



# “BUILDING A HEALTHIER FUTURE”

Launch of the Glasgow Centre for  
Population Health

Wednesday 27th October 2004

## REPORT



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**BUILDING A HEALTHIER FUTURE: INTRODUCTION**

**Mr Andy Kerr MSP, Minister for Health and Community Care**

The future prosperity and wellbeing of Scotland depend on the good health of our people and I am delighted to say that in recent years we have seen some real, tangible health improvements. Life expectancy has increased; there are fewer deaths from cancer, stroke and heart disease; and infant mortality rates have never been lower. There is however no doubt that we have a long way to go to catch up with other comparable nations and reduce the persisting health gap between our most and least deprived populations. I want to emphasise the Executive's strong commitment to tackling these problems, with health improvement firmly set at the heart of our overall health policy. The scale of the challenge cannot however be over-estimated. This is not a task which can be tackled by Government or the NHS in isolation. Rather it is a task which must engage us all. If we are to succeed in improving the health of the Scottish people, we need to encourage and promote successful multi-agency and multi-sectoral working. We must work together to create the better life circumstances which determine better health and to create an environment in which the healthier choices become the easier choices and we need to work together to reduce the disparity in health status between different socio-economic groups.



Nowhere is that health gap more pronounced than here in Glasgow. Half of Glasgow's population lives in areas identified as among the 15% most deprived in Scotland, making it one of the unhealthiest places in Europe. The Executive recognises the extent of this deprivation through: revenue funding for local government which is at the highest level in mainland Scotland; extensive investment in the Glasgow Housing Association; and strong support through the Community Regeneration Fund as well as a host of other measures to tackle Glasgow's poverty and disadvantage. We consider that the Centre's work will complement and add real value to much of what is already going on and for this reason we are delighted to support the development and establishment of the Glasgow Centre for Population Health and to commit £1m a year to it.

The Executive is currently sharpening its approach on health inequalities, focusing on key deliverables for the NHS, and setting these in the wider community planning partnership context. Community Planning Partnerships must be the vehicles for setting the tackling of health inequalities in the context of wider anti-poverty work and the Executive's Closing the Opportunity Gap agenda. The Glasgow Centre's work, in seeking to understand the patterns and causes of the City's ill health and the link between poverty and ill health, will play an extremely important role as we all step up efforts to tackle the scourge of health inequalities.

I wish the Centre well with this significant undertaking. We all have much to learn - and stand to benefit greatly from its work.

## PRESENTATION SUMMARIES

### **1. DR CAROL TANNAHILL, GLASGOW CENTRE FOR POPULATION HEALTH**

#### INTRODUCING THE GLASGOW CENTRE FOR POPULATION HEALTH



Statistics about health in Scotland and in Glasgow are well known, and a wide range of data exist describing patterns of health and disease, and their determinants. However, trends suggest that improvements in health and in reducing

health inequalities are elusive. There is a sense of needing to take stock with regard to the best way forward, to draw on new insights and skills. This need to bring a wide range of resources and perspectives to bear on the important question of how to make real, tangible, measurable improvements to our population's health and in doing so tackle inequality, is the starting point for the Glasgow Centre for Population Health.

There is a large amount of research and implementation activity taking place with the aim of population health improvement, but the evidence of its benefit to the health of Scotland is less clear. The Centre's core partners (NHS Greater Glasgow, Glasgow City Council and the University of Glasgow) and the Scottish Executive had the shared vision of establishing a focus on social justice and health in Glasgow. They supported this with the tangible commitments and resources required to translate this vision into reality and have created the Glasgow Centre for Population Health as a focal point for discussion, debate, research and development to help explain, understand and turn around the health experiences of those with the worst health in Scotland.

In rising to the challenge of turning around deeply embedded health inequalities and poor health in order to build a healthier future, the Centre will undertake two main sorts of activity – research and development. The research arm will seek to build an enhanced understanding of the causes of ill-health in Glasgow and West Central Scotland, and of the potential solutions. On the one hand, this will involve carrying out new analyses and developing new insights from the wealth of knowledge that already exists; on the other, the collection of new data and the bringing of different perspectives to bear in contributing new knowledge. The development arm will work to build more effective action, through influencing policy-development processes, exploring new ways of working, and being prepared to challenge some orthodoxies. Central to all of this will be the need to pay careful attention to the ways in which change occurs, and a concern with developing population health approaches relevant to 21<sup>st</sup> century Scotland.

The processes of discussion and development which led to the identification of the Centre's initial work programme highlighted three issues that continually emerged as being potentially highly significant.

- First, different populations display different distributions of the wide range of variables that are known to determine health. Moreover, the interactions between these variables produce variations in health outcomes. For example, the relationship between income and health seems to depend on the social and cultural environment in which income differences are experienced. Social supports and policies can reduce that intensity as, potentially, can psychological traits such as resilience and perhaps sense of control and confidence.
- Second, the extent to which good evidence of interventions effective at reducing health inequalities exists and is used in processes of policy development;
- Third, the growing body of evidence about the relationship between people's external environments and their individual responses, both behavioural and biological (in this sense, biological and behavioural responses are not qualitatively different).

These three themes have underpinned the Centre’s development and implementation plan, and the structure of this Building a Healthier Future event. More will be said about each of them in the presentations that follow. The work of the Centre has been conceived under three broad programmes, as summarised in the framework below.

| <b>PROGRAMMES OF WORK</b>               |   |  |   |
|---|---|--|---|
| <b>INITIAL COMPONENTS OF PROGRAMMES</b> | <b><u>STRENGTHEN UNDERSTANDING OF HEALTH AND ITS DETERMINANTS</u></b> | <b><u>MAXIMISE HEALTH GAIN FROM MAJOR CHANGE STRATEGIES THROUGH EVIDENCE AND INFLUENCE</u></b> | <b><u>CREATE NEW INSIGHTS AND DEVELOP FRESH THINKING</u></b>  |
|   | 1. Integrated public health data sets                                 | 5. Glasgow’s tobacco control strategy  | 10. Model of population health creation: Biological and psychological responses to stress and deprivation |
|   | 2. Tales of the city: People’s stories and public conversations       | 6. Social rented housing reforms and wider regeneration action                                 |   |
|   | 3. National and international comparisons                             | 7. Community Health Partnerships and population health improvement                             | 11. Psychological attributes and their relationship to health outcomes                                    |
|   | 4. Multi-level analyses and modelling of health creation systems      | 8. Healthy urban planning  | 12. Organisational dimensions of health   |
| 9. Employment and employability         |   |  |   |

**COMMUNICATIONS FUNCTION**

Networks bridging research, policy, practice;  
 Seminar series;  
 Website;  
 Written communications

Linking across aspects of all of these programmes, the Centre will develop a range of processes for discussion, debate and learning. The starting point for this is the monthly seminar programme, which commenced at the end of November 2004, and at which all comers are most welcome.

Through these programmes and processes, the Glasgow Centre for Population Health will work to add value to the breadth and depth of activity in place to improve health and promote social justice in Scotland. Although Glasgow and West Central Scotland provide the Centre's primary populations of interest, the issues on which we will be working are of importance throughout Scotland and beyond. Our aim is to develop understandings, evidence and insights that will be of use to a wide community of interest and which add impetus to our collective efforts to promote better, more equitable health in Scotland.

## **2. OBSERVATORY FUNCTION TEAM, INTRODUCED BY PROF PHIL HANLON, DEPARTMENT OF PUBLIC HEALTH, UNIVERSITY OF GLASGOW**

### A TEAM APPROACH TO UNDERSTANDING THE COMPLEXITIES OF GLASGOW'S HEALTH



### **The big question**

One of the 'big questions' to be addressed by the Glasgow Centre for Population Health is to understand why Glasgow seems to suffer poorer health than comparable cities in the north of England. At face value Glasgow is not so different from cities like Sheffield, Liverpool and Newcastle. However, if this conundrum is to be solved it will be necessary to analyse the determinants of health and a wide range of health outcomes in Glasgow and these comparator cities.



### **Integrated or holistic public health data**

Work of this nature is underpinned by a set of working assumptions, a model, of how health is created and destroyed. Factors from a range of domains (the physical environment, the social environment, genetic endowment, personal response, prosperity, health services and so on) interact, over the whole life course, to influence disease rates, levels of healthy functioning and wellbeing. If health is created and destroyed by the interaction of these factors, it becomes necessary to collect data from all these fields or domains (the determinants of health) and relate these to a wide range of positive and negative health outcomes. In short, a socio-ecological model of how health is determined needs to be supported by a large and integrated public health data set.

### **The 'observatory function'**

The 'observatory function' of the Glasgow Centre for Population Health will create an integrated public health data set for Glasgow. Once created it will be used for the following:

- To compare data on the determinants of health and health outcomes in Glasgow and cities in the North of England. These comparisons will lead to analyses of what is creating the 'Glasgow Effect'.
- To compare data on the determinants of health and health outcomes in Glasgow and cities or regions in Europe (if comparable data are available).
- To use integrated public health data as a tool to assess the impact of natural experiments like the Glasgow Housing Association's housing improvement programme or the new Community Health Partnerships.
- To develop integrated data as a tool by supplementing existing data with qualitative data and strengthening areas where current data are weak.

### **The medium is the message**

The range of individuals who will take this work forward gave the presentation. The key message was that this will be a body of work contributed to by a very strong team of professionals from a range of organisations. That team comprises:

- Phil Hanlon, from Glasgow University;
- David Walsh, Laura Kelso and Bruce Whyte from NHS Health Scotland;
- Khalid Bashir, Anne Scoular, and Russell Jones from NHS Greater Glasgow; and
- Jamie Arnott from Glasgow City Council.

Others will be added to the team in time.

Between them, this team has enormous experience of working with integrated public health data. To illustrate this, a demonstration was provided of how integrated data had already been used for the creation of 'Constituency Profiles'. Examples were shown of how innovative summary profiles of the determinants of health had been created for each of Scotland's parliamentary constituencies and how very complicated data could be integrated into a single set of bar charts so that an overall picture of the constituency emerged.

Next, each contributor provided insights into our current strengths and weakness in each domain of data and hinted at where the project may go in further developing our understanding of each domain.

### **A flavour of the presentations on domains**

A brief review of our current strengths and weakness in the physical environment domain led to the suggestion that there would be value in several developments. For example, an audit of the quality and condition of the complete built environment, leading to the calculation of indicative costs of improvement was one idea. Others included upgrading or improving our current use of sustainability indicators and mapping environmental aspects of anti-social behaviour.

The social environment has been a focus of research and measurement in recent years but routinely collected data remain scarce. Therefore, routine recording of information on variables like sense of belonging, optimism and hope should be investigated as should improved local recording of crime and fear of crime to better understand its impact.

In the health care domain data are plentiful but it is orientated to the measurement of treatment events rather than disease and risk factor incidence and prevalence.

It was argued that while the Centre could only support national efforts in the exciting field of genetic research it may have a role in hypothesis generation.

Interestingly, the discussion of how 'individual response' to the physical and social environment might be assessed established strong links between this strand of work and the thinking on biological determinants presented by Harry Burns in the afternoon.

One of the challenges for data on lifestyle factors, such as smoking, that emerged is the need for surveys that are robust enough to tease out differences between local communities and that employ similar methods across geographic areas to enable meaningful comparisons.

These brief extracts do no justice to the presentation but they do illustrate how advanced thinking has become on the potential for integrated public health data and the challenges that lie ahead.

### **Our aim for the day**

The purpose of this presentation was to show who is involved in the observatory function, demonstrate the core methodology (integrated, or 'holistic', data), indicate our direction of travel, dip into some work in progress, highlight challenges and attract interest and support.

The big question, 'why does Glasgow suffer less good health compared with seemingly similar cities?' remains our chief focus but much else with a potential to improve health in Glasgow should also emerge as this strand of the Centre's work progresses.

### **3. DR LINDA BAULD, DEPARTMENT OF URBAN STUDIES, UNIVERSITY OF GLASGOW** TACKLING SMOKING IN GLASGOW

Smoking is the single biggest preventable cause of death and ill-health in Scotland, claiming over 13,000 lives a year and costing the NHS in excess of £200 million in hospital treatment annually. Tackling smoking is Scotland's biggest public health challenge.

This presentation described changing patterns of smoking prevalence in Scotland, emphasising socio-economic differences in smoking rates between different groups. Smoking rates in Glasgow vary significantly between communities, with prevalence as high as 60% in some parts of the city, dropping to less than 20% in more affluent neighbourhoods. Glasgow has a long tradition of attempts to address this public health issue, dating back to the founding of 'Glasgow 2000' in the early 1980s. More recently, local efforts have been supported by a range of national developments, most notably the 1997 White Paper, *Smoking Kills*, and subsequent establishment of NHS smoking cessation services across the UK.

A new study funded by the GCPH aims to examine approaches to tackling tobacco in the city through two strands of work. The first is an assessment of the multi-agency Glasgow Tobacco Strategy, which describes how local organisations are contributing to efforts to prevent smoking and support cessation throughout the city and wider Health Board area. The second is an evaluation of the intensive group support smoking treatment services co-ordinated by Smoking Concerns and provided by Local Health Care Co-operatives (LHCCs) across Glasgow. The GCPH study began in July 2004 and is currently funded for one year. Additional research examining the Glasgow pharmacy-based smoking cessation service, 'Starting Fresh', is due to begin in early 2005. Both studies involve a team of researchers from the University of Glasgow who have recently completed the Department of Health funded national evaluation of smoking cessation services in England. The Glasgow work draws on the design of the English evaluation, which found that services south of the border were highly effective in supporting smokers to quit and were also beginning to make a contribution to addressing inequalities in health caused by smoking. It is anticipated that initial results from the Glasgow research will be available in the autumn of 2005.



**4. MR MICHAEL LENNON, GLASGOW HOUSING ASSOCIATION / DR MARK PETTICREW, MRC SOCIAL AND PUBLIC HEALTH SCIENCES UNIT, UNIVERSITY OF GLASGOW**

HEALTHY HOUSING IN TWO HEMISPHERES

One of the major processes of change that will occur in Glasgow over the next decade is a transformation in the profile and ownership of the city's social rented housing stock. That stock, having been transferred from the City Council to the Glasgow Housing Association (GHA), will now be transferred to community ownership largely through tenant-led local housing organisations. Considerable progress and investment has already been made in upgrading the physical stock (through new central heating systems, windows, roofs, kitchens, and so on), improving neighbourhood relations, and in wider action such as supporting access to benefits entitlement, training and employment.

However, the significant challenge of how the wider ambitions for this housing transformation can be realised – and in particular the potential benefits for the city’s health and wellbeing – remains to be grasped. The history of Glasgow’s housing provides good learning material about design, community structure, tenant requirements and stock management. Strategies for the future will seek not to replicate the problems of the past.

This presentation described experiences of a healthy housing development strategy in New Zealand and looked at their implications for Glasgow. The close collaboration between housing providers, health workers and researchers, involving joint assessment and joint action planning, is a helpful model. Many positive outcomes were achieved, leading to the conclusion that healthier patterns of living among tenants were facilitated by healthier housing design features and household management plans.



The relationship between housing and health is a complex one. Intuitively it is strong, but there is a notable lack of good research evidence of the health gains that result from housing investment. There is a need to know more not just about associations, but about the actual effects of housing improvement. The GHA investment programme provides an ideal opportunity to conduct a major longitudinal, multi-component, area-based study of the effects of housing improvement and area regeneration on a range of health outcomes (in individuals and communities).

The collaborative study being proposed by the Glasgow Centre for Population Health, the Glasgow Housing Association, the University of Glasgow and the MRC Social and Public Health Sciences Unit will seek not only to add to the evidence base on housing and health but also to contribute to community regeneration/neighbourhood renewal policy objectives. The scale and dimensions of the changes planned, together with the potential to link housing with wider actions and other interventions, makes this a unique opportunity to better understand and influence a range of health determinants in Glasgow. The populations experiencing these changes are also some of those with the worst health in the city (and therefore in Scotland).

Aspirations for the characteristics of Glasgow's homes in the future are not elaborate. They might be pulled together into a charter, which looks something like:

- A home should be where your heart *lifts*
- It should give you warmth and personal comfort
- It should provide respite from the cares and troubles of the day
- It should instil a sense of ease, security and peace of mind
- It should be a place within which your life can be organised and planned, with confidence and stability
- It should make you *feel* amongst others you know and respect
- It should be a setting over which you can have personal influence



Where these characteristics are absent, tenants/residents are likely to experience higher levels of stress and discomfort. The hypotheses being developed and tested by the Glasgow Centre for Population Health suggest that such stresses will have health-damaging biological and behavioural consequences.

In reviewing previous evaluations of rehousing/refurbishment (with or without community regeneration) colleagues at the MRC Social and Public Health Sciences Unit found the following effects of housing improvement:

- On feelings of general health/wellbeing                      Inconclusive
- On general illness    Inconclusive
- On respiratory problems    Inconclusive
- On mental health    Improved

The collaborative research, development and dissemination programme being developed through the GCPH will add invaluable evidence to this rather gloomy picture. It will also help to elucidate the pathways through which factors in the home and community affect people's health and wellbeing, and will seek to use these findings to improve the health of tenants and communities in Glasgow through influencing future regeneration strategies in Glasgow and beyond.



## 5. DR HARRY BURNS, GREATER GLASGOW NHS BOARD

### HOW HEALTH IS CREATED – AN HYPOTHESIS



Glasgow's health is improving but it is doing so more slowly than other cities in the United Kingdom. While the life expectancy of the most affluent citizens of Glasgow is typical of the life expectancy to be found amongst similar populations in other parts of the UK, poor health in Glasgow is strongly associated with poverty and poor social status. Glasgow has within its boundaries almost half of the most deprived postcode sectors in Scotland and it is within these areas that the poorest health is to be found.

While it might seem self evident that the surest way to tackle problems of ill health is to eradicate poverty,

examination of the data suggests that there may be other factors operating which are associated with, but not necessarily dependent on, poverty and which mediate or cause premature ill health in deprived populations. A number of observations in West of Scotland populations suggest that, biologically, they are experiencing the consequences of activated psychological and physiological stress responses which lead to an increased propensity to develop heart disease and cancer. There is also some evidence that cancers in deprived populations in Glasgow are more aggressive than those developing in affluent populations.

A number of researchers have suggested a link between chronic psychological stress and early development of serious, chronic physical illness. There is increasing interest in the possibility that the structure of parts of the frontal lobes of the brain can be affected by chronic stress and that these altered areas, in turn, modify the way the body deals with external stresses. If the stress responses are chronically activated, even to a very minor degree, it is biologically plausible that chronic ill health will be the result.

We suggest, therefore, that the mechanism by which poor social and economic conditions act to cause early ill health is through a psychosocial route. Our external environment determines our potential for health but it is the way we perceive that environment - as a threatening one or as supportive - which actually sets our capacity to achieve health. It seems, from many studies, that the concept of control is important in determining our physical health. If we feel in control of our lives, it is likely that our stress responses are functioning as intended and are acting to repair damage or fight off illness. If, on the other hand, we lack a sense of control, it is suggested that we will have chronically activated inflammatory, hormonal and immunological responses which will eventually lead to premature ageing and early onset of heart disease or cancer.

This hypothesis challenges to some extent conventional thinking on health related behaviours. It implies that individuals with a low sense of control and activated stress responses might be damaged more by smoking, poor diet and lack of exercise than those individuals that have a high sense of control. We believe that there is evidence to support such a suggestion. Clearly, smoking, diet and exercise are important determinants of good health. It may be however, that they are less important for some sections of the population than others and, in any case, it cannot be assumed that programmes aimed at changing health related behaviour will have the same impact across the social spectrum.

The policy implications of such an hypothesis are significant. For example, it seems unlikely that area-based regeneration programmes which are aimed at improving housing and the environment will improve health unless they enhance the way the residents of such areas feel about themselves. Such programmes need to enhance a sense of control in the individuals affected by them.

Interventions aimed at building a sense of control seem important in any attempt to narrow health inequalities while interventions aimed at changing health related behaviours may have unpredictable effects and may even widen health inequalities. Such interventions need careful monitoring and evaluation.



Perhaps the most immediate implication of this hypothesis is the opportunity it affords to monitor the impact of social and economic health on physical wellbeing. The markers of activated stress responses are relatively easy to measure and follow in individuals. Rather than waiting a decade to assess the effect of a housing or employment project on individual health, it might be possible to follow the impact through monitoring of markers in blood or even in less invasive ways.

## 6. DR NAVEED SATTAR, UNIVERSITY OF GLASGOW

### BIOLOGICAL RESPONSES

The biological links between deprivation and disease have long been sought, but available data come from a limited number of research groups and understanding is incomplete. In recent years, new risk factors that might mediate links have come to light. These include, in particular, blood vessel function and inflammation and other aspects of immunity but also include aspects of metabolic function. Researchers in Glasgow are at the forefront of much of this work, many based at Glasgow Royal Infirmary. Moreover, there is increasing recognition that not only can markers of inflammation cause heart disease but that there is a two-way traffic of inflammatory and related signals (e.g. steroids) between the brain and other body organs/tissues. Such insights may in part explain links between certain brain function / psychological traits and blood vessel disease.



In parallel with the emergence of new risk factors has been the development of a range of non-invasive tools which allow researchers efficiently to determine the amount of blood vessel disease or narrowing in subjects of all age groups, including children. Moreover, such techniques can allow us more speedily to determine effects of any chosen intervention on the progression of blood vessel disease.

Thus, researchers in Glasgow have at their disposal state of the art techniques which will allow efficient interrogation of the potential links between social deprivation and heart disease. Critically, close collaboration with colleagues in sociology and psychology as well as pivotal support from public health should ensure high-quality and 'linked' research in this important area with prospect to add considerably to existing knowledge.

**7. PROF KEITH MILLAR, PSYCHOLOGICAL MEDICINE, VASCULAR BIOCHEMISTRY, UNIVERSITY OF GLASGOW**

PSYCHOLOGICAL RESPONSES

The focus of this presentation was three-fold. First, it highlighted the individual variation that exists in responses to adverse circumstances; second, it explored relationships between psychological responses measures of physical health; and, third, it looked at ways of enhancing the psychological resources of individuals.



The two previous presentations hypothesised that psychological responses (such as feelings of control, self-esteem, confidence and stress) are an important mechanism through which the threats or supports of the external environment are translated into biological responses (inflammation, infection, and so on), and there is some interesting evidence of associations which support this hypothesis. For example, the dilation of blood vessels (endothelial function) is lower among depressed than non-depressed patients; and among healthy populations a short, stressful situation is associated with a significant and enduring reduction in vessel dilation. However, whilst these associations are clear and strong at group/population levels, the extent of individual variation is considerable. There is no simple relationship between individual responses and the degree of adversity faced. Rather, a range of mediating factors should be recognised in any model seeking to explore these relationships in more detail.

Recognising – but putting to one side, because they are largely unmodifiable – inherited factors, the first set of factors to consider in detail are personality factors. A number of valid and reliable personality assessment tools exist, classifying and measuring different dimensions of personality. For example, neuroticism – an inherent tendency to excessive worry and pessimism – is a predictor of poor adjustment after diagnosis and treatment of breast cancer while, in contrast, those with extrovert characteristics are more adaptable and better able to cope. The latter factors modify our responses to adversity so that two individuals faced with identical environmental or personal circumstances may respond very differently. It is therefore important to account for such variability in personal characteristics when attempting to understand the impact of a stressor.

A second set of factors that help to explain individual variation in the degree of association between psychological responses and physical health are factors to do with beliefs and perceptions, e.g. the extent to which aspects of the environment are perceived as being threatening or supportive. This complexity is perhaps most clearly illustrated through evidence from an ingenious study involving functional magnetic resonance imaging of the brain. Subjects were led to believe, erroneously, that they were playing a computerised game collaboratively with other unseen participants. The subjects played the game during functional imaging of their brain's activity. Subtle programming of the game gave the impression to the subject that they were being excluded from the game by the others. Whilst there was clear evidence of adverse emotional effects of exclusion amongst some subjects, the effects were evident only in those who reported that being excluded had upset them. In other words, the study provided very interesting evidence that social exclusion *per se* need not be distressing – it is the individual's interpretation of the event as 'threatening' or otherwise emotionally distressing that is the key.

One does not, of course, need to resort to brain imaging to confirm this fact. Research on “illness perceptions” and other beliefs about health and illness has long confirmed that distress is determined by the nature of an individual’s perceptions and beliefs about the meaning of the event. Many people show great resilience and adaptability, whilst others are very vulnerable, by virtue of their individual cognitions and perceptions. Given that there are effective psychological interventions to address harmful and destructive cognitions about one’s self, those who are more vulnerable can be taught new ways to perceive events and hence to develop resilience. As the saying goes, it’s the thought that counts.

The conclusion, therefore, is that there exists individual variation in the degree of vulnerability people have to less healthy psychological traits (for example, those with particular personality traits and those living in isolation are less resistant). Moreover, this variation in vulnerability is magnified or reduced by a range of modifying factors (such as perceptions about the extent of threats, exposure to information and education, and the amount of personal support available). These data provide pointers to ways of enhancing the likely success of population health interventions, with an important headline being “focus on individual need”. A balance needs to be found between this and the population, or community, levels of most public health interventions.

What is clear, however, is that without connection with individual need, and without attention to helping those whose emotional and psychological states inhibit them from helping themselves, many population health interventions are at risk of being ineffective and of increasing inequalities in health. Furthermore, there is a sound evidence base for a range of psychological interventions. For example, coping can be learned, depression and anxiety reduced. The approach being developed by the Centre for Population Health provides an exciting opportunity to add a concern with individual variation and psychological responses to the menu of potential solutions to Glasgow’s long-playing record of ill-health and health inequality.

**8. DR DONALD MACLEAN, UNIVERSITY OF GLASGOW; DR ROBERT MACINTOSH, UNIVERSITY OF STRATHCLYDE; AND PROF PETER ALLEN, CRANFIELD UNIVERSITY**

ORGANISATIONAL RESPONSES

The research programme of the Glasgow Centre for Population Health has established a stream of research looking at the organisational dimensions of health. This research proposes new and innovative views of health as an emergent property and draws on insights from complex



systems thinking. From this perspective, instead of seeing poor health statistics of Glasgow citizens as being the result of the particular diseases that individuals have, we would consider how variation in basic processes of human interaction and connection create both health and disease (i.e. how variation in lifestyles, social networks, levels of personal satisfaction and control in different parts of the city influence individual and social health).

Many people spend a considerable portion of their waking time in formal organisational settings. However, if we broaden our view of organisation to include any pattern of repeated interactions, the majority of everyone's social time is organised in one way or another. Within organisational



settings, people interact with colleagues, friends, neighbours, officials, etc. and it is through such interactions that meaning and biography take form. In this view then, it is the experience of living within the structures and organisations that compose parts of Glasgow that may be seen as the cause of the poor health and high mortality rates picked up by the statistics. This non-reductionist approach accepts that the mechanisms of disease are important and part of our understanding of the problem, but focuses on the occurrence of the conditions that appear to favour the creation of these diseases. This new, holistic view that complex systems thinking suggests, arises from an approach that does not make the series of simplifying assumptions that lead to the mechanical view of the world. These traditional statistical assumptions which reflect a view in terms of typical individuals in their average circumstances and physiological mechanisms are excellent at characterising the state of a city's health but limited when it comes to understanding the processes by which health changes.

The new approach attempts to see the emergence and evolution of the urban system, together with the different types of individual and their different organisational circumstances, as an on-going evolutionary process driven by its own diversity as well as by external circumstances and new technologies.



The importance of this approach is that although detailed knowledge of individual health problems is important in treating people individually, real progress in changing the statistics of populations requires that we address the systemic causes, which our research may reveal as related to the particular spatial patterns of poverty, deprivation and hopelessness. In this way, and by employing a combination of action research, theory-building and computer simulation, it may be possible to design models and interventions that change some of the unhealthy aspects of local community lifestyles, while keeping the sparkle that Glasgow clearly also has in abundance.

## **CONCLUSION**

### **Professor Sir John Arbutnott, Chair, Greater Glasgow NHS Board**



The Glasgow Centre for Population Health creates an opportunity for us all: to bring together diverse perspectives and lines of thinking about health inequalities; to talk together more about what we have learnt from the past and what we need to do in the future; and to put new approaches in place, based on a sound rationale. This is a wonderfully exciting opportunity, and we need to grasp it to deliver tangible benefit to our least healthy communities in Scotland.

In future years, when we look back at what the Centre has achieved, what do we want to see? We want to see wide involvement and engagement with the work of the Centre. It will be inclusive, drawing on the skills and experiences of a broad range of organisations and individuals. And it must involve people from other places and countries, being outward-looking, seeing our challenges in an international context, and learning from research and practice elsewhere. We want to see the Centre working effectively as a resource for the Scottish Executive in its efforts to tackle health inequalities. It will be a resource for policy-makers locally also, successfully influencing decision-making processes to enhance their impact on the population's health. Moreover, we want to see the Centre trying new things, based on high quality analysis and innovative thinking. Of course it will be impossible to fund every idea, but new approaches based on a good rationale will be part of the mix.

Ongoing support from the core partners and the Scottish Executive will be fundamental to the success of the Centre. Their extant commitments to establishment and governance of the Centre, and pledges to respond to its outputs, are crucial. We also have benefited considerably already from the wealth of expertise in our External Advisory Group. We are enormously grateful to all of our External Advisors, and greatly look forward to their ongoing involvement and advice.

Many interesting and constructive ideas have been expressed throughout this event, both formally in presentations and less formally in conversations. We face a huge agenda, and greatly look forward to working with many partners in taking it forward. This *Building a Healthier Future* event has clearly illustrated the various paths down which we are already travelling. We do so with a real commitment to building new understandings about health inequalities and developing approaches which will be effective in achieving a healthier, more equitable future.

In conclusion, I would like to thank Malcolm Chisholm who, as previous Health Minister, responded enthusiastically to the idea of the Centre and played a key role in its establishment. It is also greatly encouraging that the new Minister, Andy Kerr, attended the launch within days of taking office.



**APPENDIX ONE - PROGRAMME**



**“Building a Healthier Future”**

**27th October 2004  
The Teacher Building, St Enoch Square, Glasgow**

|   |   |  |
|---|---|--|
| <b>10.00</b>  | Welcome   | <i>Cllr Jim Coleman,<br/>Glasgow City Council</i>  |
| <b>SESSION 1 UNDERSTANDING GLASGOW'S HEALTH</b><br><i>Chaired by Prof Peter Holmes, Vice Principal (Research),<br/>University of Glasgow</i>                |   |  |
| <b>10.10</b>  | Introducing the Glasgow Centre for Population Health                  | <i>Dr Carol Tannahill,<br/>Glasgow Centre for<br/>Population Health</i>  |
| <b>10.30</b>  | A team approach to understanding the complexities of Glasgow's health | <i>Observatory Function<br/>Team, introduced by Prof<br/>Phil Hanlon, University of<br/>Glasgow</i>  |
| <b>SESSION 2 HEALTH INEQUALITIES: BUILDING THE EVIDENCE BASE</b><br><i>Chaired by Suzi Leather, Chair, Human Fertilisation and<br/>Embryology Authority</i> |   |  |
| <b>11.15</b>  | Public policy and health inequalities                                 | <i>Prof Ken Judge,<br/>University of Glasgow</i>   |
| <b>11.30</b>  | Tackling smoking in Glasgow: assessing current strategy and services  | <i>Dr Linda Bauld,<br/>University of Glasgow</i>   |
| <b>12.00</b>  | Healthy housing in two hemispheres                                    | <i>Mr Michael Lennon,<br/>Glasgow Housing<br/>Association /<br/>Dr Mark Petticrew, MRC<br/>Social &amp; Public Health<br/>Sciences Unit, University<br/>of Glasgow</i> |

|  |                                       |   |
|--|---------------------------------------|---|
| <b>12.30</b>   | Scotland's health and the GCPH        | <i>Mr Andy Kerr MSP,<br/>Minister for Health and<br/>Community Care</i>   |
| <b>13.00</b>   | <b>LUNCH</b>                          |   |
| <b>SESSION 3 IMPROVING HEALTH: NEW THINKING</b><br><i>Chaired by Prof Sir David Carter, Chair, The Health<br/>Foundation</i> |                                       |   |
| <b>14.00</b>   | How health is created – an hypothesis | <i>Dr Harry Burns, Greater<br/>Glasgow NHS Board</i>  |
| <b>14.30</b>   | Biological responses                  | <i>Dr Naveed Sattar,<br/>University of Glasgow</i>  |
| <b>14.50</b>   | Psychological responses               | <i>Prof Keith Millar,<br/>University of Glasgow</i>   |
| <b>15.10</b>   | Organisational responses              | <i>Dr Donald MacLean,<br/>University of Glasgow /<br/>Dr Robert MacIntosh,<br/>University of Strathclyde<br/>/<br/>Prof Peter Allen,<br/>Cranfield University</i> |
| <b>15.30</b>   | Panel discussion                      |   |
| <b>15.50</b>   | Concluding remarks                    | <i>Prof Sir John Arbuthnott,<br/>Greater Glasgow NHS<br/>Board</i>  |
| <b>16.00</b>   | <b>CLOSE</b>                          |   |