

# Has increased provision of treatment reduced the prevalence of common mental disorders? Evidence from four countries. Seeking preventive solutions?

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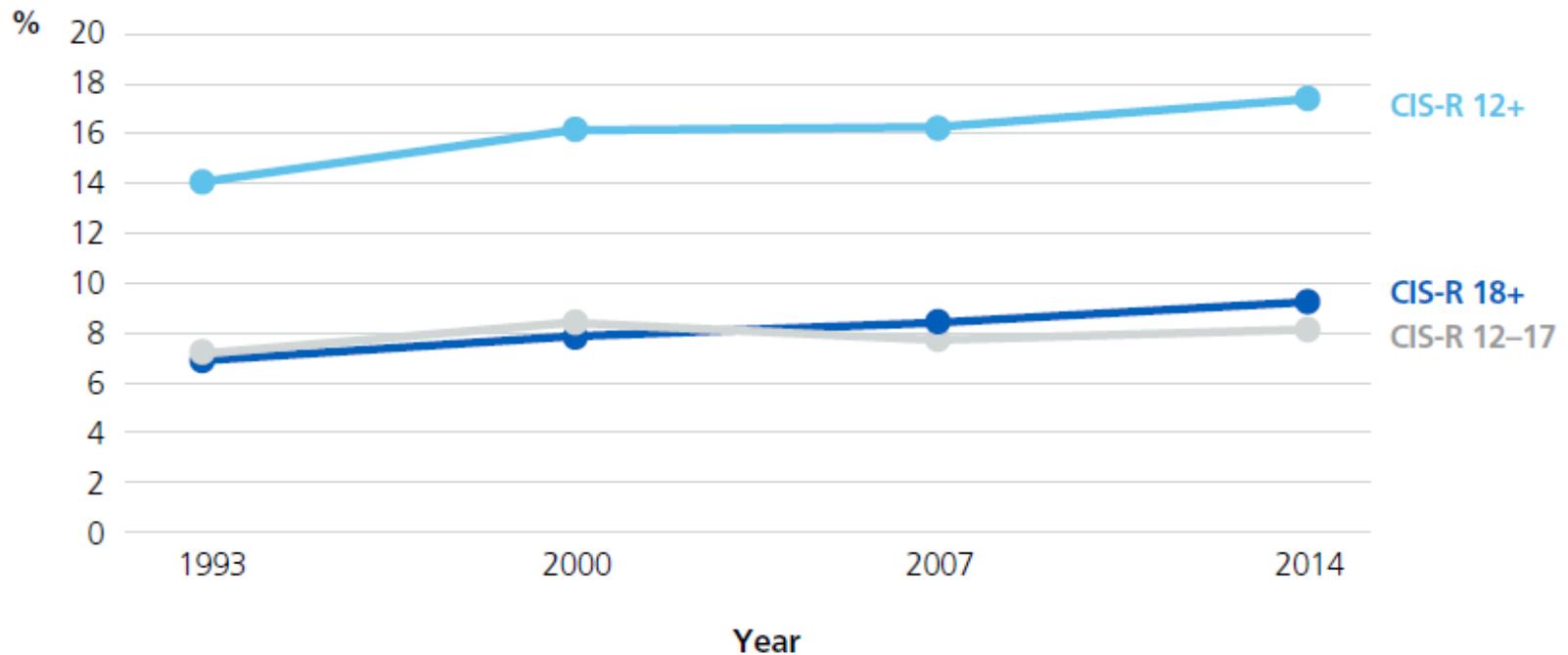
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- *Many people identified as having common mental disorders in community surveys do not receive treatment.*
- *Modelling has suggested that closing this “treatment gap” should reduce the population prevalence of those disorders.*
- *To evaluate the effects of reducing the treatment gap in industrialized countries, data from 1990 to 2015 were reviewed from four English-speaking countries: Australia, Canada, England and the U.S..*
- *These data show that the prevalence of mood and anxiety disorders and symptoms has not decreased, despite substantial increases in the provision of treatment, particularly antidepressants...*
- *For example 4 surveys across England since 1993 show:*

**Figure 2C: CIS-R score, 1993 to 2014**

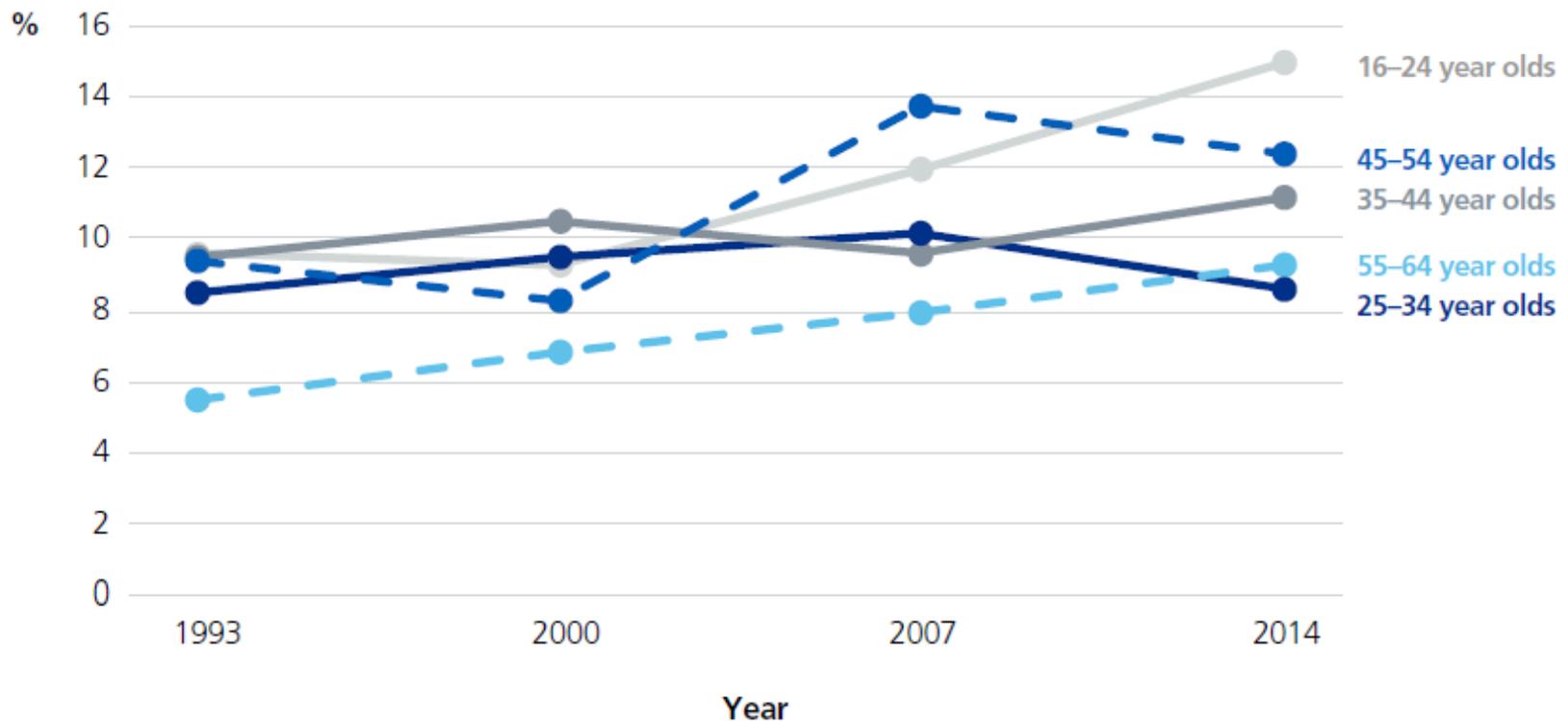
*Base: adults aged 16–64*



Trend shows an **increase** in severe common mental disorder symptoms across four national surveys of England since 1993 from **6.9% to 9.3%**.

**Figure 2F: Severe CMD symptoms (CIS-R 18+) in women, 1993 to 2014**

*Base: women aged 16–64*



Increases in rates of severe CMD symptoms were most pronounced in women aged 16 to 24 (from 9.6% in 1993 to 15.1% in 2014) and 55 to 64 (from 5.5% to 9.3%)

- *This lack of reduction in prevalence is not explained by:*
  - *increased risk factors or by*
  - *increased willingness to disclose symptoms.*
- *A more strongly supported hypothesis for the lack of improvement is that much of the treatment provided does not meet the minimal standards of clinical practice guidelines and is not targeted optimally to those in greatest need.*
- *But lack of attention to prevention of common mental disorders may also be a factor.*

# According to the Global Burden of Disease 2013 study

- Major depression ranks second and anxiety disorders rank ninth among all non-communicable diseases.
- This disability burden did not change substantially over the period 1990-2013, with age-standardized years lived with disability estimated to have increased by 4.7% (95% uncertainty: 2.7 to 6.7) for major depression and to have decreased by 0.2% (95% uncertainty: 21.6 to 1.3) for anxiety disorders.
- Similarly, age-standardized prevalence was estimated to have increased by 4.2% (95% uncertainty: 2.4 to 6.2) for major depression and to have decreased by 0.5% (95% uncertainty: 21.7 to 0.8) for anxiety disorders, consistent with a meta-analysis of prevalence studies over the period.
- Greater attention to prevention is called for.

# Discussion. The “prevention gap”

1. If greater attention to treatment of conspicuous depression does not lower prevalence will expanding effort to sub-threshold depression be sufficient?
2. If not, could the main objections to universal prevention trials be resolved:
  - a) Engaging most of the public in preventive action?
  - b) the extreme cost of trials (e.g. N~10,000: £7.5M)?

## a. How to involve the public fully?

- Exploiting existing opportunities for universal contact with health practitioners (examples):
- Training postnatal care public health nurses (Health Visitors) and community midwives to:
  1. assess depression within routine healthcare;
  2. train in the skills necessary to offer effective psychological care such as CB based methods;
  3. possible “trickle down intervention effect” on all screen negatives when symptoms are picked up.
- Comparable universal models in other sectors...

## b. Reducing the cost of universal trials?

- Effectiveness instead of efficacy evaluation;
- For example re-training all 150 community midwives, Leicestershire, (10,000 births PA)
- Ensuring routinely collected depression outcomes before, during and after re-training;
- Estimated costs:
  - Service change £275K over 3 years;
  - Data monitoring and statistical analysis, £75K.
- Inference: *interrupted time series analysis*\*

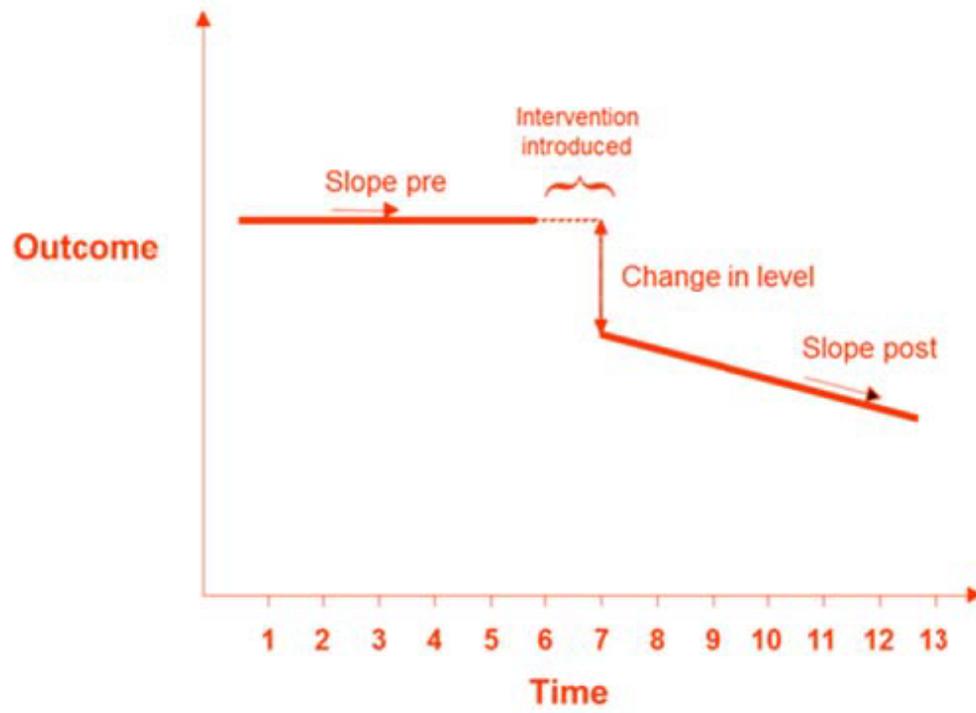
\*Ramsay et al [Int J Technol Assess Health Care](#). 2003 Fall;19(4):613-23.

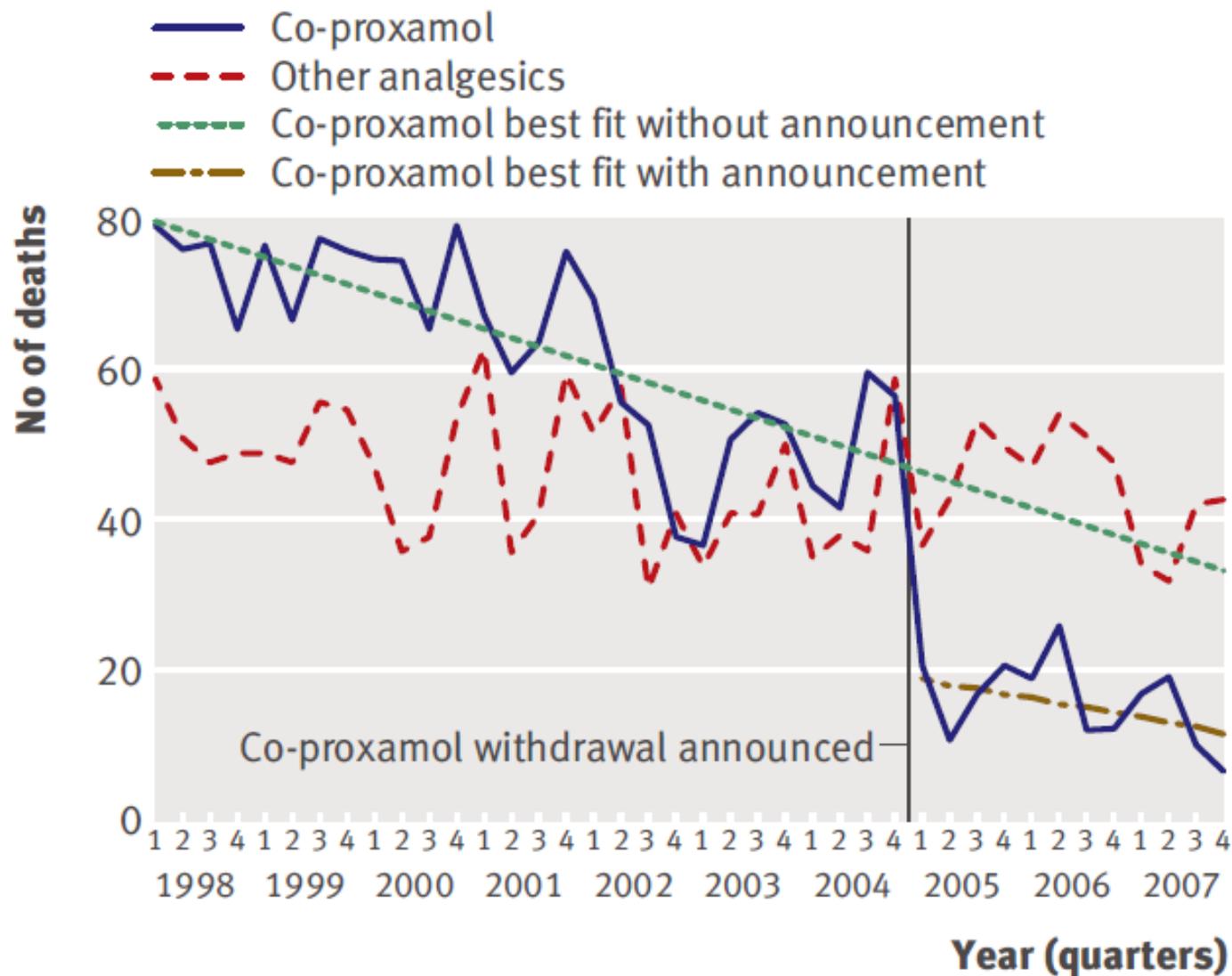
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## Effect of withdrawal of co-proxamol on prescribing and deaths from drug poisoning in England and Wales: time series analysis

Keith Hawton, professor of psychiatry and director,<sup>1</sup> Helen Bergen, researcher,<sup>1</sup> Sue Simkin, researcher,<sup>1</sup> Anita Brock, senior research officer,<sup>2</sup> Clare Griffiths, principal research officer,<sup>2</sup> Ester Romeri, research officer,<sup>2</sup> Karen L Smith, senior medical statistician,<sup>3</sup> Navneet Kapur, professor and honorary consultant in psychiatry, head of research,<sup>4</sup> David Gunnell, professor of epidemiology<sup>5</sup>

- After the announcement of the withdrawal of co-proxamol in January 2005 there were 59% fewer prescriptions than expected (based on 1998-2004 data);
- Decrease was associated with a 62% reduction in deaths from suicide related to co-proxamol (295 fewer deaths);
- There was no evidence of an increase in deaths involving other analgesics, suggesting that the initiative was effective.





**Fig 2 | Mortality in England and Wales from analgesic poisoning (suicide and open verdicts), 1998-2007, for people aged 10 years and over (substances taken alone, with or without alcohol)**

# Results: regression analyses

- Interrupted time series analyses indicated a significant decrease in both level and slope for deaths involving co-proxamol that received a suicide or open verdict, such that the number of deaths decreased by on average 24 (95% CI 12 to 37) per quarter in the post intervention period;
- There were no statistically significant changes in level or slope in the post intervention period for deaths involving the other analgesics (mean quarterly change 5, 95% CI -5 to 15);

# Conclusions

- Current policies don't work
- 'Its time for change!'
- Universal prevention:
  - can reach most of a selected population;
  - is affordable if effectiveness based;
  - will be convincing to policy makers;
  - ... its time has come!

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# Interrupted time series analysis

- The analysis estimates the effect of the intervention whilst taking account of time trend and autocorrelation among the observations.
- Estimates for regression coefficients corresponding to two standardised effect sizes are obtained: a change in level (also called 'step change') and a change in trend before and after the intervention.
- According to Ramsay 2003, a change in level is defined as the difference between the observed level at the first intervention time point and that predicted by the pre-intervention time trend, and a change in trend is defined as the difference between post- and pre-intervention slopes.
- A negative change in level and slope would indicate a reduction in, for example, infection rates.