

Recent changes to Annex 1 Medical Standards and Recommended Practices SARPs

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Plan

- Why change?
- Council Areas of Specific Concern
 - Medical Assessor, Gynaecology, HIV
 - Need for more regular review
- Frequency & content of examinations
- Antidepressants
- Reporting of medical conditions to LA
- Insulin-treated diabetes

Why?

- Council Request
- Improve flight safety
- Changes in medical knowledge
 - Ensure ICAO SARPs and guidance material remain relevant
- Drive towards evidence-based regulation
 - Safety management principles
 - Performance based regulation
- Improve global harmonization

Actions

- Medical Provisions Study Group (April 2007)
 - Chairman, Dr Jarnail Singh (Singapore)
- Initial review by ICAO Air Navigation Commission (November 2007)
- State Letter issued with proposals, requesting comments from States (May 2008)
- Proposals adjusted in light of comments from States
- Final Review by ANC (November 2008)
- Adoption by ICAO Council (March 2009)
- Applicability – November 2009

Council areas of specific concern - 1

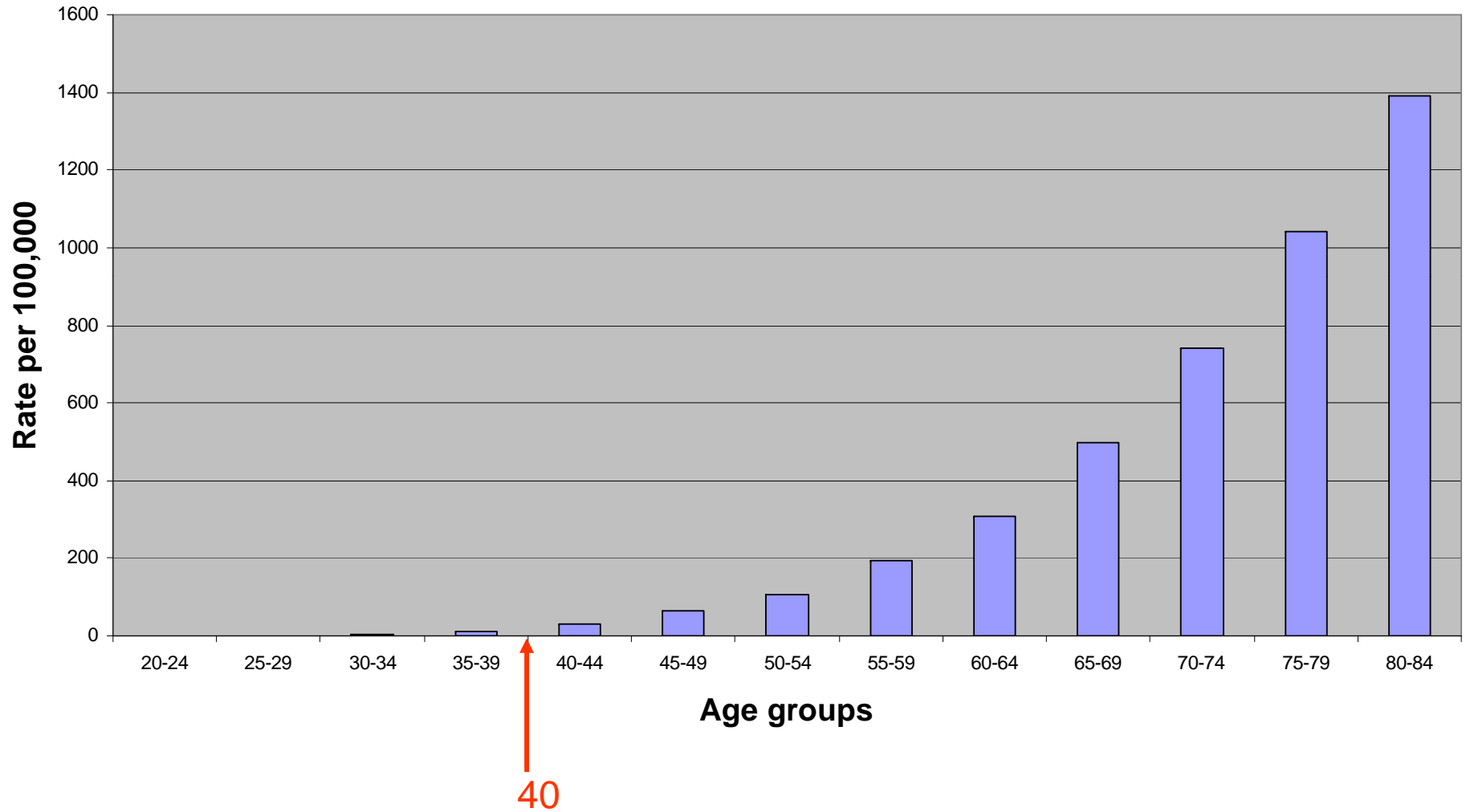
- Medical SARPs had not been revised for many years, and the next review should take place within two years i.e. by 2007
- Variety of topics considered

Frequency and content of regulatory medical examinations

ICAO requires annual Class 1 examination from initial to age 60 years, for most commercial air transport pilots

BUT.....

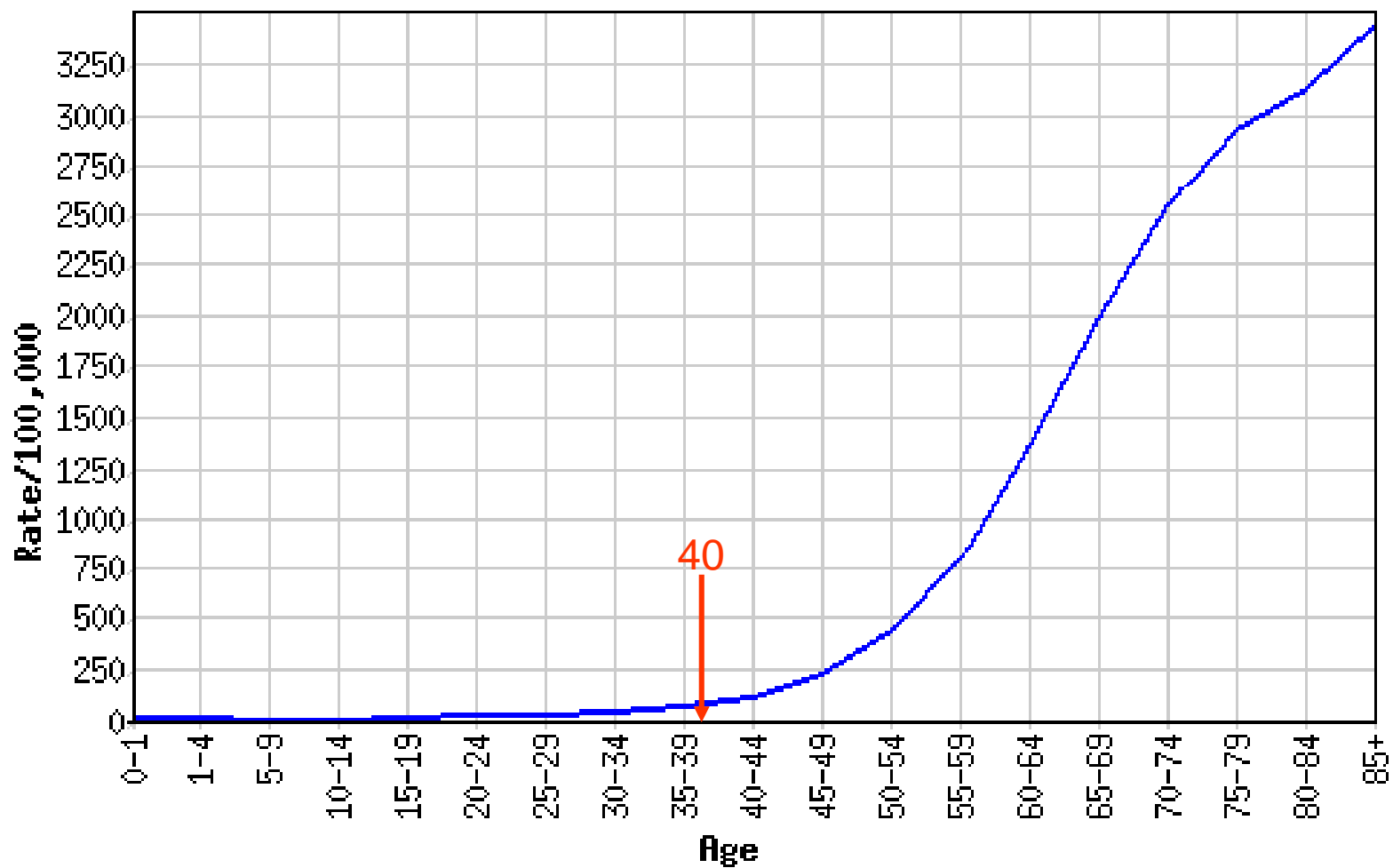
Coronary Heart Mortality, Males, England & Wales, 2002



UK Office for National Statistics

All Cancer sites, males, Canada
Public Health Agency of Canada

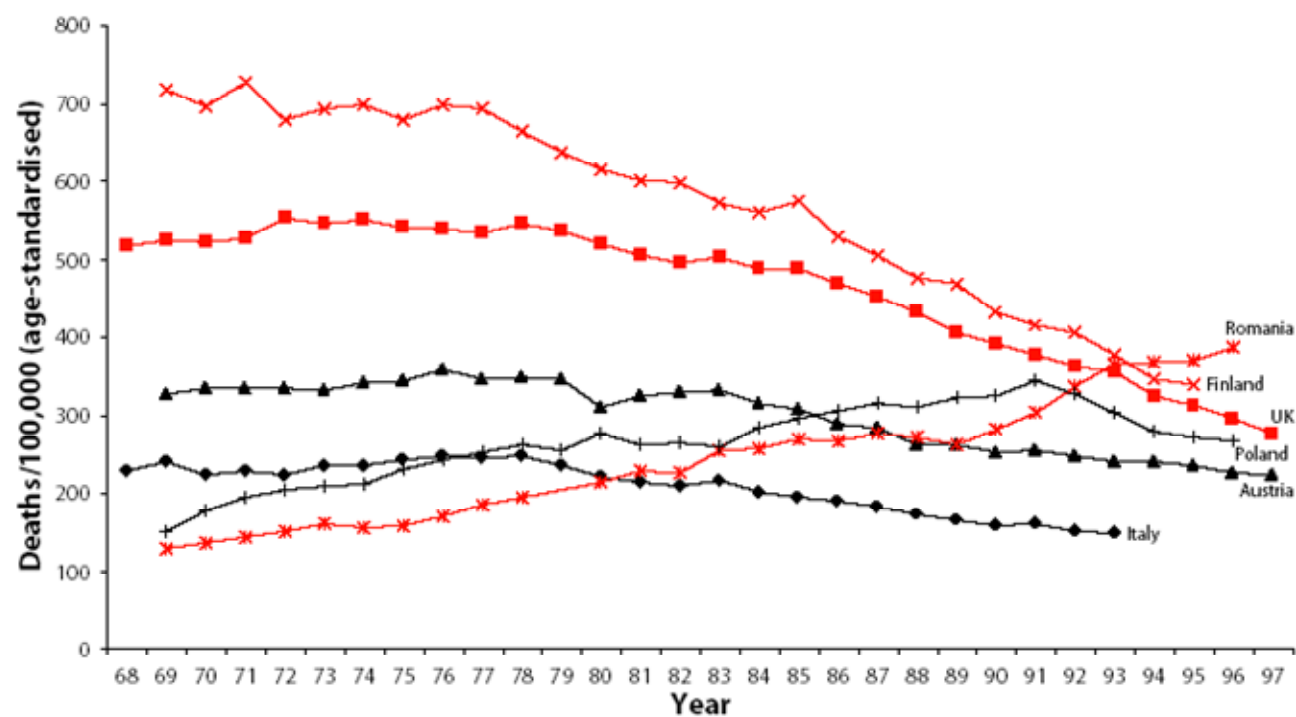
Age-Standardized Incidence Rate per 100,000 (Canada 1991)



Conclusion 1

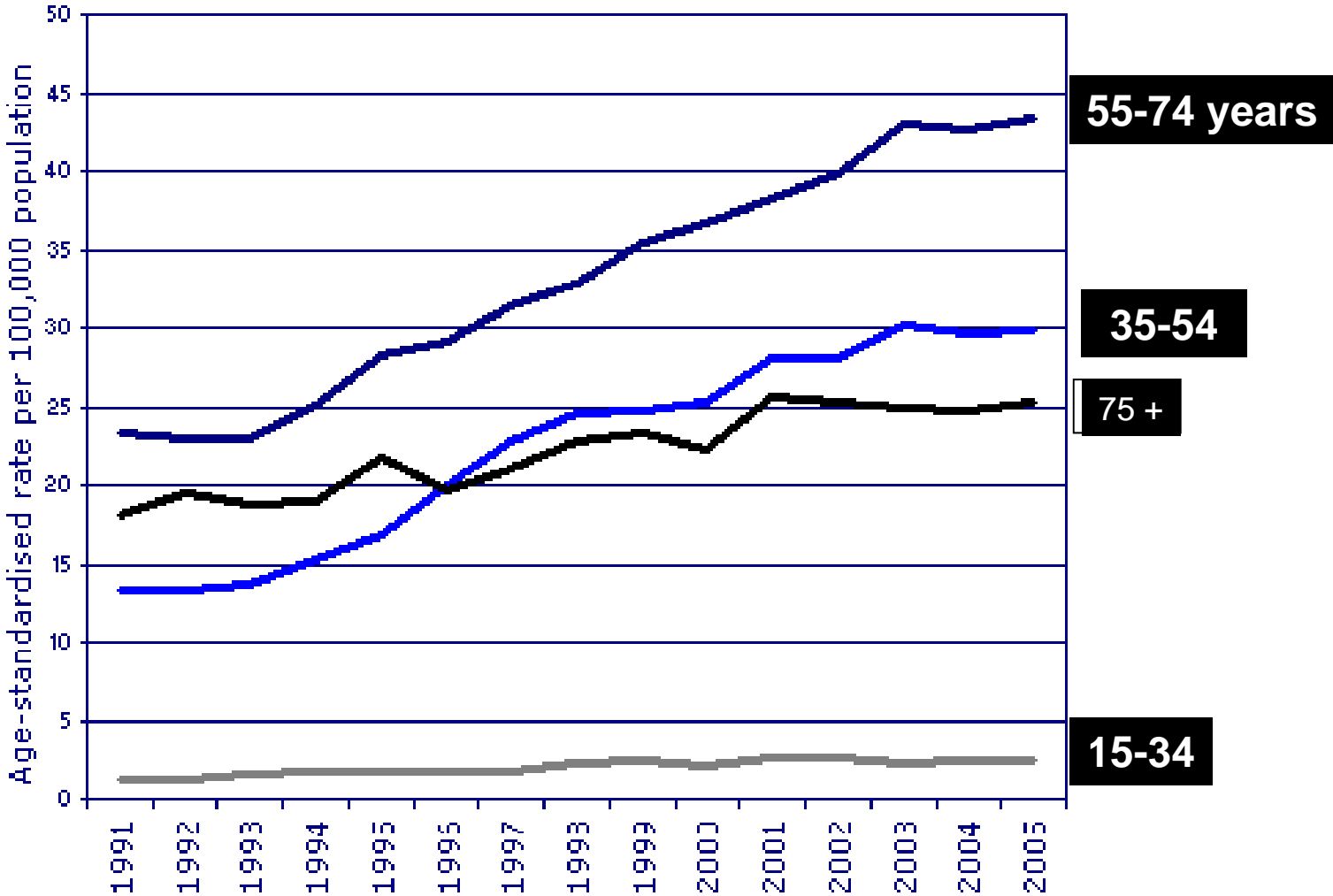
- Physical disease is uncommon in under 40s
- The routine physical examination is not likely to detect disease of flight safety significance in the under 40 applicant

Death rates from CHD, men aged 35-74, 1968-1997, selected countries

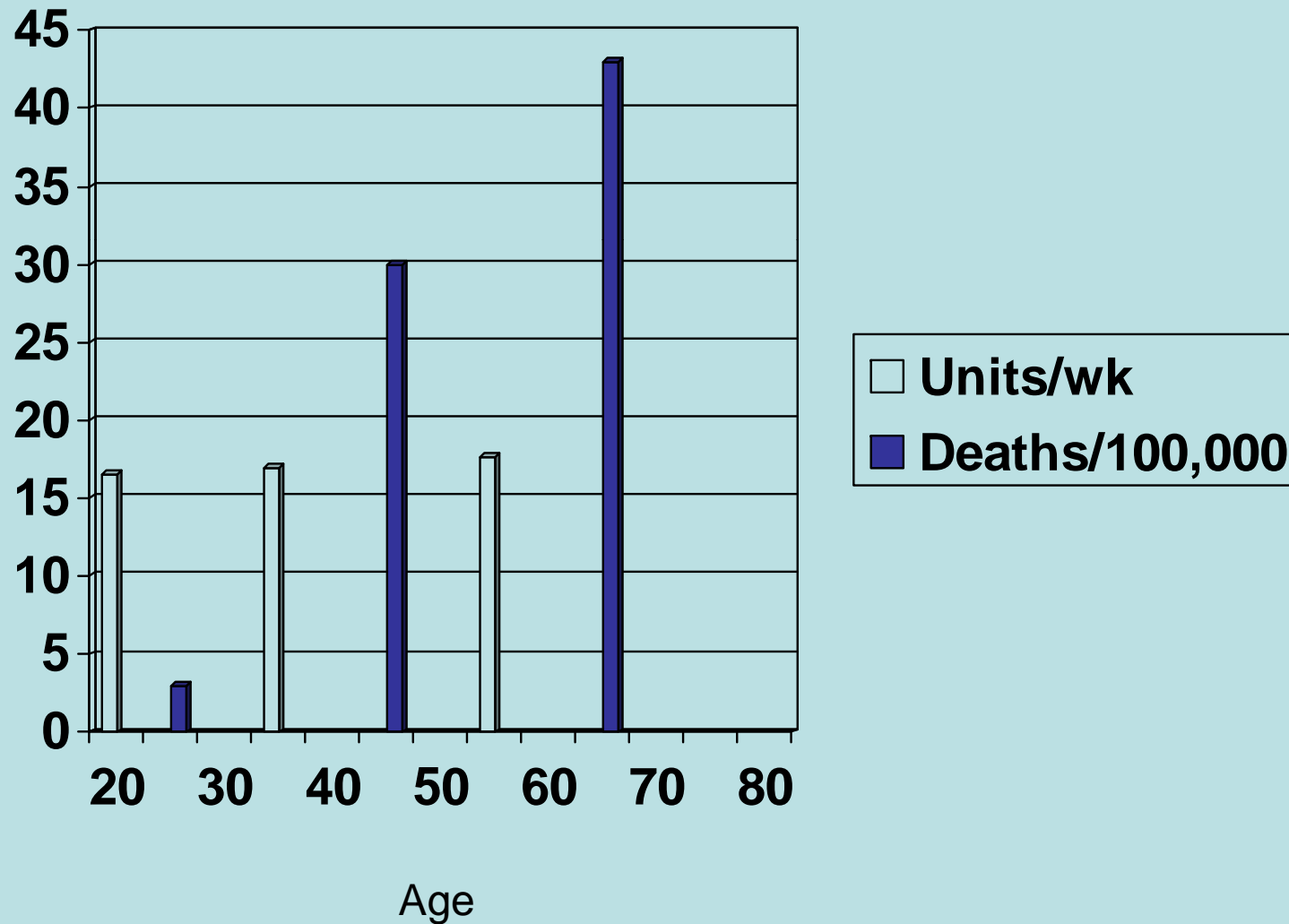


Source: Heartstats

UK male alcohol related death rates per 100,000 population, by age group and year

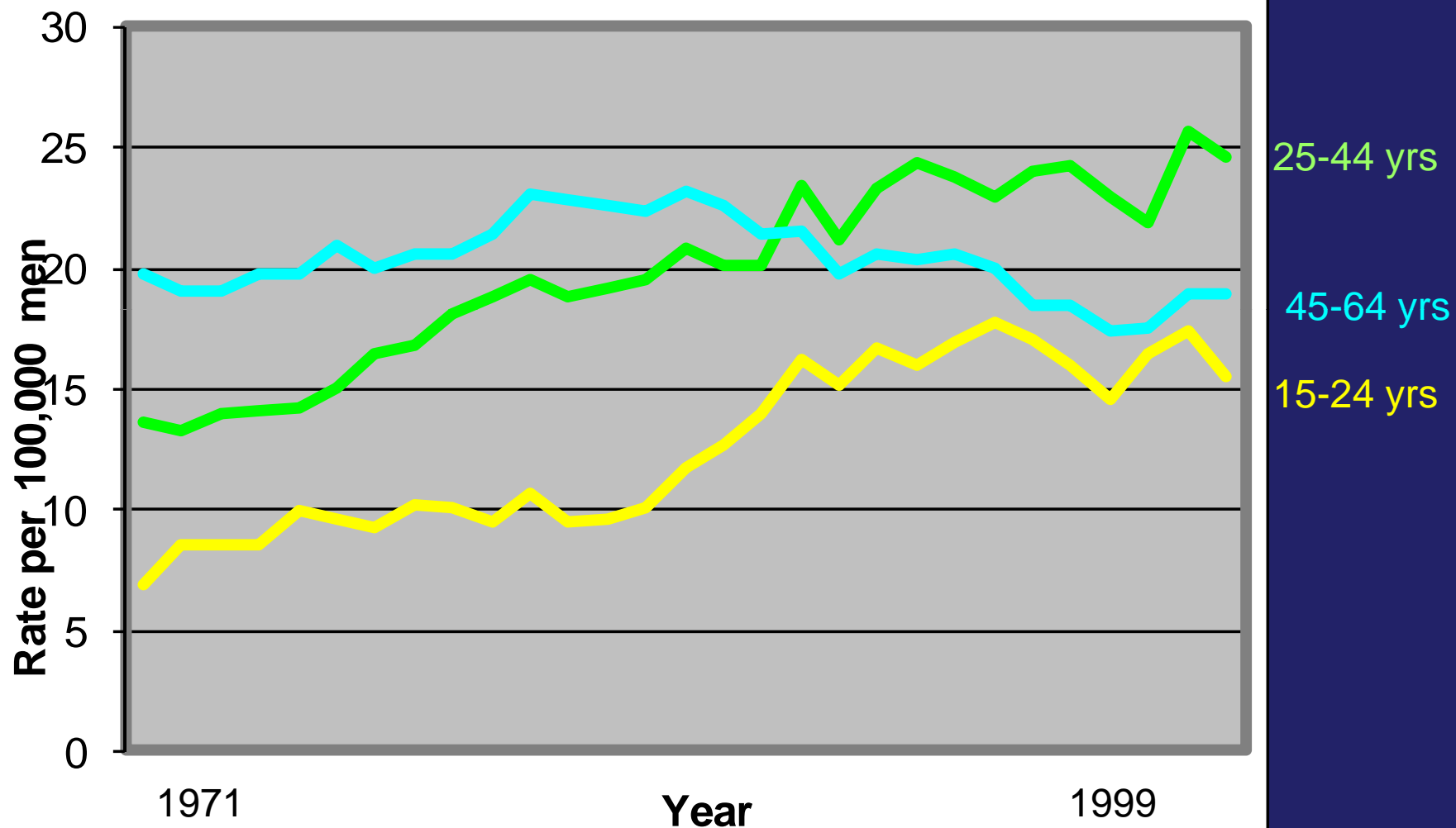


Mean rates for units drunk per week and OH related deaths per 100,000 per year

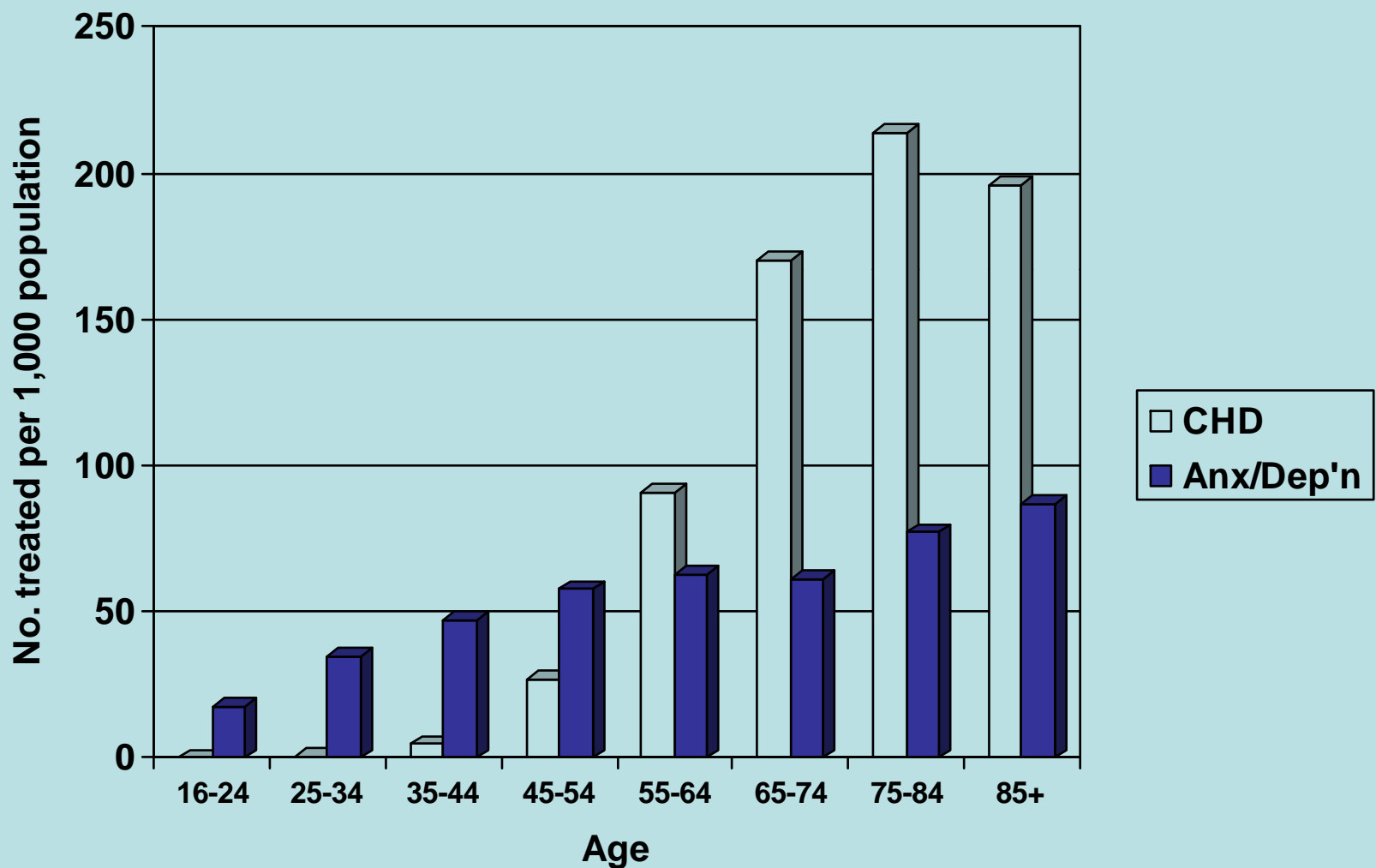


Suicide rate men, UK, 1971-1999

Office for National Statistics



Prevalence of treated coronary heart disease and anxiety/depression per 1,000 male patients by age: 1996



Conclusion 2

- Mental problems are more common than physical problems in under 40s
- And...
 - Depression and alcohol problems (and physical illness) are positively influenced by health education and lifestyle changes

Medical Cause Fatal Accidents

Worldwide medical cause fatal accidents 1980-2000

2-pilot aircraft, over 5,700 kg (excludes hypoxia, fatigue, smoke/fumes)

Year	Aircraft	Medical problem	Confidence
1982	DC 8	Schizophrenia *	High
1982	Citation	Alcoholic impairment *	High
1982	Metro	Vomiting (P2)	High
1983	Learjet	Use of marijuana (P1 & P2)*	High
1988	Metro	Use of cocaine	High
1989	FH 227	Alcohol (P2)	High
1990	Learjet	Slurred speech, ? cause *	Medium
1993	Learjet	Alcohol/cocaine (P1)	High
1994	ATR 42	Suicide *	Low
1999	An 26	Alcohol (P1 & P2) *	Medium

* Primary Cause

Conclusion 3

- Physical incapacitation is a rare cause of fatal accidents in two-pilot aircraft

Frequency and content of regulatory medical examinations

- Proposal
 - **Recommendation**, to reduce the emphasis on detecting physical conditions, whilst increasing the emphasis on health education and prevention, in under 40 Class 1 pilot applicant
 - Omit certain physical exam items in alternate years, providing more time for health education and prevention of ill health
 - **Note**, concerning guidance in Manual of Civil Aviation Medicine

Frequency and content of regulatory medical examinations

- 6.1.4 The requirements level of medical fitness to be met for the renewal of a Medical Assessment ~~are~~ shall be the same as those for that for the initial assessment except where otherwise specifically stated.
- 6.3.1.2.1 **Recommendation.**— *In alternate years, for Class 1 applicants under 40 years of age, the Licensing Authority should, at its discretion, allow medical examiners to omit certain routine examination items related to the assessment of physical fitness, whilst increasing the emphasis on health education and prevention of ill health.*
- *Note.*— *Guidance for Licensing Authorities wishing to reduce the emphasis on detection of physical disease, whilst increasing the emphasis on health education and prevention of ill health, in applicants under 40 years of age, is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

Antidepressant medication

- Modern antidepressants have few side effects (drowsiness much less common)
- Australia and Canada report good results from controlled use
- ALPA study (1997-2001) found that of 1200 professional pilots diagnosed with depression who contacted their office:
 - 60% intended to continue flying (without taking recommended medication)
 - 15% intended to continue flying (taking recommended medication) but without declaring such medication
 - 25% intended to declare their medication and cease flying

Antidepressant medication

- 6.4.2.2.1 Recommendation.— An applicant with depression, being treated with antidepressant medication, should be assessed as unfit unless the medical assessor, having access to the details of the case concerned, considers the applicant's condition as unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.
- Note 1.— Guidance on assessment of applicants treated with antidepressant medication is contained in the Manual of Civil Aviation Medicine (Doc 8984).

Reporting of Medical Conditions

- Proposal
 - **Recommendation**, less prescriptive than current Recommendation, emphasizing role of Licensing Authority in providing guidance to applicant
 - **Note**, concerning guidance in Manual of Civil Aviation Medicine

Reporting of medical conditions

- 1.2.6.1.1 **Recommendation.**— ~~Licence holders should inform the Licensing Authority of confirmed pregnancy or any decrease in medical fitness of a duration of more than 20 days or which requires continued treatment with prescribed medication or which has required hospital treatment.~~ States should ensure that licence holders are provided with clear guidelines on medical conditions that may be relevant to flight safety and when to seek clarification or guidance from a medical examiner or Licensing Authority.
- Note.— Guidance on physical and mental conditions and treatments that are relevant to flight safety about which information may need to be forwarded to the Licensing Authority, is contained in the Manual of Civil Aviation Medicine (Doc 8984).

Insulin treated diabetes

- **Note**, concerning guidance in Manual of Civil Aviation Medicine, for States wishing to certificate applicants using insulin

Insulin treated diabetes

- 6.3.2.16 Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.
- Note.— Guidance on assessment of Type 2 insulin treated diabetic applicants under the provisions of 1.2.4.8 is contained in the Manual of Civil Aviation Medicine (Doc 8984).

Council areas of specific concern - 2

- Medical assessor – clarification of rôle
 - Appointed by Licensing Authority
 - Ensure adequate performance (by training and auditing) of medical examiners

Medical Assessor- definition

1.1 Definitions

- ***Medical assessor.*** A physician, appointed by the Licensing Authority, qualified and experienced in the practice of aviation medicine who evaluates medical reports submitted to the Licensing Authority by medical examiners and competent in evaluating and assessing medical conditions of flight safety significance.
- *Note 1.— Medical assessors evaluate medical reports submitted to the Licensing Authority by medical examiners.*
- *Note 2.— Medical assessors are expected to maintain the currency of their professional knowledge.*

Medical Assessor – rôle in DME evaluation/audit

1.2.4.5.3 Recommendation.— The competence of a medical examiner should be evaluated periodically by the medical assessor

• 1.2.4.7.1—1.2.4.8.1 The medical examiner shall be required to submit sufficient ~~medical~~ information to the Licensing Authority to enable ~~the~~ that Authority to ~~audit~~ undertake Medical Assessments audits.

• *Note.— The purpose of such auditing is to ensure that medical examiners meet applicable standards for good practice medical practice and aeromedical risk assessment. Guidance on aeromedical risk assessment is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

Council areas of specific concern - 2

- Gynaecological issues

Gynaecological issues

- Gynaecological issues
 - Do not require specific mention – adequately addressed by reference to ‘genito-urinary tract’ (6.3.2.19 etc)
 - Relevant paragraphs deleted
 - ~~– 6.3.2.21 Applicants with gynaecological disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.~~

Council areas of specific concern - 3

- Human Immunodeficiency virus
 - Controversial
 - Therapy has greatly improved prognosis
 - WHO concerned that current SARPs do not:
 - Encourage HIV positive applicants to declare
 - Reflect modern thinking concerning potential recovery from AIDS defining illness
 - Reflect scientific evidence concerning HIV and depression

HIV

- 6.4.2.20 Applicants with acquired immunodeficiency syndrome (AIDS) shall be assessed as unfit.
- ~~6.3.2.20.1~~ Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless full investigation provides no evidence of clinical disease the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.
- *Note 1.— ~~Evaluation of applicants who are seropositive for human immunodeficiency virus (HIV) requires particular attention to their mental state, including the psychological effects of the diagnosis. Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.~~*
- *Note 2.— Guidance on the assessment of applicants who are seropositive for human immunodeficiency virus (HIV) is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

Summary

- Medical SARPs were in need of updating
- ICAO`s drive towards evidence based regulation, including:
 - Safety management principles
 - Performance based regulation
- Changes are mainly `permissive`, not mandatory
- Opposing States may change position with experience

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