Capgemini

Top-10 Technology Trends in Health Insurance: 2019

What You Need to Know

Contents

Introduction

Health insurance industry market dynamics are changing on a number of fronts, such as increasing competition, entry of new players, and instances of consolidations and collaborations. Looking at the top-line trend, there is a consistent growth in health insurance premiums driven by factors such as increased life expectancy, medical inflation, increased employment leading to more people seeking coverage, increased aging population, the surge in rural penetration, and an administrative push for compulsory coverage.

However, on the profitability front, low-interest rates, intense competition, internal operational inefficiencies, and market disruptions from new entrants are continuing to put pressure on health insurers. The healthcare sector is also experiencing a trend of increasing healthcare costs fueled primarily by expensive experimental treatments, increase in non-communicable chronic lifestyle diseases, and higher life expectancy.

The industry is witnessing a change in customer expectations, where customers are demanding from their insurers a digital, convenient, and personalized experience, similar to the ones they get from other industries, such as online retail. Also, advancements in technology have accelerated a shift in the sector toward a population health model which requires achieving cost-effective care.

Thus, there is an increasing need for insurers to cater to the changing customer expectations to stabilize their top-line and margins. Insurers have responded by focusing on simplifying the member healthcare journey by providing a guided user experience. Insurers have also started leveraging chatbots and voice assistants and using mobile as a channel to provide continuous care and value-added services to members. Finally, Insurers are catering to the expectations of their employer group customers by providing them with reporting tools to better manage their workforce health.

Health insurers are facing a pressing need to reduce the escalating healthcare costs as well as improve operational efficiency to hold on to their profits in the current competitive scenario. Insurers are thus shifting toward a preventive model of care and are leveraging analytics for predictive diagnosis and personalized care. Moreover, insurers are utilizing telemedicine for providing remote and convenient care. Finally, insurers are looking toward technologies such as blockchain and AI to streamline processes and improve operational efficiency.

The health insurance industry is gradually moving toward an efficient, digitally integrated ecosystem that would enable health insurers to provide a seamless and simplified customer experience.

Health Insurance Industry Landscape

The health insurance industry is witnessing a steady rise in premiums, with global health premiums growing at a CAGR of 4.4% since 2000 to reach over $1.3 trillion in 2015 (Exhibit 1).[1] Growth in premiums is mainly driven by escalating healthcare costs and increased coverage. Higher healthcare costs are reflected by the global net annual medical trend rate, which is at 8.4%, 5.3 percentage points higher than the average inflation rate of 3.1% in 2018.[2] Increased health insurance coverage is mainly due to population growth, increased employment, increase in rural health coverage penetration, and a governmental push to make private health insurance coverage compulsory.

Exhibit 1: Global health insurance premiums[a] in $ billion[b], 2000-15
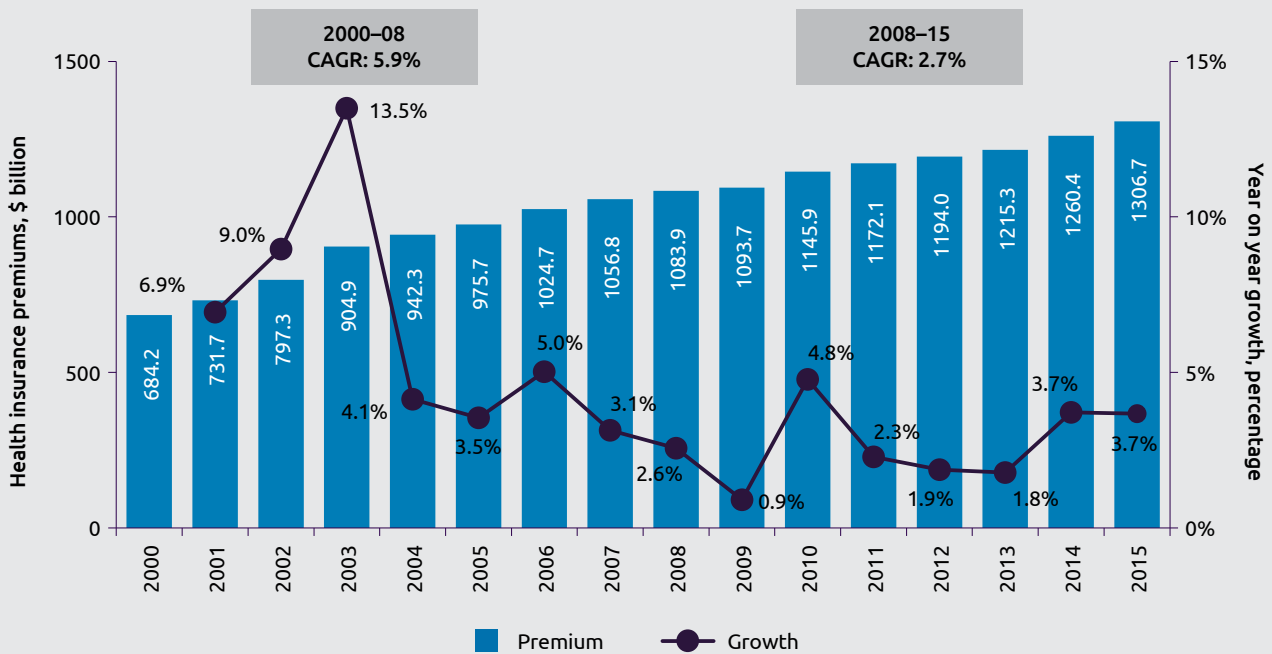
a: Global health insurance premiums is calculated from voluntary and compulsory health insurance schemes data from Global Health Expenditure Database
b: The premiums are expressed in billion constant (2010) US$
Source: Capgemini Financial Services Analysis, 2018; Global Health Expenditure Database, World Health Organization

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1   Global Health Expenditure Database, World Health Organization, http://apps.who.int/nha/database/Home/Index/en, accessed August 2018

2   Global Medical Trend Rates report 2017 and 2018, Aon Hewitt, http://www.aon.com/apac/report/2018/global-medical-trends-rate-report.jsp, accessed August 2018

Rising healthcare costs, increased competition, and operational inefficiencies are putting pressure on insurers' profitability. Other factors impacting the health insurance industry are evolving customer expectations, the shift to a value-based model of care, advancements in technology, and regulatory uncertainties.

Health insurers are responding to these shifting dynamics by catering to changing customer expectations, shifting to a preventive model of care, and improving operational efficiencies (Exhibit 2). The report discusses the top 10 trends that are shaping the health insurance sector and details actions taken by insurers to navigate the shifting market dynamics.

Exhibit 2: Health insurers responding to the changing market dynamics

Business Trends Affecting Health Insurers	Implications For Health Insurers	Actions Taken By Health Insurers to Combat Market Forces
1 Changing customer expectations		1 Consolidations to strengthen position in the competitive market
2 Margin pressures and rising healthcare costs		2 Collaborations with InsurTechs to better cater to customers and optimize operations
3 New entrants and potential market share erosion		3 Catering to evolving customer expectations using AI, chatbots, mobile, analytics, etc. to stabilize top line
4 Shift to value-based model of care		4 Shifting to a preventive model of care to provide better customer experience and reduce health costs
5 Advancements in technology		5 Exploring avenues for more effective healthcare delivery through adoption of proactive health initiatives, predictive diagnosis, and remote care, to reduce healthcare costs
6 Regulatory uncertainty		6 Improving operational efficiency and streamlining of internal processes by leveraging AI and blockchain technology

Implications For Health Insurers (center): Need to cater to evolving customer expectations; Need to reduce escalating healthcare costs; Need to enhance internal operations

Source: Capgemini Financial Services Analysis, 2018

Trend 01: Changing Market Dynamics in Health Insurance Industry

Health insurance industry is experiencing increasing instances of consolidation, new entrants, and collaborative partnerships

Background

- Lines between industry players are becoming blurred with firms engaging in cross consolidation
- BigTech firms and retail giants are new players marking their presence in the health insurance industry

Key Drivers

- BigTechs possess strong technological and analytical capabilities that position them to introduce new technology-based disruptive models that can shrink costs and increase efficiency
- Mergers and acquisitions enable insurers to take advantage of efficiencies of size and scale for survival in a highly competitive landscape
- InsurTech collaboration offers established insurers a way to innovate and adopt technology faster to better cater to evolving customer demands
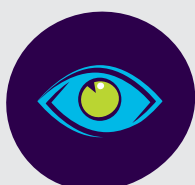
Trend Overview

- New entrants such as retail giants and technology firms are entering the health insurance sector with an eye on improved efficiency and cost reduction:
  - Retail giant Amazon partnered with Berkshire Hathaway and JP Morgan to form an independent company that aims to better manage their employee healthcare and reduce costs through the use of technology[3]
  - Alipay launched a free health insurance service to provide users a certain amount of insurance coverage every time they made a payment with their Alipay Wallet[4]
- These firms possess a vast repository of customer data, existing brand recognition, and abundant capital that reduces their barriers to entry into the market
- Technology firms are also providing value-added services and acting as enablers for other parties in the healthcare ecosystem:
  - Samsung, Anthem, and American Well partnered to provide Anthem members access to telehealth services through Samsung's mobile health app[5]
  - Uber and Lyft provide dashboards to providers that can be used to schedule transportation services to patients[6]
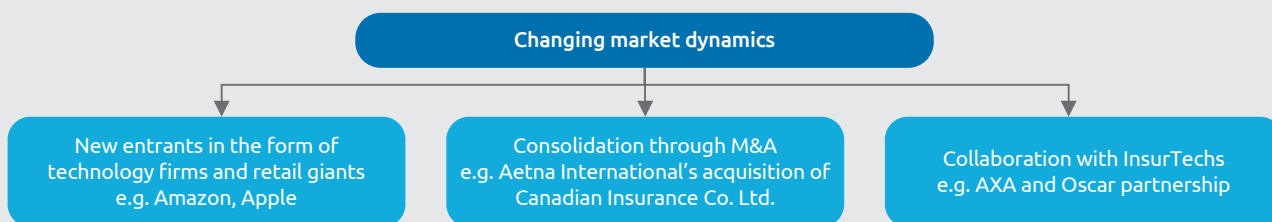
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3 *Business Wire,* "Amazon, Berkshire Hathaway and JPMorgan Chase & Co. to partner on U.S. employee healthcare," January 30, 2018, https://www.businesswire.com/news/home/20180130005676/en/Amazon-Berkshire-Hathaway-JPMorgan-Chase-partner-U.S., accessed August 2018

4 *Marketing Interactive,* "Alipay launches free health insurance service for users," Angel Tang, May 18, 2017, https://www.marketing-interactive.com/alipay-launches-free-health-insurance-service-for-users/

5 *FierceHealthcare,* "Anthem partners with Samsung, American Well on telehealth offering," Evan Sweeney, July 23, 2018, https://www.fiercehealthcare.com/tech/anthem-telehealth-american-well-samsung-mobile-app

6 *FierceHealthcare,* "Lyft announces integration with Allscripts EHR system, allowing 180,000 doctors to hail rides for patients," Matt Kuhrt, March 5, 2018, https://www.fiercehealthcare.com/tech/lyft-announces-integration-allscripts-ehr-system-letting-180-000-docs-hail-rides-for-patients

Exhibit 3: Changing market dynamics experienced by the healthcare industry

Changing market dynamics

| New entrants in the form of technology firms and retail giants e.g. Amazon, Apple | Consolidation through M&A e.g. Aetna International's acquisition of Canadian Insurance Co. Ltd. | Collaboration with InsurTechs e.g. AXA and Oscar partnership |

Source: Capgemini Financial Services Analysis, 2018

- The industry is witnessing a slew of consolidation and collaboration efforts as insurers move to become sustainable in the increasingly competitive landscape:
  - Insurers are acquiring, partnering, or merging with other insurers, retail pharmacies, primary care firms, etc. in order to take advantage of size and scale and remain competitive:
    › Aetna International has acquired Canadian Insurance Co. Ltd., a Hong Kong insurer, which has enabled the firm to become licensed to offer health insurance products in the Hong Kong market[7]
  - Health insurers are collaborating with InsurTech firms to come up with innovative offerings to better cater to changing customer expectations and improve operational efficiency:
    › AXA's international employee benefits division has entered into a multi-year agreement with InsurTech Oscar Health to further its strategy of shifting to a more customer-centric model of care[8]
    › Incumbents are finding partnerships with InsurTechs to be a more efficient and cost-effective route to developing technological capabilities, compared to in-house development

Implications
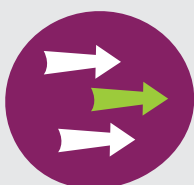
- Health insurers can extend their presence in the value chain through consolidation for a greater role in care
- It will be important for insurers to adopt digital technologies to achieve better integration and make consolidation truly effective
- Insurers can collaborate with InsurTechs to speedily provide innovative digital offerings to their customers and to explore new technologies
- In the face of the changing competitive landscape, it will be important for insurers to plan strategic partnerships and position themselves as strong players in the ecosystem

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7   *International Investment,* "Aetna Int'l continues to expand Asian footprint with HK licence," Helen Burggraf, March 14, 2018,
    http://www.internationalinvestment.net/products/insurance/health-insurance/aetna-intl-continues-to-expand-asian-footprint-with-hk-licence/

8   *Insurance Business Magazine,* "AXA secures multi-year agreement with Oscar Health," Lyle Adriano, January 16, 2018,
    https://www.insurancebusinessmag.com/asia/news/breaking-news/axa-secures-multiyear-agreement-with-oscar-health-89452.aspx

Trend 02: Simplifying the Healthcare Journey and Improving Treatment Adherence

Future-focused health insurers are offering members a guided-user experience to simplify the healthcare journey and improve patient adherence

Background

- Today's increasingly tech-savvy customers expect the same type of digital tools and experience from their insurers that they receive from industries such as online retail
- User-guided tools in healthcare include digitally-driven mobile apps or web portals that provide support for all aspects of a customer's healthcare journey

Key Drivers

- Increasing customer demand for better engagement and convenient services
- As healthcare costs rise, there is a greater need for insurers to find innovative ways to control costs
- The shift to a population health model requires cost efficiency in care without compromise in quality
- Rapid growth in mobile and internet penetration as well as in adoption of digital services by the population

Trend Overview

- Health insurers are moving toward providing a guided-user experience to simplify the customer healthcare journey and increase meaningful interaction with customers
- Insurers derive multifold benefits such as reduction in healthcare costs, lowering of service costs as well as improved customer experience and brand presence through digital transformation and by providing user-guided tools to members
- Early adopters in this space are providing population health management tools to customers and their care members such as family, home nurse, community nurse, providers, and pharmacies, to effectively manage care:
  - Horizon Blue Cross Blue Shield of New Jersey has launched web and mobile services aimed at enhancing member experience and enabling them to better understand their benefits. The firm plans to include features that would enable members to access physicians and nurses directly through the portal[9]
  - Cigna launched customer app OneGuide, which uses predictive analytics to understand member behavior and enable timely engagement and intervention[10]
  - United Healthcare launched digital tools to make it easier for members to navigate the healthcare ecosystem. Features include digital on-boarding where users can select health plans based on their health and cost preferences, integration with Apple pay, and personalized video explanations for better understanding of claims benefits and coverage[11]

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9   *CIO,* "Horizon Blue Cross Blue Shield of New Jersey's DX dive into virtual medicine," January 30, 2018, https://www.cio.com/article/3251724/digital-transformation/horizon-blue-cross-blue-shield-of-new-jerseys-dx-dive-into-virtual-medicine.html, accessed August 2018

10 *Mobihealthnews,* "For Cigna, UnitedHealthcare, digital innovation is all about the customer," Jonah Comstock, October 6, 2017, https://www.mobihealthnews.com/content/cigna-unitedhealthcare-digital-innovation-all-about-customer

11 UnitedHealth Group website, "UnitedHealthcare Introduces New Digital Health Resources for 2018, Including Apple Pay for Consumers with Health Savings Accounts," January 12, 2018, https://www.unitedhealthgroup.com/newsroom/2018/0112newdigitalhealthresources.html, accessed August 2018

Exhibit 4: Comprehensive one-stop portals to simplify healthcare journey

Source: Capgemini Financial Services Analysis, 2018; "Guided-User Experience Enhances Members' Healthcare Journey", Capgemini, 2018

Implications
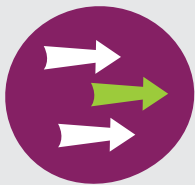
- Health insurers can improve customer experience and ensure member retention by providing easy-to-use apps to manage all aspects of customer healthcare
- Meaningful engagement can be used for accurate and timely identification of high-risk individuals who can then be offered preventive care offerings
- Timely preventive care not only benefits the customers but also helps control claims costs for the insurers
- Increased member interaction can improve patient adherence to prescribed medication and hence reduce re-admissions and healthcare costs

Trend 03: Chatbots and Voice Assistants Improve Customer Engagement and Deliver Continuous Care

Chatbots and voice assistants are being leveraged for meaningful customer engagement and to provide continuous care

Background

- Voice assistants are gaining popularity, spurred on by the offerings from BigTechs and retail giants, and are increasingly finding their way into the homes of customers
- Voice assistants leverage artificial intelligence (AI) to simulate meaningful conversation with users and hence have the potential to be a powerful customer engagement tool for insurers

Key Drivers

- Insurers need more customer touchpoints to improve customer experience and satisfaction
- An increasing aged population has resulted in a need for continuous care
- Advancements in artificial intelligence areas such as Natural Language Processing (NLP) and speech recognition have led to increased popularity of chatbots and voice assistants:
  - The global chatbot market is predicted to grow at a CAGR of 24.3% to reach $1.24 billion in 2025[12]

Trend Overview

- Chatbots and voice assistants are being leveraged by insurers to improve meaningful customer engagement and provide care:
  - CareVoice, a Shanghai-based InsurTech, partnered with AXA TianPing and Ping An Health to launch an AI-based voice assistant that enables members to seek information about their symptoms and be guided to the applicable medical specialty[13]
- Chatbots and voice assistants can be used to address health policy queries that patients may have, enabling them to better understand their health benefits:
  - Manulife has leveraged Amazon Echo to enable customers to check the balance of their health benefits. The users can also gain knowledge about various financial terms by using the Manulife IQ feature[14]

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12 *Grand View Research,* "Chatbot Market Size To Reach $1.25 Billion By 2025 | CAGR: 24.3%," August 2017, https://www.grandviewresearch.com/press-release/global-chatbot-market, accessed August 2018

13 *Asia Insurance Review,* "The CareVoice to launch AI voice-based virtual health assistant," May 18, 2018, http://www3.asiainsurancereview.com/News/View-NewsLetter-Article/id/42886/Type/eDaily/China-The-CareVoice-to-launch-AI-voice-based-virtual-health-assistant, accessed August 2018

14 *Benefits Canada,* "Manulife rolls out group benefits option through Amazon's Alexa service," Ryan Murphy, November 15, 2017, https://www.benefitscanada.com/news/manulife-rolls-out-group-benefits-plan-members-group-benefits-balance-just-ask-alexa-106539
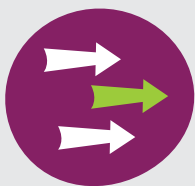
- Chatbots and voice assistants are also being leveraged for educating customers and for personalizing sales conversations:
  - Cigna launched Answers by Cigna, a skill for Amazon's voice assistant Alexa, which aims to educate members about healthcare and enable them to better understand their health benefits[15]
  - BUPA is collaborating with InsurTech Spixii to roll out a chatbot aimed at prospective customers looking to buy health insurance. The chatbot provides health insurance quotes after having a personalized conversation with the customer[16]
- These tools can also act as a continuous care companion for older patients and remind them about taking medications and doing other tasks:
  - Libertana Home Health leveraged Amazon's Alexa to provide a voice assistant that acts as a companion to members and enables them to schedule appointments, connect with caregivers, and be reminded about their medications[17]

Exhibit 5: Drivers for adoption of chatbots and voice assistants
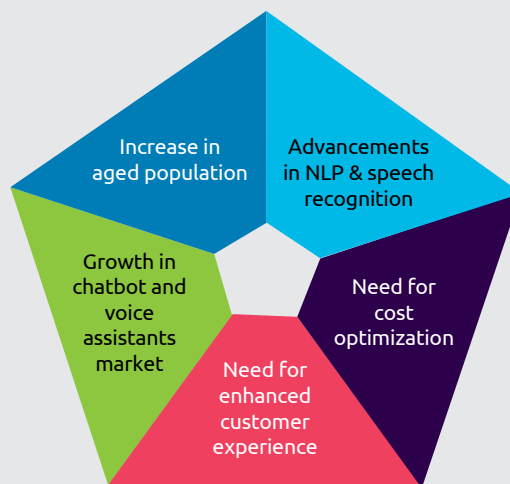
Source: Capgemini Financial Services Analysis, 2018

Implications

- Chatbots and voice assistants enable insurers to provide convenient services that can be accessed anytime and from anywhere
- Chatbots and voice assistants can be used by health insurers as a cost-efficient way to quickly scale operations in terms of customer service
- However, insurers would have to carefully navigate the hurdles of misinterpretation risks and privacy concerns that voice assistants pose

15 *HIT Consultant,* "Cigna Launches "Answers by Cigna" on Amazon Alexa," Jasmine Pennic, March 13, 2018, https://hitconsultant.net/2018/03/13/cigna-launches-answers-by-cigna-on-amazon-alexa/

16 SPIXII website, "How Bupa trialled the UK's first ever health insurance chatbot to transform digital healthcare," https://www.spixii.com/work/bupa-case-study, accessed August 2018

17 *mHealth Intelligence,* "How One Home Health Provider Turned Alexa Into an mHealth Assistant," Eric Wicklund, February 26, 2018, https://mhealthintelligence.com/news/how-one-home-health-provider-turned-alexa-into-an-mhealth-assistant

Trend 04: Mobile as a Channel Delivers Core and Value-added Insurance Services in Existing and Underserved Markets

Mobile as a channel allows insurers to provide core insurance services as well as a range of innovative value-added services and gain access to underserved markets

Background

- Mobile apps enjoy huge popularity among users, spurred on by the increasing smartphone penetration, due to the convenient services they provide
- Firms are increasingly leveraging mobile apps to increase engagement and capture customers' mindshare by being present in their smartphones

Key Drivers

- An increase in the penetration of smartphones across the globe and a surge in the popularity of mobile health apps:
  - According to a report by Research 2 Guidance, 325,000 health apps were available in 2017 with 78,000 apps added to major app stores in 2016[18]
- Customers are increasingly demanding for convenience and ease in services provided by insurers
- Mobile can act as a cost-effective channel for insurers to enable enrolment, collection of premiums, claims processing, and customer servicing, especially in underserved markets

Trend Overview

- Mobile as a channel is being leveraged by insurers to increase interactions with their customers and improve experience
- Insurers are offering value-added services such as locating physicians, booking appointments, and answering health queries, as well as core insurance services such as enrollment, premium collection, and claims processing, through easy to use apps:
  - Aviva launched a digital doctor app that enables its corporate health insurance customers to schedule video consultations with physicians, receive an initial diagnosis, and get answers to basic healthcare queries[19]
  - United Healthcare launched a mobile app aimed at improving pregnancy-related health outcomes. The app enables pregnant women to track appointments, set vitamin reminders, and contact a nurse for queries related to care[20]
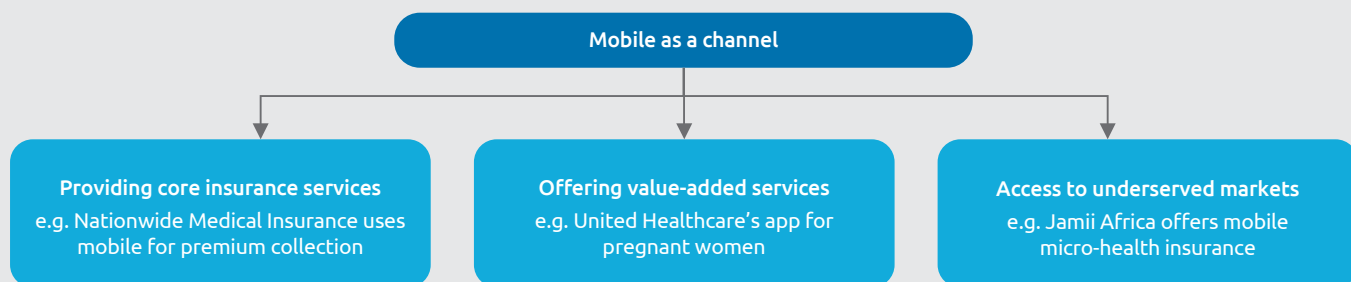
18 *Research 2 Guidance,* "mHealth Economics 2017 – Current Status and Future Trends in Mobile Health," November 1, 2017, https://research2guidance.com/product/mhealth-economics-2017-current-status-and-future-trends-in-mobile-health/, accessed August 2018

19 *Insurance Business Magazine,* "The doctor is online: Aviva unveils new digital service," Terry Gangcuangco, April 30, 2018, https://www.insurancebusinessmag.com/uk/news/technology/the-doctor-is-online-aviva-unveils-new-digital-service-99184.aspx

20 UnitedHealth Group website, "UnitedHealthcare's New Healthy Pregnancy Mobile App Designed to Help Expectant Moms Take Steps Toward Healthier Deliveries," November 29, 2017, https://www.unitedhealthgroup.com/newsroom/2017/1129pregnancymobileapp.html, accessed August 2018

Exhibit 6: Applications of mobile as a channel in health insurance

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                    ┌──────────────────────────┐
                    │   Mobile as a channel    │
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Providing core insurance services	Offering value-added services	Access to underserved markets
e.g. Nationwide Medical Insurance uses mobile for premium collection	e.g. United Healthcare's app for pregnant women	e.g. Jamii Africa offers mobile micro-health insurance

Source: Capgemini Financial Services Analysis, 2018

- Mobile as a channel is also enabling insurers to reach underserved markets and offer innovative products like mobile-based micro-insurance coverage:
  - Jamii Africa provides micro-health insurance coverage at $1 a month, targeted at low-income families. The company uses mobile to perform all administrative tasks from onboarding to premium collection and claims processing[21]

Implications

- Insurers could gain market share in new remote markets by leveraging mobile to offer insurance, contributing to top line growth
- Insurers can lower their operating costs by leveraging mobile as a channel as it provides more digital self-service options to the customers
- Insurers can build a wealth of customer data through mobile engagement that can be used to personalize services and, subsequently, improve customer retention
- Value-added services enabled by mobile connectivity can help insurers increase customer touchpoints and enhance customer engagement
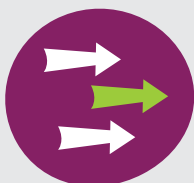
21 *Digital Insurance Agenda,* "JAMII: Bringing affordable health insurance to low income Tanzanians," Roger Peverelli and Reggy de Feniks, October 19, 2017, http://www.digitalinsuranceagenda.com/165/jamii-bringing-affordable-health-insurance-to-low-income-tanzanians/

Trend 05: Insurers Help Employers in Efficient Management of Workforce Health

Health insurers have started to provide employers with tools that enable efficient management of workforce health and related costs

Background

- In the United States, the largest health insurance market, nearly one in two Americans receive healthcare coverage through an employer-sponsored health plan[22]
- Employers are increasingly seeking to gain more control over their workforce health spending due to which the percentage of employers choosing to self-insure their employee healthcare plans have accelerated over the past two decades[23]

Key Drivers

- Healthcare represents a huge operating expenditure to employers, and there is a demand from employer groups for more data to make insightful decisions
- A general dissatisfaction among the employers with the current plans being offered by insurers[24]
- It is essential for health insurers to cater to the needs of employers to enable customer retention

Trend Overview

- Insurers are catering to the evolving needs and expectations of employers by providing reporting tools that enable better workforce health management
- These tools provide reports on how the healthcare funds are being utilized by the employees and the places where care is usually accessed
- Such insight-generating tools provide employers access to data, thus enabling them to analyze and manage their workforce health expenses efficiently and maintain transparency
- Early adopters have started providing workforce health management tools to employers to cater to their increasing demands for access to detailed data to better manage health costs:
  - Priority Health provides Employer Insights, a web-based reporting tool, for their employer customers. The tool enables employers to access customized reports on their workforce health costs allowing them to select plans that address specific health needs of their employees[25]

22 *Medium,* "American employers are in the healthcare business", Ali Diab, February 28, 2018, https://blog.collectivehealth.com/employer-driven-healthcare-270bfb7ee8c7
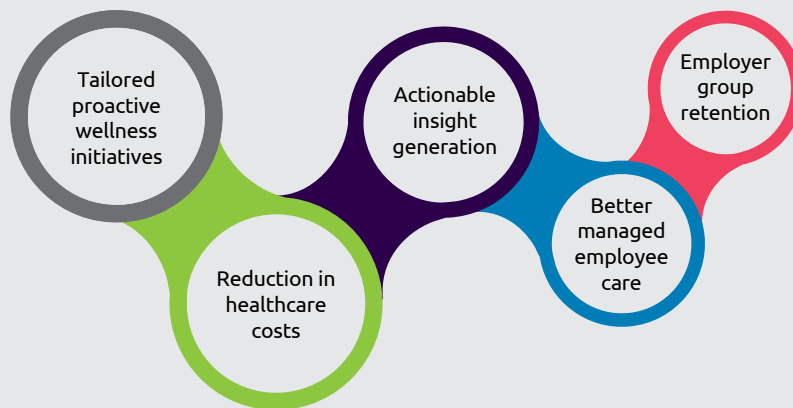
23 ibid

24 *HealthLeaders,* "Self-insurance options continue to draw employers," Gregory A. Freeman, May 3, 2017, https://www.healthleadersmedia.com/finance/self-insurance-options-continue-draw-employers

25 *Crain's Detroit Business,* "Insurers offer tools to dig into health costs," Jay Greene, July 15, 2018, http://www.crainsdetroit.com/article/20180715/news/666151/insurers-offer-tools-to-dig-into-health-costs
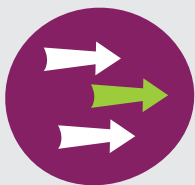
– Health Alliance Plan (HAP) provides employer group customers with claims data of their workforce so they understand spending trends, evaluate benefits use, and thus can come up with relevant employee wellness initiatives[26]

– MVP healthcare partnered with MedeAnalytics to provide its Employer Reporting solution to MVP's employer groups and brokers. The tool provides clinical and financial information to employers allowing them to understand the cost and utilization trends of their workforce health plan and hence take better strategic decisions that would improve workforce health and lower costs[27]

Exhibit 7: Key benefits of providing workforce health management tools

Tailored proactive wellness initiatives

Reduction in healthcare costs

Actionable insight generation

Better managed employee care

Employer group retention

Source: Capgemini Financial Services Analysis, 2018

Implications

• Employers can use the digital and analytics tools to analyze spending trends, get insights into their workforce health, and better design wellness initiatives tailored to their workforce

• Insurers can strengthen relationships with employers by customizing health plans according to their organization and increasing transparency

• Insurers can ensure better customer retention and thus stabilize their top line by catering to the needs of their employer customers

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26 ibid

27 *PR Newswire,* "MVP Health Care Advances Employer Reporting with MedeAnalytics," September 18, 2017, https://www.prnewswire.com/news-releases/mvp-health-care-advances-employer-reporting-with-medeanalytics-300520728.html, accessed August 2018

Trend 06: IoT Devices to Effect Preventive Models of Care

Health insurers are moving toward a system of preventive model of care and are providing proactive wellness initiatives supported by the use of IoT devices

Background

- There is an increasing demand for personalized offerings from customers:
  - According to the *World Insurance Report (WIR) 2018,* 45.7% of tech-savvy customers and 38% of Gen Y customers were willing to receive proactive, personalized offerings from their insurers
- Insurers are moving toward a preventive model of care, which involves real-time monitoring of a user's parameters for timely care interventions and encouraging healthier lifestyles through wellness initiatives so that health incidents are prevented in advance rather than being addressed only after they occur

Key Drivers

- As the cost of global healthcare escalates there is a need to reduce it to control claims costs
- Wearable devices are growing in popularity and customer acceptance:
  - According to CCS Insight, the wearables market will be worth $25 billion by 2019 with more than 245 million devices sold[28]
- Customers are increasingly willing to share data with insurers, especially if it means discounted premiums[29]
- An increase in chronic, lifestyle diseases such as diabetes and heart disorders require shifts to preventive care and healthier lifestyles

Trend Overview
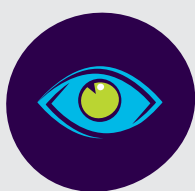
- Insurers are using wearables to continuously monitor the health parameters of members, which helps in timely intervention in case of anomalies:
  - United Healthcare provides its Medicare Advantage plan participants access to Dexcom Mobile Continuous Glucose Monitoring system, a sensor-based device worn on the abdomen that measures the glucose levels of the user. This enables users to understand how their eating and exercising patterns affect their sugar levels and thus take appropriate preventive action[30]
- Insurers are encouraging healthy lifestyle behavior by offering proactive wellness initiatives that involve a reward for displaying healthy behaviors:
  - Aditya Birla Health Insurance Co. Ltd. incentivizes healthy behavior by offering rewards of up to 30% of annual premiums based on active days the user clocks, derived from the activity data gathered from wearables[31]

28 *CCS Insight,* "Wearables Market to Be Worth $25 Billion by 2019," https://www.ccsinsight.com/press/company-news/2332-wearables-market-to-be-worth-25-billion-by-2019-reveals-ccs-insight, accessed August 2018

29 *Insurance Journal,* "Young Consumers Willing to Let Insurers Spy on Digital Data – If It Cuts Premiums," Julie Edde, June 19, 2018, https://www.insurancejournal.com/news/internation;al/2018/06/19/492646.htm

30 UnitedHealth Group website, "UnitedHealthcare and Dexcom Bring Wearable Technology Solution, One-on-One Coaching to People Battling Type 2 Diabetes," January 10, 2018, https://www.unitedhealthgroup.com/newsroom/2018/0110dexcomwearableces.html, accessed August 2018

31 *Livemint,* "Wearables data may influence your health, life insurance premiums," Shaikh Zoaib Saleem, December 18, 2017, https://www.livemint.com/Money/GFfQPU9H24nME447kF7dNL/Wearables-data-may-influence-your-health-life-insurance-pre.html

Exhibit 8: Drivers for a preventive model of care
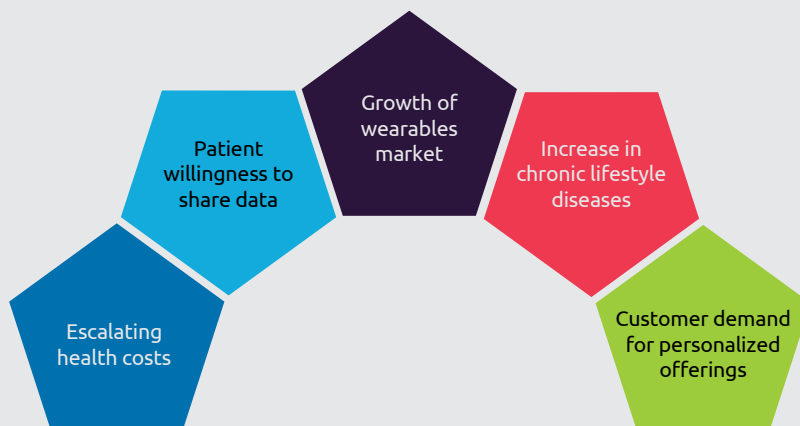
Source: Capgemini Financial Services Analysis, 2018

- Health insurers are developing more community-based care programs and offering solutions for aging and chronic populations:
  - Humana has a population health strategy that focuses on improving key social detriments to community health and chronic conditions through wellness programs and interventions. The firm aims to make the communities it serves 20% healthier by 2020[32]
  - Health Insurer CZ partnered with Qorvo, a connected devices firm, to launch an e-health system in the Netherlands that enables the elderly to live more independently. The system consists of a non-intrusive set of motion and open/close sensors, and a gateway which will monitor every room and detect adverse changes. The technology also provides secure long-range transmission of data and aims to improve assisted living[33]

Implications
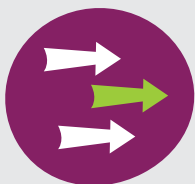
- Health insurers can decrease claims costs through preventive care models by executing timely care interventions based on real-time data from connected devices
- Frequent and meaningful engagement can enable health insurers to better customer experience and increase loyalty
- Health insurers may face greater regulatory scrutiny to prevent discriminatory behaviors toward more risky customers

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32 Humana website, http://populationhealth.humana.com/, accessed August 2018

33 *Home Toys,* "Qorvo® IoT Solution Powers Senior Home Care," January 6, 2018, https://www.hometoys.com/content.php?post=37772, accessed August 2018

Trend 07: Analytics Enable Predictive Diagnosis and Personalized Care

Analytics enable health insurers to efficiently navigate the population health model by facilitating predictive diagnosis and personalized care

Background

- A population health model that focuses on holistic population health rather than episodic instances of care is being increasingly adopted
- Insurers can leverage analytics to make predictions about members' susceptibility to ailments and can, therefore, provide timely care interventions

Key Drivers

- The need for timely interventions and proactive risk mitigation to decrease the growing healthcare costs
- The industry shift to value-based care calls for improving the cost efficiency of care
- Advancements in AI, Machine Learning (ML), and image recognition technologies have paved the way for predictive diagnosis, data-driven determination of correct treatment
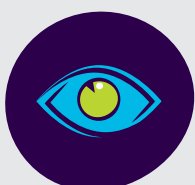
Trend Overview

- Analytics is enabling insurers to get insights into members' future health trajectories through predictive analysis of the probability a customer may contract an illness:
  - InsurTech Lumiata offers actionable insights to insurers by applying intelligent health analytics to a patient's medical data to accurately predict their future health trajectories and determine when members might be at risk of developing certain medical conditions[34]
- Analytics can also be used for deciding the best course of action, in terms of identification of most effective treatments and drugs resulting in cost-efficient treatments
- Insurers are leveraging analytics for initial monitoring and diagnosis of ailments, via analysis of photos or videos, through a mobile app:
  - Ping An Insurance Group has a mobile application called Good Doctor that provides an initial diagnosis for certain ailments by analysis of photos and videos[35]
  - SkinVision uses machine learning and analytics to diagnose cancerous moles through analysis of photos that users upload in the mobile app[36]
    › Accuro Health partnered with this InsurTech to make the SkinVision app available to its members, free of cost, to help in the prevention and early detection of skin cancer[37]

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34 *The PE Hub Network,* "Lumiata raises $11 mln from Khosla, BlueCross BlueShield, Sandbox, Intel Capital, others," Mark Boslet, July 10, 2018, https://www.pehub.com/2018/07/lumiata-raises-11-mln-from-khosla-bluecross-blueshield-sandbox-intel-capital-others

35 *Financial Express,* "Chinese Insurance major embraces Artificial Intelligence," November 24, 2017, https://www.financialexpress.com/industry/technology/chinese-insurance-major-embraces-artificial-intelligence/945635, accessed August 2018

36 Squirro website, "InsurTech Top 5 – DIA Munich and AI Data Analysis," Maria Schuett, November 22, 2017, https://squirro.com/2017/11/22/insurtech-top-5%E2%80%8A-%E2%80%8Adia-munich/

37 SkinVision website, https://www.skinvision.com/accuro, accessed August 2018

Exhibit 9: Use of analytics in customer care continuum
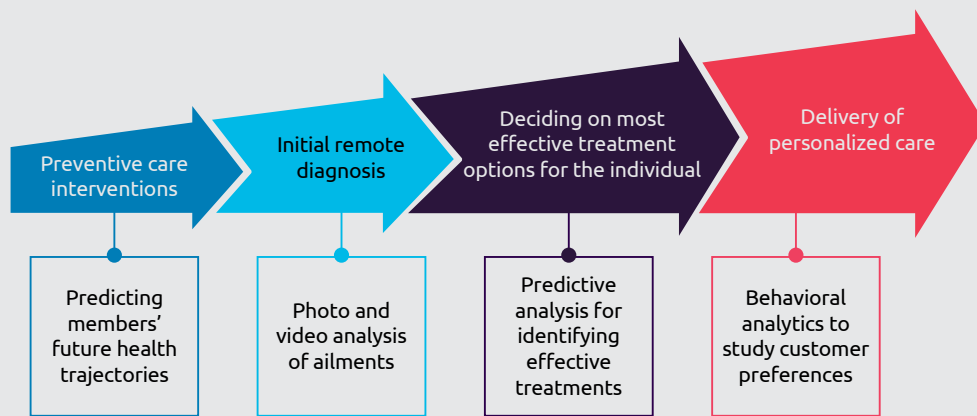
Source: Capgemini Financial Services Analysis, 2018

- Behavioral analytics enable insurers to study customer preferences and thus improve adherence and personalize care:

  – Anthem plans to leverage behavioral analytics to improve customer engagement skills and deliver a highly personalized experience. The firm develops consumer profiles by integrating different data such as claims data, clinical data, electronic health records, lab results, and other key data sets. The data is used to correctly segment customers into the right brackets for messaging, coaching, and additional services as well as to deliver a frictionless experience in which customers' engagement preference is considered[38]

Implications
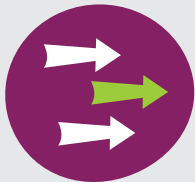
- Predictive diagnosis enables insurers to perform proactive and timely care interventions leading to cost efficiency in care and reduction in claims costs
- Insurers can improve customer satisfaction and loyalty by providing convenient and accurate initial monitoring services through mobile apps
- It will be important for insurers to build capabilities in AI, ML, and analytics for delivering more effective care

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38 *Health IT Analytics,* "Borrowed from Retail, Anthem's Big Data Analytics Boost Member Engagement," Jennifer Bresnick, August 3, 2017, https://healthitanalytics.com/news/borrowed-from-retail-anthems-big-data-analytics-boost-member-engagement

Trend 08: Telemedicine Transforming Provider-Payer-Client Relationship

Remote care via telemedicine is gaining prominence and transforming the nature of provider-payer-client interactions

Background

- There is a rise in the popularity of telemedicine, with the international telemedicine industry predicted to be valued over $40 billion by 2021[39]
- Telemedicine enables cost savings for insurers and provides users convenient access to physicians from anywhere, through video consultations on their mobile phones and tablets

Key Drivers

- An increase in the penetration of smartphones across the population, with people increasingly using mobile apps
- Rapid advancements in imaging technology have paved the way for improved virtual consultations
- The need to meet customer demand for convenience while lowering the cost of services
- The need to reduce escalating healthcare costs to bring down insurers' claims costs
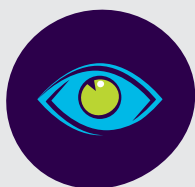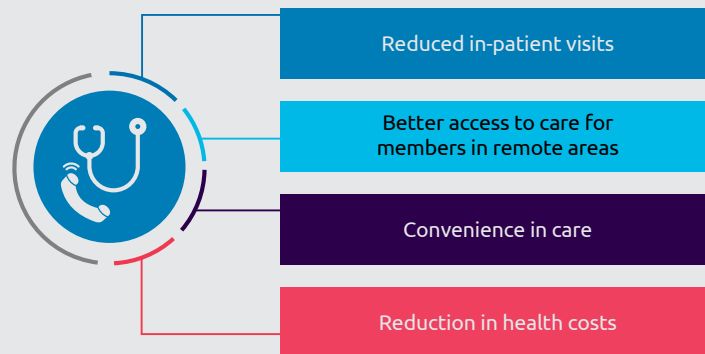
Trend Overview

- Insurers are increasingly offering remote consultation services to their members through telemedicine and thus helping reduce in-patient visits
- These services can be accessed from anywhere and at any time, through mobile phones, tablets, and computers:
  - Aetna and Blue Cross Blue Shield Association offer telemedicine services to their members through partnership with Teladoc, a New York-based telehealth company[40]
  - Amerigroup plans to offer its Medicare Advantage Plan members in Texas, free telemedicine consultation services that provide members access to certified physicians and licensed therapists 24x7[41]
- Telemedicine enables insurers to provide customers in remote or inaccessible areas with better access to care

39 *Medium,* "The 9 Healthcare App Development Trends to Follow in 2018," January 24, 2018, https://medium.com/@AppInventiv/the-9-healthcare-app-development-trends-to-follow-in-2018-d55cf2b03f4d, accessed August 2018

40 *FierceHealthcare,* "With 89% revenue growth in 2017, Teladoc looks to deepen partnerships with large insurers," Evan Sweeney, February 28, 2018, https://www.fiercehealthcare.com/tech/teladoc-earning-insurer-partnerships-telehealth

41 *Healthcare Finance,* "Payers focus on digital tools for member engagement," Jonah Comstock, December 26, 2017, https://www.healthcarefinancenews.com/news/payers-focus-digital-tools-member-engagement-q4
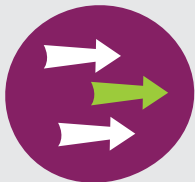
Reduced in-patient visits

Better access to care for members in remote areas

Convenience in care

Reduction in health costs

Source: Capgemini Financial Services Analysis, 2018

- Remote consultation is also being used for behavioral health services and providing care to members with chronic non-communicable lifestyle diseases:

  – Capital Blue Cross has launched an expanded Virtual Care app that provides its members with access to counseling and psychiatry services. It connects members with certified psychiatrists and counselors who are licensed to practice in the state the member resides. The Virtual Care app has capabilities of providing care in 21 different languages including American sign language[42]

  – MVP Healthcare added psychiatric services to its telemedicine offering, myVisitNow in addition to providing members access to behavioral health therapists, nutritionists, and general physicians[43]

Implications

- Diagnosis performed remotely can result in convenience and cost benefits to all the members in the healthcare ecosystem by reducing in-patient visits and enabling patients to avoid travel and other costs associated with a trip to the doctor's office

- Insurers need to develop better remote diagnostic capabilities to leverage the full potential of telemedicine

42 *PR Newswire,* "Capital BlueCross Launches New Virtual Care App and Expands Telehealth Access for Behavioral Health Services," June 18, 2018, https://www.prnewswire.com/news-releases/capital-bluecross-launches-new-virtual-care-app-and-expands-telehealth-access-for-behavioral-health-services-300667394.html, accessed August 2018

43 MVP healthcare website, "MVP Health Care adds psychiatry services to online health offerings," February 5, 2018, https://www.mvphealthcare.com/news-center/mvp-health-care-adds-psychiatry-services-to-online-health-offerings/, accessed August 2018

Trend 09: Blockchain as a Potential Records Unification Solution

Blockchain technology is being seen as a potential solution by health insurers for unifying and maintaining provider lists and customer records

Background

- Blockchain technology uses decentralized distributed ledger to store data in an immutable, highly transparent and secure manner
- Health insurers can potentially leverage blockchain to enhance operational efficiency and improve sharing of up-to-date data with different stakeholders in the ecosystem

Key Drivers

- An administrative push for unified electronic health records (EHRs) and transparent data sharing:
  - MyHealthEData in the United States and MyHealthRecord in Australia showcase an administrative push for improved and unified customer health records[44, 45]
- Costs to update and track provider information are estimated to be more than US$2 billion dollars/year for the healthcare industry[46]
- Duplicity in data and inefficiency in processes due to siloed data storage calls for an effective solution for data management

Trend Overview

- Health insurers are looking toward blockchain to solve the issues of inefficiencies in data management that is present in the industry:
  - According to *World Insurance Report (WIR) 2018,* 69.2% of health insurers are in the conceptualization stage of using blockchain technology for their organization's automation initiatives
- Members want access to accurate, up-to-date provider information, such as whether the provider is in the network, provider credentials, and licensure, for seamless experience; and insurers are looking to blockchain to achieve this:
  - United Healthcare and Humana have joined forces with Optum, Quest Diagnostics, and Multiplan and have launched a pilot program to determine if blockchain can be used for maintaining up-to-date provider directories. The program will examine if sharing provider data and updating the list by different members via blockchain can result in operational efficiencies, cost optimizations, and improved data quality[47]

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44 *Healthcare Analytics News,* "Aiming for Patient Empowerment, White House Launches MyHealthEData Initiative," Jack Murtha, March 6, 2018, https://www.hcanews.com/news/aiming-for-patient-empowerment-white-house-launches-myhealthedata-initiative

45 My Health Record website, https://www.myhealthrecord.gov.au/, accessed August 2018

46 *CNBC,* "Insurers will study blockchain to fix their provider lists," Bertha Coombs, April 2, 2018, https://www.cnbc.com/2018/04/02/insurers-will-study-blockchain-to-fix-their-provider-lists.html

47 *CNet,* "Health care groups to use blockchain to improve provider data," Abrar Al-Heeti, April 2, 2018, https://www.cnet.com/news/health-care-groups-use-blockchain-to-improve-provider-data/

Exhibit 11: Key benefits of leveraging blockchain for unifying data records
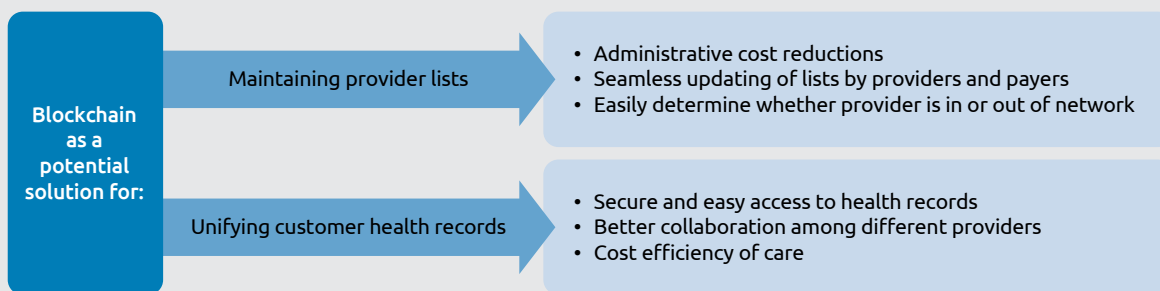
Source: Capgemini Financial Services Analysis, 2018

- Blockchain can also be leveraged to provide members with greater and easier access to their EHRs, which can be easily shared between different providers:
  – Embleema, a blockchain-based health start-up, launched PatientTruth, a patient-driven blockchain-based electronic health records solution that allows patients to control their health data and securely share information between various stakeholders[48]
  – MintHealth, a digital startup in the healthcare space launched a blockchain-based health record platform that allows patients to access their health record data through a mobile app[49]

Implications
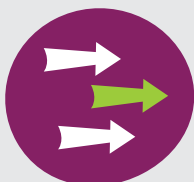
- Using blockchain to unify data sets could result in streamlining of operations and reduction of costs
- Easy access to up-to-date provider information can enable insurers to provide a better customer experience
- Blockchain can offer data transparency and security which can enable better integration of various health ecosystem partners
- Improved data sets could enable the use of data mining and business intelligence techniques to determine ways to improve care

48 *Healthcare Global,* "Robert Chu, CEO and Founder of Embleema, discusses the launch of its blockchain health records," Catherine Sturman, July 18, 2018, https://www.healthcareglobal.com/technology/robert-chu-ceo-and-founder-embleema-discusses-launch-its-blockchain-health-records

49 *Mobi Health News,* "MintHealth launches blockchain-driven mobile health records platform," Dave Muoio, October 27, 2017, https://www.mobihealthnews.com/content/minthealth-launches-blockchain-driven-mobile-health-records-platform

Trend 10: AI Enables Operational Efficiency

As Artificial Intelligence gains momentum it is being used to improve claims processing and fraud detection to beef up operational efficiency

Background

- Artificial Intelligence has numerous applications in healthcare in the areas of voice assistants, predictive diagnosis, streamlining of internal processes, etc.
- According to the *World Insurance Report (WIR) 2018,* more than 50% of insurers surveyed said their firms were piloting or deploying AI solutions

Key Drivers

- Margin pressures call for operational efficiency and cost optimization:
  - Fraud costs the insurance industry about $80 billion a year according to an estimate by Coalition Against Insurance Fraud[50]
- Insurers seek a superior claims experience with seamless processing and faster payouts to drive customer satisfaction
- Advancements in AI have enabled better processing of large quantities of structured and unstructured data captured from a variety of sources

Trend Overview

- Insurers are leveraging AI for improving claims processing, thus reducing the requirement of manual interventions and resulting in speed and efficiency:
  - ICICI Lombard, an Indian insurance company, launched an AI-based technology for smart health claims approval which has reduced the claims processing time to just a minute. The solution allows for instant cashless processing of members' requests and enables immediate availing of treatment[51]
- Automating internal operations using cognitive document processing (CDP) technologies enables insurers to reduce human errors, such as incorrect filing of information, and thus improve processing speed and efficiency:
  - WorkFusion automated extraction of social security data from unstructured documents and entry into core insurance systems. This has significantly reduced manual interventions for the firm[52]
  - Expediente Azul, a Mexico-based InsurTech, offers cognitive document processing capabilities by leveraging AI and Optical Character Recognition (OCR) technology and enables smooth claims processing[53]

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50 Coalition Against Insurance Fraud website, http://www.insurancefraud.org/statistics.htm, accessed August 2018

51 *Business Standard,* "ICICI Lombard launches India's first AI to automate instant health insurance claims," August 20, 2018, https://www.business-standard.com/article/news-cm/icici-lombard-launches-india-s-first-ai-to-automate-instant-health-insurance-claims-118082000970_1.html, accessed August 2018

52 *PR Newswire,* "WorkFusion and Owliance Group bring AI-powered cognitive automation to France," October 5, 2017, https://www.prnewswire.com/news-releases/workfusion-and-owliance-group-bring-ai-powered-cognitive-automation-to-france-300531782.html, accessed August 2018

53 Expediente Azul website, https://expedienteazul.com/financiera/financiera, accessed August 2018

Exhibit 12: Key benefits of leveraging AI for optimization of processes

| Enhanced customer experience and operational efficiency | Faster claims processing and payouts | | Accurate identification of fraudulent claims | Cost optimization and claims cost reduction |

Source: Capgemini Financial Services Analysis, 2018

- Insurers also use AI to more precisely detect fraudulent claims, resulting in cost savings:
  - Shift Technology is an InsurTech that offers insurers an AI-based fraud detection and prevention solution that analyzes claims data and sends real-time alerts on suspicious claims. The Health Insurance Counter Fraud Group UK (HICFG) selected Shift Technology to develop an improved health insurance counter-fraud database that would enable members to better combat claims fraud[54]

Implications

- AI can be leveraged by insurers to provide a seamless, fully automated, and customized claims experience for members
- Insurers can collaborate with InsurTechs working in the AI space to quickly and cost-efficiently optimize processes across the value chain
- Use of AI can improve the productivity of human employees by enabling them to focus on only the complex cases and more value-adding activities
- Insurers can realize cost savings due to a more streamlined claims process and better fraud detection

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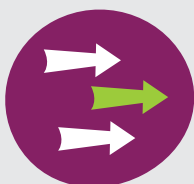
54 Shift Technology website, "HICFG selects Shift to develop new counter fraud database in the UK!", July 11, 2017, https://www.shift-technology.com/hicfg_selects_shift/, accessed August 2018

Conclusion

The health insurance industry is gradually becoming an efficient, digitally-integrated ecosystem (Exhibit 13). Health insurers are following a three-pronged strategy of managing industry dynamics, meeting customer expectations, and enhancing internal operational efficiencies to achieve such a connected ecosystem.

More and more health insurers are moving to customer-centric business models by leveraging technologies such as voice assistants, wearables, telemedicine, etc. The availability of a wealth of customer data and improved analytical capabilities will enable insurers to become customers' health partners by providing seamless guided-user experiences, proactive wellness initiatives, and preventive and personalized care.

Exhibit 13: Health insurance industry evolving to a digitally integrated ecosystem
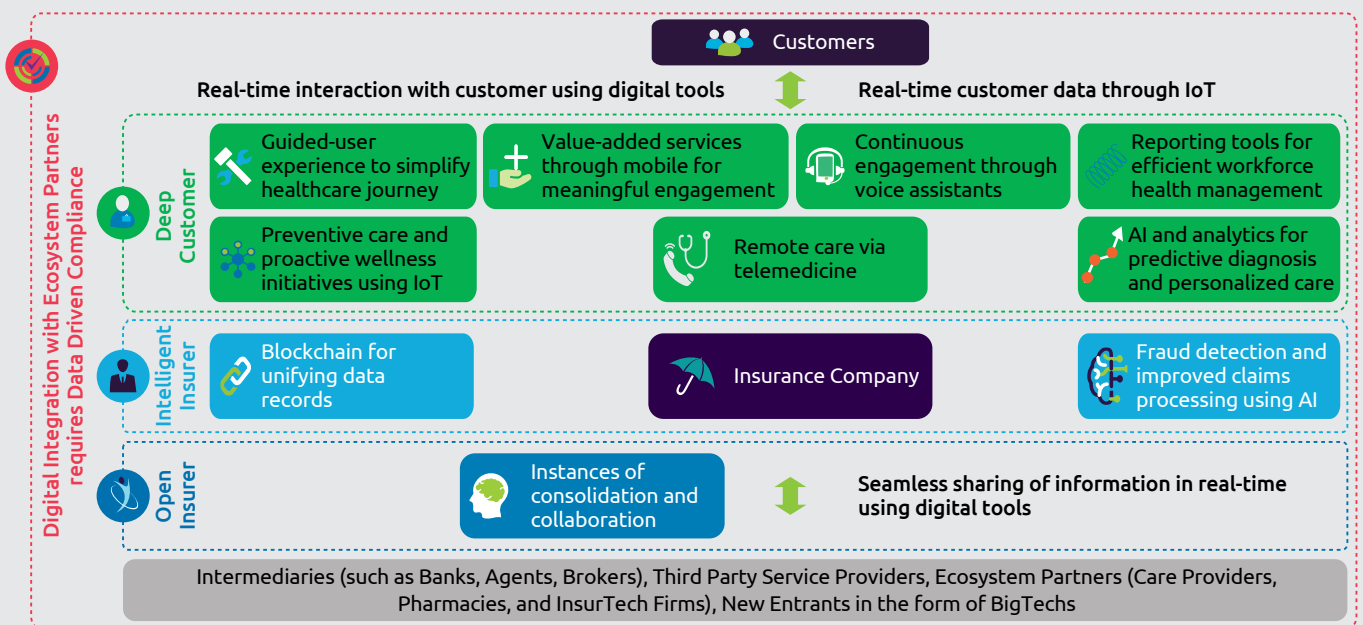
Source: Capgemini Financial Services Analysis, 2018

Insurers are streamlining internal operations and achieving operational efficiency with the help of technologies such as blockchain and artificial intelligence. As real-time data processing and business intelligence capabilities improve, insurers will be able to make intelligent, data-driven business decisions and improve efficiency.

Insurers are also focusing on seamless digital integration with all ecosystem players such as providers, partners, pharmacies, and members through increased data sharing and by leveraging technologies such as APIs. Integration may lead to the creation of a digitally-connected healthcare ecosystem that allows all ecosystem players to deliver a seamless, orchestrated customer experience.

To sustain and succeed in the health insurance landscape of the future, insurers need to equip themselves with certain specific attributes. They should become ***intelligent insurers*** by equipping themselves with capabilities such as real-time actionable insights generation, intelligent fraud detection and prevention, cognitive documents processing, etc.

Insurers need a ***deep customer*** focus and business models that deliver personalized and customized services attuned to customers' innate needs.

Customer security and privacy compliance will gain even more prominence, especially in the health insurance sector where sensitive information is common. Therefore, insurers will need to bolster their ***data-driven compliance*** capabilities.

Finally, insurers need to move toward becoming an ***open insurer*** for better integration between ecosystem partners and orchestrated seamless customer service delivery.

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Disclaimer

About the Authors

Dharini S is a Strategy Consultant with the Market Intelligence Team in Capgemini Financial Services SBU with two years of consulting and strategic analysis experience in the IT and insurance sectors.

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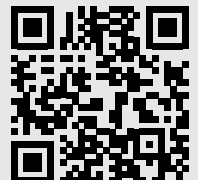
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