CHARACTERIZATION OF THE VALUE OF INNOVATIVE MEDICINES

Introduction
At the High-Level Meeting on 29 September 2006, the Pharmaceutical Forum has asked the Working Group on Pricing to “further progress by ...clarifying views on the value of innovation, taking account of national health systems in order to establish a sound basis for further discussion between different stakeholders...”. This mandate has been assigned to an ad hoc taskforce with the Members of the Working Group Pricing and involving the chairman of the Working Group on Relative Effectiveness.

This report does not aim to identify and implement an EU-wide definition of what is valuable innovation. It is rather a bottom-up exercise, based on the collection and discussion of views of the relevant Member State authorities on how to recognise, assess and reward valuable innovative medicines. Thus, the main objective is rather to identify the common ground between the individual Member States, as well as the different, more optional views on what can be valuable innovation. Still, the decisions on healthcare and pharmaceuticals remain a national responsibility.

Focus of this exercise
It became quickly clear that the taskforce did not need to focus on innovation in se, but rather on the additional benefit(s) that an innovative medicine brings for the user-side, i.e. mainly for the patient and for society. These users do compare these additional benefits to validated existing treatment options. In this paper the term “innovation” is therefore different than its strict legal and/or technical definition (‘novelty’ as often identified by a patent).

Such potential benefits can be structured in 3 main area’s:
1. “Therapeutic/Clinical” benefits refer to those new medicinal products which are able to treat or to prevent, in all patients or in specific patient’s groups, diseases lacking (adequate) treatments or diseases already treated with pre-existing medicinal products but with clinical or safety advantages.
2. “Quality of Life” benefits refer to those new medicinal products which, as compared to the existing ones, are able, in all patients or in specific patient groups, to provide quality of life gains.
3. ”Socio-economic” benefits refer to those new medicinal products which, as compared to the existing ones, are (also) able to offer benefit on a higher-level for society (e.g. related to public health or public budgets).

It is clear that the benefit brought by one medicine can cover more than one area. Furthermore there is often interdependence between these three areas of benefit, one benefit influencing another. This is to be taken into account during assessments in order to avoid double-counting.

Process undertaken
During a first brainstorming session in summer 2006, the taskforce has tried to further specify each of these area’s by listing up a large number of potential benefits that could be expected from new innovative medicines. This list was meant in first place to be exhaustive and cover all different benefits that could be considered by each of the Member States’ competent authorities. Recognition of the benefits on this list can therefore not be seen to be mandatory, but rather they build a menu of options, where individual Member States can indicate or add the benefits they consider more or less relevant. The questionnaire was also sent to a number of patients’ organisations.

Table 1: potential benefits from innovative medicines
To collect the views of the individual Member States, the list was transformed into a questionnaire (see annex 1), adding some questions to each of the potential benefits. Firstly, whether this new benefit, when delivered through a new innovative medicine, is usually considered of value as a desired improvement. And if so, in what disease/therapeutic situation this new benefit is in particular valuable. In addition, the questionnaire tried to understand how competent authorities identify/measure these benefits as well as how they reward/incentivize a company for delivering such a benefit.

The questionnaire has been completed and sent out end 2006 and by begin 2007 fourteen answers were collected from respectively Belgium, Denmark, Finland, France, Germany, Greece, Hungary, Latvia, Malta, Netherlands, Norway, Slovenia, Sweden and the U.K.

Findings
The collected results have allowed to compile some findings in each of the 3 area’s of benefits. This report provides only the summary. More detailed views can be consulted in the Member States’ individual replies. However, it is worthwhile first to mention some overall findings.

General findings:
- Most competent authorities consider benefits in each of the 3 area’s mentioned. Although therapeutic/clinical benefits are mentioned as being most important, there is a general openness to consider benefits in quality of life and/or socio-economic benefits.
- Although these benefits in se can be valuable, the value of a new medicine each time needs to be considered case-by-case, i.e. what new additional benefits the medicine brings compared to existing treatments. The type of disease and general status of the patient also play a key role in defining the value of the benefit delivered by a new medicine.
- The responses indicate that Member States know the benefits they are looking for, but companies have many difficulties in proving these benefits and authorities have many difficulties in identifying and measuring these benefits and then giving them a value and incentive.

<table>
<thead>
<tr>
<th>Therapeutic/Clinical</th>
<th>Quality of Life</th>
<th>Socio-economic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher probability of full recovery</td>
<td>Higher physical self-sustainibility/self-management at home</td>
<td>Avoiding Pandemics (vaccination, …)</td>
</tr>
<tr>
<td>Faster partial or total recovery</td>
<td>Higher psychological self-sustainibility</td>
<td>Dealing with resistance (HIV, antibiotics, …)</td>
</tr>
<tr>
<td>Slower progression of diseases</td>
<td>Higher social self-sustainibility</td>
<td>Reduced total cost of medication</td>
</tr>
<tr>
<td>Increased ability to cope with disease symptoms (e.g. analgesic)</td>
<td>Higher convenience/comfort for the patient and his environment</td>
<td>Reduced total cost of treatment</td>
</tr>
<tr>
<td>Higher probability of preventing the (re-) emergence of a disease</td>
<td></td>
<td>Reduced Non-healthcare spending</td>
</tr>
<tr>
<td>Survival rate, life expectancy</td>
<td></td>
<td>Reduced cost of sick-leave</td>
</tr>
<tr>
<td>Less or less severe side effects</td>
<td></td>
<td>Higher productivity of the citizen</td>
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<tr>
<td>Less or less severe interactions with other medicines</td>
<td></td>
<td></td>
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<tr>
<td>Higher tolerability</td>
<td></td>
<td></td>
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<tr>
<td>Broader/easier dosing, improving compliance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easier administration schedule, improving compliance</td>
<td></td>
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</table>
- The list of benefits sent out is rather complete. Most respondents have replied on each of them, and only one reply suggested an additional benefit.
- Most respondents indicated that they work with these benefits, though they usually have no fully structured overview in place to identify and assess new medicines, like proposed in this exercise.
- Many Member States have an evaluation procedure that starts with determining the intrinsic value of innovation, based on therapeutic/clinical benefits and benefits of quality of life. Pharmaco-economic evaluations follow then in a second step.
- Replies from the patients’ organisations add the importance of the empowered patient and the importance of a societal perspective including analyses of therapeutic benefits, quality-of-life benefits and savings.

Findings on therapeutic/clinical benefits:
- Therapeutic and clinical benefits are the main benefits authorities are looking for, in particular benefits related to recovery, survival, disease progress and management of symptoms. Benefits related to side-effect and interactions of a medicine are considered as a second important category. Benefits related to improved compliance are only considered when this translates into an overall clinical benefit.
- Ideally these benefits can be identified and captured within one over-arching parameter. QALY (quality adjusted life years) was mentioned as well as a combination of morbidity, mortality and quality of life (QoL). In most situations however, this is not possible due to difficulties with the design, running and interpretation of clinical studies which serve as the main source of proof of the benefit. Though, these clinical studies are primarily designed to obtain marketing authorisations, not for assessments of benefits.
- Largest rewards are given to medicines that bring benefits in the fields of recovery, survival rate, disease progress and management of symptoms.

Findings on benefits for quality of life (QoL):
- Benefits on QoL are considered in most countries, in particular benefits related to (physical) self-sustainability. Of course such benefits are often related to clinical/therapeutic benefits.
- Benefits related to convenience and comfort of the patient are less considered, although these dimensions are indicated to be of high importance by the patient and his community/family.
- Many tools exist to measure benefits in terms of QoL, though only few of them allow an objective and validated assessment. This leads to difficulties in recognising and proving these benefits.
- As a consequence, reward and incentives related to benefits in QoL are rather limited. Though, some competent authorities mention that the individual patients might be willing to add more reward to these kind of benefits through a higher personal co-payment.

Findings on socio-economic benefits:
- Socio-economic benefits are considered in all countries. There is a high overall interest in ‘socio-’ benefits related to public health, like the management of pandemics and/or the resistance against certain antibiotics. Most countries also consider economic benefits, often savings, in particular when these relate directly to the cost of the medication or of the treatment. But these last benefits are often only assessed in order to define an appropriate price and reimbursement level, once therapeutic/clinical benefits and/or benefits in quality of life are recognised.
- Measuring ‘socio-’ benefits is often based on epidemiological data, which are not always easily available. Measuring economic benefits is more straightforward and often directly translated into Euros, though several issues exist with the methodologies.
- Authorities give a larger incentives to benefits that address ‘socio-’ public health concerns. The rewards given to medicines with an economic benefit, are often directly related to the economic benefits.