



# **MULTI DIMENSION IMPACT ACCOUNTING (MDIA)**

## **The TrueValueMetrics Book Section VIII The Socio-Economic Dynamic of Different Sectors**

# The Socio-Economic Dynamic of the Health Sector

## Health is a big element of good quality of life

Good health is at the center of a good quality of life. When a person's health is compromised in any way, quality of life deteriorates.

The expectation of good health changes with age, but at any age, quality of life is lower when health is poor compared to when health is good.

## Economics ... a truly dismal science

For most rich countries ... expectation of life has increased substantially over the past hundred years ... which is good. For those who are not in the rich countries ... and without big fortunes ... the healthcare system is problematic. Expectation of life in poor communities around the world is something like half what it is in rich countries ... with rates of infant mortality ... complications of pregnancy ... and prevalence of all sorts of preventable disease that are simply awful.

The bad news is that real world market economics does not result in good outcomes in healthcare ... market economics and healthcare are incompatible systems and produce dysfunctional outcomes. The tools for analysis used by economists are insufficient ... inadequate ... to manage resources in healthcare. Techniques that work for scientific research do not work well for managing resources. Good management accounting, however, has techniques that can get clarity about matters and what does not.

Each of the interventions needed for sustainable success in malaria control builds on a different foundation of science, and must be planned for and implemented in different ways. All interventions have two things in common: (1) they have costs; and, (2) they contribute more or less to impact. They are planned differently and have different cost and impact behavior. The best ... most cost effective ... outcome is not always apparent because the science is complex as is society.

## A better system of metrics

There is no good reason for not having the data about cost of healthcare, what it paid for, and the impact for each and every community.

### **Guideline**

*It is understandable that there is some doubt about how things will turn out in the future ... but there is absolutely no excuse for not knowing how things have worked out in the past.*

Revise this to reflect Multi Dimension Impact Accounting (MDIA) methodology

The data centric aspect of IMM addresses the need for the metrics that are essential to the management of scarce resources ... the essence is economy. The conceptual framework for IMM

data derived from the Community Analytics (CA) Methodology is more aligned with science and accountancy than with the techniques of the social sciences and statistics.

CA builds on ideas from science and engineering, economic and accountancy. The understanding of cost is simple relative to much of science and engineering ... but not well done. It is possible to calculate what costs should be using technical considerations and simple arithmetic ... and it is possible to know what actual costs are using equally simple cost accounting. The fact that such data are not compiled and available is a failure of management pure and simple ... usually because management knows that such data will highlight poor performance and create embarrassment, if nothing more serious. Cost efficiency is the idea that actual costs may be compared to a theoretical standard of what costs should be ... a common practice in corporate organizations.

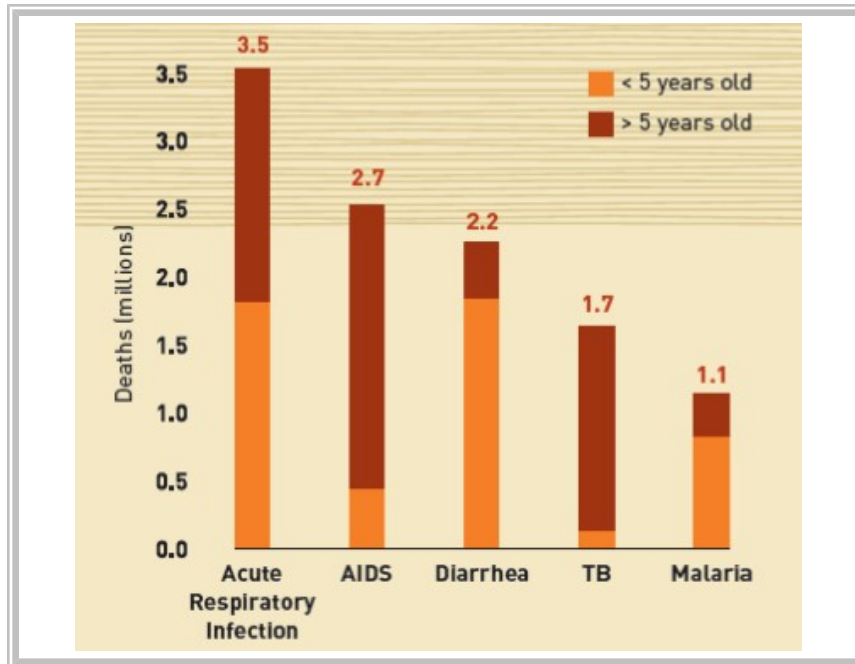
It is possible to calculate cost effectiveness using similar concepts. The idea is simply to relate the resources used ... costs ... with the value realized, or the impact on the community. The quantification of value is not easy ... and very much a subjective exercise ... but it is not impossible. CA has developed an approach where a standard value is assigned to all matters of importance in a community ... and progress may be measured using changes in this value.

## **Cost effectiveness in malaria control**

Because the various possible malaria control interventions work in different ways, the problem of resistance is minimized ... but it is also true that these interventions also provide a multiplier effect. In simplistic terms it makes sense to combine environmental controls, source control, dwelling repellency (IRS), personal protection (bednets) and medical therapy to reduce not only the medical impact, but also the transmission. There are very complex linkages between the different elements with no reliable information on how these various interventions can be optimized ... but it is nevertheless apparent that a combination of interventions is significantly better than a single intervention.

## **Cost effectiveness for community health**

The case for integration of health programs is strong. The following data from WHO in 2000 shows the relative importance of diarrhea, acute respiratory disease and malaria for under 5 child mortality. While malaria mortality is high, so also is mortality from diarrhea and acute respiratory disease. From a purely medical perspective none of these diseases should be life threatening for young children. If there is no accessible health infrastructure there is going to be mortality that would otherwise be preventable. The data show that HIV-AIDS and TB are the diseases associated with high mortality for older children and adults.



These data suggest that the most cost effective successful health performance at the community level will be one where there is a broader clinical capacity rather than one that has only a single disease focus. Infrastructure is most cost effective when the system has the capacity to address all the main diseases, and not just a single one.

## Integrated multi-disease efficiency

A system that has the capability to reduce mortality caused by diarrhea, acute respiratory infections and malaria is going to have a level of cost effectiveness way better than one that only treats malaria ... or only treats an other single disease. Some data from studies conducted in Zambia suggest that where interventions to reduce the prevalence of malaria have worked, infant mortality from other causes remained high. This indication is another element that has motivated a strong focus on community health performance and the spatial dimensions of the IMM approach.

## Smart healthcare strategy

But while the issue of resources for malaria is important ... the way all resources in the health sector are used may well be even more important. Resources that are of use to improve malaria performance may, at the same time, improve the situation for other diseases ... and together the burden of disease in the community then becomes very much reduced. In smart health ... the most amount of good health is achieved at the least cost. With smart health data, decisions are measured based on the impact there is on health outcomes and cost effectiveness.

<b>With community health infrastructure</b>	<b>No community health infrastructure</b>	<b>No community health infrastructure</b>
<b>The better way</b>	<b>Good luck outcome</b>	<b>Bad luck outcome</b>

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A person feels ill	A person feels ill	A person feels ill
Easy visit to the clinic	Waits in hope illness will go away	Waits in hope illness will go away
Quick accurate diagnosis	Illness gets worse	Illness gets worse
Treatment specified	Have to find transport	Have to find transport
Pays for clinic	Pay for transport	Pay for transport
Drugs purchased ... pay for drugs	Get to clinic	Get to clinic
Treatment started	Wait in line	Wait in line
Person goes home	Maybe have to wait to next day ... stay overnight or redo the journey.	Maybe have to wait to next day ... stay overnight or redo the journey.
Person gets better	See health worker ... get diagnosis	See health worker ... get diagnosis
	Treatment specified	Needs hospitalization
	Clinic paid for	Clinic paid for
	Buy drugs ... pay for drugs	Pay for hospital
	Treatment starts	Treatment starts
	Patient goes home	Buy drugs ... pay for drugs
		Treatment too late
		Patient dies

It really does not matter what disease a patient has ... they need access to medical care. Medical care is more effective when the diagnosis is timely, the diagnosis is correct and treatment is given soon after the onset of the symptoms.

This requires a functioning health infrastructure that is easily accessible to the local population. The community health infrastructure may well be the most important determinant of the health of the people in the community. If timeliness is important ... then a community health care presence is very valuable. But community health is improved with local infrastructure because the process is lower cost as well as the outcomes being better. The table shows how this works:

One of the most valuable metrics for health sector planning in developing countries would be to know the cost and the impact of the community clinic ... or even just the community health worker ... having cost and impact well documented. Some understanding of how disease progresses and treatment progresses suggests that early intervention at the community level is a very good way to go ... but not much data about this seems to exist.

# **The Socio-Economic Dynamic of the Education Sector**

**Education is valuable**

# **The Socio-Economic Dynamic of the Employment Sector**

**Education is valuable**

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