Computer-based Alcohol Interventions

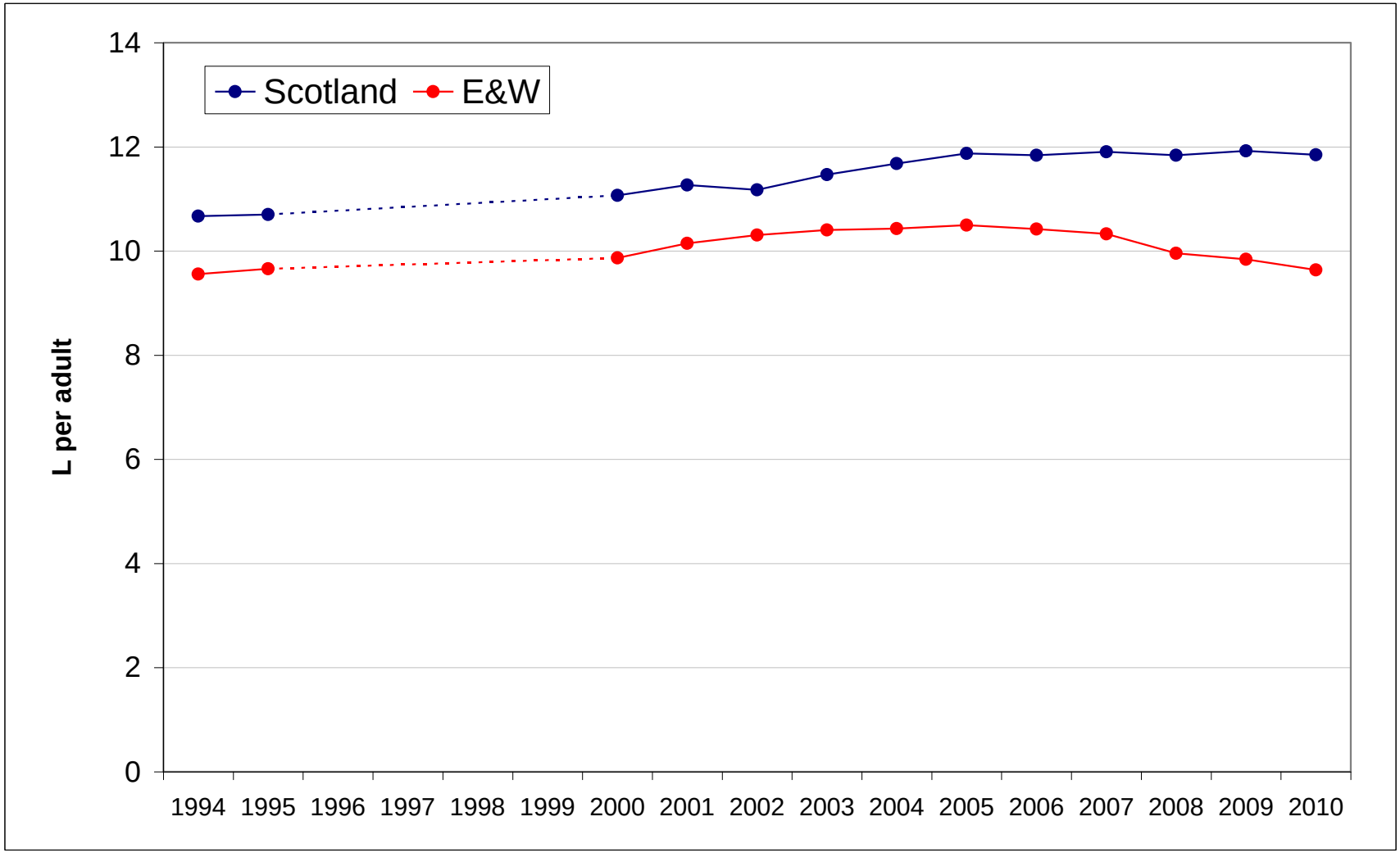
Andrew McAuley
Public Health Adviser (Substance Misuse / Alcohol)
Alcohol Academy IBA event
17 July 2012

NHS Health Scotland

Outline

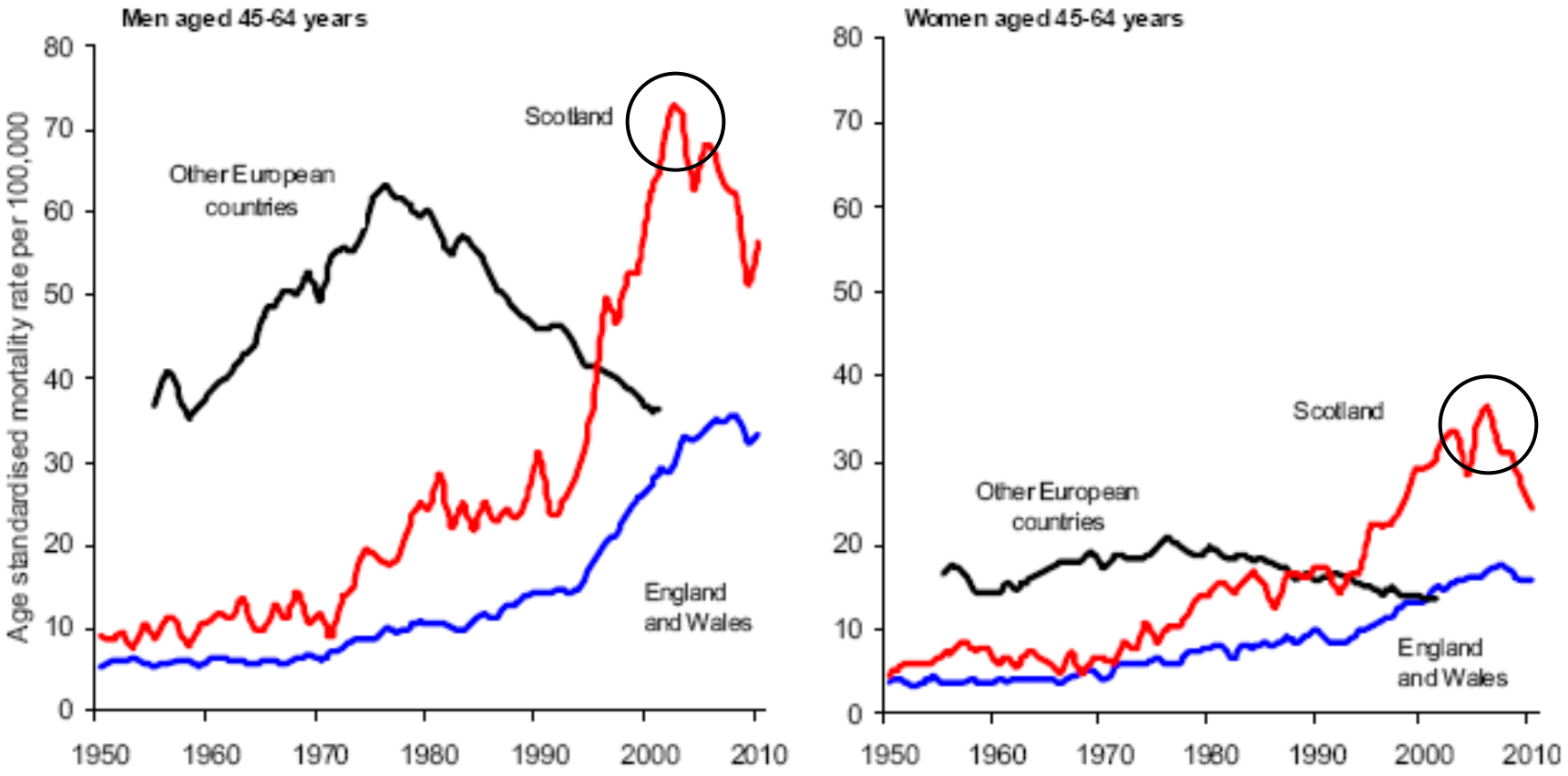
- Background
  - Alcohol consumption/harm in Scotland
  - ABIs (IBA) in Scotland
- Computer-based Alcohol Interventions
  - Rationale / Plausibility
- Rapid-Evidence Assessment (REA)
  - Method
  - Findings
- Discussion
- Conclusions

Alcohol sales in Scotland and England & Wales per adult aged ≥16, 1994-2010



Source: Nielsen/CGA & MESAS, 2011

Chronic Liver Disease mortality rates per 100,000 population, 1950-2010



Source: Alcohol (Minimum Pricing) (Scotland) Bill Policy Memorandum, 2011

Background: Alcohol Brief Interventions (ABIs) in Scotland

- 2003 - SIGN 74 Clinical Guideline

  'The management of harmful drinking and alcohol dependence in primary care'

  – Primary-care
  – A&E
  – Antenatal

Background: ABIs in Scotland

- Health Efficiency Access Treatment (HEAT): *target*

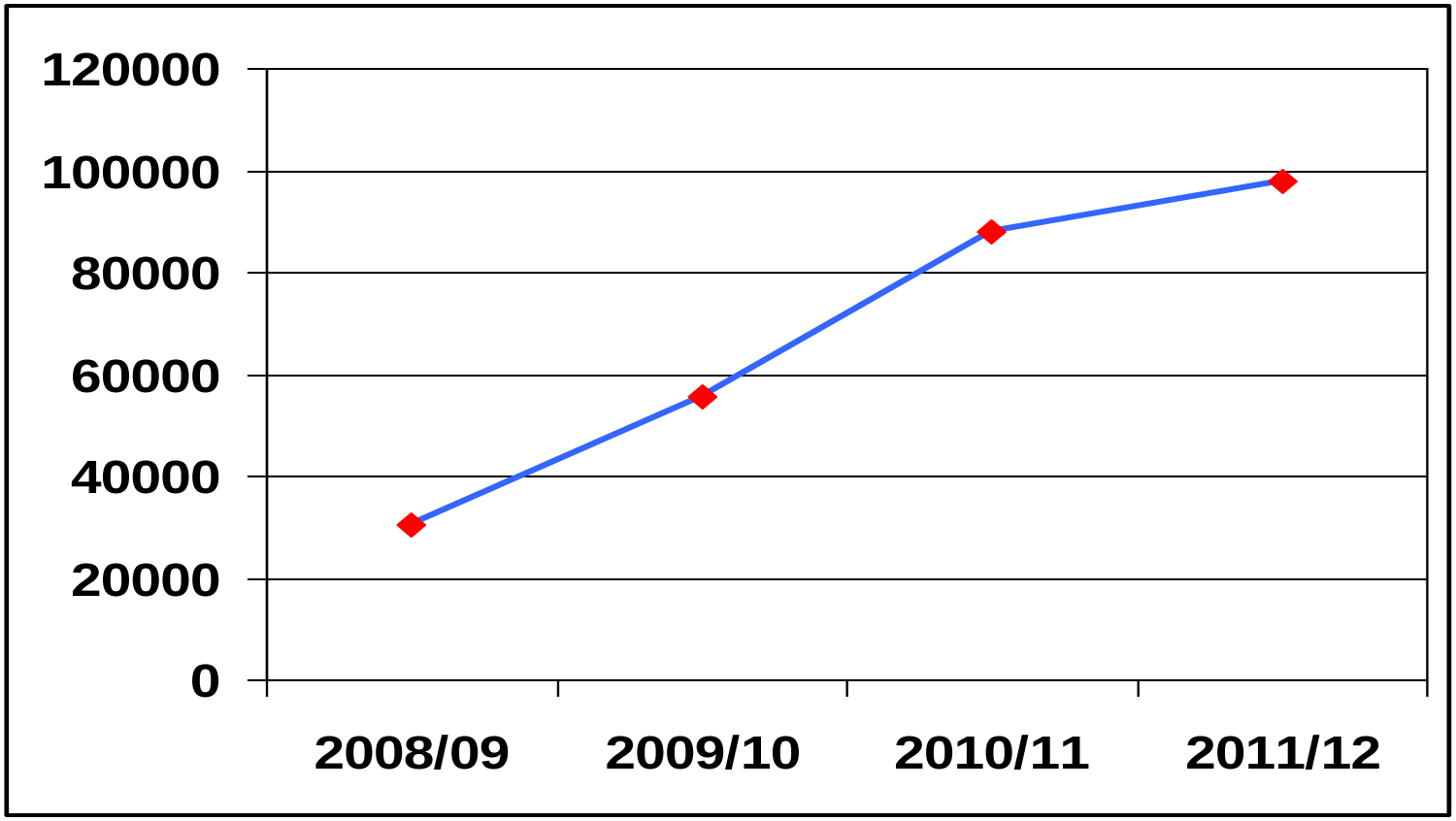
  'NHS Boards will deliver 149,449 ABIs in primary care, accident and emergency and antenatal care by 2011'

- HEAT *Standard*

  'NHS Boards and their Alcohol and Drug Partnership (ADP) partners will sustain and embed alcohol brief interventions (ABI) in the three priority settings (primary care, A&E, antenatal), in accordance with the SIGN74 Guideline. In addition, they will continue to develop delivery of alcohol brief interventions in *wider settings*'

NHS Health Scotland

HEAT Target ABI Delivery: 2008-2012



ABI Success in Scotland, but…

- Traditional community-based alcohol treatment and support services are limited…
  - Accessibility
  - Availability
  - Capacity

Solution…?

Computer-based Alcohol Interventions

Variety of options…

- Information / education / intervention
- Stand-alone / web-based
- Therapist-involvement e.g. CBT
- Self-Assessment e.g. BI
- Peer-support

Web-based alcohol interventions

- ↑access to 'digital participation'

"people's ability to gain access to digital technology, and understand how to use it creatively"

(Scottish Government, Digital Strategy, 2011)

Digital Participation

NHS Health Scotland

↑Digital Participation

- 70% of the population have home internet access
- 73% report ‘personal internet use’
- Almost all (97%) homes in Scotland have access to digital TV
- Viewers in Scotland watch television for 4.5 hours per day, more than anywhere else in the UK
- 21% of adults use a Smartphone to access the internet

(Scottish Government, 2011b1; Ofcom, 2011)

Growth of the Internet

- Before...
  - Traditionally an information retrieval tool

- Now…
  - “the internet combines attributes of mass communication (broad reach) with attributes of interpersonal communication (interactivity, rapid individual feedback)”

(Copeland & Martin, 2004)

- Post-web 2.0 era…greater focus on end user involvement

Target groups?

- Potential to reach key target groups…
  - Young people aged 16-24 have the highest proportions of internet usage (Scottish Government, 2011)
  - Over half the users of the six-week ‘Down Your Drink’ internet intervention were women (Linke et al, 2007)

Plausible?

- Consistently delivered, without a therapist
  - Cost-effective?

- Flexible
  - Accessibility
  - Availability
  - Adaptability

- Person-centred
  - Tailored personal feedback
  - Privacy and anonymity

Internet / health / alcohol

- Over a third of broadband users in Scotland report using the internet to find information on health issues, across all age groups (Ofcom, 2011)
- Sizable demand for internet-based substance use interventions (Bewick et al, 2008)
- Alcohol information websites already exist, and these are accessed by large numbers of people who appear willing to divulge information on their drinking habits (Linke et al, 2007)

DOWN YOUR DRINK

USER NAME: FORGOTTEN PASSWORD?

PASSWORD: LOG IN

HOME | ABOUT US | PRIVACY POLICY



Are you drinking too much?

Most of us drink. Some of us drink more regularly than others. But how often is too often? And how much is too much?

The fact is, alcohol affects all of us differently. What is manageable for some can be a problem for others. Remember, drinking regularly may not mean you have a serious problem. It may only take a small change to make a big difference.

This site is designed to help you work out whether you're drinking too much, and if so, what you can do about it.

Find out if you are drinking too much

Alcohol Concern aerc MRC Medical Research Council UCL

Therefore…

Plausible theory suggests computer-based alcohol interventions have potentially an important role, but…

…what does the evidence say?

Method

- Rapid Evidence Assessment (REA)
- Pragmatic search of electronic databases
- English language articles from the period 2001-2011
- Only ‘review’ / ‘meta-analysis’ level studies included
- Quality appraisal and synthesis

Results

- Overall, 10 articles were found to fit the study inclusion criteria:
  - four systematic reviews
  - three meta-analyses
  - two qualitative reviews
  - one non-systematic review.

Results: key points (+)

- Reviews *suggest* that computer-based alcohol interventions can be effective in reducing alcohol consumption and frequency of drinking

- Reviews *suggest* that computer-based alcohol interventions are more effective than no treatment or assessment only, and equally as effective as other 'conventional' alcohol treatments (including ABIs)

Results: key points (+)

- Self-administered computer-based CBT interventions are effective, but are enhanced by some degree of therapist involvement.

- Single-session personalised feedback interventions may be most effective via computer technology (ABI?)

Results: key points (-)

- The majority of computer-based alcohol intervention studies to date…
  - characterised by small sample sizes, high attrition rates, limited consideration of bias, participant self-selection and a lack of 'pure' control groups
  - have used inappropriate statistical measures of central tendency
  - have relied on self-report measures
  - have been conducted in US student populations

Results: key points (-)

- The majority of computer-based alcohol intervention studies to date…
  - heterogeneity in relation to both outcome measures and intervention content
  - lack of evidence on long-term impact
  - Fail to demonstrate their cost-effectiveness

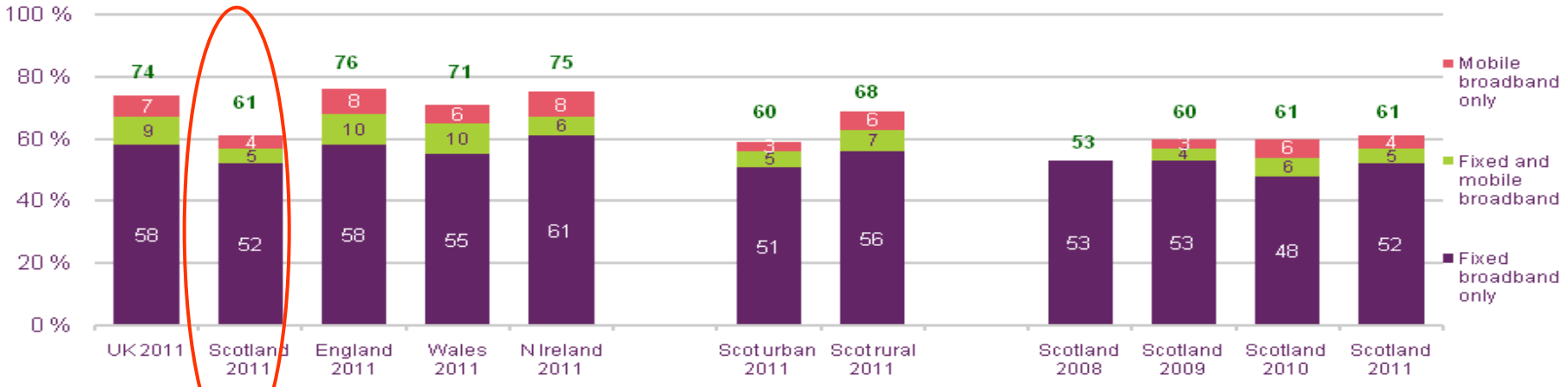
Discussion

- Plausible theory suggests computer-based alcohol interventions have potential an important role, however…
  - most of these advantages lack an empirical basis and disadvantages have yet to be fully investigated (Riper et al, 2009)

- Further research is required!
  - Feasibility and efficacy in general populations
  - Interventions, delivery-methods, and target groups
  - Cost effectiveness

- Health Inequalities?
  - 30% of the population have no home internet access and over a quarter (27%) have no internet access at all (Scottish Government, 2011)
  - Scotland lower broadband take up than rest of UK (Ofcom, 2011)

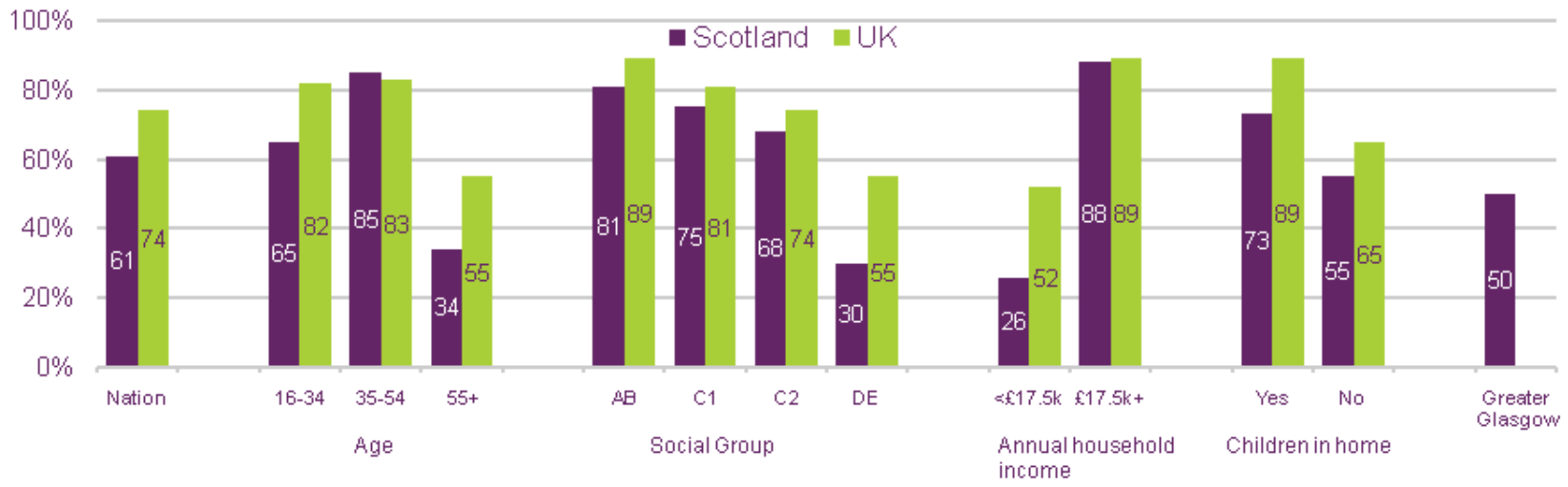
Figure 4.1, Consumer broadband take-up (by connection type)



QE9. Which of these methods does your household use to connect to the internet at home? (NB 2008 survey did not cover mobile broadband. 2008 measure shows any broadband)
Source: Ofcom research, Quarter 1 2011
Base: All adults aged 16+ (n = 3474 UK, 487 Scotland, 1983 England, 493 Wales, 511 Northern Ireland, 239 Scotland urban, 248 Scotland rural, 925 Scotland 2008,1014 Scotland 2009, 1468 Scotland 2010, 487 Scotland 2011)

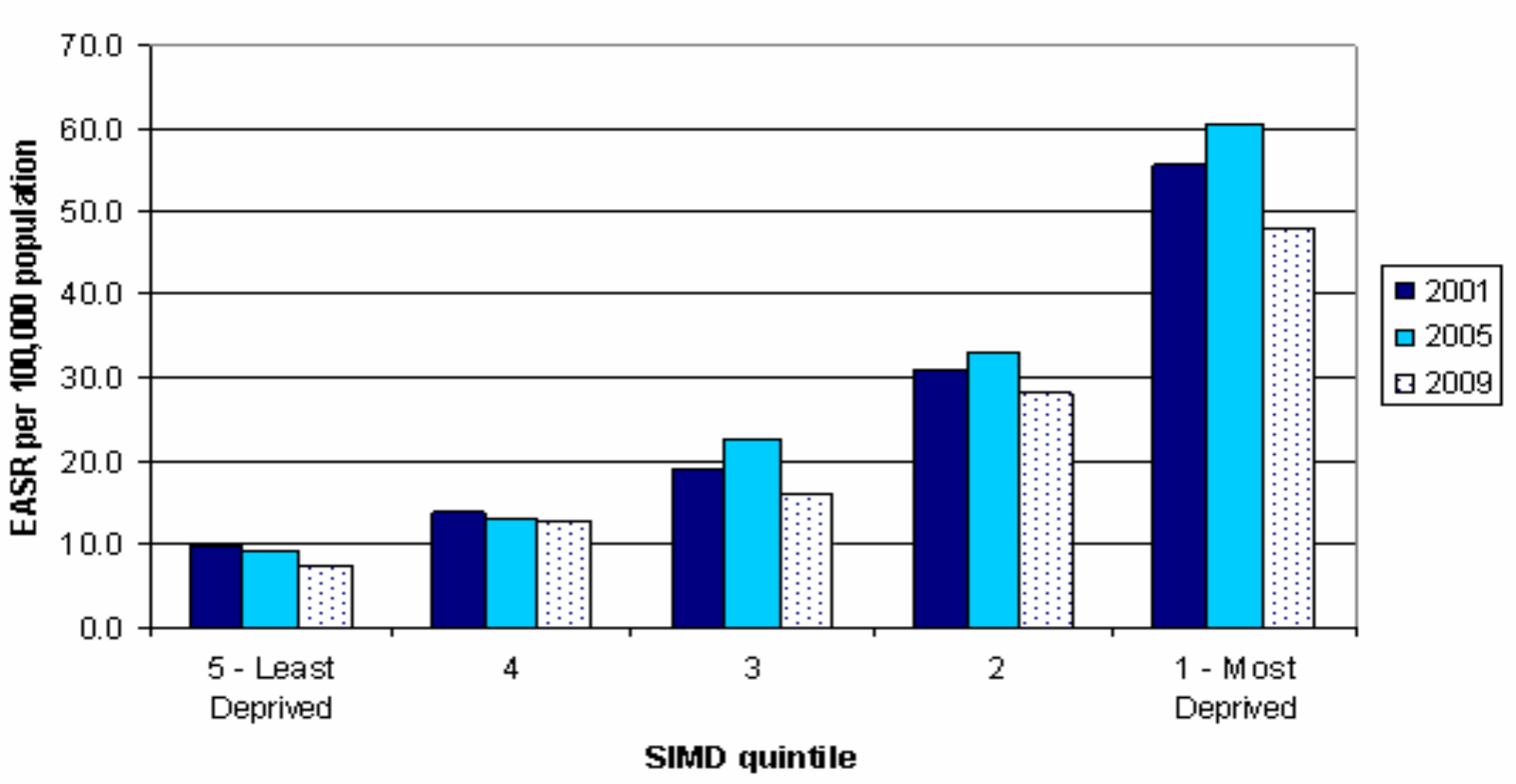
- Health Inequalities?
  - Older people; lower incomes; fewer educational qualifications; not in work, disability or long term illness; and those living in the most deprived areas were least likely to have internet access (Scottish Government, 2011). Low take up common across UK but more profound in Scotland.

Figure 4.2, Consumer broadband take-up in Scotland compared to UK (by demographic)



QE9. Which of these methods does your household use to connect to the Internet at home?
Source: Ofcom research, Quarter 1 2011
Base: All adults aged 16+ (n = 487 Scotland, 145 16-34s, 178 35-54s, 164 55+, 109 AB, 141 C1, 95 C2, 142 DE, 127 <£17.5k income, 90 £17.5k+, 159 children in home, 328 no children in home, 120 Greater Glasgow)
Note: "Greater Glasgow" includes Greater Glasgow and Clyde Health Board area + other parts of Lanarkshire.

Alcohol-related deaths (underlying cause), deprivation category, 2001, 2005, 2009



Beeston et al, 2011

Conclusion(s)

- Computer-based alcohol interventions offer an important new development for treatment and support
- Improvements in technology and increases in public access to the internet have increased the focus on the use of computer-based tools to deliver health information, education and intervention
- Evidence on effectiveness and cost-effectiveness of these approaches to address alcohol misuse and related harm is limited, more research required
- Potential harms to service-users can be minimised by ensuring security, quality and credibility issues are prioritised
- Sustainability appears plausible over time, although this must be balanced against initial start up costs and funding to adequately market the intervention
- Issues of equitability require more thorough investigation as any roll-out of such an approach has the potential to increase health inequalities

Thank you

Andrew McAuley
Public Health Adviser (Substance Misuse / Alcohol)
NHS Health Scotland
Public Health Science, EfA Team
Elphinstone House
65 West Regent Street
Glasgow, G2 2AF

Tel: 0141 354 2935 (ext: 2935)
Fax: 0141 354 2901
andrew.mcauley@nhs.net
www.healthscotland.com

McAuley, A. 2012. Computer-based alcohol interventions. Edinburgh: NHS Health Scotland, available at http://www.healthscotland.com/documents/5830.aspx

NHS Health Scotland