

# ONE HUNDRED & COUNTING: CENTENARIAN USE OF EMERGENCY DEPARTMENTS IN NSW

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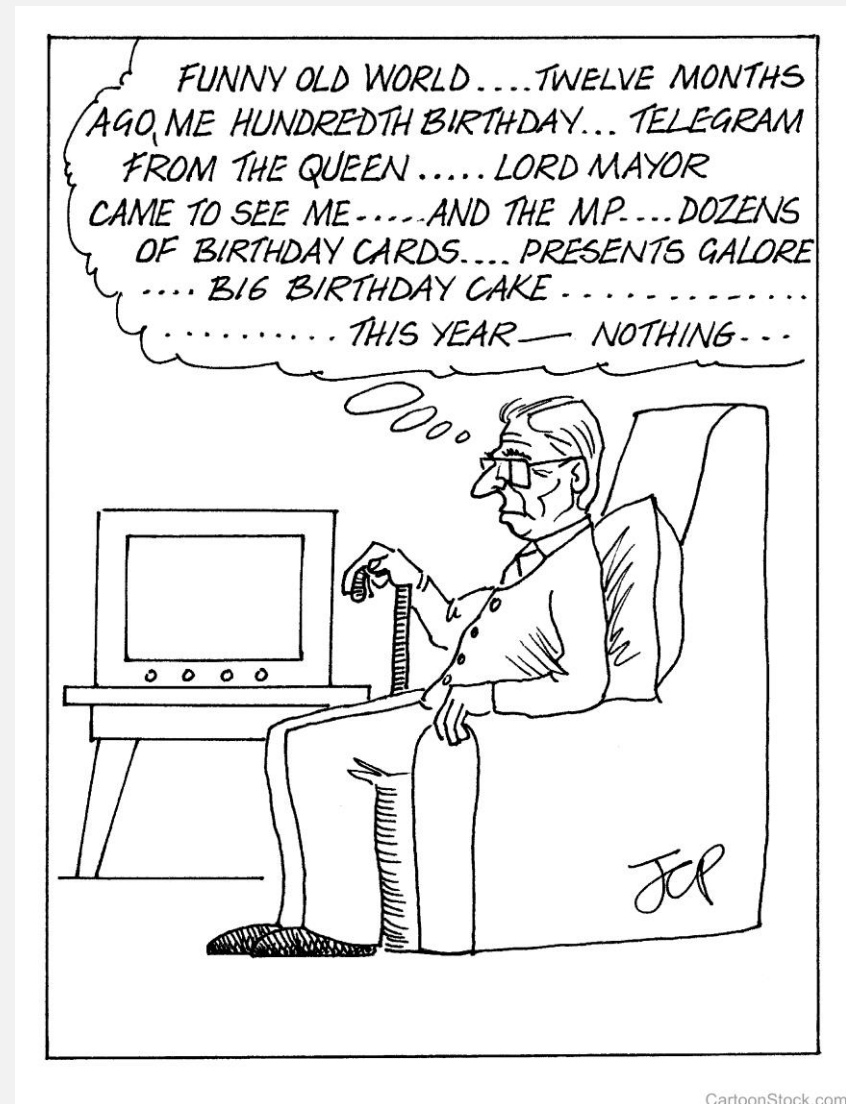
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ECI (Feb to Aug 2017)

Concord Hospital

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# emergency medicine

ideal

NURSE I NEED 10 CCs of Epi  
OR THIS MAN WONT MAKE IT



I haven't pooped in 6 days, can you  
get it out for me

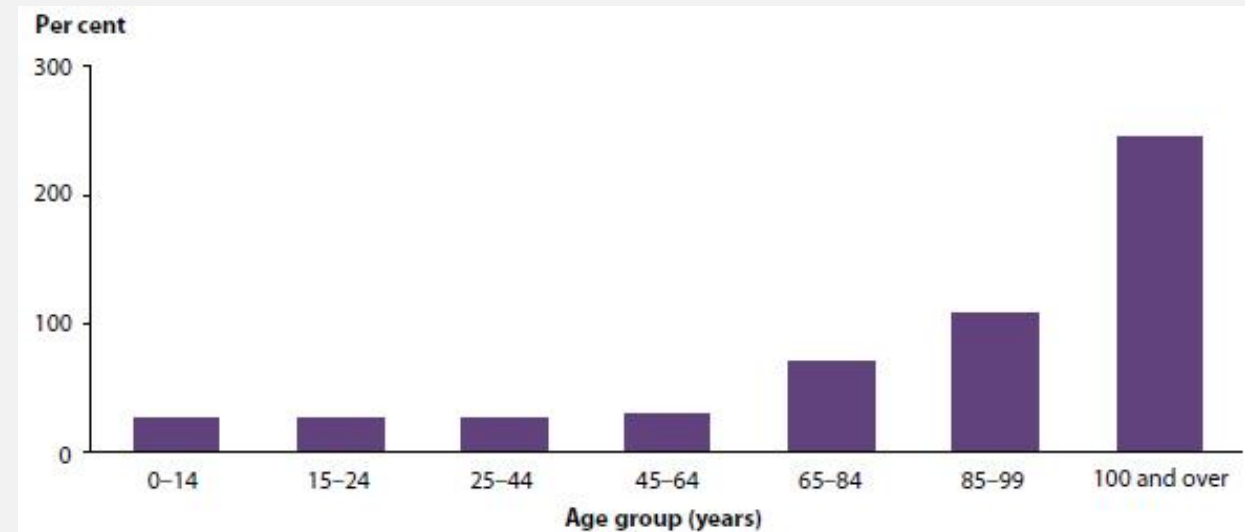
reality



# AUSTRALIA - AN AGING POPULATION

- Centenarians are the “oldest old”
- People aged 100 years and over are the fastest growing age group in Australia
- Number of centenarians living in Australia in 2016 estimated to be 4870, with 1743 in NSW
- Expected to double every 10 years – by 2034, there will be over 15,000

**Projected growth in number of Australians by age group from 2014 to 2034 (AIHW)**





## TWO NUMBERS: JAPAN HAS MORE THAN 60,000 CENTENARIANS, AND TOKYO CAN'T AFFORD THEIR GIFTS

BY JACK MOORE ON 9/23/15 AT 10:52 AM

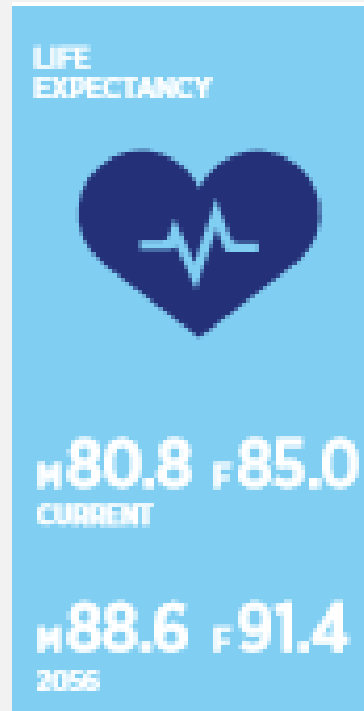


YAO XIAO

Getting old is getting old in Japan. The government has a tradition of presenting Japanese centenarians with the gift of a *sakazuki*, a silver sake cup, in the year they turn 100, but there are so many people hitting the milestone these days that the state is looking for a cheaper alternative.

The commemorative cups presented to Japan's centenarians are valued at approximately \$66. On September 15, Japan's Seniors' Day, the government sent the gift, as well as a signed letter from Prime Minister Shinzo Abe, to the 30,379 people turning 100 this year at a cost of around \$2 million.

# CENTENARIANS IN NSW



**ABC NEWS**

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## Future State report: NSW residents living past 100 to increase tenfold by 2056, \$17b gap in finances

By state political reporters Sarah Gerathy and Lucy McNally and Eleni Psaltis  
Updated 26 May 2016, 9:19am

**More than 10 times as many people in New South Wales will be aged over 100 in the year 2056 than today, which will contribute to a \$17 billion gap in the state's finances, a State Government report predicts.**

The Future State: NSW 2056 report, released today, also forecasts the state's population will rise by 50 per cent to 11.2 million.

More than a quarter of those people will be above the age of 65.

Life expectancy is expected to rise from 80 to 88 for men, and from 85 to 91 for women.

A total of 18,000 people are predicted to live beyond the age of 100. By comparison, there are now just 1,500 centenarians living in the state.

**RELATED STORY:** [Population of NSW ageing rapidly, older people outnumber children in some regions](#)

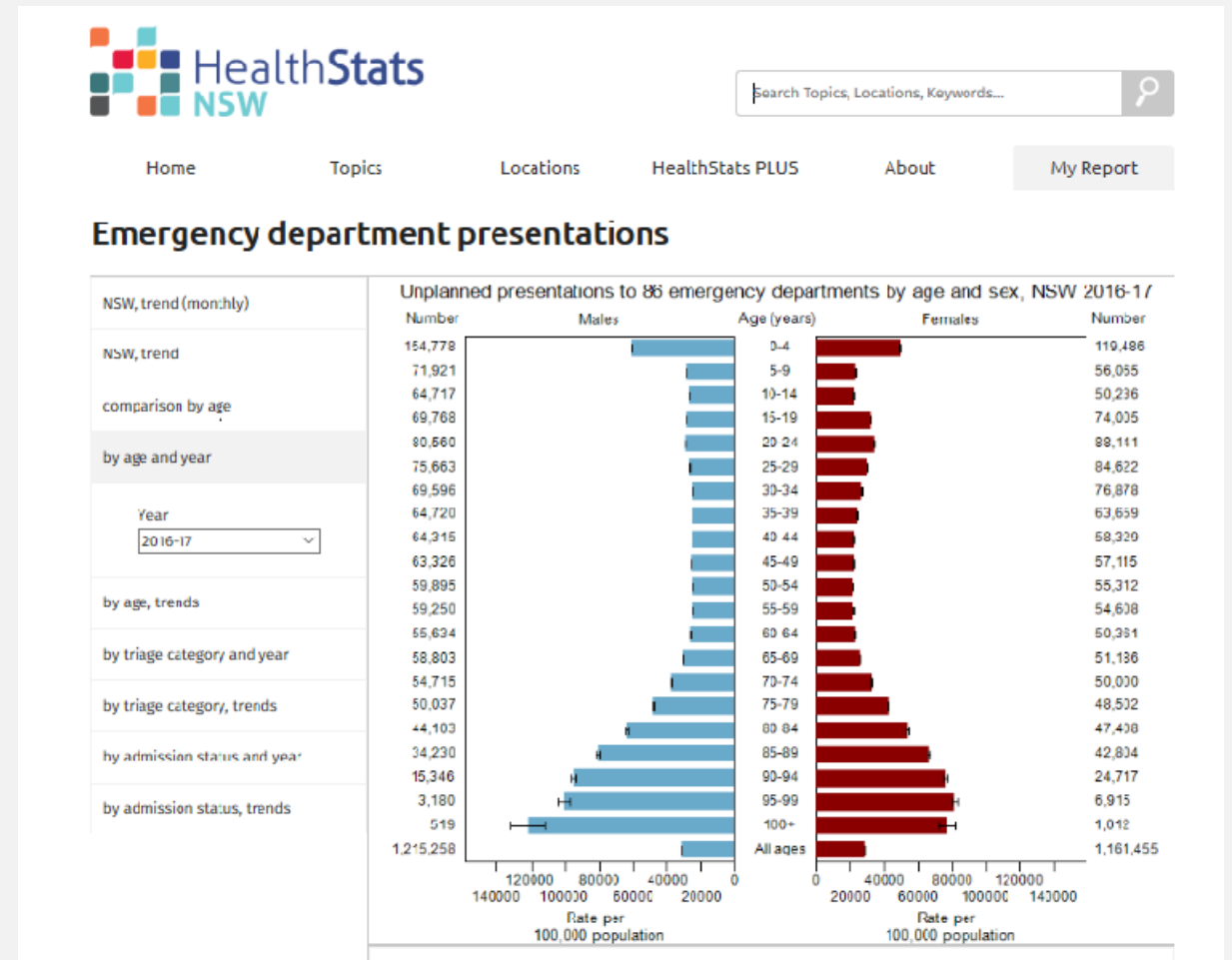
MAP: NSW

### Key points:

- \$17b gap in state's finances by 2056
- NSW population to exceed 11 million by 2056
- Life expectancy to rise to 88 for men, 91 for women
- Healthcare to account for largest share of government expenses

# CENTENARIANS IN NSW EDs

- According to NSW BHI ED data, centenarians have the second highest crude presentation rate for all age groups (after the 90-99 yr age group)
- During our study period, the presentation rate for this age group was 707 per 1,000 popn
- No Australian studies have been conducted around ED presentations in the “oldest old”



## STUDIES ON CENTENARIANS IN OVERSEAS EDs

- Emergency Department Use by Centenarians: 2008 Nationwide ED Sample (US)
  - Most common reasons were fall related injuries (21.5%), followed by pneumonia (5%) and UTI (5%)
  - Less likely to visit for chronic conditions such as congestive heart failure, arrhythmias, chest pain and COPD
- Another US study looked at hospital admissions in centenarians - admission rate of 59%
  - Most common reasons were pneumonia (11%), CCF (8%), UTI (5%), #NOF (5%) and sepsis (5%)
- UK study looked at the frequency, nature and outcomes of hospital admissions in centenarians living in a small area within north east England (population of 130 centenarians.)
  - 76% of presentations resulted in hospital admission – commonest reason was respiratory tract infection.
  - Falls were identified as a primary or secondary reason for admission in 41%.

## ONE HUNDRED & COUNTING:

### CENTENARIAN USE OF EMERGENCY DEPARTMENTS IN NSW

GABRIELLE MANE, HATEM ALKHOURI, MICHAEL DINH, SALLY MCCARTHY

#### Aim

Describe the utilization of emergency departments by people aged 100 years & over, focusing on demographics, presenting problem and patient flow

#### Methods

A retrospective observational study in 150 EDs in NSW

Data collected as part of the “Demand for Emergency Service Trends IN Years 2010-14 (DESTINY 10.14) project” was analysed

**10,798,797**

**ED presentations captured for all  
age groups in 2010-14**



**4,033**

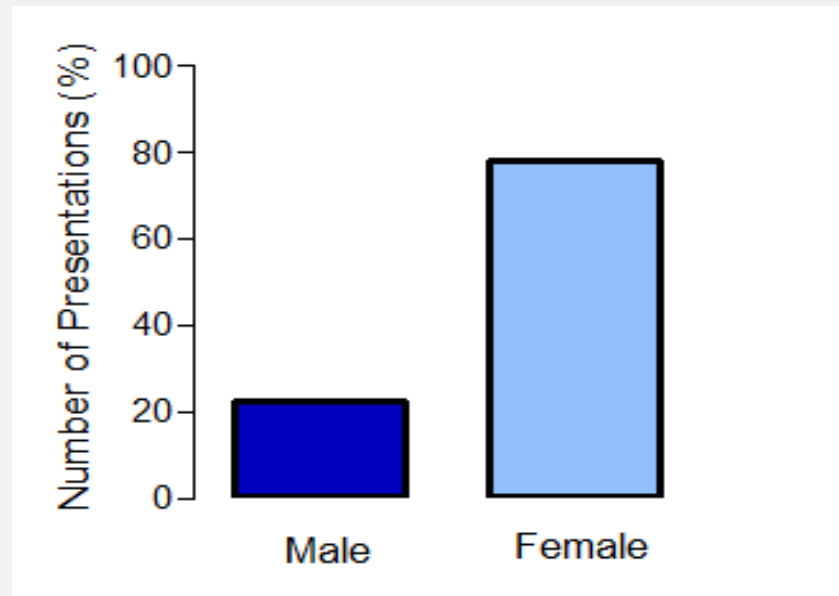
**ED presentations for people aged  
100 years old and over**



# RESULTS - DEMOGRAPHICS

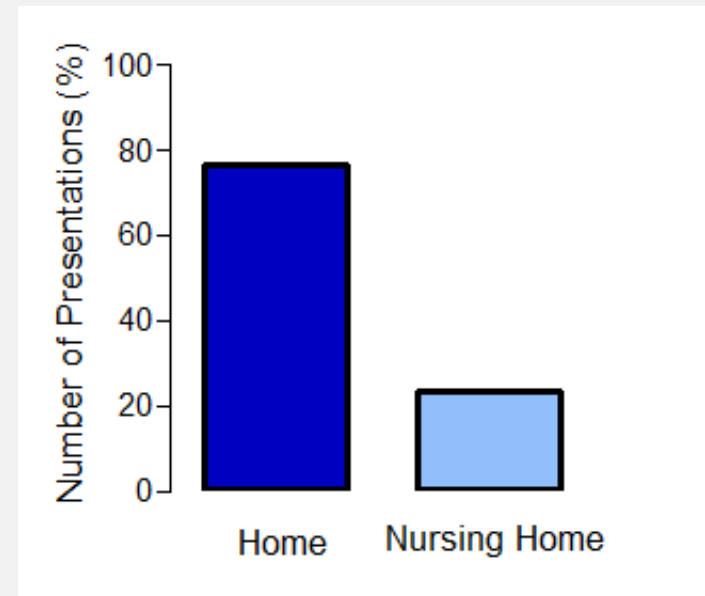
## Gender

- 78% patients were female

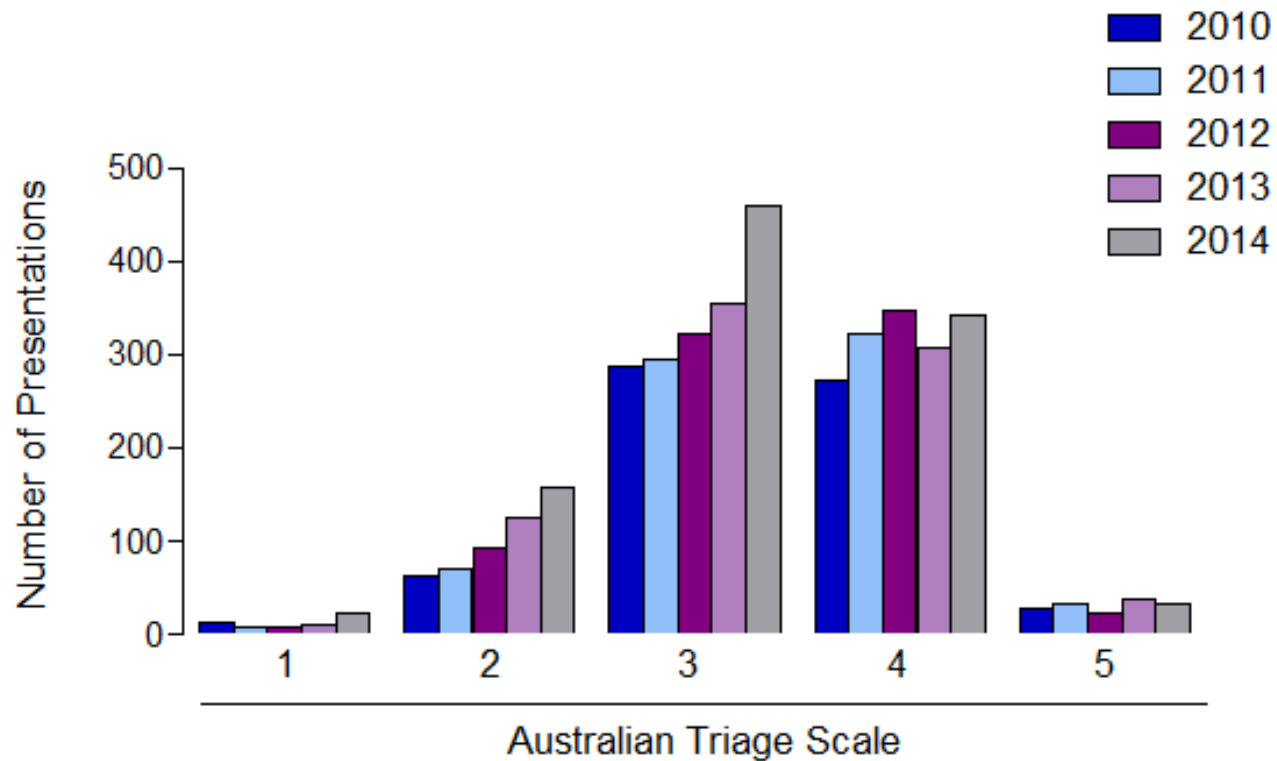


## Place of residence

- 77% were living at home

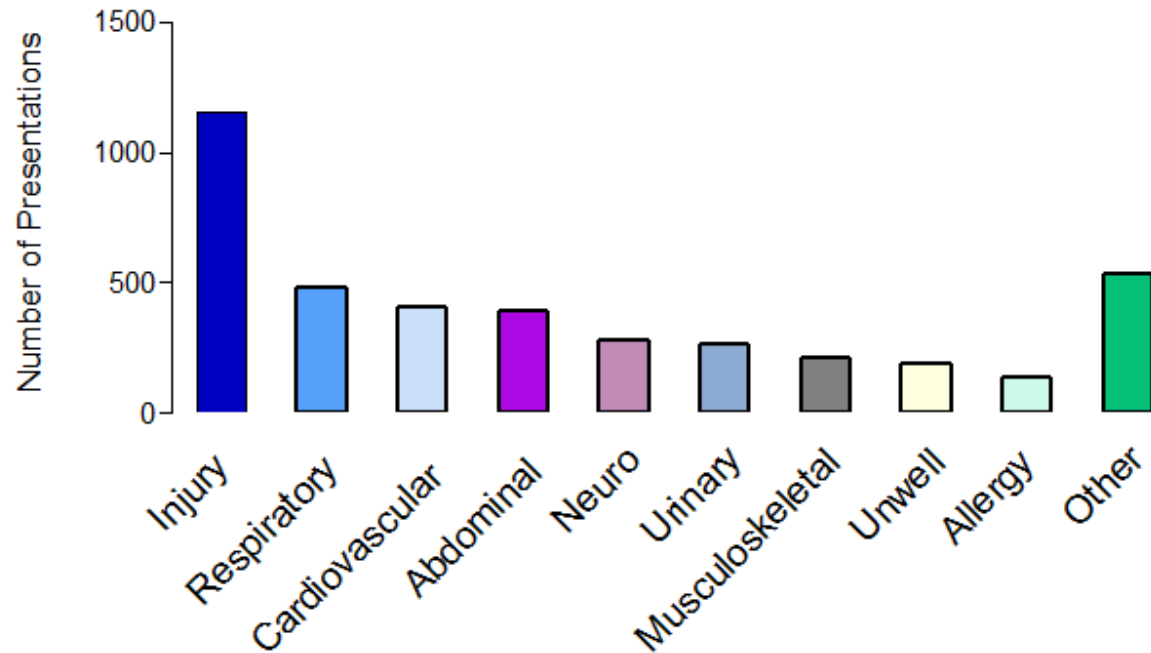


## RESULTS - TRIAGE CATEGORY



- No statistical difference between patients from home and NH in terms of triage category

# RESULTS - PRESENTING PROBLEM



- No statistical difference in presenting problem between patients from home and NH

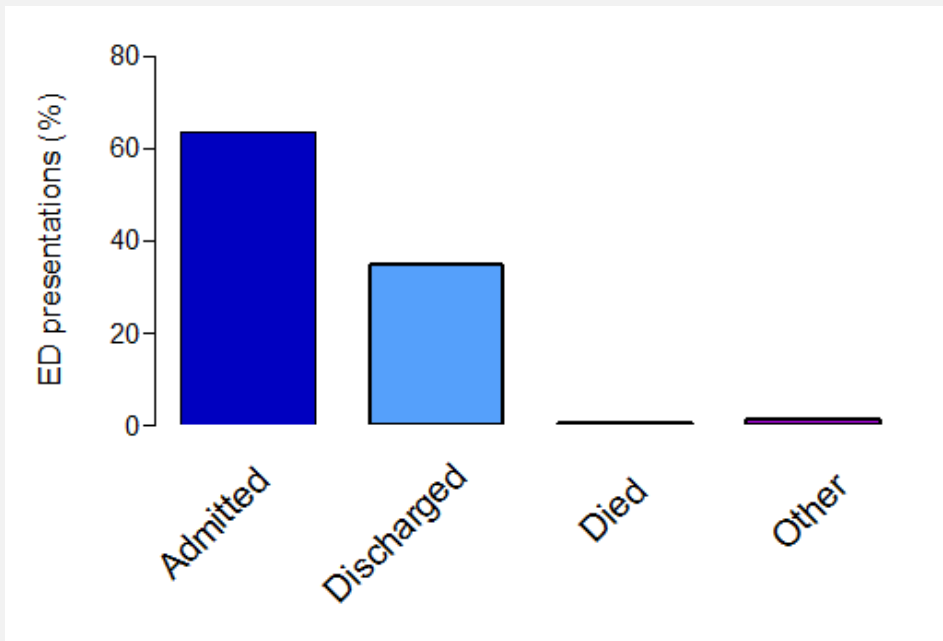
- **Most common presenting problem**

- Injury related (29%)
- Respiratory (12%)
- Cardiovascular (10%)
- Abdominal (9%)

- **Most common admitting diagnoses**

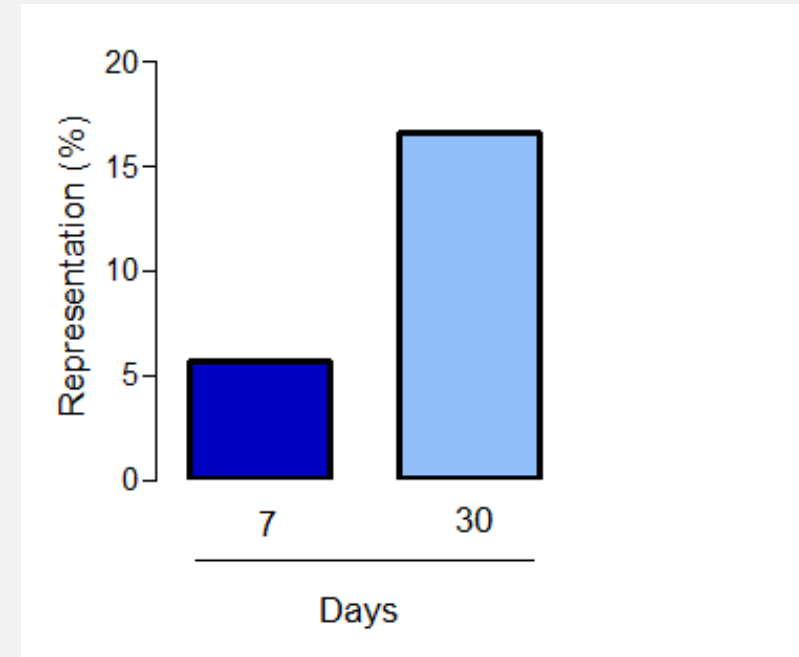
- Falls (11%)
- Fractures (7.5%)
- Pneumonia / RTI (7%)
- Wounds / superficial injuries (4%)
- UTI (3.5%)

# RESULTS - ADMISSIONS & REPRESENTATIONS



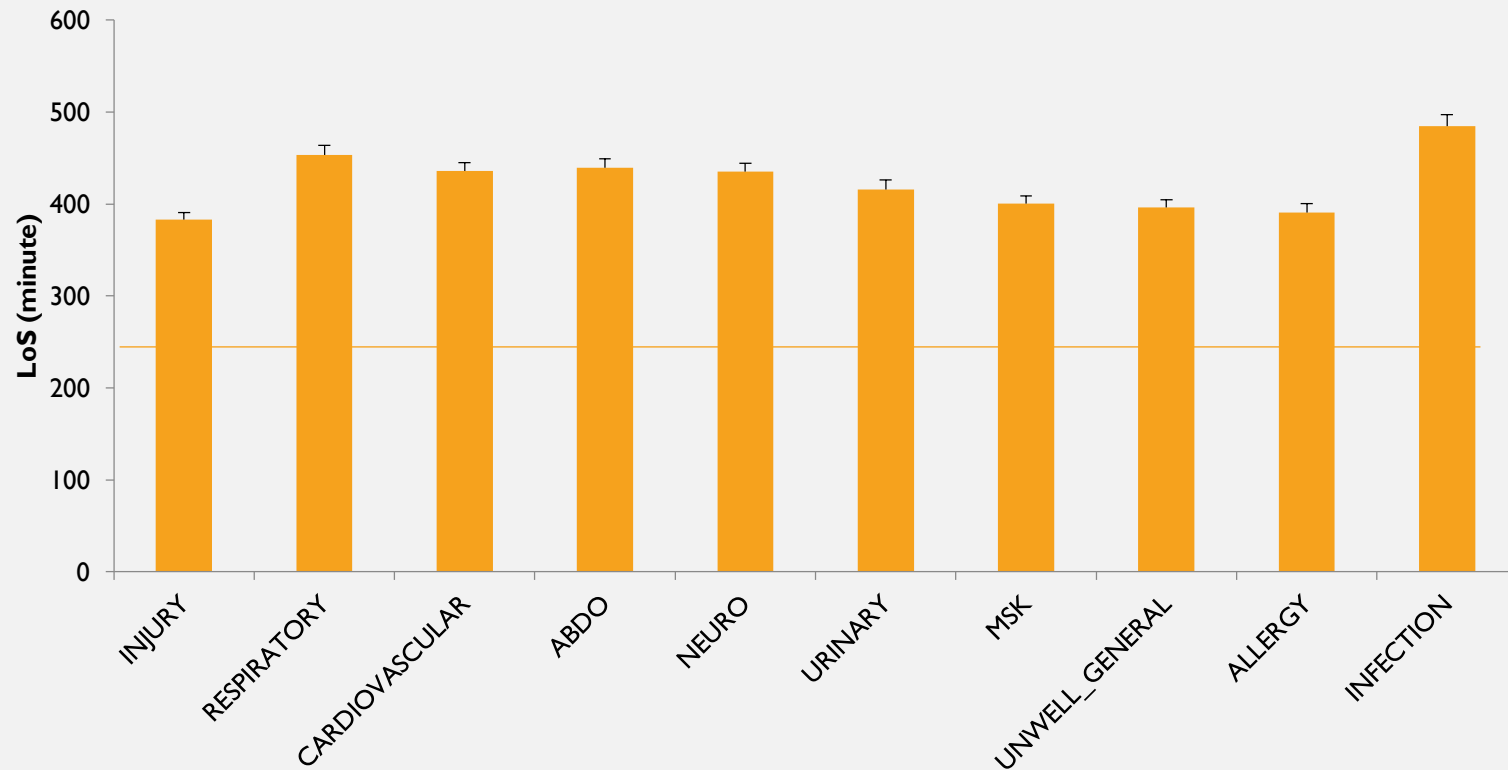
Admission rate - 64%

No statistical difference between home and nursing home pts in admission rates



Representation rate (7 day) 5%

# LENGTH OF STAY IN ED



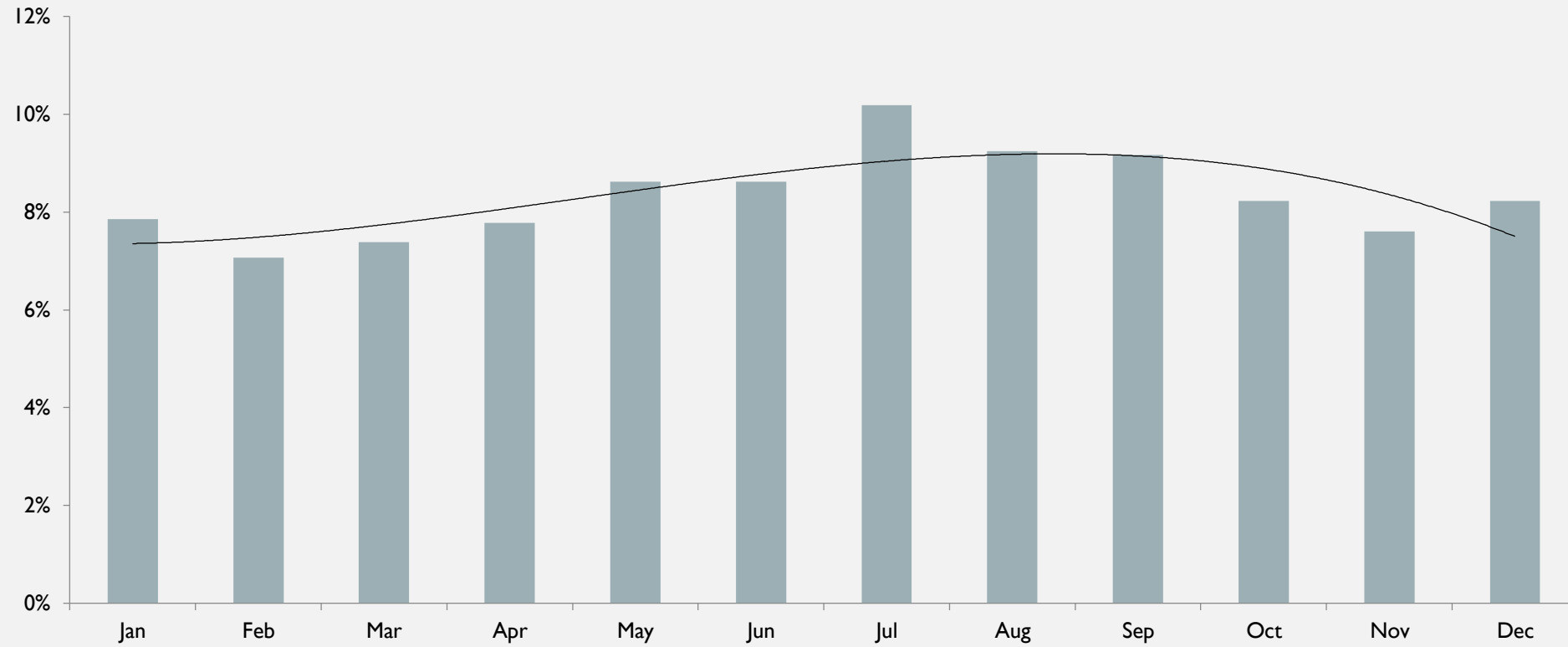
## NSW ETP target

- 4 hr target met for 32%
- Discharged ETP – 48%
- Admitted ETP – 25%

Median LOS was 5.7 hrs



# MONTH OF PRESENTATION



# LOOKING TO THE FUTURE

How can we streamline these patients through the ED, given their high admission rates and prolonged LOS?

Could more care be given in the community, especially in aged care facilities?



# IS THERE A ROLE FOR SEPARATE GERIATRIC EDs OR SSU?

ANZ SOCIETY FOR GERIATRIC MEDICINE  
POSITION STATEMENT 2015 –

“THE MANAGEMENT OF OLDER PERSONS IN  
THE EMERGENCY DEPARTMENT”

- Rate of presentation for older patients to EDs is increasing at a rate faster than for younger patients
- Existing models of ED care were designed for acutely ill and injured patient rather than medically complex and functionally impaired senior
- Older pts present with more complex medication conditions, have longer ED and hospital stays, and are more likely to be admitted



- Geriatric EDs (“Senior ERs”) have been opening up across the US over the last 10 years, focusing on...
  - Physical space - falls & delirium management
  - Use of screening tools - falls assessment, medications, delirium & dementia assessment & palliative care
  - Multidisciplinary care coordination, with staff that have further skills and specific geriatric ED training

# COMMUNITY BASED CARE

Our study showed no difference in admission rates for presentations from home and nursing home

Could some of these admissions especially from nursing homes be avoided?

- Hospital in the Nursing Home
  - Recent NSW HITH Forum 2018 included a presentation on RACF patients
- Aged Care Emergency project (ECI website) 2011-2
  - Aimed to support RACF staff and residents to facilitate acute care within NH rather than needing ED transfer - resulted in reduced ED presentations and admissions

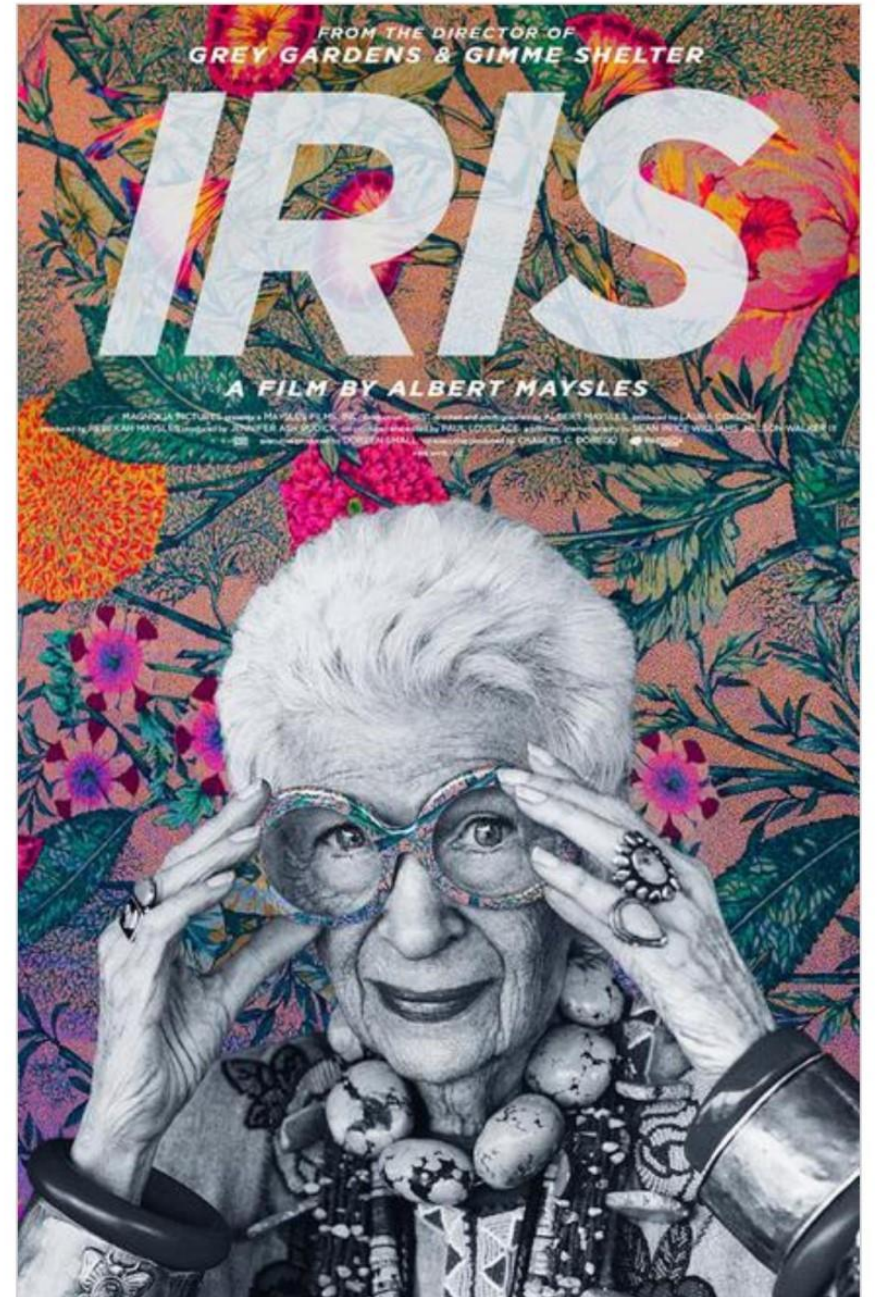
How can we improve access to primary care services as well as community based geriatricians?

- Could telemedicine or outreach services be used to avoid physical transfers to hospital?

## REDEFINING “OLD AGE”

Traditionally defined at 65 years & over  
(in developed countries and research literature)

Given the increase in our life expectancy and improvements in health, should this be redefined to higher age such as 75 years



*Iris Apfel - Redefining Old Age Style*



# NOT ALL OLD PEOPLE ARE THE SAME

Well recognized that an aging population is associated with an increasing burden of disease – however it is not just about chronological age

Recent UK study looking at death certificates showed that “younger elderly” patients are more likely to die from chronic diseases such as IHD, COPD or cancer

Centenarians are more likely to die from acute illnesses, such as infections

## AGEING and HEALTH



Between 2000 and 2050, the number of people aged 60 and over is expected to double

In 2050, more than 1 in 5 people will be 60 years or older.



By 2050, 80% of older people will be living in low- and middle-income countries.

### ▶ EVERY OLDER PERSON IS DIFFERENT



Some have the level of functioning of a 30 year old.



Some require full time assistance for basic everyday tasks.

Health is crucial to how we experience older age.

### ▶ WHAT INFLUENCES HEALTH IN OLDER AGE



### ▶ WHAT IS NEEDED FOR HEALTHY AGEING

A change in the way we think about ageing and older people



Creation of age-friendly environments



Alignment of health systems to the needs of older people



Development of systems for long-term care



Healthy Ageing...being able to do the things we value for a long as possible  
#yearsahead

## MANY CENTENARIANS ARE “HEALTHY” BUT FRAIL

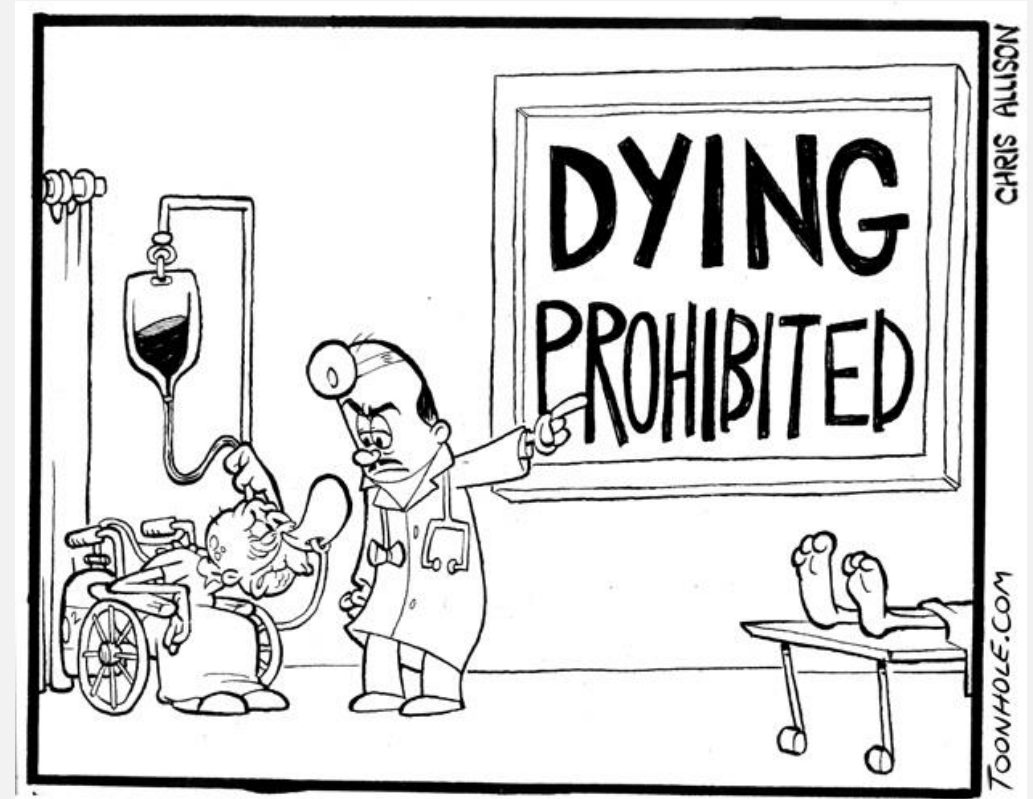
Studies looking at the health of centenarians show that they are often “healthier” than their younger counterparts - US data shows....

23% reach 100 without any chronic disease

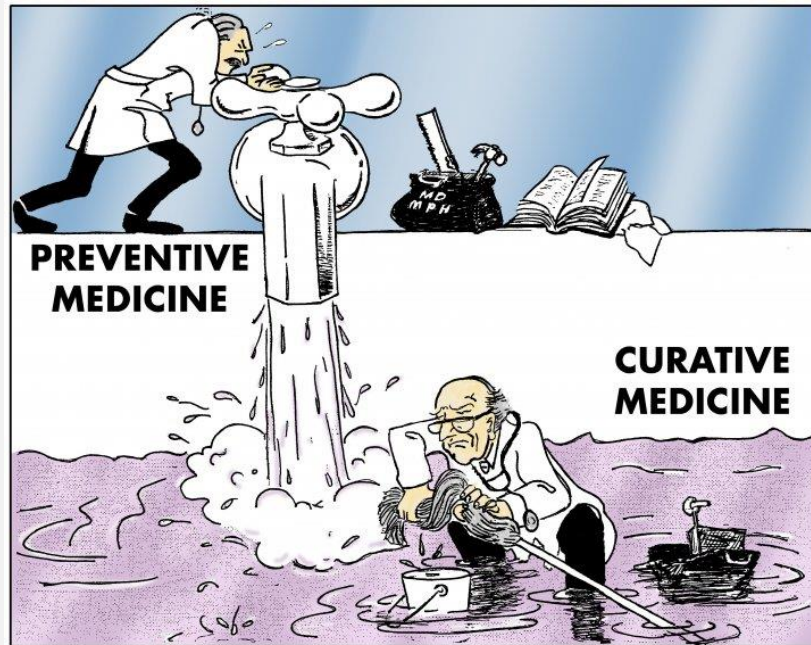
55% do not have any cognitive impairment

However, most centenarians are still “frail”

Priorities should be to develop appropriate management goals and pathways, which should include end of life planning



# LOOKING MORE BROADLY – INJURY PREVENTION



- Falls and injuries are the most common reason for these people to present to ED
- Programs targeting falls prevention are important to reduce the burden of injury in this age group
- Effective falls prevention strategies include
  - Balance and strength training
  - Home safety interventions
  - Eye examinations and treating visual impairment
- Further interventions such as improved nutrition need to start now among younger age groups



# LOOKING MORE BROADLY – IMPROVING AGED CARE FACILITIES

- Returning to the “oldest population” in Japan, we may be able to learn a few things from their aged care facilities
  - Nutritionist on staff in all facilities
    - Emphasis on good nutrition as well as improved quality of life through food choices & enjoyment
    - Facilities for relatives to prepare home cooked food
  - Life rehabilitation
    - Includes physical exercise / strength training as well as cultural pursuits, such as calligraphy
  - Emphasis on maintaining seasonality and cultural practices to reduce the disconnect with the “outside world”



# ACKNOWLEDGEMENTS

DESTINY project team, supported by ACI



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