



BASEL MEDICAL

At the forefront of healthcare.

SINGAPORE ACTUARIAL CONFERENCE 2024

The Application of ESG in the Healthcare Industry and Its Connection to Insurance

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About Basel Medical

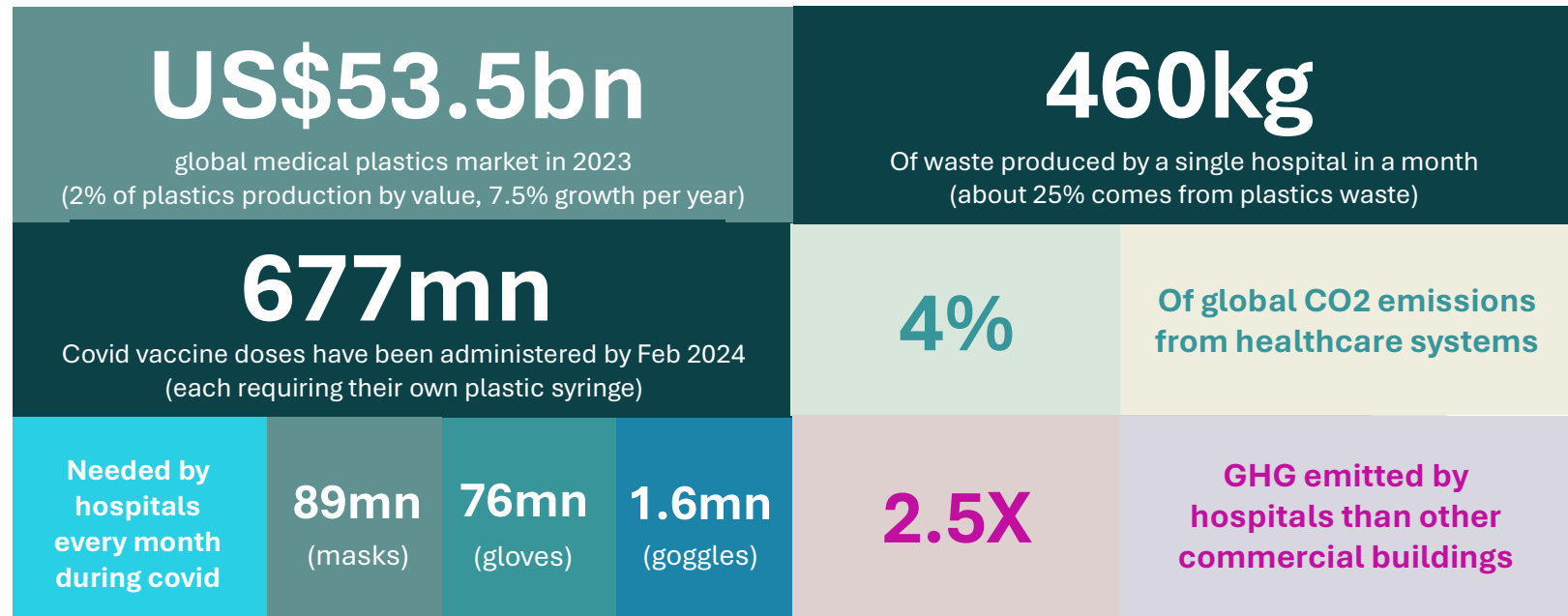
Basel Medical is here to revolutionize healthcare across Southeast Asia, starting from Singapore & Malaysia.

Our vision is to establish an integrated healthcare ecosystem, comprising a diverse portfolio of companies across 4 pillars: medical practices, medical supply chains, medical technology and pharmacies.

We are currently in the process of IPO at Nasdaq, expected to complete by Q4 this year.

Our goal is to become the premier healthcare provider, offering seamless, one-stop solutions with unparalleled customer experience.

Some Healthcare Statistics



Source:

1. [Medical Plastics Market Size, Share & Forecast Report 2032 \(marketresearchfuture.com\)](https://www.marketresearchfuture.com)
2. [Here's how healthcare can reduce its carbon footprint | World Economic Forum \(weforum.org\)](https://www.weforum.org)



Agenda

- 01** What is ESG?
- 02** (E)nvironmental Initiatives in Healthcare
- 03** (S)ocial Responsibilities in Healthcare
- 04** (G)overnance & Ethical Practices in Healthcare
- 05** Connection & Opportunities for Insurance

A person wearing blue medical scrubs is shown from the chest down. They are holding a glowing, translucent globe of the Earth in their hands. The globe is illuminated from within, casting a soft blue glow. Small, stylized green plants with thin stems are growing out of the bottom of the globe. The person's stethoscope is visible around their neck, and a pen is tucked into a pocket on their left chest. The background is dark, making the glowing globe and the person's hands stand out.

Section 1: What is Environmental, Social & Governance (ESG)?

What is ESG?

Environmental, Social, and Corporate Governance (ESG) is an evaluation of a firm's collective conscientiousness for social and environmental factors

- Considered a form of corporate social credit score that is compiled from data collected surrounding specific metrics related to **intangible assets** within the enterprise
- Research shows that such intangible assets comprise an increasing percentage of **future enterprise value**
- The three central factors together, E. S. G. , comprise a label that has been adopted throughout financial industry globally, used for a myriad of specific purposes with the ultimate objective of measuring elements related to **sustainability** and **societal impact** of a company or business

Source: Wikipedia

What is ESG?

- Understanding and incorporating ESG principles into our **decision-making processes** can contribute to a more sustainable and equitable future for all
- ESG is not just a buzzword; it has real-world implications that affect our daily lives. Companies that prioritize ESG principles are more likely to:



**Adopt
sustainable
practices**



**Reduce their
environmental
footprint**



**Contribute to
well-being of
communities**



**Have robust
governance
structures**



**Prevent
unethical
behaviour**



**Promote
transparency and
accountability**

Covid-19 accelerates adoption of ESG

Climate change and COVID-19 pandemic alike require innovation and science and the world working together. Getting through Covid-19 pandemic together will set a promising precedent for global cooperation.



- COVID-19 crisis makes it clear that all people live on one planet in a **deeply interconnected way**
- Climate change, loss of biodiversity, industrial agriculture, deforestation - There is no place on the planet to run to, just as there is no place to avoid the health and economic consequences of COVID-19
- As the world recovers from COVID-19, the trend of ESG issues will become more central to investing and business decisions will accelerate **(the new normal)**
- As customers, employees, suppliers and investors, we look at how companies impact the well-being of the world, both at the local community level and at the global level
- The ESG measurement system will increasingly be an **important criteria to evaluate companies**

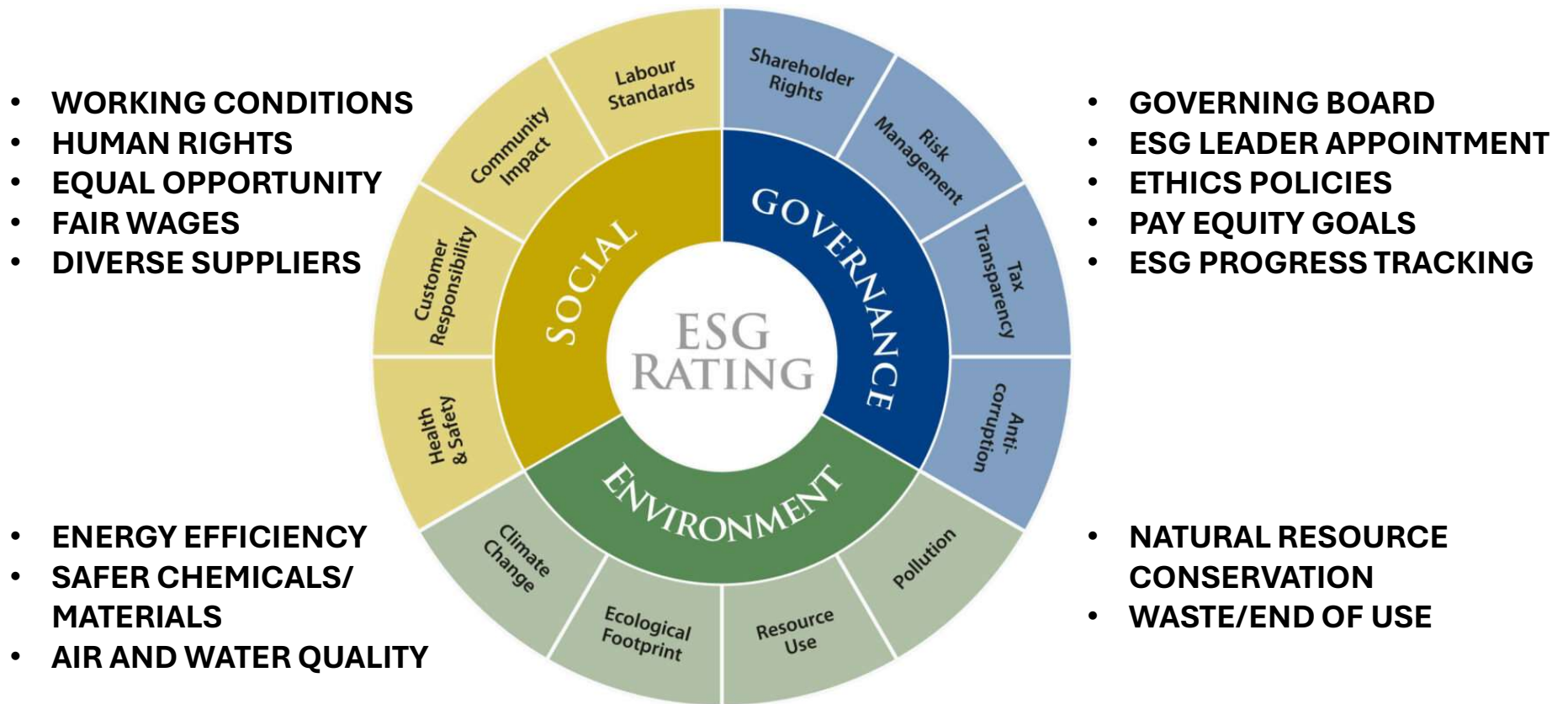
Why ESG in Healthcare?

Advancing UN Sustainable Development Goals

- **Sustainable Development Goals (SDGs):** adopted by United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity
- **The 17 SDGs are integrated:** they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability
- Countries have **committed to prioritize progress** for those who're furthest behind. The SDGs are designed to end poverty, hunger, AIDS, and discrimination against women and girls



3 Components of ESG in relation to Healthcare Industry



A healthcare professional in blue scrubs is shown from the chest down, holding a glowing globe of the Earth. The globe is held in their hands, and several small green plants are growing from the bottom of the globe. The background is dark, and the overall tone is professional and focused on environmental health.

Section 2: Environmental Initiatives in Healthcare

Environmental Issues in Healthcare

ENVIRONMENTAL CHALLENGE

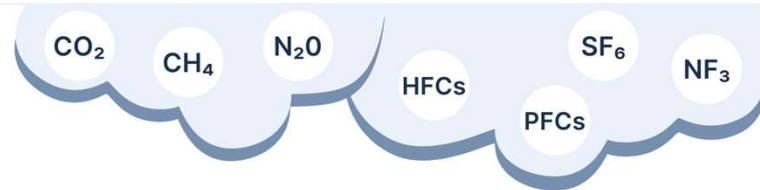
Healthcare systems contribute to 4.4% of net global CO₂ emissions – more than the aviation and shipping industries and equivalent to the annual greenhouse gas emissions from 514 coal-fired power plants.

In industrialized nations the emissions associated with healthcare were found to be even higher – up to 7.6% of national emissions. Given the negative impact of climate change on public health, communities and society, we believe that the healthcare industry must urgently increase its efforts to become part of the solution.

- Every product has an “**environmental footprint**” from its energy and material use, manufacture, delivery, use, and disposal
- Product waste, especially toxic waste, can harm human health & ecosystems
- The healthcare industry must urgently **reduce greenhouse gas emissions**
- The **supply chain** is a major source of healthcare emissions
- Solutions: switch to **renewable energy** and **improve supply chains**
- Suppliers’ emissions should be measured/reported to achieve net-zero healthcare



The GHG Protocol

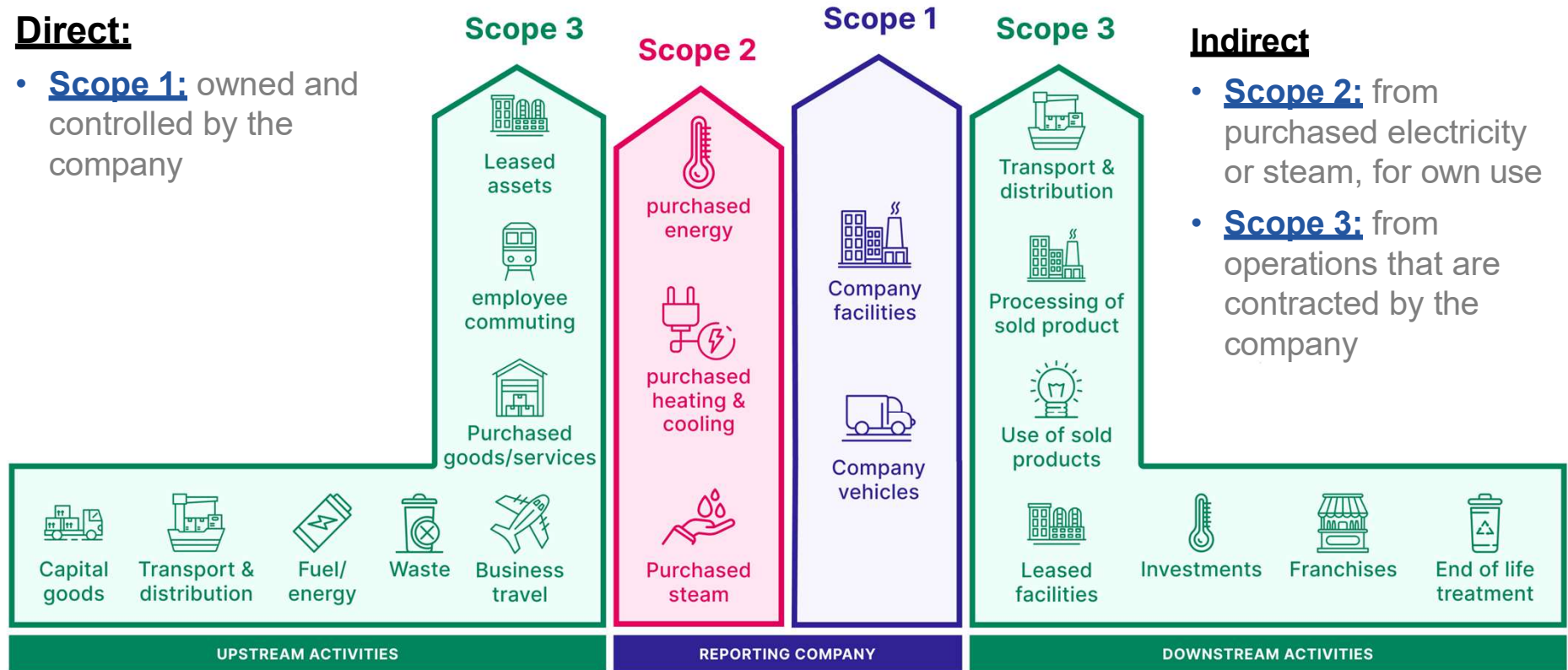


Direct:

- **Scope 1:** owned and controlled by the company

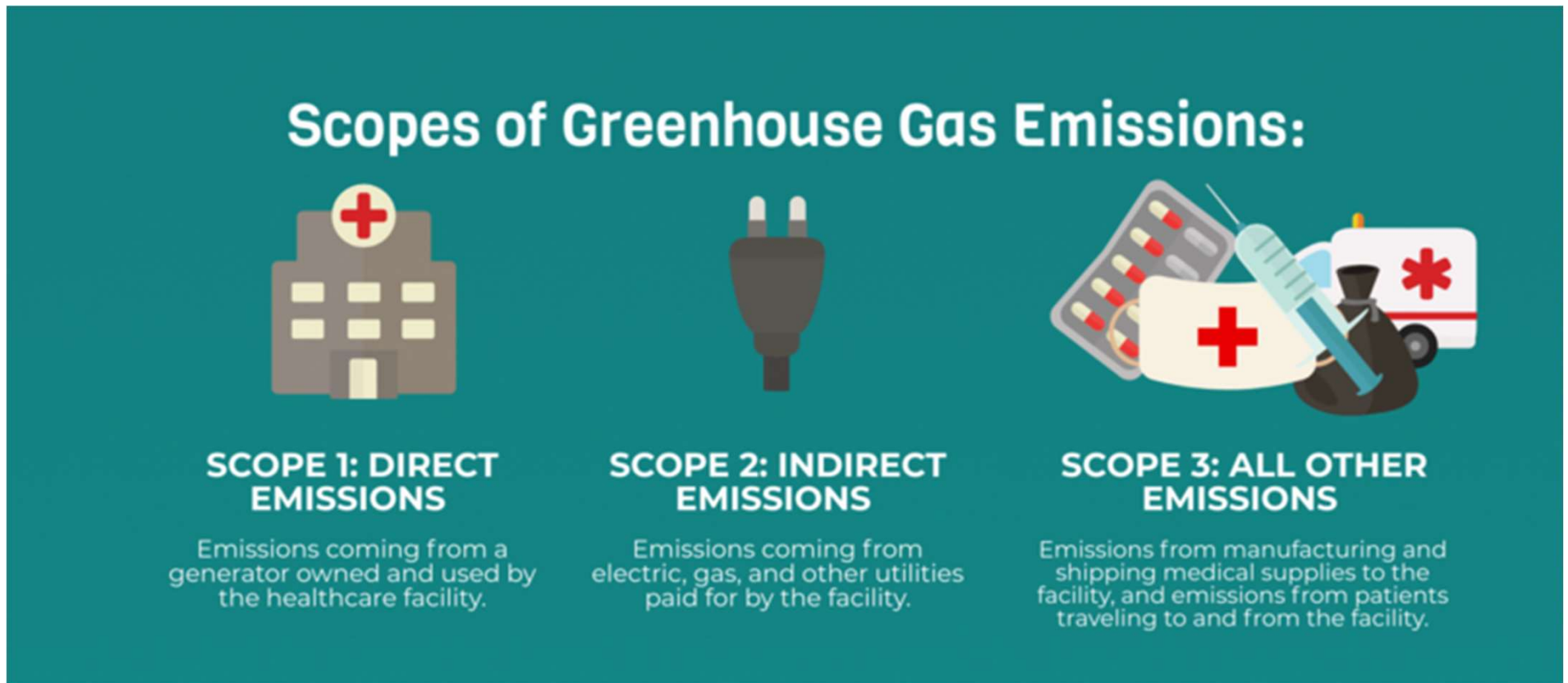
Indirect

- **Scope 2:** from purchased electricity or steam, for own use
- **Scope 3:** from operations that are contracted by the company



Source: Scope 1, 2, 3 emissions explained (circularise.com)

Scope of GHG Emissions in Healthcare



[Source: Yale Experts Explain Net Zero Healthcare | Yale Sustainability](#)

Case Study: Green Practices for Healthcare



Source: [Emissions Management - IHH Healthcare Berhad](#)

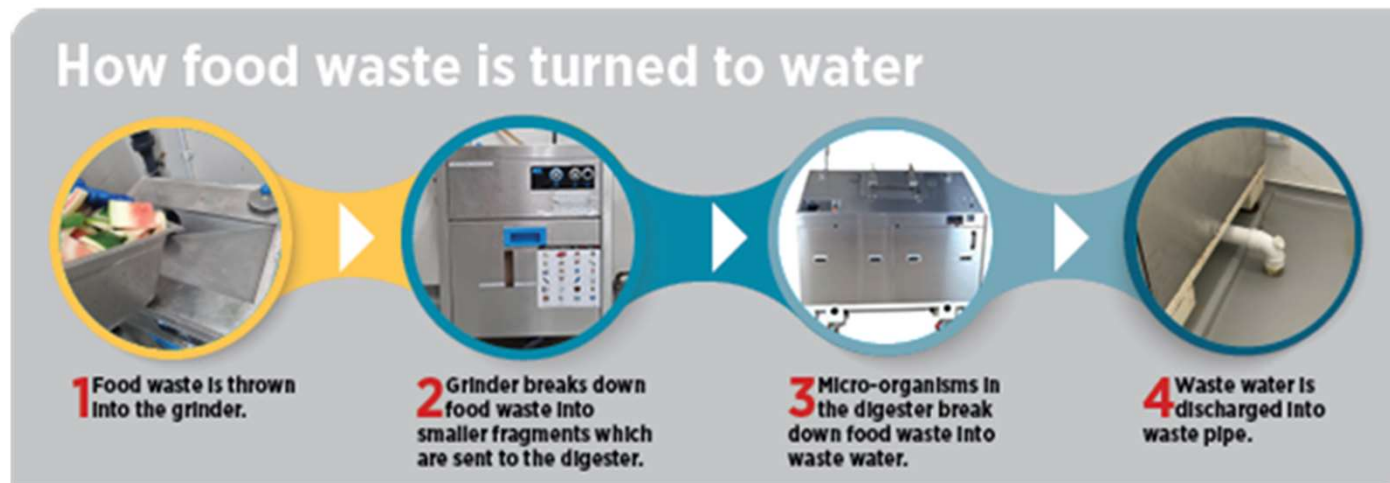
IHH Malaysia has introduced a Building Efficiency Index (BEI) across its 16 hospitals to better assess and manage its energy efficiency initiatives.

The BEI has helped in identifying effective strategies for each hospital, including the optimisation of chiller settings and the installation of advanced refrigerant flow systems in operating theatres.

These measures have contributed to a 12.5% reduction in energy intensity across the hospital network.

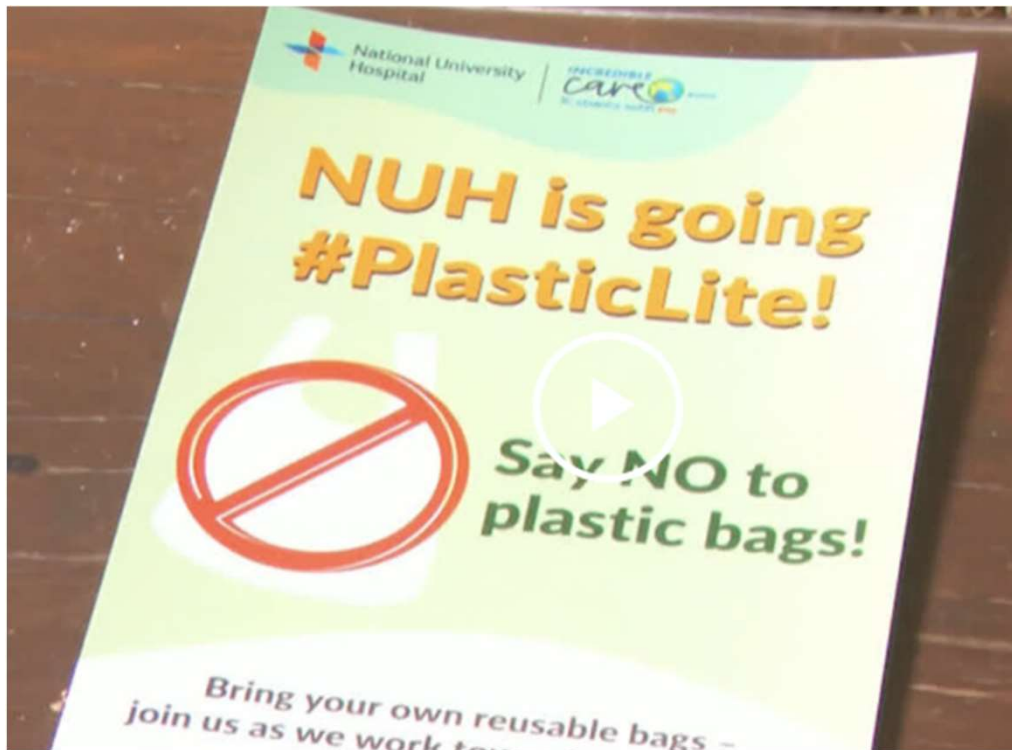
Case Study: Green Practices for Healthcare

- To remove food waste effectively and in a more environmentally-friendly way, the Food Services Department managing **SengKang General Hospital's** central kitchen has adopted green practices for enhanced waste management.
- Two food waste digesters were installed in the central kitchen which **break down food waste into water**, effectively reducing the waste to be sent for incineration.



Source: [skoop issue 10 food waste \(skh.com.sg\)](http://skoop.issue10.food.waste.skh.com.sg)

Case Study: Green Practices for Healthcare



Source: [The National University Hospital pledges commitment to go plastic-lite \(nuh.com.sg\)](https://www.nuh.com.sg/news/2019/05/nuh-is-going-plastic-lite)

- **National University Hospital (NUH)** is proud to announce its commitment to environmental sustainability by moving towards a **plasticlite campus**.
- The hospital is phasing out the use of small plastic bags at its pharmacies across the campus, which can cut the use of up to **480,000 small plastic bags** a year with the support of patients and members of the public. This move aligns with NUH's ongoing efforts to implement environmentally friendly practices in a sector that is both affected by, and a key contributor to, climate change.

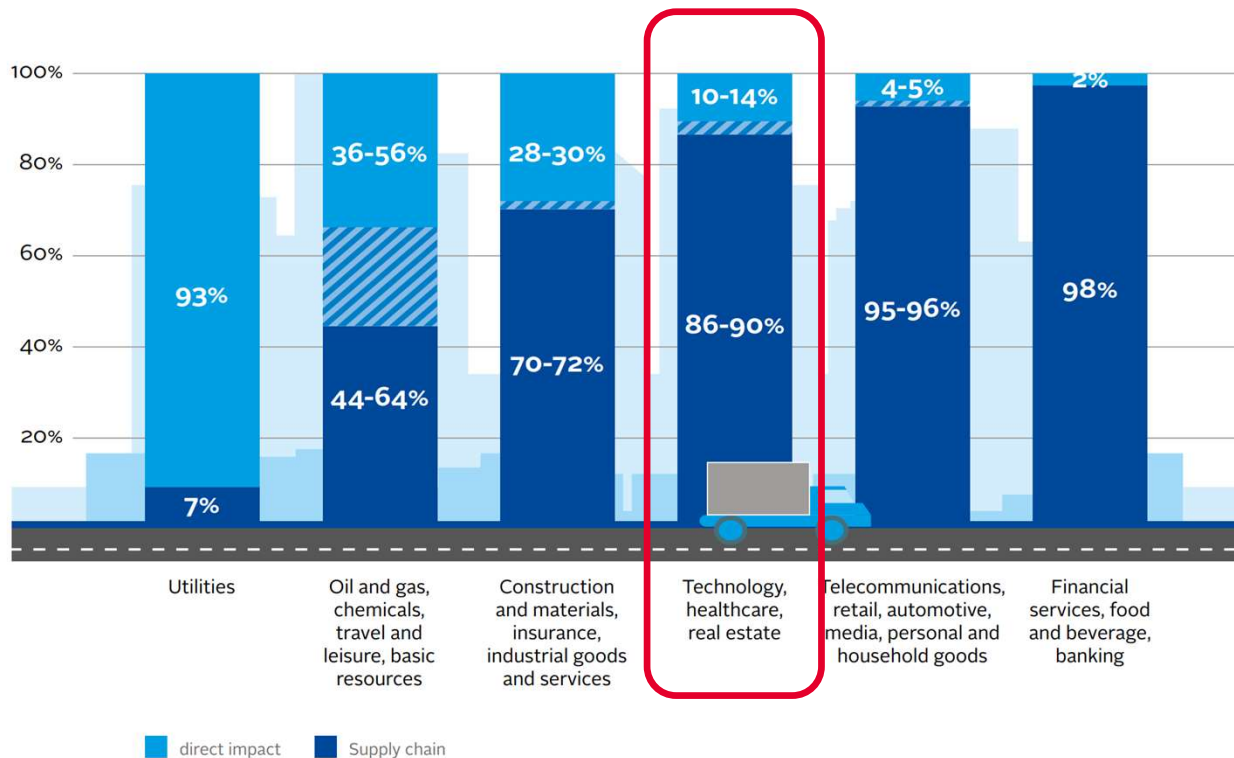
Sustainable Procurement in Healthcare

Organizations meet their needs for goods and services while generating benefits for society and economy while minimizing damage to health and the environment

- Sustainable Procurement (or Green Procurement) involves **supply chain management**, materials management, logistics, procurement, and strategic sourcing activities
- The process examines what products are made of, where they come from, who made them, who is affected by their production, how they will be disposed of, and whether a product needs to be made or used at all
- Institutions buy products and services that integrate **environmental factors** (positive effects on the environment and health), **social factors** (fair labor, human rights, local employment), and **economic factors** (longevity, total cost of ownership, disposal cost, quality, innovation)
- It is a necessary process for healthcare institutions to meet **Scope 3 GHG protocol requirements**

~90% of environmental impact in Healthcare is due to Supply Chain

Share of a sector's environmental impact located in the supply chain



- Current global material consumption is not sustainable. The world's population would need **1.7 Earths** to support its demands on resources
- **Healthcare uses 10% of all materials annually**, and most waste produced from the industry goes to landfill or incineration
- Applying **circular economy** strategies that reduce dependence on 'take, make, waste' business models could **cut emissions by 39% to 45%**
- It is critical to scale circular practices across healthcare. Sustainable Procurement can help incentivize and accelerate this transformation

Source: [PRI_Managing-ESG-risk-in-the-supply-chains.pdf](#)

Case Study: Green Procurement in Healthcare

IMH strives to be a Green Hospital by championing the principles of Reduce, Reuse and Recycle & Green Procurement

REDUCE




TAP ON TECHNOLOGY

Automated rice cooking equipment portions a more precise quantity of rice, reducing the amount of food waste while increasing productivity.

STANDARDISED SCOOPS FOR MEAL PREPARATION AND PORTIONING

Kitchen staff now follow standardised portioning guidelines, which enable them to gauge more precisely the quantity of food being cooked, and avoid cooking extra that will become food waste.

RECYCLE & REUSE




FOOD & HORTICULTURAL WASTE

We aim to install a food digester by 2023 to convert food waste into organic compost (fertiliser), which will then be used for gardening. We presently have a compost bin that decomposes dry leaves, grass clippings, paper, and some food scraps.

E-WASTE

To encourage IMH staff to recycle their old devices, our General Services & Operations team has prepared a remodelled old bin for old electrical devices to be dropped off.

OLD	NEW SUSTAINABLE PRACTICES
	<div style="display: flex; align-items: center;">  <ul style="list-style-type: none"> Provide water dispensers / water jugs / cambros and reusable cups Inform attendees to BYO (bring your own) water </div>
	<div style="display: flex; align-items: center;">  <ul style="list-style-type: none"> Provide reusable crockery and cutlery Encourage BYO policy among our staff for internal catering requests All staff have been given a set of reusable food containers and mug for personal use Green catering policy established in IMH, with a list of approved "Green" caterers </div>
	<ul style="list-style-type: none"> Greater engagement with caterers to use eco-friendly tableware and dining ware Focus on food sustainability (e.g. source raw ingredients from local farms, offer more plant-based dishes)
	<h3>KEEPING THE CHANGE WITH OUR VENDING MACHINES</h3> <p>You will not find any plastic bottles in the vending machines in IMH! We requested this of our suppliers in support of our green initiatives. So goodbye, plastic - and hello, recyclable cans and cartons!</p>



Section 3: Social Responsibilities in Healthcare

Social Issues in Healthcare

SOCIAL CHALLENGE

Healthcare is a social good but it is also a **source of social inequity**. The COVID-19 pandemic underscored long-standing equity issues between resourced and under resourced communities when it comes to health outcomes.

Health inequities are differences in health status or in the distribution of health resources between different population groups, arising from the social conditions in which people are born, grow, live, work and age. Health inequities are unfair and could be reduced by the right mix of government policies.

- **Social factors** – Education, employment status, income level, gender, and ethnicity – significantly impact an individual's health
- There are notable **disparities in health outcomes** among different social groups
- Individuals with lower socio-economic status face higher risk of poor health outcomes
- Systematic differences in health status between population groups lead to significant social and economic costs
- Many healthcare organizations are focusing on enhancing **diversity and inclusion**, upskilling staff, and improving workplace safety.



Case Study: Social Responsibilities in Healthcare

- Gender diversity is a key goal for IHH. They pursue **diversity and inclusion** in five dimensions: Gender, Generational, Differently Abled, Skillset and Cultural:
 - Determine strategy and measure progress through global diversity, equity & inclusion **benchmarks**
 - Develop **market-level strategies** that consider local social, economic and cultural nuances
 - Integrate the Diversity, Equity, Inclusion, and Belonging (DEIB) agenda into **performance metrics**



Building a Culture of Inclusiveness and Togetherness Through Sports



Overcoming Gender Stereotypes in Acibadem



Advocating for Gender Equality

Case Study: Social Responsibilities in Healthcare

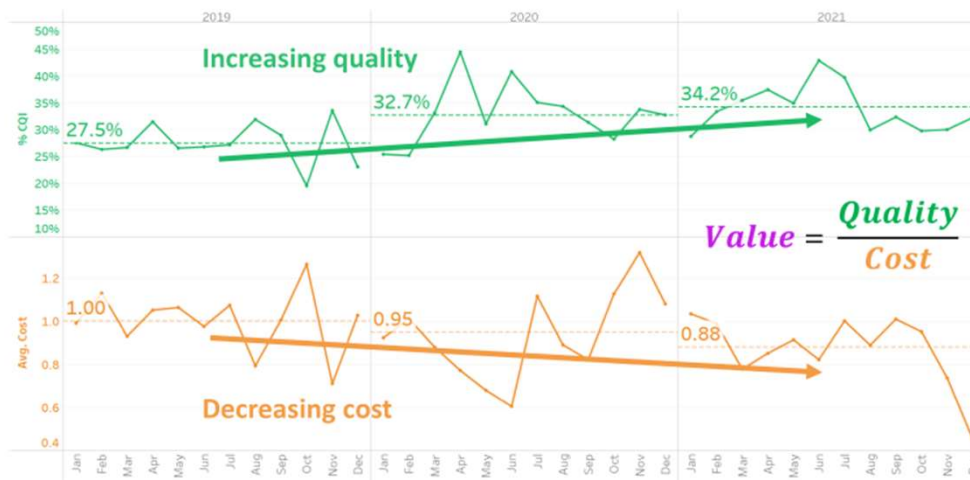


- CVS Health invested in **affordable housing projects** and programs in different locations such as Alaska, Ohio, Massachusetts, Texas, Georgia, Florida, Wisconsin, Hawaii, California, New York, Maryland, and Colorado.
- \$15.3 million to build 144 new homes and services for Ohio seniors and those with disabilities, in two affordable housing communities
- \$6.2 million for Happiness House Apartments in Canandaigua, NY, a supportive housing community providing 30 new homes for families and seniors, including homelessness
- \$4.3 million for Bridgeway Community Housing in Wasilla, AK, a 24-unit PSH project designed to meet the needs of Alaskans experiencing homelessness, living with mental disabilities

[Source: CVS Health invests \\$114 million in affordable housing across the country in 2020](#)

Case Study: Social Responsibilities in Healthcare

- NUH introduced the **Value-Driven Care (VDC) framework** to improve patient health outcomes by optimising available resources through the collection, benchmarking and analysis of various quality and cost indicators, making healthcare more effective and accessible.
- By collecting, benchmarking and analyzing various quality and cost indicators, and providing the data to healthcare professionals, it enabled them to identify **cost-effective clinical practices**, reduce unnecessary variations and improve both cost and quality outcomes.



VDO Case Study: Sepsis VDO Results

- Increase in Clinical Quality Index (CQI) driven by decreasing cost and increasing quality
- An absolute decrease of **12% points in mean total cost per patient** from 2019 to 2021

Source: [Providing affordable and sustainable healthcare \(nuh.com.sg\)](https://www.nuh.com.sg)

[Sepsis | Value-Based Healthcare - NUHS](#)



Section 4: Governance and Ethical Practices in Healthcare

Governance & Ethical Issues in Healthcare

GOVERNANCE CHALLENGE

The health care sector is known for its high-risks in corruption due to large pools of available funding for public procurement and amongst with supply chain complexity and transparency.

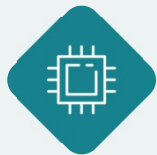
An average of **7.29% of annual global health spending is lost to fraud, and with an estimate of US \$415 billion lost annually.**

Corruption is also a significant challenge for the implementation of the 2030 Agenda for the Sustainable Development Goals, and with the growing due diligence areas in the protection of human rights, labour, ethics, environment and tackling climate change.

- Lack of **transparency in procurement** can lead to corruption, fraud, mismanagement, eroding trust in healthcare
- Ensures suppliers follow **fair labor practices and respect human rights**, avoiding products from child labor or unsafe conditions
- Some procurement practices may favor certain suppliers, leading to monopolies or **unfair competition**
- Adherence to local and international regulations is vital for **maintaining procurement integrity**
- Procurement decisions should promote local economic development and **equitable access** to healthcare services



Governance Solutions through Sustainable Procurement



Transparency and Accountability

Ensuring clear, documented procurement processes to prevent fraud and corruption.



Ethical Considerations

Integrating labour standards, human rights, and ethical sourcing into procurement decisions.



Environmental Impact

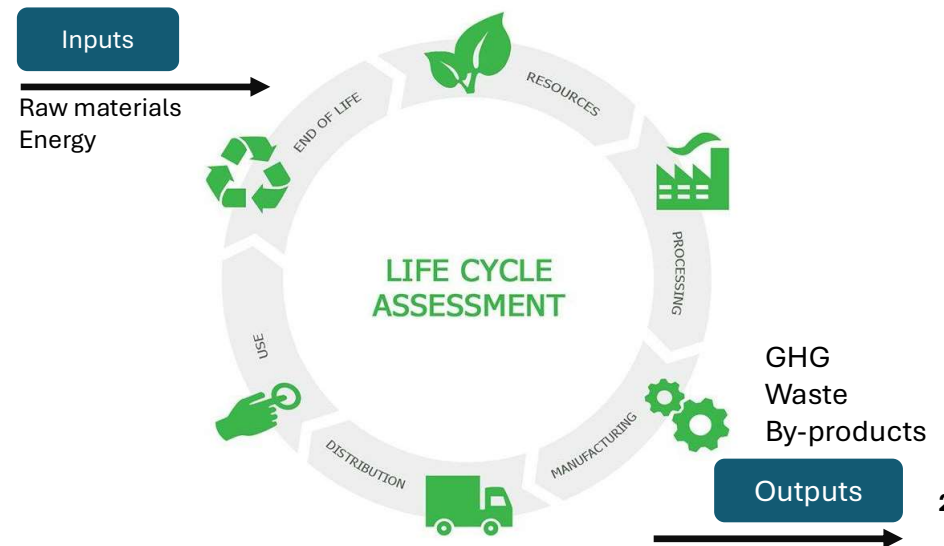
Addressing environmental consequences of procurement choices, including waste management and carbon footprints

Sustainable Procurement Strategies

Capacity Building: Enhance skills & knowledge of healthcare procurement teams to implement sustainable practices.

Market-Shaping Strategies: Use purchasing power to encourage suppliers to adopt sustainable & ethical practices.

Lifecycle Analysis: Implementing lifecycle assessments to evaluate the long-term impacts of procurement choices.



Case Study: Global Green and Healthy Hospitals (GGHHN)

- The **Global Green and Healthy Hospitals Network (GGHHN)** is a worldwide community — a network of 35 health system and organizations worldwide (> 43,000 hospitals, 72 countries) adopting sustainable procurement practices
- Impact: Significant reduction in environmental impact, improved efficiency, and cost savings
- Key Takeaway: Collaboration across health systems to promote sustainable procurement as a standard practice



Source: [Perpage_062520 \(hospitalesporlasaludambiental.org\)](http://Perpage_062520(hospitalesporlasaludambiental.org))

★ Health Care Without Harm Regional Offices
● Strategic Partners
Highlighted countries indicate the location of GGHH members

Case Study: Global Green and Healthy Hospitals (GGHHN)

- Some Projects done by GGHHN through its Health Care Without Harm Global Program

Policy Action around the world



State level climate alliances organized by Health Care Without Harm in the US are powerful vehicles to create cross-sectoral support for climate-smart health care. Governor Jay Inslee speaks at the launch of the Health Care Climate Alliance in Washington State.

Climate Health Air Monitoring



Doctors for Clean Air



Greening Health Supply chain



Rohingya refugee camps in Bangladesh



Waste management



MOBILIZING HEALTH CARE TO PREVENT PLASTIC POLLUTION: A PLASTICS TOOLKIT FOR HOSPITALS



Source: [Perpage_062520 \(hospitalesportlasaludambiental.org\)](https://perpage_062520.hospitalesportlasaludambiental.org)



Section 5: Connection and Opportunities for Insurance

What is Sustainable Insurance?



Sustainable insurance is a strategic approach where all activities in the insurance value chain, including interactions with stakeholders, are done in a responsible and forward-looking way by identifying, assessing, managing and monitoring risks and opportunities associated with environmental, social and governance issues. Sustainable insurance aims to reduce risk, develop innovative solutions, improve business performance, and contribute to environmental, social and economic sustainability.

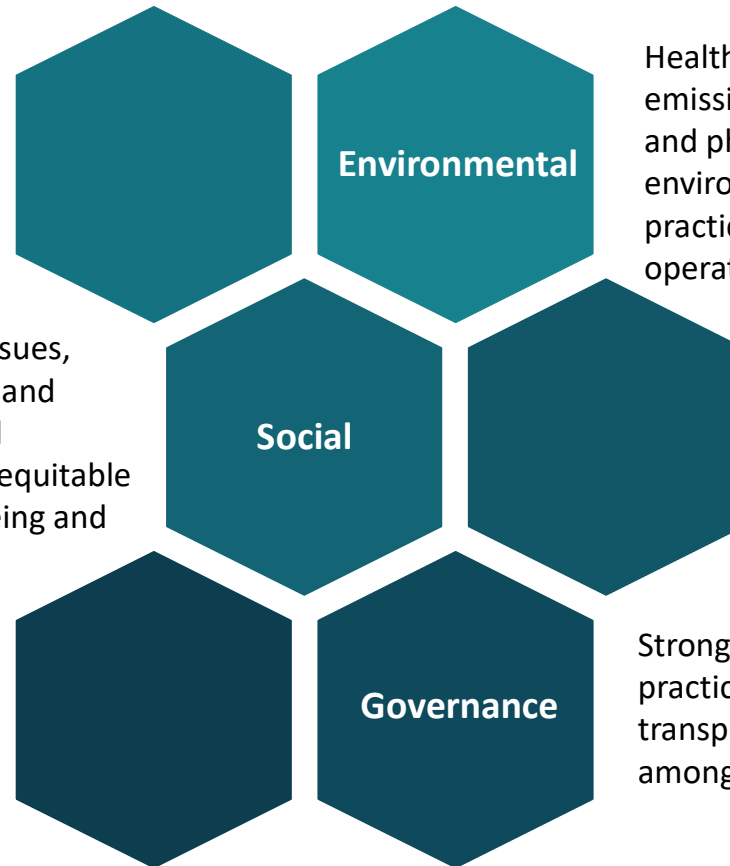
Aspiration of Sustainable Insurance

1. Insurance is about understanding, managing and carrying risk
2. Insurance helps protect society by risk prevention, risk reduction and sharing risk
3. Changing ESG landscape is leading to diverse, interconnected and complex risks but also opportunities
4. A resilient insurance industry depends on holistic and far-sighted risk management in which ESG issues are considered
5. Better management of ESG issues will strengthen the insurance industry's contribution to building a resilient, inclusive and sustainable society

The future we want is a society in which people are aligned and incentivised to adopt sustainable practices

Connection between ESG and Healthcare

Healthcare is inherently tied to social issues, including access to care, patient safety, and workforce well-being. Addressing social determinants of health and promoting equitable access can enhance community well-being and reduce long-term healthcare costs



Healthcare systems contribute significantly to carbon emissions through energy use, waste generation, and pharmaceutical production. Reducing the environmental footprint through sustainable practices can improve health outcomes and operational efficiency.

Strong governance in healthcare involves ethical practices, data privacy, regulatory compliance, and transparency. Effective governance fosters trust among patients, stakeholders, and the public

Opportunities for Sustainable Insurance

Insurance can be the key partners with healthcare providers:



Sustainable Health Insurance Products

Offering insurance products that incentivize sustainable practices, such as preventive care, wellness programs, and telemedicine, which can reduce healthcare costs and improve patient outcomes.



ESG Driven Underwriting

Integrating ESG criteria into underwriting processes to assess risks more accurately. For example, healthcare facilities with strong environmental practices may receive favourable premiums.



Investment in ESG-Compliant Healthcare Companies

Allocating capital to healthcare companies with strong ESG performance, ensuring long-term financial returns while promoting sustainability and social responsibility

Opportunities for Sustainable Insurance

Insurance can be the key partners with healthcare providers:



Partnerships for Green Healthcare Initiatives

Collaborating with healthcare providers to support the development of eco-friendly hospitals and clinics, reducing environmental impact and enhancing brand reputation.



Development of ESG Compliance Coverage

Providing insurance products that help healthcare organizations manage risks associated with ESG compliance, including liability coverage for non-compliance or ESG-related incidents.



Health Equity and Access Programs

Creating insurance programs that support initiatives aimed at improving access to healthcare for underserved communities, aligning with social responsibility goals and expanding the customer base.

Case Studies from Insurance Companies

Insurance can be the key partners with healthcare providers:

Sustainable Health Insurance Products



Discovery's Vitality program incentivizes healthy behavior by offering rewards and discounts for activities like exercising, eating well, and getting regular checkups. This approach not only promotes preventive care but also reduces the overall healthcare costs for both the insurer and the insured.

ESG Driven Underwriting



Swiss Re has integrated ESG criteria into its underwriting process, particularly in healthcare. They assess environmental risks, such as the impact of climate change on health, and social factors, including access to healthcare and working conditions. This allows Swiss Re to offer tailored insurance products and pricing that reflect these ESG considerations.

Investment in ESG-Compliant Healthcare Companies



AXA has committed to investing in healthcare companies that demonstrate strong ESG performance. For example, they have invested in companies that focus on innovative medical technologies and sustainable practices in healthcare delivery, aligning their investment strategy with ESG principles.

Case Studies from Insurance Companies

Insurance can be the key partners with healthcare providers:

Partnerships for Green Healthcare Initiatives



Bupa partnered with the Carbon Trust to develop energy-efficient healthcare facilities. This partnership led to the creation of greener healthcare environments that reduce carbon emissions, aligning with Bupa's commitment to sustainability while improving patient care through healthier buildings.

Development of ESG Compliance Coverage



Zurich has developed products that help healthcare organizations manage ESG-related risks, including liability insurance for non-compliance with environmental regulations or social governance standards. This helps healthcare providers mitigate the risks associated with failing to meet ESG requirements.

Health Equity and Access Programs




Kaiser Permanente has long been involved in initiatives aimed at improving access to healthcare in underserved communities. They've developed community health programs that address social determinants of health, such as access to nutritious food, housing, and education, which are also supported through their insurance offerings that focus on community well-being.

Sources: [Bupa picks up global Carbon Trust Standard on journey to reduce CO2 by 20% - edie](#)

[ESG integration | Zurich Insurance](#)

[Kaiser Permanente launches resources hub to address SDOH in communities \(fiercehealthcare.com\)](#)

A futuristic illustration of a robot doctor with a stethoscope, set against a background of glowing blue medical data and a human heart. The robot is depicted in a light grey, metallic style with yellow eyes. The background features a glowing blue heart and various data lines and patterns. The text is centered in a bold, white, sans-serif font.

**Is Your Insurer Positioned
to Drive the Future of
Sustainable Healthcare?**



Reach out to me to discuss partnership opportunities with Basel Medical Group:



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