Title: Assessing public health policy approaches to level-up the gradient in health inequalities: the Gradient Evaluation Framework

Key words: health inequalities; public health policy; interventions; health gradient; evaluation; health promotion

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Abstract

Objectives: This paper seeks to introduce and analyse the development of the Gradient Evaluation Framework (GEF) to facilitate evaluation of policy actions for their current or future use in terms of their 'gradient friendliness'. In particular, this means their potential to level-up the gradient in health inequalities by addressing the social determinants of health and thereby reducing decision makers' chances of error when developing such policy actions.
Study design: A qualitative developmental study to produce a policy-based evaluation framework.

Methods: The scientific basis of GEF was developed using a comprehensive consensus-building process. This process followed an initial narrative review, based on realist review principles, which highlighted the need for production of a dedicated evaluation framework. The consensus-building process included expert workshops, a pre-testing phase, and external peer review, together with support from the Gradient project Scientific Advisory Group and all Gradient project partners, including its Project Steering Committee.

Results: GEF is presented as a flexible policy tool resulting from a consensus-building process involving experts from 13 European countries. The theoretical foundations which underpin GEF are discussed, together with a range of practical challenges. The importance of systematic evaluation at each stage of the policy development and implementation cycle is highlighted, as well as the socio-political context in which policy actions are located.

Conclusions: GEF offers potentially a major contribution to the public health field in the form of a practical, policy-relevant and common frame of reference for the evaluation of public health interventions that aim to level-up the social gradient in health inequalities. Further research, including the need for practical field testing of GEF and the exploration of alternative presentational formats, is recommended.

Keywords: health inequalities; public health policy; interventions; health gradient; evaluation; health promotion

1. Introduction

There are growing inequalities in health in most European countries which form a systematically patterned gradient between health and social circumstances across their entire populations which can affect all individuals. There is an extensive literature highlighting and documenting these growing health inequalities both within and between countries [1] [2][3][4]. The reasons for these health inequalities are complex and involve a wide range of factors which relate to the wider social determinants of health [5]. These health inequalities are not always the result of individual behavioural choices, genetic factors, or lifestyle factors and are thus deemed inequitable. This is important as whilst inequality can apply to any variation in health; inequity is only applied to these variations which are deemed to be unjust and therefore preventable.

Consequently, international organisations such as the World Health Organisation (WHO) [6], the European Union (EU) [7], and individual governments of various countries [8] [9] [10][11] have set the reduction of health inequalities as a core policy objective. In the WHO European Region, average life expectancy differs between member countries by 20 years for men and 12 years for women. Best practices and policy options to address socially determined inequities in health, being identified by a WHO commissioned European review of social determinants and the health divide [12], will inform its new Health 2020 policy framework for the European Region. The European Portal for Action on Health Inequalities was launched by the European Commission during 2011 (see www.health-inequalities.eu). Developed by EuroHealthNet, on behalf of the Equity Action Programme; this portal aims to

provide a source of information on health inequalities, social determinants of health, and Health in All Policies.

The challenge faced is that although these growing inequalities in health are well documented [1][3], there remains a dearth of evidence defining what policies and interventions are the most effective in reducing health inequalities [10][13]. This lack of evidence applies in particular to policies that seek to level-up the gradient [14][15]. Indeed, the Marmot Review in England which has highlighted the weakness of the evidence base in relation to health inequalities, has also identified the need for more appropriate evaluation [8]. Moreover the UK House of Commons Health Select Committee on health inequalities concluded that this weakness in the evidence is due primarily to inadequate policy evaluation tools and methods [15].

This situation has undoubtedly resulted in uncertainty among policy-makers and their advisors working at European, national and local levels as to the most effective ways to develop public health policy to reduce health inequalities and address the gradient in health determinants. This in turn has highlighted a pressing need to build an evidence base of what works in practice for whom and under which circumstances. However, such an evidence base can arguably only be created by the systematic and comprehnensive evaluation of public health policies and effective communication of appropriate guidance to policy advisors.

In 2009 the European Commission (Directorate General Research) funded the Gradient project under its Framework Seven Programme to address this knowledge gap [16]. In particular, the Gradient project focussed on the evaluation of public health policy actions that seek to level-up the gradient in terms of the underlying social determinants of health related

in particular to children, young people and their families in Europe. The project, which ran until 2012, was carried out by a consortium of 34 members from 12 institutions across Europe which included universities, non-governmental organisations, and (national) institutes of public health.

As a core part of the Gradient project's remit, the project's Work Package 2 (WP2; led by the authors), developed a European Evaluation Framework to facilitate the assessment of policy actions for their current or future use in terms of their 'gradient friendliness' i.e. their potential to level-up the gradient in health inequalities by addressing the social determinants of health [17]. The resulting Gradient Evaluation Framework (GEF) provides an action-oriented policy tool to guide policy advisors' technical experts in public health and thereby reduce decision-makers' possibilities of error having developed, or when developing, policies and related actions [18]. The current paper presents the development of GEF via a European consensus-building process, and in doing so, outlines recommendations for its further development in practice.

2. Methods

Study Design

A qualitative developmental research design was utilised using a comprehensive consensus-building process, which included a series of three expert workshops (n=31), a pre-testing phase, and an external peer review among European experts (n=15). Earlier papers by the authors documented in detail the initial developmental work of WP2 and GEF [19][20]. This work included completion of a narrative review based on realist review principles [21]. A wide range of material was explored to obtain a clearer understanding of the key strengths and challenges of using evaluation frameworks for examining public health policies and

related interventions with respect to levelling up the gradient in health inequalities [19:p3]. Ethical approval for this research was given by the Faculty of Health and Social Science Research Ethics and Governance Committee at the University of Brighton. In total, 34 evaluation frameworks were reviewed. As no one existing framework emerged that was deemed 'fit for purpose' in terms of the Gradient project, work began on the development of a bespoke evaluation framework.

Expert Workshops

Each of the three expert workshops enabled participants, who consisted of researchers, policy-makers and practitioners from a broad range of European countries, to contribute to the development of the consensus-building process to develop the Gradient Evaluation Framework. The workshops were interrelated and incremental. Workshop locations (Brighton [June, 2010], Dubrovnik [March, 2011], and Helsinki [November, 2011]) were selected, *inter alia*, to facilitate the participation of relevant experts from different regions of the European Union (EU). 31 European experts from 13 European Member States (Austria; Belgium; Czech Republic; Denmark; Estonia; France; Germany; Hungary; Netherlands; Norway; Slovenia; Sweden and the UK, specifically, England, Scotland, and Wales) were selected purposively for their involved in regional, national and/or European level policy relating to public health, health promotion, and specifically, health inequalities. Most participants were external to the project although some selected Gradient Consortium members were also present where relevant. All workshops were chaired and facilitated by the authors.

Initial consensus on the basis of what the Gradient Evaluation Framework (GEF) should be built upon was achieved during the Brighton workshop through the use of the Nominal Group Technique (NGT). The NGT has been effectively used with a wide variety of experts in

various settings [22] [23] [24] [25] [26]. It is a variation of the Delphi process appropriate for use with complex issues. In preparation for the workshop, participants were required to read the background documents which they were sent and to consider their responses to some key issues, but not to discuss these in advance with each other. The NGT protocol applied proved to be a useful decision making method that was carried out quickly to allow the various experts to decide on the importance of including relevant evaluation methods and efficacy indicators at each stage of the well-established policy cycle. Depending on the context of their particular policy intervention, it was felt that users could decide for themselves on their most appropriate entry points and levels of action to influence the underlying structural determinants of health inequalities.

Pre-testing

During the consensus-building process experts agreed that GEF should be pre-tested and guidance developed accordingly (for example, with regards to what works, what doesn't, what should be changed and so on). Subsequently, four policy experts agreed to pre-test a shortened version of 'GEF in Action' by applying it to a public health policy or its related actions that was either intended to affect or is intended to affect (if not yet implemented), the health and equity of a given population in their own region or country. These experts then fed back their findings to the authors and WP2 partners offering critically constructive suggestions for improvement, areas for development, and country specific illustrative examples for future use as follows:

Slovenia – an initial case study pre-test was carried out in the Pomurje region of Slovenia relating GEF to their regional health promotion strategy and action plan for tackling health inequalities.

Belgium – two policy areas were pre-tested using the test version of GEF:

a) To screen the advice of the Flemish Education Council on 'equal chances for all pupils in the school policy on health promotion' (as education is the responsibility of the regions in Belgium).

b) To assess rapidly the developing action plan to decrease the high rate of suicide among young people to formulate an adapted health target for suicide prevention policy for the Flemish Minister of Wellbeing, Health and the Family.

Germany – to review the policy of the National Centre on Early Prevention (NZFH) with regard to improving the protection of children from parental abuse and neglect.

Czech Republic – to review a regional policy to increase literacy among pregnant women in Prague.

The results from these four pre-tests enabled specific changes to be made related both to content, structure, and presentational aspects of GEF.

Peer Review

15 experts (not previously involved in the development of GEF) were drawn from various professional public health networks in 11 European countries. The review process was guided; that is, reviewers were sent guidelines about how to think about GEF together with the GEF review form. It was pointed out to them that it was not an anonymous review and that they would be providing comments directly to the authors of GEF. Although these boundaries to the review could be seen as limitations, it was also made clear to reviewers that GEF was (at that time) confidential work in progress. Reviewers were informed that they

could review GEF with a colleague as long as confidentiality was maintained. In total, 8 completed reviews were received from the 15 invitations sent out for review. The completed forms came from invited named experts from the following countries – Austria, Czech Republic, Denmark, Finland, Greece, Italy, the Netherlands, and Wales.

Leading on from the earlier pre-tests, the peer review process provided constructive feedback and suggestions to facilitate the further improvement of GEF; it identified missing parts and weaknesses, both technical and presentational; it also provided expert opinion on GEF and its potential value.

3. Results

The Gradient Evaluation Framework (GEF).

Findings from the consensus-building process resulted in broad agreement among the range of experts involved that the underlying principles and the conceptual foundations of GEF were sound and that it had considerable potential to serve as a useful policy tool for the evaluation of policy actions at each of the key stages of the policy cycle. Participants had been asked to identify the essential components of a Gradient Evaluation Framework taking particular account of its use in practice. They agreed that evaluation methods, efficacy and measurement indicators were the key categories in the development of the Framework, highlighted appropriate content and reviewed the Framework with particular regard to these issues.

GEF includes a set of principles, procedures and mechanisms that can be applied to:

- Public health policies comprising a complex mix of actions, including programmes;
- Specific health policy actions (e.g. nutrition programmes in schools);
- Non-health policies that have a potential to impact on the social determinants of health inequalities (e.g. education, employment, and agriculture sectors).

GEF can be used in different policy contexts and by different stakeholders (policy makers, researchers and practitioners) at different entry points in the policy cycle. For example, although GEF places a particular emphasis on upstream policies (policies that target the circumstances that produce adverse health behaviours for example the determinants of health that are ingrained in society's structural inequalities) it also facilitates the scrutiny of midstream (affecting working conditions or targeted lifestyle measures) and/or downstream (changing individual health behaviours and lifestyles directly) policy contexts. Moreover, to assist different potential users from different European countries whom may be working through different professional 'lenses', pre-testing revealed that GEF should offer users the ability to access the framework at different entry points of the policy cycle thus maximising its potential flexibility for use in practice. In addition, pre-testing showed that because of its European remit, GEF required the use of health policy and evaluation language that avoided jargon as far as possible and instead used widely understood definitions of common terms and phrases.

GEF comprises the following four sections:

Section One – Introduction

This section sets out the rationale and justification for GEF (including its conceptual foundations and structure) following completion of the narrative review of existing evaluation frameworks [19]. The conceptual underpinnings of GEF are grounded within the EUHPID (European Health Promotion Indicator Development) health development model [27] [28], the Ottawa Charter [29] and the wider literature on health inequalities [8] [30]. More specifically, GEF is set within a systems-based understanding of nature and society, individuals, and health following the quality assurance framework proposed by Donabedian [31] [32]. As we note elsewhere [19], systems theory describes a system as being made up of interdependent and related parts which must be considered as a whole as it cannot be viewed in isolation from its environment and context [33]. A systems approach is built around the three concepts of a system's structure, the process it supports and the outcome of its use. It therefore distinguishes between quality of outcome, which is produced by quality of process, which is determined by quality of structure. These three categories are not meant to be viewed as independent; instead they are linked in an underlying framework. Good structure should promote good process and good process should promote good outcome [31] [34]. We thus acknowledge strongly the mediating role of process as proposed by Donabedian in the evaluation of policy actions and this is highlighted throughout GEF.

FIGURE 1 - HERE

GEF sets the formulation, implementation, monitoring and evaluation of policies and their related actions firmly within the well-established policy cycle (Figure 1) [18]. Although the policy cycle has been challenged by some for being unresponsive, simplistic, and unrealistic [35] [36]; it is nevertheless also generally accepted as being a useful heuristic and iterative

device for understanding the lifecycle of a policy, especially when evaluating complex policy actions [37]. Whilst the specific core components of the policy cycle may vary, in GEF it consists of five core elements including: priority setting and policy formulation; pre-implementation; (pilot) implementation; full implementation; and policy review. It should be emphasised that although the stages of the policy cycle in GEF are interrelated; they are also interdependent and need not operate in a linear or incremental way. Instead, evaluation can apply flexibly at each and every stage as appropriate to the policy action context and their stage of development under consideration.

Section Two – User Guide

This section introduces GEF and its use in practice which includes an explanation of what it is, what it is for, who should use it, and when they should use it. It also highlights the benefits of using GEF. It has been developed as a European action-oriented policy tool to be used by technical experts - individuals or teams with a high knowledge of the values, concepts and principles of modern public health, who may or may not work in the health sector. GEF is to be used by them when guiding and advising policy makers in the development, implementation and evaluation of policies that aim to reduce health inequalities, especially to level-up the gradient in health and its social determinants.

Section Three – GEF in Action

GEF in action is the core interactive part of the tool, this enables users to apply the Gradient Equity Lens (GEL) (Figure 2) and carry out more in depth GEF evaluation activities related to their specific needs.

FIGURE 2 – HERE

GEL can be applied iteratively and flexibly to facilitate appropriate evaluation of policy actions at *each* stage of the policy cycle. GEL comprises two key inter-related dimensions (Dimension One and Dimension Two) which together provide a Gradient perspective on evaluating policies and their related actions. During GEF development, expert reviewers stressed that Dimension Two should have a 'Gradient lens' that should draw on elements outlined in Dimension One. Each dimension would then raise a series of questions and issues that decision-makers can pose and/or consider to better understand the unique nature of each policy action by linking them to their particular circumstances (e.g. political, socioeconomic, cultural, and historical contexts). Posing such questions offers the opportunity for wider participation in the developmental learning process. It allows for variation and flexibility among the multiple perspectives involved in levelling-up the gradient. Dimension One of GEF (Figure 3) guides the user through 8 key areas which form a relative quick 'check-list' of key components deemed important by participants to underpin the design and evaluation of effective policy actions (proposed or in place) in terms of their potential to be 'gradient-friendly'.

FIGURE 3 – HERE

A summative traffic-light system (at the end of each key component) is used to provide an overall rating of the policy action. This rating can help in restructuring policy and devising effective actions. The eight key components that make up Dimension One underpin the design and evaluation of effective policies and actions in terms of their potential to be 'gradient-friendly'. The components were developed initially from a combination and

adaptation of the set of analytical criteria which guided the review of identified international evaluation frameworks [19], Norwegian policy approaches to level-up the gradient [11] [38] [39], recommendations from various Marmot reports [6] [8] and a range of relevant literature addressing health inequalities, for example [4] [14] [30] [40].

Dimension Two of the Gradient Equity Lens (Figure 4) guides the user through six key steps with particular exemplar activities considered relevant for the design and evaluation of policy actions, proposed or in place, in terms of their potential to be 'gradient-friendly'. These steps are adapted from a series of commonalities gained from the review of international evaluation frameworks, which included, for example, the US Centre for Disease Control Framework for Program Evaluation in Public Health [41].

FIGURE 4 - HERE

Drawing on aspects of Dimension One (where appropriate), Dimension Two is a more detailed and in-depth series of self-assessment tasks outlining specific cyclical, iterative, and crosscutting evaluation activities. Although it is presented as a series of incremental steps this is purely for demonstration and clarity purposes. The different stages of the policy cycle can overlap with each other and may not necessarily proceed in a linear or cyclical fashion; this depends on the stage of development and policy context under analysis. More opportunities are indicated to engage with the policy cycle by establishing more entry points to enable GEF to become more flexible as multi-level tool.

Section Four – Resources

This final reference section of GEF includes a case study example (adapted from one of the GEF pre-tests), a glossary of key terms, a reference list and pages for users' notes [see 18].

4. Discussion

Although the Gradient project focussed specifically on policies to level-up the gradient in health inequalities among children and young people, GEF can be used more broadly among other population groups as well. It provides a quick, efficient and flexible means of assessing the level of ability to level-up the gradient; in other words GEF provides an indication, it does not provide outcomes; it helps users by identifying how to avoid potential errors in policy-planning.

However, it is acknowledged that the initial developmental pre-testing and review work carried out on GEF has been quite limited in terms of review numbers, as well as the extent to which pre-testing was applied (e.g. range of European countries involved). Moreover, in some countries inequalities are not always particularly visible due to lack of appropriate and relevant indicators and regular monitoring systems. The availability of appropriate indicators was therefore identified during the consensus-building process as a key problem for GEF as information does not always exist at country and/or regional level; making evaluation of policy actions therefore, fraught with difficulties. Consequently, the Gradient project has advocated for the development of suitable new 'gradient sensitive' indicators and the regular collection of appropriate and relevant data across Europe [16]. In this regard it is important that the European Commission, EUROSTAT and the WHO take such advocacy on board in order to monitor and evaluate more effectively, the impact of policies on different socio-economic groups to level up the gradient in health inequalities. Similarly, initiatives such as

the ECHIM 1 and 2 (European Community Health Indicators Monitoring) projects arguably also need to move away from focusing almost entirely on pathogenic health indicators and look to identify more salutogenic indicators relevant to addressing the gradient in health inequalities. Such a focus might include looking more closely at indicators during sensitive periods of the life course, for example, early and middle childhood and adolescence.

GEF seeks to advocate and raise awareness among key stake-holders of the importance of investment in such policy actions, as there is a lack of awareness and commitment among policy-makers, for example, within most Member States of the importance of such policy actions to tackle health inequalities [42]. Therefore regular reminders are inbuilt into GEF to facilitate the need for action by encouraging the regular exchange of experiences and sharing of good practice. However, in order to obtain optimum benefit for using GEF in action, adequate funding and trained personnel should be made available as well as allowance made for appropriate time scales for the policy action/s to be effectively implemented and sustained.

Although GEF makes a potentially important contribution to the knowledge-based on the evaluation of policy actions to level-up the gradient, it is important to recognise that at the same time, it only represents a first developmental step. Further research and development are required, for example through thorough full field testing with a broad range of existing and planned policy actions at various levels – regional, national, European/international – and in as many European countries as possible. For instance, GEF currently faces challenges in specific instances when national and regional policy contexts may differ in the same country, such as in Slovenia. Therefore it is recommended that GEF should be tested in a variety of

different contexts, for example, western/eastern; regional/national; developing/advanced, narrow/wider policy focus, and between different welfare systems.

Presenting complex conceptual notions in a two-dimensional paper format is always challenging, and GEF is no exception. Further development should also explore how policy tools such as GEF could be made more user-friendly by being developed as a web-based electronic tool operating through a variety of lenses to meet the needs of policy-makers, researchers/evaluators, technical advisers or practitioners; at various levels from European to local; and relate to up-stream to down-stream policies, strategies and programmes (but not projects). In such a format, users would be able to click on relevant parts of GEF and be taken through a bespoke system. As a first step an interactive Gradient Check Application (or 'APP') for mobile devices (Android and Apple operating systems) has been developed for policy makers to assess quickly whether their health policy is likely to be gradient-friendly (see the European Portal for Action on Health Inequalities) together with a related web-based application to create an alternative online format of GEF.

5. Conclusions

It is extremely challenging to measure both the direct and indirect effects of policy actions on the social gradient in health inequalities. This is not only because of the complexity of causal links but also inter-generational time scales (amongst other things). It is therefore perhaps rather unsurprising that there is currently little evidence available of what works to level-up the gradient. This is where tools such as GEF can offer a more strategic approach to help stakeholders identify and implement what appears to work, for whom, and under which circumstances. A particularly useful aspect of GEF is that the questions, activities, and examples provided are designed to challenge users to think both broadly and more deeply

about equity issues through a 'gradient-friendly lens'. Further work is of course still required to test GEF more widely, to build on its strengths, and to address its limitations, and in this regard we recommend that it should be applied and used to design and evaluate gradient-friendly policy actions in the many current and planned 'equity' projects underway in Europe (e.g. through European projects such as ACTION-FOR-HEALTH co-funded by DGSANCO's Public Health Programme, as well as more research focused projects under the forthcoming Horizon 2020 programme). Nevertheless, a key thrust of the work underpinning GEF is the strength and benefits derived from European added value – countries sharing their common challenges and experiences to the better good of all. In this way GEF offers a unique contribution to address the increasing and widening health inequalities both within and between European countries.

Ethical approval

Ethical approval for this research was given by the Faculty of Health and Social Science Research Ethics and Governance Committee at the University of Brighton

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Figure 1 *Gradient Evaluation Framework*

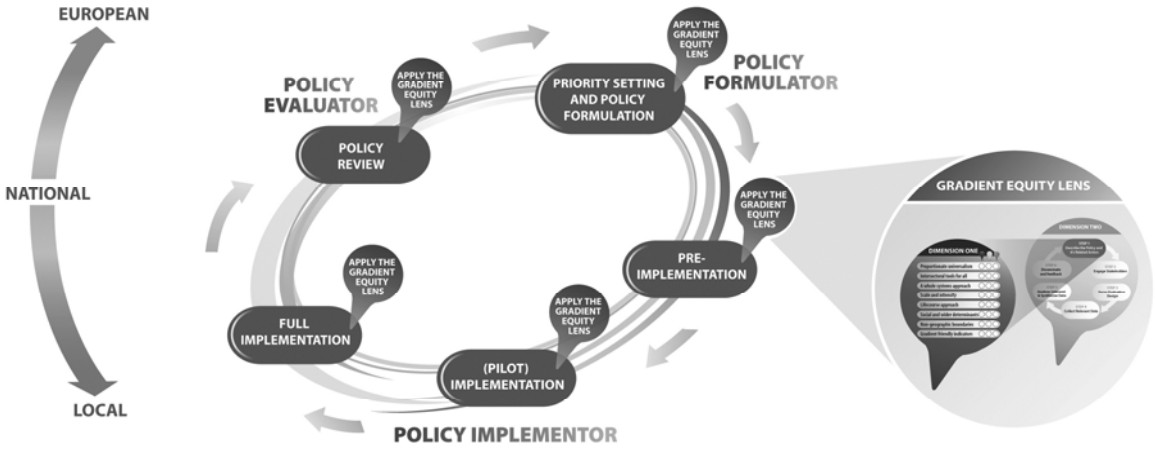

Figure 2 *The Gradient Equity Lens: Dimensions One and Two*

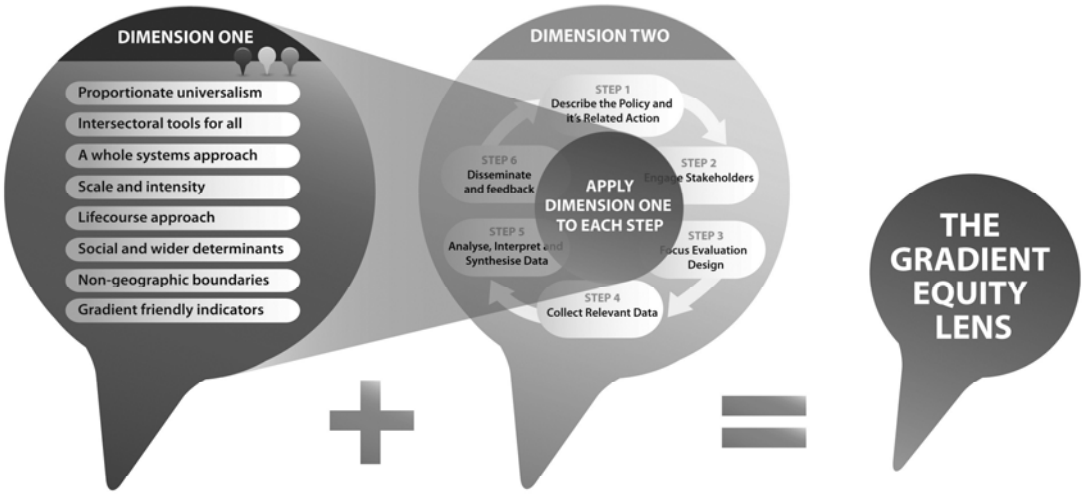

Figure 3 *The Gradient Equity Lens: Dimension One*

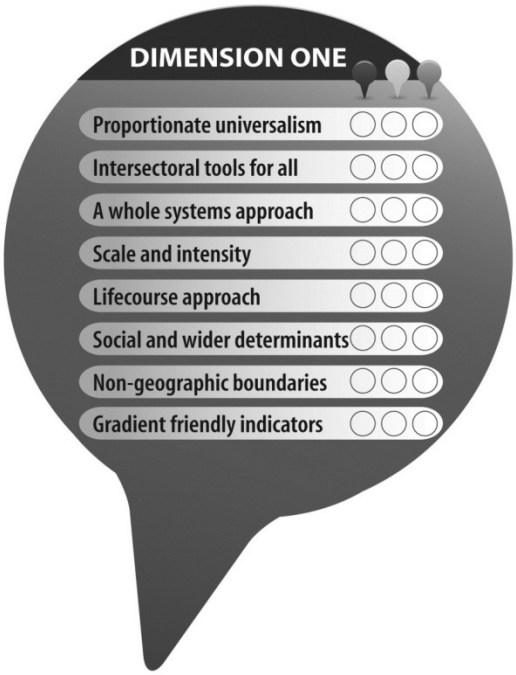

Figure 4 *The Gradient Equity Lens: Dimension Two*