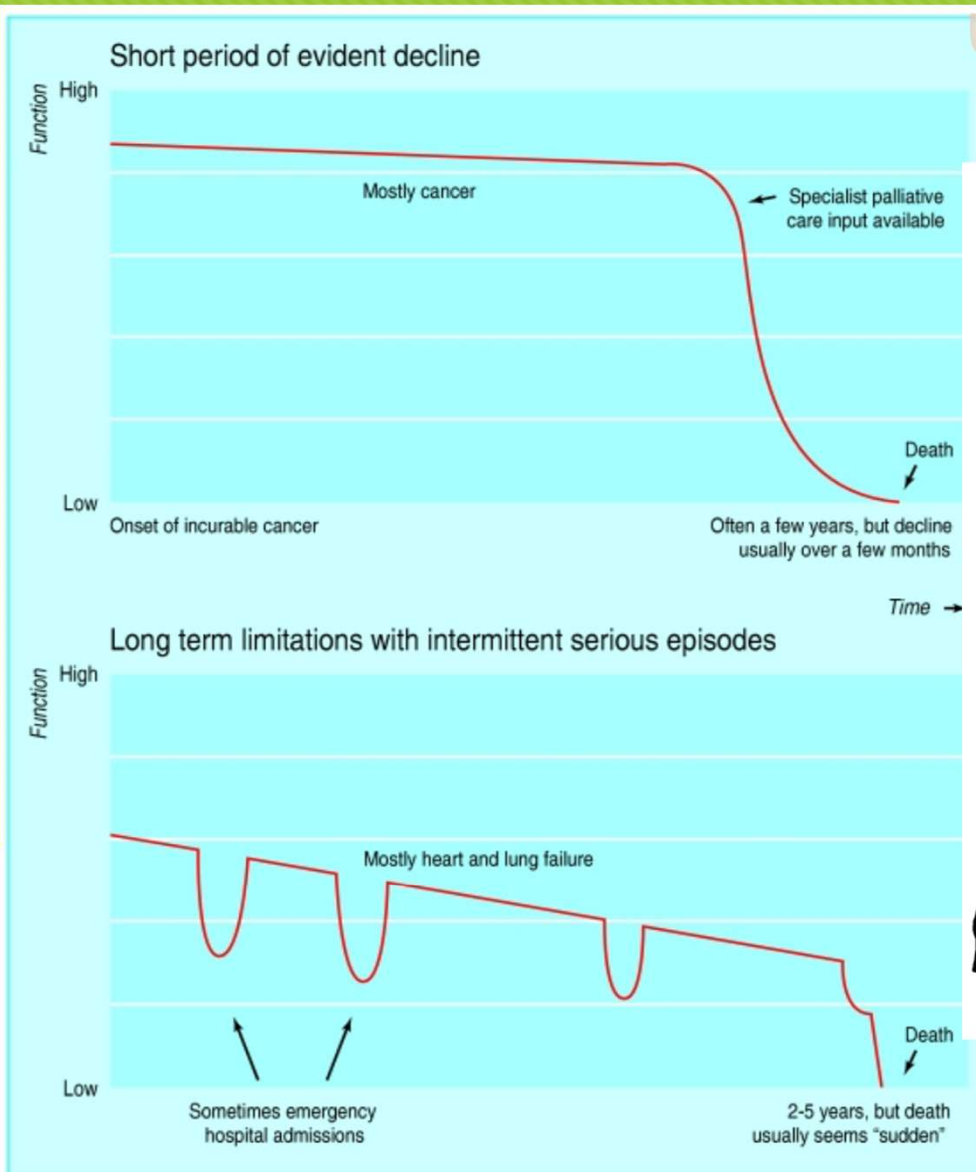
**DR MAGNOLIA
CARDONA, PhD, MPH,
MBBS, Associate
Professor of Health
Systems Research and
Translation, Gold Coast
University Hospital, Bond
University, and NHMRC
Partnership Centre
for Health Systems
Sustainability**



**DR SALLY GREENAWAY,
BMED, FRACP, FACHPM,
Director, Supportive
and Palliative Medicine,
Westmead Hospital,
Blacktown Hospital, Mt
Druitt Palliative Care Unit
and The University of
Sydney**

The medicalisation of dying from natural causes

Unacceptable to patients, low-value for the health system.



**Dying
is a journey.
Not a point
in time**

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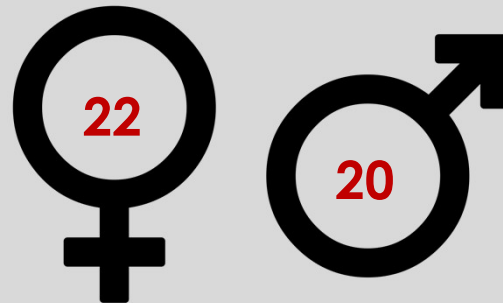
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**HOUSIE
VERSITY**
Spring Minds

2017: Aus 3.7million aged 65+ years; QLD 720,000



2050: Double



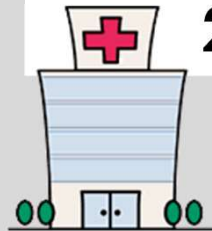
2018:

1 in 5 emergency presentations



1 in 7 could have been managed by a GP

**AUS 85+y.o.
Resuscitation:
2,650**



admitted to hospital

The role of hospitals from ancient Greece & Middle Ages



Public health measures:

Sanitation

Living conditions

Better nutrition

Vaccination

Education campaigns

Disease screening – early detection

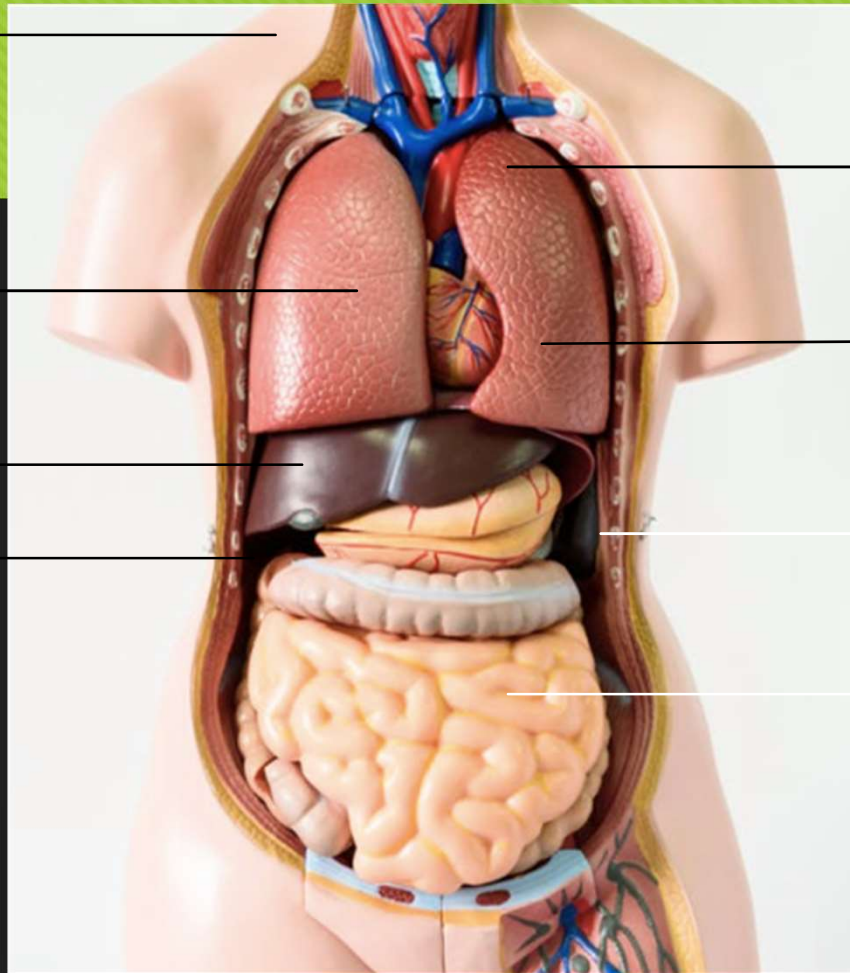
1946
Chemotherapy

1981
Heart lung
transplant

1967
Liver
transplant

1950
ICU & Kidney
transplant

1980s MRI
1985 Robotic surgery
1990s Gene therapy
2005 Keyhole heart surgery



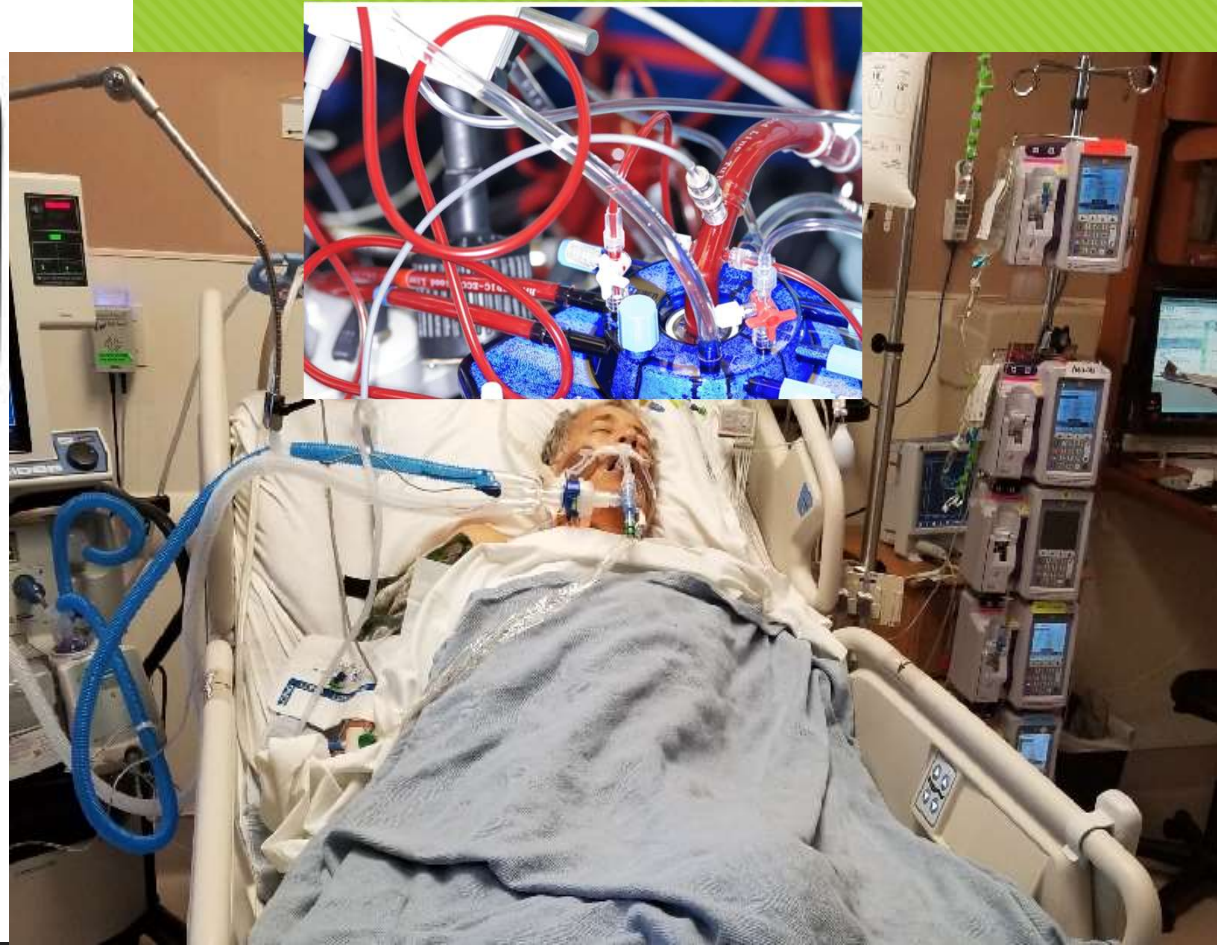
1895

X rays

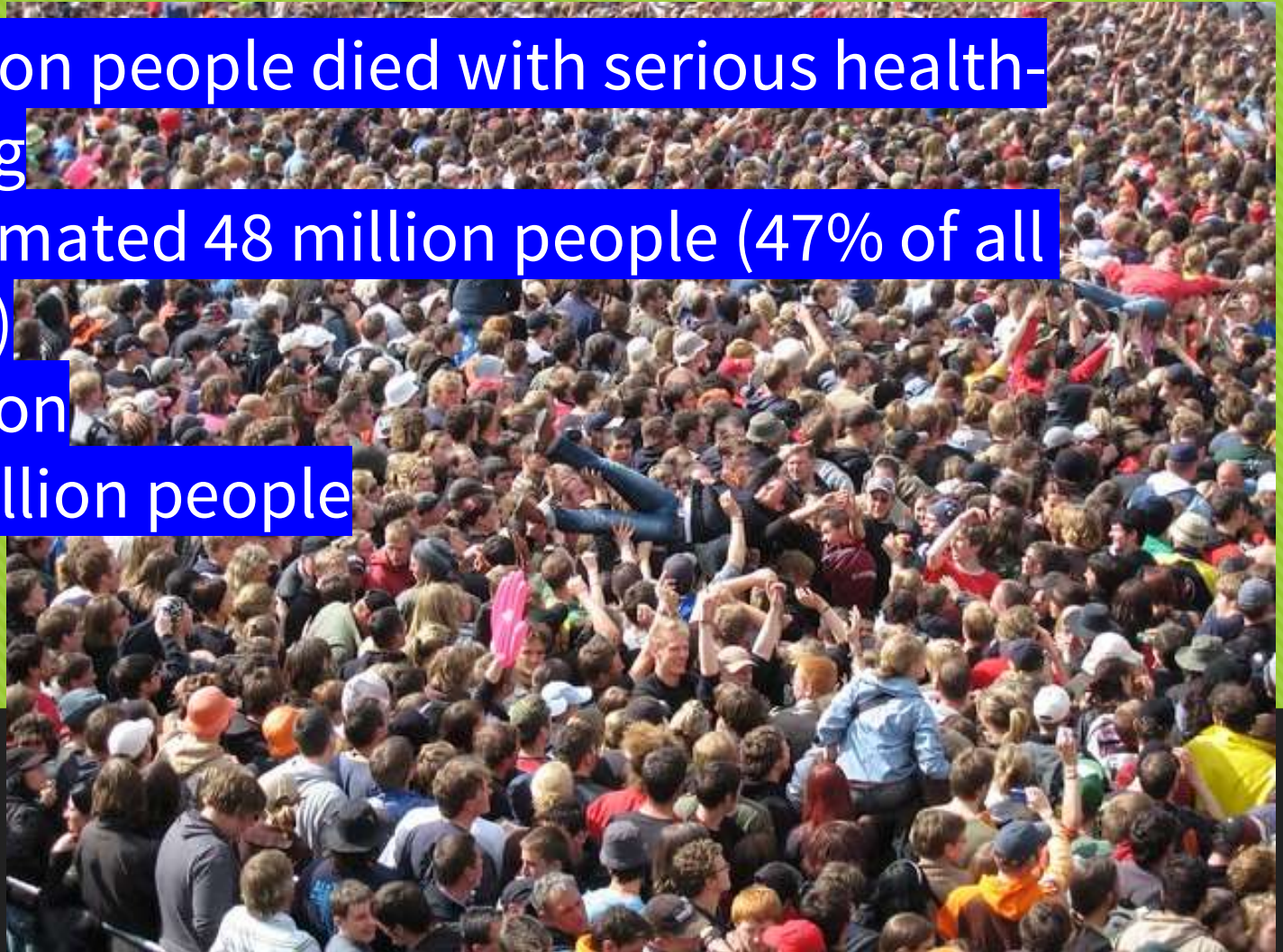
1967
Heart
transplant

1943
Kidney Dialysis

1940
Antibiotics



- In 2016, 26 million people died with serious health-related suffering
- By 2060, an estimated 48 million people (47% of all deaths globally)
- Cancer: 16 million
- Dementia: 6 million people



Who Benefits from Aggressive Rapid Response System Treatments Near the End of Life? A Retrospective Cohort Study

Magnolia Cardona, PhD, MPH; Robin M. Turner, PhD, MSc; Amanda Chapman, BN, GradDip (Acute Care); Hatem Alkhouri, PhD, MSc; Ebony T. Lewis, MIPH, BN; Stephen Jan, PhD, ME; Margaret Nicholson, MN, DipAppSc; Michael Parr, MBBS, FCICM; Margaret Williamson, MPH, BPharm; Ken Hillman, MD, FCICM

Background: Many patients near the end of life are subject to rapid response system (RRS) calls. A study was conducted in a large Sydney teaching hospital to identify a cutoff point that defines nonbeneficial treatment for older hospital patients receiving an RRS call, describe interventions administered, and measure the cost of hospitalization.

Methods: This was a retrospective cohort of 733 adult inpatients with data for the period three months before and after their last placed RRS call. Subgroup analysis of patients aged ≥ 80 years was conducted. Log-rank, chi-square, and *t*-tests were used to compare survival, and logistic regression was used to examine predictors of death.

Results: Overall, 65 (8.9%) patients had a preexisting not-for-resuscitation (NFR) or not-for-RRS order; none of those patients survived to three months. By contrast, patients without an NFR or not-for-RRS order had three-month survival probability of 71% (log-rank χ^2 145.63; $p < 0.001$). Compared with survivors, RRS recipients who died were more likely to be older, to be admitted to a medical ward, and to have a larger mean number of admissions before the RRS. The average cost of hospitalization for the very old transferred to the ICU was higher than for those not requiring treatment in the ICU (US\$33,990 vs. US\$14,774; $p = 0.045$).

Conclusion: Identifiable risk factors clearly associated with poor clinical outcomes and death can be used as a guide to administer less aggressive treatments, including reconsideration of ICU transfers, adherence to NFR orders, and transition to end-of-life management instead of calls to the RRS team.

≥ 80 years, 40% died during the hospitalization, 10% in the ED

≥ 80 years had repeat admissions and repeat MET calls. Half of deaths within 2 days of MET call

1 in 10 had a NFR order – all with a NFR order had MET calls and all died within 3 months

Many with flags for imminent death : CPR, intubation, mechanical ventilation, IV fluids, transplant

Were they dying of natural causes?

Medicine has evolved.

Real-life quotes

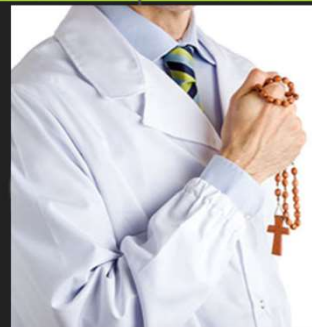
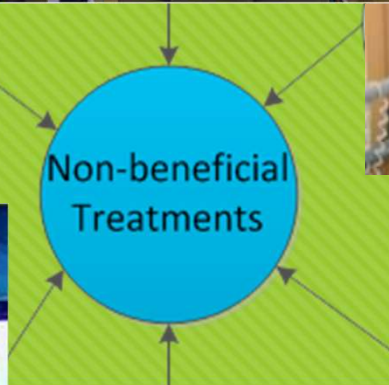
"No-one is allowed to die anymore... it has almost become a dirty word" **NSW doctor**

"If you want to pass away don't come to the hospital. Most doctors will not let patients simply pass away even if it is the patient's wish"
NSW nurse

"Who wanted to talk mortality when he was feeling so alive? (at age 91)" **NSW informal caregiver**

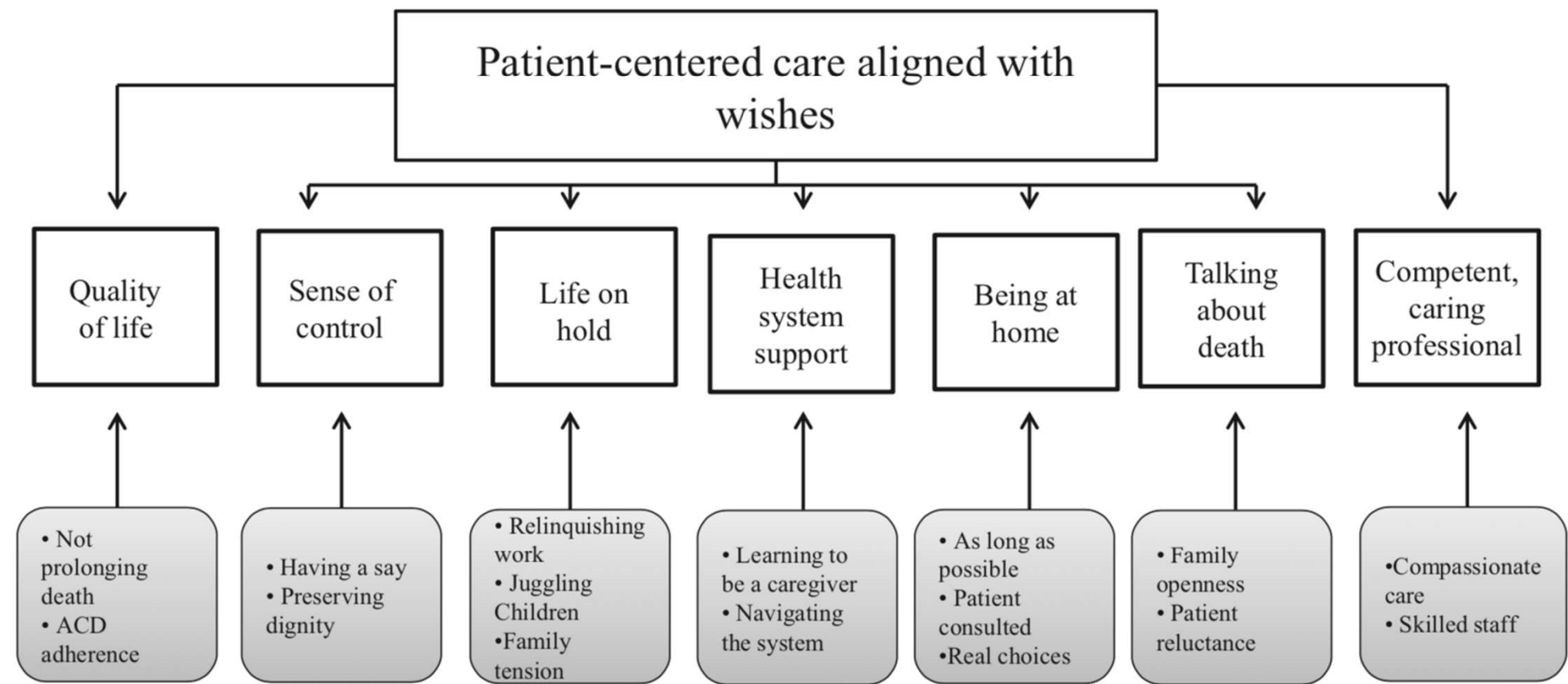
"You know I'm dying. I don't want any more treatments. I only agreed to do this for my sons. I know it is time". **USA Older patient**,
Overtreatment at end of life.
Teaster & O'Brien 2014

Why is over-treatment happening?



What do older people want?





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What scientists do to contain overtreatment

Intensive Care Med (2015) 41:1700–1702
DOI 10.1007/s00134-015-3712-6

WHAT'S NEW IN INTENSIVE CARE



CrossMark

Ken M. Hillman
Magnolia Cardona-Morrell

The ten barriers to appropriate management of patients at the end of their life

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during their remaining few months of life. How did this happen, and what can be considered the top ten potential barriers to managing patients at their end-of-life (EoL) transition in a more appropriate way?

Potential barriers to EoL management faced by intensivists

The top ten potential barriers encountered by intensivists in managing the EoL transition are presented in Table 1.

Unreal expectations People are constantly fed stories of medical miracles. Our society wants to believe that there are cures for most medical conditions, and members of the medical profession do little to put the miracles into per-

Prognostic uncertainty

Family pressure
Societal expectation

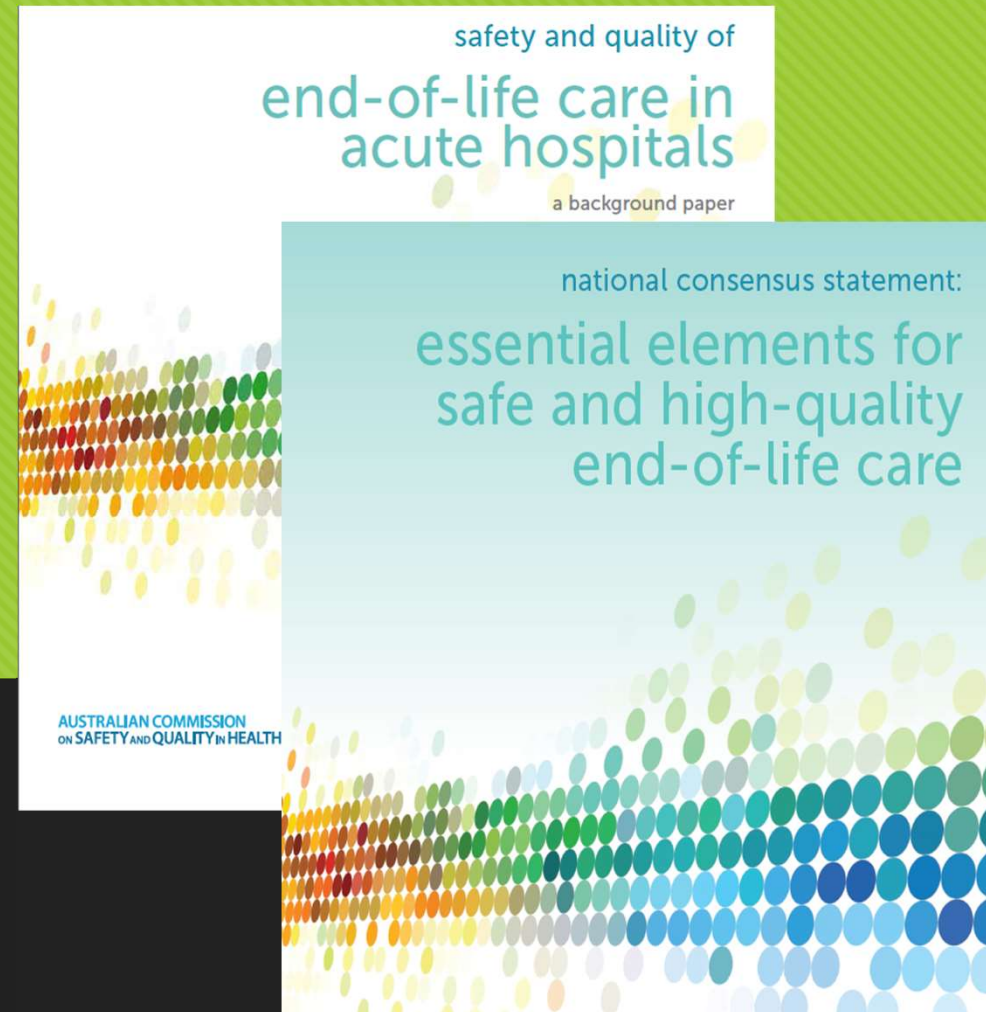
Not knowing patient
wishes

Lack of training

Ethical ambivalence

How can clinicians help reduce medicalisation?


- Recognise dying earlier
- Education to clinicians
- Inform goals of care
 - Curative if of benefit
 - Medical –LST no CPR
 - Comfort/palliative
- Models of care out of hospital
- Shared decision-making



RESEARCH

WILEY Australasian Journal on Ageing

Dissonance on perceptions of end-of-life needs between health-care providers and members of the public: Quantitative cross-sectional surveys

Magnolia Cardona^{1,2}  | Ebony Lewis³ | Shantiban Shanmugam⁴ | Margaret Nicholson⁵ | Margaret Williamson⁶ | Laura Hanly⁶ | Ken Hillman^{5,6}

¹Centre for Research in Evidence Based Practice, Faculty of Health Sciences and Medicine, Bond University, Gold Coast, Queensland, Australia

²Gold Coast University Hospital, Gold Coast, Queensland, Australia

³School of Public Health and Community Medicine, The University of New South Wales, Sydney, New South Wales, Australia

Objective: To investigate views, determinants and barriers to end-of-life discussions for doctors, nurses and members of the public (MoP) and their acceptability of risk prediction tools.

Methods: Concurrent surveys of 360 doctors and nurses and 497 MoP.

Results: Sixty per cent of clinicians reported high confidence in initiating end-of-life discussions, and 55.8% regularly engaged in them. Barriers to end-of-life communication reported by clinicians were uncertainty on the likely time to death (44.7%) and

How far do scientist go advocating?

Received: 15 March 2018 | Accepted: 10 June 2018

DOI: 10.1111/ijcp.13222

PERSPECTIVE

WILEY THE INTERNATIONAL JOURNAL OF
CLINICAL PRACTICE

Truth disclosure on prognosis: Is it ethical not to communicate personalised risk of death?

Summary

Predicting risk of death based on personalised and objective clinical indicators is an improvement over intuition and clinical judgement. Risk assessment can benefit clinicians by improving prognostic certainty, and truth disclosure helps patients and families by preventing futile management. Some argue that consent should be obtained before a patient is given an estimate of their prognosis as disclosure of bad news can overburden patients. In this article, we argue

ages, and in particular the very old,⁵ provides information on likely outcomes, including death, and is but one essential component of truthful communication.

Delivering a prognosis, especially a bad one, is complex, takes time and requires sensitive communication filled with good judgement, skill, empathy and compassion. Some patients may hold beliefs that can distort their understanding or expectations of

International Journal for Quality in Health Care, 2016, 28(4), 456–469

doi: 10.1093/intqhc/mzw060

Article

OXFORD

ments in hospital at the end review on extent of the

H KIM², RM TURNER³, M ANSTEY⁴,
N^{1,6}

search, SWS Clinical School and the Ingham Institute for Applied South Wales, PO Box 6087 UNSW, Sydney NSW 1466, Australia, in Sydney University, Narellan Road & Gilchrist Drive, Campbelltown and Community Medicine, Level 2, Samuels Building, Samuels Ave, gton NSW 2033, Australia, ⁴Sir Charles Gairdner Hospital, Hospital Intensive Care Unit, Building 12, Level 3, Canberra Hospital, Yamba and ⁶Intensive Care Unit, Level 2, Liverpool Hospital, Elizabeth St &

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Our vision is for a healthy Australia supported by the best possible healthcare system.

Our membership includes state health departments, Local Hospital Networks and public hospitals, community health services, Primary Health Networks and primary healthcare providers, aged care providers, universities, individual health professionals and academics. As such, we are uniquely placed to be an independent, national voice for universal high-quality healthcare to benefit the whole

The Health Advocate article

**The medicalisation of dying from natural causes:
Unacceptable to patients, low-value for the health system**

Helpful strategies

- 1. Prognostication**
- 2. Shared decision making**
- 3. Public Education**
- 4. PBS Remuneration**
- 5. Community based options**
- 6. Compassionate Communities**

8 of August:
Dying to
Know Day
in Australia



What
you can
do to
help
improve
the
situation

SeniorAu.com.au

Senior Australian news and research

<http://seniorau.com.au/8571-older-australians-want-the-truth-about-their-medical-prognosis>

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Older Australians want the truth about their medical prognosis

Two new surveys show older people want a straight answer to one of life's weightiest questions but clinicians are often reluctant to give one - "Doctor, how much longer do I have left to live?"

The research, led by Associate Professor Magnolia Cardona of Bond University and Gold Coast University Hospital, reveals older Australians want the truth about their prognosis, even if it is bad news.

Doctors and nurses, meanwhile, prefer to be cautious because of uncertainty around life expectancy and pressure from families asking them to withhold information from terminal patients. There is also a perception that patients and families lack the knowledge to make informed decisions.

"While this may have been the case 15 years ago, our recent findings strongly suggest that the public today may be more willing than clinicians realise to talk openly about what is in store and how or where they want to die," said Dr Cardona, of the Centre for Research in Evidence Based Practice (CREBP) at Bond University.

Researchers conducted concurrent surveys of 360 Australian nurses and doctors dealing regularly with patients near the end of life - such as those in aged care, palliative care and emergency departments - and 497 members of the public, mostly aged 60 and over.

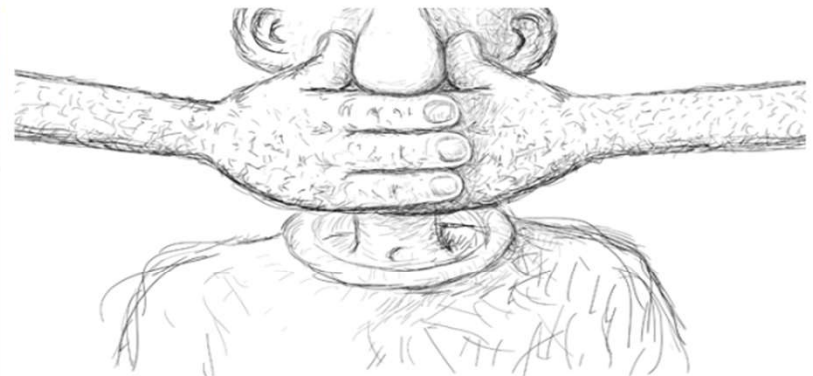
More than 92 per cent of older people wanted information about life expectancy while almost 90 per cent wanted involvement in treatment decisions if the likelihood of death was high.

Almost 60 per cent of clinicians said they were highly confident of initiating end-of-life conversations and more than 55 per cent regularly engaged in them. But almost 44 per cent said uncertainty about life expectancy was a barrier to the fateful

aged care
insite

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[Home](#) | [News](#) | Don't beat around the bush: older people on prognoses



Don't beat around the bush: older people on prognoses

By: Dallas Bastian | in News, Top Stories | March 13, 2019 | 0

Give it to them straight, Doc.

When it comes to important questions about health and death, older adults want to know the truth.

New research has shown that while older Australians want the full picture of their prognosis, even if it is bad news, clinicians are sometimes hesitant to spell it out.

Study lead Associate Professor Magnolia Cardona, from Bond University and Gold Coast University Hospital, said the public may be more willing than clinicians realise to talk openly about what's in store and how or where they want to die.

The research team surveyed 360 Australian nurses and doctors dealing regularly with patients near the end of life and 497 members of the public, mostly aged 60 or older.

Just under 90 per cent of older adults wanted involvement in treatment decisions if the likelihood of death was high.

And 92 per cent wanted information about life expectancy, but almost 44 per cent of clinicians said uncertainty about life expectancy was a barrier to the conversation.

Conversation starters

About me

Conversation cards

About me

**Being able to
is the most
important thing
to me.**

About me

**..... is important
for me to live well.**

About me

**For me, a life
worth living is
where I**

About life

Conversation cards

About life

**What do you value
most in life?**

About life

**What's in your
bucket list?**

About life

**What does a good
day look like to
you?**

About choices

Conversation cards

About choices

**I was thinking about
what happened to
and it made me realise
that**

About choices

**If happened to
me, I would want
.....**

About choices

**I would want to
make medical
decisions on my behalf
if I was unable to.**



Statement of Choices

ADVANCE CARE PLAN

This Statement of Choices can be used to express your wishes, values and beliefs to guide health care decisions on your behalf if you are unable to make those decisions for yourself.

My name:

B. Personal Values

Describe what you value or enjoy most in your life:
Think about what interests you or gives your life meaning.

Consider what you would like known about you when health care decisions are being made:
Think about your past experiences, wishes and beliefs or what is important to you.

Describe the health outcomes that you would find unacceptable:
*Think about what you would **not** want, including situations you consider may involve severe disability.*

Describe what would be important or comforting to you when you are nearing death:
Think about your personal preferences, special traditions or spiritual support.

Indicate the place where you would prefer to die: (e.g. home, hospital, nursing home)

Consider how you would want to be cared for after you die:
Think about your spiritual, religious and cultural practices; organ and tissue donation; and any other wishes that you want noted.

Queensland Advance Care Directive (form 4)

Available from
<https://publications.qld.gov.au/dataset/power-of-attorney-and-advance-health-directive/resource/6a3af073-cdba-4b82-8de7-eabe65950c24>

Form 4
Queensland
Powers of Attorney Act 1998
(Section 44(2))

ADVANCE HEALTH DIRECTIVE

This form deals with your future health care.

The time may come when you cannot speak for yourself. By completing this form, you can give directions about your medical treatment at such a time.

This document can be used by non-English-speakers if a qualified interpreter/translator reads it to the person in the person's own language and a signed Statement of Interpreter/Translator is attached. Blank statements are available from GoPrint offices, WC Penfold Stationers and most newsagents throughout Queensland.

ver: 4-9/01/04



Queensland Government
Department of Justice and Attorney-General

8. If I am in the terminal phase of an incurable illness:

- | | |
|---|---------------------|
| <input type="checkbox"/> I do not want cardiopulmonary resuscitation. | Initial here: _____ |
| <input type="checkbox"/> I do want cardiopulmonary resuscitation. | Initial here: _____ |
| <input type="checkbox"/> I do not want assisted ventilation. | Initial here: _____ |
| <input type="checkbox"/> I do want assisted ventilation. | Initial here: _____ |
| <input type="checkbox"/> I do not want artificial hydration. | Initial here: _____ |
| <input type="checkbox"/> I do want artificial hydration. | Initial here: _____ |
| <input type="checkbox"/> I do not want artificial nutrition. | Initial here: _____ |
| <input type="checkbox"/> I do want artificial nutrition. | Initial here: _____ |
| <input type="checkbox"/> I do not want antibiotics. | Initial here: _____ |
| <input type="checkbox"/> I do want antibiotics. | Initial here: _____ |

Other treatment (specify):

- | | |
|--|---------------------|
| <input type="checkbox"/> I do not want _____ | Initial here: _____ |
| <input type="checkbox"/> I do want _____ | Initial here: _____ |

9. If I am permanently unconscious (in a coma):

- | | |
|---|---------------------|
| <input type="checkbox"/> I do not want cardiopulmonary resuscitation. | Initial here: _____ |
| <input type="checkbox"/> I do want cardiopulmonary resuscitation. | Initial here: _____ |
| <input type="checkbox"/> I do not want assisted ventilation. | Initial here: _____ |
| <input type="checkbox"/> I do want assisted ventilation. | Initial here: _____ |
| <input type="checkbox"/> I do not want artificial hydration. | Initial here: _____ |
| <input type="checkbox"/> I do want artificial hydration. | Initial here: _____ |
| <input type="checkbox"/> I do not want artificial nutrition. | Initial here: _____ |
| <input type="checkbox"/> I do want artificial nutrition. | Initial here: _____ |
| <input type="checkbox"/> I do not want antibiotics. | Initial here: _____ |
| <input type="checkbox"/> I do want antibiotics. | Initial here: _____ |

Other treatment (specify):

- | | |
|--|---------------------|
| <input type="checkbox"/> I do not want _____ | Initial here: _____ |
| <input type="checkbox"/> I do want _____ | Initial here: _____ |

The directions you give in this section apply *only* if, in the opinion of your treating medical practitioner:

- you have a terminal, incurable, or irreversible illness or condition,
- or you are in a persistent vegetative state,
- or you are permanently unconscious,
- or you are so seriously ill or injured that you are unlikely to recover to the extent that you can survive without the continued use of life-sustaining measures.

Complete this section by:

- first considering the points carefully,
- then ticking the boxes next to the points that you want to apply to you,
- then writing your initials on the lines that follow those points,
- and finally, drawing a line across any part that you do not want to apply to you.

7. I request that:

- ☐ everyone responsible for my care initiate *only* those measures that are considered necessary to maintain my comfort and dignity, with particular emphasis on the relief of pain.

[Initial here]

- ☐ any treatment that might obstruct my natural dying either not be initiated or be stopped.

[Initial here]

- ☐ unless required for my dignity and comfort as part of my palliative care, no surgical operation is to be performed on me.

[Initial here]

Form 4 QLD

More information at <https://www.qld.gov.au/law/legal-mediation-and-justice-of-the-peace/power-of-attorney-and-making-decisions-for-others/advance-health-directive>

What ELSE can you do to help improve the situation?

**2-Nominate an enduring power of attorney
in case you are unable to make your own decisions
due to incapacity**

Who is an appropriate surrogate decision-maker?

Me & my preferences

If in permanent vegetative state

- No Pain or prolonged suffering
- NO ICU admission
- No surgeries / IV drugs
- No tube feeding
- No resuscitation attempts
- Die in palliative care



My surrogate's preferences

If in permanent vegetative state

- Do everything available
- Do **not** disconnect me in ICU
- IV medications / dialysis
- Stem cell research
- Head transplant
- Resuscitate, Resuscitate



What ELSE can you do to help improve the situation?

3-Have the conversation with your doctor **Ask 5 questions**

- Is this treatment really necessary?
- What are the benefits and risks?
- Are there simpler/safer options?
- What happens if I don't do anything?
- What are the costs to me/my family?



Choosing Wisely
Australia

An initiative of NPS MedicineWise

<https://soundcloud.com/acpaustralia/planning-for-the-worst-could-actually-be-a-joyful-experience-radio-national>

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ACPAustralia

Planning for the worst could actually be a joyful
experience - Radio National

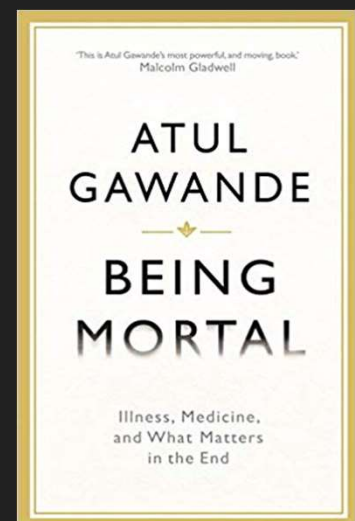
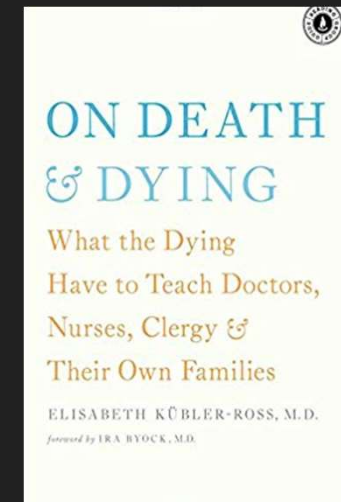
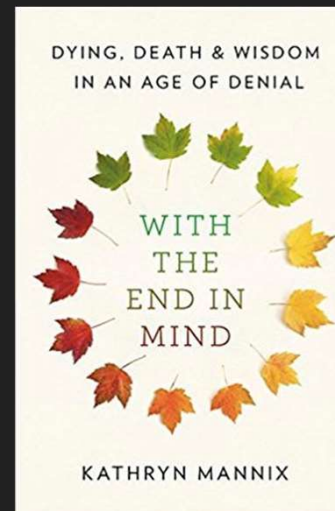
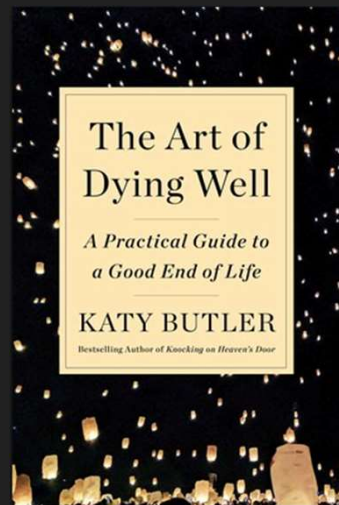
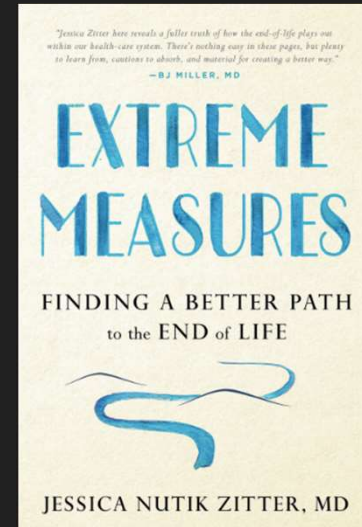
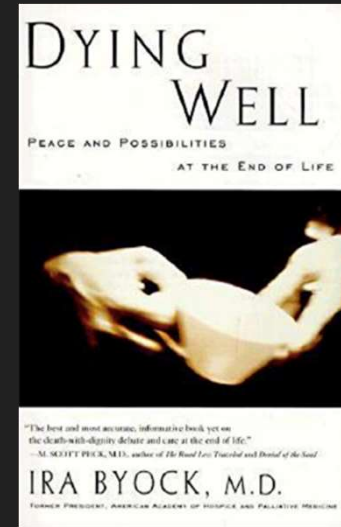
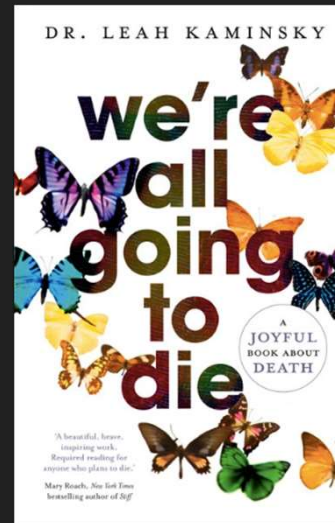
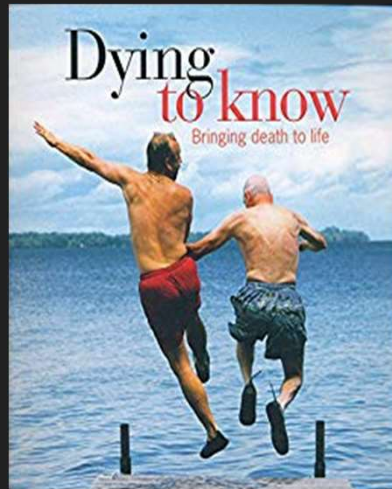
4 months ago

Interview



LIFE MATTERS

Normalising The end-of-life discussion



Science breakthroughs have gone too far

- Use fourth industrial revolution to support, not burden older people
- Older people-friendly hospitals
- Better access to Community-based services
- Allow them to die at a place of their choice
- Listen to their personal values & preferences
- **Need to realign the health system to meet the needs of the ageing population**



**Look after
our elders**

Want to sign up as consumer? advisor to help in future?

- *60+ year-olds**
- *Personal/family experience**
- *Open to discuss**
- *Respect for different views**

Email me: [Magnolia](mailto:mcardona@bond.edu.au)

mcardona@bond.edu.au

