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How to account for production gains when prioritising healthcare interventions

PERSPECTIVES

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Priority setting in health care involves the distribution of scarce resources. Changing the rules on priority setting entails a redistribution of resources. We present two proposals on how revised rules could improve total welfare while maintaining an acceptable distribution.

The Norwegian government has announced a new white paper on priority setting in 2024 (1). One of the main questions is whether the government wants priority rules that account for increased economic activity originating from healthcare interventions. In simple terms, this would mean prioritising patient groups that can contribute to the economic activity, with the consequence that other groups may lose out. We refer to this as redistributive effects.

It is these effects that make changing rules on priority setting challenging, and there are differing views on what is acceptable (2). In economic welfare theory, a redistribution that makes at least one person better off without making anyone else worse off is defined as a Pareto improvement. This type of redistribution should undoubtedly be implemented, but it rarely occurs. A more common type of redistribution is the so-called Kaldor-Hicks improvement, which implies a redistribution of resources in which those who become better off could hypothetically compensate those who become worse off (3) (Figure 1). A prerequisite is that overall welfare increases as a result of the redistribution and increases economic efficiency. However, such redistribution can be controversial because it is difficult in practice to compensate those who become worse off. It is specifically Kaldor-Hicks improvements that the government has to consider in its deliberations on whether effects on economic activity should be emphasised when setting priorities.

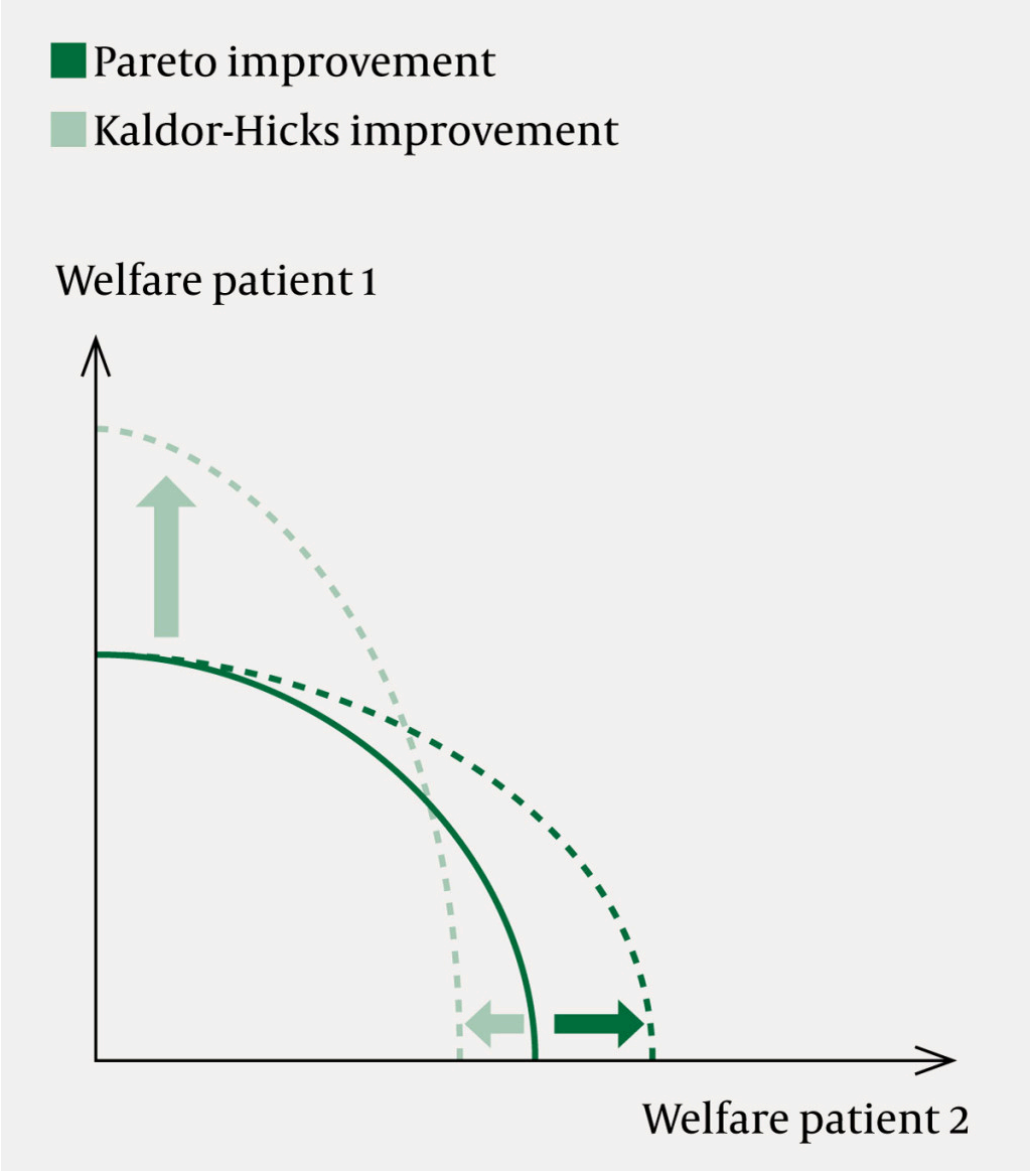

Figure 1 Pareto and Kaldor-Hicks improvements illustrated for two patients with their respective welfare along the axes. The Kaldor-Hicks improvement increases overall welfare, and hypothetically, both patients could be better off if patient 1 compensates patient 2.

Perspectives in economic evaluation

In June 2023, the Ministry of Health and Care Services in Norway established three expert panels that will contribute to the knowledge base for the announced white paper on priority setting. One of the panels will assess which analytical perspective should form the basis for setting priorities in health care. This is a question of which costs and benefits will be accounted for in the economic evaluation of healthcare interventions. (4). In Norway, standard practice has been, with few exceptions, to only capture costs in the healthcare sector. The question is now whether health economic analyses should include the effect of healthcare interventions on the patients' and informal caregivers' capacity to work. Altered work capacity can impact on the economic activity in

society and, consequently, tax revenue, public welfare benefits, as well as the private finances of patients and their informal caregivers. These effects, known as production effects, are not currently considered.

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The topic has been widely debated (5–7). While there is broad agreement that healthcare interventions can increase total welfare in the economy, the discussion has centred around the ethical aspects of distributional effects. If production effects are given weight in priority setting, patient groups with the least potential work capacity will be given a relatively lower priority. A recently published study concludes that accounting for production effects may lead to increased prioritisation of younger patient groups of working age with chronic diseases, while current practices may favour older patient groups with fatal diseases (8). As new healthcare interventions are funded within existing budgets in the healthcare sector, higher priority for one group comes at the cost of others.

We are thus considering potential Kaldor-Hicks improvements. By placing an emphasis on production effects, overall welfare can increase, but some patient groups may be denied health interventions. A key question is therefore whether the group that loses out can be compensated, fully or in part, for the health losses they suffer. We propose here a potential compensation mechanism. The goal is to inspire discussion, both inside and outside the expert panel, leading up to the new white paper on priority setting.

Expanding the perspective

Production can be increased as well as decreased through healthcare interventions. In the following, we assume that the health interventions have a net positive effect on production, and thus provide a basis for compensating those who lose out. Increased production leads to, inter alia, higher tax revenues and lower costs of welfare benefits. It is these 'extra resources' that may be considered relevant for redistribution.

One of the challenges is that increased tax revenues and reduced costs of welfare benefits show up in budgets outside the healthcare sector. It is important to emphasise that what we propose does not involve redistribution of existing resources from other budgets to health care, but rather facilitating the creation of additional resources that would not otherwise have existed. A proportion of these resources can be transferred to health care as compensation. If production gains are not taken into account, there will likely be fewer of these resources. Hence, we are not proposing an increase in public expenditure, but rather facilitating increased economic activity (value creation), combined with an acceptable distribution of resources. The holders of budgets

where production effects will manifest should therefore have a self-interest in supporting a societal perspective in economic evaluations of healthcare interventions, especially if some of the value creation remains in their sectors.

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We have observed three main objections to accounting for production gains in priority setting. The first is that patient groups where none or few experience an increased work capacity as a result of treatment, may be given a relatively lower priority. The second is that the production gains may mostly benefit the companies providing health care interventions, as the value from production gains may be fully or partially factored into the price of the treatment. The third objection is that decision-makers lack incentives to consider the societal benefits if these occur outside their own budget. For example, hospitals will not benefit directly from prioritising interventions that yield increased production gains. Our proposals aim to address all three of these challenges.

Proposed solution

Despite extensive research literature on the topic, there is disagreement on how production effects should be quantified and weighted (9). We assume that health authorities can formulate rules for estimating production effects, while we propose two methods for applying them in priority setting. Method A is aimed at addressing the objection that healthcare providers increase the price of care, for example pharmaceuticals, to reflect the value of production gains, as described above. Method B is aimed at the other two main objections. It may be preferred to combine the methods or apply them separately, depending on the circumstances and the desired effect:

Method A: Surplus sharing. Here, production gains are given a weight X < 100 % of the estimated effect in the economic analysis. This will ensure that the provider of the healthcare intervention cannot capture all the benefits from increased production. X will also determine the weighting of production effects in priority setting.

Method B: The budget method. Transferral of proportion Y < 100 % of the expected production gain to the healthcare budget. Increased production means, inter alia, higher tax revenues and reduced welfare payments (sick pay and disability benefits). By transferring a proportion of this to healthcare budgets, 'extra resources' are ensured for treating more patients.

In the proposal for surplus sharing, the authorities and patients will likely retain a significant portion of the welfare gain. For pharmaceuticals, this is supported by the fact that pharmaceutical prices are rarely adjusted for inflation over time in Norway, unlike the value of production. The proportion of the welfare gain that accrues to the healthcare provider will therefore decrease

over time regardless of the value of X. Also, pharmaceutical prices tend to decline over time following market entry due to competition and, eventually, patent expiry.

Whether the additional funds from the budget method will be sufficient to compensate any patient groups that lose out when production effects are accounted for depends on the amount that is being transferred. However, it is not inconceivable that those who get deprioritised on the margin due to changes in rules for priority setting, may be the first to be prioritised when new funds are allocated to health care. The fact that more patients than before will receive treatment will, in any case, mitigate the ethical dilemma originating from redistribution. This is also in line with the "resource criterion", a current rule for priority setting in Norway, which implies that interventions consuming fewer healthcare resources, all else being equal, should be given a higher priority. The rationale behind this is that it frees up resources that can generate additional health benefits. The budget method is also intended to incentivise decision-makers to give weight to values outside their own budget.

Practical implementation

There are several ways that these methods can be implemented, but ensuring predictability for all stakeholders is crucial. There are other systems in place for the allocation of additional funds to healthcare budgets (10), and some of them have mechanisms that could inspire the design of our proposed methods. To make the proposals practical and straightforward, we suggest that the budget method only be used when the annual production gain exceeds NOK 20 million at group level. This would avoid the need for additional work in changing budgets where this will have minimal impact on prioritisation. Less extensive production gains can still be given weight in priority setting, and this also applies to the proposal for surplus sharing (Method A).

Production gains above a certain threshold, for example NOK 150 million, can be handled in the regular national budget process, while smaller gains can be handled in conjunction with other budget revisions throughout the year.

The main criticism of the existing system for the allocation of funds when major budgetary implications are expected, is that it delays patient access to cost-effective treatments. This is because the funding must be approved by Parliament in conjunction with the regular national budget. By applying several budget revisions throughout the year, this issue is mitigated.

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Our proposals can be implemented through the Norwegian HTA system (*Nye metoder*), which in principle covers all specialist health care, and through the budget processes of the Norwegian Institute of Public Health (e.g. vaccines)

and the Norwegian Directorate of Health (e.g. screening). The calculation of X is based on health technology assessments already conducted for various interventions.

A key question is what proportion of the production gains should be transferred to health care. Considering that production gains often span several years, a one-off transfer can be made based on the expected production gain and its duration. Alternatively, annual transfers could be made. In both cases, Y will ensure that the increase in tax revenue and reduction in public expenditure from production gains will exceed the amount transferred to health care.

Discussion

We propose that production gains should be accounted for in economic evaluations of health interventions. This is contrary to current guidelines for priority setting in Norway, but the principle has previously been applied in Norwegian health care. For a period, Norwegian hospitals received additional funds to expedite the treatment of patients on sick leave who were awaiting treatment (11). Production losses in the economy were weighted heavily when assessing the extent of COVID-19 measures, and local authorities have purchased private health insurance for their employees to prevent long periods of sick leave.

If production gains were accounted for in priority setting, the budget method would result in increased healthcare budgets. The budgetary impact will be greater the more significant the change in the ranking of healthcare measures. If accounting for production gains leads to substantial changes in priority setting, this implies that production gains of considerable value have been estimated. Consequently, the amount transferred to the healthcare budget will be relatively large. This means that total health gains increase and the priorities change. We hope that the debate on priority setting going forward will be about principles rather than individual examples of the implications for the positions taken.

The Norwegian welfare system will face significant challenges in the future (12), with an ageing population, low productivity growth and a high proportion of the working-age population living on welfare payments. The Healthcare Personnel Commission (13) also pointed out that lack of personnel will be a limiting factor for sustainable health care and that policies must be designed to reflect this. With over 300,000 employees in the healthcare sector, it is reasonable to assume that production gains may contribute to more people finding employment in this sector.

Our proposals can increase health care budgets and raise awareness that creation of economic activity and value is a prerequisite for the welfare state. Surveys have shown broad support among Norwegians for strengthening the funding of the public health service (14, 15). Our proposals can help achieve this in a targeted and economically sustainable manner.

REFERENCES

1. Helse- og omsorgsdepartementet. Regjeringen setter ned tre ekspertgrupper. https://www.regjeringen.no/no/aktuelt/regjeringensetter-ned-tre-ekspertgrupper-til-prioriteringsmeldingen/id2989600/ Accessed 27.10.2023.

2. Olsen JA, Richardson J. Production gains from health care: what should be included in cost-effectiveness analyses? Soc Sci Med 1999; 49: 17–26. [PubMed][CrossRef]

3. Oxford Reference. Kaldor-Hicks efficiency. https://www.oxfordreference.com/display/10.1093/oi/authority.20110803100028833 Accessed 27.10.2023.

4. Helse- og omsorgsdepartementet. Ekspertgruppen om perspektiv i prioriteringer. https://www.regjeringen.no/contentassets/09eeba65923f4ef99c605074816028ac/ekspertgruppen-om-perspektiv-i-prioriteringer02.pdf Accessed 27.10.2023.

5. Østby JT, Holmboe F, Hansen A et al. Bør arbeidsevne vektlegges i metodevurderinger? Dagens Medisin 23.8.2022. https://www.dagensmedisin.no/debatt-og-kronikk/bor-arbeidsevne-vektlegges-i-metodevurderinger/302488 Accessed 27.10.2023.

6. Kjerkol I. Skal arbeidsevnen vår telle i møte med helsetjenesten? Dagens Medisin 17.6.2022. https://www.dagensmedisin.no/blogg/skal-arbeidsevnen-var-telle-i-mote-med-helsetjenesten/324502 Accessed 27.10.2023.

7. Skogli E, Stokke OM. Skal ikke samfunnsnytten telle? Dagens Medisin 23.6.2022. https://www.dagensmedisin.no/debatt-ogkronikk/skal-ikke-samfunnsnytten-telle/244653 Accessed 27.10.2023.

8. Kinge JM, de Linde A, Dieleman JL et al. Production losses from morbidity and mortality by disease, age and sex in Norway. Scand J Public Health 2023; 0: 14034948231188237. [PubMed][CrossRef]

9. Direktoratet for forvaltning og økonomistyring. Veileder i samfunnsøkonomiske analyser. https://dfo.no/fagomrader/utredning-og-analyse-av-statlige-tiltak/samfunnsokonomiske-analyser/veileder-i-samfunnsokonomiske-analyser Accessed 27.10.2023.

10. Statens legemiddelverk. Slik får legemidler offentlig finansiering. https://legemiddelverket.no/offentlig-finansiering/slik-far-legemidler-offentlig-finansiering Accessed 27.10.2023.

11. Folkehelseinstituttet. Brukererfaringer med "Raskere tilbake". https://www.fhi.no/publ/2017/brukererfaringer-med-raskere-tilbake/ Accessed 27.10.2023.

12. Finansdepartementet. Perspektivmeldingen 2021. https://www.regjeringen.no/no/dokumenter/meld.-st.-14-20202021/id2834218/ Accessed 27.10.2023.

13. Helse- og omsorgsdepartementet. Helsepersonellkommisjonen. https://www.regjeringen.no/no/dep/hod/org/styrer-rad-ogutvalg/tidligere-styrer-rad-og-utvalg/helsepersonellkommisjonen/id2920239/ Accessed 27.10.2023.

14. Solberg CT, Tranvåg EJ, Magelssen M. Attitudes towards priority setting in the norwegian health care system: a general population survey. BMC Health Serv Res 2022; 22: 444. [PubMed][CrossRef]

15. Norheim OF. Bør Norge bruke mer penger på helsetjenester? Dagens Medisin 29.6.2022. https://www.dagensmedisin.no/debattog-kronikk/bor-norge-bruke-mer-penger-pa-helsetjenester/308385 Accessed 27.10.2023.

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