

Finance Committee

Prevention

Submission from Improvement Service

Introduction

The “question set” for the Committee’s enquiry seems to presume that (a) prevention involves new programmes, projects and services and (b) an identifiable shift of resources from an imagined alternative towards “prevention” in a way that can be documented. From working with councils and partnerships across Scotland, we think both these presumptions are potentially misconceived and, sensibly defined, the largest proportion of local public service activity and spending is preventative, although typically not classified as being so.

The aim of this short note is to map out more precise definitional criteria for “prevention”, and demonstrate that a very much wider range of public service activity is preventative than is typically allowed. The second key point the note explores is that understanding of causation and chains of causation is fundamental to prevention, and that local public services often field the consequences of higher levels of Government failing to make preventative interventions further up the chain (e.g. through macro-economic, fiscal or regulatory policy). Public services intervene at the point in the chain of causation they have access to: they cannot, and should not, be held accountable for failures to prevent further up the chain.

This is illustrated by analysis of data on education achievement across the decade to 2013 that shows a substantial preventative impact of core public services. It also illustrates complexities of attribution and the problem of labelling particular services and spending as preventative or not.

Defining Prevention

The way preventative work is discussed always draws an implicit contrast with an imagined opposite: “reactive”, “acute” or event “universal”. A moment’s reflection shows this to be questionable. For example, the Victorians invested in municipal water and sanitation precisely because of an understanding of the causation and dissemination of infectious disease. Genetic screening and intervention follows from contemporary knowledge of the causation of inherited disease. Within current accounting conventions, the former would be classified as capital assets, and the latter is often classified as acute service expenditure. Neither would appear on accounts as “preventative” but they are.

On the same principle: a hip joint replacement prevents worsening pain and disablement; pre-school education from age two prevents (or at least mitigates) inequality of linguistic environment and access to learning resources from early years; work on literacy and numeracy prevents exclusion from subsequent educational and economic opportunity; work on traffic control prevents accidents and damage to people; investment in infrastructure prevents restriction of economic and social activity; regulation prevents social, environmental and economic harm, etc. etc.

The unifying criteria running through all these examples are: without some action or intervention, predictably negative outcomes will occur and the action taken will allow us to avoid or substantially mitigate that outcome. Prevention is anything that does that, not simply services and projects labelled as such. A fiscal framework that redistributes pre-tax income and mitigates income inequality is prevention in this sense. “Community benefit” clauses in capital procurement aimed at mitigating economic exclusion and unemployment in disadvantaged communities are also preventative in this sense.

“Prevention” is contingent on predictive capacity: understanding statistical relationships and the causal mechanisms that underpin them. As the Health Scotland model (appendix 1) illustrates, there are complex chains of causation and a preventative intervention can occur at any point in the chain, preferably as early as possible. Macro-economic, fiscal and regularly intervention tend to focus early in the chain, service interventions tend to be much further down the chain. That better fiscal treatment and regulation of foodstuffs (e.g. sugar tax) would be preferable to fitting gastric bands to prevent worsening obesity does not mean the latter is not preventative at that point in the chain.

The second point that follows is that prevention is not a new type of service or budget line, it is a stance that should inform the design of all services and the use of all resources. “Shift to prevention” is not about movement between budget heads, it is about how core resources are used on the ground. A school can be run in a more or less preventative way in terms of how it links to parents and local communities, to other services and to vulnerable children that study within it. The school will still exist, the staff will still be there and the public accounting will not vary whether the school “thinks prevention” or not. “Shift to prevention” is a shift of stance and commitment about how we use what is already there. The admirable development of “locality” and “neighbourhood” management approaches to better integrate support for multiply disadvantaged communities is a preventative stance in action.

The Community Empowerment Scotland Act 2015 places a common duty on all public services to improve outcomes and reduce inequalities of outcome. Outcomes cannot be improved if we do not understand what causes less than good outcomes, and intervene to prevent that happening. Equally, “reducing inequality” means understanding what will lead to predictably unequal outcomes and taking action to wholly prevent or mitigate that.

The foregoing is clearly open to the criticism that the idea of “prevention” is being extended too elastically that it could encompass a very wide range of activities and interventions. I accept that but do not take it as a criticism unless:

1. Ways of narrowing it down are specified that respect (at least) minimal definitional criteria for prevention.
2. Established chains of causation are respected and
3. A coherent, more restrictive definition and classification is explicitly proposed (e.g. that shows that a hip joint replacement or the use of stents are not “preventative”).

To sum up, “prevention” always presumes predictive capacity and the ability to intervene in “chains of causation” to prevent or mitigate predictably negative outcomes. It would be a strategic stance and focus for the whole public policy and public service system, not a new type of service. Local public services intervene in the chain of causation at the point that they have access to it, and their work is often mitigative of outcomes that were not prevented at earlier points in the chain. Their work is preventative of further negative outcomes but sometimes cannot wholly offset wider factors that create relatively poor outcomes.

The Case of Educational Achievement

The best established statistical relationship in European social policy is between income inequality (pre and post-tax Gini coefficient) and inequality in other life outcomes (education achievement, health, etc.). Scotland has amongst the highest average household incomes in Europe but also amongst the highest income inequality between households in Europe. As the OECD PISA data has shown, though Scotland ranks high on average scores in mathematics, language and science at age 15, the variation around the average (the inequality) is amongst the highest in Europe.

A preventative approach would have to understand the causation that underpins household income inequality, the link between household income and children’s educational prospects and take steps at all points in the chain of causation to avoid or mitigate negative outcomes. This would include using macro-economic and fiscal preventative levers, as well as curricular reform, investment in teachers, better learning technologies, etc.

Real wages have been stagnant across the last period, and the incomes of the lowest decile of income earners have declined against the average, and the top decile, due to unemployment, underemployment and welfare reform. The UK Government, particularly since 2010, has not taken steps that would have been preventative of income inequality, and the Scottish Parliament lacks fiscal and macro-economic capacity.

Despite that, children from the 5% most deprived communities in Scotland have been the fastest improving group at SQA level 5 and 6. The S4 tariff scores have improved by 34% and S5 by 25%. (Their overall achievement will be understated as many use their SQA level 5 achievements to gain access to college courses, but success there is not linked back to the school where they studied. Treating the whole S4 cohort as the denominator for S5 achievement exaggerates this effect.)

As importantly, the link between income inequality and variation in education achievement weakens across the period. Across the whole pupil population it moves from explaining 50% of the variance to explaining (only) 30% of the variance. In the comparison between the top quintile in income terms and the bottom quintile, it moves from explaining 70% of the variance to 50% of the variance. The critical point is that this trend is consistent before and after the crash, consistent across the real incomes of the bottom decile growing and reducing, and consistent across rising per pupil expenditure and declining per pupil expenditure.

This is a singular, counter trend, achievement as the OECD noted in their 2014 PISA report. Predictably negative outcomes based on trend projections were mitigated. This is not, evidentially, associated to new projects, programmes and services or with a discernible shift of resources from one use to another. It is to do with a change in stance: a priority being attached to preventing negative outcomes for disadvantaged children, rethinking the curriculum to make it more relevant and engaging, and much more sharing of knowledge and practice. "Curriculum for Excellence", GIRFEC, etc. are expressions of the change of stance, not the cause of it, but so also is the better integration of the wide range of services that support disadvantaged communities and their children.

The case illustrates the complexities of precise attribution. This generation of children benefited from welfare and tax policies of the then Labour Government in early childhood: parental recognition of the importance of education may have altered and been influential in shifting the pattern. There is still variation within quintiles as well as between them so simple generic attributions will not capture complex causalities here.

What is clear is that a trend pattern of predictably negative outcomes has been disrupted and that this coincides with a change in whole system stance in Scotland. 30% of overall variation being linked to income inequality is still very high but it may well be that more effective macro-economic and fiscal prevention "up the chain" would be necessary to eliminate this relationship entirely.

Conclusions

Assuming the definition of prevention proposed, it would be imaginable to regard the total resource within the school system as being used (more) preventatively across the decade. More generally, most things from winter road gritting and street lighting to care

at home and child protection are preventative in that a predictably negative outcome is identified and action taken to prevent or mitigate that outcome.

That we tend to think of prevention in terms of a narrow range of specifically labelled projects and initiatives obscures that reality. It also creates the presumption that new resources or “shift” of resources is a key indicator for prevention. On the above analysis, this is wholly mistaken: being preventative is about stance, or orientation, in using existing resources better, not about shifting resources around.

The perception that public services are not currently preventative goes back to the Christie Commission estimate that around 40% of public spending in Scotland was on “failure demand”, i.e. reacting to preventable negative outcomes once they had occurred. I undertook that work for the Commission and two points are worth noting. First, if 40% of spend is reactive, 60% is not and most of that is preventative in a perfectly propose sense. Second, the proposition was not that local public services could have prevented these outcomes: it was that they were in principle preventable, often through macro-economic, fiscal or regulatory intervention. Thinking through the chain of causation would make this clear.

Finally, and in the context of the whole analysis, an estimate of well over 50% of public service activity and spending being preventative would probably be reasonable. This follows from the analysis, it can be tested on a service by service basis, and is the logical corollary of the “failure demand” estimate in Christie.

