THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

HEALTH QUALITY & SAFETY COMMISSION NEW ZEALAND
Kupu Taurangi Hauora o Aotearoa

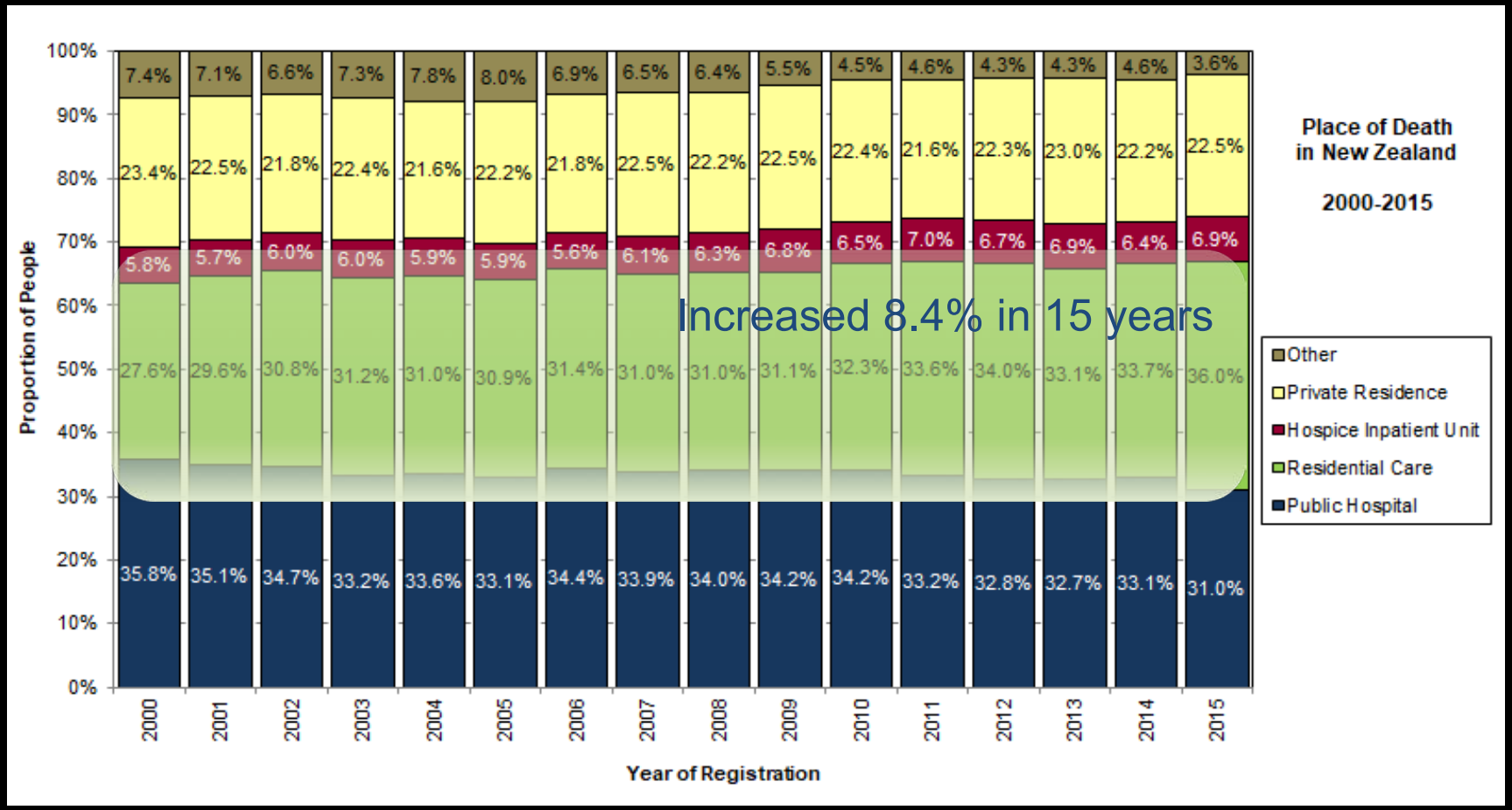
Frailty Care Guides

NZNO Gerontology Section Conference
5 November 2018

Dr Mchal Boyd
Associate Professor and Nurse Practitioner
Te Arai Palliative Care and End of Life Research Group

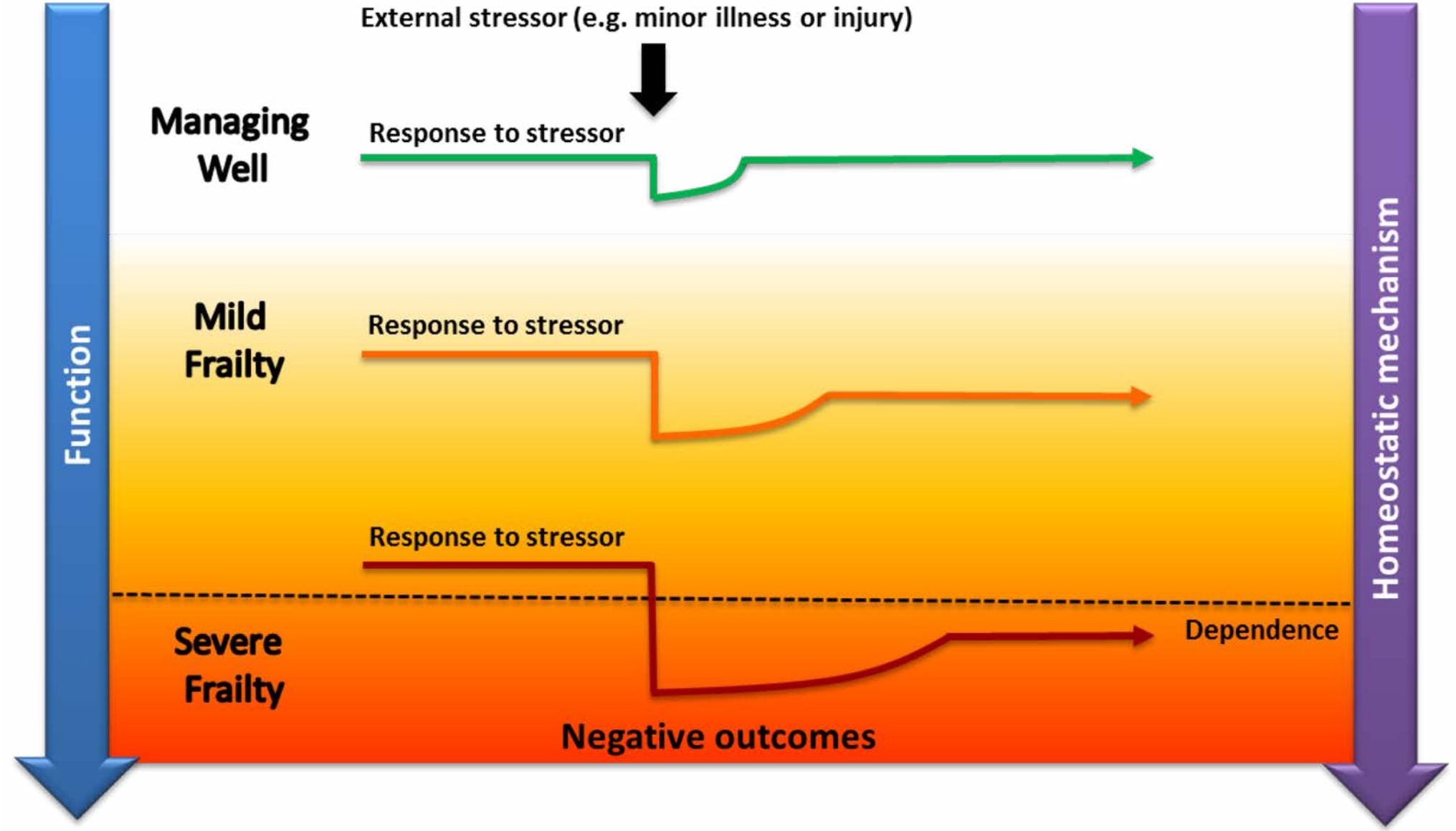
Mihi

Place of Death in New Zealand
Total Deaths, 2000-2015



The proportion of all deaths that occur in residential care has increased from **27.6%** in 2000 to **36.0%** in 2015. The proportion of deaths in public hospitals and other settings have declined sharply, with little change in private residence and hospice IPU.

Data Source: Ministry of Health MORT data 2000-2015, extracted March 2018


External stressor (e.g. minor illness or injury)
Managing Well
Response to stressor
Mild Frailty
Response to stressor
Response to stressor
Severe Frailty
Dependence
Negative outcomes
Function
Homeostatic mechanism

It is not the strongest of the species that survives, nor the most intelligent that survives.

It is the one that is the most adaptable to change.

Adaptation of Charles Darwin's theory 'Origin of Species'

Rockwood: Clinical Frailty Score

1 **Very Fit** – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2 **Well** – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.

3 **Managing Well** – People whose **medical problems are well controlled,** but are **not regularly active** beyond routine walking.

4 **Vulnerable** – While **not dependent** on others for daily help, often **symptoms limit activities.** A common complaint is being "slowed up", and/or being tired during the day.

5 **Mildly Frail** – These people often have **more evident slowing,** and need help in **high order IADLs** (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6 **Moderately Frail** – People need help with **all outside activities** and with **keeping house.** Inside, they often have problems with stairs and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.

Rockwood: Clinical Frailty Score (cont)

7 Severely Frail – **Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8 Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9. Terminally Ill - Approaching the end of life. This category applies to people with **a life expectancy <6 months**, who are **not otherwise evidently frail.**

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia**, they cannot do personal care without help.

* 1. Canadian Study on Health & Aging, Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

DALHOUSIE UNIVERSITY

Defining and recognising frailty

Rockwood - Accumulation of Deficits Model, based on functional characteristics as depicted in the Clinical Frailty Scale below

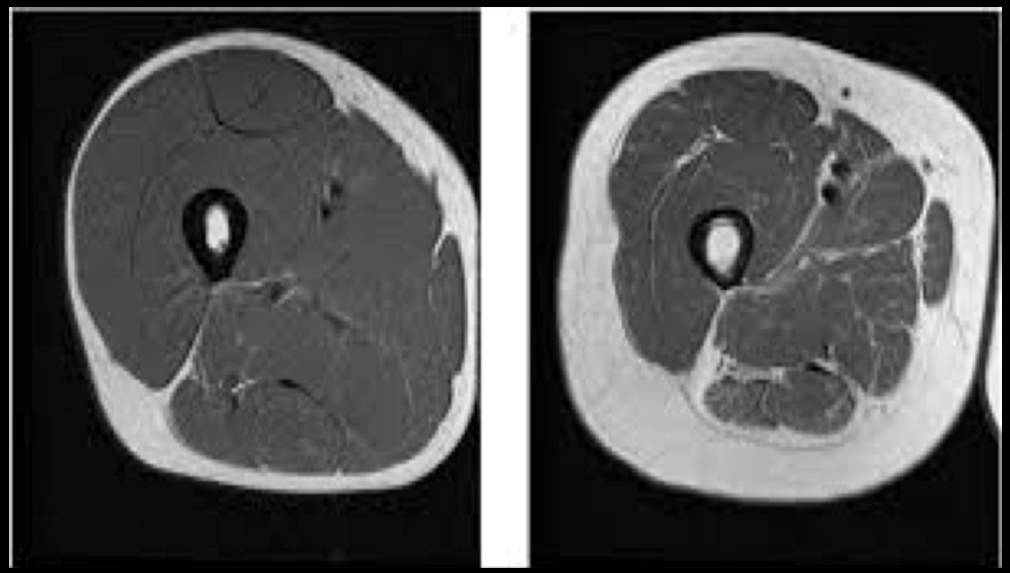
Example 1 - *Rockwood Frailty Index:* Below is an example of how to determine a frailty index (FI). Total items assessed (e.g. 26 below) divided by total number of deficits the person has.

0-5 deficits – 0/26 to 5/26 = 0.0 to 0.19: Frailty Index classification *Non-frail*
6-7 deficits – 6/26 to 7/26 = 0.23 to 0.27: Frailty Index classification *Pre-frail*
> 8 deficits – 8/26 or more = 0.31 or higher: Frailty Index classification *Frail*

Rockwood Frailty Index

1. Congestive heart failure
2. Cerebrovascular accident
3. Dementia, not specified type
4. Atrial fibrillation
5. Depression defined as PHQ score >5
6. Arthritis
7. Hip fracture
8. Pressure sores
9. Urinary incontinence
10. Polypharmacy >6
11. Physical help with dressing
12. Fatigue with self report or staff observation, included in PHQ >9
13. No spouse
14. Weight loss
15. Mobility impairment
16. Anything other than a regular diet
17. Bowel incontinence
18. Cancer
19. Renal disease
20. Pneumonia
21. Urinary tract infection
22. Wound infection
23. Diabetes mellitus
24. Malnutrition
25. Psychotic disorder
26. Respiratory failure

Fried: Frailty Risk Factors



Age 25 Age 63

Sarcopenia

Frailty is defined as 3 or 5 Components (Fried 2001):

- unintentional weight Loss
- slow walking speed
- self-reported exhaustion
- low energy expenditure
- weakness

Espinoza and Fried, 2007, Clinical Geriatrics,15(6).

Frailty Risk Factors

Physiologic

A. Activated inflammation

B. Immune system dysfunction

C. Anaemia

D. Endocrine system alteration

E. Underweight or overweight

F. Age

Sociodemographic and Psychological

A. Female gender

B. Low socioeconomic status

C. Race/ethnicity

D. Depression

Medical Illness &/or Comorbidity

A. Cardiovascular disease

B. Diabetes

C. Stroke

D. Arthritis

E. Chronic obstructive pulmonary disease

F. Cognitive impairment/cerebral changes

Disability

A. Activity of daily living disability

Espinoza and Fried, 2007, Clinical Geriatrics,15(6).

FRAIL-NH

	0	1	2
Fatigue	No	Yes	PHQ-9 ≥10
Resistance	Independent Transfer	Set Up	Physical Help
Ambulation	Independent	Walker	Not Able/WC
Incontinence	None	Bladder	Bowel
Loss of Weight	None	yes	xxxx
Nutritional Approach	Regular Diet	Mechanically Altered	Feeding Tube
Help with Dressing	Independent	Set Up	Physical Help
Total			0-13

Nonfrail (0-5), Prefrail (6-7), Frail (≥8)

Kaehr E, Visvanathan R, Malmstrom TK, Morley JE. Frailty in Nursing Homes: The FRAIL-NH Scale. *J Am Med Dir Assoc* 2015;16(2):87.

Topics Updated

- EPOA
- Cardiac guidelines
- Advanced care planning
- Gastro intestinal constipation guidelines
- Delirium
- Dementia
- Depression
- Diabetes
- End of life
- Falls
- Fracture & contracture
- Nutrition & hydration
- Pain
- Respiratory guidelines
- Skin
- Syncope and collapse
- Urinary incontinence
- Urinary tract infections

New topics added

- Defining frailty and recognising and intervening for acute and gradual deterioration
- Post fall assessment care guide
- Polypharmacy and deprescribing
- Challenging behaviour and mental health issues
- Family support and communication
- Sexuality and intimacy

Acute Deterioration Assessment Steps

This tool is to help recognise acute change in older people and assessment steps for early intervention.

STOP and WATCH	
S	Seems different than usual
T	Talks or communicates less
O	Overall needs more help
P	Participates less in activities
A	Ate less, difficulty swallowing medications
N	No bowel motion >3 days, diarrhoea
D	Drank less
W	Weigh change
A	Agitated or nervous more than usual
T	Tired, weak, confused or drowsy
C	Change in skin colour or condition
H	More help walking, transferring, toileting

Assessment Step 1: *Review Goals of Care*

- Review goals of care for hospitalisation, antibiotics or for comfort cares only, CPR status?
- What does the resident/family want to happen now?
- If comfort care only see Palliative Care Guides.

Assessment Step 2: *Take observations – review warning signs that indicate serious illness or sepsis (see pg XX for sepsis screening tool)* Take into account baseline observations

- **Respiratory rate >28/minute (see respiratory CG pg XX) Increased respiratory rate is one of the most sensitive indicators of acute illness.** SPO2 <90%
- Temperature >37.7 (or low temp <36)
- New heart rate >100 bpm
- New systolic BP <100 mmHg

Assessment Step 3: *Assess for recent labs or other results (eg x-rays)*

Consider need for labs: CBC, CRP, electrolytes, Creatinine, LFTs, MSU, BGL

Assessment Step 4: *Review hydration status*

- Start input/output chart, ensure input/output equal in 24 hours
- Offer fluids orally every 1-2 hours to increase oral fluid intake to 1000-1500/24 hours
- **If unable to take oral fluids, consider normal saline SC (500 ml/12 hrs) & review diuretics (in consultation with prescriber)**

Assessment Step 5: *Assess for delirium* Delirium screen: Neuro changes, increased falls, functional change and/or confusion. Neuro assessment: pupils, extremity, power, face and body symmetry, weakness. See Delirium CG and 4AT delirium screen

Assessment Step 6: *Review pain status,* Assess for pain location, type and severity. Review for pain intervention (use OLDCART pg XX)

Assessment Step 7: *onstipation or diarrhoea.* Bowels not open for 3 days or watery bowels? Review available laxatives and clear bowels for constipation. Use loperamide and assess for dehydration for diarrhoea. (See Care guide pg XX)

Final recap assessment step: *Re-review Goals of Care* What does the resident/family want to happen now?

- Review again after assessment goals of care:
  - for hospitalisation?, Antibiotics?
  - for comfort cares only? If comfort care only see Palliative care guide (pg XX)

Acute Deterioration Assessment Steps

This tool is to help recognise acute change in older people and assessment steps for early intervention.

Assessment Step 1:

- Review goals of care for hospitalisation, antibiotics or for comfort cares only, CPR status?
- What does the resident/family want to happen now?
- If comfort care only see Palliative Care Guides.

Acute Deterioration Assessment Steps

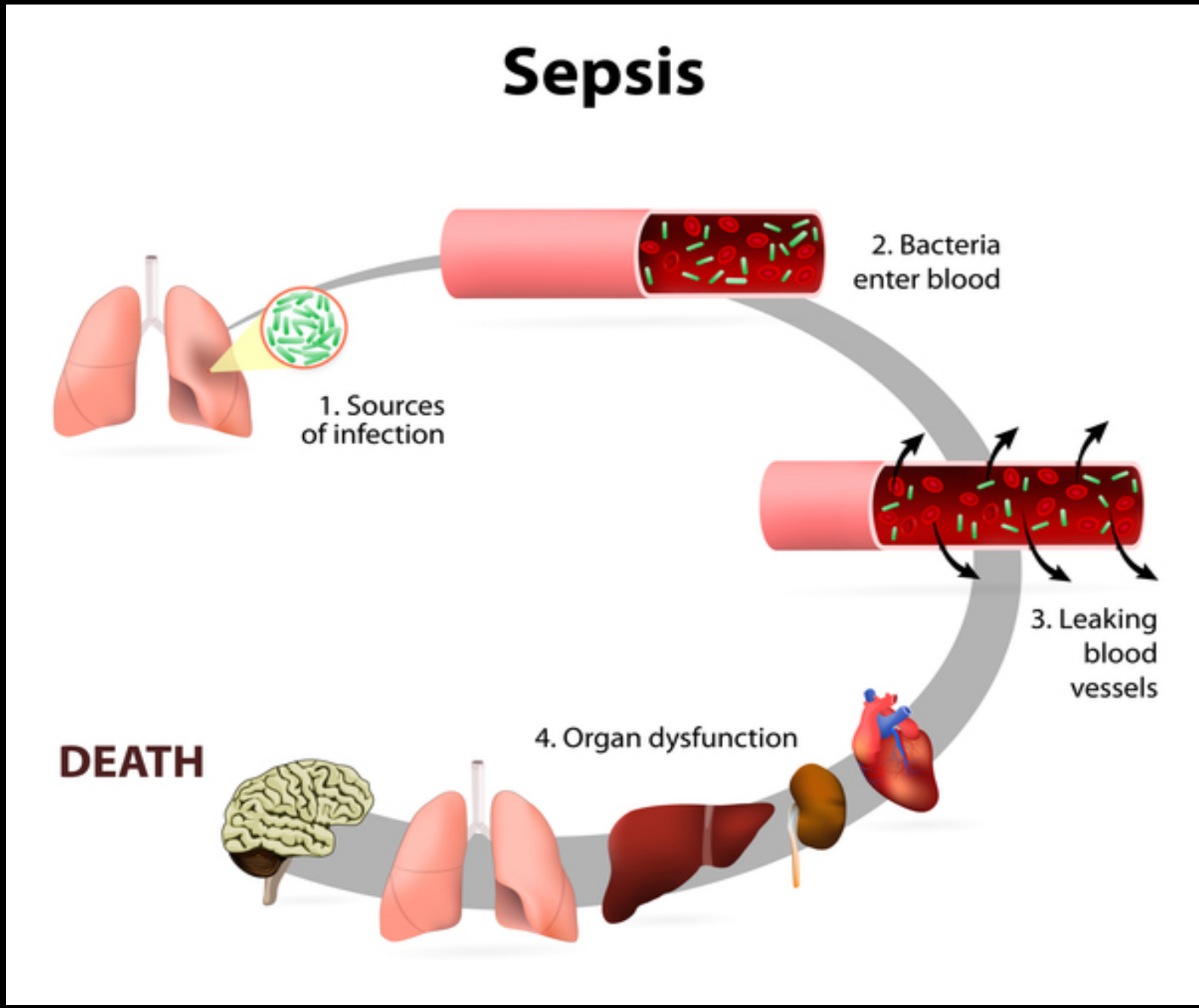
This tool is to help recognise acute change in older people and assessment steps for early intervention.

Assessment Step 2: ***Take observations – review warning signs that indicate serious illness or sepsis***

(see sepsis screening tool)

Take into account baseline observations

- **Respiratory rate >28/minute (see respiratory CG)**
  Increased respiratory rate is one of the most sensitive indicators of acute illness. SPO2 <90%
- Temperature >37.7 (or low temp <36)
- New heart rate >100 bpm
- New systolic BP <100 mmHg


Sepsis
2. Bacteria enter blood
1. Sources of infection
3. Leaking blood vessels
4. Organ dysfunction
DEATH

Sepsis Screening Tool
Sepsis is a medical emergency

- Known or suspected infection

Plus

- Any 2 of the following
~ Acute mental status change
~ Hyperglycaemia
~ Hyperthermia or hypothermia <36 or > 38.5
~ High white blood cell count (or low blood cell count)
~ Tachycardia HR>100
~ Tachypnoea >28 respiration/minute

May indicate sepsis – Contact GP/NP

Possible shock

Indications of **septic shock** or organ dysfunction include:
- Hypotension
- Increasing oxygen requirement (SPO2 >90%)
- Petechial rash
- Elevated creatinine or bilirubin level
- Low platelet count

Review again goals of care – for hospital or comfort measures?

Expected management/treatment of sepsis in aged care facility:
Oral Antibiotic
Use oxygen to keep SPO2 >90% if not COPD
Monitor hydration and urine output
Pain management
Monitor labs: CBC, renal function, CRP

Expected management/treatment of sepsis in hospital:
IV fluids and antibiotics
O2 to keep sats>90% if not COPD
bloods: cultures, lactate, renal function, CBC

Acute Deterioration Assessment Steps

This tool is to help recognise acute change in older people and assessment steps for early intervention.

Assessment Step 3: ***Assess for recent labs or other results (eg x-rays)***

Consider need for labs: CBC, CRP, electrolytes, Creatinine, LFTs, MSU, BGL

Assessment Step 4: ***Review hydration status***

- Start input/output chart, ensure input/output equal in 24 hours
- Offer fluids orally every 1-2 hours to increase oral fluid intake to 1000-1500/24 hours
- **If unable to take oral fluids, consider normal saline SC (500 ml/12 hrs) & review diuretics (in consultation with prescriber)**

Acute Deterioration Assessment Steps

This tool is to help recognise acute change in older people and assessment steps for early intervention.

Assessment Step 5: *Assess for delirium*

Delirium screen: Neuro changes, increased falls, functional change and/or confusion.

Neuro assessment: pupils, extremity, power, face and body symmetry, weakness. See Delirium CG and 4AT delirium screen

Delirium Rating 4AT

	Description	Questions	Circle
1	**Alertness**: This includes patients who may be markedly drowsy e.g. difficult to rouse and/or obviously sleepy during assessment or agitated/hyperactive.	▪ Normal, fully alert but not agitated throughout assessment ▪ Mild sleepiness < 10 seconds after waking, then normal ▪ Clearly abnormal	0 0 4
2	**AMT4**: Age, date of birth, place (name of the hospital or building), current year	▪ No mistakes ▪ One mistake ▪ Two or more mistakes/untestable	0 1 2
3	**Attention:** Ask the patient "please tell me the months of the year backwards order starting at December". To assist in initial understanding one prompt of "what is the month before December?"? Is permitted	▪ Achieves 7 months or so ▪ Starts but scores < 7 months or refuses to start ▪ Untestable – cannot start because unwell, drowsy, inattentive	0 1 2
4	**Acute change or fluctuating course:** Evidence of significant change or fluctuation in alertness, cognition, other mental function e.g. Paranoia, hallucinations) arising over the past 2 weeks and still evident in the last 24 hours	▪ Yes ▪ no	0 4
	4 or above – possible delirium +/- cognitive impairment 1-3 – possible cognitive impairment 0 – delirium of severe cognitive impairment unlikely	Delirium still possible if (4) information incomplete	**4AT score**

Acute Deterioration Assessment Steps

This tool is to help recognise acute change in older people and assessment steps for early intervention.

Assessment Step 6: ***Review pain status,*** Assess for pain location, type and severity. Review for pain intervention (use OLDCART)

Assessment Step 7: **eview for *constipation or diarrhoea.*** Bowels not open for 3 days or watery bowels? Review available laxatives and clear bowels for constipation. Use loperamide and assess for dehydration for diarrhoea.

Acute Deterioration Assessment Steps

This tool is to help recognise acute change in older people and assessment steps for early intervention.

Final recap assessment step: ***Re-review Goals of Care***

What does the resident/family want to happen now?

- Review again after assessment goals of care:
  - for hospitalisation?, Antibiotics?
  - for comfort cares only?

Acute deterioration – Clinical Reasoning Guide

Start with the STOP AND WATCH, and then complete reversibility assessment steps 1-7 including Assessment handover tool (page xx).
Below is a tool to help narrow down the clinical causes for acute deterioration and helpful Frailty Care Guides could help.

As per SBAR: History of the presenting problem. General appearance: pale, sweaty, distracted. Full set of obs T, P rates and rhythm, RR, BP, o2 sats compare all with 'normal'. What medical history, and medications are they on? Any recent labs, investigations, new medications?
Below are possible causes for specific clinical changes.

Dizziness

- Neurological changes/CVA – pg xx
- Benign Positional Vertigo – pg. XX
- Cardiac changes – pg xx
- Dehydration – pg XX

Confusion, change in behaviour

- Delirium – pg. xx
- Stroke - pg xx
- Uncontrolled Diabetes – pg xx
- Electrolytes imbalance – pg xx
- Depression – pg xx

Urinary Dysuria, flank pain, lower abdominal pain

- Urinary Tract infection pg xx
- Urinary Retention pg xx
- Constipation
- Pylonephritis (kidney infections) pg xx
- Medications pg xx

Sleepiness, fatigue, drop in consciousness level

- Hypoxia pg xx
- BGL too low/too high pg xx
- Hypoactive delirium pg xx
- Medications pg xx
- Electrolyte imbalance
- Dehydration
- Infection
- Acute cardiac event or congestive heart failure pg xx
- Neurological change: CVA/TIA pg xx

Fall

- Cardiac changes – pg xx
- Dehydration – pg xx
- Urinary tract infection – pg xx
- Lower respiratory tract infection – pg xx
- Neurological event – eg TIA or CVA pg XX
- Increasing frailty – pg. xx
- Medication changes – pg xx

Skin changes Rash or wound

- Infection – cellulitis? Pg XX
- DVT? – pg XX
- Allergic/reaction pg xx
- Bleeding (on warfarin?) pg xx

Shortness of breath (SOB)

- Respiratory: COPD or lower respiratory tract infection – pg XX
- Acute cardiac event or congestive heart failure pg xx
- Anaemia pg

Pain

- Complete OLDCART (see below)
- Chest pain, see pg xx
- Neurologic, see pg Xx
- Musculoskeletal, see pg xx
- Abdominal, see pg xx
- Peripheral neuropathic pain, see pg xx

OLDCART

Symptom evaluation tool

O Onset

L Location

D Duration

C Character

A Aggravation or associated symptoms

R Relievers

T Treatment

Louise Fowler and Christy Jackson
Bay of Plenty PHO

Name:

NHI:

Early Alert Assessment and Communication

☐ **Review Resident Record:** Recent progress notes, labs, medications, other orders
☐ **Assess the Resident:** using this form
☐ **Review / activate care pathway (if available)**
☐ **Have Relevant Information Available when Reporting**
(i.e. medical letters, blood tests and investigations, ceiling of intervention orders, allergies, medication list)

SITUATION

Staff Name and designation: _____

Signature_____
Date _____ / _____ / _____ Time (am/pm)_____

The current change in condition, symptoms and concerns are

This started on _____ / _____ / _____ at _____ am/pm

Since this started it has gotten: ☐ worse ☐ better ☐ stayed the same

Things that make the problem ***worse*** are_____
Things that make the problem ***better*** are_____

This condition, symptom, or sign has occurred before: ☐ Yes ☐ No
Treatment for last episode:

Other relevant information or problems:

Louise Fowler and Christy Jackson
Bay of Plenty PHO

BACKGROUND

Resident Description

This resident is in the facility for: ❑ Rest Home ❑ Hospital ❑ Dementia ❑ Other _____

Primary diagnoses:

Relevant medical/social history:

Allergies / alerts:

Medications

Currently on:

❑ Warfarin: last INR: _____ Date ___/___/___ ❑ other anticoagulant ❑ oral hypoglycaemic ❑ Insulin ❑ Digoxin

❑ Other:

❑ Medication changes in the last week:

Resident and/or family advanced care planning / preferences for care:

Patient / NHI

ASSESSMENT

Blood Pressure: Lying: Standing:
Pulse: ❑ Regular ❑ Irregular
General appearance:

Blood Sugar:
Temperature:
Respiratory rate:
Pulse Oximetry: % on ❑ Room Air ❑ O2 ____ l/min

Weight: _____ kg on _____/_____/_____
For CHF, oedema, or weight loss: last weight before the current one was_____kg on _____/_____/_____

Changes since last set of observations:

COGNITIVE
❑ disorientation
❑ confusion
❑ fluctuating ❑ consistent
❑ other signs of delirium (CAM)
❑ baseline MOCA:

❑ altered level of consciousness
❑ hyper alert
❑ sleepy/lethargic
❑ difficult to rouse
❑ unresponsive

NEUROLOGICAL
❑ headache
❑ dizziness
❑ numbness / tingling
❑ seizure
❑ Face droop
Arm / body weakness
Speech changes

❑ GCS score:

RESPIRATORY
❑ shortness of breath
❑ new ❑ increased
❑ at rest
❑ on exertion
❑ SOB affecting speech or sleep
❑ cough
❑ productive
❑ non-productive
❑ laboured
❑ rapid
❑ cheyne stoke
❑ wheeze
❑ crackles

CVS
❑ chest tightness ❑ pain
❑ dizzy / lightheaded
❑ oedema
❑ irregular pulse
❑ resting pulse >100 or <50
❑ JVP <3cm

ABDOMINAL
❑ tenderness ❑ pain
❑ decreased food / fluid
❑ swallowing difficulty
❑ nausea
❑ vomiting
❑ constipation
date of last BM:
❑ diarrhoea
❑ bowel sounds
❑ absent ❑ hyperactive
❑ bloody stool or vomit
❑ distended abdomen
❑ jaundice

GU
❑ tenderness ❑ pain
❑ painful urination
❑ urgency
❑ frequency
❑ nocte increase
❑ decreased or no urine
❑ incontinence
❑ blood

PAIN
❑ yes
❑ new or ❑ increased
❑ OLDCART assessment
❑ intensity 1-10:
❑ non-verbal signs:

BEHAVIOURAL
❑ depressed
❑ social withdrawal
❑ aggression
❑ verbal ❑ physical
❑ personality change
❑ other:

MSK
❑ decreased mobility
❑ increased weakness
❑ needing more assistance with ADL
❑ falls in last month:

❑ symptoms of fracture
Site:

SKIN
❑ discolouration
❑ itch / rash
❑ contusion
❑ open wound
Site:
❑ pressure injury
Site:
Grade:
❑ chronic wound
Type:
Site:

RECOMMENDATION / RESPONSE

Nursing Diagnosis (what do you think is going on?):

Nursing Interventions (what are you going to do):

- ❑ observations _____ hrly for _____ hrs
- ❑ safety interventions _____
- ❑ prn medications: _____
- ❑ other:
- ❑ urinalysis
- ❑ additional assessment _____
- ❑ increase oral fluids
- ❑ activate symptom management plan:
- ❑ review recent bloods
- ❑ family discussion, place of care / goals of care

GP Notified:_____ Date ____ / ____ / ____ Time (am/pm)_____

Recommendations / plan from GP:

- ❑ ongoing monitoring every _____ hrs and GP review in _____
- ❑ IV or subcutaneous fluids:
- ❑ Oxygen:
- ❑Other:
- ❑ New or change medication(s):
- ❑ Transfer to the hospital (non-emergency / emergency) *(send a copy of this form)*

Goals of transfer:

Name of Family Notified:_____

Date ____ / ____ / ____ Time (am/pm)_____

Advanced frailty as the last stage of life: What's needed?

- Upskilling across all sectors to recognise reversible deterioration and intervene early to support resilience as one ages
- Education and guidelines for common issues and interventions for those with dementia and chronic disease (Frailty) in long term care
  Frailty Care Guides currently under development with the
  Health Quality and Safety Commission
- Increasing interventions to promote "meaningfulness" for people with advanced frailty
- Collaboration and support for families of those with advanced frailty and promote clear articulation of goals of care

Thank You.

THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

Michal.boyd@auckland.ac.nz