VALUING PHYSICAL ACTIVITY AND THE ECONOMIC IMPACT OF INACTIVITY WORKSHOP

NICE physical activity return on investment (ROI) tool: An example from Dumfries & Galloway

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Presentation Overview

- Context for return on investment (ROI) work in Dumfries & Galloway (D&G)
- ROI in practice using the NICE physical activity tool
- Key findings, learning and wider impact from ROI
- Wider health economic approach in D&G
- A practitioner experience

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D&G Context - Why ROI?

- Be Active Birmingham: Cost effective data helped sustain intervention
- Place a monetary value on interventions (*health behaviour change data is often not enough*)
- Increasingly important in decision making (investment and disinvestment)
- Evidence that public health and physical activity interventions are highly cost effective

Context – The Intervention

- Be Active Upper Nithsdale (BAUN)
- Free access to 2 leisure centres and selected third sector physical activity programmes for adults 50+ and carers (16 +)
- Multi-agency grant funded – Putting You First
- Delivered - August 2014 – March 2016
- DG4 postcode - 2,071 adults 50+ and 598 carers
- DG4 categorised as area of relative deprivation
- Modelled on Be Active Birmingham

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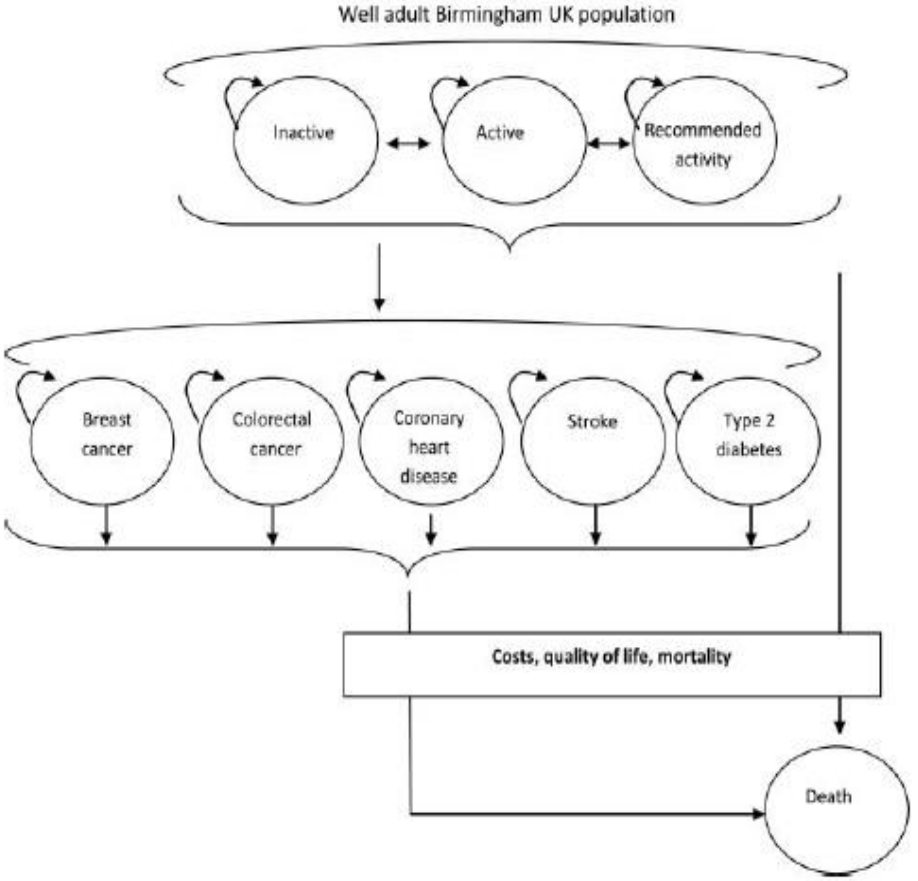
Planned Methodology

- Replicate the cost-effectiveness of a study of Be Active Birmingham
- Permissions to use Birmingham University participant Survey
- Building a Markov model is highly complex



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Frew, E.J et al. 2012 British Journal of Sports Medicine, Vol. 48, No. 3

Actual Methodology

NICE Physical Activity Tool

- Practical, evidenced based and publicly available
- Measures to UK guidelines
- **Community level** (and individual level)
- Adaptable - customisable to local populations
- Data requirements to populate – low burden
- Metrics met public health requirements
  - Expected return by: healthcare, productivity and transport
  - QALY
- Comparison with other D&G intervention

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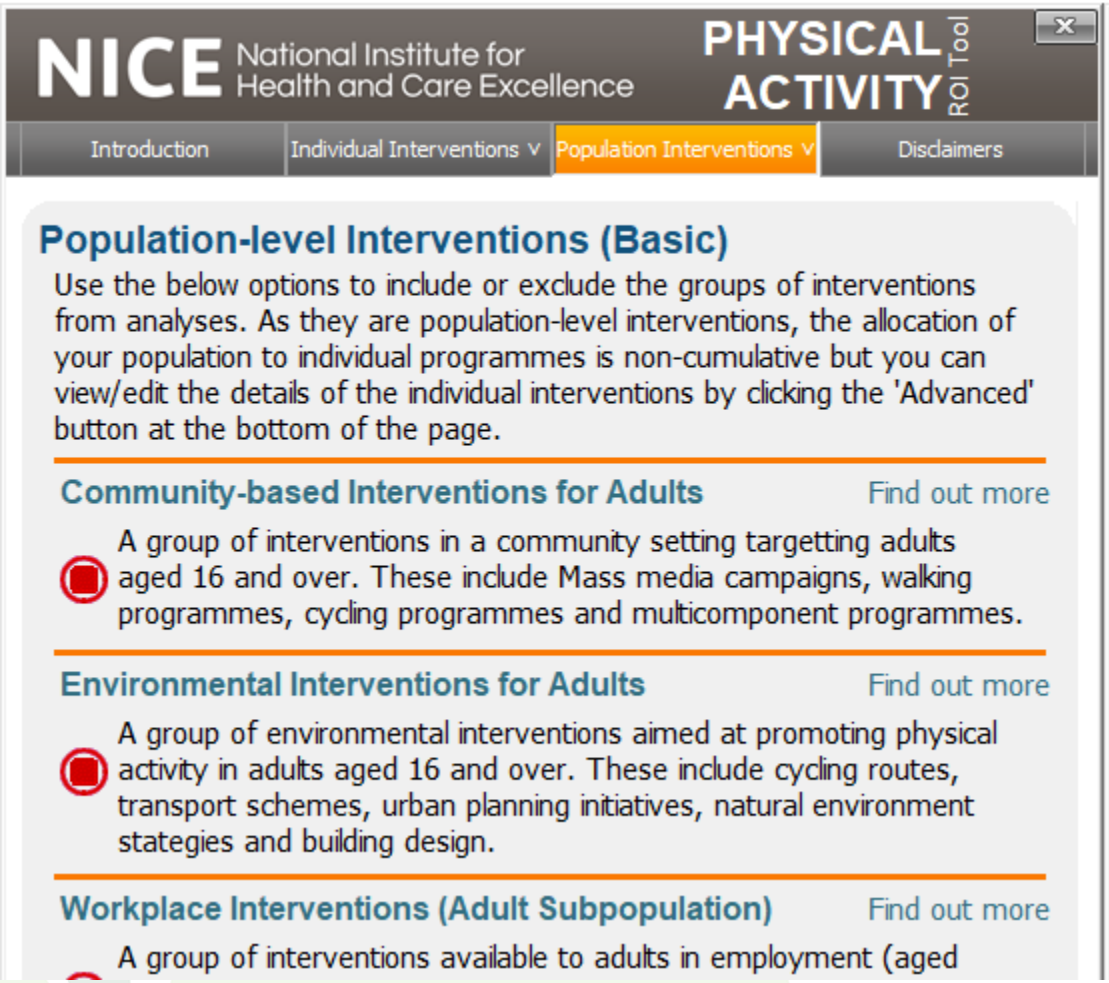

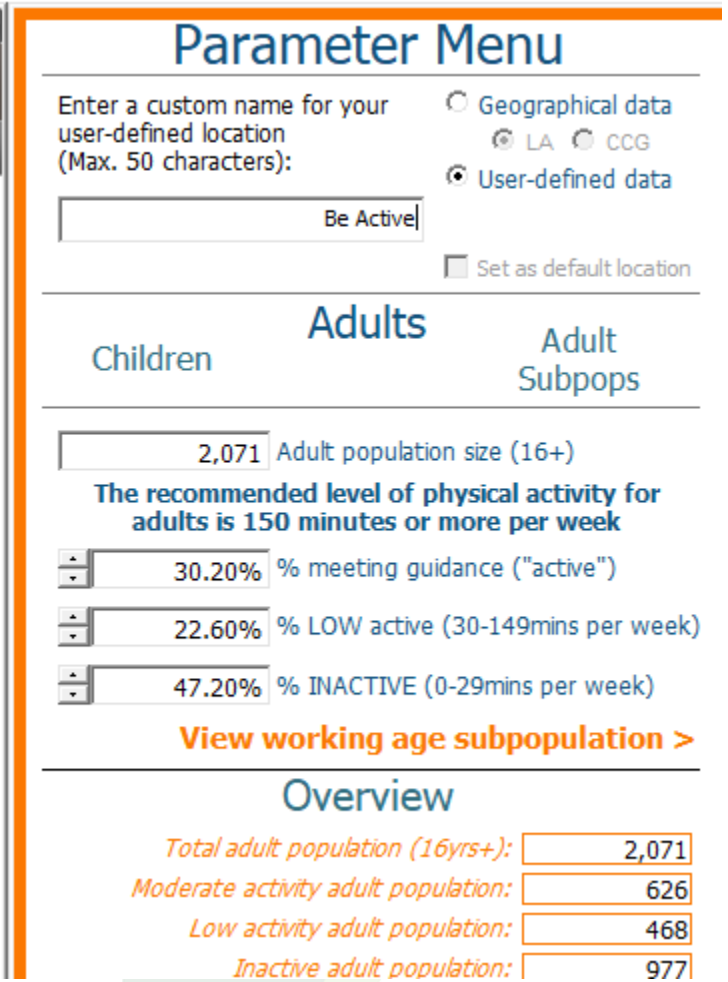

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BAUN Methodology

- Research Timeline: July 2014 - August 2015

- 3 stage quantitative research design
  - Leisure card data
  - Self-report questionnaire
  - **Return on Investment**

beactive
UPPER NITHSDALE

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Data Input – Essential Information

- Total intervention cost / cost per participant
- Participant numbers (adults 16+)
- Change in physical activity levels (moderate)
- Before and after intervention physical activity levels
  - Survey instrument matches ROI measure (e.g. intensity)
- Further segmentation by working age population

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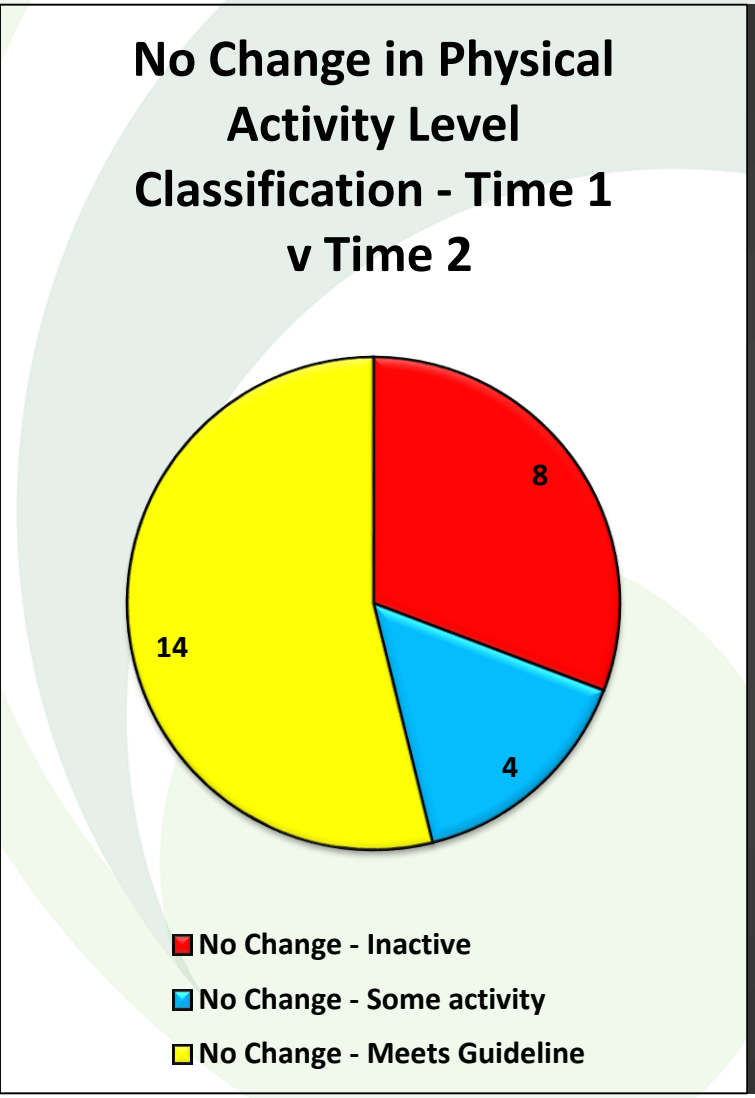
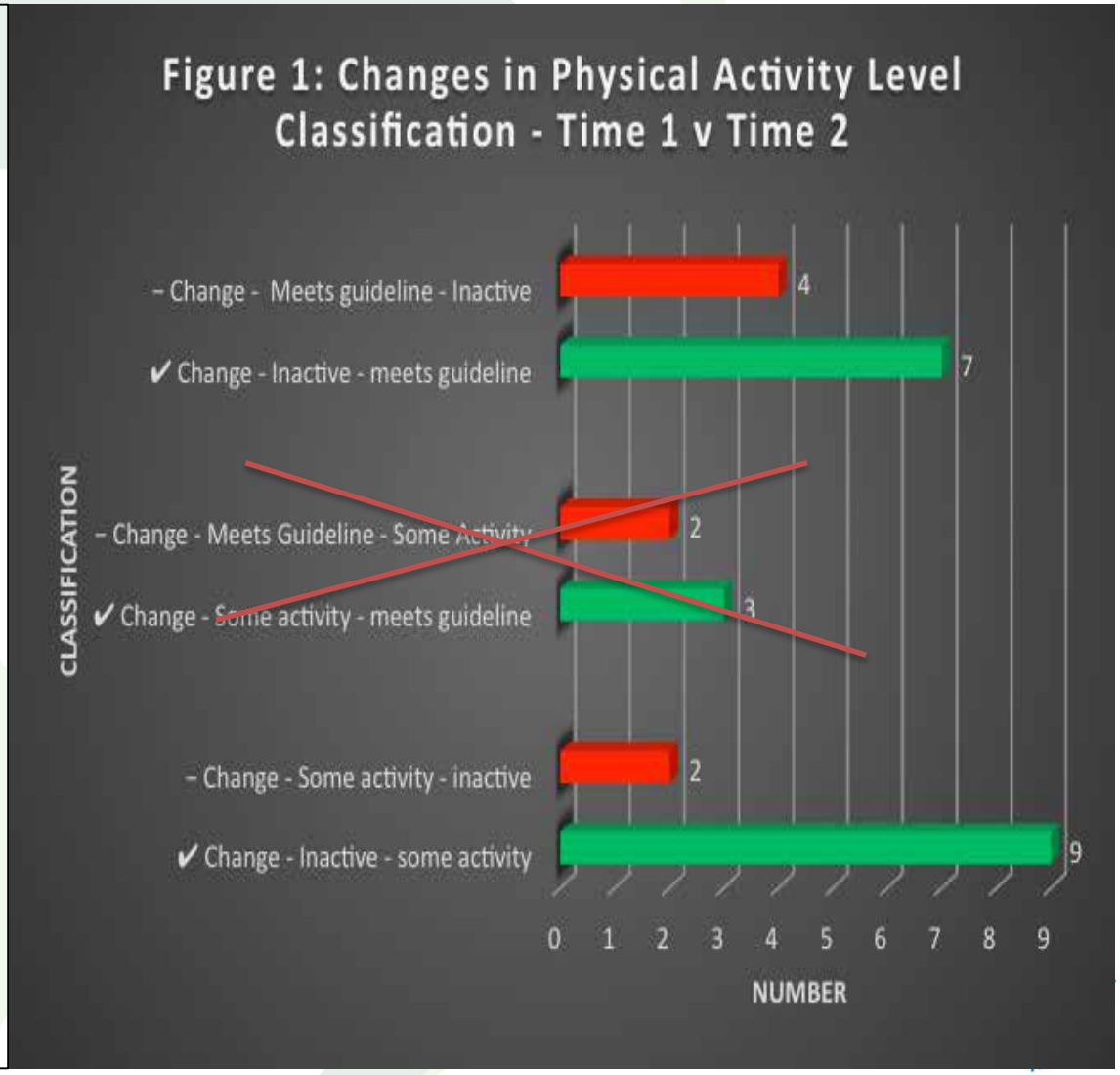
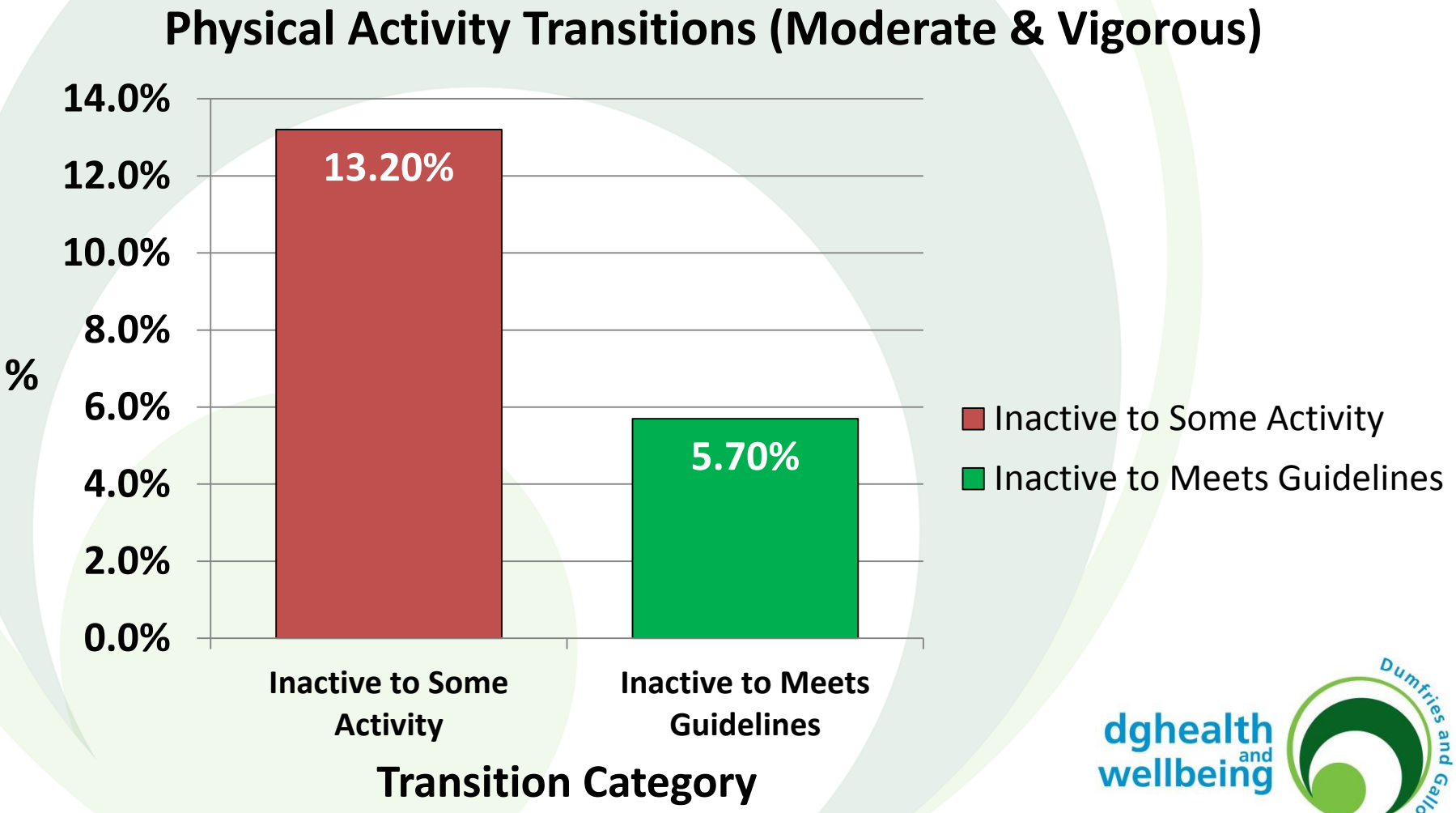
Calculating ROI - Metrics





Calculating ROI - Metrics



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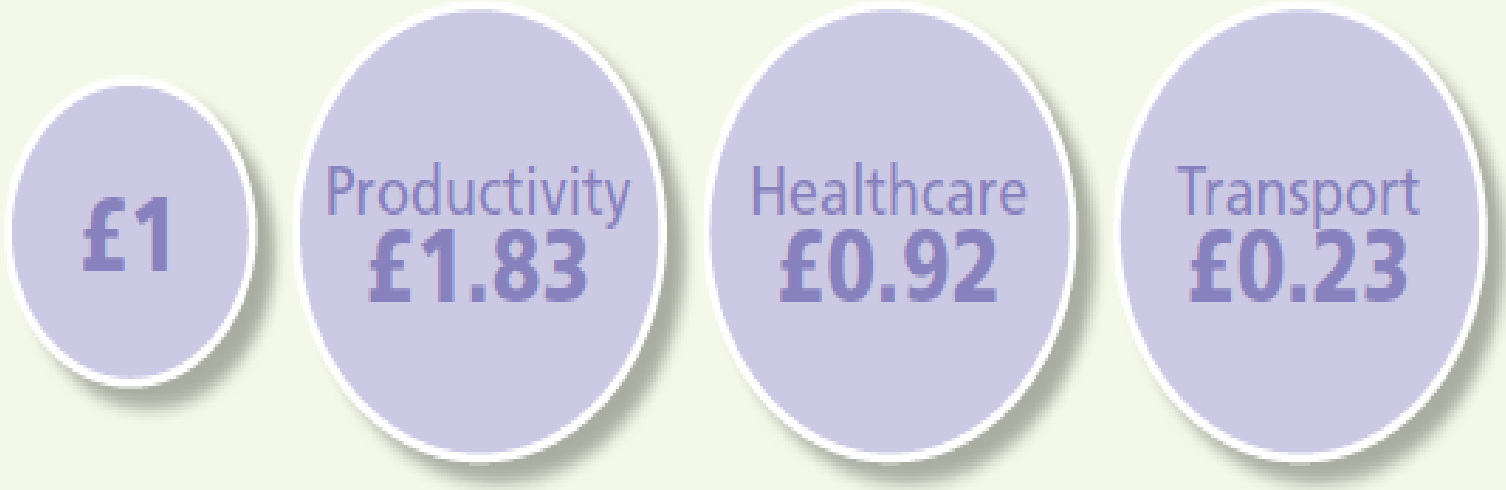
BAUN – Intervention Results

- 311 individuals registered
- Compared to 2013/14 (no intervention)
  - 73.3% increase in facility attendances
- Female physical activity increased*
- Male physical activity decreased
- Carers physical activity increased

*statistically significant**

BAUN ROI - Results

For every £1 spent on BAUN, after 2 years, savings of £2.99 were generated:



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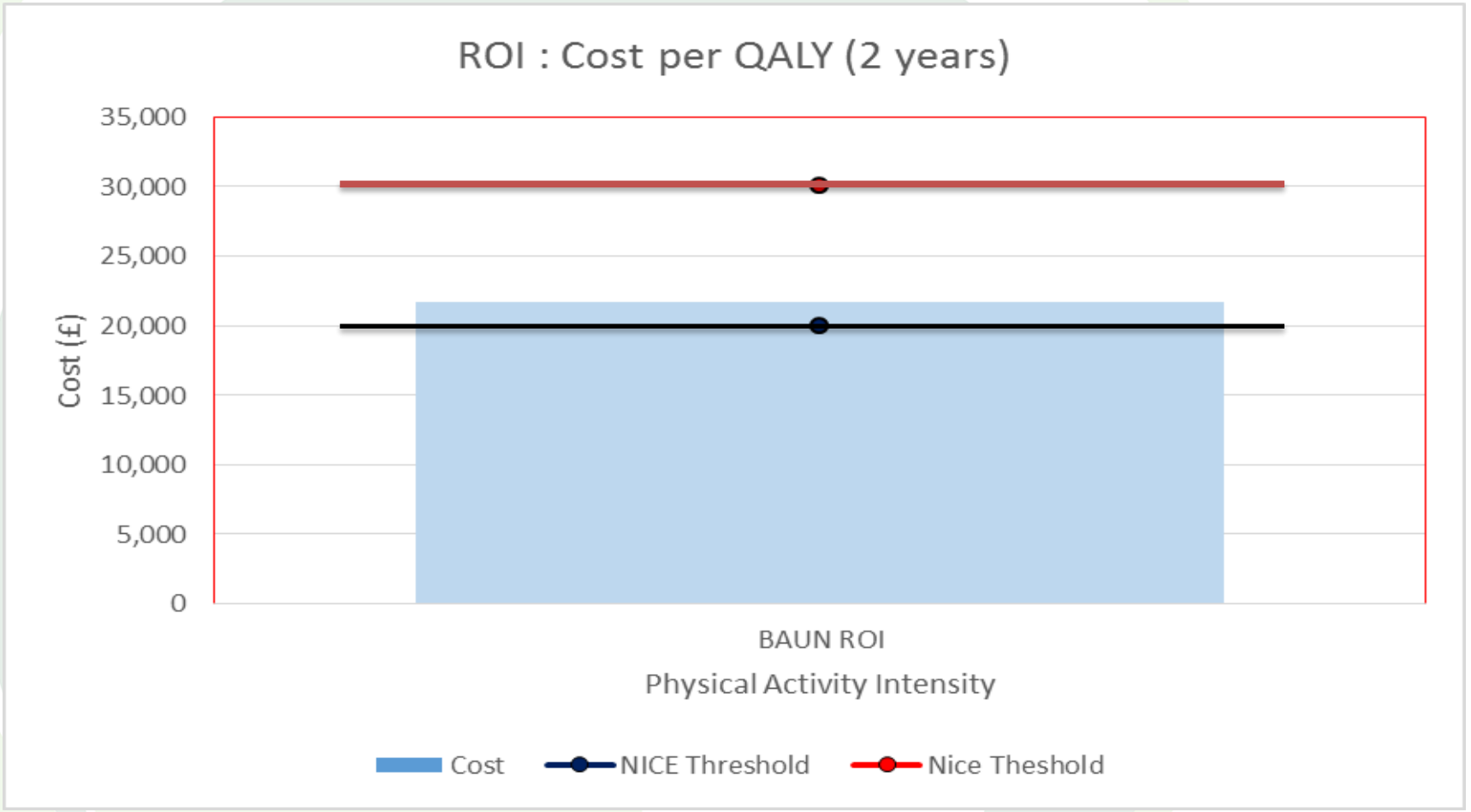
BAUN ROI - Results



- BAUN not cost effective in comparison to other physical activity interventions

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BAUN - Legacy Impact

- BAUN ended in March 2016
- Increased community use of leisure facilities continued
- Get Active launched in DG4 in early 2016
  - Test low cost fitness membership
  - 174 members by April 2016 (baseline: 50)
- Club DG – **regional** lower cost fitness membership scheme launched with over 1,000 new members
- Unclear to the extent ROI influenced legacy

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ROI - Conclusion and key learning

- Economic modelling can be difficult even with a custom built tool
- NICE model gives clear outputs demonstrating cost savings (or not) - *however, this is not always the full story*
- NICE tool has some limitations (e.g. marginal increase not included, no population subgroups)
- Tool is easy to use, has low number of data fields and provides simple reports- *however, method for entering data may differ altering results (sample, physical activity transitions etc)*
- **Seek help/clarification** when required

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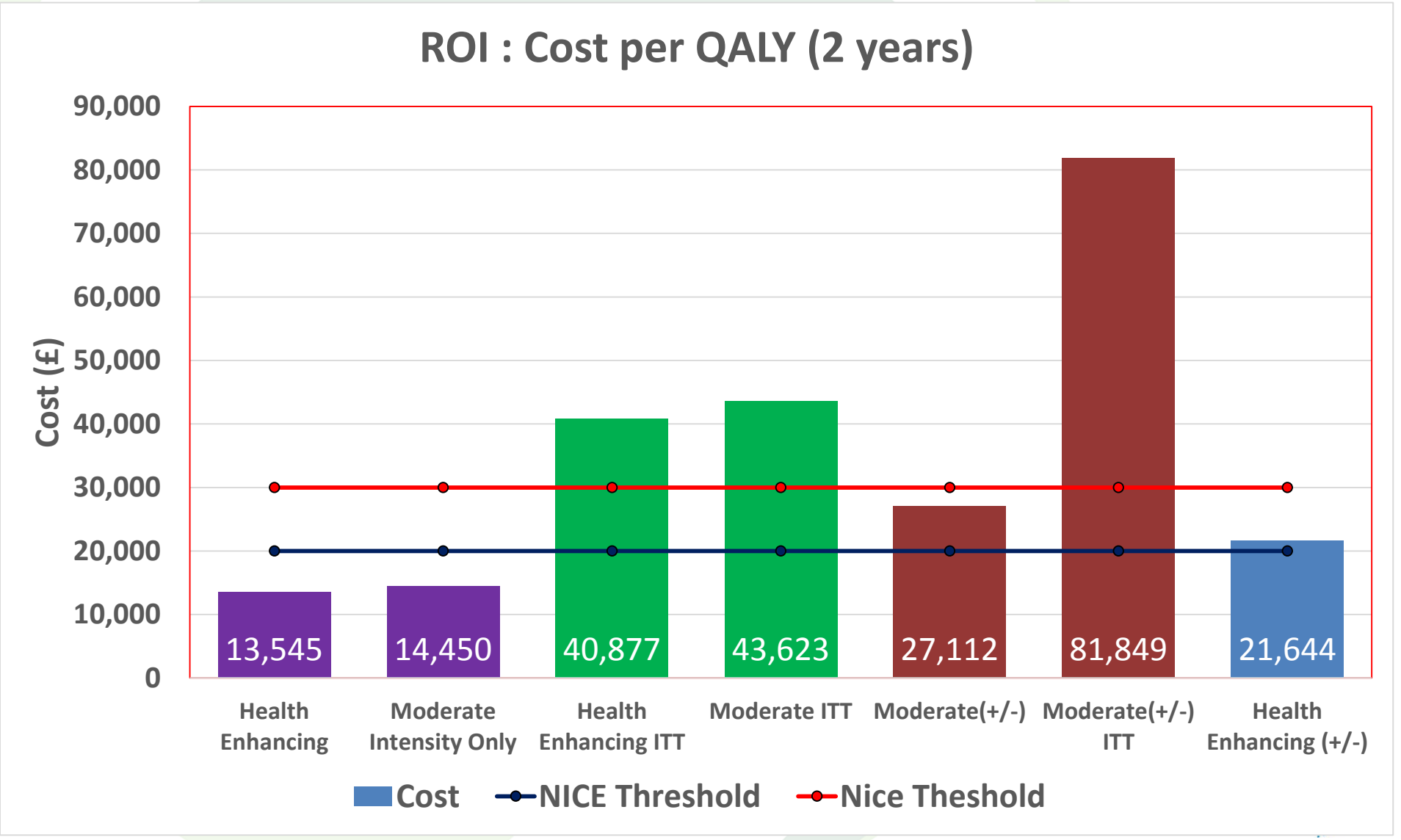
Data Input - Different Results



Valuating Physical Activity - D&G

- Health economic data is important to the strategic physical activity approach in D&G
- Health behaviour change and economic data is presented together where practical
- Evidencing economic effectiveness is integral in decision making (investment/disinvestment)
- Initially used for single interventions now regional level in D&G

Individual Intervention ROI- Beat the Street

	Dalbeattie 2015		Dumfries 2017	
	ROI over 2 years	ROI over 5 years	ROI over 2 years	ROI over 5 years
QALY	16	16	22	
Productivity	£7.73	£7.80	£7.11	£16.87
Transport	£4.71	£11.17	£1.69	£4.01
Healthcare	£1.94	£4.60	£6.75	£6.81
Total (£)	**£14.38**	**£23.57**	**£15.55**	**£27.69**

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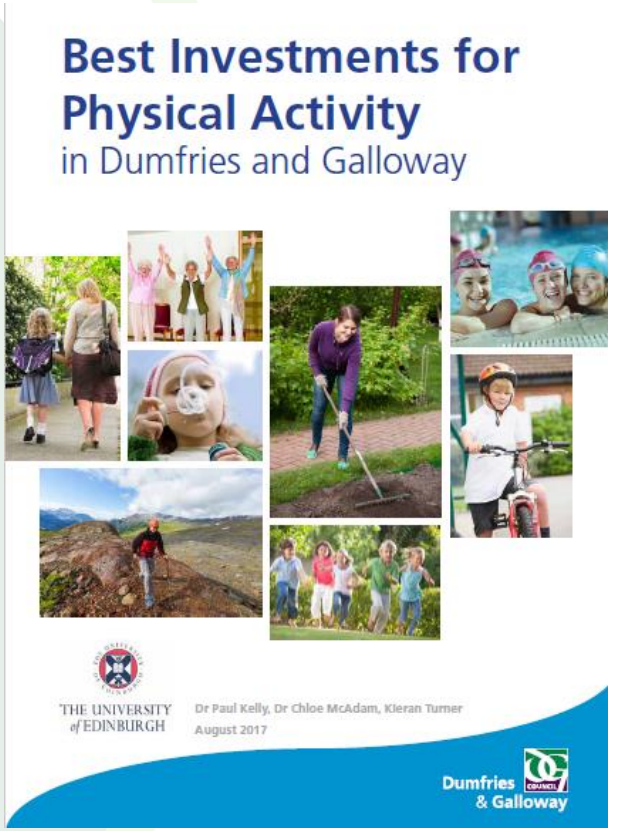
Intelligent Health

Regional Approach

- Review of physical activity projects to identify those providing best ROI
- Pragmatic methodology included:
  - Project cost weighted against: participants reached, repeat attendances and duration
  - Utilisation of existing infrastructure
  - Legacy of ongoing impact
- 52 projects reviewed
  - 700,000 unique engagements
  - Cost of £2.1 million



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Impact in Practice

- 21 local recommendations developed
- Developed to agreed principles – "*are intervention processes and outputs measurable? (e.g. cost)"*
- Ambition of 5% rise in physical activity levels by 2023 (equal to 5,494 people becoming active).
- Value placed on 5% increase using HEAT Tool
- Senior leader **approval** for implementation
- Development of evaluation tool – link to health economic tool inputs

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Demonstrating Economic Impact

HEAT: Economic value of increasing physical activity in D&G

Percentage change in meeting PA guidelines	Number becoming active	Change in annual premature mortality rate	Total economic benefit after 5 years	Total economic benefit after 10 years
1%	1,099	0.23	£1,853,000	£5,636,000
5%	5,494	1.17	£9,266,000	£28,175,000
10%	10,987	2.34	£18,529,000	£56,345,000

World Health Organisation Regional Office for Europe. (2014). "Health economic assessment tools (HEAT) for walking and for cycling."

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QUESTIONS
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