



The Digital Divide: Why are Hong Kong's Patients & Consumers
Unsure About Using E-Health Solutions?

October 2018

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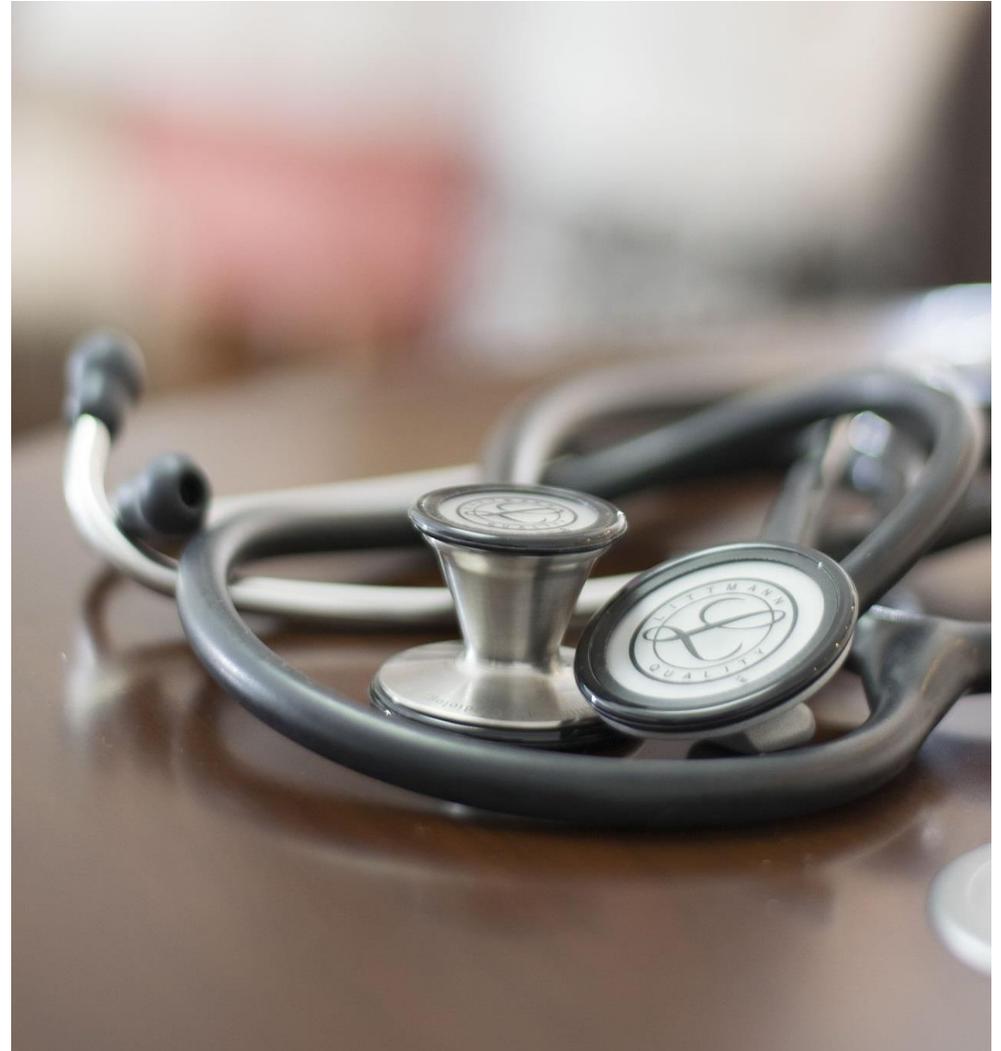
2. The digital rhetoric – how this has become the perceived vehicle for solving health challenges?



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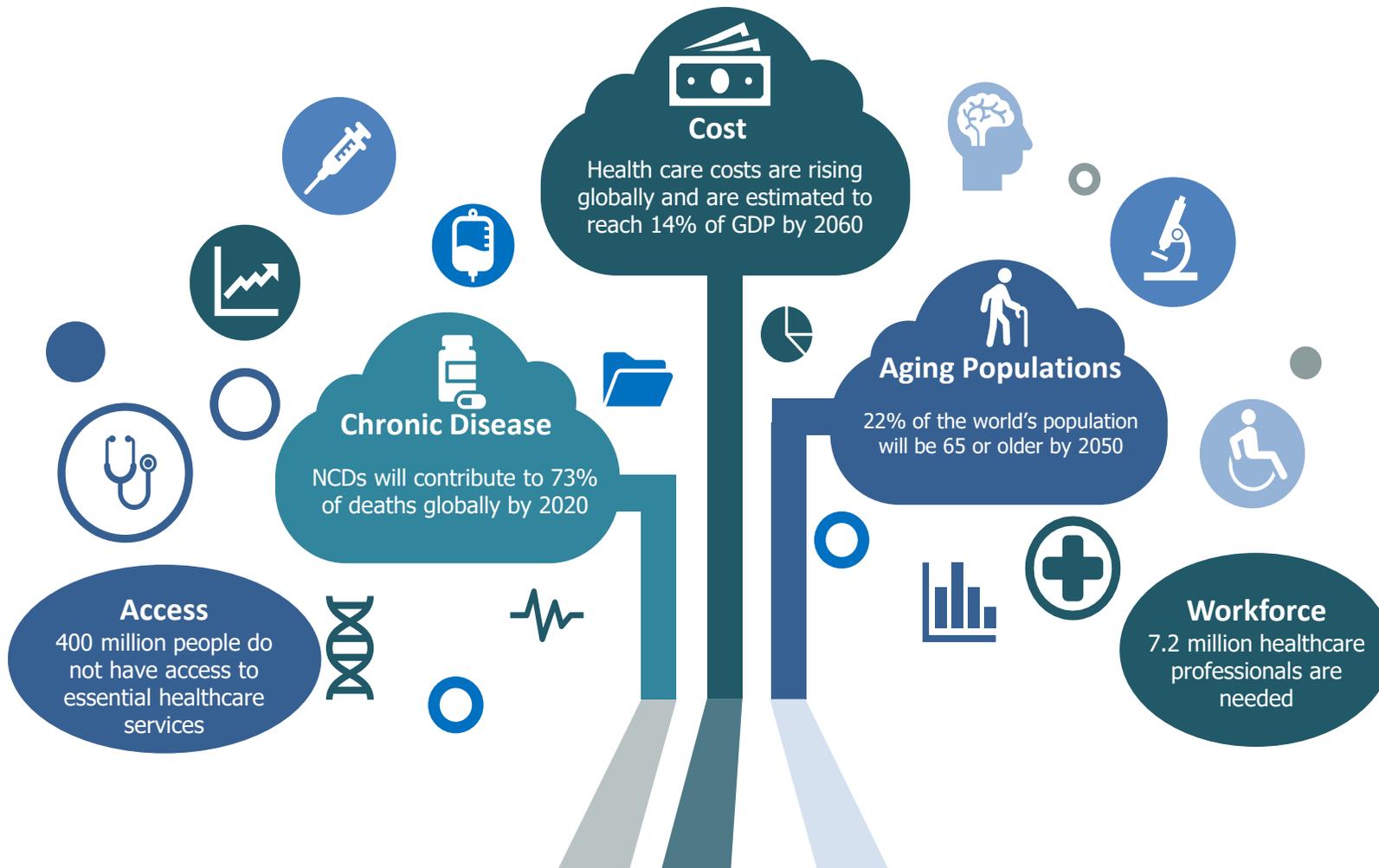


4. Our research – where this indicates that digital health should be focused to achieve the highest gains





Digital is increasingly seen as a lever to address global trends in health system stresses and threats to sustainability

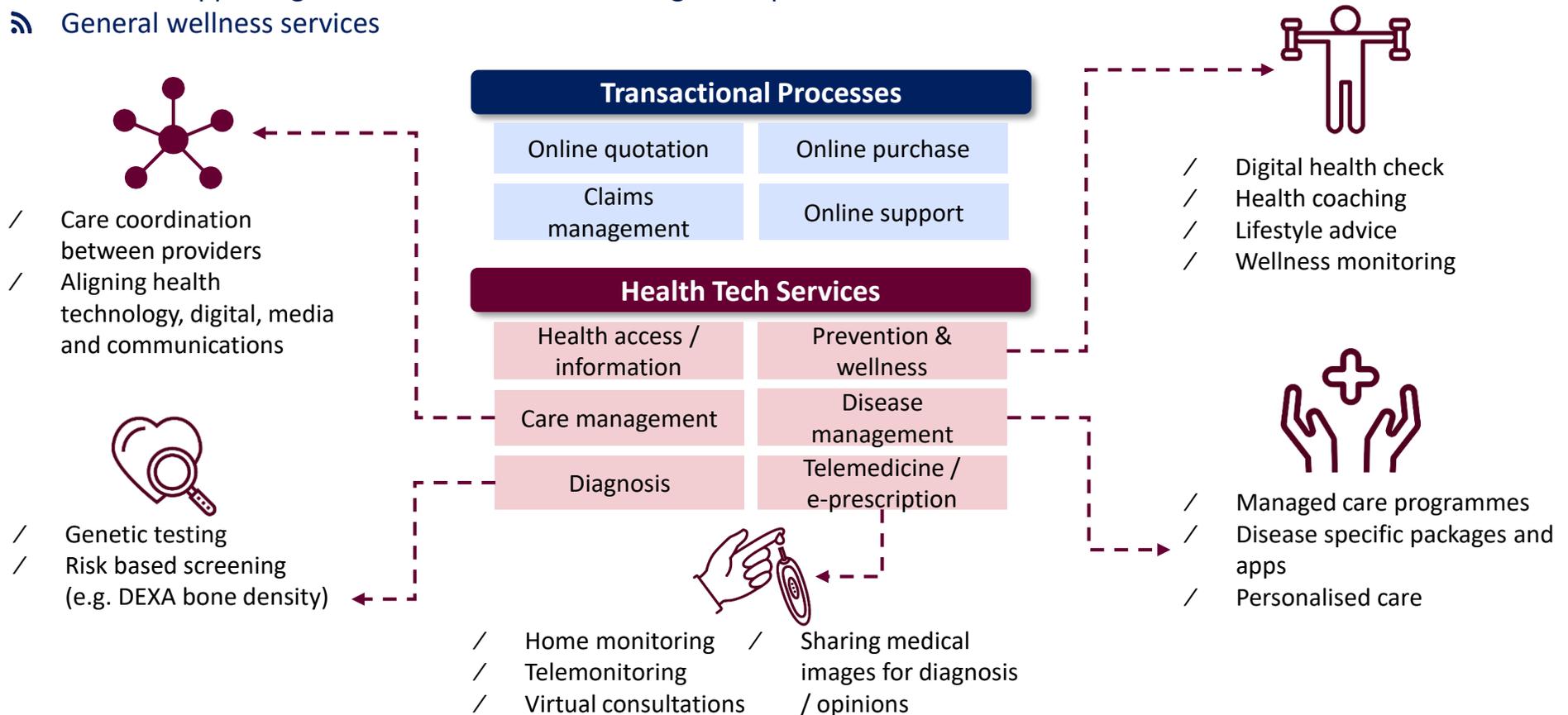




Investment in and the maturity of digital channels and products has increased in recent years

Availability of digital channels for insurer processes, healthcare support and delivery is highly variable across Asia, with the most common services being:

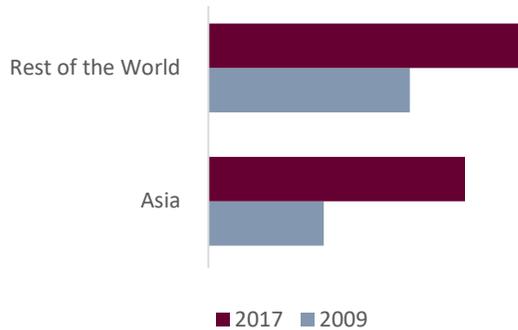
- 📶 Tactical operational processes such as online quotation and purchase
- 📶 Services supporting access to healthcare such as general practitioner directories
- 📶 General wellness services





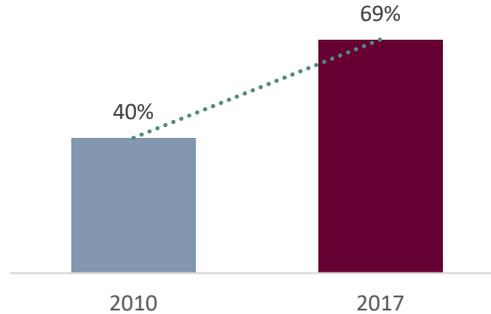
Traditional digitisation indicators suggest Asia is an attractive market for smart solutions – at least on paper

Internet Penetration Rate



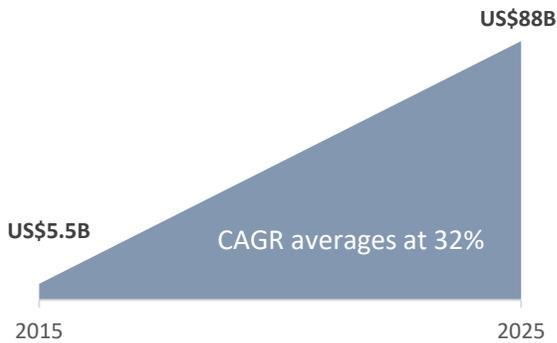
Source: Media Partners Asia, Statista, Asia Care Group analysis

Smartphone users in Asia-Pacific as a % of the total population



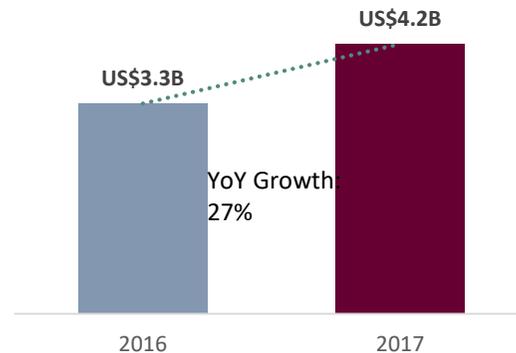
Source: GMA Intelligence, Asia Care Group analysis

Projected size of E-commerce economy in Southeast Asia



Source: Google-Temasek, Asia Care Group analysis

Size of China's digital economy



Source: Cyberspace Administration of China, Asia Care Group analysis



- / Indicators typically used to gauge the market potential for digitisation suggest that Asia is an attractive market for investment in digital healthcare
- / Globally, Asia has seen some of the fastest growth in digital penetration in recent years



- / China and Southeast Asia alone, which are considered two of the biggest drivers in future growth in digital economy, have seen double-figure growth of the e-commerce economy each year
- / Home to the most populous countries on earth, this makes Asia on paper a prime market for investors and providers of digital services

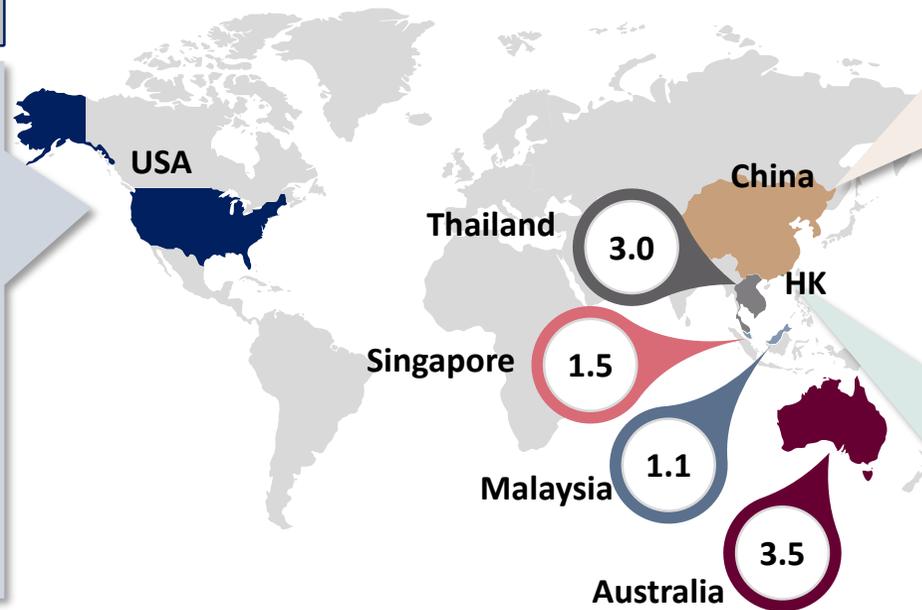


Investment in and the maturity of digital channels and products has increased in recent years

An analysis of the digital offerings across the top 5 insurers within Asian countries reveals significant differences in the maturity:

3.9/5 Digital Score

- One of the current world leaders in digital health
- Widespread digitisation of customer processes and adoption of healthcare services
- Many examples of digital innovation to support access to care, new delivery mechanisms, and developments into management and prevention services



Source: ACG analysis of top 5 Insurer digital offerings by market share

2.5/5 Digital Score

- Digitisation of insurance many customer processes such as sales, claims and customer support
- However, healthtech services such as prevention and telemedicine are in their infancy. Recent Government legislation on internet hospitals will help regulate/stimulate growth

1.2/5 Digital Score

- Hong Kong is still a traditional system, with paper-based process and face-to-face service models
- Insurers are placing emphasis on digitising processes, slowly
- Insurers are beginning to expand digital health services but these are more “value-add” than transformational



Investment in and the maturity of digital channels and products has increased in recent years

HONG KONG



- / Transactional processes are the current focus of digitisation efforts
- / Healthtech services are more informational than transformational at this stage
- / There are regulatory concerns and issues surrounding some aspects of healthtech
- / Insurers have struggled to deploy healthtech as part of targeted prevention, case finding or case management efforts

Source: ACG analysis of top 5 Insurer digital offerings by market share

Insurer Customer Process

Quotation

Well developed – all top insurers provide online top quotation services

Purchase

Some offer online purchase of insurance plans. Some offer online discounts and chat support

Claims management

Many insurers are experimenting with mobile apps/portals; these often use old tech (scanning) and are hard to navigate

Online support

The majority of top insurers do not have robust online support to guide customers

Value Added Services

Health access / information

Most insurers offer static data (e.g. directories) but not online access, booking, real-time waits of quality scores to support access

Prevention and Wellness

Rudimentary online risk-based questionnaires and informational webinars are available, but tailored prevention or AI is not.

Diagnosis

The majority of top insurers do not have diagnosis services available online

Care management

There are no integrated case management services which support predict and prevent or smart case management yet

Telemedicine / e-prescription

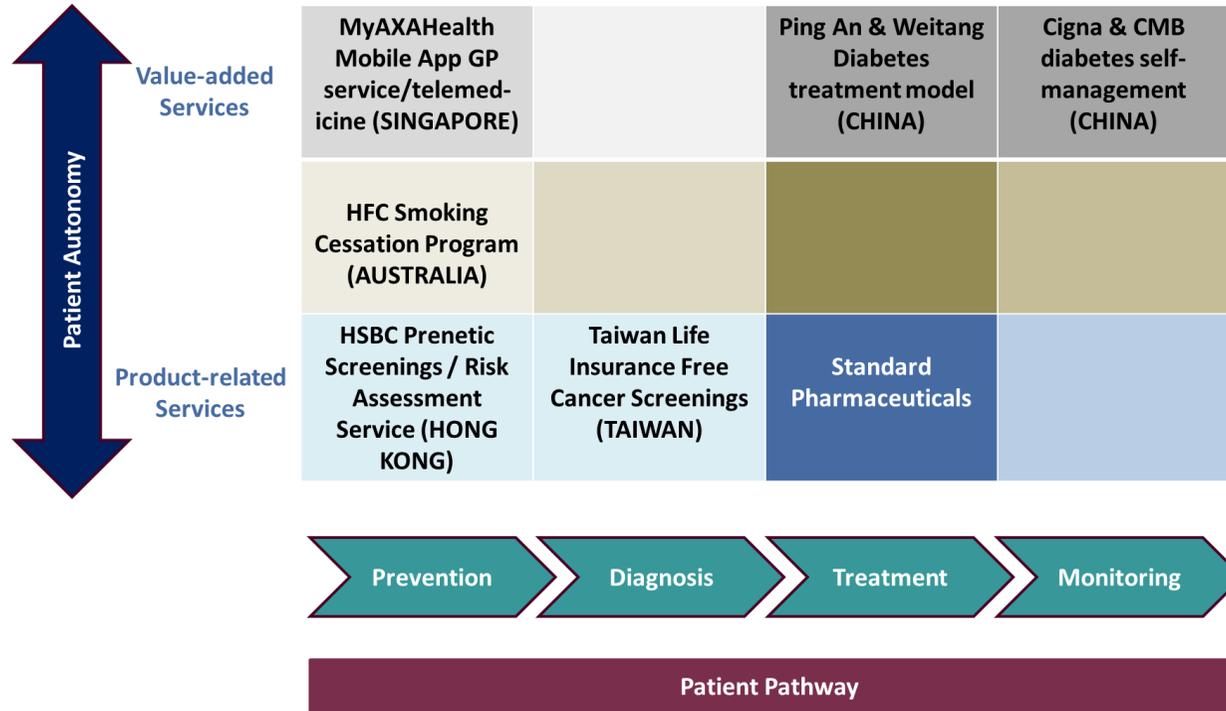
Some telemedicine services such as second opinions and apps for remote monitoring of diabetic glucose levels, otherwise not developed

Disease management

Limited services across few top insurers focusing on a handful of chronic conditions (e.g. diabetes)



Insurers are beginning to explore value-added services and cost-containment tools, though innovation remains low



- There is a significant opportunity to better use these technologies to actively manage health risks, incentivise patient behaviours and ultimately reduce payor costs
- This requires an enterprise-wide approach to integrating and leveraging these technologies as well as navigating the many challenges to digital usage in the Hong Kong health market



The realities of the HK health system present a number of challenges for digitisation

As payors attempt to manage costs and differentiate products from competitors across the landscape, there is an increasing interest in digital channels, solutions and value-added services. However, the challenges of operating the Hong Kong market mean that this is not necessarily a “magic” solution to profitability issues.



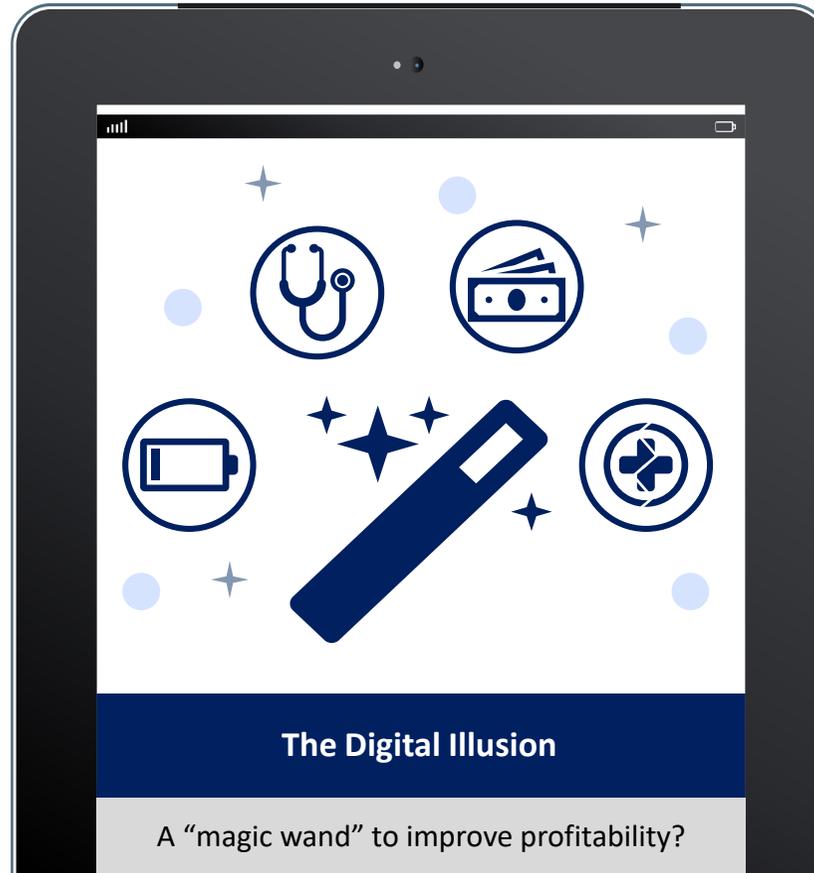
Digital usage is still low across many industries

Despite a maturing supply base, uptake of digital channels is still lagging



Digital services are replicating fragmentation

Instead of exploiting the potential for digitisation to better integrate and coordinate healthcare, it replicates existing fragmentation



Preference for traditional ‘human’ healthcare channels

Patients still show a preference for, and greater satisfaction from traditional, ‘human’ based channels



The ROI for current digital efforts is low

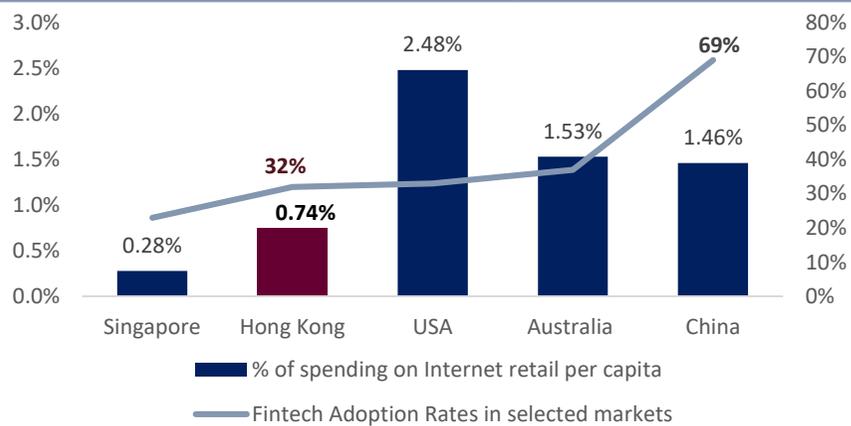
Due to factors such as rising medical inflation, overutilization, weakness of primary care and a rapidly ageing population, the Private Health Insurance Market is not growing in a profitable manner



Uptake of digital channels in other industries is lagging

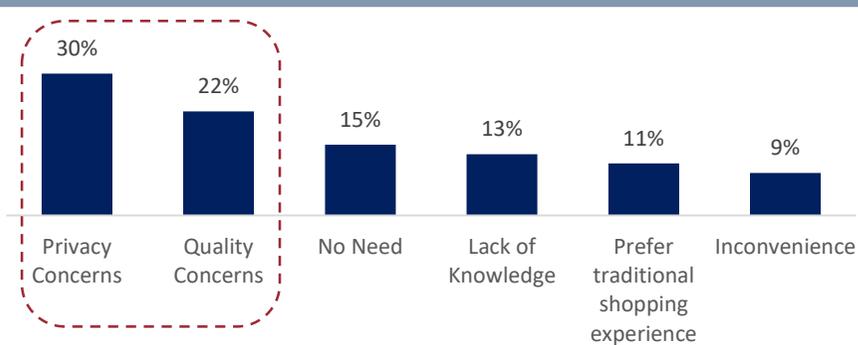


Hong Kong underperforms in two of the most common digital activities today - online shopping and fintech usage



Source: UNESCAP 2016; ILO 2017; EY 2017; ACG analysis

Factors pushing people from online shopping



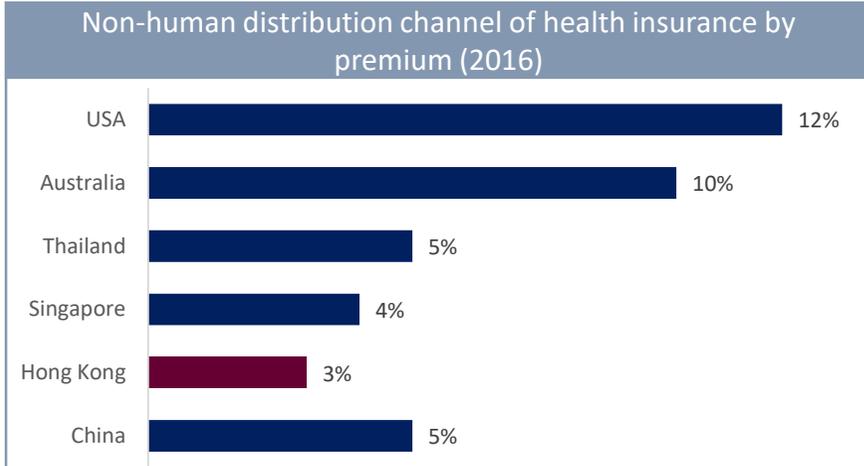
Source: Consumer Council 2016; Insurance agencies in selected markets; ACG analysis

- / Hong Kong has seen a relatively low level of general readiness and acceptance for digitisation, preferring traditional “human” channels for popular online activities such as shopping and banking
- / As a developed economy, infrastructure and capacity are not significant barriers to usage. The Hong Kong market has a diverse range of online platforms, apps and developing digital technologies across a range of industries
- / Instead, cultural drivers and societal norms are possible drivers of this reluctance to transition to digital. Consumers often cite issues indicating a lack of trust in digital channels such as privacy and perceived lesser quality.
- / Consumer concerns relating to ease of use, benefits and preference also indicate that there are not strong incentives for consumers to break ingrained habits
- / However, this trend is not universal across Asia. China has become a world leader in adoption and embedding of digital channels

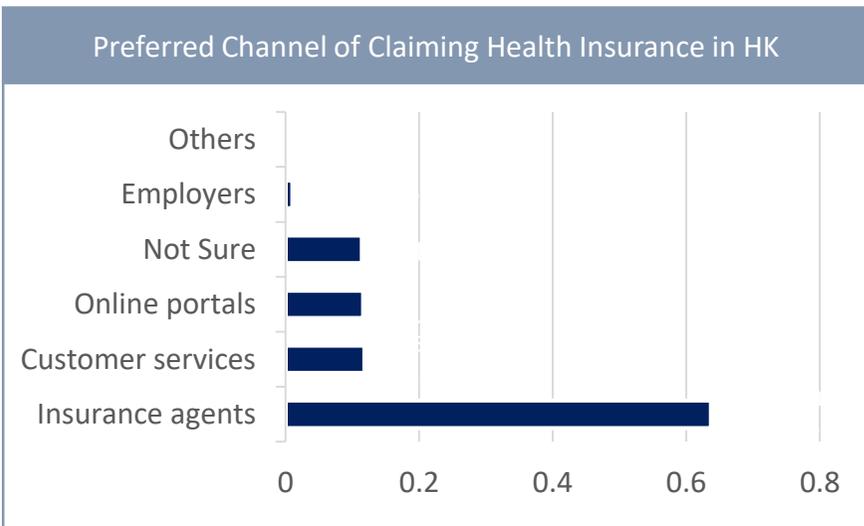


Despite the availability of digital alternatives, consumers show a continued preference for 'human channels'

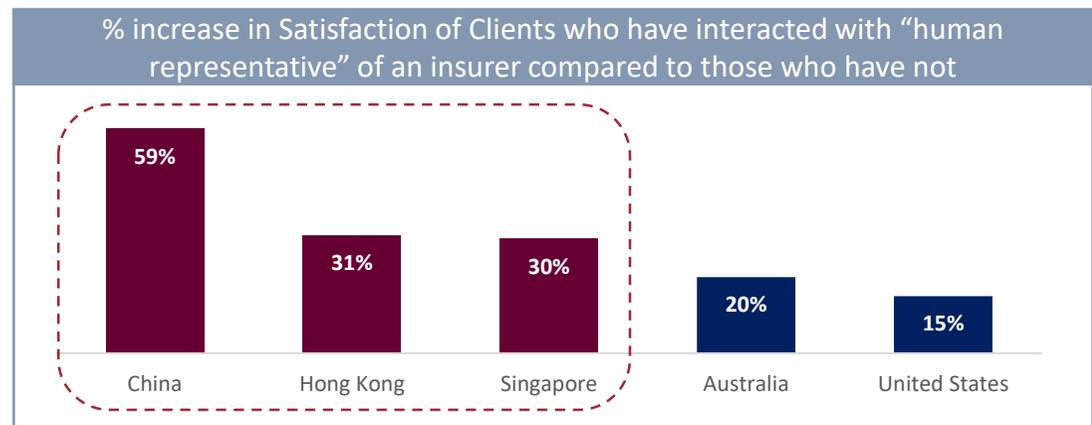
- ✓ The trend of relatively low level of readiness and acceptance for digital engagement in common 'everyday' activities in Hong Kong is also seen in healthcare
- ✓ For Private Healthcare Insurance (PHI) 'human' channels such as brokers and agents remain the most popular method for quotations, purchase and healthcare claims
- ✓ This preference and value of human interaction is a key cultural feature of Asia, and a driver of customer satisfaction. Hong Kong consumers also show a higher degree of satisfaction in making claims when human interaction is involved compared to Western comparators



Source: Insurance Authorities and Associations of each market, Asia Care Group analysis



Source: Life Underwriters Association HK, Asia Care Group analysis



Source: Bain & NPS, Asia Care Group analysis



Complexity in PHI arises from both the insurance market itself being fragmented, and system-wide fragmentation

Product and payor complexity: an example of the variation in the HK market

Payor market density



1 health insurer in **92,000** people



1 health insurer in **388,000** people



1 health insurer in **655,000** people

Source: Census and Insurance regulatory bodies in each market, Asia Care Group analysis

Product variation and complexity



44 Insurers are licenced to operate in Hong Kong



Each insurer has between **5-10 products**



Resulting in between **220 – 440 products** to choose from!

- / Despite being a significantly smaller insurance market, Hong Kong has 3-6 times more competitors than mature economies in the West
- / This is abnormally high relative to the market size, and has resulted in fierce competition. The density of the PHI market results in a high degree of choice and complexity driven by competition as Insurers seek to differentiate themselves through avenues such as value added services
- / This choice and variation drives an inherent complexity in the PHI market. Insurers feel more compelled to keep rolling out new and “eye-catching” add-on products in addition to their health insurance policies to distinguish themselves from competitors and entice new customers in a complex and competitive market
- / This results in a relatively heavy concentration of digital products which require little interaction from insurers and are “bolted on” to the existing value chain



Complexity in PHI arises from both the insurance market itself being fragmented, and system-wide fragmentation

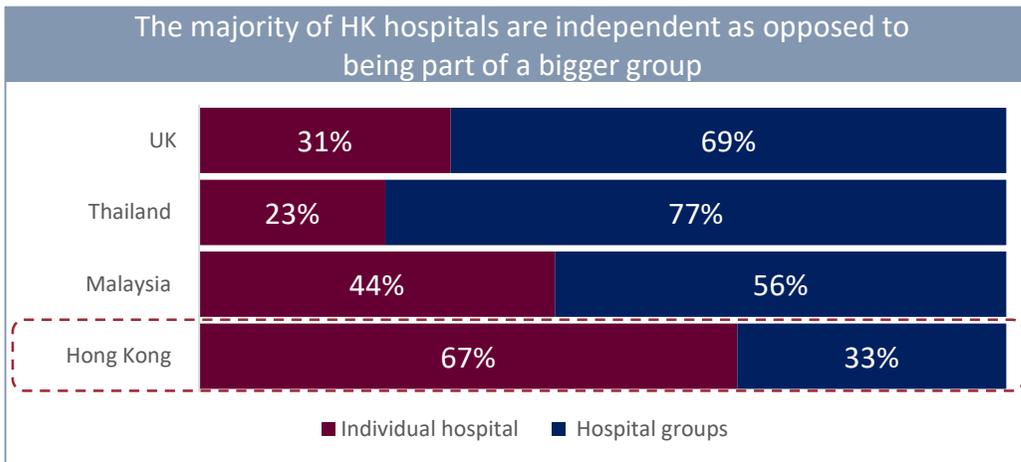


The top 5 clinic chains in Hong Kong account for **80%** of the primary care market share (HK\$ 4.1bn in 2017) but only account for **35%** of all Outpatient visits



Approximately **5.82 million** visits per year are conducted in other smaller service providers, or independent clinics/ family doctor clinics, accounting for **28%** of the outpatient visits

Source: Annual reports of major clinic chains (2017 or nearest), Census and Statistics Department – Thematic Household Survey no. 63 (2017), Asia Care Group analysis



Source: Annual Reports of Clinic Chains; eHealth (HKSAR Government); ACG analysis

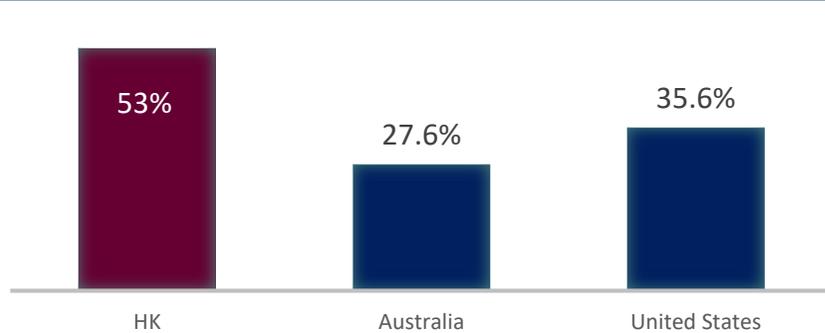
- / Hong Kong has a very fragmented private health system for both primary and acute care which is also a driver of complexity
- / In Hong Kong, 70% of primary care is provided in the private sector. In general, the primary care sector is quite independent of other levels of care
- / The majority of hospitals and a large number of clinics are independently owned and operated, which translates into huge patient choice and variation in terms of quality of care and fee schedules
- / Poor coordination between levels of care underlines this fragmentation. For example, only 20% of Outpatient clinics with compatible eHR systems allow for automated transfer of patient data
- / Care fragmentation continues to drive up healthcare costs. There is a significant opportunity for digital technologies to support the integration and connection between care silos, creating an “end to end” care continuum



Healthcare is viewed as a good to be “consumed”; leading to disproportionate service usage



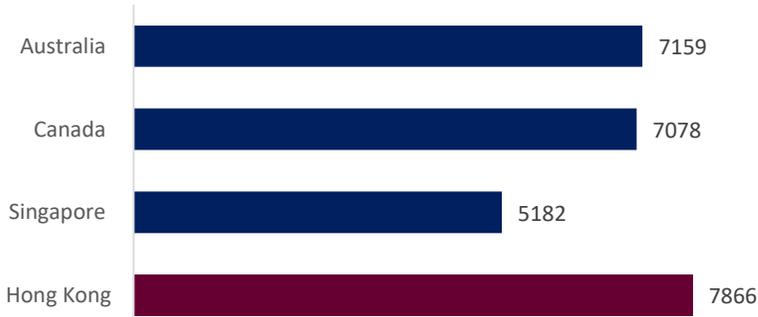
Hong Kong patients are more likely to shop around for doctors



Source: MIMS, Asia Care Group analysis

- / Individuals with PHI are more likely to undergo medically unnecessary and costly procedures (e.g. gastroscopy / endoscopy / colonoscopy, body checks etc. Despite body checks being popular in Hong Kong, they have less than a 20% success rate of early detection of serious diseases
- / The claims rate for common procedures – particularly colonoscopy and gastroscopies – are very high by international comparisons. Health insurance claims data highlights that most policyholders use, and claim for general acute care services rather than complex tertiary care such as cardiac or oncology services
- / When a product or service is considered “free” by HK consumers - as in there is no additional out-of-pocket payment required - they are more likely to “try” them
- / Trends of ‘Doctor shopping’ have also been observed in Hong Kong, where patients will seek multiple opinions, often as a way to seek an immediate outcome or treatment for a perceived condition
- / Similarly, heightened medication prescribing rates observed in Hong Kong can be viewed as a symptom of a ‘consumer culture’ in healthcare, leading to increased activity levels

Hong Kong has a significantly higher rate of prescription of antibiotics DDD (per 1,000 population)



Source: CDDEP, HKFI, Asia Care Group analysis



Insurers have been looking to digitisation as a cost-containment measure



- Although PMI has seen some growth in recent years in terms of policies sold, this has not translated into higher profits. High claims expenses, coupled with costly – and traditional – distribution channels, have put severe pressure on profits
- Technology is often used to create cost- advantage in health insurance, through automating processes, reducing processing speeds, better utilizing capacity and integrating intelligence from different parts of the business to create better products, underwriting models and claims functionality

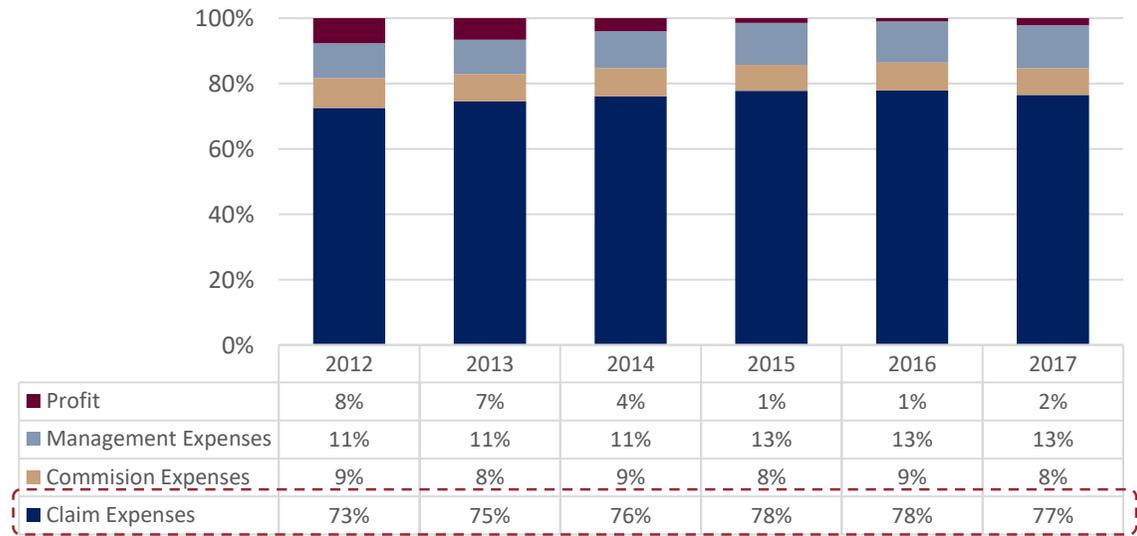
Current digital health trends in Hong Kong focus on the digitisation of customer processes and improving service access and information.

Whilst these efforts are important in improving choice, customer experience and exercising cost-control, will largely focus on containing costs within a small area of insurer's expenditure

The majority of insurers' operating cost is driven by the claim itself: Therefore, to truly leverage digital's potential, offerings supporting demand management through activities such as targeted prevention schemes, case finding and disease management may yield significant gains

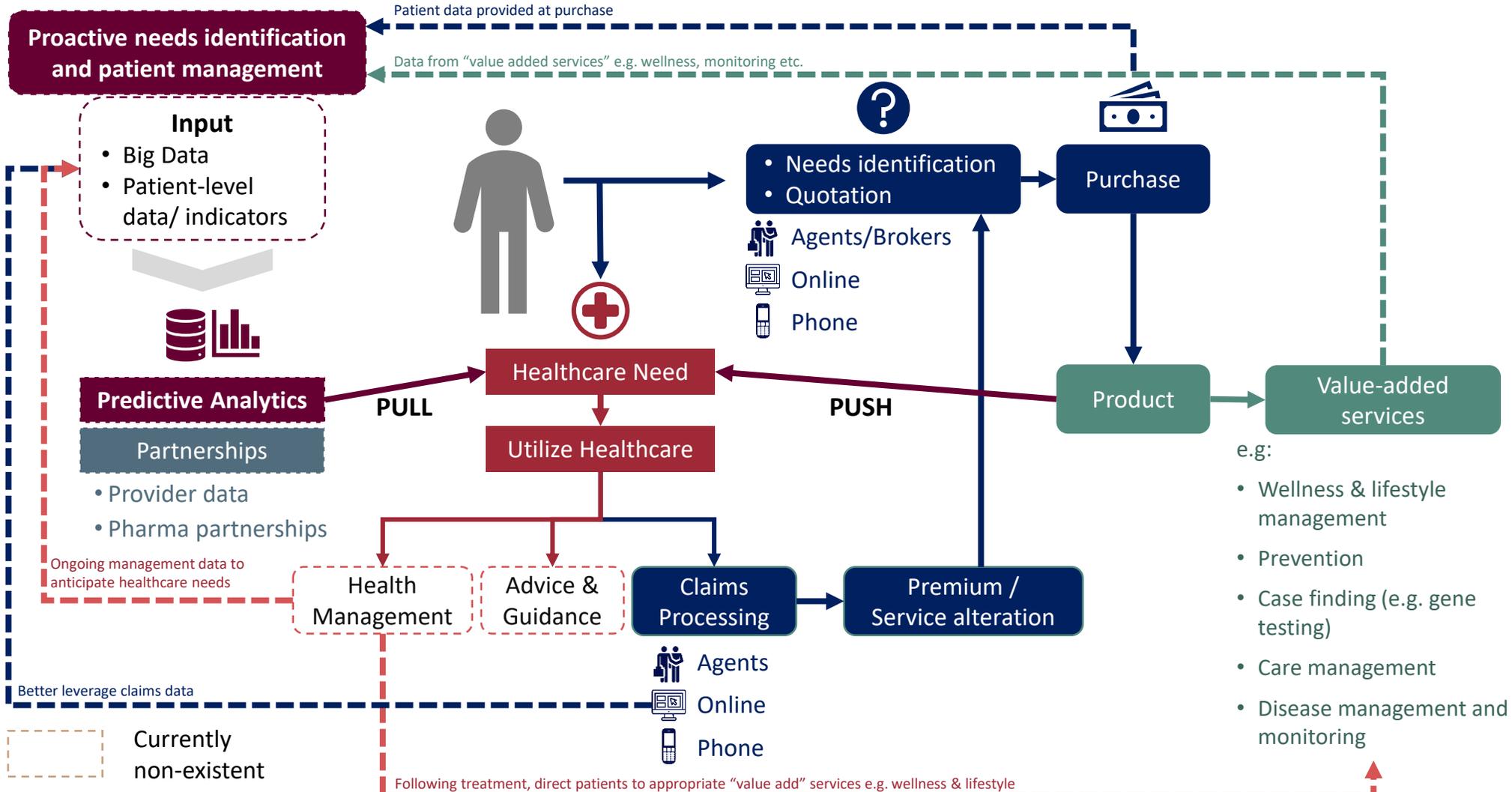
The majority of insurer operating cost is driven by claim expenses – can digital be leveraged to address these increasing costs?

Profit and Operating Ratio of PHI policies

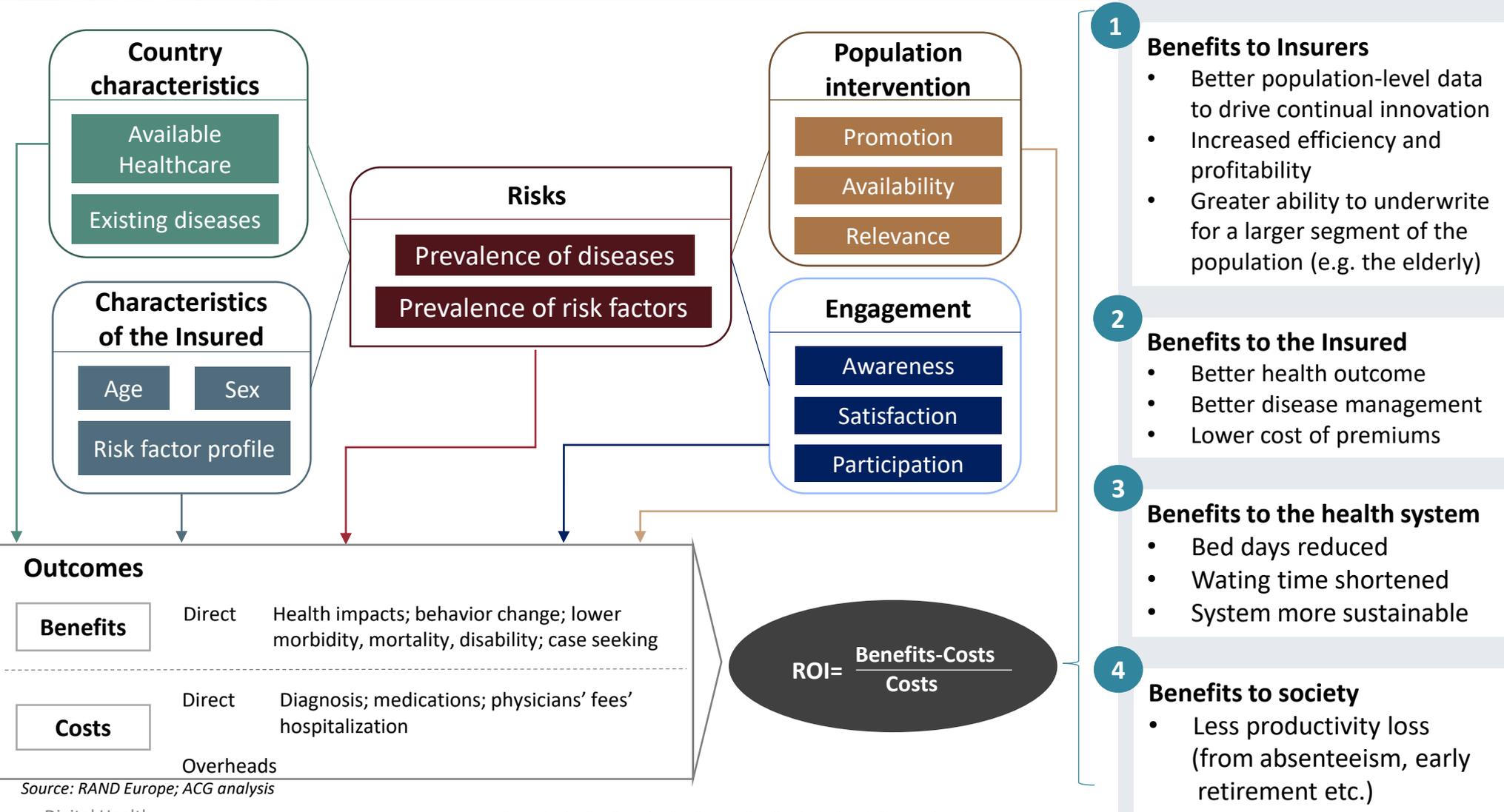


Source: Insurance Authority – Statistics for General Business (2017)

Insurers could leverage data and digital technologies to actively 'pull' patients into the system, and keep them healthier for longer



The potential benefits of digitally-driven demand management and prevention



Source: RAND Europe; ACG analysis

Digitally supported disease management has a significant opportunity to reduce avoidable admission rates




Chronic Heart Failure


Michigan

Cost Saving

- Overall costs of care in intervention group = USD \$2,823(including Cost of intervention: USD \$100)
- Cost in control group = USD \$5,644
- USD \$2,821 less for cost of care in intervention group**

Clinical Benefits

- 60% reductions in readmissions,
- 69% reduction in total hospital days
- 76% reduction in lost school/work days


Asthma


Missouri

- Cost of intervention = USD \$186 per patient
- Savings of USD \$6,462 per patient**

- Sicker patients improved the most with median HbA1c dropped from **8.5% to 7.5%**


Diabetes


Germany

- Cost neutral

- Reduction in Emergency Department (ED) use recorded in second year
- Subset of sicker patients show **44%** fewer hospitalizations and **55%** fewer ED visits in Year 2


Chronic Conditions


Rochester

- Cost neutral

Source: Chronic Disease Management: Evidence of Predictable Savings, Asia Care Group analysis

- / Disease management and early case detection is the key to drive down unnecessary hospital admissions. Asia Care Group analysis suggests that **HK\$ 5.8 billion can be saved** through **better disease management, robust and systematic early detection.**
- / A **prevention and management oriented** healthcare solution with an elevated role for the primary system will lead to reduced in-patient admission, and thus billions in savings.

Digitally supported disease management has a significant opportunity to reduce avoidable readmission rates

- ✓ Ambulatory sensitive conditions (ACSCs) are conditions for which hospitalisation could be prevented by better interventions in primary care. Poor access or low quality of primary care often results in higher hospitalisation rates for these conditions
- ✓ As such, they are prime candidates for targeted disease management interventions that offer support such as assessment and remote monitoring, reducing risk factors and managing exacerbating factors



Pneumonia
COPD

Pneumonia: 27.8%
COPD: 39.1%

27,877

\$144.2



Coronary Heart Failure
Chest Pain

CHF: 53.4%
Chest Pain: 36.4%

31,822

\$164.5



Pyelonephritis
Chronic Kidney Disease

Pyelonephritis: 40.8%
CKD: 32.6%

11,386

\$58.9



Diabetes

Diabetes: 65.3%

4,963

\$25.7



Other

Others: 45.6%

67,976

\$351.4

Estimated %
avoidable
readmissions

Estimated
bed days
saved

Estimated
Cost
Avoidable
(Million, 2017 HKD)

Source: HK Legislative Council (2017), Yam, et al. (2010), Yam, et al. (2014), Wong et al. (2010), Asia Care Group analysis

The impacts of preventable hospitalisations on the health system are crippling. Asia Care Group analysis reveals that:

- ✓ **44% of all hospitalisations in Hong Kong in 2014 were caused by an ACSC, of which 21.4% were readmissions**
- ✓ **In 2017, the estimated total cost of ACSCs in A&E admissions was \$4.47 billion**
- ✓ **Avoidable readmissions cost \$744.7 million each year, the equivalent of 144,000 bed days**



Key takeaways: Where should digitisation be focused to best drive value in Hong Kong?

Predictive risk modelling

- / Insurers are likely to gain substantially more return on investment by focusing digitisation efforts on predictive-risk modelling, highly targeted use of remote monitoring and solving current customer pain points (e.g. steerage and shortfall issues) rather than tackling basic tactical/process issues

Omnichannel approaches

- / Trying to alter current distribution models may prove challenging due to a strong customer preference for a human-relationship at point-of-purchase
- / Insurers should look at omnichannel approaches, as a prerequisite to full digitisation – which may be a longer term play



Consumption behaviours

- / Telemedicine should be approached with some caution. Hong Kong's insured population currently display "consumerist" tendencies towards healthcare and there is a risk that telemedicine will be an accessible good to be "consumed" like any other
- / Insurers should put in place appropriate incentives (e.g. telemedicine or traditional, not both)

Focus on patient value

- / There is a considerable amount of "unnecessary innovation" and a start-up system that is heavily engaged in solving healthcare problems which don't exist. At best these innovations do no harm, at worst they drive unhealthy behaviours (e.g. unnecessary testing, unhealthy or obsessive levels of biohacking)
- / Choose the firms you work with selectively and always involve public health professionals in the decision-making process to assess unintended consequences



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