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Sustainability of public finances: inclusion of unrelated medical cost only part of the story

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We read with interest the paper by van Baal et al. establishing the case for including unrelated healthcare costs in economic evaluations to inform decisions on resource allocation in health [1]. The approach proposed by van Baal and colleagues recognizes the externalities of improving health status and the likelihood of ongoing health costs that can arise in relation to allocating decisions. We broadly agree with the premise proposed by the authors, however, we suggest that if we recognize that treating one medical condition gives rise to future externalities and thus the need for healthcare related transfers, we question why stopping at the inclusion of unrelated healthcare costs to economic evaluations and why not consider a broader analytic perspective that includes a range of public costs and benefits attributed to changes in morbidity or mortality that can be attributable to a new intervention or allocation decision.

The authors highlight that ageing populations will increase pressure on health systems and that considering the broader externalities of allocation decisions in health could improve financial stewardship. We support that this is relevant for ensuring health systems remain sustainable as alluded to by the authors. However, we argue that if the goal is to improve stewardship, then it might be prudent to consider a broader range of public costs that can arise from allocation decisions within the healthcare setting. It is well established that health conditions and changing the course of illnesses can have pronounced impact on the public finances for government [2–4]. The fiscal consequences of changes in health status can include increased government transfer costs as well as increased or lost tax revenues for government which can be attributed to an allocation decision in health.

From the perspective of government, the health service is only one government sector amongst many where most would recognize that allocation decisions in one government sector can influence another sector. For example, previous studies from the United Kingdom (UK) have shown that the major costs from ill-health in working aged adults, is not due to health costs [5]. In fact, the major cost-driver for government is often lost tax revenue and workless benefits i.e., transfers that can be attributed to poor health and premature mortality. In the UK report, the costs of workless benefits and lost taxes attributed to ill-health accounted for approximately 85% of overall costs to government [5]. Conversely, the healthcare costs which are the focal point of NICE and many other health technology assessment (HTA) agencies are approximately 15% of public sector costs in the UK. Of course, this can vary by age as health spending is mostly concentrated in those that are not in working ages and health costs are often exceptionally high in the last years of life. At the other end of the spectrum, children represent future public assets for governments attributed to lifetime tax contributions; rather than considering them as only future consumers of healthcare [6–8].

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Health systems in OECD countries are mostly publicly financed or funded through compulsory insurance using pay-as-you-go systems that collect taxes from mostly younger and healthier persons transferred to other persons with medical need in the form of healthcare costs [9]. Whilst achieving efficiency within the health system is important to increase fiscal space for tax financed healthcare, it might be prudent to look beyond health and consider the sustainability of broader public finances. To consider in isolation only one publicly financed sector, such as health, without considering the interconnected nature of public finances reflects a siloed approach to public finance sustainability. A resource allocation decision in health will inevitably have a future impact on other government budgets including pensions, government allowances and tax revenue. Consequently, the long-term positive and negative spill-over effects of health interventions can lead to changes in the current flows of taxes, transfers and to changes in the intergenerational sourcing and allocation of funds. Hence, health interventions convey broader actuarial effects of health gains and are not limited only to trade-offs of healthcare costs which may represent a smaller component of public costs linked to health status changes compared to other public costs.

Every successful medical intervention employed that changes the course of health gives rise to future public economic costs not only unrelated healthcare costs. Averting a death or preventing an illness changes the life course of an individual that enables a person to fulfil their actuarial life and continue to pay taxes and collect a pension in the future. The consequences of health externalities are visible everywhere in the world of public finances namely in relation to pension costs and other allowances driving up public spending and debt. To some extent one can claim we have a pensions' crisis in many countries because health services were so effective at improving life-expectancy without changing retirement ages and switching to defined contribution pension schemes. As our health systems have improved and we all live healthier and longer lives our public finance systems have failed to adapt and much of the sustainability of finances is attributed to survival gains achieved through tremendous medical advancements. If health economists are really concerned with sustainability, we need to also look more broadly and consider how changes in morbidity and mortality influence our public finances. To this point there are presently two projects in Europe funded by Horizon 2020 grants that are exploring precisely this point. Gradually people are waking to the realization that the externalities of improved health extends into other areas of public finances and not only the health service.

From our own research we have observed that linking broader fiscal consequences in an analysis of health interventions can conflict the findings of cost-effectiveness analyses (CEAs) [6]. Instead of focusing attention to internalize the negative externalities of medical interventions as the authors

proposed in a CEA and focusing only on health cost. Rather we see greater value in assessing the negative and positive externalities of health through changes in public costs and tax revenues by applying cross-sectorial governmental perspective framework [3, 10]. Governments around the world typically project both transfer costs and lifetime taxes paid, that they expect to collect from citizens at each stage of life which can be easily employed in the evaluation of medical technologies [8]. Based on the situation described by the van Baal and colleagues to focus only on health cost externalities, it may be at least equally important to understand whether a health intervention has an effect on future net public transfers of individuals benefiting from it.

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