

IoT and Connected Insurance Reshaping The Health Insurance Industry. A Customer-centric “From Cure To Care” Approach

A. Silvello¹

¹DigitalTech International, as@digitaltech-international.com

Abstract

An increasing global population, the rise in number of chronic disease patients and the threat of global epidemics have made the way for technology as a potential answer to many of these problems. Health insurance can contribute to the resolution of some of these issues but insurers need to transition from simple “Payers” to “Players” in order to achieve that. They need to become points of reference on which the customer and the health care system can count on. This is possible and is strictly related to connected insurance and in particular to wearables and devices that are able to gather vital data from patients and share them with the care givers.

Keywords: ehealth; health; insurance; telemedicine; wearables; iot.

Received on 13 October 2017, accepted on 22 November 2017, published on 8 December 2017

Copyright © 2017 A. Silvello, licensed to EAI. This is an open access article distributed under the terms of the Creative Commons Attribution licence (<http://creativecommons.org/licenses/by/3.0/>), which permits unlimited use, distribution and reproduction in any medium so long as the original work is properly cited.

doi: 10.4108/_____

1. Introduction

The health insurance sector is getting a considerable amount of attention all around the world while Insurers and connected insurance play a crucial role in the health sector worldwide but the current (traditional) role of the insurer is extremely different according to country specific health & welfare policy. Health insurance can positively contribute to solve some of the main issues of humanity like for example how to cope with a rising number of people and keep them healthy and protected. To do that insurers need to transition from simple “Payers” to “Players”, to become a reference point (a “Player”) for all the health-related needs of their customers. They need to become points of reference on which the customer and the health care system can count on. This outcome is strictly related to connected insurance and in particular to wearables and devices that are able to gather vital data from patients and share them with the care givers.

2. Connected Insurance, wearables and the impact on health insurance

In light of the above, connected insurance (from wearables usage to m-health applications) presents great potential for both insurer and insured. Such potential should be harnessed in a profitable way by targeting less risky clients and presenting them with an improved, better-priced value proposition. For this to happen, the Insurance Company will have to seek partners from both the technological innovation sphere and medical providers, keeping in mind that its role in the health system is changing from “payer” to “pivot”.

The tendency is for insurance companies to become more of a 360° health “counselor” that assists the insured in taking the best decisions based on connected insurance solutions: IoT, Big Data and Artificial Intelligence are the “three pillars of connected insurance” and are the technologies disrupting a traditionally change resistant industry like insurance.

Insurers are indeed starting to research the opportunities offered by these “three pillars of connected insurance” but the effective application of such solutions

is still too slow for a fast moving economy. If creating partnerships in order to get more specialized is something that many insurers do nowadays, matters are completely different when it comes to big data analytics and creating efficient customer experiences. There is so much space for innovation but legacy systems certainly play their role in making the task of innovating more difficult.

The question then is how can innovation in health insurance transform the insurance company from a simple Payer to a proactive Player in the customer health journey? Insurance covers can be differentiated by client segments and the insurer can propose different levels of assistance based on specific tools & services.

Typical examples of health services are:

- •Medical contents in multiple formats
- •Call center for emergencies
- •Pharmaceutical products ordering and home-delivery
- •e-health with specific devices for specific target patients (elder, heart problems and diabetes patients, ...), including alerting on possible critical health conditions. Furthermore professional medical advices can be delivered in multiple ways (messaging, call, video...). Discounted price for doctors and medical structures can be proposed through a preferred network; online booking and payments can be performed; medical history storage and digital health agendas can be managed.

With the objective to push through the adoption of healthier behavior, gamification and engagement based on wearables & tailor-made goals, alongside digital personal trainers and wellness agreements with gyms and shops, become key in setting a long-term healthy relationship with the clients.

Insurers need to stay profitable and that is perfectly achievable with such a model (insurer that takes “care” not just “cures” the client). According to Matteo Carbone, worldwide InsurTech thought leader, there are five main value creation levers to take into consideration.

1) Risk selection: enhancing the underwriting phase with a temporary monitoring based on dedicated devices. As far as the risk selection layer is concerned, connected devices can be indirectly or directly used to select risks at an underwriting stage resulting in low risk customers acquisition and connected reduction in fraudulent intents.

2) Loyalty and behaviour modification programs lead the client toward risk free behaviour. Behavioral programs are basically approaches that exploit information gathered on behavior to direct clients towards less risky solutions. To this scope a reward system that stimulates safer client behaviors is a key element in this evolved insurance landscape and programs based on innovative gamification approaches are a must in order to keep clients engaged.

3) Value added services: developing client tailored ancillary services that allow the Insurer to play as an omnichannel medical concierge.

Value added services consist in the proposition to clients of policy related services that have a double aim: on the one hand to guide clients towards desired behavior, on the other hand to offer perceived value through services to clients. Some ancillary services are proposed to the insured clients in order to exploit relevant data detected; these services could be directly supplied by the insurance company or by means of specialized partners.

4) Loss control, developing a broad approach to mitigate claims. Connected insurance allows to use registered data in order to limit the portfolio loss ratio and it enables the development of claims management processes that permits the Insurance Company to act more proactively and make the whole process faster and more efficient.

5) Risk-based pricing, developing insurance policies with pricing linked to client behaviors. Monitoring the “quantity” and “level” of risk exposure during coverage period has become possible. In this sense, the risk can be calculated on the basis of gathered information monitoring with a direct impact on pricing applied to the single customer.[1]

Insurers are beginning to use wearable technology and health apps to reduce risk and improve technical results. Some are educating customers on looking after their own health resulting also in higher customer engagement. Big Data gathering and analysis sit at the base of an improved design and product pricing which in turn can encourage clients to adopt a healthier lifestyle. Last but not least the very effectiveness of medical treatments can be improved through technology.

Insurance companies have begun to have a more proactive approach by staying in contact with their customers even when they are in completely good health and not only when they seek help themselves. This can be done through the use of innovative systems like wearables and reward schemes.

The transition to a “prevention-centered” approach is actually a pragmatic decision for insurers because in time, the portfolio tend to change its structure, passing from a majority of so called “sick” clients to a majority of relatively in good health clients.

Thanks to the integration between intelligence, connectivity and better usability, wearable devices can offer interesting opportunities in health and activity monitoring, tracking, personal notifications and virtual assistance. Even if smart watches and fitness trackers are the most common wearables, the list of the smart products available on the market is considerably wide and includes patches, fabrics, smart glasses, jewels and many others and fall into several categories like Medical, Wellness and Sport/Fitness wearables.

Smart wearables can supervise, support and enhance our life, and can be used for helping people in their professional and personal sphere.

Some applications are, in the medical sphere: Vital signs monitoring; In vivo/ implants, chronic diseases management, brain eye movement. In the Wellness area,

physiological monitoring, weight /energy monitoring, posture correction

In the Sport&Fitness area: Sport performance, fitness monitoring, virtual coaching, outdoor navigation, body cooling / heating.

Among the most creative examples of wearables on the market, there is one still in prototype phase: the Biometric Tattoos that can monitor body temperature and detect if someone is stressed based on sweat, heart rate and hydration level information. Other examples are the Spree SmartCap that measures Heart Rate, Temperature, Movement and Calories Burned or the Wearable Socks Sensoria Smart that can monitor the cadence of the steps made by their users and measure the impact of the feet on different surfaces and examples continue.

3. Best practices

The winning insurance value proposition will be the one which is able to propose to its customers insurance components together with “e/m-health” modular services made available in a single, easy to use and complete UX accessible via a mobile app: wellness, medical network access and medical services.[2]

In order to better grasp the actual benefits for clients (the citizens that decide to get insured) and not just for Insurers that adopt such an innovative approach, we need to take a closer look at the South African player Discovery that can be considered the benchmark when it comes to engaging and improving the life quality for members and generically speaking the national welfare. Its Vitality program has managed to create a system that not only raises the loyalty of customers but improves their lifestyle and overall state from a health point of view. Why is that? Because of a gamification strategy run with the support of an extended network of partners and with the help of wearables and smart objects alongside the well know smartphone. Other than your smart watches and smartphones there are a series of devices that can be used in order to accurately gather data points from members: take for example contact lenses that measure blood-sugar level in a non invasive way, smart shoes with sensor in the insole for measuring running style or smart toothbrushes that check if you’re using a correct brushing routine.

What Vitality does is to give customers mini challenges related to shopping for food, physical and sporting activities, medical checkups and so on, that if accomplished are rewarded with cash-back, discounts or other types of incentives. As a consequence the individuals end up having a more active life (Engaged Vitality members exercise 25% more than non-Vitality members) and according to a study released by Discovery[3] they live longer than non-Vitality members: to be more precise the average life expectance of an insured South African is 67 years while the average life expectancy of an insured Vitality member is 81 years.

Also, according to a BCG report hospital visits for Vitality members are down by 15 % and the duration is shorter by around 23% when they do go to the hospital.

The data is very telling and the implications for ensuring healthy lives and promoting wellbeing are huge. But how could this approach be taken to as many citizens and could it work so well for the general population or does it just address a certain niche of people who are already health conscious and practice sports? These questions need to be addressed in order to see to what degree innovation driven by Insurers and technology companies can be used to benefit citizens in general. There are several companies with the same approach as Dicovery like Oscar, Humana or Bupa to name just a few and there are companies that provide IoT health scoring platforms i.e. Dacadoo, Amodo or Quealth.

Another major part of the connected health trend are virtual medical visits for which the main drivers are lower costs and in some cases lack of medical doctors. According to a survey by Mercer, a typical charge for a telemedicine visit is \$40, compared to \$125 for an office visit, in the US.[4] For this reason the percentage of large employers that are offering telemedicine services in the US has seen significant growth reaching 59% from previously 30. We could say that the opportunity here is huge, but generally consumers need to be educated in order to be able to benefit of such a service and know when and how to use it.[5]

4. Conclusion

We are all witnesses to a major shift in the way that medical services are delivered, passing from a one-size-fits-all approach towards a personalized approach that looks at individuals and their habits, needs and their environment. As the World Health Organization predicts a 13 million doctors deficit at worldwide level by 2035[6], it’s essential for connected health to evolve in such a way that will allow care providers to be much more versatile and flexible in getting to their patients. Other players such as Insurance Carriers will be able to reduce costs and positively influence the health state of their customers. Citizens will have improved access to medical care and advices at a lower cost. The benefits of connected health are real for all players involved and should be sustained even at a government level in order to help spread the culture of innovation in healthcare among citizens.

References

- [1] Insurance Thought Leadership, Will Fintech Disrupt Health, Home Firms?, 7 August 2015. Available at <http://insurancethoughtleadership.com/will-fintech-disrupt-health-home-insurers/> accessed 9 January 2017

- [2] Silvello A, J Health Med Informat 2017, 8:3(Suppl), “Connected health and its central role to evolution of the insurance sector from “payer” to “player” ”
- [3] “Get healthy. Get rewarded. Launch 2016 Vitality Sales Brochure”, based on the Vitality Diamond Zones research paper, 2016. Available at http://www.hr.uct.ac.za/sites/default/files/image_tool/images/236/remuneration/healthcare/discovery/vitality_2017.pdf accessed 17 January 2017
- [4] Mercer Survey: health benefit cost growth slows to 2.4% in 2016 as enrollment in high-deductible plans climbs, 26 October 2016. Available at <https://www.mercer.com/newsroom/national-survey-of-employer-sponsored-health-plans-2016.html> accessed 17 January 2017
- [5] Silvello A, J Int Soc Telemed eHealth 2017;5(GKR):e52, “E-health as a core lever in the evolution of the insurance sector: from “payer” to “player”, the opportunity is here”
- [6] A Universal Truth: no health without a workforce, 2013. Available at http://www.who.int/workforcealliance/knowledge/resources/hrhreport_summary_En_web.pdf accessed 20 January 2017