Report of the SCPHRP Inaugural Scottish Applied Public Health Research Planning Workshop BMA, Edinburgh

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Introduction

In early 2006, stakeholders in Scottish and U.K. public health research, and its policy, programme and practice applications, met twice, to examine the best way to strengthen these fields in Scotland, utilizing pump-priming funding from the Scottish Chief Scientist Office (CSO) and the Medical Research Council. This process led to the submission to the MRC, in July 2006, of a formal proposal for the establishment of the SCPHRP, which was approved. An international competitive search led to the appointment of Professor John Frank in April 2007. Following a lead in period, during which he spent seven separate weeks in Scotland, between the summer of 2007 and June 2008, familiarizing himself with the Collaboration's stakeholder community, Professor Frank took up the position full-time in July 2008. The SCPHRP is based in the MRC Human Genetics Unit, Western General Hospital, Edinburgh and is currently staffed by the Director, one part-time PA and a full time secondee.

The Collaboration's core mandate is to:

- To identify key areas of opportunity for developing novel public health interventions that *equitably* address major health problems in Scotland, and move those forward.
- To foster collaboration between government, researchers and the public health community to develop a national programme of intervention development, large-scale implementation and robust evaluation.
- Build capacity within the public health community for collaborative research of the highest quality, with maximum impact on policies, programmes and practice.

International experience has shown that this sort of collaborative research-and-research-translation agenda requires, from the start, the full engagement of *both* research users (i.e. "decision-makers") as well as researchers. Joint "ownership" of the process is essential in order to facilitate the eventual transfer of consequent research findings, so as to influence actual programmes, policies and professional practices. In keeping, therefore with the philosophy of full initial involvement of these two "communities of interest" for public health intervention research and its application, an inaugural planning workshop was held in early 2009 to set priority categories of programmes and policies for the Collaboration to further develop, through joint Working Groups, over the next few years.

The Workshop

In late January 2009, the SCPHRP held an Inaugural Workshop. This event was planned as a highly structured consensus meeting utilising a modified nominal group technique, based on pre-workshop electronic surveys of all invitees. The invitees consisted of over 60 selected Scottish public health experts, approximately one-half of them from the policy, programme and practice decision-maker communities, and half from the applied research community, based in universities across Scotland. Over 85% of those invited to the Workshop either attended in person, or sent approved alternatives from their organization or research team.

The Workshop's goals were to:

- Assess the best current Scottish opportunities for *equitable* health improvement, by novel yet feasible policy or programme interventions still to be developed and/or tested in this setting;
- Identify, at least in broad outline, the developmental research activities necessary to move these interventions forward, towards scaled-up implementation and conclusive evaluation studies; and
- Prioritize these activities.

Details of the Workshop programme and participants are given in Appendix 1.

Pre-workshop Activity

In the period leading up to the Workshop, invited participants took part in the first stage of the nominal group technique. Workshop participants were invited to nominate promising public health interventions for further development, organised around critical stages in the life course. These were defined as:

- **Early life:** from pre-conception through the pre- and peri-natal periods, to the primary school years, when strong predictors of lifelong health take root, but are exceptionally amenable to change;
- **Adolescence and early adulthood:** when culturally-influenced "external" causes of ill health predominate, and are currently tipping the balance towards greater health inequalities in Scotland (i.e. violence, suicide, and related mental health problems; smoking, drug and alcohol abuse; and risky sexual behaviours);
- **Early to mid-working life:** when career success, work-related-disability and family functioning, and consequently mental health and social issues, figure strongly as key outcomes for healthy and productive adults, but a range of chronic disease risk factors also tend to become firmly established, including the current pandemic of overweight, with all its physiological consequences;
- **Later life:** especially the period between ages 45 and 65, when symptomatic chronic diseases and associated disability begin to appear, typically in unequal ways across socio-economic strata, leading to quite differential experiences of senescence.

Using these early nominations and a WHO framework of risks to health, a matrix of broad categories of intervention was developed. The matrix provided the basis for an on-line survey. Workshop participants were asked first to prioritise the listed intervention categories for further development by SCPHRP and then to nominate additional interventions that were missing. Using survey responses, the matrix was then revised. The revised matrix of interventions, a summary of nominated interventions and a summary of the priority rating scores assigned the intervention categories are given in Appendix 2.

Workshop Groups

The main activity of the Workshop took place in four Life-stage Workshop groups - **Early life, Adolescence & early adulthood, Early to mid-working life** and **Later life**. It was intended that in each Workshop group, participants would review the broad categories of promising intervention identified for their particular life stage, revise them in discussion, and then prioritise the revised listing using the same rating system employed in the pre-workshop on-line survey. However, in two of the groups – **Adolescence & early adulthood** and **Later life** – it was agreed that the prioritisation would emerge through discussion rather than using the modified nominal technique. The main points from each of the Workshop Groups, together with their agreed priorities, are outlined below.

Summary of Early Life Workshop Group

Facilitator: Peter Craig

The Workshop began with a discussion of prioritisation criteria. It was acknowledged that there would be variability in the application of the criteria both between individuals and in how the criteria are applied to different intervention categories. In addition to the criteria identified in the plenary discussion on the first day, *researchability* was identified as an important criterion for prioritisation.

Early life was defined by the group as the period spanning pre-conception to 12 years, reflecting the importance of addressing public health issues across the pre-teen period, as well as the pre-school period. The Early life interventions matrix was then reviewed and revised. Three interventions **Development of effective parenting**, **Promotion of physical, social and cognitive development** and **Promotion of social connectedness and support for high risk parents and children** were thought to be overlapping and were reconfigured into two categories of intervention:

- **Working with parents**, and the health, education and social care services/systems to promote physical, social and cognitive development of children, providing more intensive support for those at greatest risk.

- **Promotion of social and cognitive development of high risk children** through development of effective parenting.

The universal intervention **Prevention harmful environmental exposures** was changed to **Promotion of safe and healthy environments** which better captured the broad scope of the intervention category and **Promotion of physical activity** was changed to **Promoting physical activity and reducing inactivity**. The intervention category **Health literacy and empowerment** was initially removed but then reinstated.

The revised interventions were then discussed individually. In rating the individual interventions it was noted that it was difficult to choose or differentiate between very specific interventions such as **Prevention of childhood injury** and more broadly defined intervention categories such as **Promotion of safe and healthy environments**.

In discussing the individual ratings the following points were made:

Working with parents, and the health, education and social care services/systems to promote physical, social and cognitive development of children, providing more intensive support for those at greatest risk.	It was envisaged that in the next phase, the Early Life Working Group would review evidence, identify gaps and develop a strategy that is participatory, partnership based. The intention was to create a 'niche' in which to develop innovative ways of working and identifying barriers to that and prioritise domains and levels.
Promotion of social and cognitive development of high risk children through development of effective parenting	The development of interventions in this area would require a clear definition of 'high risk' and attention to how 'high risk' children and families are identified.
Promotion of breast feeding and good early nutrition	The group agreed that the focus needs to be on early nutrition which incorporates weaning and nutrition for toddlers and older children. This could be incorporated in to 'Working with parents' intervention.
Prevention, early identification & management of poor maternal-child mental health	This should also be incorporated into 'Working with parents' category of intervention.
Action on poverty & deprivation	The group agreed that this was not within the scope of the Collaboration
Housing & community regeneration	This was recognised as an important area but was already an area that was being addressed in the Go Well Study and given this it was not clear what could be done within the Collaboration
Promotion of safe & healthy environments	The revised intervention category was broad and overarching. Addressing this was felt to be both important and to be within the scope of the Collaboration
Obesogenic Environment	This should include both the social and physical aspects of the environment and addressing this cross-cutting category was within the scope of the Collaboration
Health literacy & empowerment (Reinstated)	This was not regarded as an intervention per se, but rather an underlying mechanism or feature of an intervention

Optimal delivery and utilization of effective primary care preventive measures	This should focus on delivery and utilisation and include both existing services and potential new developments in primary care. This could be incorporated into 'Working with parents'.
Promoting physical activity and reducing inactivity	It was acknowledged that lack of physical activity was associated with a high burden of disease. This could be incorporated into 'Working with parents'.
Prevention of childhood injury	This requires much better definition – in particular differentiation between unintentional injury and interpersonal violence. Domestic violence and bullying were regarded as important foci within this intervention category.

Two additional categories of intervention were added by the group:

Individual child development through the promotion of physical, psychological, cognitive and social development	The focus of interventions would be on language development, social interactions and literacy and numeracy. In addition to outcomes in early life, these interventions will have an impact on both adolescent and adult health and related outcomes
Wider community environment (Safe and healthy environment):	This was regarded as a very wide ranging intervention category might incorporate interventions and approaches targeted specifically at children, ranging from play opportunities and access to pre-school and quality to access to the preventative healthcare services (eg health visitors, immunisation)It also links to parental issues: maternal mental health, child-adult interaction, home learning environment, effective parenting, breastfeeding and immunisation and parental behaviour / family culture/values (eg. activity levels, diet, violence, substance use). Finally this category also links to both poverty & deprivation and the obesogenic environment

Figure 1 below gives the median priority rating assigned to the Early Life intervention categories. They cluster into two distinct groups with four intervention categories **Working with parents**, **Promotion of social and cognitive development of high risk children, Brest feeding** and **Maternal-child mental health** all having a median priority score of >7 – although in discussion it was noted that some of the other low priority and more specific interventions might be incorporated into **Working with parents**.

Figure 1: Median Priority Scores for Early Life Interventions

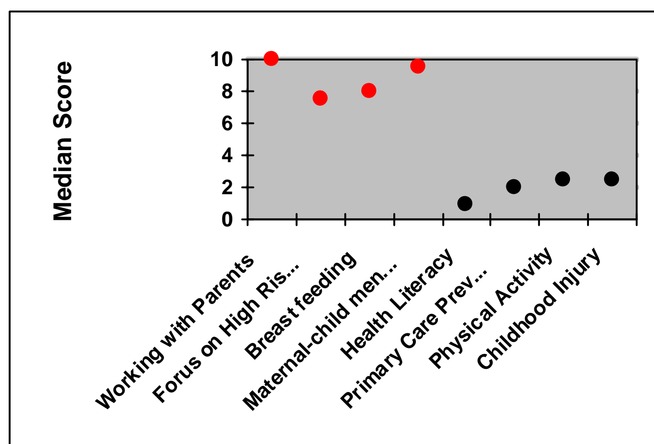
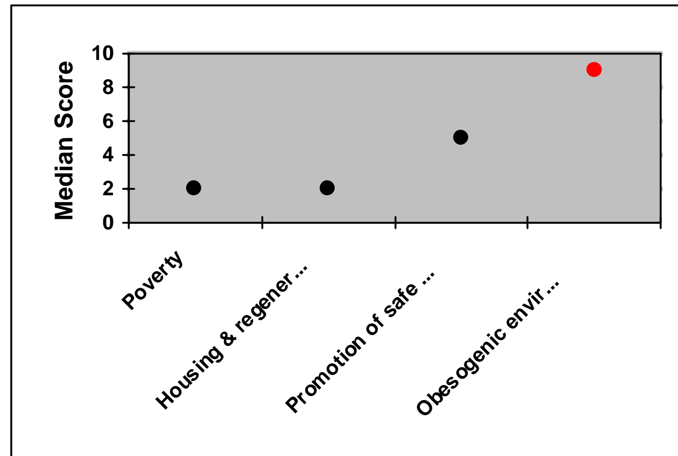


Figure 2 below gives the median priority rating assigned to the Early Life intervention categories. From this it can be seen that of the universal interventions, the **Obesogenic environment** were rated as a highest priority for the Collaboration and **Poverty** and **Housing & regeneration** were given a low priority.

Figure 2: Median Priority Scores for Universal Interventions



Summary of Adolescence and Young Adulthood Workshop Group

Facilitator: Sally Haw

The group began with a general discussion about the list of interventions. There was a general consensus that the broad categories of interventions as framed in the pre-workshop exercise reflected a mix of intervention, health risks and outcomes. This led on to a discussion of what became a set of principles that should underpin the developing work plans. Common to all Working Groups were the principles that work plans should be set within the context of reducing health inequalities and be sensitive to, but not necessarily constrained by, the broader policy environment.

Central to the development of interventions for this life stage were the principles that the work package should:

- Aim to support the transition from adolescence to adulthood
- Maintain the positive advantage from early childhood, where it exists.
- Focus on the positive aspects of behaviour and promote resilience, opportunity and an investment in the future.
- Be based on a broad understanding of adolescent worlds, their perspectives, group processes and timeframes.

However it was also recognised that some children entered adolescence from a position of severe disadvantage. For these high risk groups the focus should be on:

- Bringing young people back from being ‘off the rails’
- Breaking the cycle of trans-generation transmission of social and economic disadvantage.

The implications of the above are that the work package that develops must:

- Contain components that take both a population and a targeted approach
- Address a wide age range from about 9 to 25 years
- Promote positive behaviours as well as addressing problems
- Have more than health outcomes
- Involve input from young people.

Next, followed a discussion about social and cultural connectedness. This was constructed as connection with family (both within and across generations); with peers; and with community as well as with broader societal and cultural values. It was recognised that this was important across the life-course, but was particularly important in adolescence and young adulthood as a *likely mechanism* for promoting pro-health and pro-social behaviours and preventing health and social problems. It was also recognised that there are also potentially damaging or negative familial, peer and community models and negative cultural norms. Loosening connectedness to these should also be an objective.

The working hypothesis that increasing positive and reducing negative social connectedness has the potential to impact on a range of health and social outcomes was developed. Potential outcomes suggested included a reduction in obesity; tobacco, alcohol and drug misuse; youth offending; and suicide and other mental health problems; and improvements in adolescent mental health; and retention in education, training and employment. It was proposed that these outcomes might also mediated by healthy environments, looking and feeling good, a sense of belonging and a sense of purpose.

The group next discussed what interventions might achieve the outcomes described above.

Over the course of Adolescence and Young Adulthood there are a large number of transitions and there was support for interventions that focused on **Managing transitions** at different stages: from primary to secondary school; through adolescence; and then the transition from adolescence into the adult world.

Some time was spent discussing the disengaged family and the potential role interventions such as **Promoting the family meal and sharing of food** might have. The intervention – could be widened to address, family budgeting and cooking skills; include school-based components; or be linked to work with the food industry. In developing an intervention of this kind it was noted that it is necessary to determine what levers there were in current behaviours that can be built on. At the same time ensure that there is sufficient tailoring of the intervention for different social groups to minimise the exacerbation of inequalities.

A third focus for discussion was interventions based on **Mentoring** for specific groups. This might involve key workers, teachers, or young people themselves. The key component identified was face to face communication with one on one time. This could also link to the family meal intervention.

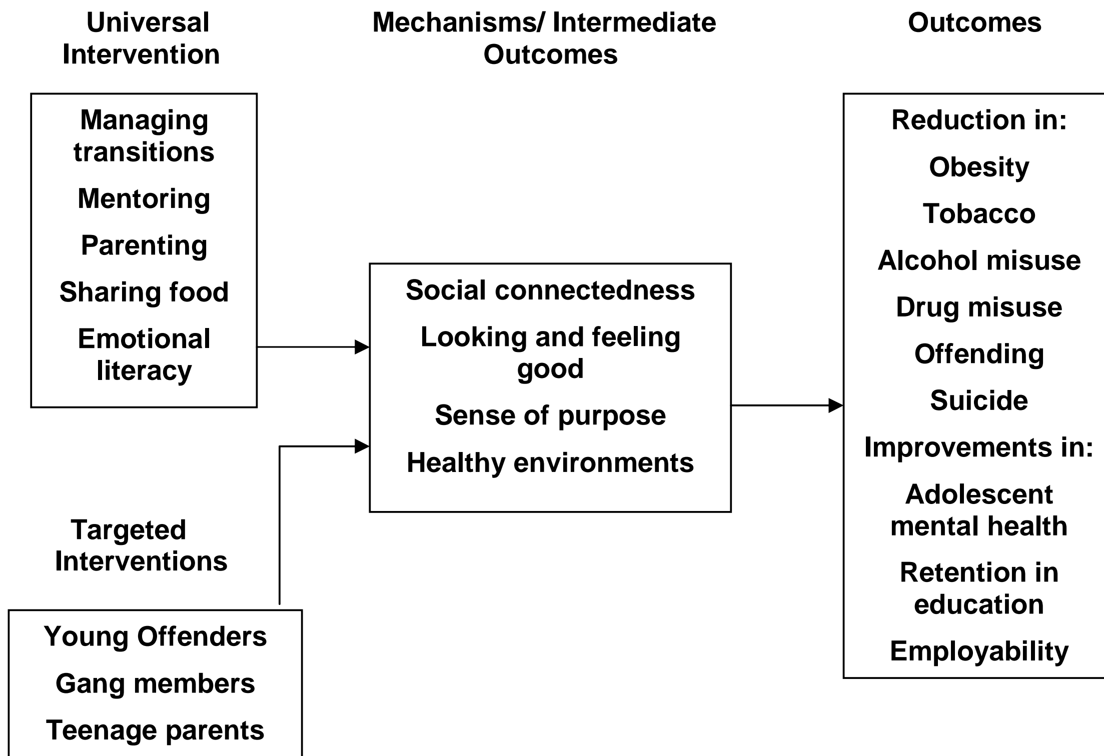
Interventions that promote **Emotional literacy and negotiating skills** and support the development of an internal locus of control were also identified as having potential for development.

Finally, interventions that were specifically tailored for and targeted at high-risk sub-groups – specifically young offenders and gangs – were also given a high priority.

It was not possible in the workshop groups to identify what the components of the interventions might be. However, two kinds of approach/processes were identified that were relevant to intervention development – promoting health in the information age and the development of partnerships with the commercial sector.

Figure 3 below presents the working hypothesis developed by the group that the package of intervention as outlined would lead to the specified outcomes via a set of intermediate mechanisms.

Figure 3: Proposed Package of Interventions for development by Adolescence & Young Adulthood Working Group



Summary of Early to Mid-Working Life Workshop Group

Facilitator: Jennifer Waterton

The group began with a review of the 17 broad areas which had been identified through the pre-Workshop survey results. Participants observed that many of the areas overlapped to a greater or lesser degree, that some were extremely broad and that others were highly specific, and that the link between the broad areas and the specific itemised interventions was not always clear.

By discussion, the group was able to reduce the original list of 17 areas to nine broad topics. This rationalisation involved **renaming and redefining some categories** (for example 'Prevention of Harmful Environments' was reworked as 'Promotion of Healthy Social Physical and Cultural Environments'; 'Optimal Delivery and Utilisation of Effective Primary Care Preventive Measures' was reworked as 'Delivery and Utilisation of Effective Preventive Measures'), **subsuming some categories** (for example 'Reduction in Obesogenic Aspects of the Built Environment' was subsumed into 'Promotion of Healthy Social Physical and Cultural Environments'; 'Housing and Regeneration' was subsumed into 'Promotion of Healthy Working Environments'), **dropping others either because they were too narrow or because they were of limited relevance to this life course stage** (for example 'Promotion of Good Sexual Health' and 'Prevention of Offending and Anti-Social Behaviour') and **introducing some new (broad) categories** (for example 'Healthy Working Lives' and 'Individual Empowerment and Community Engagement').

The nine areas which the group settled on, and which framed its subsequent discussion were Actions on poverty and deprivation; Promotion of healthy, social, physical and cultural environments; Individual Empowerment and community engagement; Delivery and utilisation

of effective preventive measures; Prevention and treatment of obesity and sub-optimal nutrition; Promotion of physical activity; Prevention and treatment of substance misuse (including smoking, drugs and alcohol); Improving mental health and well-being; and Healthy working lives.

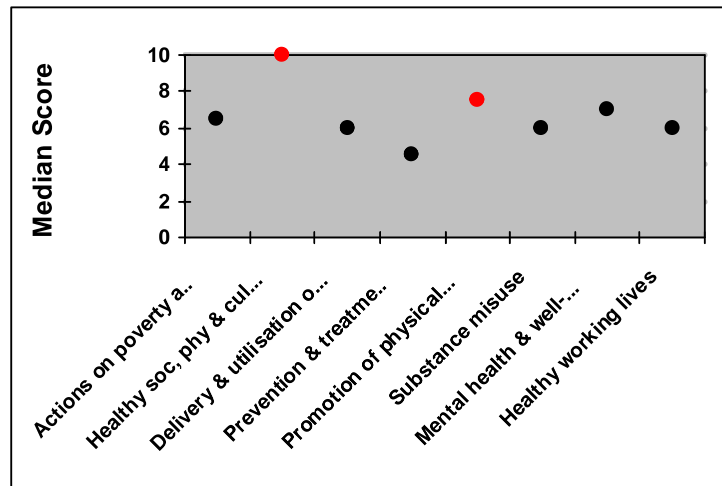
The group then reviewed the criteria for prioritisation : researchability; health benefits; reduction of inequalities; scientific advance; Scottish strengths / niche; partnership potential; political support; capacity building; contribution to the economy / efficiency; scalability. The group thought this was an excellent set of prioritisation criteria, but agreed that other criteria might be used when individuals made their own individual judgements.

When participants rated each one of the nine areas / topics there was little discrimination between the priority given to each area, with the exception of 'Individual Empowerment and Community Engagement' which achieved a low score. This topic was dropped from further discussion and the remaining eight were discussed in detail.

For **Actions on poverty and deprivation,** it was argued that there was lots of evidence on association but not on where interventions can be effective. It was agreed that political support in this topic would be high. For **Healthy physical social cultural and commercial environments** it was argued that there has been relatively little evaluation on this, and although effect sizes may be small exposure is high so the potential impact of intervening could be great. [Note that as the group discussed this area it became clear that there were different interpretations of this category, with some assuming that the environment was the context / backdrop while others were talking about the environment as an intervention in itself. This would need much more discussion at a later stage.] For **Delivery and utilisation of effective preventive measures** the group commented that this would result in narrowing inequalities if it was possible to access hard to reach groups. However others thought that this type of research is not a high enough challenge for SCPHRP to pursue. For **Prevention and treatment of obesity and sub optimal nutrition** whilst the group was aware that this would attract political support there was a lack of consensus about whether this should be the top priority for this life course stage. As far as **Promotion of physical activity** was concerned, whilst some members of the group felt this was an under researched area where there was much to be learned, others thought that it should be seen in the broader context of promoting healthy environments. The **Prevention and treatment of substance misuse (including alcohol and tobacco)** the group discussed the context that the Scottish Government is about to make a major announcement about potentially radical approaches to policy especially within the field of alcohol abuse and there was a discussion about whether this made it a good or a bad choice for SCPHRP activity. The group discussed **Improving mental health and well-being** which was recognised as a huge problem and required different interventions / approaches. There was discussion about whether this topic was most suited to this – or to an earlier – life course stage. The final discussion covered **Healthy working lives** where it was suggested that effective work has the potential to affect a lot of people and a lot of other issues e.g. mental health. Given that there is now a massive economic downturn in prospect it was argues that there will be very many people who have insecure jobs, many people who have lost their jobs. And the biggest challenge is how we support people through the downturn. However, some group members thought this agenda fitted more comfortably under the 'Action on poverty and deprivation' category.

After this discussion, the Working group members rated the revised intervention categories. Figure 4 below gives the median priority rating assigned to the Early to Mid-woking Life intervention categories. Setting the high priority threshold at a median score of >7 and a low priority threshold at < 4, it can be seen that **Healthy social, physical and cultural environment** (median 10) and **Promotion of physical activity** (median 7.5) were identified as high priority interventions. The remaining intervention categories were all rated as intermediate priority with **Mental health and well being** (median 7) just below the threshold set for high priority.

Figure 4: Median Priority Scores for Early to Mid-working Life Interventions



At the close of the workshop, participants were invited to comment on whether they felt Working Groups set up on a life course stage basis was the best approach. Participants commented that much is cross cutting. However, they were keen to ensure that in the event that Working Groups were set up on some other basis (for example topic specific) then the life stage approach should not be neglected. No-one argued strongly against the life course stage approach.

The group then discussed the skills required for the Working Groups, and the methodological approach which should be adopted. It was pointed out that the discipline of health economics doesn't fit into to life stage or topics, but could assist in developing a framework and an approach within the Working Groups. For example, an early modelling exercise could help think through which interventions are likely to pay off and which aren't. This led to a broader discussion about the importance of regarding the four working groups as linked, and as a joint resource which between them had the pool of relevant skills including health economics, statistics, synthesis, and modelling.

Finally, it was pointed out that we could get a step change in health outcomes simply by implementing interventions which are already known to be effective.

Summary of Later Life Workshop Group

Facilitator: John Frank

The group began with a review of the pre-Workshop Survey results, which essentially revealed – with the single exception of **Maintenance of capacity for independent living** no strong preference, among the 53 respondents, for any of the original intervention categories for later life. The group viewed this result as reflecting the rather narrow, disease-specific or risk-factor-specific nature of most of those nominated interventions – i.e. they are either targeted at a single health outcome, such as cognitive decline and dementia, depression, wasting/lack of fitness, falls, iatrogenesis, or else aimed at improving just one problem that leads to ill health, such as nutrition, social connectedness/ loneliness, etc.

After further discussion, there emerged considerable support for combining all these rather specific intervention categories into a more holistic – *whole person* – category that expands on the most favoured (and least specific) original nomination, thus:

Interventions, ranging from high-level policies around funding and eligibility, to very practical approaches to health-and-social-service organization and integration, including primary care,

to **maintain independence and function in the population at risk, so as to optimize their quality of life***, and reduce unnecessary or premature dependency or institutionalization.*

It was pointed out that this over-arching health goal, and the intervention category addressing it, could equally be applied to any person, at any age, at significant risk of disability sufficient to threaten their autonomy and /or require new living arrangements, so that this focus is not really specific to "later life." On the other hand, the numerical preponderance of such persons in the general population is found towards the end of life.

Group members suggested that the next steps in the exploration of this intervention category, by a Working Group, might entail systematically examining existing systems of primary and community care for the disabled and elderly, locally and – for comparison -- in settings outside Scotland, including jurisdictions with very different health insurance and social benefits coverage. There was general agreement that best – or at least " the most promising" -- practices with respect to this sort of intervention might only be identifiable through a very broad environmental scan, in both Scotland and internationally, including key informant interviews with the disabled and elderly, informal caregivers, relevant professional groups, health and social services researchers, agency programme managers, and policy analysts/decision-makers. In Scotland the goal would be to identify both strengths and weaknesses of current policies, programmes and practices. In other countries the intent would be to look for novel models. There will also clearly be a need to perform rigorous review research, in both the formal and grey (unpublished) literatures – probably requiring a diverse set of academic disciplines to cover the wide range of studies performed.

It was acknowledged that, even after doing all that, any best practices identified might be difficult to translate into the Scottish scene, especially if they were to require massive changes in basic policies and programmes already well established here. Thus there was likely to be required, the group thought, a considerable period of initial inquiry before the Working Group could lay out any new approach to this problem worthy of a piloting in this country. And even then, additional widespread stakeholder consultation – involving again the disabled and elderly, from a range of living situations; both informal care-givers as well as professional caregivers of all sorts; and higher-level programme managers and policy-makers -- would be necessary, in order to obtain the buy-in needed to test a substantially new approach in Scotland. This consultation was likely to be challenging, since thousands of public sector and third-sector employees already work on this problem in this country, across a diverse set of programmes and services that have seen significant changes in recent years, and now are potentially subject to further local heterogeneity due to reductions in "ring-fencing" of social services funding at the local level, the emergence of Single Outcome Agreements, etc. Therefore, some resistance to change was to be expected, raising the bar for the quality and completeness of the evidence base which must be assembled by the Working Group before introducing a new model of any sort into the present, rather complex programme and policy context.

A special plea was made to utilize the insights and methods of a wide variety of academic and research disciplines in assembling this evidence. For example, a health economist pointed out that some service-delivery options to tackle this problem might be easily identified at the start of the initial "environmental scan" as very promising, but extremely expensive – for example to the public purse (although some options likely transfer substantial costs to families and/or the voluntary sector instead.) It might be possible to achieve efficiencies in the environmental scan by stopping short of full evidence review – e.g. prior to summarizing effectiveness trials -- for particularly expensive or potentially unpopular approaches that would be unlikely to obtain widespread support in Scotland, as it enters a major recession. In particular, since devolution, there has been a significant Scottish policy initiative to reduce socio-economic inequalities in access to assisted care in the home and institutional care – so new approaches would likely have to respect that strong social preference for equitable approaches to this problem. There may as well be a social preference for not over-professionalizing this area of need, by ensuring that every reasonable effort is made to support the inherent capacity, of families and communities themselves, to help deliver the services, and living options, needed by persons becoming frail and disabled. Appropriate

uses of new technologies could, for example, play a role here, to better connect persons at risk living alone to the community around them.

The group elected to report back to the Workshop plenary only this one over-arching intervention category (italicized above), rather than vote on the much more specific options provided as a result of the original pre-Workshop Survey. There was widespread interest among those present for continued involvement in a Working Group to further develop these initial ideas into a multi-year Work Plan.

Synthesis of the Four Group Sessions

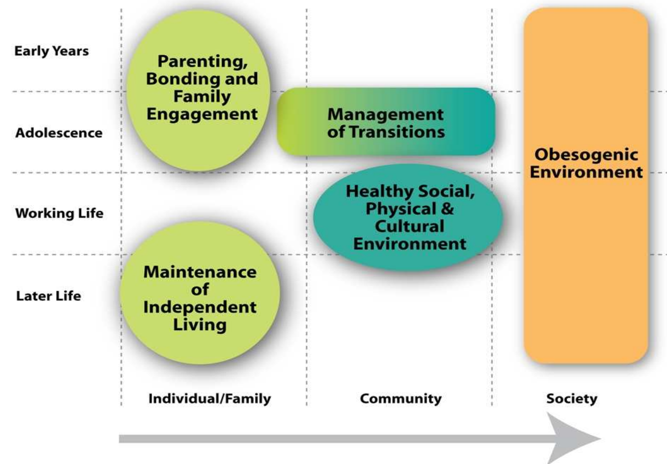
Before the four life-course groups began their meetings, the Workshop plenary discussion had flagged a diverse range of views about the utility of staying with the life-course perspective. In the end, it is striking that the four groups selected a mix of "vertical" (health-problem-based) and "horizontal" (life-course-stage-based) priorities. There seemed to be a tendency for those discussing the beginning and the end of life to focus on specifically life-course-situated interventions: *parenting improvement and the support of optimum child development and mental health* in the **Early Life Group**, and *the preservation of function and independence, in the face of increasing disability,* in the **Later Life Group**. Both of these topics transcend many kinds of hazardous exposures/risk-factors and health outcomes, and thus have a strong horizontal integration across standard disease prevention programmes and policies.

In contrast, the Group discussing **Adolescence and Young Adulthood** selected a broad category of interventions that could be applied across the life-course, but have special relevance for this age-group: the *maintenance of social connectedness and mentoring, at family and community levels, in order to support both the transitions from adolescence to the adulthood and sound decisions about behaviours that can influence health over the rest of the life-course.* The group was clearly influenced by the dual needs of i) maintaining the apparent positive advantage from early childhood and ii) bringing back those who had already 'gone off the rails'. It was recognised that while the origins of many health behaviours lie in experience in the early years, they can also be determined, *although* not necessarily fixed, during the teenage and early adult years. Clearly, much of that social influence – both healthy and unhealthy -- stems from peers. Nonetheless, family and broader social and cultural influences can have a powerful impact on health-related behaviours both in this age-group, and lifelong.

The Early- to Mid-Working Life Group faced a dichotomous choice, with a strong minority opinion keen to focus on *work-related problems, such as the major musculoskeletal/traumatic and mental-health causes of chronic disability, including long-term receipt of incapacity benefits, and workplace-based solutions.* A larger segment of that Group opted instead for focussing on those aspects of the environment – *physical, social and cultural – that promote widespread but preventable health problems, such as obesity*. Clearly, this priority would encompass policies and programmes that would inevitably impact on all stages of life-course. The "environment", writ large, is shared by the entire population – especially those aspects of it that influence us to overeat, eat sub-optimally, and avoid physical activity. In that sense this Group selected perhaps the most "vertical" of the priorities across the four, although its broad nature – as articulated by them – means that it is directed at reducing more than one health problem, since improving nutrition and increasing physical activity would have health impacts across many conditions beside overweight and obesity per se.

Pictorially, Figure 5 below attempts to show how the matrix of promising but unproven public health interventions for Scotland, formed by the intersection of these vertical (health problem) and horizontal (life-course-stage) themes, is populated by the mix of these two archetypal categories selected by the Workshop Groups. Note how even those intervention categories initially seeming to be located largely within a single life-course stage, overflow the banks of the horizontal age-specific streams in the matrix. Likewise, even the interventions that clearly cross-cut all life-course stages – such as those tackling the "obesogenic aspects of the environment", are likely to have stronger influence in some parts of the life-course than others.

Figure 5: Top Priorities for Promising Public Health Interventions across the Life Course



The implications of these prioritized categories of interventions, for the initial activities of actual Working Groups as they form over the next few months, would appear to be that all four Groups have selected a category of policy and/or programme interventions which may require considerable further refinement, and "honing down," before an environmental scan could reasonably be conducted – otherwise its scope would be daunting. It is suggested that some further reflection on all Workshop Groups' initial priorities be undertaken – perhaps by electronic consultation within the Group -- in preparation for the first formal Working Group meetings, now being planned for late April. In particular, all Workshop attendees might want to propose additional invited memberships to those four Groups, for persons who have special expertise (both decision-maker and research expertise) in the topics described above. Conversations with these experts, prior to and during the April Working Group meetings, should be helpful in focussing each Group's priority so that it can be subjected to an environmental scan, to address "Who has done what, when and where? " for any given category of intervention.

Finally, it should not be taken as a deficiency of the Workshop Group deliberations that further refinement is still required of the broad topics initially selected. The great diversity of participants in the January 27-28 Workshop, and the fact that many of them had never personally interacted in this way, meant that achieving even this level of consensus in Collaboration planning was an accomplishment.

Summary of Final Panel Session

In the last session of the Workshop, 6 participants were invited to comment on the Workshop

Graham Watt led off the panel commentaries. He was pleased with the mix of intervention priorities emerging from the sub-groups. He noted that a mixed portfolio of intervention categories, spanning both "vertical" axes (i.e. based on health outcomes – e.g. tackling the obesogenic environment, or on risk-factor-exposure -- e.g. unhealthy alcohol consumption) and "horizontal" axes (i.e. community or service setting – e.g. integrated social and primary heath care for the disabled and frail elderly) seemed a wise choice for the Collaboration and its Working Groups, avoiding slavish adherence to life-course stages per se. He expressed a strong personal preference for developing an intervention that would make optimal use of the wide and deep personal contacts that primary care practice teams have with at-risk populations – noting that such teams often do not consider themselves "public health professionals," even though they are.

Sarah Cunningham-Burley commented that the Workshop was a promising start to what needed to be seen as a complex, lengthy process of partnership-building. She found the life-course approach useful, but felt that it needs to be complemented with a broader, environmental/setting-related approach that transcends individual age-groups, in order to prevent over-segmentation of the Collaboration agenda. She flagged some critical next steps: engagement of a wider support-base, including the public and politicians; careful examination of the Collaboration's role with respect to the policy process in Scotland, including the pros and cons of advocacy; further specification of how intellectual property issues will be dealt with, hopefully with an explicit privileging of open-source publication; and the need to integrate the full context of the present recession, and wider issues – such as global climate change and environmental sustainability -- into whatever work we do.

Kay Barton commented that we must not lose sight of a core aim of the Collaboration's founders – to reduce health inequalities – within the larger goal of improving the whole Scottish population's health. She pointed out the critical role of "policy environment fit" in the selection of specific interventions for development, noting that the Collaboration must be, and be seen to be, responsive to decision-makers' needs as it moves forward. For example, it is involved in the evaluation of the Equally Well roll-out, and should anticipate the probable launch of a long-term strategy on obesity later in 2009. She noted that policy and practice leaders who are involved in many key aspects of the determinants of health in Scotland, were not represented at the Workshop and volunteered to help recruit more of them into the next steps in the process. In closing, she wondered aloud if a key underlying driver of SES gradients in health may in fact be individual resilience and "self-efficacy" with respect to coping with stressors and managing health risks.

Richard Mitchell offered the view that many good ideas had come forward prior to and during the Workshop, and that the life-course approach in the sub-groups had identified some cross-generational issues to address, such as improved parenting. He pleaded for emphasis on better implantation of what we already know about improving health equitably, while admitting that the full evidence-based needed to make our environment, especially the built environment, more health-enhancing, was probably not yet in place, leaving significant work to which the Collaboration could usefully contribute. He closed by wondering if perhaps some of the sub-groups had ended up by converging on topics, such all sorts of unhealthy aspects of the "environment" (social and cultural as well as physical), which are so broad as to be hard to pin down sufficiently to further develop in Working Groups. He argued for focussing on "salutogenic" aspects of these environments.

Lyndal Bond stated that the Workshop was an essential first step for the Collaboration, and that inevitably some participants' "hobby horses" were evident during the two days. She noted that the span of disciplines represented – both academic and professional – while still not the complete set relevant to our task, was so broad that further work would be required just to achieve some "shared language" with common meaning. For example, she pointed out that some "settings" for interventions, such as schools, are in fact much more than that – they need to be thought of as institutional targets of change, per se. She closed by expressing a personal willingness to work on the development of specific novel interventions, and appropriate evaluation designs for them, for application in Scotland through the Working Group process.

Andrew Fraser completed the panel commentary by complementing the Workshop organizers on the diverse turnout, and the format -- including the life-course sub-groups, which he felt was a useful organizing tool. He was pleased that some predictable "bunkers on the course" had been avoided, such as over-emphasis on the bio-medical model, and evangelical approaches to lifestyle change per se. As a fulltime prison service physician, he was comfortable with the reframing of narrow topics in this vein as meeting the broader challenge of "building resilience during maturation, from early life onward." He noted that the next step for any Working Group, which will require the establishment of trust across the diverse professional cultures represented at the Workshop, might in fact be the hardest -- namely, deciding precisely **how** to develop the research and research-to-action agenda for each Group.

The Workshop was brought to a close by Sir David Carter, who thanked all the participants (noting how well some had ridden their hobby horses, but to no detriment to the group-process). He also thanked the SCPHRP staff, facilitators and consultants whose preparatory work had contributed to the success of the event.

Workshop Evaluation

Following the workshop respondents were asked to complete a short on-line evaluation. Thirty-one **(51%)** participants replied. As well as rating the individual components of the Workshop, participants were asked to rate how successful, from 1 (Not successful) to 6 (Very successful), the workshop was in achieving a set of 6 objectives and the overall success of the Workshop.

Figure 6: Workshop Objectives: Mean & median success ratings

Workshop Objectives	Mean rating (Median)
To bring together public health experts from policy, practice & research and facilitate networking	4.9 (5)
To familiarise Workshop participants with the nature of and engage them in the work of SCPHRP	4.8 (5)
To provide information on SCPHRP organisational structure and funding mechanisms for the Working Groups	4.8 (5)
To identify and prioritise promising categories of intervention	3.3 (3)
To identify potential Working Group members	3.5 (4)
To consider potential ways of taking the Working Groups forward	3.3 (4)
To promote future participation by Workshop members in the Working Groups	3.8 (4)
Overall success of the Workshop	4.3 (4)

A summary of all responses to the evaluation questionnaire is given in Appendix 3.