

Developing outcome models to support the refinement of Local Authority/Community Planning Partnership Single Outcome agreements as part of the HIPM process.

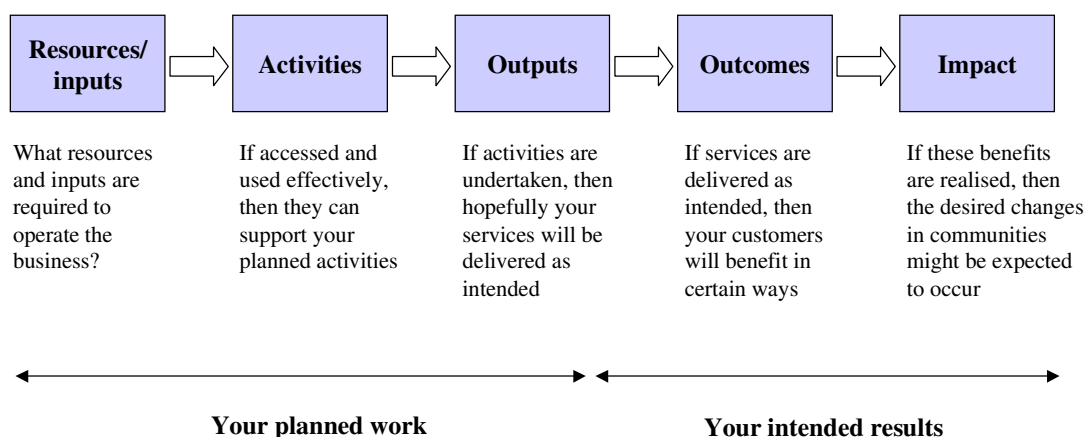
Introduction

This short paper has been developed for NHS Health Scotland (NHSHS) from recent work completed by Avril Blamey & Associates and Brodies LLP on behalf of the West Dunbartonshire Health Improvement Strategy Group (HISG) - the “health” sub-group of the local Community Planning Partnership (CPP). The paper was developed in order to promote discussion between national and local stakeholders about ways in which CPPs might be supported to develop local plans that explicitly show the logic of how their prioritised activities and services will contribute to the outcomes in their SOAs. The examples in the paper are intended to show how some of the currently available tools might be used to enhance planning, programme learning and performance management. The paper is not intended to be prescriptive.

The paper illustrates how the application of logic modelling (www.wkkf.org) and the Re-Aim framework (www.Re-Aim.org) may aid CPPs and Local Authorities in the further development of their Single Outcome Agreements (SOAs).

Logic modelling, as shown in diagram one, is an approach which aims to provide a ‘roadmap’ or ‘journey’ that projects the sequence of related events that logically come together to deliver desired outcomes.

Diagram one: Outline Logic Model



[See <http://www.wkkf.org/default.aspx?tabid=75&CID=281&NID=61&LanguageID=0>]

Planning approaches in many public bodies traditionally work by moving from the left of the diagram to the right (i.e. what impact can we make by continuing to do what we do?). The logic modelling approach works from right to left, working back from the desired impact, through the outcomes (long, intermediate and short-term), to identify the outputs, activities and inputs needed from each partner.

The Re-aim Framework is a planning and evaluation tool that aids the assessment of whether proposed or delivered interventions are likely to be/are successful in achieving population level public health impact (i.e. are 'generalisable' to larger groups or different contexts). It uses a range of criteria which uncover the extent to which interventions:

- will **reach** enough participants (be offered, taken up and adhered to by sufficient individuals in the targeted population);
- have **efficacy** (have been shown to work/are evidence based or plausible);
- can be easily **adopted** by a range of agencies, partners or organisations;
- are **implemented** as intended (according to evidence and best practice across sites and organisations) [called model fidelity]; and
- can be **maintained** over a long enough period of time by individuals and organisations (are sustainable).

[For more information please see: <http://www.Re-Aim.org/>]

This paper presents examples of how this process can be applied to the topic of physical activity. It illustrates how local partnership physical activity programmes can be presented in a fashion that demonstrates their potential contribution to national government outcomes and local SOA's. It also provides an example of how logic models can help identify and be aligned with national and local indicators for performance management purposes.

The example models

The strategic model

Model A on the accompanying paper is a strategic model which illustrates how an integrated set of local physical activity programmes (aimed predominantly at adults) might be logically linked to local and or national intermediate and longer term outcomes.

The right hand side of the model shows the five longer-term (national) outcomes that will most plausibly be influenced by local physical activity programmes from the fifteen high level outcomes in the Scottish Government's National Performance Framework.

Moving to the left, the next column illustrates long-term health outcomes which might be achieved via the influence of a local physical activity programme. It shows potential links to the long-term outcomes which feature in the proposed indicators from the recent SOA guidance.

Moving again to the left, the next column indicates the programme's potential contribution to more intermediate outcomes for health and the environment. The numbers on the various outcome boxes are linked to a table, presented later in this paper, which illustrates some possible aligned indicators and data sources for these outcomes. The table is intended to inform discussion in relation to issues of performance management at the local and national level.

Finally the left hand side of the model shows the range of interventions and services that may constitute a local programme and how, if they are appropriately delivered, they may contribute to these previously detailed outcomes. The lowest box on this column also introduces one key short-term outcome (changes in knowledge about benefits and opportunities for activity) as well as the related activity. [The letters and colours on these activity boxes correspond to operational models detailed later in this paper].

The majority of other short-term outcomes are not detailed on this strategic model but are illustrated on subsequently presented operational models that show the contribution of particular interventions in more depth. The partnership inputs are not detailed on any of the models presented in his paper. This is to minimise the size and complexity of the models in this illustrative paper.

Theoretically any of the outcomes (national/long-term, intermediate or short-term) could be relevant at the local or national level. In practice, however, as outcomes become longer-term/higher level they are sometimes more likely to require both local and national action. As such they may not feasibly be deliverable by local partnerships alone or perhaps at all. Similarly as the outcomes become more distant they often become more difficult to measure at the local level.

The operational models

Models B to E demonstrate how logic modelling can be used at an operational level to show more precise linkages between activities, outputs and shorter-term outcomes. The outputs and shorter-term outcomes are predominantly missing from the strategic model. The models also show linkages between the short-term outcomes and intermediate or longer-term outcomes. All the models link back to the strategic model in terms of their activities and their outcome of increasing physical activity. The other intermediate and longer-term outcomes shown on the strategic model also appear on the operational models that they relate to most closely. The operational models are more useful for developing action plans and programme monitoring that can inform local performance management and programme improvement over shorter-term timescales.

Model B illustrates the logic linking the cluster of activities typically associated with Leisure and Recreation Services and Sports Development within a local area to increasing and maintaining physical activity. It is also likely to include activities delivered by the voluntary (and to some extent the private) sector.

Model C shows the logic linking the cluster of activities typically associated with the referral of specific target groups (inactive, clinical, those with a diagnoses of CHD, etc) to programmes aimed at increasing and maintaining physical activity. It also includes brief interventions in health care settings to promote physical activity.

Model D demonstrates logical linkages between activities related to the promotion of active commuting and to a lesser extent activity promotion within the workplace. This model does include some activities targeted at young people such as safer and active routes to school and the travelling green initiative.

Finally, Model E highlights the linkages between activities encapsulated in Scottish Planning Guidance SP11 concerning the protection and enhancement of green space and the development of infrastructure to promote physical activity. Whilst both of the latter models (D and E) are concerned with increasing and maintaining physical activity they also have clear links to longer-term environmental outcomes.

Identifying the contributions of key programmes within the logic models towards the prioritised interim outcomes

The following tables and text illustrate where key elements of the Re-Aim framework (Re-Aim.org) can be aligned with the development of logic models in order to highlight the potential contributions made by the various prioritised interventions. This process integrates important concepts such as population reach, adoption and efficacy (see previous definitions) into the models. This further demonstrates the models' plausibility and do-ability or highlights potential flaws in their logic. The use of this framework can provide data that can aid decision making regarding which intervention(s) to prioritise to best achieve local and national outcomes.

The Re-Aim tables follow the same order as the operational models, however, only a few of the possible interventions contained in the operational models have been worked up in this fashion. These provide examples of the utility of this process and the learning that can result and how it can aid partnerships in refining their initial outcome models.

In order to present the following examples we have used hypothetical data based on a fictitious Scottish Community Health Partnership (CHP). The contributions to the outcomes listed are informed by reference to currently available evidence of likely effectiveness of the interventions. This process of developing logic models aligned with the Re-Aim framework has been applied to a real life Scottish Community Planning Partnership. The models and learning to arise from the process were provided to the partnership to inform their future discussions regarding the development of their SOA (Brodies LLP and Avril Blamey & Associates, West Dunbartonshire Community Planning – Health Improvement Strategy Group Tobacco Control and Physical Activity Outcome models September 2008).

Information about ‘Made Up’ Community Health Partnership to inform the hypothetical Re-aim Framework

‘Made Up’ CHP is an urban Scottish CHP with an adult population of 200,000. They have prevalence rates for participation in physical activity slightly higher than the Scottish average with 40% of their adult population achieving the national target of participating in moderate physical activity on five or more days per week (or the equivalent of 3 x 30 minutes of vigorous activity each week). This means that 120,000 adults are not reaching the national target. 34% of the population is sedentary/inactive (achieving 30 minutes-or less- on only one day a week or less).

To achieve a 1% increase in the *overall* population who are reaching the national target would require that each year an additional 2,000 people participate in moderate activity on most days of the week (6000 over the three years of the action plan) and the maintenance of current activity levels amongst those already reaching these targets.

The completed Re-Aim framework for Leisure Services’ Passport to Recreation scheme (linked to operational logic model B)

Activity	‘Made Up’ Leisure Services’ Passport to Recreation scheme offering free/discounted access to facilities and classes at specific times
Target Group(s)	Those at risk of CHD and those who are inactive/low active from more deprived SIMD areas
Anticipated reach	Currently 10% of the adult population have a Passport to Recreation (n=20,000). The aim is to increase this to 20% (40,000) by 2011. As detailed in efficacy below most schemes do not report (or in some instances gather data) on the activity levels of those who take up the scheme or on their ongoing adherence (frequency, duration of mode of activity) so individual adherence or maintenance is unknown.

	Scheme is targeted to give greater savings and access to those in more deprived areas but a scheme for all residents also operates but with lower discounts.
Evidence of efficacy	The general evidence base for the impact of leisure services on physical activity and health is relatively poorly developed ¹ . This is mainly due to limited monitoring and evaluation in relation to these outcomes. Evaluations of concessionary scheme such as free swimming tend to show equivocal results ² and often increase activity amongst the already active or achieve only short term change in the inactive.
Adoption	The scheme runs/applies across all facilities but only allows access at limited times.
Implementation fidelity	Explicit evidence informed model not known. Extent to which the scheme is implemented as intended across all sites unknown. Scheme advertised mainly in leisure venues, not directly to the inactive/low active. However, the scheme is promoted through Exercise Referral
Maintenance	Similar scheme operational for six years to date
Contribution to local target /outcome	Whilst the scheme has the potential to make a substantial contribution to achieving the local target of getting 6000 people regularly active (over three years) and to maintain existing activity, the actual contribution is unknown as data are not gathered that indicate activity levels on joining the scheme or the level of adherence once individuals have joined. The contribution to and balance between encouraging adoption and/or adherence is therefore difficult to gauge.
Cost	£300,000 pa
Partner contributions	Contribution mainly from Leisure services. Scheme promoted to those in Exercise referral and by Health Improvement staff.
Monitoring and Evaluation	Currently limited must be enhanced

¹ <http://www.sportscotland.org.uk/ChannelNavigation/Resource+Library/Publications/Social+Benefits+of+Sport.htm>

² <http://www.sportscotland.org.uk/Search.htm?searchTerm=passport%20to%20recreation>

***Key points for decision making from the Re-Aim framework for Leisure Services
Passport to Recreation scheme***

Given the large possible reach of this intervention it has the potential to make a substantial contribution to the target of increasing activity amongst 6000 previously inactive/low active adults across the three years.

This is only likely to occur if the scheme is genuinely marketed (tailored and targeted) to those who are inactive/low active (rather than those already within leisure services facilities) and if these individual are given support to adhere to their chosen activities. To achieve this maintenance strategies could be developed (reward schemes, buddy systems, reminders, introductory classes and events).

Restrictions on the schemes to protect income targets for leisure services should be made explicit to partners and limited resources used to explicitly target those most in need /likely to benefit.

Processes should be developed, if not already in place, to record whether those taking up the scheme are inactive and to monitor (at renewal times) reported adherence. If such data is recorded it should be analysed and shared to inform programme development

The completed Re-Aim framework for the proposed Exercise Referral Scheme (linked to operational logic model C)

Activity	'Made Up' CPP Exercise Referral (ER) Scheme
Target Group(s)	<p>Those at risk of CHD</p> <p>Post MI /surgery /angina (for Cardiac Rehabilitation or ER)</p> <p>Inactive and low active</p> <p>[At least 60% of the CHP adult population are likely to eligible n= 120,000]</p>
Anticipated reach	<p>Currently the scheme provides a service to only 200 people per year (50% from Lower Depcat/SIMD areas) Aim is to increase to 300 referrals per year (70% from lower Depcat/SIMD)</p>
Evidence of efficacy	<p>NICE review/guidance –and NHSHS commentary- suggests limited evidence of short term efficacy but poor long-term outcomes ³.</p> <p>Some local scheme data from other CHPs however, (e.g. NHS GG&C schemes) indicates upwards of 5-9% still active at one year⁴.</p> <p>Expected efficacy, therefore, estimated at 5% still active at 1 year.</p> <p>Cardiac Rehabilitation is recommended in the SIGN guidelines and will impact on those at high risk although its potential reach is likely to be lower than Exercise Referral⁵.</p>
Adoption	<p>See efficacy for information on individual adoption</p> <p>'Made Up' CHP has 10 GP practices [30 GPs and 20 Practice Nurses]</p> <p>Currently: 3 practices have referred no patients, 4 have referred fewer than 10 patients each, the remaining three have referred approximately 53 each.</p>

³ <http://www.healthscotland.com/documents/2375.aspx>

⁴ http://www.glasgowcitycouncil.co.uk/healthycities/ghcp/pdf/eval_exe.pdf.

⁵ <http://www.sign.ac.uk/guidelines/fulltext/57/section3.html>

Implementation fidelity	Local scheme follows National Quality Assurance Framework for exercise ⁶ .
Maintenance	Scheme operational for four years to date
Contribution to local target /outcome	Given estimated efficacy for Exercise Referral of 5% still being active after one year then after three years (assuming 300 patients referred and attend at baseline each year) there is likely to be around 45 people who have remained active. [May be less given covers three years rather than one year of maintenance]. Note many more may have been active for shorter periods but may have relapsed or are active at lower levels. Additional numbers may have been achieved via Cardiac Rehabilitation
Cost	£120,000
Partner contributions	Posts financed by NHS. Venues and access to reduced price /free activity financed by Leisure Services. Referral via primary care and Acute Services.
Monitoring and Evaluation	Scheme has some monitoring in place. Potential to be enhanced

Key points for decision making from the Re-Aim framework for Exercise Referral

Given the relatively limited evidence of efficacy, this intervention is likely to make a contribution of around 45 people who have increased activity (in the longer term – likely to be more in the short term) to the overall local target of 6000 across the three years.

To enhance this contribution the scheme is likely to require greater reach and adoption. This means more referrals and greater adoption (more GPs and Practice Nurses referring more patients, self referral, and referral by other professionals). It is likely also to need more strategies to enhance participants' adherence in the longer-term (greater number of follow ups, more reminders, buddy systems, rewards, less formal activities).

Referral from lower SIMD areas would need to be enhanced and checks made on the relative levels of adherence for those from different SIMD groups to avoid exacerbating rather than tackling inequalities.

⁶ Department of Health 2001/recommended for use in Scotland

The completed Re-Aim framework for Active Commuting/Green travel/Workplace interventions (linked to operational logic model D)

Activity	'Made Up' CPPs Active Commuting/Green travel and workplace interventions.
Target Group(s)	Those inactive/low active Those currently doing most of their commuting [to work] by car approximately 69% of the population nationally (only 12% walking and 2% cycling) Those in workplaces (particularly sedentary occupations).
Anticipated reach	Local evidence shows that within 'Made Up' CHP 65% of the working population travel to work by car and 80% have sedentary occupations. Most journeys to work are relatively short (under 3 miles). The potential reach of these activities are very large although predominantly focused on commuters (mainly, therefore, the employed).
Evidence of efficacy	Many of these programmes are at an early stage and so have limited monitoring information. Due, in part, to lack of good quality evaluation and research evidence of impact is limited. The range of activities detailed in this model are supported by the NICE guidance on behaviour change ⁷ in workplaces and community based walking and cycling schemes ⁸ . Some of the interventions (e.g. 'Walk In To Work Out' ⁹ , Travelling Green ¹⁰ and promoting stair walking have been ¹¹ subject to local evaluations/trials demonstrating some efficacy. Many of these have the potential to encourage small but significant increases in 'activities of daily living' in the short and (in some instances) in the longer term. Their impact on inequalities is relatively unknown.

⁷ <http://www.nice.org.uk/guidance/index.jsp?action=byID&o=11670>

⁸ <http://www.nice.org.uk/guidance/index.jsp?action=byID&o=11373> Department of Health 2001/recommended for use in Scotland

⁹ Mutrie N, Carney C, Blamey A, Crawford F, Aitchison T, and Whitelaw A. Walk in to Work Out: a randomised controlled trial of a self help intervention to promote active commuting. *Journal of Epidemiology and Community Health* 2002;56:407-12

¹⁰ McKee, R, Mutrie, N., Crawford, F., Green, B. Promoting walking to school: results of a quasi-experimental trial. *Journal of Epidemiology and Community Health* 2007, 61:818-823.

¹¹ Blamey A, Mutrie N, Aitchison T. Health promotion by encouraged use of stairs. *British Medical Journal* 1995;311:289-90

Adoption	At the moment these programmes are run in only a small proportion of workplaces (18%). Showering and bike parking is available in only 20% of workforces. Public transport improvements are planned across the CPP area
Implementation fidelity	No information on the extent to which these interventions are implemented in the way they were intended (tested in trials) across the various sites
Maintenance	Varied depending on particular intervention. Most relatively recently developed in the worksites.
Contribution to local target /outcome	Although most likely to lead to small but significant changes the reach of these potential interventions is likely to be great
Cost	Excluding improvements in transport, the promotional interventions are likely to be relatively inexpensive but need refreshed regularly and coordinated locally.
Partner contributions	Promotional programmes evaluated by NHS, materials for many programmes provided by NHSHS, time commitments to implement from worksites and venues. Transport authorities and transport companies for public transport schemes.
Monitoring and Evaluation	Smaller interventions evaluated. Larger ones less so. Some monitoring information may be commercially sensitive

Key points for decision making from the Re-Aim framework for Active Commuting, Green travel and workplace programmes.

Given the large potential reach of these promotional interventions and their relatively low cost, they could lead to substantial small but significant changes in behaviour (activities of daily living). This would require local coordination and regular refreshing of campaigns.

Due to their predominant focus on those in employment they may exacerbate inequalities.

To achieve greater impact they will need to be aligned and jointly promoted with the activities in the planning and environment model that details infrastructure change.

The completed Re-Aim framework for the proposed SP11 Planning and built and natural environment activities (linked to operational logic model E)

Activity	'Made Up' CPP SP11 activities
Target Group(s)	Due to the nature of the interventions they may well impact on the whole population rather than key target groups. However, it is likely that some of the planned infrastructure changes will impact mainly on those commuting or in employment. Improved environments should ideally impact on all socio-economic groups and should encourage both maintenance (those already active) and adoption (inactive/low active) of physical activity by influencing worksites, the urban environment and green spaces.
Anticipated reach	This set of interventions has potentially greater reach than any of the others in the previous models because through changing infrastructure and the environment they can impact on virtually the whole of the local population.
Evidence of efficacy	A key issue in this area is that, due to the large-scale nature of these environmental/infrastructure interventions, there has been limited evaluation. Where there has been evaluation there have been difficulties in attributing outcomes to specific elements of such regeneration programmes and generalising across contexts. The NICE guidance summarises the wide ranging evidence behind the main activities that are contained in this model ¹² .
Adoption	Likely to require substantial promotional campaigns and possible incentives to encourage behaviour change even with long-term changes in the environment. For example, Green travel plans and commuting schemes would need to be associated with development of bike lanes and refreshed regularly.

¹² <http://www.nice.org.uk/guidance/index.jsp?action=byID&o=11917>

Implementation fidelity	Some scrutiny of implementation of SP11 in local contexts would probably be needed. Again there are likely to be significant differences in interpretation in different planning environments and varied degrees of allied activity in terms of advertising, promotion, upkeep etc.
Maintenance	Many of these interventions would, by their nature, be long-term. Their long-term impact would depend on good maintenance and upkeep or policing (e.g. keeping cycle routes safe and free from cars).
Contribution to local target /outcome	Any estimation of the thresholds of change that might be expected from any of these interventions would need to be modelled based on the actual infrastructure changes that were planned (e.g. Kilometres of bike/walking trails or segregated cycle lanes, development of green space and parks etc). The evaluation of such infrastructure change in term of its impact on physical activity is underdeveloped (see above).
Cost	High
Partner contributions	Significant contribution from numerous partners likely in term of capital costs, maintenance, promotion, policing etc.
Monitoring and Evaluation	Currently underdeveloped

Key points for decision making from the Re-Aim framework for SP11 (Planning and built and natural environment).

This cluster of activities can have enormous reach. However, it is likely that infrastructure change will need to be delivered alongside promotional and behaviour change campaigns and programmes if that reach is to be turned into impact in terms of adoption and maintenance.

There is much need for good quality monitoring and evaluation in these areas and possible use of other area/international comparisons /observation research.

Likely success will depend on the interpretation of SP11 in local areas and the impact on physical activity will be tied to issues of upkeep, policing, safety (real and perceived) etc.

Using the Re-Aim data

The above key learning points from each of the interventions can be used for a variety of purposes. In the main it allows consideration of the plausibility of the models that have been developed by checking the efficacy, reach and underpinning theory of the links in the models. For example, the outcomes in the SP11 planning model will only be achieved if the guidance is fully implemented and if planning authorities are not swayed by competing economic or other social interests.

The information can also help prioritise between different potential interventions or to consider the ideal mix of interventions that might maximise impact for any given resource. For example, promoting physical activity in Primary Care might require a mix of 'brief interventions' by GPs and Exercise Referral. The former may have greater reach (but possibly lower efficacy) than more intensive Exercise Referral interventions targeted at those with higher risk.

The learning can also be used to improve programmes through enhancing particular elements of the interventions. For example, increasing the number of worksites or schools offering a programme (adoption), developing strategies to improve individual adherence (part of 'reach'), ensuring all sites are implementing the programme in line with recommended best practice, or identifying processes to achieve longer-term sustainability (maintenance).

It should be noted that a key limitation in the modelling process, and in partnerships' ability to prioritise interventions, is the lack of good quality evidence for many of these areas. It is unlikely that such evidence will improve, however, unless the theory behind interventions is improved. Tools such as logic models and Re-Aim can help that process. In addition, in the absence of evidence these approaches at least consider the plausibility (in terms of common sense and tacit knowledge) and do-ability of plans.

This type of information can be useful in refining future SOAs and improving local and national action plans.

Linking the models to indicators and data sources for performance management

The following table shows how the logic models can be aligned to possible indicators to inform programme monitoring and ultimately performance management at the local or national level. The indicators relate to Model A only (the strategic model) and are aligned to the intermediate outcomes (and the one short-term outcome) detailed on this model.

Possible indicators for the short (n=1) and intermediate outcomes	Possible national /local data sources
<p>1.</p> <ul style="list-style-type: none"> • % of population aware of PA targets and health benefits of PA • % of professional in key groups (primary care, social work) aware of aware of PA targets and health benefits of PA 	<p>Scottish Health Survey (previously part of HEPS) reported at national level yearly. 2008 data available in 2009 (and so on). Available for local NHS Board areas <i>dependent on sample sizes</i> every four years</p> <p>Local health and wellbeing survey /citizens panels, where conducted, are possible alternative sources.</p> <p>Local survey of professionals</p>
<p>2.</p> <ul style="list-style-type: none"> • The % of the population participating in 30 minutes of moderate physical activity 5 or more times per week (or equivalent). • The % of those who are <i>inactive/sedentary</i> in the population. • • Relative decrease in % of those <i>inactive</i> in lowest 15% of SIMD areas relative to most affluent 	<p>Scottish Health Survey reported at national level yearly. 2008 data available in 2009 (and so on). Available for local NHS Board areas every four years</p> <p>Scottish Health Survey reported on at national level yearly. 2008 data available in 2009 (and so on). Available for local NHS Board areas <i>dependent on sample sizes</i> every four years.</p> <p>Local health and wellbeing survey /citizens panels, where conducted, are possible alternative sources for all above (again dependent on sample sizes).</p>

<p>3. % of the population maintaining participation in 30 minutes of moderate physical activity 5 or more times per week (or equivalent) over time</p>	<p>As above</p>
<p>4. *In terms of access you would ideally need a range of locally chosen indicators that covered issues such as availability, geography, access for key groups, % of population who know of facilities and classes etc but ultimate test of access perhaps is 'is the opportunity taken up'?</p> <ul style="list-style-type: none"> • *No of appropriate ('fit for purpose in relation to target group') opportunities in locality • % of population taking up existing/new physical activity services/opportunities who were previously inactive/low active 	<p>Audit Scotland SPI's provide information on attendances per 1000 population (per year) at pools, and indoor facilities. However, this is attendances rather than individuals and so doesn't really address access (e.g. may be 4,000 but not known if 1000 people 4 times or 40 people 100 times).</p> <p>Currently not available (or not collated) from most Leisure Services usage figures or Passport to Recreation schemes.</p> <p>Available in some smaller schemes such as Exercise on Referral.</p>
<p>5.</p> <ul style="list-style-type: none"> • % of inactive receiving brief intervention in Primary Care • % of inactive offered and taking up referral from PC • % of those with MI/Angina/CABG receiving and taking up referral to cardiac rehab care <input type="checkbox"/> 	<p>Currently not available. Would either need to become part of Quality Outcomes Framework nationally for Primary Care or may be influenced by future HEAT target?</p> <p>Monitoring from local schemes/services</p> <p>Monitoring from local schemes/services</p>
<p>6.</p> <ul style="list-style-type: none"> • Amount and quality of green space available 	<p>Scottish Household Survey at LA level? Shows % of residents satisfied with local greenspaces.</p> <p>Local surveys</p>

<ul style="list-style-type: none"> • Number of 'on and off' road cycle paths that are maintained and safe • Number of well maintained, safe and accessible play areas 	<p>KMs of paths available from local planning (but not maintenance and safety levels)?</p> <p>Local survey /Greenspace audits?</p>
<p>7. Proportion of adults making one or more visits to the outdoors per week</p>	<p>SNH Scottish Recreational Survey. Completed monthly on sample (n=1000) until 2012</p> <p>Local surveys</p>
<p>8. The proportion of driver journeys delayed due to traffic congestion</p>	<p>Scottish Household Survey – time lost on regional roads due to congestion? Not sure if available at local level</p> <p>Local transport survey data where it exists</p>
<p>9.</p> <ul style="list-style-type: none"> • %of journeys to work made by public or active transport • % of journeys to work where walking/bike as dominant mode • % of children travelling to school by public or active transport • % of children travelling to school where walking/bike as dominant mode 	<p>Scottish Transport Statistics (SHS) details trips per person per year by main mode. Data not available at local level (?) and seems to have some limitations.</p> <p>Local transport surveys</p> <p>Local school surveys</p>
<p>10. The average score of adults on the Warwick-Edinburgh Mental Well-being Scale by 2011</p>	<p>WMWBs scale now part of SHS from 2008 so available nationally annually and at local NHS board level every four years. Depending on sample size data may be available and usable in some Local Authority areas.</p>
<p>11. Mortality from coronary heart disease among the under 75s in deprived areas</p>	<p><i>Information below taken from Improvement Service guidance on SOAs</i></p> <p>Information Services Division Scottish Health Statistics – Data will be available from June 2008 at local authority level and on request at small area level ISD Health</p>

	<p>General Register Office for Scotland publish data on deaths from cancer (malignant neoplasms), coronary heart disease and other causes on an annual basis for local authority areas GROS: Causes of death</p> <p>Sub-local authority data is available from the community health and well being profiles. For example, average annual deaths due to heart disease expressed as number and directly age-standardised rate per 100,000 population, is available for postcode sector areas. Profiles were published in 2004 and there are plans for the profiles to be updated in 2008 Community Profiles</p> <p>Scottish Government National Indicator</p> <p>General Register Office for Scotland (GRO(S)) for deaths data GROS</p> <p>Scottish Index of Multiple Deprivation http://SIMD</p>
12. Healthy life expectancy at birth in the most deprived areas	General Register Office for Scotland Life Expectancy
<p>13.</p> <ul style="list-style-type: none"> • % of population who are obese/overweight • % of morbidity due to obesity 	<p>Scottish Health Survey reported on at national level yearly. 2008 data available in 2009 (and so on). Available for local NHS board areas every four years</p> <p>General Register Office for Scotland publish data on deaths from cancer (malignant neoplasms), coronary heart disease and other causes on an annual basis for local authority areas GROS: Causes of death ?</p>
14. Reduce our overall ecological footprint	Carbon footprint (Central Performance Indicators- UK govt.) SEI-REAP see UK Local Area Agreements performance frameworks

The next section of this paper highlights lessons from the application of the above tools in real life scenarios to date.

Learning and reflections from the application of logic modelling

This section presents key learning that has been gathered to date from our (and others) applications of logic modelling in West Dunbartonshire and elsewhere.

Models should be fit for purpose

Logic modelling can be used for a variety of purposes. However models will require different degrees of specificity depending on that purpose. For example, if the model is intended as a tool to communicate a project or partnership's intended long-term outcomes then it can remain relatively simple. If it is to guide implementation then it should ideally provide more additional detail as to intended outputs and short and intermediate outcomes and identify who is responsible for different activities and contributions. If its purpose is to inform monitoring then it should contain targets and link these to indicators. If it is to be used for evaluation purposes then it ideally needs, in addition, to contain anticipated thresholds of change and to ensure that linkages are shown between specific activities and specific outcomes. The utility of models that are intended to guide implementation and aid monitoring or evaluation will be enhanced if greater consideration is given to the targeting, reach and uptake of the intended activities. These elements are vital in terms of understanding potential impact and attributing any changes in outcomes achieved. Ideally partnerships should have a clear concept of why they want to engage in logic modelling and understand the type of model and necessary process that is required.

As illustrated above logic models can be used individually, linked or nested, they can show various partner contributions or identify different contributors' spheres of influence on any given outcome. Again, however, their development takes time and commitment and so partnerships should understand that it requires resources to construct the models and that there is little point in doing this if managers and operational staff are not 'bought into' the process and committed to their use to aid programme improvement.

The value is in the process not the product

Our experience to date suggest that models are often considered as products when in reality, if they are to deliver on their potential, it is the process of developing and critiquing the model itself that is of value rather than the finished model per se. Models that are developed should be considered as 'live' and need to be regularly reviewed and adapted if

programme learning is to result from their use. Although models can be used in all of the ways detailed above they are primarily a tool to aid programme improvement by supporting outcome-focused planning and performance management. They should help to identify the key questions to be addressed and the subsequent information that needs to be gathered and considered by stakeholders. This should be done to understand past performance and inform decision making about the future balance and emphasis of different investments in the programme activities to enhance short, intermediate and longer-term outcomes.

Ultimately logic modelling aims to improve the service for the benefit of the service recipient. The quality and specificity of the model is important but so are the values that inform the model. In addition to testing the model against criteria such as plausibility, testability and do ability, and those in the Re-Aim framework, there needs to be explicit discussion about the underlying values upon which any project or service is based (e.g. inclusiveness, equity and intention to do no harm). It is possible to design an apparently evidence-based and logical model that addresses the wrong problem or that does harm (e.g. unintentional injury, raises anxiety or exacerbates inequalities). It is vital, therefore, that the underlying problem the model is to address has been articulated appropriately and that the key assumptions and values that underlie the model are made explicit. It is also important to consider the contextual issues and external factors that may impinge upon the outcomes. Some of these may be outside the control of the partnership.

Logic models should be embedded in part of a wider performance management system and a learning culture

There are a number of barriers that exist in using logic modelling and the Re-Aim framework.

The greatest barrier is gaining the commitment and input from both managers and operational staff who may see their key role as delivering services rather than planning, prioritising, monitoring or evaluating them. Logic modelling can be seen as a threatening process which can uncover programme limitations and duplication. It may be used to inform discussion about disinvesting as well as investing resources and can, therefore, threaten individuals and the programmes that they have spent substantial time and effort developing. The resulting decisions may have wider political implications if, for example, a service is changed or removed as it was ineffective but was none the less popular with participants.

Like any other tools logic modelling will be more successful if it is embedded in a wider performance management system that values self reflection and that is committed to learning from success and failure. Such systems are likely to succeed only if they are non-threatening, reward learning, and encourage sharing of learning across projects and programmes.

Leadership is vital to embedding a learning or evaluative culture in an organisation or partnership. Senior and middle managers need to ask for, and act upon, evaluative information. Operational staff and junior managers are unlikely to invest the necessary time in planning, monitoring and evaluating if there is neither, a demand for the subsequent learning, nor, if programmes and investments remain unchanged as a result of such learning. If there is to be a cultural shift towards outcome-focused planning and performance management then various stakeholders (funders, service recipients, elected members, managers and operational staff themselves) need to regularly ask pertinent questions about the outcomes of programmes and investments rather than only about the levels of activity and throughput.

Logic modelling is limited by, but may also contribute to, the existing evidence base

In many ways the utility of logic modelling is limited by the accessibility and availability of existing evidence on the effects of different activities on health and of monitoring systems to provide outcomes data. There are undoubtedly many areas in health improvement where evidence is scarce or difficult to interpret or where there are few data sources available at appropriate geographical levels or frequency. However it is not unusual to find that existing evidence has not been considered in a comprehensive way in relation to the current problem or context. Similarly existing data sources and surveys are often not analysed, shared or used or no agreement is made as to the most appropriate source for planning purposes across a partnership. The result may be that partners set different and potentially conflicting targets for the same outcome and have varying criteria or means to judge success. Logic modelling, if applied appropriately, can bring such issues into the open and provide opportunities to address them. Logic modelling has the potential to enhance monitoring and evaluation and so may in time contribute to the existing evidence-base as a result of the improved delivery and evaluation of current practice.

Conclusions

The above issues highlight that logic modelling is not a panacea. However, if used appropriately, logic modelling is an additional weapon in our armoury for improving programme learning and enhancing the impact on, and experience of, services for those most in need as well as the wider population we serve.

Box 1 summarises some pertinent issues in relation to logic modelling

- Logic modelling is a tool not a panacea
- The value in logic modelling is through engaging in the process rather than being in receipt of the product (e.g. is a journey not a destination)
- Beware of developing beautifully detailed models that address the wrong problem
- Be clear about why you want to use logic modelling, the type of model that you need and the resources it will require to fully develop, test, and use it
- Models should be tested via a range of criteria [e.g. the Re-Aim framework, plausibility (including targeting, reach & uptake), do-ability and testability] but must also consider underpinning values such as equity and inclusiveness
- Uncovering the underlying assumptions upon which a programme is based and the context and external factors that might impinge upon its delivery is vital
- A successful logic modelling process requires time and resources and buy in from managers and operational staff
- Logic modelling should be embedded in wider performance management systems
- The potential of logic modelling will only be achieved if leaders and managers are regularly requesting information on programme outcomes, if learning from success and failure is encouraged, and if the such learning is subsequently acted upon to improve programmes