

What do we know about the physical health of older people with mental illness, and what does this mean for improving care?

Prepared by

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Health

Overview

- Ageing population
- Physical health and mental health in older people
- Physical health needs of older people with mental illness
- How are we responding to these needs?
- What does this mean for care?

85 is the new 65

(Roberts, 2017)

Editorial

The health of older people in Australia: 85 is the new 65

The 2016 census findings reveal that the population over the age of 65 is 3.6 million people.¹ In 1911 one in 25 in Australians were over the age of 65, compared to one in six in 2016.² The 2016 census also showed 84 000 more people aged 85 years and older than in 2011¹ and it is predicted that the number of people over 85 will double by 2032.² Eighty-five is the new 65.

What does this rapid increase in the number of older Australians mean for rural health service provision? The standard answers are it means an ageing workforce combined with a greater demand for health services and a higher percentage of the population on the aged pension without private health insurance, with all of these factors pointing to an impending health care crisis. However, closer inspection of the data suggests the picture may not be this straightforward.

Australian men and women can expect to live 7 years longer than in the mid-1960s.³ The additional years of longevity appear to be additional *healthy* years, perhaps due to better sanitation, infection control, vaccination, health promotion, better preventative health initiatives and improved health care. The number of years living with 'severe or profound core activity limitation'⁴ appear to be about the same, they just occur at a much older age.

The percentage of Australians over 65 years receiving the age pension is trending down and is at its lowest since 1992.⁵ In addition, means testing of accumulated assets and wealth and the trend to increased levels of voluntary and mandatory superannuation will mean fewer people will be eligible for the aged pension over time. Our older population is wealthier than before. Older Australians also have higher rates of home ownership than the younger generations and home ownership is a major protective factor against financial and housing difficulties in older age. (The current housing affordability issues in major cities and reduced home ownership will have profound impacts for city-based older people in future decades that won't be evident in regional and rural communities, where houses remain more affordable.)

We also have high levels of community participation in the form of social, recreational and community activities.² Nearly 60% of over 65s participate in a social group and 30% in a community support group.⁶ Older Australians are better educated than ever before

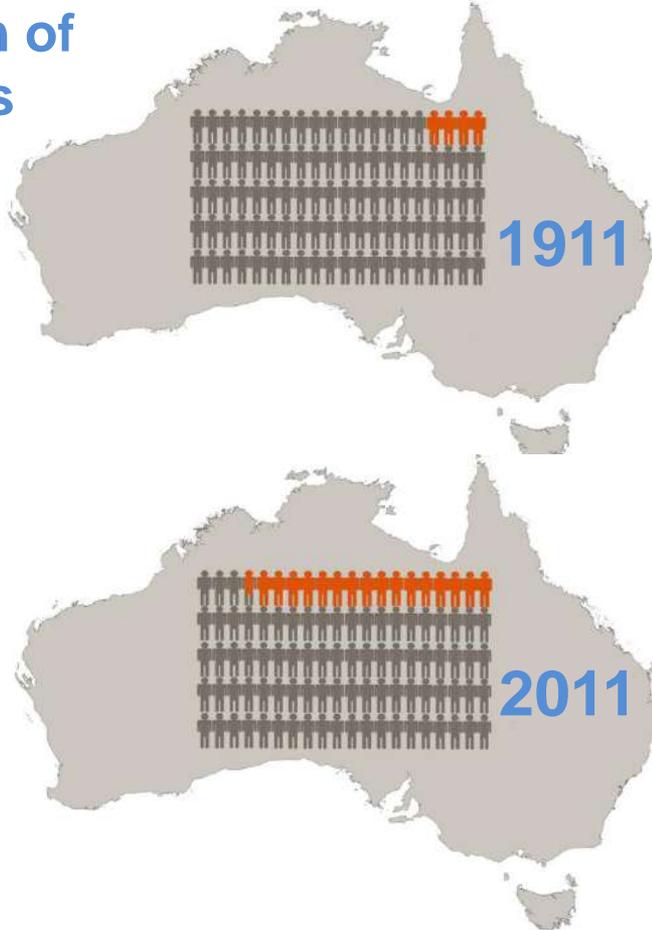
(almost 10% have a bachelor's degree or above) and are now working longer in paid employment, both on a full-time and part-time basis, well past 65 years of age.⁴

Older Australians contribute a high proportion of voluntary work. Nearly a million people (31%) of those over 65 are providing voluntary labour for an organisation. A free, engaged workforce of 1 million people and a potential 2 million more! In addition to this, over half a million older people are the informal and/or primary carers for a dependent spouse, with additional numbers caring for an older parent or a dependent child. Older people also provide a substantial child-care service. In fact, they are the largest single provider of childcare. Almost 20% of children aged 0–11 years attend care with their grandparents.⁷ Our community and caring services would be severely overstretched and possibly overwhelmed without the voluntary work of those 65 years and older.

In sum, what do the 2016 census and recent the National Health Survey and Australian Institute of Health and Welfare reports tell us? Australians aged 65 years and over are more numerous, wealthier, better educated, better housed and contribute more paid and voluntary work than ever before. Each of these factors are significant determinants and predictors of health, and older Australians are healthier and living longer than ever before.

Nonetheless, ageing does bring health challenges. The rate of co-existing physical illnesses increases dramatically with age. According to the 2014–2015 National Health Survey, 60% of people over 65 had one or more of eight selected chronic diseases, compared to 10% of people aged 0–44, and almost 30% of those over 65 had three or more chronic diseases compared to 2.4% of those under 45.⁸ For those living in regional and remote areas the rate of co-morbidity was 33% higher than for those living in major cities.⁸ This rural-city differential demonstrates the effectiveness of adequate screening, diagnosis and service provision in reducing the incidence of co-morbidities and thereby enhancing the health of older people.

Mental health co-morbidity in older persons also presents a challenge. The rate of depression in residential aged-care facilities is alarming at approximately 50%.⁹ This is unacceptable and demands immediate action. The view that a high rate of depression is to be expected given the challenges and losses associated



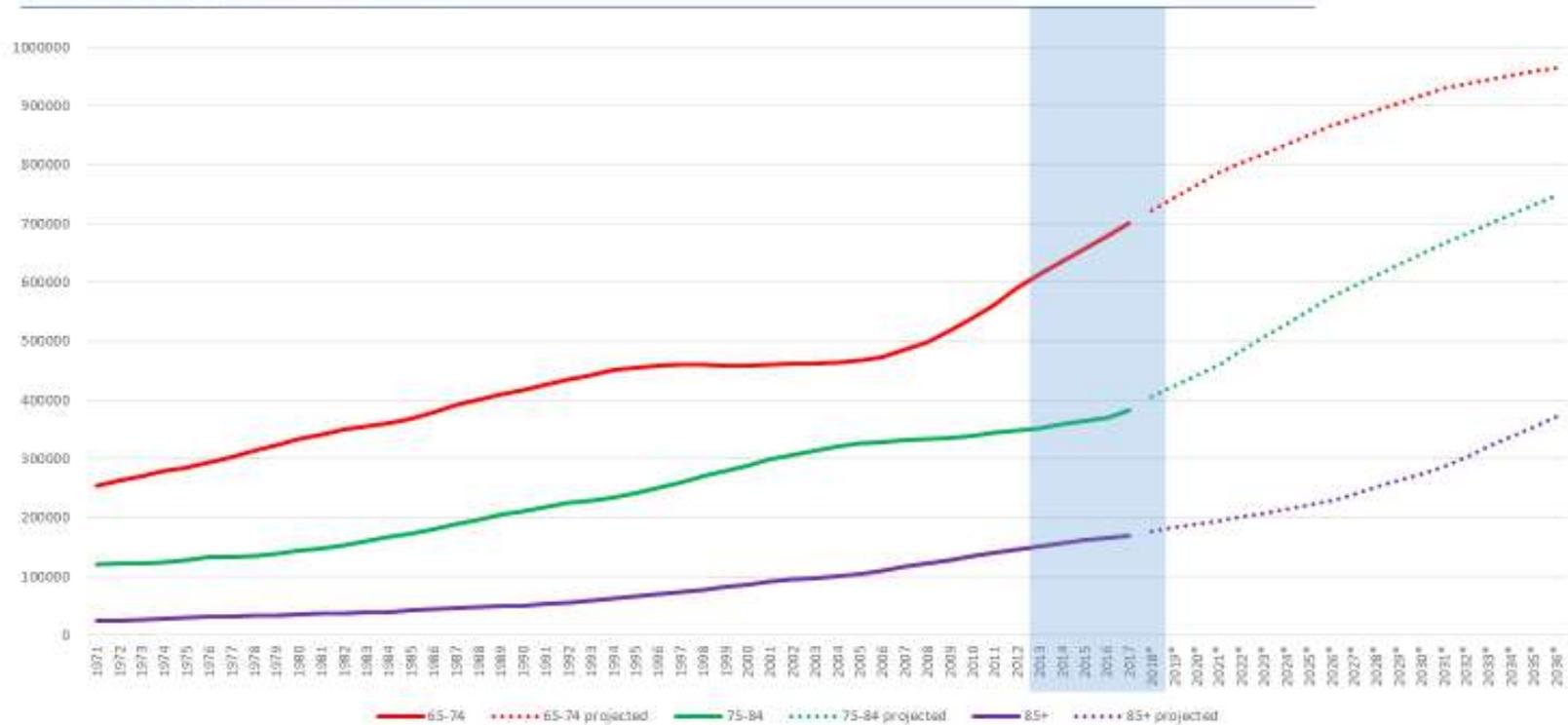
Proportion of over 65s

● Australians are living 7 years longer than in mid 1960s

These are additional HEALTHY years!

Population ageing: a more differentiated perspective

NSW Population 65+



- Projected data

Data from <http://www.healthstats.nsw.gov.au>

Over 65's



- Provide 20% of ALL childcare of 0-11 yr olds
- 60% social participation
- 10% have a bachelors degree or above
- 31% provide voluntary work (over 1,000,000 people)

Age has a protective effect on mental health

- Age has a protective effect on mental health (17%)
Lorem et al 2017
- **But** the rate of depression in RACF is 50%
- And in 8 of the last 10 years men over 85 have the highest rate of suicide

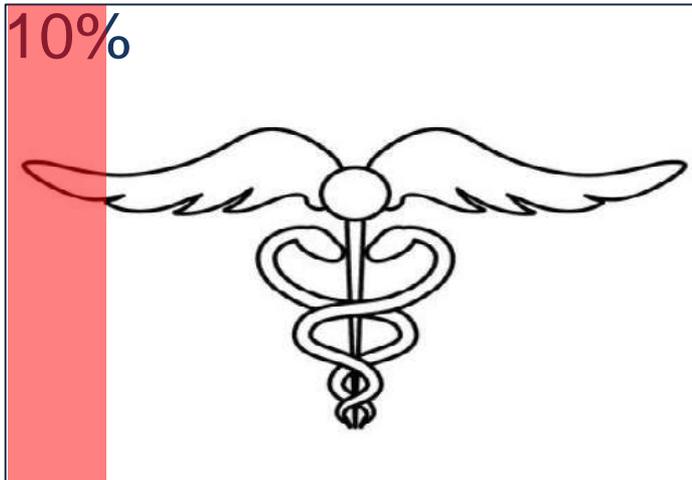


But...comorbidity rises dramatically!!

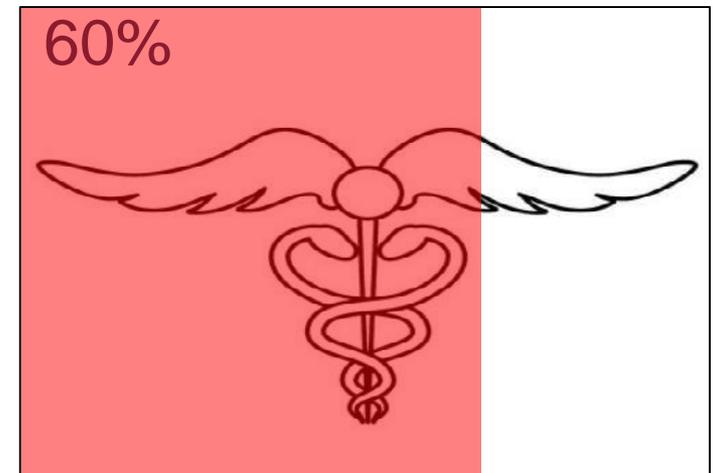


**National Health Survey: Mental Health
and co-existing physical health conditions,
Australia, 2014 – 15.**
(Feb, 2016)

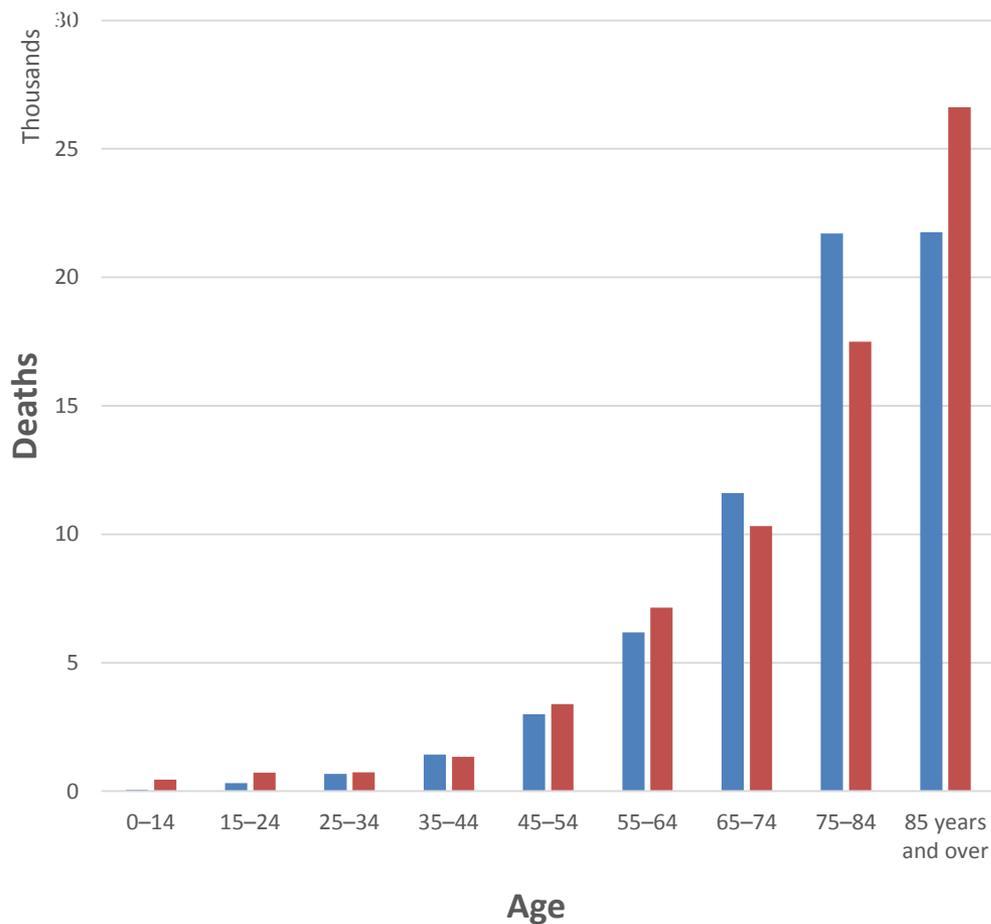
Under 45s



Over 65s



Each year more people aged 65 - 85 living with mental illness die than the entire rest of the Australian population in that age range



Mortality of People Using Mental Health Services and Prescription Medications

Analysis of 2011 data

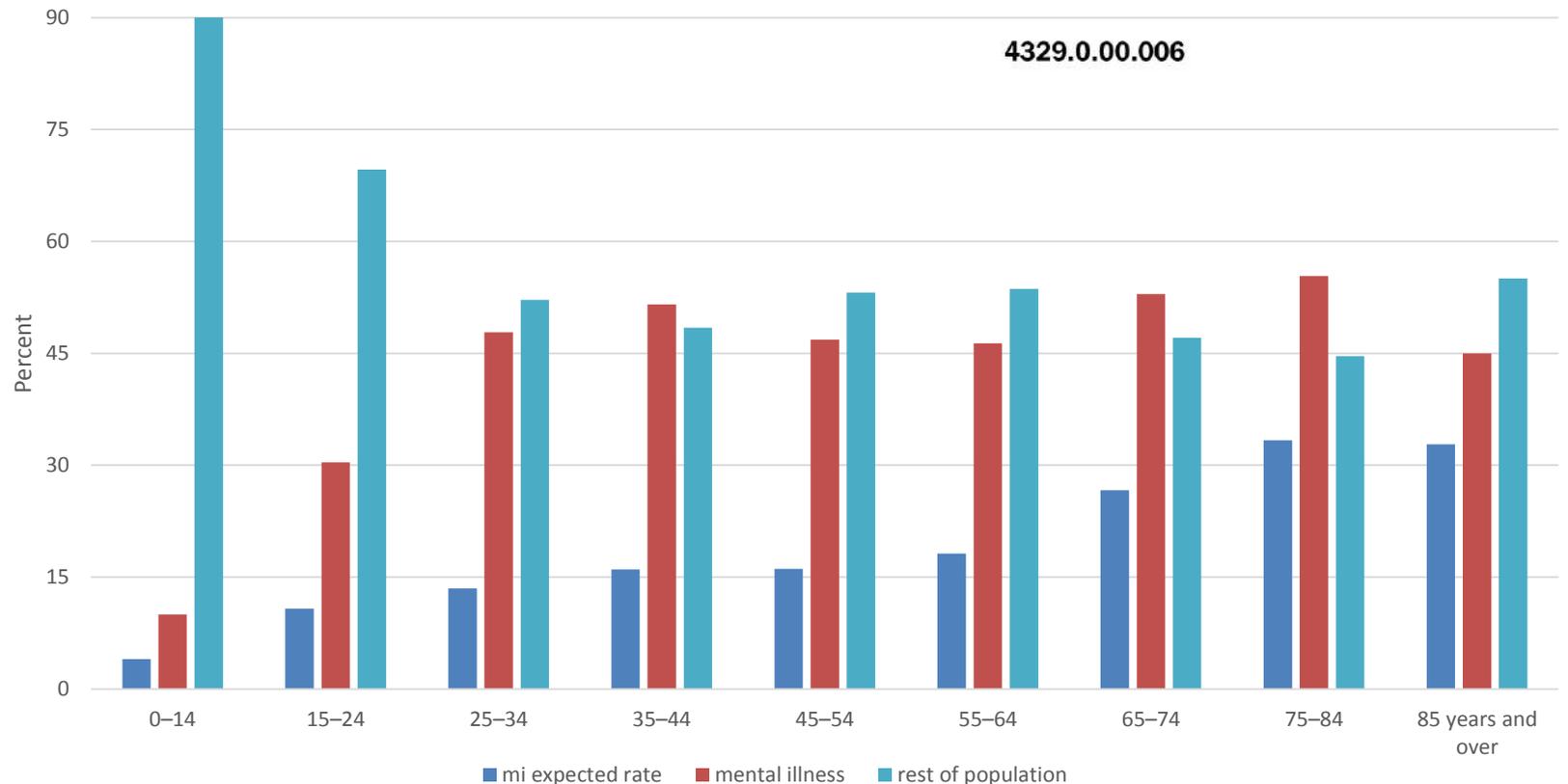
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And the percentage of population accessing MBS/PBS treatments goes up to about 30%



Mortality of People Using Mental Health Services and Prescription Medications

Analysis of 2011 data



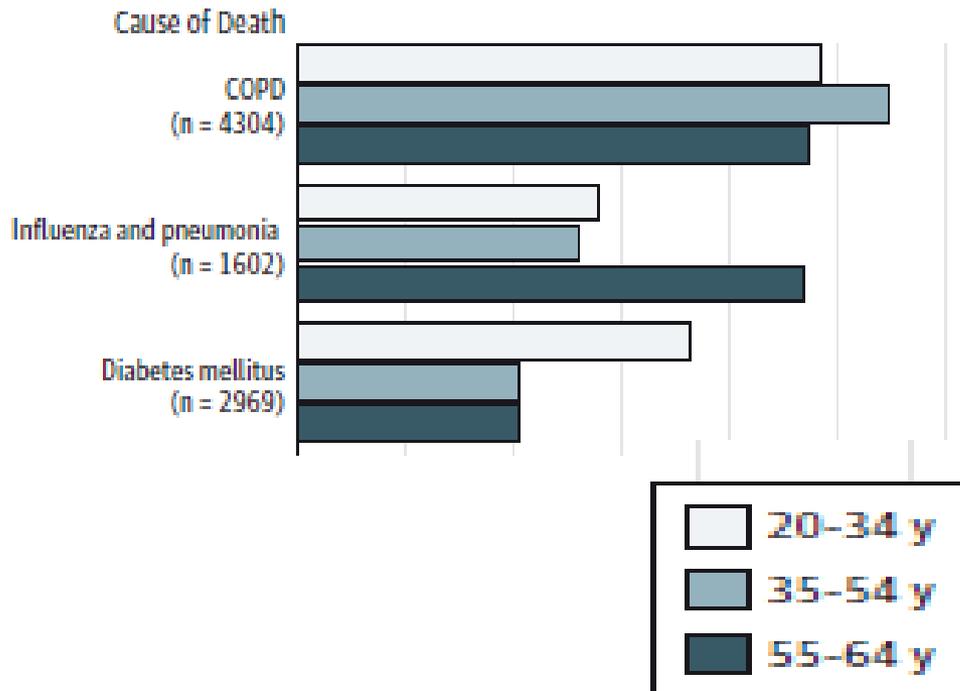


Relationship status : "It's complicated"

Changes in risk are not simply age related

(Olfsen 2015)

Figure. Standardized Mortality Ratios of Adult Medicaid Beneficiaries Diagnosed as Having Schizophrenia for 10 Common Causes of Death by Age Group (January 1, 2001, to December 31, 2007)



Research

Original Investigation

Premature Mortality Among Adults With Schizophrenia in the United States

Mark Olfsen, MD, MPH, Tobias Gerhard, PhD, Cecilia Huang, PhD, Stephen Crystal, PhD, T. Scott Stroup, MD, MPH

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Supplemental content at jamapsychiatry.com

IMPORTANCE Although adults with schizophrenia have a significantly increased risk of premature mortality, sample size limitations of previous research have hindered the identification of the underlying causes.

OBJECTIVE To describe overall and cause-specific mortality rates and standardized mortality ratios (SMRs) for adults with schizophrenia compared with the US general population.

DESIGN, SETTING, AND PARTICIPANTS We identified a national retrospective longitudinal cohort of patients with schizophrenia 20 to 64 years old in the Medicaid program (January 1, 2001, to December 31, 2007). The cohort included 1 138 853 individuals, 4 807 121 years of follow-up, and 74 003 deaths, of which 65 553 had a known cause.

MAIN RESULTS AND MEASURES Mortality ratios for the schizophrenia cohort standardized to the general population with respect to age, sex, race/ethnicity, and geographic region were estimated for all-cause and cause-specific mortality. Mortality rates per 100 000 person-years and the mean years of potential life lost per death were also determined. Death record information was obtained from the National Death Index.

RESULTS Adults with schizophrenia were more than 3.5 times (all-cause SMR, 3.7; 95% CI, 3.7-3.7) as likely to die in the follow-up period as were adults in the general population. Cardiovascular disease had the highest mortality rate (403.2 per 100 000 person-years) and an SMR of 3.6 (95% CI, 3.5-3.6). Among 6 selected cancers, lung cancer had the highest mortality rate (74.8 per 100 000 person-years) and an SMR of 2.4 (95% CI, 2.4-2.5). Particularly elevated SMRs were observed for chronic obstructive pulmonary disease (9.9; 95% CI, 9.6-10.2) and influenza and pneumonia (7.0; 95% CI, 6.7-7.4). Accidental deaths (52.0 per 100 000 person-years) accounted for more than twice as many deaths as suicide (25.0 per 100 000 person-years). Nonsuicidal substance-induced death, mostly from alcohol or other drugs, was also a leading cause of death (95.2 per 100 000 person-years).

CONCLUSIONS AND RELEVANCE In a US national cohort of adults with schizophrenia, excess deaths from cardiovascular and respiratory diseases implicate modifiable cardiovascular risk factors, including especially tobacco use. Excess deaths directly attributable to alcohol or other drugs highlight threats posed by substance abuse. More aggressive identification and management of cardiovascular risk factors, as well as reducing tobacco use and substance abuse, should be leading priorities in the medical care of adults with schizophrenia.

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JAMA Psychiatry. 2015;72(12):1172-1181. doi:10.1001/jamapsychiatry.2015.1137
Published online October 28, 2015.

But it's clear that poor physical health is the largest contributor to poor mental health (Lorem et al, 2017)

“...mental health symptoms caused by physical illness is an increasing public health problem”

- 40,000 participants over 65.
- Waves of research at 7 year intervals from 1974 to 2008.
- Age has a protective effect on mental health (17%)
- **Physical illness has major impact: 42% of total effect**

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Open Access Research

BMJ Open Ageing and mental health: changes in self-reported health due to physical illness and mental health status with consecutive cross-sectional analyses

Geir Fagerjord Lorem,¹ Henrik Schirmer,^{2,3} Catharina E A Wang,^{4,5} Nina Emaus¹

ABSTRACT
Objectives: It is known that self-reported health (SRH) declines with increasing age and that comorbidity increases with age. We wished to examine how age transfers its effect to SRH through comorbid disease and mental illness and whether these processes remained stable from 1994 until 2008. The hypothesis is that ageing and/or the increased age-related burden of pathology explains the declining SRH.
Setting: The Tromsø Study (TS) is a cohort study using a survey approach with repeated physical examinations. It was conducted in the municipality of Tromsø, Norway, from 1974 to 2008.
Participants: A total of 21 199 women and 19 229 men participated.
Primary and secondary outcome measures: SRH is the outcome of interest. We calculated and compared the effect sizes of age, comorbidity and mental health symptoms using multimedator analysis based on OLS regression.
Results: Ageing had a negative impact on SRH, but the total effect of age decreased from 1994 to 2007. We assessed the direct effect of age and then the proportion of indirect age-related effects through physical illness and mental health symptoms on the total effect. The direct effect of age represented 79.3% of the total effect in 1994 and decreased to 58.8% in 2007. Physical illness emerged as an increasingly important factor and increased its influence from 15.7% to 41.2% of the total effect. Age alone has a protective effect on mental health symptoms and this increased (2.5% to 17.3%), but we found a stronger association between mental health symptoms and physical disease in the later waves of the study (increasing from 3.7% to 14.8%).
Conclusions: The results suggest that the effect on SRH of mental health symptoms caused by physical illness is an increasing public health problem. Treatment and care for specific medical conditions must therefore focus more strongly on how these conditions affect the patient's mental health and address these concerns accordingly.

Strengths and limitations of this study

- The sample comprises large, representative samples of a general population with repeated measures at ~7-year intervals.
- Multimedator analysis allows for the interpretation of the joint effect of age, comorbid disease and mental health on self-reported health.
- We used the repeated measures as separate cross-sectional data in the analysis.
- The last three panels (1974–1986) did not include any adequate measurement of mental health symptoms and were excluded, but the CONDR-MHI (1994) was validated against the Hopkins Symptom Checklist and showed good agreement.

the patient or participant. It is well known that a whole range of biological, psychological and socioeconomic factors affect SRH, and also that these factors interact.^{1–5} The research literature suggests that SRH is produced in a cognitive process that is inherently subjective and contextual, and also that SRH predicts mortality and other health outcomes; this shows that the basis of self-rated health lies in the biological and physiological state of the individual organism.⁶ Well-known crucial biological factors that independently affect SRH are specific medical conditions (eg, cardiovascular diseases, diabetes and asthma) and health risk factors (eg, resting heart rate, blood pressure, cholesterol, BMI and endocrine measures). Although the effect of SRH attenuates when such variables are controlled for, SRH still remains as an independent variable for all-cause death and other future health outcomes.^{7–11} Mental health symptoms affect SRH, but mental health is also affected by physical disease. The literature suggests that severity of mental health symptoms correlates with many specific medical conditions, and consequently with impaired well-being. Comorbid strain increases with increasing age, and older

INTRODUCTION
Self-reported health (SRH) is a subjective assessment of current health status as seen by

Publication history and additional material is available. To view please visit the journal (<http://dx.doi.org/10.1136/bmjopen-2016-013629>).

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BMJ

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What do we know of the physical health needs of older people with mental illness?

● **Impacts of psychiatric medications on physical health**

- Antipsychotics (and anti-depressants, mood stabilisers) associated with increased risk for several physical diseases *including obesity, dyslipidemia, diabetes mellitus, thyroid disorders, hyponatremia; cardiovascular, respiratory tract, gastrointestinal, haematological, musculoskeletal and renal diseases*
- Older age and polypharmacy (common in older people), and higher dosages associated with greater risk for most of these diseases

Correll et al, 'Effects of antipsychotics, antidepressants and mood stabilizers on risk for physical diseases in people with schizophrenia, depression & bipolar disorder' (*World Psychiatry*, 4 June 2015)

● **Association between physical health and mental health**

- Besides depression, the number of physiological diseases is more important than physical function on the mental health of elderly adults in Taiwan

Ren-Hau Li et al, title as above (*Community Mental Health Journal*, 1 Feb 2017)



What do we know of the physical health needs of older people with mental illness? (cont.)

- **Particular risks and guidance for older mental health consumers**
 - Older people more frequently experience inter-related medical, psychiatric and social issues
 - Older people are particularly at risk of problems related to falls, multiple medication use, malnutrition, pressure areas (if they have reduced mobility), musculo-skeletal limitations and pain, constipation
 - Potential challenges to obtaining an accurate and complete physical health history may include hearing or visual impairment, memory impairment and minimisation of symptoms or conditions
 - Consent to examination and treatment may be complex
 - In new presentations and in relapse of established illness in older people, it is important to take delirium into account

Who has what needs?

- **Older people with schizophrenia**

- similar to controls re registered chronic medical illnesses, but significantly **less likely** to receive medication for cardiovascular diseases and more likely to be treated with analgesics
- Overall, hospital admissions and days hospitalized equal to controls, but with significantly fewer general medical outpatient contacts

Brink et al, 'Physical Health, Medication, and Healthcare Utilization among 70-Year-Old People with Schizophrenia: A Nationwide **Danish Register Study**' (*Am J Geriatric Psychiatry* 25:5, May 2017)

- Excess mortality continues into later life, affecting men more often than women

Meesters et al, 'Mortality and Its Determinants in Late-Life Schizophrenia: A 5-Year Prospective Study in a **Dutch Catchment Area**' (*Am J Geriatric Psychiatry* 24:4, April 2016)

Who has what needs? (cont.)

- **Older people with severe mental illness**

- Higher frequency of metabolic syndrome in older patients with severe mental illness

Konz et al, 'Screening for Metabolic Syndrome in Older Patients with Severe Mental Illness' (Am J Geriatric Psychiatry, 22:11, November 2014)

- **Older people with anxiety and comorbid physical conditions**

- Increased mental health service use associated with comorbid anxiety disorder with cardiovascular disease or arthritis
- Comorbidity between gastrointestinal conditions and anxiety associated with unmet mental health service needs

El-Gabalawy et al, 'Mental health service use among older Canadians with anxiety and comorbid physical conditions' (Aging & Mental Health, 20:6, April 2015)

Are we meeting these needs?

- **Under-assessment and under-treatment of physical health problems in older people with schizophrenia**
 - Despite known risks of obesity, diabetes, hypertension, etc only 51% patients received BMI recording, 21% had evidence of assessment of all 9 key physical health measures
 - Among those with high blood sugar, only recorded evidence of 53.5% receiving appropriate intervention
 - Despite this, most patients reported that they were satisfied with the physical health care they received

Crawford et al ' Assessment and treatment of physical health problems among people with schizophrenia' (British Journal of Psychiatry, 205, 2014)

Are we meeting these needs? (cont.)

- **Clinician attitudes towards older people with severe mental illness and physical illness**
 - Challenge of managing physical healthcare needs in addition to mental health issues
 - Many older adults with severe mental illness and physical health needs are ‘falling through the gap’, with a lack of clarity about where responsibility lies
 - More collaboration between services and ongoing clinician education is required

Clifton et al, ‘An exploration of clinician attitudes toward older adults experiencing mental and physical health problems in the UK’ (International Journal of Ageing and Society, 7 (1), 2016)

How are OPMH services responding to physical health needs?

Jurisdiction National
Age Group Older Person
Measure HoNOS65+
View Item 05 - Physical illness - disability
Level of Analysis Episode Transition
Transition Admission/Discharge
Individual Comparison 1
Change Score
Service Setting Inpatient
Financial Year 2013-2014, 2014-2015, 2015-2016

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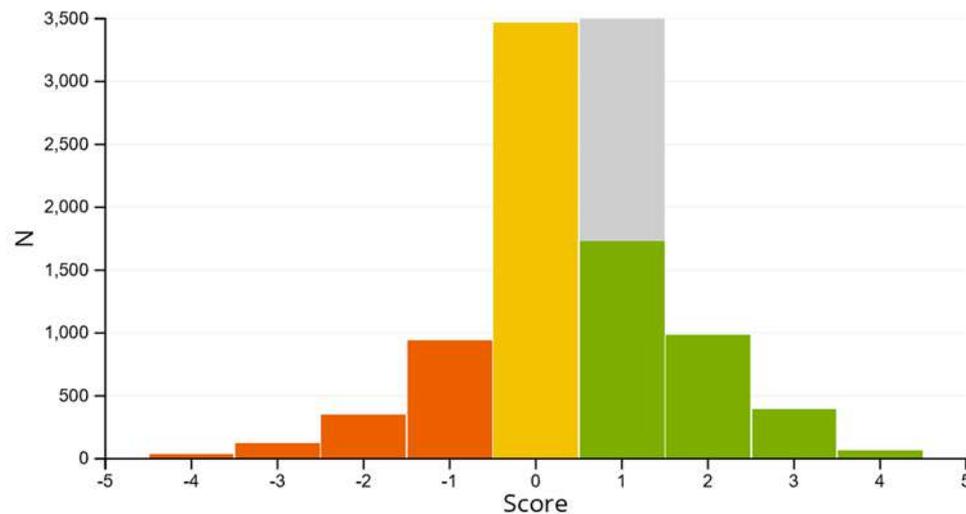
Summary

N	Mean	Std Dev
8103	0.4	1.3

Percentiles

10	25	50	75	90
-1.0	0.0	0.0	1.0	2.0

Chart



Significant Improvement ■
 Improvement ■
 No Change ■
 Deterioration ■
 Significant Deterioration ■

How are OPMH services responding to physical health needs? (cont.)

Jurisdiction National
Age Group Older Person
Measure HoNOS65+
View Item 10 - Activities of daily living
Level of Analysis Episode Transition
Transition Admission/Discharge
Individual Comparison 1
Change Score
Service Setting Inpatient
Financial Year 2013-2014, 2014-2015, 2015-2016

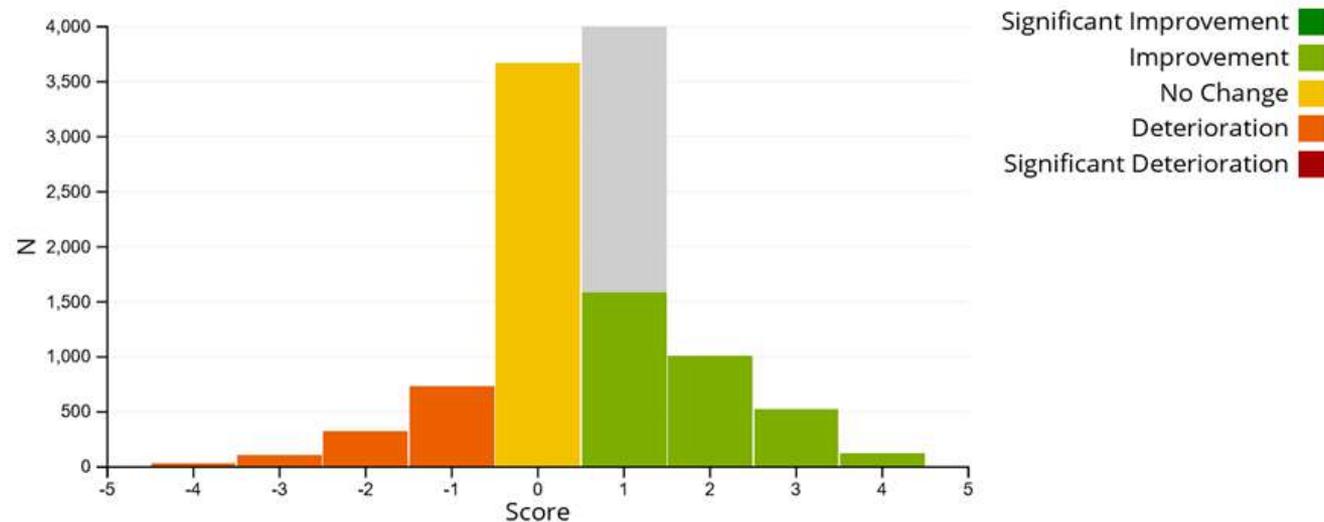
Summary

N	Mean	Std Dev
8116	0.5	1.3

Percentiles

10	25	50	75	90
-1.0	0.0	0.0	1.0	2.0

Chart



How are OPMH services responding to physical health needs? (cont.)

- NSW OPMH annual benchmarking self-audit results against range of good practice standards, indicate OPMH services challenged by a number of standards relating to physical health care:
 - Involvement of GPs (in pre-admission processes, initial assessment and care, care coordination)
 - Access to nursing staff trained in IV medication and fluids, SC fluids in inpatient settings
 - Physical examination of older consumers in the community
 - Action about falls prevention (especially in the community)
- NSW OPMH community Model of Care evaluation
 - Confirms challenges re physical health assessment, accessing skilled staff for assessment and management (physios, dietitians, GPs), other self-audit findings

How are OPMH services responding to physical health needs? (cont.)

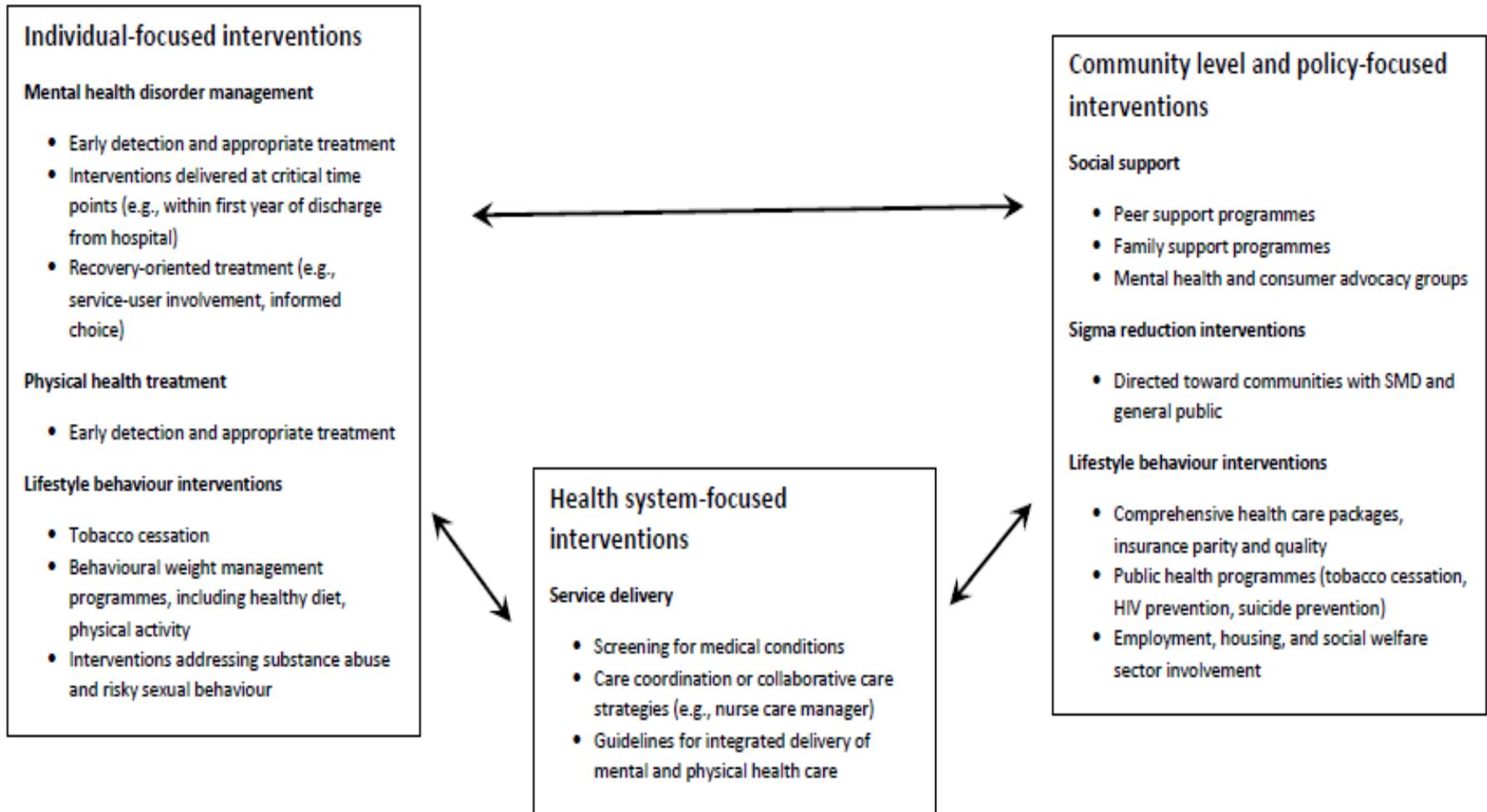
- In NSW, measure of consumer experience of mental health services ('Your Experience of Services' or 'YES' questionnaire) includes specific set of questions re physical health care
- YES results for OPMH services indicate:
 - **High** level of information/advice provided about healthy eating and diet, exercise and physical activity
 - **Medium** level of information/advice provided about possible side effects of medications (slightly better in community services), alcohol and drug use (better in community services), smoking (where relevant)
 - **Low** level of information/advice about sexual health
- High consumer satisfaction with OPMH services

What does this mean for care?

- Ageing population
- Different sub-groups of older people with mental illness (eg younger old and older old)
- High physical and mental health co-morbidity in older people - integrated care imperative
- Understanding of risks and complexities specific to older people with mental illness (eg NSW Health guidance)
- Improving assessment and treatment in known physical health risk areas (eg cardiovascular conditions, obesity, diabetes)
- Looking within OPMH services at attitudes to physical health care and collaborative care, staff skills and staffing profiles, collaboration (esp. with GPs), advice to consumers on physical health issues

WHO implementation framework

Lui et al. (2017) World Psychiatry



Questions?

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