

## COMMENTARY

# How to get the Information Needed to Inform Decision-Makers—An Economic Perspective

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### Abstract

From an economic viewpoint, the amount of primary research conducted on a topic at any given point in time depends on grantmaker and researcher incentives. The potential addresses of research findings often set these incentives. Following this logic, there is an economic explanation provided for the availability of primary data in efficacy studies. This also explains the lack of data in other important fields of health care. This article evaluates why there are few studies on effectiveness and cost-effectiveness then discusses how research incentives might be changed to overcome this problem. As a result of cost containment efforts in some countries, this process has already been initialized.

In their article, Simon Gilbody and Mark Petticrew<sup>1</sup> present two basic arguments in favor of systematic reviews in health care. The first argument assesses systematic reviews when research data is available, and suggests that systematic reviews enable follow-up researchers to find out systematic patterns in the primary results. In addition, these systematic reviews point out the weaknesses—and strengths—of primary research data and study design. The second argument of Gilbody and Petticrew assesses systematic reviews when there is no primary research data available. In this instance, they argue systematic reviews will emphasize the lack of primary research data, thus influencing the direction of future data collection and research.

Roland Sturm,<sup>2</sup> in his fine comment on Gilbody and Petticrew, differentiates between varying levels of research and their corresponding addressees, arguing that systematic reviews are a very powerful tool in relation to efficacy studies, a helpful tool with regards to effectiveness and cost-effectiveness studies, but almost no help with regards to policy advising.

The underlying reason for all of these arguments is the availability of primary research data. Referring to the availability, I want to add four aspects in this comment. First, the amount of primary research depends on grantmaker

and researcher incentives set by the decision-makers. Second, the almost ubiquitous problem of increasing spending on health care has already created better incentives for further research in some countries with regards to effectiveness and cost-effectiveness of various drugs and methods of treatment. As both Gilbody/Petticrew and Sturm point out, the research base is improving. Third, incentives to perform research on the effects of different institutional frameworks of health care systems are not changing, meaning that there will continue to be less information in that field—an argument echoed in the comment by Sturm. Finally, I argue that better research—especially in relation to institutional frameworks of healthcare systems—does not necessarily mean better health policy.

### The Logic of Argument

Looking at systematic reviews on the use of drugs, Gilbody and Petticrew complain about poor clinical data and non-existent economic data. Why does this problem exist? An economic approach<sup>3</sup> suggests the importance of the incentives for the relevant players, which are shaped by institutions. To analyse the impact of these different institutions on human behaviour is the focus of institutional economics.<sup>4,5</sup> This part of economics basically has two important branches. One carries out positive analyses of institutional settings to be found in reality, studying how these institutions emerge and how they work, especially with regards to the incentives provided for the relevant players. In mental health, recent studies have focused on contracting issues, especially in the context of managed behavioural health care.<sup>6–8</sup> The other branch is that of normative analysis, which shows how institutions can be designed to come to a desirable outcome. In health care policy this would include the search for institutions which set the incentives in a way that efficiently provides a good quality of health care.<sup>9,10</sup> Following this logic, the availability and the lack of primary data should be traced in incentives of the relevant players: the grantmakers, researchers and decision-makers.

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## Basic Incentives for Research on Efficacy

All authors agree that there is an abundance of primary efficacy studies. This indicates a set of institutions providing the right incentives. However, taking a closer look, the results of the efficacy studies are often needed to fulfil the requirements of product legislation and therefore drug companies finance most of these studies.<sup>11,12</sup> Obviously the requirements on information imposed by the legislator determine the kind of research funded by the drug companies. If—as Gilbody and Petticrew point out for the UK—there is no ‘regulatory framework to demand evidence of improved clinical cost and cost effectiveness’, there is no need to fund and to perform such studies. This gives us an economic reason for the lack of research in clinical cost and cost effectiveness. But this does not explain the poor quality of efficacy studies Gilbody and Petticrew refer to in their article. Again, this requires a look at the incentives.

In the field of efficacy studies drug companies are paying researchers. These researchers benefit from the funding, receiving better technical equipment, bigger staff and sometimes higher personal income. To meet the requirements of product legislation (i.e. to show the efficacy of a new drug), drug companies determine the study design. Taking this into account, there is—to put it mildly—no strong incentive for the researchers to come to results that are not in the interest of the research funders, especially if there is an opportunity to obtain some follow-up research funding.<sup>13</sup> In this line of argument we may find some reason for the—from an independent point of view—poor quality of study design and research results.<sup>14</sup>

Here lies one of the most important advantages of systematic reviews: if follow-up researchers perform them independently of the primary research incentives, systematic reviews can provide results with less potential bias.

## Changing Incentives for Research on Effectiveness and Cost-Effectiveness

My first argument provides reasons for the availability of primary research in some fields of health care and a lack of it in others. To overcome this lack of research we should look for ways to improve the incentives. These incentives are a result of requirements on research imposed by product legislators. In some countries there are exhibiting signs that there is hope for a change of product legislation and therewith incentives.

Consider Germany as an example, where medication accounts for about 13% of the spending of German Statutory Health Insurance. The latest ‘achievement’ in a long history of unsuccessful efforts to reduce spending in health care is the implementation of budgets. The federal government put up separate budgets for in care, for out patient care and for drugs.<sup>15</sup> There are no serious incentives for the individual prescribing physician to stick to the prescription budget, but there is a collective liability of all practitioners for crossing the budget line. Following an influenza wave in the winter of 1999, there was an outcry from the National Association

of Statutory Health Insurance Physicians (NASHIP). Without further action to reduce it, the trend of drug prescription would have led to a budget overshoot of more than 1 billion Euro. To avoid collective liability claims, NASHIP planned some rationing of medical services.<sup>16</sup>

In a desperate attempt to avoid such rationing and to keep prescribing within the budget, the German Federal Minister of Health (FMH) came to an agreement with the NASHIP and the National Association of SHI-Sickness Funds as the administrator of the budget. They agreed that practitioners should—in future—only prescribe those drugs with a superior cost-effectiveness.<sup>17</sup> That means—apart from an immediate increase in the use of generic drugs—drug companies now have to provide a proof of superior cost-effectiveness to hold their market shares. Up to now, there were only announcements to provide such information.<sup>18</sup>

Taking this argument further, it would be consistent to change the product legislation in the following way. Assume there is a drug that can be defined as a medical standard in the treatment of a certain disease. Taking this medical standard treatment as a benchmark, product legislation could then impose the necessity for drug companies to prove that a new drug has a superior cost-effectiveness. That means it must not only be efficacious but also more cost-effective than the given standard medicine, i.e. either significantly more effective at the same cost or significantly less costly at the same effectiveness. This kind of reasoning could also be applied to decide whether a drug is put on a drug positive list, that the German Federal Minister of Health plans to put up in the ‘Health Care Reform 2000’.<sup>19</sup> This new regulation means that the SHI-Sickness Funds will only cover the costs for the prescription of drugs that are on this list.

Such an institutional change would provide strong incentives for the traditional funders of primary research (especially drug companies) to provide not only information on efficacy but also on cost-effectiveness. This could be achieved through new product legislation, a drug positive list, or spending limitations imposed due to financing problems within the health care system. In this regard, the ubiquitous scarcity of finances in the health care system could help to overcome the lack in primary data in the important field of effectiveness and cost-effectiveness research.

## No Change in Incentives for Research on Institutional Framework

As mentioned before, Gilbody/Petticrew and Sturm pointed out that the most obvious lack of data can be found in the sector of institutional analysis. What are the potential reasons for this?

If we have a look at the potential funders of that kind of research, we find that they are a rather rare species. Private for profit organizations have basically no interest in funding such research. But who does? As Sturm points out, policy-makers are the addresses of this kind of information. In a decentralized system such as in the US, this is the only kind of information policy-makers need. In contrast, policy-makers in a centralized health care system (like that in the

UK) need all this information on efficacy, effectiveness and cost-effectiveness because they are responsible for implementing guidelines, for the admission of new drugs and the setting up of legislation. For the latter, they also need information about costs and benefits of different sets of legislation. They do so because the distribution of costs and benefits influences their probability of being re-elected.

Therefore, public funding plays an important role in this field of research. Other potential funders are—more or less independent—foundations or private non-profit organizations. Due to the cuts in public budgets in many countries, funding for such institutional research will presumably not increase. So, for the time being, there are no deep changes in the demand for research in institutional frameworks of health care questions.

In addition to the prevailing scarcity in funding, there has been another reason for the lack of research in the past that has partly disappeared: the widespread neglect of institutions within traditional economics. The hopeful sign for more and better economic analyses in this sector of research is the now growing influence of institutional economics within economics as a science. This may help to overcome at least part of the existing lack of research, so that in the very long run there could be enough primary data to perform systematic reviews even in this field.

## Does Better Research Imply Better Health Policy?

Gilbody and Petticrew say 'it is imperative that decision makers can readily differentiate between good and poor quality' research results. That may be obvious, but, unfortunately, is not the only prerequisite for 'better' health policy. Public choice theory (as a part of positive institutional economics) has taught us that policy-makers—although they seek to serve the public's interest—have one severe restriction to overcome: their re-election.<sup>20</sup> That means that if research comes up with results in policy advising that are scientifically reasonable but politically unpopular, there is a great chance that those suggestions will not be implemented. Politicians often look for short-term solutions (that come up with short-term benefits and long-term costs) rather than performing real reform projects (that will have high costs in the short term and positive effects only in the long run). Obviously, here we have to look for institutions that provide politicians with incentives to also look for long-term policies.<sup>21</sup>

The public choice perspective leads me to my final conclusions. First, we obviously need more systematic analysis of the basic institutions in health care systems with regards to the incentives they offer providers, consumers

and intermediary payers. Second, even if we have these systematic data to inform policy-makers, the use of these data does not necessarily result in the best solution indicated by research. The best solution will often not be implemented if it does not correspond with the politicians' interests.

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