Exploring new ways of measuring the economic value of vaccination with an application to the prevention of rotaviral disease

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7 RECOMMENDATIONS

We are living in an environment that globally becomes more complex. Under such circumstances we cannot expect that we should always be able to apply a uniformed solution to a same problem manifesting differently under different circumstances. If we choose for that one option solution, there is a high risk for making mistakes in obtaining the right implementation of the vaccine because of not being economically attractive. We need to remain cautious and take into account the diversity of the environments to analyse and to present economic results adjusted to the local contexts.

What I have tried to demonstrate in this thesis is that first a vaccine has intrinsically a moving benefit target to be achieved over its life cycle that will impact its economic value assessment at two levels: the individual and the group level. An attractive economic result will therefore be depended where and when the assessment is performed. This is typical for any active prevention program that is initiated when a problem is substantial. From reducing the burden where the economic value of the new intervention will be high to controlling the outbreaks where the economic game of using the intervention is then different and may be more depended on the risk assessment. We often forget about that change in focus linked to the benefit vaccines can achieve over time. When we introduce a new vaccine in a community, it is not only about reducing specific mortality –the vaccine can achieve that sometimes very easily and very quickly-, but the vaccine is mainly brought in because it has the ability to control the disease spread towards a critical helping hand in the process of elimination or even eradicating specific disorders. But the economic value and the assessment tool to be used will be different by focus type.

Second is that the vaccines we are working with today are used towards the prevention of infectious or communicable diseases. This has implications for the assessment of the benefit that doesn't remain at the level of the individual as we see it for treatment, but at the level of a population or a group. We know that when we introduce a vaccine in a community it will be very difficult to reach a full coverage. Because of that we will obtain an indirect benefit by the vaccine, called the herd effect. We need to be sure that we capture well that extra hidden benefit in our economic assessment. But there are other important additional hidden benefits that are economically critical for the value assessment of the vaccine: reduction in productivity loss and improvement in quality of care. Maybe other benefits could be discovered as well, we haven't thought about.

Third is that to be most successful vaccines need to obtain a high coverage. Therefore the logistics must be there to facilitate the access. If the disease burden is huge -and that should be the case anyway otherwise one shouldn't introduce a new vaccine universally- and the vaccine coverage is high at uptake, it must create an imbalance into the established health care system. In those environments where the health care programs are maturely developed, vaccines will be a '*substitute*' for

the existing situation. The vaccine must then show high added value. We often miss to demonstrate the full picture at launch for obvious reasons. The economic assessment tool can be ICUA, but the shift should now be more in favour of CBA. With vaccines the initial investment is large, the assessment should be at the population level preferentially, and all the societal benefits need to be accounted for and not using a silo approach. A much different approach is suggested in an environment where the health care program is not so well developed. In those circumstances the vaccine will be an '*add on*' project and not a substitute. In an *'add on'* environment the driving force is about budget allocation and prioritizing. The new economic tool to be used then is about optimising the resource use and being most efficient.

Many challenges remain ahead for bringing those new messages across. But that is part of the game of performing the appropriate economic evaluation of vaccines depending of the environment where we are living in.

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