

A new typology of policies to tackle health inequalities and scenarios of impact based on Rose's population approach

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ABSTRACT

The last decade has witnessed a surge in interest for policies to tackle health inequalities. Adequate theoretical development of policy models is needed to understand how to design and evaluate equity-oriented health policies. In this paper we review Graham's typology of policies (focused on the worst-off, on the gap, or on the gradient) and propose an adaptation (targeted, universal with additional targeting, redistributive, and proportionate universalism). For each type, potential scenarios of impact on population health and health inequalities are depicted following the idea of Geoffrey Rose's population curves and strategies, policy examples are given and a simulation with survey data is shown. The proposed typology of scenarios of health inequality reduction can serve as an effective tool to interpret the differential impact of interventions and to reflect on how to adequately design or re-orient a policy and which measures to use to evaluate it.

The last decade has witnessed a surge in interest for equity-oriented health policies and strategies.^{1–8} Adequate theoretical development of policy models is needed to understand how to design and evaluate equity-oriented health policies.

In a work which has strongly influenced thinking on policies to reduce social inequalities in health, Graham⁹ has distinguished three kinds of policy approaches, each approach reflecting different values and goals: (1) improving the health of those in the worst socioeconomic position through targeted programmes without making any effort to improve the health of those with higher socioeconomic position; (2) closing the health gaps or narrowing the health division between those in the worst social positions and the better-off socioeconomic groups (SEGs); and (3) reducing social inequalities throughout the whole population, addressing the entire health gradient by equalising health opportunities across the whole social scale.⁹ These three approaches correspond to different ways of alleviating the unfair burden of various diseases of the socially deprived, and differ significantly in their strengths and shortcomings.

A REVIEW OF GRAHAM'S APPROACHES

Policies to improve health among deprived populations have the advantage of targeting clearly defined segments of the population, making easier to monitor or assess their outcomes. They align well with other targeted interventions in governmental antipoverty agendas, such as social welfare programmes focused on particular deprived

subpopulations or neighbourhoods. On the other hand, this approach on specific subpopulations has some policy disadvantages. First, it may undermine the politics of solidarity that is the key to maintaining support for public provision.¹⁰ Second, this approach does not commit itself to bringing levels of health in the poorest groups closer to national averages, so that even stronger progress among better-off groups may lead to widening health inequalities. Moreover, programmes targeting poor neighbourhoods, such as the UK New Deal for Communities, show that the better-off within targeted areas tend to benefit more from the programmes thus increasing health inequalities.¹¹ Finally, this approach does not address the structural causes of health inequality since typically it includes only a minority of the population ignoring the rest of the population.

An approach targeting 'health gaps' has the goal of reducing the difference in health outcomes between the richest and poorest groups by improving the health of the poorest groups fastest. The UK's health inequality targets confront directly the problem of relative outcomes, as it 'requires both absolute improvements in the levels of health in lower SEGs and a rate of improvement which outstrips that in higher SEGs'.⁹ The main policy advantage is its emphasis that, despite absolute improvement in the health of poorest groups, they may be losing out in terms of overall improvements in health. Other potential advantages include: it facilitates target setting; it seeks to reverse trends; and it aligns health-equity policies with wider policies. Nevertheless, since the health-gap approach continues to direct efforts to the worst-off subpopulation measured against the best-off, it can fail to improve the health of intermediate groups across the socioeconomic gradient.

Tackling the socioeconomic gradient in health across the entire spectrum of socioeconomic positions constitutes a population-wide goal. This is a more comprehensive model for action on health inequalities because it incorporates the other two previous goals. The aim here is levelling up health outcomes across the social hierarchy having the greatest rate of health gain in the lowest social class, the next greatest health gain in the next lowest social class and so on. The main policy advantage is that it is inclusive of the whole population. Also, it directs attention away from the poorest groups and focuses on unequal structures, namely the upstream concentration of power and resources. Public policy action to address gradients may prove politically complex and costly, and

yields satisfactory results only in a long run. Nevertheless, these advantages call for a truly equity-based approach to tackling health inequalities to focus on the entire range of gradients.^{6 12}

A NEW TYPOLOGY OF POLICIES TO REDUCE HEALTH INEQUALITIES

In a previous study, using Rose's preventive strategies as a starting point,¹³ we presented possible scenarios to change population's health and health inequalities including examples from real policies.¹⁴ This follows from the idea that population health policies should have the dual purpose of promoting health gains in the population as a whole and reducing health inequalities.² We also showed the best expected positive impact represented by an ideal scenario with the co-occurrence of better overall population's health and reduced health inequalities. However, in the previous work we did not consider the different possibilities within this ideal scenario in terms of health inequalities reduction in specific socioeconomic groups.

To discuss this additional aspect of the ideal scenario, we present here a typology of policy scenarios of health inequality reduction according to the shift and shape of changes in health inequalities. The typology proposed adapts and modifies Graham's proposal⁹ based on the three categories previously reviewed (ie, worst-off, gap and gradient) for a new approach based on four categories of interventions (ie, targeted and health gap, universal policy with additional focus on gap, 'redistributive policy', and 'proportionate universalism' or universal policy with increasing benefits through the gradient).

In order to illustrate expected effects of these interventions, we include a hypothetical graphical example based on a 'proximal' risk factor like the consumption of saturated fatty acids (SFA), involved in the pathogenesis of obesity and cardiovascular diseases (figure 1), along with other examples of real or potential policies.

In the upper level of figure 1 (figure 1.0), we observe the theoretical distribution (baseline) of the intake of SFA in three SEGs represented by SEG1, SEG2 and SEG3 from the better-off to the worse-off, and the overall population distribution. In the rest of the figure, we include four types of policy scenarios with their respective effects on the SFA intake distribution in each SEG group and in the population as a whole.

For the sake of simplicity, in the graphical example we follow a few assumptions without losing the generality. First, we assume that we describe the situation of three equally-sized SEGs. Second, we assume that the factor under study within each SEG follows a normal distribution, with the same SD but different means in the three groups. Third, we also assume that changes between time 1 (before or 'baseline') and time 2 (after) are exclusively due to the intervention or policy. Finally, we look at one specific graphical example and other policy examples.

Based on population data from the USA, where the mean daily intake of SFA was 29 g,¹⁵ we set the baseline SFA intake mean level at 24, 30 and 36 for SEG1, SEG2 and SEG3, respectively, with SDs of 4. This implies that the overall population SFA mean intake at baseline is 30. These differences are excessive and unrealistic, but serve for an illustrative purpose.

Scenario 1: focusing on targeted interventions and health gap

The first two approaches described by Graham⁹ to reduce health inequities (ie, interventions to target the worse-off and to narrow the gap of disadvantaged groups relative to the rest of the population) are considered together since both approaches basically focus on improving the situation of the most disad-

vantaged group. Worst-off groups are the exclusive target of intervention and the benefits are limited to them. Thus, the distance between the most disadvantage group and the other SEGs is reduced in both absolute and relative terms. In figure 1.1, mean SFA of SEG3 is modified to 32 while the others stay constant. In the resulting population curve, the right side of the curve is somehow 'pulled' to the left (similarly as in Rose's high-risk approach¹³), while little change in the overall level of SFA intake is observed.

Examples of this type of policies come from the extensive experience of Area-Based Initiatives in the UK, concentrated in the most deprived neighbourhoods, such as the Healthy Living Centres,¹⁶ or local programmes for early childhood development, such as Sure Start¹⁷ or Communities for Children.¹⁸ In the USA, there has been a focus on implementing and establishing effectiveness of targeted interventions for high-risk social groups on early childhood health and development, such as the Nurse-Family Partnership and other home-visiting programmes,¹⁹ or out-of-home daycare.²⁰ Other examples of interventions to improve environment and expand services in poor neighbourhoods, include urban renewal programmes,^{19 21} and Barrio Adentro in Venezuela with expanded access to universal healthcare.²²

Scenario 2: universal policy with additional focus on gap

According to this approach, a universal policy benefiting the whole population is developed, but a special focus on the worst-off is ensured by, for instance, prioritising access to services via extra budget in disadvantaged areas or targeted campaigns. As in the first approach, the distance between the better-off and the worst-off SEGs is reduced, even though the reduction of the disadvantage throughout the social gradient may be neglected. In figure 1.2, mean values were lowered two points for SEG1 and SEG2, and four points for SEG3. In the population distribution, the 'left-pull' effect observed in figure 1.1 is accompanied by an overall shift to the left, left values being more favourable values.

Two examples of this policy approach can be found in the UK: a universal smoking cessation programme with a priority on Health Action Zones²³ and the target of increasing childcare places overall, but concentrating most of them in the most disadvantaged wards.²⁴ This approach can be particularly effective in reducing the 'inverse care effect,' that is, those who need care the most benefit the least from policies (thus increasing inequalities).

Scenario 3: 'redistributive policy'

In this approach, a universal policy is applied on the cause(s) of health problems whose occurrence increases with social disadvantage, and practically leaves the most privileged group unaffected. Under this intervention that we may call redistributive policy, the most advantaged are not expected to benefit from the policy (since they are not in special need), but only those worse-off groups of the social gradient. In figure 1.3, SEG1 stays at 24, while SEG2 and SEG3 are lowered by four and six points, respectively. This results in: (1) a great reduction of gaps between groups; (2) a shift to the left of the overall curve; and (3) a reduction in variation which results in a more sharply-peaked curve.

Examples from outside the health sector can be found in policies such as social housing or rental vouchers,²⁵ security income for the elderly such as rising minimum pensions²⁶ and other cash transfer programmes,^{19 27} or means-tested subsidies, for instance, for school textbooks. The classical example is one

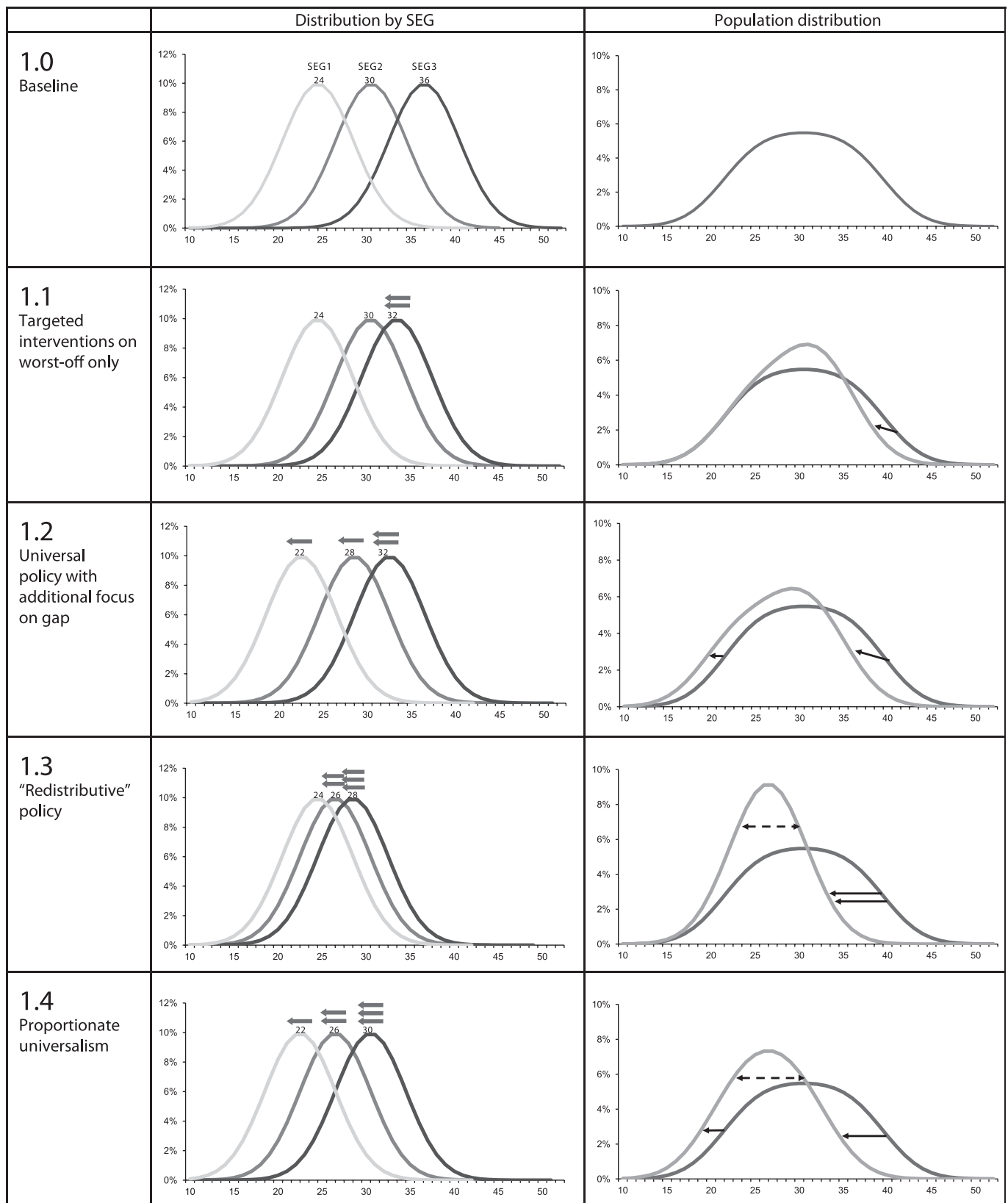


Figure 1 Typology of four policy scenarios of health inequalities reduction with their effects on risk-factor distributions by socioeconomic group (SEG) and in the whole population.

where the better-off are supposed to contribute more than they receive, that is, progressive taxation systems, which reduce income inequalities generated by the market.²⁸ In most real-life

situations, the possibility of a health trade-off for the most advantaged is marginal and clearly overwhelmed by benefits for the majority of the population throughout the gradient.¹⁰

Table 1 Typology of four policy scenarios of health inequalities reduction, classified by focus of reduction and extent of benefits, with examples of policies

Inequality reduction focus		
Gap		Gradient
Benefits to social groups		
Selective	1 Targeted interventions on worst-off only 1. Area-based initiatives: deprived neighbourhoods renewal, early childhood development local programmes, Health Action Zones ^{16–18} 2. Home-visiting programmes on early childhood health and development for high-risk social groups ¹⁹ 3. Raising minimum pensions, minimum income for healthy living initiatives	3 'Redistributive' policy 1. Progressive taxation systems ²⁸ 2. Social housing and other non-targeted, means-tested social services or subsidies ²⁵ 3. Security income for the elderly and other cash transfer programmes ^{26 27}
Universal	2 Universal policy with additional focus on gap 1. Universal smoking cessation programme with a priority on Health Action Zones ²³ 2. Increasing childcare places overall, concentrating most of them in the most disadvantaged wards ²⁴	4 Proportionate universalism 1. Public, universal healthcare system 2. Needs-based geographical allocation of services ^{34–36} 3. Population-based cancer screening programmes ²⁹ 4. Psychosocial workplace interventions ³² 5. Widespread introduction of traffic calming areas ³³

Actually, all universal and/or 'gradient' policies whose main financial basis is a progressive taxation (and, therefore, you pay what you can and you use what you need) may be considered redistributive.

Scenario 4: 'proportionate universalism'—universal policy with increasing benefits through the gradient

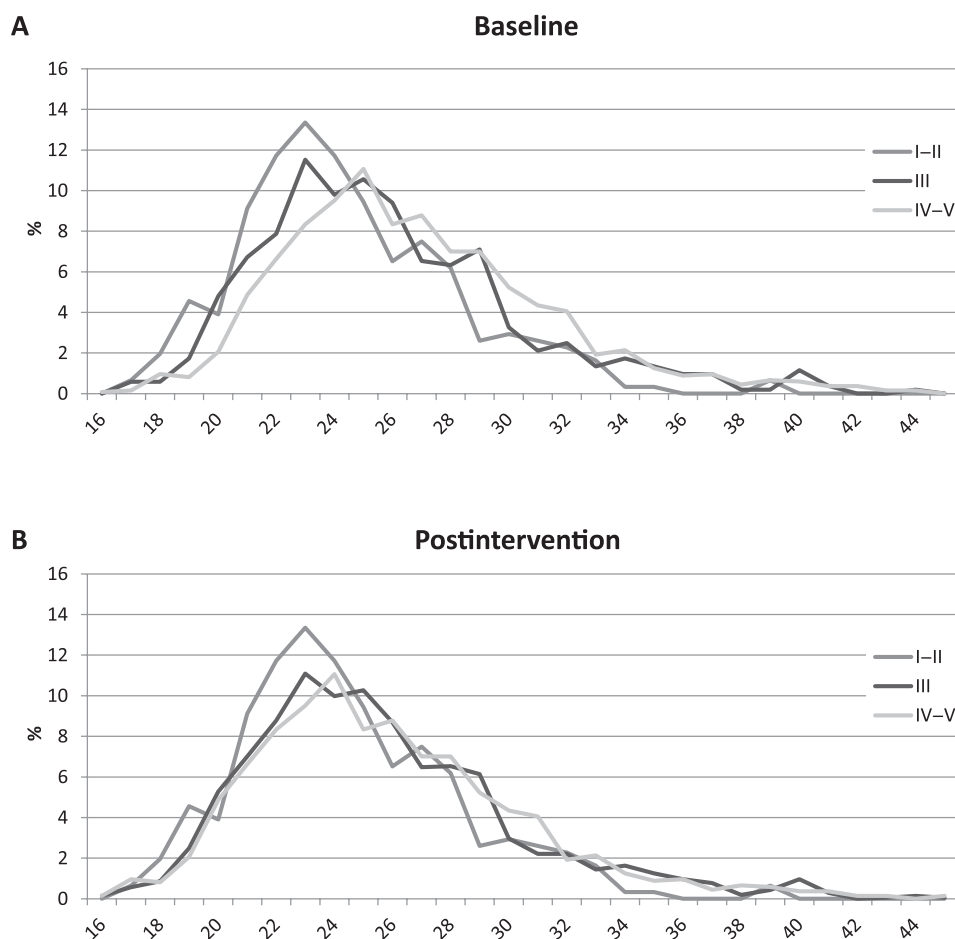
In this approach, the focus of the universal policy is health problems or determinants whose occurrence increases with social disadvantage, as in the case of most social determinants of health. Actions are universal, but with a scale and intensity that are proportionate to the level of disadvantage. This corresponds

to the concept of proportionate universalism that has recently been championed by the Marmot Review.⁶ In this 'gradient approach', the benefit increases through the gradient and the gap between SEGs is reduced. In figure 1.4, we described this scenario as lowering of two points in SEG1, four in SEG2 and six in SEG3. The overall curve shifts to the left, and also the gap between groups and total variations is reduced, though to a lesser or greater (it depends) degree than in figure 1.3.

Examples may be of two types:

- Policies that produce either a universal exposure or a universal entitlement, with no special device for disadvantaged groups, but whose benefits increase through the gradient: real-life

Figure 2 Example of the potential effects of an intervention to increase walkability, targeted to poor neighbourhoods, on the body mass index distributions in women aged 45–64 years, by social class (I–II: professionals and entrepreneurs; III: intermediate; IV–V: manual occupations). (A) Baseline data from the 2006 Catalan Health Survey. (B) Hypothetical modified distribution postintervention.



examples might be population-based cancer screening programmes,²⁹ vouchers for healthcare in less-developed countries,³⁰ mandatory folic acid fortification in foods,³¹ some types of psychosocial workplace interventions³² or the widespread introduction of traffic calming areas.³³

- Universal policies that explicitly incorporate criteria to increase resource allocation to populations with increasing needs: examples may come from the various forms of needs-based geographical allocation of services in the context of a comprehensive universal healthcare system.^{34–36}

In table 1 we summarise the typology of our four policy scenarios, classified by focus of reduction and extent of benefits, with examples of policies.

A graphical example of the application of the typology, based on real baseline data and a simulation of plausible effects, is given in figure 2. Baseline data are taken from the 2006 Catalan Health Survey and show the body mass index (BMI) distributions by social class in women aged 45–64. The intervention would be a policy targeted at poor neighbourhoods, modifying the built environment in order to increase their walkability. We assume that this policy is effective in increasing physical activity and improving well-being in older adult women in these neighbourhoods, thus moderately moving the BMI curve to the left (lower values), avoiding a possible side effect of a population-based intervention on obesity that can result from an increase in excess slenderness and eating disorders. As we expect the social composition of the relatively poorest neighbourhoods to be partly mixed, we can reasonably assume the largest reduction in manual social classes (IV–V, one point reduction in mean BMI) but also a small reduction in intermediate social classes (III, –0.25). This gives a good example of how a policy does not necessarily fit a single model of the four described: in this case, a policy that is ‘targeted’ in its intentions ends up with ‘redistributive’ effects due to its geographical base for targeting.

CONCLUDING REMARKS

Using Rose’s population strategy as a starting point¹³, this paper has presented a typology of the possible scenarios to tackle health inequalities including examples of real or potential policies. Targeted and universal strategies are not mutually exclusive, but they can be complementary and can build on each other.² Of course, the relevance of these approaches and their sequencing may vary with countries’ historical economic and political development, other contextual factors and the determinant factors of the health problem under consideration. For example, a targeted approach may have little relevance in a country where 80% of the population is living in extreme poverty. Also, caution

What is already known on this subject

Using Rose’s preventive strategies as a starting point, a previous study presented possible scenarios to change population’s health and health inequalities including examples from real policies. We showed the best expected positive impact with the co-occurrence of better overall population’s health and reduced health inequalities but we did not consider the different possibilities in terms of health inequalities reduction in specific socioeconomic groups. Adequate theoretical developments of policy models are needed to understand how to design and evaluate equity-oriented health policies.

What this study adds

Starting from a review of Graham’s typology, this paper presents a typology of policies (targeted, universal with additional targeting, redistributive and proportionate universalism) to tackle health inequalities. For each type, real-life examples are given, and using a hypothetical example, potential scenarios of impact on population health and health inequalities are depicted following the idea of Geoffrey Rose’s population curves and strategies.

Policy implications

The typology proposed here can help policymakers and policy evaluation researchers to reflect on the characteristics of the policy they are concerned with, and then know how to adequately design or reorient it and which measures to use to evaluate it.

must be taken in interpreting the impact of policies on population health based on figures, which depend on the authors’ assumptions, while real-life effectiveness will depend on the concrete policy. Finally, it is not realistic to believe that changes are only due to a specific intervention and policy since the political, economic and/or cultural contexts can matter at a large extent and real policies must consider them in detail. We believe, however, that the proposed typology of policy scenarios of health inequality reduction can serve as an effective tool to interpret the potential impact of policy interventions for different SEGs.

Figures suggest that type (2) and (4) policies might maximise population health benefits, while type (3) maximises health inequalities reduction. Therefore, it is not a matter of establishing which type of policy is best; the choice of a policy will depend on the nature of the health problem, its context and the potential effectiveness and efficiency of the solution. Understanding where this policy fits in the typology proposed here can help policymakers and policy evaluation researchers to reflect on the characteristics of the policy they are concerned with, and then know how to adequately design or reorient it and which measures to use to evaluate it.

There are policies geared towards re-distribution of specific services (eg, childcare, healthcare) with increasing need as a consequence of the socioeconomic gradient and policies geared towards changing the gradient itself (eg, progressive taxation). In addition, some policies target particular outcomes, while others target overall health. We did not consider potential different consequences of these different types of interventions.

This paper was based on a systematic theoretical appraisal of relevant policies to tackle health inequalities in populations. In addition to the aforementioned assumptions, it is important to note that we only used three SEGs, not considering other key social mechanisms of inequality such as gender, ethnicity and migration. In spite of these limitations, this theoretical formulation opens a useful discussion on how policies and interventions may differently reduce health inequalities. Many other social determinants, risk factors and health outcomes need to be examined to confirm how well the present approach works, theoretically and empirically, in different contexts. The impact of different

policies on determinants, factors and health outcomes should be assessed empirically, for different types of causes and outcomes, and under different social contexts and historical circumstances.

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