Dr. Heather Wardle

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NEW HORIZONS
IN RESPONSIBLE GAMBLING
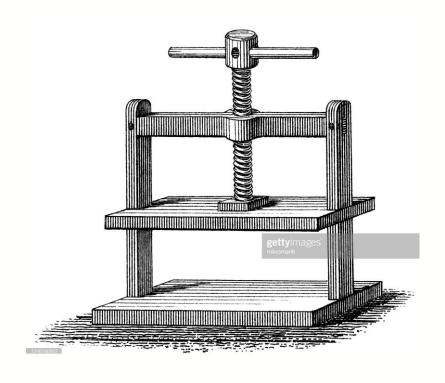
Disclosures

- HW is currently funded by: Economic and Social Research Council, Wellcome Trust and National Institute for Health Research
- HW has been previously funded by GambleAware (up to 2018)
- HW was Deputy Chair of the Advisory Board for Safer Gambling, funded through the Gambling Commission (2015-2020)
- HW is a member of the WHO panel and gambling and co-Chair of the Lancet Public Health Commission on gambling

The Challenge….

Can we just "crank the handle" and all the relevant metrics for harms are produced?

July 2017

The starting point….

1	What do we mean by harms?

2	What kinds of data and insight are we thinking about?

3	What kinds of approaches to evidence and data collection are we talking about?

The first steps…
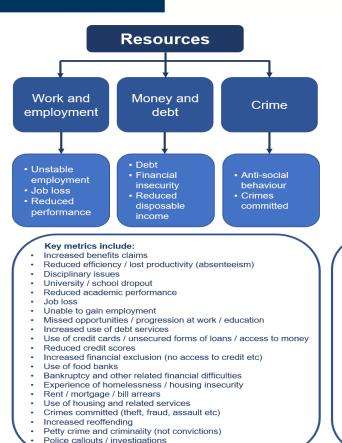

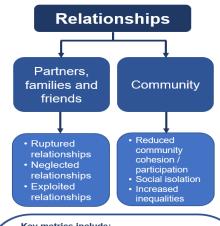*Gambling-related harms are the adverse impacts from gambling on the health and wellbeing of individuals, families, communities and society*
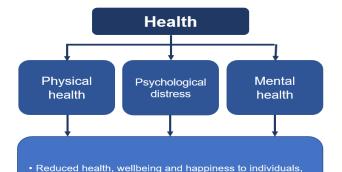
Resources
(e.g. work and employment, money and debt, crime etc)

Gambling-related harms

Relationships
(e.g. partners, families and friends, community etc)

Health
(e.g. physical health, psychological distress, mental health etc)

The first steps…

Resources

- **Work and employment**
  - Unstable employment
  - Job loss
  - Reduced performance

- **Money and debt**
  - Debt
  - Financial insecurity
  - Reduced disposable income

- **Crime**
  - Anti-social behaviour
  - Crimes committed

Key metrics include:
- Increased benefits claims
- Reduced efficiency / lost productivity (absenteeism)
- Disciplinary issues
- University / school dropout
- Reduced academic performance
- Job loss
- Unable to gain employment
- Missed opportunities / progression at work / education
- Increased use of debt services
- Use of credit cards / unsecured forms of loans / access to money
- Reduced credit scores
- Increased financial exclusion (no access to credit etc)
- Use of food banks
- Bankruptcy and other related financial difficulties
- Experience of homelessness / housing insecurity
- Rent / mortgage / bill arrears
- Use of housing and related services
- Crimes committed (theft, fraud, assault etc)
- Increased reoffending
- Petty crime and criminality (not convictions)
- Police callouts / investigations

Relationships

- **Partners, families and friends**
  - Ruptured relationships
  - Neglected relationships
  - Exploited relationships

- **Community**
  - Reduced community cohesion / participation
  - Social isolation
  - Increased inequalities

Key metrics include:
- Reduced social capital / community engagement
- Increased social / community inequalities
- Increased social isolation
- Reduced social connectedness (including cultural and religious relationships)
- Divorce / separation / relationship breakdown
- Increased use of relationship services
- Increased arguments and relationship stress
- Increased use of social services
- Domestic violence / abuse
- Reduction of future prospects (including children of gamblers)
- Impact on quality and quantity of future relationships
- Loss of trust between family members
- Inability to fulfil / neglect of familial responsibilities
- Loss of parental support / attention among children of gamblers

Health

- **Physical health**
- **Psychological distress**
- **Mental health**

- Reduced health, wellbeing and happiness to individuals, families and communities

Key metrics include:
- Reduced physical activity
- Increased blood pressure
- Poor diet / nutrition
- Poor overall wellbeing
- Increased stress
- Feelings of shame
- Feelings of stigma
- Experience of insomnia
- Experience of depression
- Increased anxiety
- Self-harm
- Suicide and suicidality
- Substance abuse / misuse
- Use of alcohol / drug treatment services
- Use of mental health, primary and secondary healthcare services
- Erosion of personal values, impacting wellbeing
- Increase in benefits claims for long-term disability / ill health

University of Glasgow

The system?

Individual

Individual characteristics, life events, personal history and cognitive characteristics that influence the potential experience of harm

For example: negative motivations for gambling, early gambling experiences, engagement in other risk behaviours that may increase the risk of harm

Families and social networks

Factors within an individual's closest relationships, such as family, partners and peers that influence experience of harm

For example: cultures of gambling within family / peer groups or poor social support that may increase the risk of harm

Community

Characteristics of local areas and cultures within local spaces or broader social groups, like schools and workplaces, that may influence experience of harm

For example: access and availability of gambling locally, poor social / cultural capital or greater deprivation that may increase the risk of harm
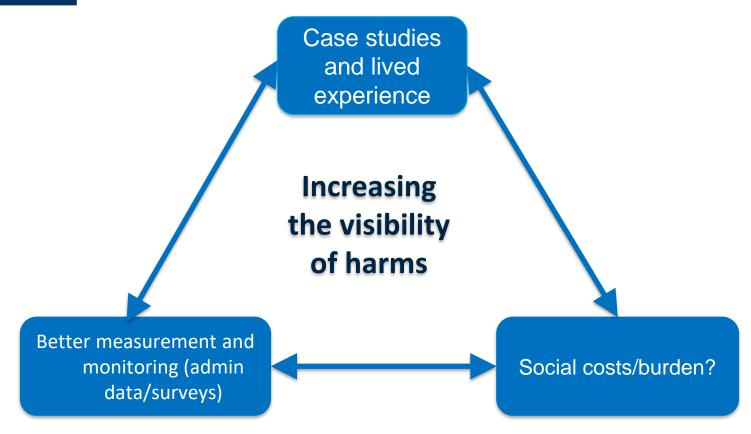
Societal

Policy and regulatory climates and associated corporate norms and practices that may influence the experience of harm

For example: ineffective regulation, certain product characteristics, advertising environments or gambling availability that may increase the risk of harm
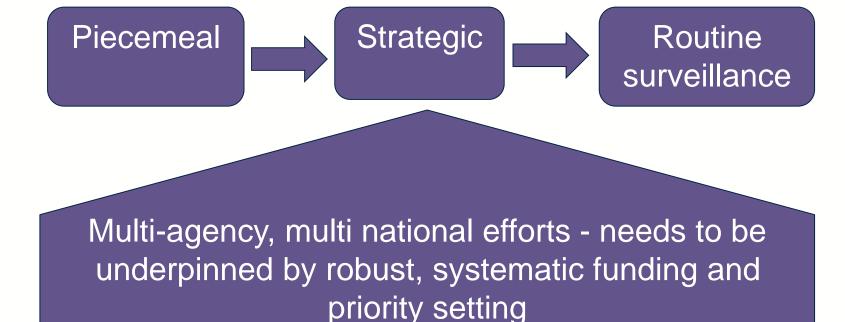
What happened next…

A patchwork quilt of action?

Strong advocacy groups highlighting experiences of harms	Growth and strength of lived experience networks (ground-up)	
	Some national surveillance of harms: Citizens advice bureaus/econsult systems	Some improvement in data quality on treatment networks
Localised pilots for local surveillance – criminal justice systems		Pilot of collection of survey data on harms

Where next?

Piecemeal → Strategic → Routine surveillance

Multi-agency, multi national efforts - needs to be underpinned by robust, systematic funding and priority setting

Can we "crank the wheel"?

- No, but progress in people understanding broader range of gambling harms and gaining some traction from organisations and agencies who weren't previously interested
- Building on this traction continues to build support for efforts, but efforts still reliant on good-will and buy-in
- Can't be truly systematic without the funding to support it.
- So – do we "know" how many people are harmed by gambling in Britain?

Thank you

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@UofGlasgow

Dr. Anita Patel

Independent Health Economics Consultant

2021 New Horizons in Responsible Gambling Conference: Player Health Reboot: Resetting the Future, 9-10 March 2021,

Bringing a public health perspective to measuring the costs of gambling-related harms

Dr. Anita Patel

Independent Health Economics Consultant

Summary

- Why measure the costs of gambling harms?

- Evidence to date

- Measurement challenges

- Learning from other public health concerns

- Recommendations for future directions

Why measure the costs of gambling harms?

- Calls for a public health approach to tackling gambling harms founded upon growing recognition of:
  - gambling harms falling far beyond the individual who gambles, towards family and social groups, communities and society
  - socio-economic/commercial determinants of harms
  - inequalities in harm burdens

- Thus gambling harms sit alongside public health concerns (smoking, air pollution, alcohol consumption, obesity etc) which require multi-faceted prevention and treatment approaches enacted through policy and legislation

- Quantifying scale and size of gambling harms is an essential step towards:
  - recognising their relative importance in society
  - prioritising investment towards mitigating measures
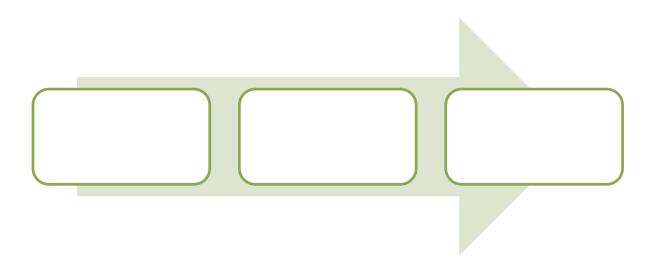 - assessing progress

Our look at the evidence

- McDaid & Patel (2019) report for the Gambling Commission in Great Britain

- GC was set up under the Gambling Act 2005 to regulate commercial gambling in Great Britain in partnership with licensing authorities. Also regulate the National Lottery

- Aimed to document approaches to better measure and value the cost of gambling-related harms identified in *Measuring gambling-related harms: a framework for action (Wardle et al, 2018)*.

- Examined evidence and gaps in measuring costs of harms

- Identified examples of economic evaluations on interventions to prevent or reduce gambling-related harms

- Wide scope: gambling harms, addiction harms, other relevant public health relevant harms

Evidence to date

- We found 322 records examining ways to measure and cost harms linked to gambling and other addictions (of which 112 specifically addressed gambling)

- Growth in studies adopting a more public health perspective approach to costing harms, including consideration of impacts for all gamblers and their families, not just problem gamblers

- Quality of life and wellbeing instruments also now being used

- 30% of all studies led by authors from the US, followed by Australia, Canada and UK

- 2/3 of studies published in last 10 years and over time literature has broadened...more countries and different gambling experiences, including online gambling, gaming with in-game purchases
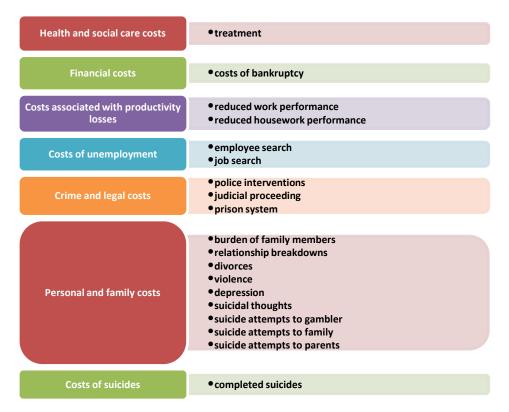
Key steps for estimating costs

Aspects of gambling-related harms included in selected costing studies (McDaid & Patel, 2019)

Study	Work / employment	Money/ debt	Crime	Families	Community	Physical health	Psychological distress	Mental health	Other costs
Browne et al (Australia)	green	green	green	green			green	green	Policy, regulation and research on treatment.
Browne et al (New Zealand)				green		green		green	
Effertz et al (Germany)						green		green	
Han et al (South Korea)		green	green						Outside scope of conventional gambling: Debts associated with gambling on stocks and shares
Fong et al (Macao)			green					yellow	
Kohler (Switzerland)						green	green	green	General social functioning
Rodriguez-Monguio et al (USA)						green		green	Includes out of pocket health care payments
O'Neil et al 2008 (Australia)	green	green	green	green			green	yellow	
Productivity Commission (Australia) 1999	green	green	green	green			green	yellow	
Productivity Commission (Australia) 2010	green	green	green	green			green	yellow	
Talamo et al (Italy)			green						Costs of organised crime around gambling
Thorley et al (UK)	green	yellow	green			green		green	
Victorian Competition & Efficiency Commission (Australia)	green	green	green	green			green	green	Included some regulatory costs for preventing / dealing with gambling

Range of costs estimated for the Czech Republic

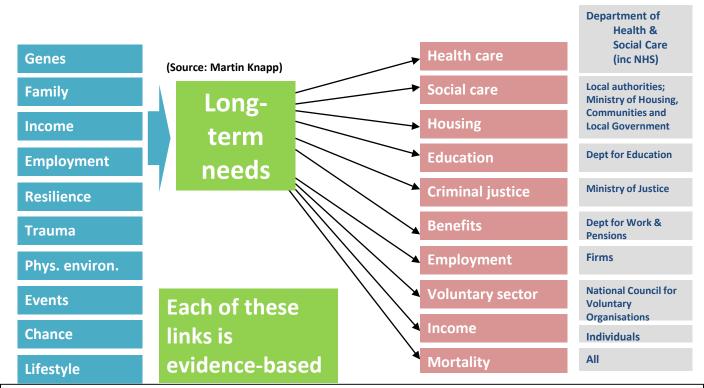|	
Health and social care costs	• treatment
Financial costs	• costs of bankruptcy
Costs associated with productivity losses	• reduced work performance • reduced housework performance
Costs of unemployment	• employee search • job search
Crime and legal costs	• police interventions • judicial proceeding • prison system
Personal and family costs	• burden of family members • relationship breakdowns • divorces • violence • depression • suicidal thoughts • suicide attempts to gambler • suicide attempts to family • suicide attempts to parents
Costs of suicides	• completed suicides

Winkler et al (2017) based on the methodology used by the Australian Productivity Commission (2009)

Challenges

- Multiple and wide-ranging societal impacts to measure

- Attributing social harms to gambling

- Going beyond costs to capture quality of life impacts

- Lack of economic evaluations so unclear how best to intervene
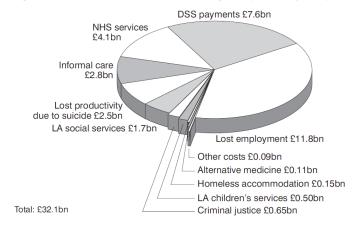
- But we have seen the same challenges elsewhere…

Mental health problems are similarly characterised by breadth, complexity and longevity...hitting many budgets

(Source: Martin Knapp)

| Genes |
| Family |
| Income |
| Employment |
| Resilience |
| Trauma |
| Phys. environ. |
| Events |
| Chance |
| Lifestyle |

Long-term needs

Each of these links is evidence-based

Health care	Department of Health & Social Care (inc NHS)
Social care	Local authorities; Ministry of Housing, Communities and Local Government
Housing	
Education	Dept for Education
Criminal justice	Ministry of Justice
Benefits	Dept for Work & Pensions
Employment	Firms
Voluntary sector	National Council for Voluntary Organisations
Income	Individuals
Mortality	All

"If gambling is to be taken seriously as a public health issue then policy responsibility for prevention and treatment should lie with the Department of Health and Social Care, with input from other departments who deal with the harms of gambling such as welfare, justice, and education. Local authorities should also play a significant role" (Wardle et al, BMJ, 2019)

Despite complexities, we are able to estimate societal costs of mental health

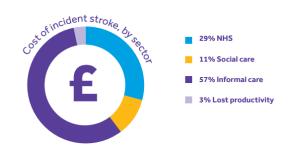**Figure 1 The cost of mental illness in England (1996/97 prices)**

- DSS payments £7.6bn
- NHS services £4.1bn
- Informal care £2.8bn
- Lost productivity due to suicide £2.5bn
- LA social services £1.7bn
- Lost employment £11.8bn
- Other costs £0.09bn
- Alternative medicine £0.11bn
- Homeless accommodation £0.15bn
- LA children's services £0.50bn
- Criminal justice £0.65bn

Total: £32.1bn

Patel & Knapp, 1998

TABLE 1: NUMBER OF PEOPLE WITH SPECIFIC DISORDERS AND CURRENT AND PROJECTED COSTS

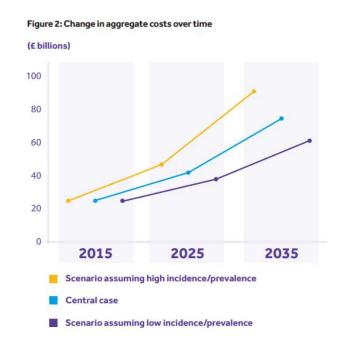| Disorder	Number of people (million)		Service costs (£ billion)			Lost earnings (£ billion)			Total costs (£ billion)		
	2007	2026	2007	2026 (2007 prices)	2026 including real pay and price effect[c]	2007	2026 (2007 prices)	2026 including real pay and price effect[c]	2007	2026 (2007 prices)	2026 including real pay and price effect[c]
Depression	1.24	1.45	1.68	2.03	2.96	5.82	6.31	9.19	7.50	8.34	12.15
Anxiety disorders	2.28	2.56	1.24	1.40	2.04	7.7	8.34	12.15	8.94	9.74	14.19
Schizophrenic disorders	0.21	0.244	2.23	2.52	3.67	1.78	1.94	2.83	4.01	4.46	6.5
Bipolar disorder/ related conditions	1.14	1.23	1.64	1.8	2.63	3.57	3.83	5.58	5.21	5.63	8.21
Eating disorders	0.117	0.122	0.016	0.016	0.024	0.035	0.036	0.052	0.051	0.052	0.076
Personality disorder[a]	2.47	2.64	0.7	0.78	1.13	7.2	7.65	11.16	7.9	8.43	12.29
Child/adolescent disorders[b]	0.61	0.69	0.14	0.16	0.24	0	0	0	0.14	0.16	0.24
Dementia[b]	0.58	0.94	14.85	23.88	34.79	0	0	0	14.85	23.88	34.79
Total	8.65	9.88	22.5	32.59	47.48	26.1	28.1	40.97	48.6	60.69	88.45

Notes: [a] The costs for personality disorders related to 64.6 per cent of people with the condition (see Chapter 9). [b] The total costs are the same as the service costs as we have assumed that there is no lost employment for people with these conditions. [c] It has been assumed that real pay and prices increase by two percentage points above the GDP deflator.

McCrone et al, 2007

...and many other health conditions

Figure 1: Breakdown of costs for incident and prevalent stroke

Cost of incident stroke, by sector

- 29% NHS
- 11% Social care
- 57% Informal care
- 3% Lost productivity

Cost of prevalent stroke, by sector

- 9% NHS
- 22% Social care
- 62% Informal care
- 7% Lost productivity

Figure 2: Change in aggregate costs over time

(£ billions)

- Scenario assuming high incidence/prevalence
- Central case
- Scenario assuming low incidence/prevalence

Patel et al, 2019

Interpretation (and measurement) complexities

Costs naturally vary across time and place. Some other aspects of variation to look out for, especially before drawing comparisons:
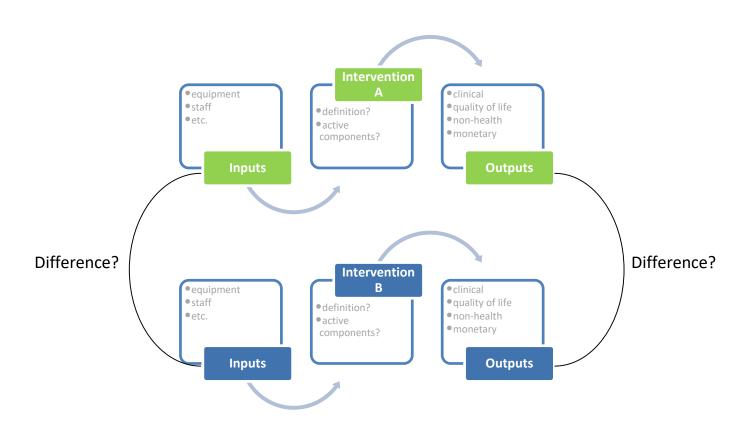
Reference population	**Counting unit – person/population**
Inclusions/exclusions	**Data sources & quality**
Whose views	**Whose budgets**

Moving from counting to evaluating

- Counting costs ultimately only reflects the costs of doing nothing

- Given all the impetuses to reduce harms and to use limited resources to best effect, important to shift towards economic assessments of actions/interventions

- But our review found few such assessments (especially compared against those for other addictions)

Example policy evaluation questions :

- If we implement a walk-in community-based gambling counselling service, what would be the additional cost associated with any reductions in prevalence of co-morbid depression over one year, compared with referral-based counselling provision?

- What impact would there be on health care costs and quality of life over ten years if people presenting in primary care with any addiction issues were referred to a suicide prevention programme?

- Do the total monetary benefits of implementing harmful gambling screening among young adults exceed the monetary costs over their lifetime?

- What are all the costs and benefits associated with increasing the minimum legal age for online gambling?

Patel & McDaid, 2019

Typical economic evaluation framework

Dealing with the unknown

Modelling/estimation useful when:

- data minimal/unavailable

- extrapolating data across time, place, context, population, evaluation phase

- exploring intervention's position within gambling trajectory and potential nature/timing of its impacts

- need early indication of potential costs/gains/cost-effectiveness against comparators, by stakeholder, and key determinants of this

- deciding/justifying further R&D needs

- exploring alternative pricing/implementation/roll-out scenarios

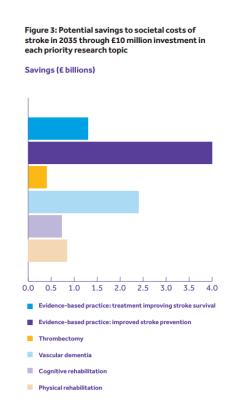- synthesising a series of data (often superior to single studies)

Modelling examples

TABLE 15: POTENTIAL ANNUAL SAVINGS FROM INTERVENTIONS TO TREAT DEPRESSION, ANXIETY DISORDERS, SCHIZOPHRENIA, BIPOLAR DISORDER AND DEMENTIA

Condition and interventions	2007	2026
Depression		
Medication for those currently untreated	£5–36 million	£8–61 million
Medication plus psychological therapy for those currently untreated	£1–9 million	£2–16 million
Anxiety disorders		
Medication for those currently untreated	£8–66 million	£13–102 million
Medication plus psychological therapy for those currently untreated	£1–7 million	£2–11 million
Schizophrenia		
Expansion of crisis intervention teams	£4–22 million	£7–37 million
Expansion of early intervention services	£0 million	£13–65 million
Introduction of early detection services	£0 million	Up to £19 million
Bipolar disorder		
Expansion of crisis intervention teams	£2–10 million	£3–16 million
Expansion of early intervention services	£0 million	£8–31 million
Introduction of early detection services	£0 million	Up to £4 million
Dementia		
Reduction in prevalence among those aged 65–74	£0.2–0.6 billion	£0.4–1.2 billion
Reduction in prevalence among those aged 65–84	£0.8–2.4 billion	£1.7–5.2 billion

The range of potential savings depends on how many more patients are treated and how quickly new services come online

McCrone et al, 2007

Figure 3: Potential savings to societal costs of stroke in 2035 through £10 million investment in each priority research topic

Savings (£ billions)

- ■ Evidence-based practice: treatment improving stroke survival
- ■ Evidence-based practice: improved stroke prevention
- ■ Thrombectomy
- ■ Vascular dementia
- ■ Cognitive rehabilitation
- ■ Physical rehabilitation

Patel et al, 2019

In conclusion, some recommendations...

- Incorporate a public health perspective for economic assessment of gambling-related harms
- Make use of methodologies that deal with the issue of causality
- Difficulty in attributing multi-morbidities to gambling is not a reason to exclude physical and mental health costs
- Highlight all relevant impacts of gambling-related harms, not just those that can more easily be measured monetarily
- Consider making use of existing governmental estimates on intangible impacts of crime, injury and unexpected loss of life to put monetary values on comparable harms relating to gambling
- Measure and value gambling-related harms associated with all levels of gambling
- Invest in simulation modelling
- Make use of opportunities to generate data for future longitudinal analysis of gambling related harms
- Consider use, and further development, of quality of life metrics when assessing impacts of gambling related harms
- Assess cost-effectiveness of actions to minimise gambling related harm

McDaid & Patel, 2019

Thank you!

References

McCrone P et al. Paying the price: the cost of mental health care in England to 2026. The King's Fund, London, May 2008.

McDaid D & Patel A (2019). Measuring Gambling-related harms: methodologies & data scoping study. Care Policy and Evaluation Centre, Department of Health Policy, London School of Economics and Political Science, London.

Patel A & McDaid D (2019). Methods for assessing costs of gambling related harms and cost-effectiveness of interventions. Care Policy and Evaluation Centre, Department of Health Policy, London School of Economics and Political Science, London.

Patel A et al (2018). Current, future and avoidable costs of stroke in the UK: summary report. The Stroke Association, London.

Patel A & Knapp M. Costs of mental illness in England. Mental Health Research Review 1999; 5: 4-10.

Productivity Commission (2010). Gambling. Inquiry Report Volume 1. Australian Government, Canberra.

Wardle H et al (2018). Measuring gambling-related harms: a framework for action. IPSOS Mori, London.

Wardle H et al. Gambling and public health: we need policy action to prevent harm. BMJ 2019; 365: 1807.

Winkler P et al. Social costs of gambling in the Czech Republic 2012. Journal of Gambling Studies 2017; 33(4): 1293-310.

Questions?

Use the sessions chat
in the right-hand panel.