

Parallel session 3

Health index insurance – A game-changing solution

By Shilpi Nanda

Research has shown that certain vector-driven diseases such as malaria and dengue are correlated with weather patterns. There is a potential for creating health index insurance solutions that are triggered under parametric criteria linked to weather events, and pay out in cases of pandemic or epidemic outbreaks. This session reviewed the research and initiatives and brainstormed design and distribution strategies for such a product.

Pandemic Emergency Financing Facility

Index-insurance products have become increasingly popular, particularly for agricultural risks. The key benefit of index insurance is speedier claims settlement, as the pay-out for a loss is based on a predetermined index for the area rather than specific damage to an individual farm. While agricultural risks affect many in the developing world, health-related risks, particularly pandemics and epidemics, pose a serious threat to people everywhere. Some of the most widespread diseases are climate-sensitive. WHO estimates that between 2013 and 2015, 250,000 deaths per year were caused by climate change, most of them due to malaria, diarrhoea and other vector-borne diseases.

In 2014–2015, the Ebola outbreak did significant damage in West Africa. After the outbreak, the World Bank Group created the Pandemic Emergency Financing Facility (PEF) in response to a need for liquidity. The objective was to enable fast financing mechanisms in case of outbreaks. The PEF is a combination of one cash window and one insurance window. It covers 6 viruses and the insurance (Health Index Insurance) window relies on parametric criteria to be activated based on publicly available data. The parametric criteria depend on the outbreak size (number of cases or number of deaths), outbreak growth (growing over a defined period) and spread (number of countries affected). This support is provided at the macro level; the session focused on micro and meso levels to enable similar financial mechanisms for pandemics (see Figure 11).

56 — Left to right: Lourdes del Carpio, Manager, Massive Channels and Agricultural Insurance, La Positiva Seguros, Peru; Pranav Prashad, Senior Technical Officer, ILO’s Impact Insurance Facility, Switzerland.

57 — Gilles Galludec, Principal, Global Insurance, World Bank Group, United States.

58 — Left to right: Stephen Mitchell, Chairman of the Board, MiCRO, United States; Jimmy Loro, Senior Advisor, GIZ RFPI, Philippines.



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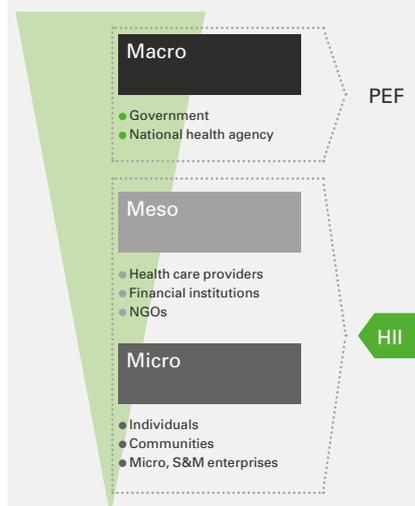


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Figure 11
Fill the financing gap



Source: Galludec, Gilles. Presentation “HII: Expanding index insurance to the health sector.” 13th International Microinsurance Conference 2017.

Index-based and disease-specific

In Peru, nearly 53% of people do not have any health insurance. Of the 47% who do, 94% are covered under the public health system. Only 0.4% of the people at the bottom of the pyramid have private health cover. These figures indicate a lack of information on health services for people who also face challenges with access to health care when needed. The need for insurance cover is acute, especially for diseases like dengue and cholera. Equally, there is an opportunity for insurance companies to develop disease-specific products along the lines of health index insurance. Research in Peru, too, shows a correlation between certain viral and bacterial diseases and climate changes, particularly in humidity and temperature, triggered for example by El Niño and La Niña (see Figure 12).

Health index insurance would give people access to treatment and hospitals, and cash to spend on prevention measures. The public system, in Peru as elsewhere, does not always have the ability or resources to respond to epidemics in a timely or suitable manner.

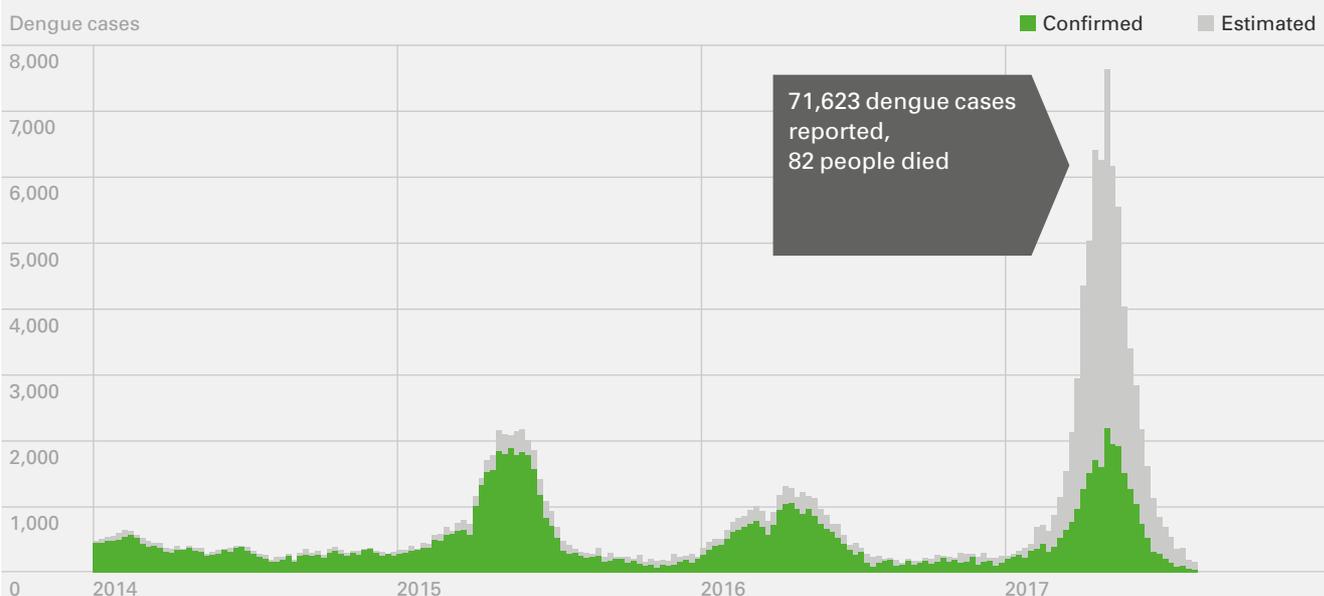
Data continues to be a challenge in all types of index insurance products, but proliferation of technology is leading to greater opportunities. The Centre for Disease Control (CDC) in the USA has found that tracking social media enables faster identification of disease incidence compared to traditional data sources. For countries with high usage of social media, this could be a path to explore. Constructing a suitable index is challenging as well. Insurers could build indices on foot-falls at hospitals or within communities, or could explore hybrid indices comprising weather events and hospital admittances.

A specialty reinsurer

In 2010, following the devastating earthquake in Haiti, the Microinsurance Catastrophe Risk Organisation (MiCRO) was set up as a specialty reinsurer providing natural catastrophe and weather index products to MFIs insuring low-income microenterprises. Its founding partners are Swiss Re, Mercy Corps and Fonkoze micro-finance, and it is supported by the IFC.

MiCRO developed a hybrid product with a parametric component as well as an indemnity one. If there were a triggering event, funds would be released by Swiss Re, and MiCRO would cover the indemnity pay-outs to Fonkoze clients. With a cholera outbreak in Haiti in the wake of the earthquake, MiCRO explored parametric product structures to cover such epidemic risks, but pricing proved to be a challenge, as was the availability of dedicated resources to accomplish the task.

Figure 12
Curve of Dengue cases
Perú 2014–2017



There is evidence that the incidence of dengue in endemic areas is correlated to temperature and humidity. There is a positive correlation with El Niño and La Niña phenomenon.

Source: Del Carpio, Lourdes. Presentation "Health Index Insurance" 13th International Microinsurance Conference 2017.

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Focus on prevention

Research in the Philippines shows that rainfall duration, relative humidity and temperature are climatic parameters that influence the emergence of dengue haemorrhagic fever. However, the incidence of dengue spikes at least a month after the main triggering event, such as rainfall.

This means that there is still time to implement suitable preventive measures at the community level and prevent the disease from spiking.

When designing health index insurance products, one has the choice of either an individual as a beneficiary or an institutional intermediary. The study in the Philippines demonstrates how health index insurance products can be used to identify health emergencies before they happen, and trigger a release of funds to the public health institutions or other intermediaries to enact preventive measures. It is also possible to extend this concept to multiple perils like earthquakes, floods, etc. and make it mandatory to address issues around basis risk and anti-selection.

Regardless of the choices, it is clear that there is a real need and an opportunity for insurers to innovate in health index insurance. To develop these plans, they can use lessons learnt on data, consumer education, aggregation and distribution channels from existing agricultural insurance pilots and schemes.

Lessons learnt

- Health index insurance offers speedy settlement due to the index-linked trigger for claims which, in turn, helps stabilise income for people and businesses during epidemics and support rehabilitation.
- One challenge to be met is the availability of quality data, a key element in the construction of an appropriate and reliable index. An epidemic takes time to start and develop after the insured event, such as excess rain, is triggered – time which can be used for preventive services.
- Education and trust are important for index insurance, particularly in relation to health. Multiple players need to play a part in popularising insurance, particularly the government and media.

Figure 13
Monthly mean rainfall and dengue cases
One month



Relationship of Quezon City mean monthly rainfall levels mm (Y)
adapted from PAGASA, and dengue cases (X) adapted from DoH; 2009

Source: Loro, Jimmy. Presentation "Developing an Index-Based Insurance in Response to Human Health Consequences due to Heavy Rainfall". 13th International Microinsurance Conference 2017.