

Taking firm steps
towards a secure future



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Foreword

Macau people understand that a good life starts with good health. That's why they have always gone to great lengths to safeguard their families' and their own health. However, there is a little-known fact about Macau people that demands widespread attention: currently, the proportion of Macau people who have life insurance policies is still relatively low, a clear indication that the public is insufficiently protected against various risks.

How should we mend our safety nets? This booklet presents a snapshot of the state of healthcare in Macau – the most common diseases and treatments, health maintenance options and case studies – to help you start planning for the future as soon as possible and become more resistant to future challenges.

Health is wealth, but that the reverse is also true – wealth is a key ingredient of health. As the HSBC Quality of Life Report 2024¹ points out, a good quality of life must rest on three pillars – body, mind and money. These 3 components are interlinked, and each is indispensable.

In view of this, some organisations have introduced special health incentive programmes. Through a combination of mobile apps, big data and behavioural science analytics, these programmes help the public make sustainable gains in physical, mental and financial health as well as overall quality of life. At the same time, a wealth of protection and wealth management information is accessible through different websites to help you plan the best route to your personal goals.

The purview of this booklet goes far beyond health maintenance and effective planning. Its coverage of the latest medical technologies also offers a revealing glimpse of the shape of things to come. Don't miss.

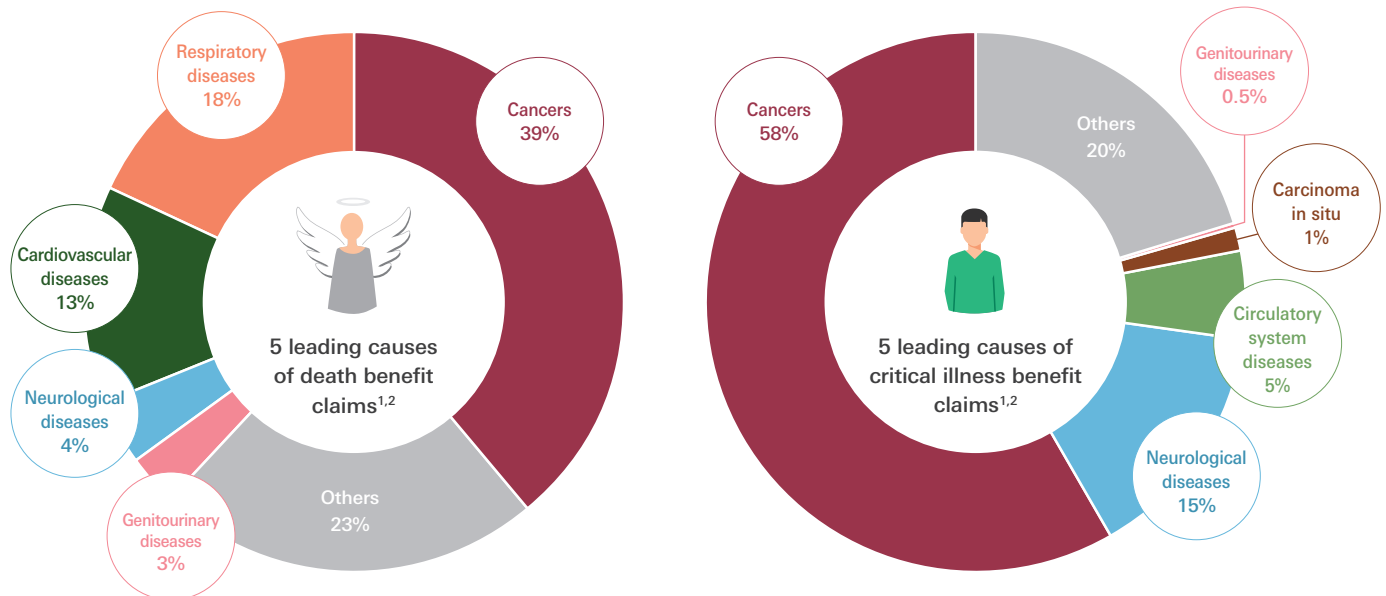
1. HSBC Quality of Life Report, 2024

Identify the weak link in your defence Strengthen your protection

Currently, a significant number of Macau people are still without life insurance coverage, a clear indication that the public is under-protected. If anything unfortunate happens to the main income earner of a family, their loved ones may face dire financial consequences. That's why it is vitally important to review your family's insurance coverage regularly so as to maintain a robust defence against life's uncertainties.

Insurance claims – better understanding means better prevention

Based on HSBC Life claims data¹, the common serious diseases in Hong Kong include:



Pay attention to death and critical illness benefit amount paid¹

Type of claim	Average benefit amount paid per policy	Highest single-case claim settlement amount (Cases)
Death benefit	HKD1,156,000	HKD234 million (Heart disease resulting in death)
Critical illness benefit	HKD776,000	HKD10.6 million (Parkinson's disease)



Claims fulfilment overview¹

Type of claim	Average time needed for benefit payment	Claims approval rate
Death benefit	3 working days	Over 99% ✓
Critical illness benefit		Over 97% ✓
Voluntary Health Insurance Scheme		Over 98% ✓

1. 2023 HSBC Life Claims Report, this study is limited to Hong Kong cases only. The settlement amount and claims approval rate are for reference only. Actual coverage and settlement amount differs from case to case and may be higher or lower. Please refer to the provisions and terms and conditions of the relevant policy.

2. Due to the rounding of numbers, the total sum of certain figures may not equal 100%.



Spotlight on urban living and chronic illnesses

The World Health Organization reports that non-communicable diseases (also known as chronic diseases) are responsible for 41 million deaths worldwide each year, or 74% of all deaths, making them a serious health threat across the globe³.

Generally, chronic illnesses are medical conditions that persist for a long period of time while deteriorating gradually. Examples include high blood pressure, diabetes, asthma, some cancers, cardiovascular diseases, mental disorders, etc.

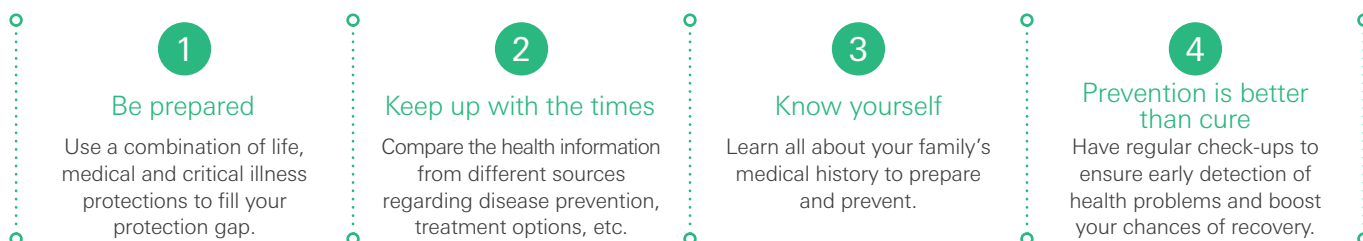
Social and economic developments have led to various lifestyle changes in Macau. For instance, office workers now spend their days sitting and don't have enough exercise, and increasing numbers of people are forgoing home-cooked meals in favour of takeout food. It is well-documented that unhealthy lifestyle habits may increase the risk of numerous chronic diseases.

According to official estimates, chronic diseases are having a serious impact on Macau people's health. Annually, over 70% of deaths in Macau are related to chronic diseases⁴. Data from the Statistics and Census Service indicate that, in 2021, cardiovascular diseases, diabetes, cancer or chronic lower tract respiratory diseases accounted for 66% of all deaths in Macau, which translated to a mortality rate of 224 per 100,000 people. Clearly, Macau citizens should be especially alert to the health threats posed by common diseases of affluence.

In 2022, the Statistics and Census Service conducted the Survey on Public Health and Medical Consultation. One of its key findings was that approximately one quarter of the over-16 population in Macau suffer from a chronic disease. It is therefore perhaps not surprising that the demand for medical services has been consistently on the rise. From 2009 to 2019, the number of times Macau people had to access medical services increased by nearly 60%⁵. In 2016, however, Macau Health Survey found that a large number of citizens, especially young people, were not up-to-date on their own health status, nor were they sufficiently health-conscious. Many had the erroneous impression that chronic diseases appear only in old age, and did not keep track of key health indices such as blood pressure, sugar and lipids⁵.

4 key prevention tactics

In view of the issues, claim statistics and health threats outlined above, the following tips can prove useful:



3. World Health Organization: Non-communicable Diseases (16 September 2023).

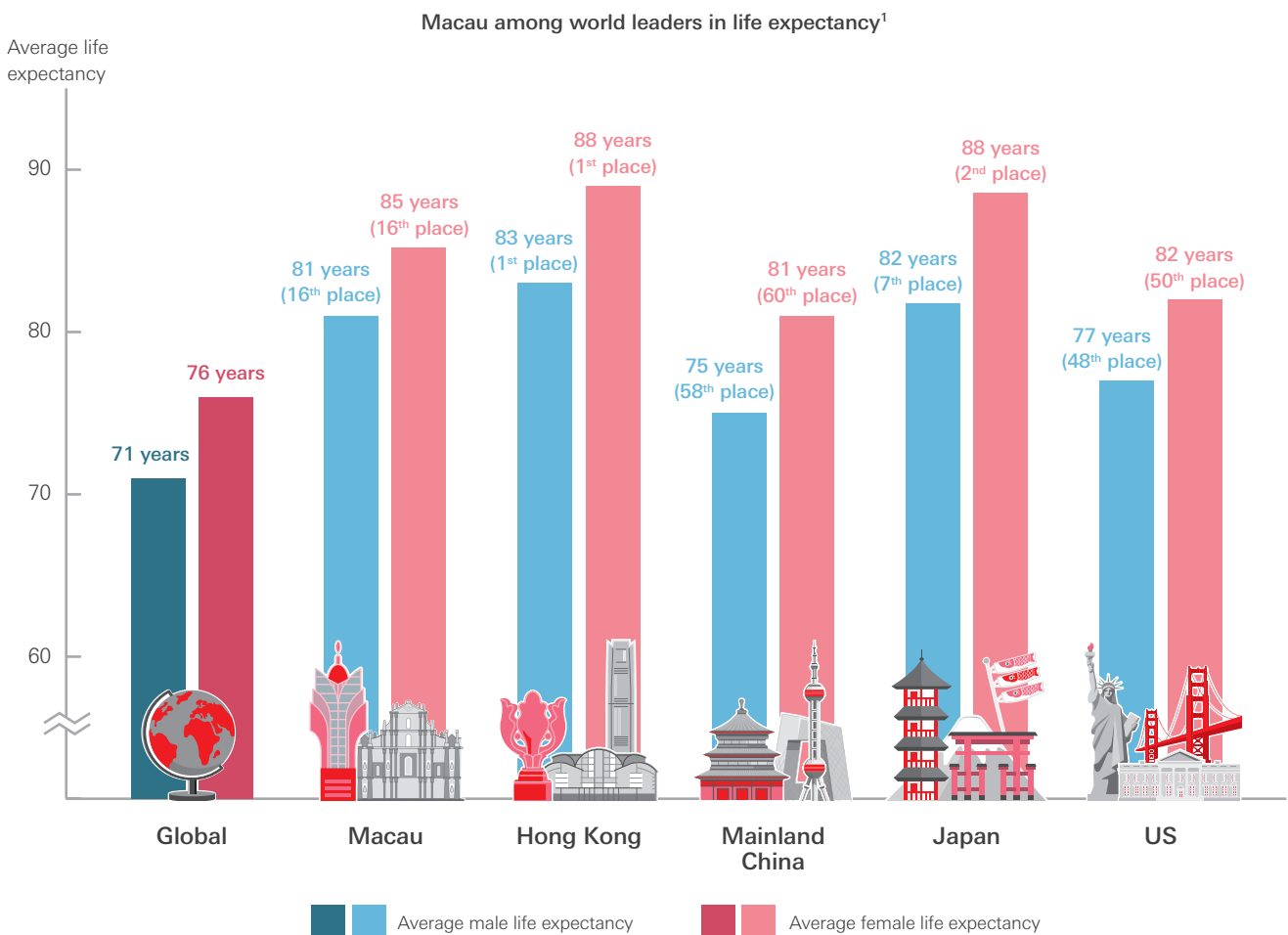
4. Macau SAR Government Portal: Committee on Prevention and Control of Chronic Diseases Convenes 2023 Working Session (7 November 2023).

5. Government Information Bureau of the Macau SAR: Health Services Bureau implements precise measures centered on residents' health (October 2024).

Longer life expectancy, higher medical expenses

If there were a longevity contest, Macau would be a perennial front-runner. Indeed, both the men and women in Macau have a life expectancy that far surpasses the global average.

Statistics show that Macau people have an average lifespan of 83 years, which earned them a 15th place ranking in the world in 2024¹. Assuming retirement at the age of 60, Macau people may need to build up a financial reserve that would be sufficient for more than 20 years of retirement life and medical expenses. Needless to say, early planning is essential.



Live long, stay healthy

As the World Health Organization pointed out years ago², “Increased longevity without quality of life is an empty prize. Health expectancy (average number of years that a person can expect to live in ‘full health’) is more important than life expectancy.”

Globally, the average health expectancy is only 62 years³. Since Macau people have an average life expectancy of 83 years¹, they may face a period of over 20 years when their health is in decline. If one lives long but remains unhealthy, suffering from chronic illnesses that lead to long periods of bed rest or even loss of mobility, it will severely impact the quality of life. Therefore, health and longevity are inseparable core values.

1. Worldometer: Life Expectancy of the World Population.
 2. World Health Organization: The World Health Report 1997 (20 March 1997).
 3. World Health Organization: Healthy life expectancy at birth (2 August 2024).

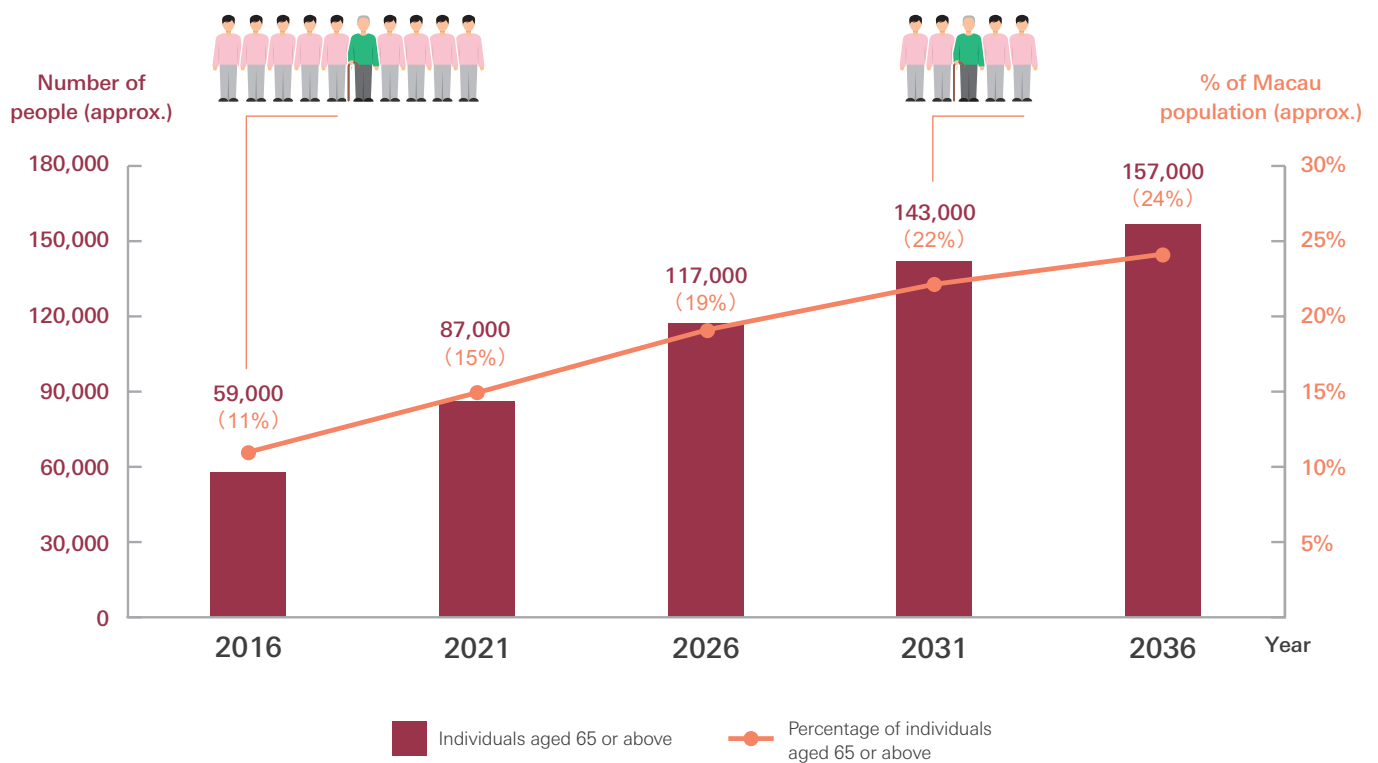


Population ageing set to accelerate over the next 20 years

Longevity can be a double-edged sword. While it is no doubt a blessing, it can also give rise to potential problems for both society and the individual. Data from the Statistics and Census Service show that Macau's population is rapidly ageing - the number of seniors aged 65 or above is expected to rise from 59,000 in 2016 to 157,000 in 2036⁴. That means, based on a population of 690,000, around 1 in every 4 Macau people will be an elderly in little over 10 years.

Macau is, however, experiencing a severe shortage of doctors. Currently, there are approximately 2.9 doctors for every 1,000 citizens, fewer than in other developed countries (3.2 to 3.9 doctors)⁶. Macau is therefore ill-equipped to meet greater demand for medical services.

Population ageing in Macau⁵



4. Statistics and Census Service: Population ageing – trends and challenges (August 2014).

5. Statistics and Census Service: Population statistics (3rd Quarter, 2024).

6. Macau SAR Legislative Assembly: Written Interpellations (25 October 2023).

Medical costs on an upward spiral

When considering the price of longevity, medical expenses are one of the major factors that need to be taken into account. According to Statistics and Census Service data, medical expenses reported for May 2024 represented a year-on-year increase of 2.76%¹. For the average Macau person, that clearly signals an ever heavier healthcare burden, one that could exhaust their savings if they don't start building a retirement reserve as early as possible.

Reference costs: private hospitals

Macau citizens can choose to access medical services locally, or they can do so at a private hospital or clinic in Hong Kong. The latter would, however, incur higher costs. Actual costs depend on the medical problem and the treatment required. For cancer and common chronic diseases, the treatment costs below can be referenced for budgeting purposes.

Disease	Treatment	Reference cost (MOP ²)
Colorectal cancer	Endoscopy and polypectomy	84,900 ³
	Laparoscopic colectomy	287,000 ³
	Monthly targeted therapy	20,600 – 146,300 ⁴
Breast cancer	Lumpectomy	131,600 ³
	Breast reconstruction surgery	154,500 ⁵
	Monthly targeted therapy	20,600 – 84,500 ⁴
Parkinson's disease	Deep brain stimulation	206,000 ⁶
Coronary heart disease	Angioplasty (balloon angioplasty) and stenting	164,800 ⁷
Chronic obstructive pulmonary disease	Oxygen therapy unit (oxygen concentrator)	25,500 – 47,600 ⁸

1. Statistics and Census Service: Consumer Price index (May 2024).

2. Approximate MOP amounts are calculated based on the exchange rates determined by the Monetary Authority of Macau on 17 January 2025.

3. Hong Kong Adventist Hospital: Reference Charges for Common Surgical Procedures – data of standard room charges 2023.

4. MoneyHero: Targeted therapies/prices/side effects and eligibility requirements for government subsidy 2024 (27 June 2024).

5. Hong Kong Breast Cancer And Disease Centre: Breast Cancer Surgical Cost – Is it expensive? Covered by medical insurance?

6. Hong Kong Parkinson's Disease Foundation: Surgical treatment.

7. Hong Kong Adventist Hospital: Percutaneous Coronary Intervention (PCI) Subsidy Scheme (15 March 2022).

8. Medimart: Chronic Obstructive Pulmonary Disease.

Reference costs: rehabilitation

Chronic diseases require a long treatment and recovery journey. Even after surgery or other treatments, rehabilitation therapy is often needed. It is therefore important to include follow-up medical expenses in your budget. For instance, patients who have had a moderate or severe stroke are generally hospitalised for 3 to 5 months, at a cost of MOP560,000 to MOP930,000⁹. Rehabilitation may also require home physiotherapy, a caregiver or a nurse. Reference costs are as follows^{10,11}:

Medical and healthcare personnel	Typical charges (approx. MOP)
Physiotherapy	500
Home care	300/3 hours
Health care	250/hours



New routes to recovery

Faced with an array of challenging diseases such as the No.1 killer in Macau, cancer (2,571 new cases in 2021¹²), the medical community is not only relying on traditional treatments but pioneering new ones, bringing patients new hope with every new technological advance. Typically, though, the newer the technology, the higher the cost.

To treat liver cancer, the Li Ka Shing Faculty of Medicine of the University of Hong Kong has acquired the first **histotripsy system** in Asia, which uses targeted ultrasound waves to form microbubbles to disrupt and liquefy malignant tissue. This breakthrough technology represents a non-invasive, painless way to treat cancer. Moreover, liver cancer surgery can be completed in approximately 30 minutes, depending on the size of the tumour¹⁴. Since its certification by the US Food and Drug Administration in October 2023, the technology has already achieved very encouraging results in several hundred cancer cases¹³. Patients typically need only one histotripsy treatment session, which costs approximately USD8,000 (approximately MOP64,200²).

Another groundbreaking cancer treatment is **proton therapy**, which achieves significantly higher precision than traditional radiotherapy. By focusing proton beams on cancer cells without damaging the surrounding healthy tissue, this therapy reduces the risk of side effects and complications. Treatment for different parts of the body (5 to 30 sessions) costs approximately MOP211,400 to MOP687,900^{2,15}.

Precision Medicine for Cancer is another option that has been introduced in different parts of the world in recent years. It involves the use of DNA testing to determine the most appropriate type of medical intervention for the patient, thereby increasing cancer treatment efficacy. DNA testing costs between MOP3,100 to MOP30,900².

Neurostimulation – helping Parkinson’s disease patients move forward again

Parkinson’s disease is a degenerative neurological disorder. Patients suffer from muscle stiffness and tremors in the limbs, making it difficult to coordinate different parts of the body. As a result, patients can only move slowly and are prone to falls. Medical experts in Switzerland and France have teamed up to develop a breakthrough electronic device that is capable of implanting electrodes into a patient’s spinal cord. That makes it possible to send signals in the form of electric currents to the leg muscles directly to stimulate movement, thus helping the patient to regain mobility.

Even though more time is needed to test the efficacy and safety of the treatment before clinical trials can begin, experts are optimistic that this could be a giant step forward for medical technology, and welcome news for Parkinson’s disease patients worldwide and their families!

In the fight against intractable diseases, more and more new treatment options are emerging to ease the public’s worries. These developments also underline the importance of early planning. It is only by accumulating our financial capability over time that we will be able to access the widest possible range of treatment options when it becomes necessary.

9. EC Stroke Rehabilitation: Frequently Asked Questions.

10. University Hospital : Physiotherapist

11. Caritas Macau : Social Innovation (5 February 2025)

12. Macau SAR Government Portal: Health Services Bureau marks World Cancer Day with call for early cancer prevention efforts by local residents (3 February 2024).

13. University of Chicago: UChicago Medicine among the first to offer histotripsy for liver tumors (29 January 2024).

14. University of Hong Kong: Donation of Asia’s first world-class medical device to the HKU Li Ka Shing Faculty of Medicine (29 August 2024).

15. Hong Kong Sanatorium & Hospital: Proton Therapy Centre.

Older age demands stronger protection

Macau's population is ageing, and the shortages of doctors and hospital beds are worsening. That means many patients may need to turn to home care as part of their recovery and rehabilitation journey. Fortunately, the rapid development of smart technologies is making it possible for the medical community to use the insights yielded by patient data to improve efficiency. These technologies are also becoming increasingly pivotal in the effort to improve patients' quality of life and, in particular, to care for elderly patients.

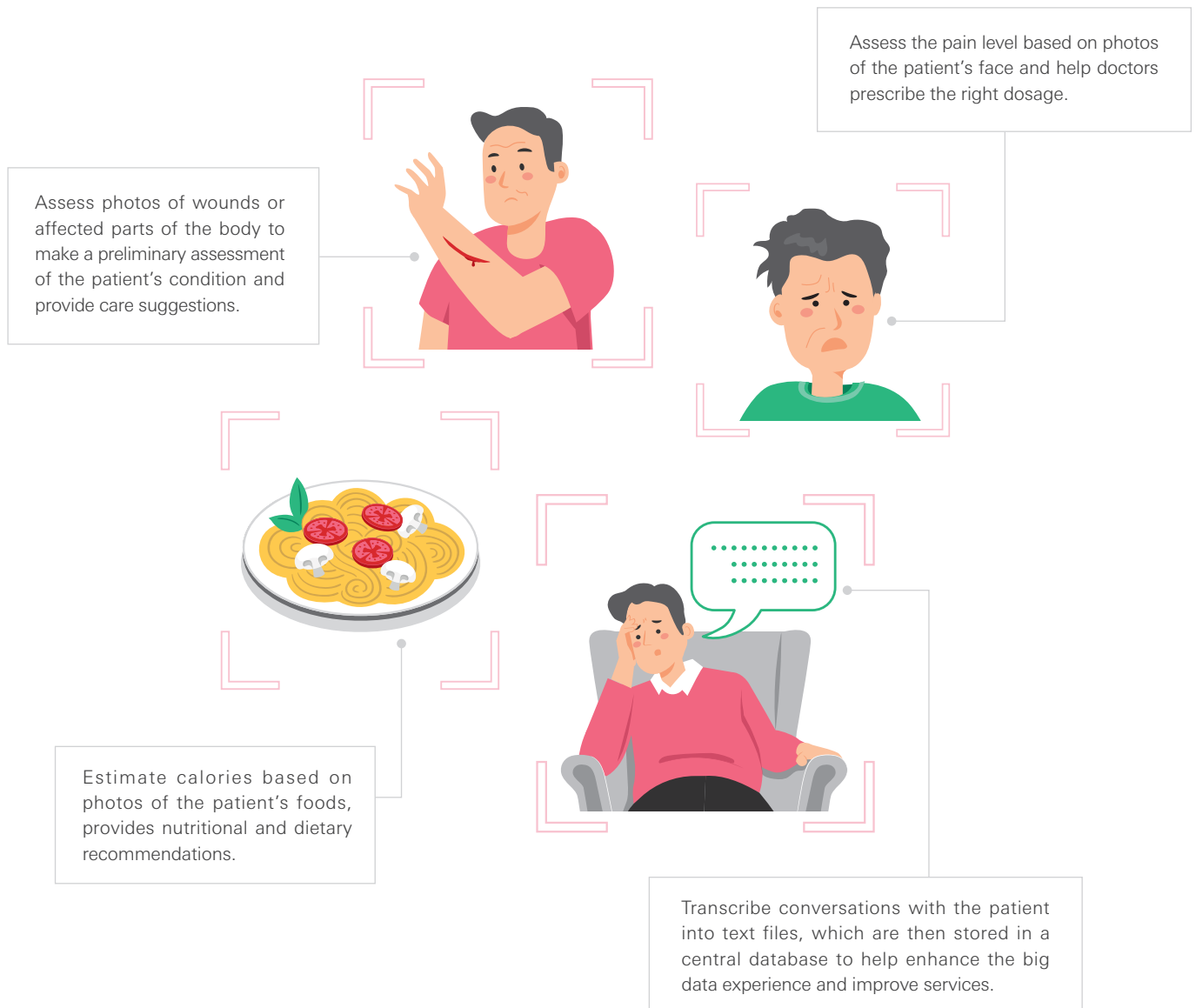
AI nurse answers questions remotely

In view of the fact that many people stayed at home for extended periods of time during the pandemic, a local home care service provider has launched a 24/7 AI nursing service through a newly developed app. The AI nurse stands by 24 hours a day to answer questions about health maintenance and care services, while the app is programmed to analyse over 10,000 scenarios and answer questions based on the patient's symptoms. If the patient requires home visits by a health professional or caregiver, the app can also provide referrals, thereby helping to reduce the burden on the public healthcare system.



Smart home care assistant

In the world of smart technology, it may soon be possible for you to receive health assessments by an AI assistant in the comfort of your own home or have other arrangements made on your behalf¹:



Observing elderlies' daily life to prevent falls

Falling is one of the biggest threats faced by the elderly. Physiotherapists working in hospitals or elderly care homes can now use an AI movement monitoring system to help prevent falls. Through the system's computer and cameras, they can track a senior's movements, the body's centre of gravity, and the angles of the limbs. Subsequent AI analysis of the subject's balance, stability and agility makes it possible to assess the risk of falling and help prevent various muscular and bone diseases.

By providing physiotherapists with data and detailed reports, the system helps reduce consultation time, so therapists can focus on improving patients' postures and strengthening their muscles to prevent falls.

1. China Medical University Hospital: US HIMSS Smart Hospital DHI Assessment (22 February 2024).

Laser + vibration: helping Parkinson's disease patients take the next step

Patients with Parkinson's disease typically suffer from impaired balance and sway unsteadily while walking, which makes them prone to falls. A new walking aid uses an app and three cues to help Parkinson's disease patients: a laser line stimulates the user to start a movement, while a metronome and the vibration in the handles support the walking rhythm. Together, these cues enable the patient to re-learn coordination and regain confidence¹.



Parkinson's disease walking aid reference price: USD2,000² (approx. MOP16,000³)

Wearable smart technology for assessing risk of sleep apnea/stroke

Did you know you can assess your health simply by wearing a ring to bed? Linked to a remote health monitoring system, the new smart ring allows the user to assess their sleep apnea at home, and identify the causes of their sleeplessness and chronic stress before seeking treatment. This has the benefit of greatly reducing the time needed for in-hospital observation.



Smart ring reference price: MOP4,700^{3,4}

Another device currently under development is the smart cardiovascular monitor, comprising a blood circulation sensor, data router and inflatable blood pressure watch. It's like having an AI health expert on your wrist — you get personalised healthcare and medical recommendations based on real-time data to help prevent stroke⁵.

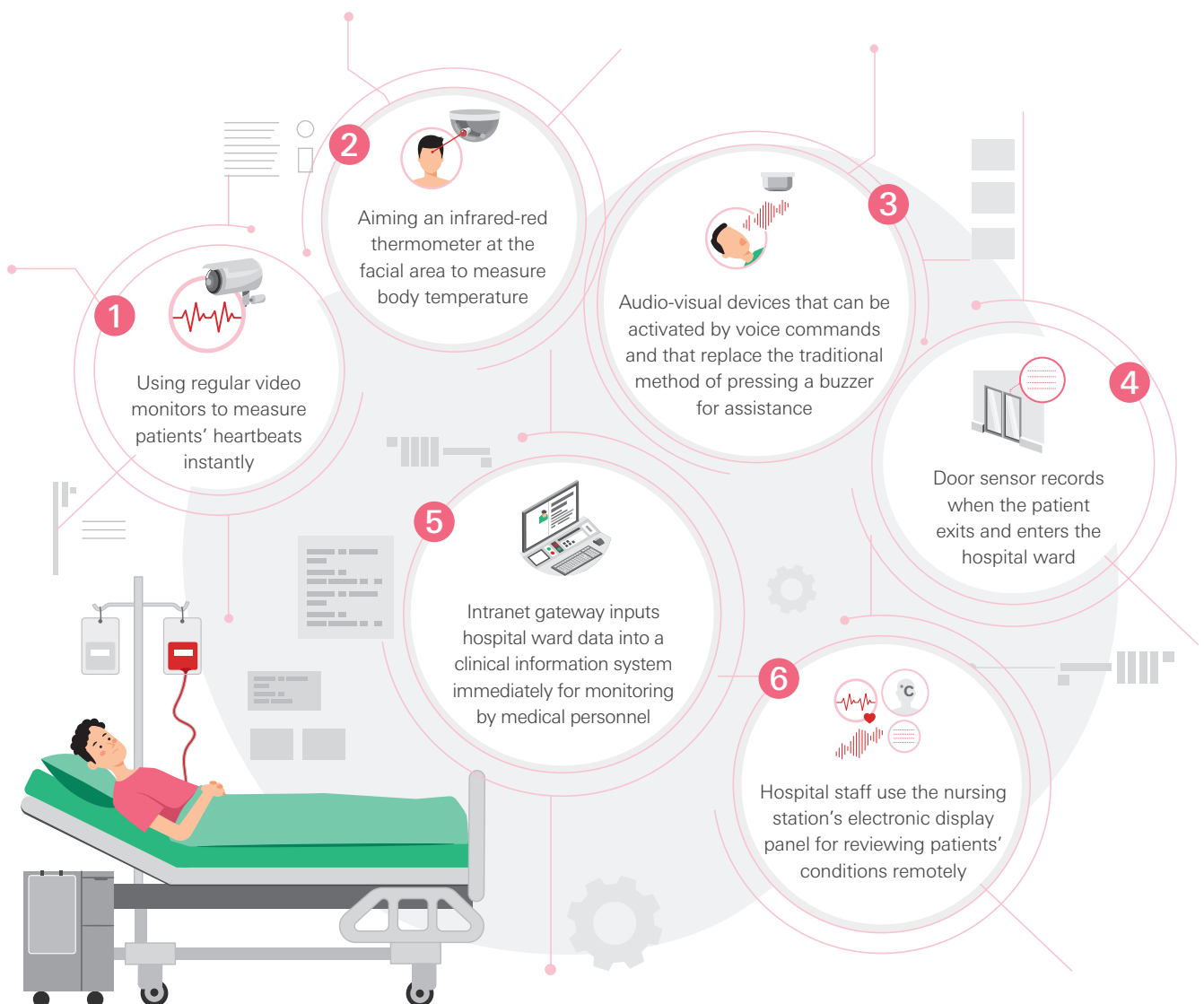


1. The Hong Kong Council of Social Service: Walking aid with special features.
 2. Rollz: Rollz Motion Rhythm.
 3. Approximate MOP amounts are calculated based on the exchange rates determined by the Monetary Authority of Macau on 17 January 2025.
 4. Belun Technology: Belun Ring.
 5. City University of Hong Kong: Angel Fund Start-ups.

What will we find in the hospital ward of the future?

In addition to the above innovations, smart technologies are also being incorporated into the hospital ward of the future. During the pandemic, the number of confirmed cases in Israel reached relatively high levels. To reduce medical personnel's risk of infection, a local hospital installed monitors and sensory transmitters near sickbeds and under mattresses to track changes in patients' physical conditions. If AI detected an anomaly, it would notify the medical team 4 to 6 hours before the condition deteriorated, thus helping to boost the patient's chances of survival⁶.

Taipei Medical School Hospital⁷, the winner of many industry awards, emphasises contactless pandemic prevention measures and advanced technology. It has introduced 6 key hospital ward installations, which may become the blueprint for equipping the smart hospital of the future to cope with the global health crises identified by the World Health Organization.



To cater to the health needs of senior citizens, many individuals and entities are offering medical and lifestyle enhancements by improving services and developing new technologies. A large number of new concepts have already been turned into reality. Effective medical solutions, however, take time to develop, and many are still in the testing or finetuning stages.

6. Motherapp: Technologies that change the way we live (15 June 2022).

7. Wikipedia: Taipei Medical University Hospital (17 March 2024).

Health maintenance is persistence

Being healthy is not merely the absence of disease or infirmity. The World Health Organization provides a clear and concise definition, “Health is a state of complete physical, mental and social well-being¹”.

However, there are many factors in our daily life that could undermine that well-being by causing health problems. Germs, bacteria, carcinogens and cancer cells are not the only potential culprits; bad lifestyle choices are equally responsible. On the other hand, developing a healthy lifestyle and taking time out of your busy schedule for daily health maintenance is a recipe for good health.

Mental illness: fighting a long-term battle

Referencing the statistical figures of Hong Kong, a neighbouring city to Macau, 1 out of every 7 Hong Kong people has had or will have one of the main mental disorders, the most common of which are anxiety and depression².

Hiding depression with a smile?

A mood disorder does not always show itself for all the world to see. Some people hide it well. Always smiling on social media or when they are with friends and family, these people may in fact often feel melancholy, dejected and helpless when they are alone. Their smiles merely mask the sadness inside. Known as smiling depression or atypical depression, this condition has been the subject of scholarly interest since 1959³.

Smiling depression has not yet been officially classified as a diagnosable mental illness. That may partly be due to the fact that sufferers are in the habit of hiding their true selves behind a public persona, and symptoms are therefore difficult to detect. In these cases, a mental breakdown may be very serious. Generally, the signs of smiling depression are as listed on the right:



Generally speaking, both depression and atypical depression can be alleviated through treatment, but the person with condition must first recognise that they have a problem. The care and support of family and friends would also be helpful. Seeking professional help as early as possible is a must. Currently, clinical psychologists charge MOP1,000 to MOP3,000 per hour^{4,5}, depending on the patient's condition and the services needed. Call hospitals or clinics for enquiry.

1. Institute of Mental Health, Castle Peak Hospital: How to achieve mental health and overcome mental illness?

2. Mind HK: Mental health in Hong Kong.

3. drlamchun.com.hk: Smiling depression.

4. Wellness Travellers: Comparing charges for mental health services (20 October 2023).

5. Approximate MOP amounts are calculated based on the exchange rates determined by the Monetary Authority of Macau on 17 January 2025.

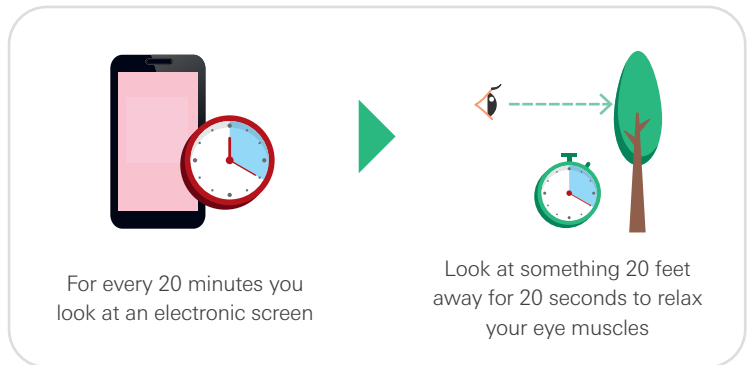
Codes for staying healthy

Good lifestyle habits go a long way towards maintaining physical, mental and social health. These habits include: keeping regular hours, making informed dietary choices, exercising often. A healthy social life and me time are also must-haves. The codes below are a good start to a healthy lifestyle.

Habit #1 20-20-20 rule for preventing eye strain⁶

In the digital age, adults and children alike spend a large part of each day looking at electronic screens, whether for work, study, communication or recreation. Our eyes are constantly overworked by an array of seemingly indispensable devices, from computer, TV, mobile phone to tablet. That's why it's so important for people of all ages to protect their eyesight.

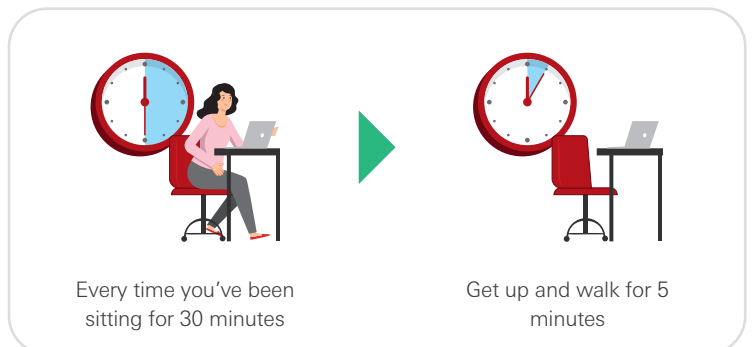
The 20-20-20 rule is easy to remember and follow, and is recommended by the American Optometric Association and the American Academy of Optometry. If you want to relieve eye fatigue and dry eyes, it's definitely worth a try. Eye health requirements differ from person to person, however. If in doubt, please seek professional advice.



Habit #2 Leave your chair every half an hour⁷

Overseas sport science researchers have found that sitting for several consecutive hours each day increases the risk of diabetes, heart disease, dementia and cancer. Fortunately, their research also indicates that maintaining a simple habit can offset the potentially serious health consequences of sitting for long periods.

This habit can reduce your post-meal peak glucose level by almost 60%, and your blood pressure by 4% to 5%. It can also help eliminate fatigue and enhance your mood for better productivity! If in doubt, please seek professional advice.

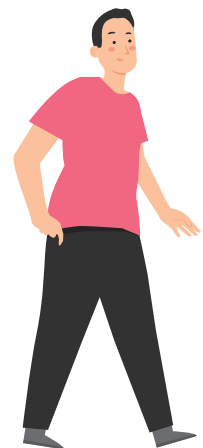


Habit #3 Take a walk every day

Many scientists in other countries have been studying the relationship between walking and longevity. The prevailing view is that walking is a key habit that contributes to healthy living. Keep in mind, though, that the appropriate step count is different for everyone, depending on age and health status, and can range from several thousands to 10,000⁸. If you have doubts, please seek professional advice.

5 major benefits of frequent walking⁹:

1. Maintains suitable body weight
2. Improves cardiovascular and pulmonary fitness
3. Strengthens muscles and bones
4. Lowers the risk of chronic diseases (including high blood pressure, type 2 diabetes, cardiovascular diseases, some forms of cancer, etc.)
5. Relieves symptoms of anxiety and depression



6. Medical News Today: Does the 20-20-20 rule prevent eye strain? (11 January 2024)
 7. The Conversation: Sitting all day is terrible for your health (13 January 2023).
 8. UNC School of Medicine: How many steps lead to longevity? (15 March 2022).
 9. Department of Health: Health benefits of walking (2023).

Habit #4

Eat to 70% full¹

Bad dietary habits can lead to indigestion and negatively impacts health over the long run. Eating to 70% full at each meal helps promote digestive health and facilitates the absorption of needed nutrients. Maintaining a balanced diet and being mindful of the origins of different food items is also key.

How can you develop a 70% full habit? Below are several useful tips:



The food pyramid² below and other related information show the key building blocks of a balanced diet.

- 1 Consume with moderation: red meat, butter, refined grains, beverages or desserts containing sugar, salt
- 2 Milk and dairy products (1 or 2 servings daily), vitamin D or calcium supplements
- 3 Nuts, seeds, beans, bean curd
- 4 Fish, poultry, eggs
- 5 Vegetables, fruits
- 6 Healthy fats, oil
- 7 Whole grains (such as brown rice, oat)
- 8 Exercise regularly and control body weight

Each person's physical condition is different. If you have questions about maintaining a healthy diet, please seek professional advice.



Self-selected:
Moderate alcohol consumption (not suitable for all individuals)

1. Department of Health: Dyspepsia.
2. Harvard University: Healthy Eating Pyramid.

Habit #5**Sleep 7 to 9 hours a day³**

Not getting enough sleep on a regular basis can lead to lower productivity and mood disorders. Your immune system may also be weakened, making you vulnerable to diseases. Experts say people aged 18 or above should sleep for approximately 7 to 9 hours each day. Each person has a different biological clock, and the actual amount of sleep needed varies. If you have doubts, please seek professional advice.

Our brain is not a computer. We can't put it in sleep mode anytime we want. The 10 tips below, however, may help you sleep better:

- 1 Go to bed at approximately the same time, whether on weekdays or holidays.
- 2 Take a warm bath or foot bath before bed.
- 3 Turn off the lights at bedtime to keep the room dark.
- 4 Keep your sleep environment quiet and at an appropriate temperature.
- 5 Don't work or study in bed.
- 6 Refrain from looking at electronic screens during the hour before bedtime.
- 7 Avoid eating too much before sleeping.
- 8 Minimise intense exercise during the 2 hours before bed.
- 9 Avoid smoking and drinking alcohol or coffee during the 4 to 6 hours before bedtime.
- 10 Don't think about what you need to do tomorrow. Relax, sleep tight.

**Habit #6****20 minutes of me-time each day⁴**

More and more people are taking up meditation and various forms of yoga, and becoming aware of the importance of spending time alone. Experts in the US point out that 20 minutes of distraction-free me time each day can help relieve stress and relax your mind. The benefits for your brain and psychological health are as follows:

The brain may automatically repair the cognitive system, restoring concentration and thinking ability.

It can stimulate the cranial nerves to improve memory and learning ability, or relieve depression.

Relive and embrace the different feelings you've had that day. This can help you become more empathetic, thankful and optimistic.

There is no shortage of courses and programmes designed to help you practice hesychasm and mindfulness, including singing bowl therapist certificate courses that combine meditation, singing bowl therapy, contemplation and the precepts of yoga to help you heal yourself and others. If you have doubts, please seek professional advice.

3. Department of Psychology, University of Hong Kong: A City Asleep.

4. University of Rochester: The Power of Meditation.

Case study

Enjoying flexible protection through all-round medical coverage

Kay (aged 35¹) and her husband are both white-collar workers. Their son was born recently. She has a busy work schedule, which requires her to sit for long stretches at the office and leaves her no time for exercise. She is therefore worried that her unhealthy lifestyle would increase her risk of health problems. Even though she already has a group medical policy, she is looking to strengthen her coverage for hospitalisation and surgical expenses. A newborn son means a larger family budget. She wants to ensure that, if she ever becomes seriously ill, the unexpected medical expenses will not become a heavy burden for her family.

She decides to take out **HSBC Flexi Medical Insurance Plan ("HSBC Flexi") – Silver level**, with an annual deductible of MOP50,000 and a standard annual premium of MOP4,202.

Policyholder & life insured	Kay (non-smoker)	Issue age¹	35 ¹
Benefit level	Silver	Annual deductible amount	MOP50,000
Annual premium	MOP4,202	Annual benefit limit	MOP25,000,000



Remarks:

- The above examples are hypothetical, non-guaranteed and for illustrative purposes only.
1. Unless otherwise specified, all ages mentioned in this product brochure refer to the age of the insured person on his or her last birthday.



Kay

Age¹ 40

Cancer treatment

During a routine check-up, Kay is diagnosed with early-stage breast cancer. As the tumor is relatively small, she decides to have breast-conserving surgery (lumpectomy) to remove only the malignant tissue, then undergo chemotherapy to eliminate the rest of the cancer cells. She chooses to receive her treatment in a private hospital in Hong Kong.



Using two medical policies flexibly

Hospitalisation
(semi-private room)
and treatment
approx. MOP266,500



Deductible MOP50,000
(covered by group
medical benefit)



Remaining expenses
MOP216,500
(fully covered by
HSBC Flexi²)



Before her hospital admission, Kay has applied for pre-authorization for **cashless arrangement**, which makes it unnecessary for her to pre-pay her medical expenses³, thus giving her less to worry about.

Age¹ 60

Retirement

Upon her retirement, Kay's group medical coverage is terminated. She decides to retain her HSBC Flexi policy, which will keep her protected in her later years so her family won't be burdened by her medical expenses.

Age¹ 61

Treatment for an injury

She becomes an outdoor enthusiast in her retirement. One time, while on a hike, she injures her ligament.



Worry-free recovery journey

Anterior Cruciate Ligament
(ACL) Reconstruction surgery
approx. MOP218,600



Deductible
MOP50,000



Remaining expenses
MOP168,600
(fully covered by HSBC Flexi²)



She receives regular physiotherapy; her policy covers physiotherapy expenses of up to MOP6,000 per policy year.

Since HSBC Flexi Medical Insurance Plan is guaranteed renewable until the age of 100¹, it's designed to provide long-term protection.



2. Full coverage shall mean the actual amount of eligible expenses and other expenses charged and payable in accordance with the terms and benefits of this policy.
3. A life insured who has obtained pre-authorization is not required to pre-pay medical expenses in Hong Kong. HSBC Life reserves the right of final decision with regard to any application for pre-approval or Cashless Arrangement. For more details of the pre-authorization, medical claim procedures and value-added services, please refer to the User Guide on www.hsbc.com.mo (HSBC Macau > Insurance > HSBC Flexi Medical Insurance Plan).

Case study

Self-chosen coverage, lifetime protection

Richard, 45¹, is the owner of a restaurant group. His wife, Katherine, is a homemaker. They have an 8-year-old¹ son, Josh, a bright child who is already a lot of potential. Richard plans to send him overseas in the future so he can complete his education and pursue his dreams.

As the family's sole income earner, Richard wants an insurance policy that can provide his loved ones with the financial protection they would need to maintain their quality of life if he ever becomes seriously ill or passes away. Ideally, the policy would also provide him and his wife with good potential returns in their golden years, while giving him the flexibility to pass the policy on to their son.

He decides to take out **HSBC Health Goal Insurance Plan ("HSBC Health Goal")**:

Policyholder & life insured	Richard (non-smoker)	Issue age¹	45 ¹
Annual premium	USD100,000	Premium payment period	3 years
Total Basic Plan Premium Paid²	USD300,000		

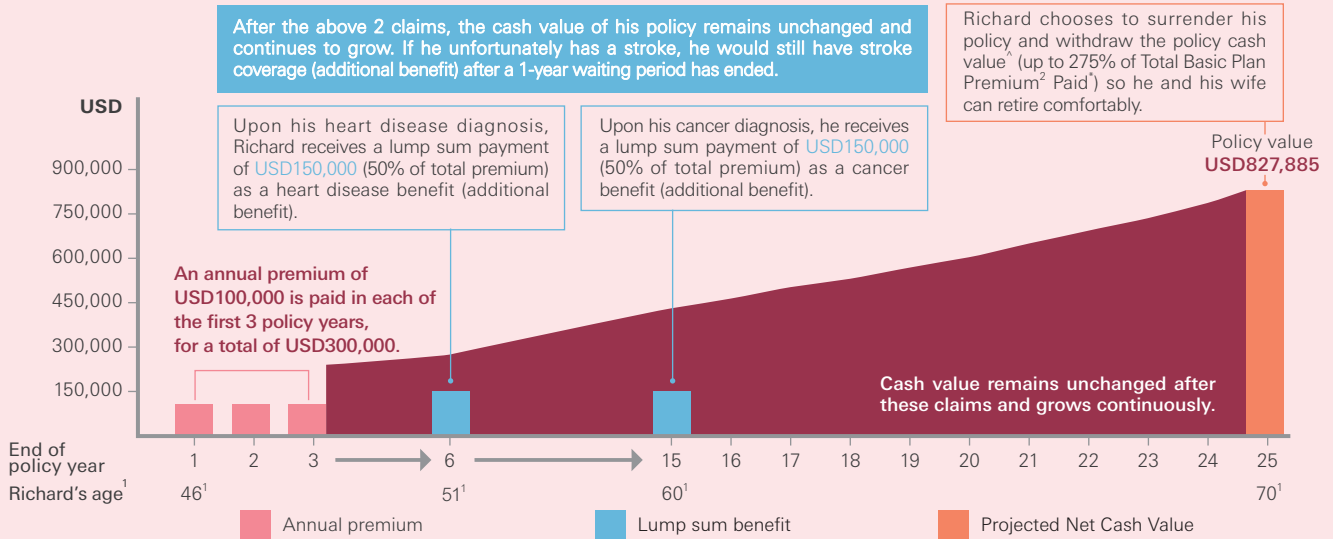


Remarks

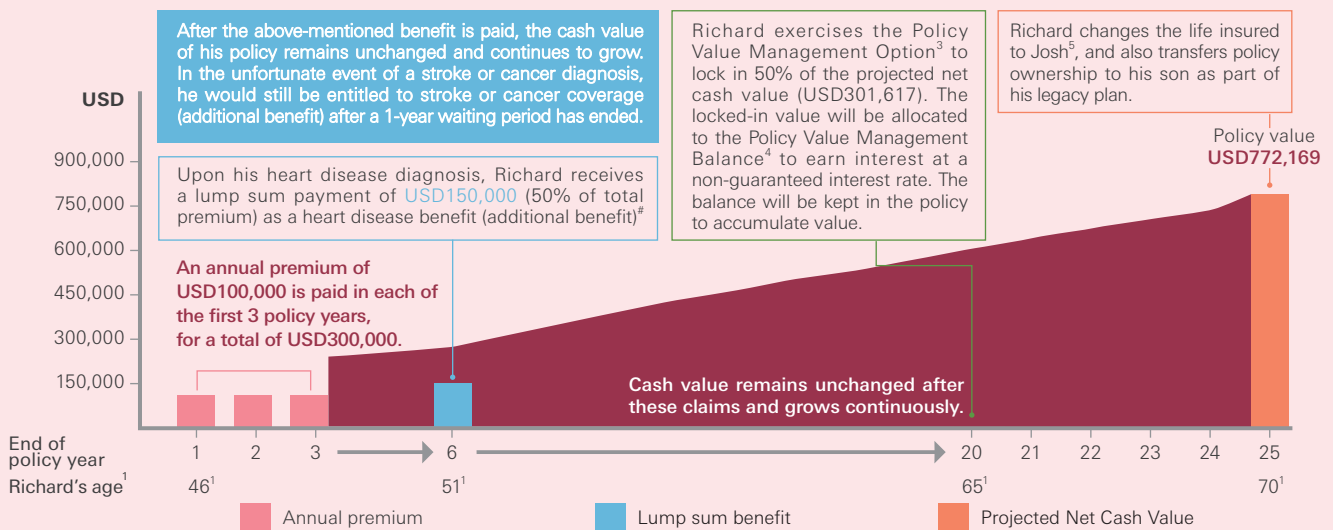
- The above examples are hypothetical, non-guaranteed and for illustrative purposes only.
- Age means the age of the life insured or the policyholder where applicable at his/her next birthday.
 - Total Basic Plan Premium Paid refers to the Total Basic Plan Premium Paid due for the basic plan (whether or not actually paid) as of the date of death of the life insured. If you choose to prepay the required premiums, the balance of the prepaid premiums will not be counted as the Total basic plan premiums paid until such part of premium is due.

Scenario 1:

- Richard has paid all the premiums by the end of the 3rd policy year.
- When he is 51¹, he is diagnosed with heart disease, and when he is 60¹, he is diagnosed with cancer. After undergoing appropriate treatments, he recovers from both illnesses.
- When Richard is 70¹, Josh is 33¹ and is enjoying a successful career. Richard decides to surrender his policy and collect the Net Cash Value, which will cover living expenses for himself and his wife in their retirement.

**Scenario 2:**

- Richard has paid all the premiums by the end of the 3rd policy year.
- When he is 51¹, Richard is diagnosed with heart disease. After receiving treatment, he makes a full recovery.
- When he is 65¹, as a result of market fluctuations, he worries that an uncertain market outlook and a sluggish economy might impact his policy's value. He decides to exercise the Policy Value Management Option^{3,4} to lock in a portion of the projected Net Cash Value, then let it accumulate interest at a non-guaranteed interest rate. This way, his policy's value will be protected and his risk exposure reduced.
- When he is 70¹, Richard changes the life insured to his son⁵, and also transfers the policy to Josh to make him the new policyholder as part of his legacy plan.



As claims for critical illness has been made under this policy, such Critical Illness Benefits feature shall cease to operate immediately upon the exercising of the change of life insured option.

[^] Projected Net Cash Value (USD827,885): Guaranteed Cash Value (USD283,680) + non-guaranteed Special Bonus⁶ (USD544,205).

^{*} Projected Net Cash Value as a multiple of Total Basic Plan Premium Paid²: Projected Net Cash Value (USD827,885)/Total Basic Plan Premium Paid² (USD300,000) = 275% (2.7 times).

³ You may apply to exercise this Policy Value Management Option to allocate a portion of the Net Cash Value as of the date of such request is processed, to the Policy Value Management Balance provided that the policy has been in force for 20 policy years or more; all premiums are paid up when due; and there is no outstanding policy loans, interest and premiums under your Policy. The exercise of the Policy Value Management Option is subject to the minimum amount requirements on (i) the Net Cash Value to be allocated per transaction; and (ii) the Notional Amount after the exercise of this option. Such minimum amount requirements are determined by us from time to time without prior notice to policyholder.

⁴ Policy Value Management Balance means the amount of the accumulation of the proceeds from exercising the Policy Value Management Option which is allocated to your Policy to accumulate at such non-guaranteed interest rate(s) that are determined at our discretion from time to time, and less any previously withdrawn amounts.

⁵ Each policyholder is entitled to the change of life insured of policy for up to three times after the third policy year or after the end of the premium payment period provided all premiums are fully paid, whichever is later. Critical Illness Benefits will be transferred together with the basic plan to the new life insured provided no claims has been made under the Critical Illness Benefits by the original life insured. However, if any of these benefits has been claimed by the original life insured before the acceptance of change of life insured, the Critical Illness Benefits under this policy shall cease to operate for the new life insured. Change of life insured is subject to evidence of insurability and approval by the Company which is based on the underwriting conditions of the life insured. Any such request will be assessed on case-by-case basis and is at our discretion, with consideration of multiple factors, including but not limited to the change in underlying claim risk, change in policy term, latest economic outlook; and is at our discretion.

⁶ Special Bonus (if any) is not guaranteed; the size of the Special Bonus and whether it is payable depends on factors including but not limited to: The investment performance of the assets supporting the policies; Claims, lapses, and expenses experiences; and The long-term expected future performance of the investment and other experiences mentioned above. If the performance over the long term is better than expected, the Special Bonus paid would increase. If performance is below expectation, the Special Bonus paid would decrease.

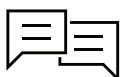
Featured interview

AI medical innovation – Enabling smartphone-based, real-time detection of heart valve diseases



Professor Joshua W.K. Ho Assistant Dean (Innovation & Technology Transfer), Li Ka Shing Faculty of Medicine, The University of Hong Kong
Lead Scientist, Laboratory of Data Discovery for Health

AI is enabling breakthroughs in many different areas, including that of medical technology. Examples include the use of big data to provide instant health assessment, and even to turn smartphones into medical-grade stethoscopes for making preliminary investigations into potential heart valve diseases. What are the benefits of these smart health technologies? Professor Joshua Ho shares his insights and outlook.



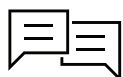
What is heart valve disease? Why is early detection important?

The heart has four valves – aortic valve, bicuspid valve, pulmonary valve and tricuspid valve. Their primary function is to maintain the unidirectional flow of blood. That is, they open to allow blood to pass through, and close to prevent it from flowing backward.

The heart valves' function is impaired when they have become narrowed (valve stenosis) or cannot close properly (valve regurgitation). Stenosis means the valves are unable to fully open because they have thickened and

calcified. Regurgitation refers to the valves' inability to close completely, leading to the backward flow of blood. Common causes of heart valve disease include age-related functional decline and rheumatic heart disease.

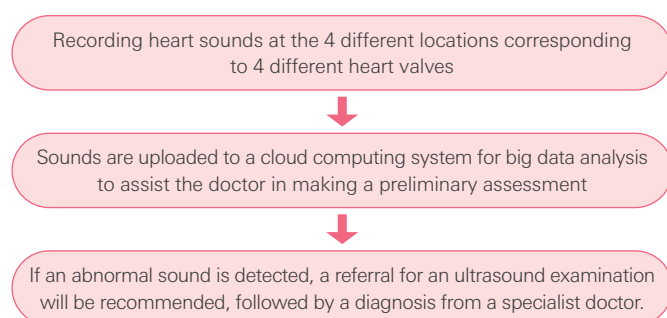
Heart valve disease may have no symptoms during the early stages, and can only be detected by a doctor using a stethoscope. As the condition progresses, the patient may experience difficulty breathing, swelling of ankles and feet, chest pains, dizziness, etc. People diagnosed with the disease must be examined by a cardiologist through an echocardiogram. Some may need open-heart surgery for heart valve repair, or other transcatheter procedures.



Why is it possible to detect heart valve problems by listening to heart sounds?

Most people not only have a regular heart rate, but each heartbeat should make a clear and distinct sound. If the heart valves can't open and close properly, we may hear abnormal sounds like heart murmurs. Doctors use a stethoscope to listen to a patient's heart sounds. If there are any aberrations, ultrasound images can then be taken for investigative and diagnostic purposes.

A phone installed with our Vitogram® software is like a portable stethoscope:



Currently, the technology has an accuracy of 81%, close to the level achieved by a doctor using a medical-grade stethoscope. This breakthrough technology makes it much easier to find "hidden" heart valve disease patients in the community, so they can be alerted to the problem and seek medical help as soon as possible. The public can also use it for regular self-examination. This can help prevent the disease from developing into a more serious heart problem, thus reducing the risk associated with the required surgical procedure and the impact on recovery.



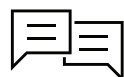
Does the phone require a quiet environment to record? What kind of people need this software? Who is it suitable and unsuitable for?

The quieter, the better, of course, but the software does work in environments with typical ambient sounds. It includes a built-in denoising function that can minimise interferences, including human voices and the sounds of the phone rubbing against the body. The results of trials in public hospital wards were quite good.

Operating Vitogram® is simple and safe; it can be used for self-examination by people who have:

- 1 Specific symptoms (including difficulty breathing, swelling of ankles and feet, chest pains, dizziness, etc.)
- 2 A family medical history
- 3 High blood pressure or diabetes

Individuals who have an implanted ventricular assist device, pacemaker, or defibrillator are not suitable for using this software.



When will the software be launched?

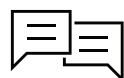
We are currently in talks with different medical organisations about incorporating this AI software into in-hospital or remote consultation programmes. This would allow users to receive appropriate guidance and follow-up care by medical personnel. And combining it with regular check-ups and diagnosis by a specialist would ensure even better efficacy. We are targeting the end of 2024 or 2025 for the launch.



What was the catalyst that led you to develop AI software?

I worked at a heart research institute in Australia for many years. After returning to Hong Kong in late 2018, I wanted to focus on developing innovative solutions in medical data collection, for instance, through the use of mobile phones and AI. The next year, 2019, marked the beginning of the COVID-19 pandemic, during which it was difficult for many people to leave home. Some hospitals responded by introducing video consultation services. The disadvantage was that doctors could not examine patients in person and use stethoscopes, and could only consult through observation and by referring to the patient's medical history.

During that period, the Laboratory of Data Discovery for Health was being established with the support of the InnoHK platform of the Innovation, Technology and Industry Bureau, which also agreed to support our AI software development project. Since the end of 2023, we have conducted a clinical trial involving several hundred people, and the degree of accuracy indicated is quite high.



Do you think medical services will be led by AI in the future? Will some personnel be replaced by AI?

AI has no doubt become a very important topic, and everyone in the medical sector should develop a reasonably strong grasp of it. That's why, starting in 2019, the university has been incorporating AI, big data, digital medical service, etc., into our medical and healthcare programmes.

We believe AI can make consultation and diagnosis more efficient, for example, by speeding up the basic symptoms collection so doctors can move on to the next steps sooner. Once the workload is reduced, there may be a corresponding decline in the demand for some personnel. But AI could also lead to the rise of new professional disciplines. For instance, the numbers of R&D personnel and specialists in medical AI programmes will no doubt increase.



Featured interview

New normal in healthcare

Monitoring health with the help of AI



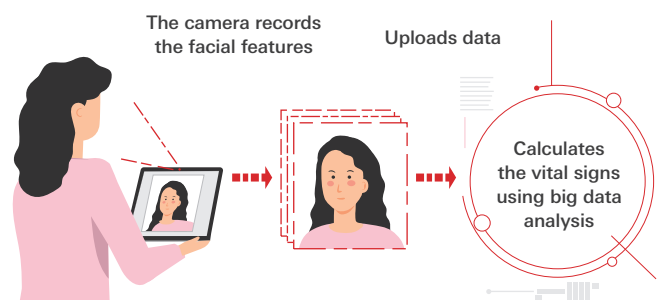
Dr. Kyle Wong CEO & Co-founder, PanopticAI

In response to public demand, many healthcare organisations have introduced digital services in recent years, providing health information and consultation services through dedicated websites and mobile apps. Some have even harnessed the power of AI and big data to make quick vital sign measurements, including pulse rate, blood oxygen level and blood pressure. This capability greatly facilitates the early detection of health problems so users can seek timely medical help. As digital healthcare is a topic many readers are interested in, we talk to Dr. Kyle Wong, CEO of PanopticAI, to learn more about the technology.

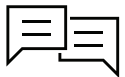


What are vital signs? How can they be measured with a camera?

Vital signs are measurements that indicate the status of the body's vital functions. As such, they offer clues to potential health problems. Vital signs include:



Traditionally, vital signs are measured with contact-based devices like pulse oximeters and blood pressure monitors. PanopticAI's Vitals software using only the camera of a standard computer, smartphone, or tablet, our technology captures subtle changes in facial blood flow through a brief 30-second video. This data is then processed using advanced big data analytics and proprietary AI algorithms, delivering accurate measurements for multiple vital signs simultaneously. The entire process is contactless, enhancing both convenience and scalability.



What applications does this technology have? Does it work with digital healthcare services and apps?

Through our partnerships with medical service providers and different companies, we provide the public with a range of services:



Hospitals and clinics

Vitals software can be added to existing apps to measure patients' vital signs, thus helping to monitor their health, identify treatment options and facilitate triage.



Insurance companies

Policy management or health apps can be enhanced with functionalities for measuring vital signs, assessing health status and supporting disease prevention.



Pharmacy chains

Pharmacists or nutritionists can use tablets to assess customers' health, recommend medications, health foods and supplements, and suggest daily health maintenance routines.



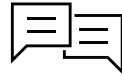
Elderly care

Remote healthcare services make it convenient for elderly to measure their vital signs at home. This helps the treatment of chronic diseases by making it possible to detect worsening health problems and provide medical intervention as early as possible.



Employee health programme

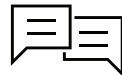
Companies can make use of the software to track vital signs for their employees. This can help relieve work pressure, promote preventive care, and boost productivity and morale.



Are the measurements accurate? And are there limitations?

Our technology has undergone rigorous validation across a diverse population, encompassing variations in skin tone, ethnicity, age, gender, and even pre-existing health conditions. We've also tested it extensively on a range of devices. By training our AI model on a massive dataset from this diverse group, we've achieved remarkable accuracy—up to 98%—for key vital signs. Blood pressure measurement, being inherently more complex, currently has an accuracy of approximately 80%, and we have multiple ongoing clinical trials dedicated to further enhancing its precision.

As with any optical technology, ambient lighting and movement can influence the quality of measurements. For optimal results, users should ensure their face is evenly lit and remain as still as possible during the brief 30-second scan. Facial features such as eczema, mustaches, beards, tattoos, or heavy makeup may also affect accuracy. The difference in complexion does not matter much.



What are the reasons for studying remote measurement of vital signs? Any plans to expand its functions?

My undergraduate in biomedical engineering in the UK, which encompasses both medical and AI technologies, provided the foundation for PanopticAI. While pursuing my PhD at HKUST, I met my now business partners, who shared my passion for leveraging AI to improve healthcare.

During the pandemic, we assisted Hong Kong's Immigration and Health Departments with body temperature monitoring systems. Since a person's body temperature can be affected if they have taken fever medicines and just washed their face, the departments also had to use contact-based devices to measure pulse rate and blood oxygen level. This experience exposed limitations in existing methods, sparking our interest in remote vital signs measurement using cameras. Recognising the ubiquity of smartphones, we founded PanopticAI to create a truly contactless and personalised solution.

Our core focus remains on using the software to measure vital signs. We believe that by providing accurate measurements, the product can play a significant role in the healthcare landscape.





“Afterword

Health starts with self. Faced with a rapidly ageing population and the threat of chronic diseases, it's imperative that we become not only more health-conscious but health-savvy. In the fight against diseases, our immune system is the first line of defence, yet we may also have to resort to the public healthcare system.

Rapid technological development has brought us new hope in the form of new drugs and treatments. It's also a reminder to us all that staying up-to-date on diseases, treatments, medicines and foods, and analysing information objectively, is the best way to create the healthy lifestyle that's right for ourselves.

In the event of an illness, there is no shortage of treatment options. There is, however, only one way to be certain that the option you want will be the option you get. Start planning and building your safety net early. As long as you're financially prepared, no obstacle to a healthy, rewarding life will be too high to overcome.

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