

Adding years to life and life to years

At least six years of higher-quality life for everyone is within reach.

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This is a decisive moment in the history of human health.

In many respects, health is a remarkable success story. Over the past century, life expectancy has dramatically increased in most parts of the world. But the portion of life we human beings spend in moderate and poor health hasn't changed, meaning we spend more years in poor health than at any point in history. Moreover, significant inequity continues to exist across and within countries.

We can do better—quickly.

Humanity mobilized against COVID-19 at a speed and scale previously unseen. While far from perfect, our success should inspire us to challenge what we think is possible. At its best, our response to COVID-19 demonstrates that when resources and motivation coalesce, scientific breakthroughs and large-scale behavior change are possible in very short periods of time.

It's time to set a new, more ambitious, more relevant goal for human health—a goal that galvanizes across continents, sectors, and communities to support everyone on the planet in adding years to their lives and life to their years. Humanity

needs a goal that yields more time with loved ones, more accomplishments, and more time free from cognitive or physical impairment.

As a starting point for discussion, the McKinsey Health Institute (MHI) believes that over the next decade humanity could add as many as **45 billion extra years of higher-quality life—roughly six years per person on average, and substantially more in some countries and populations.**¹

Achieving this objective requires us, as a society, to challenge our beliefs about health and reorient material portions of public policy and the economy. It requires embracing a modernized understanding of health, including physical, mental, social, and spiritual health,² and the full richness of factors that influence those elements of holistic health. It requires viewing health as an investment, not an expense. It requires scaling solutions that work, which could address 40 percent of the disease burden.³ It requires dramatically more innovation and leadership from institutions outside of the traditional healthcare industry. It requires fully empowering individuals to steward their own health.

Every institution, every leader, and every person has an important role to play.

¹Calculated in a scenario-based simulation sizing three effects: increase of life expectancy ("extending"), decrease of lifetime spent in poor health, and decrease of lifetime in moderate rather than good health ("lifting" and "squaring the curve"). Data sources comprise WHO HALE data, health system data, life-expectancy data for more than 20,000 administrative regions globally, and the McKinsey Global Institute's report *Prioritizing Health: A prescription for prosperity*, July 8, 2020. The McKinsey Health Institute's aspiration to add six years of higher-quality life on average is going significantly beyond delaying the average onset of disease from, for example, 55 to 65 years mentioned in the latter report.

²Spiritual health includes meaning, belonging, purpose, and identity. It does not necessarily require or include religious belief.

³"Prioritizing health: A prescription for prosperity," McKinsey Global Institute, July 8, 2020.

The state of human health: Great achievement with much more to do

Good health underpins our ability to lead productive and enjoyable lives. Health enables social development and spurs economic growth. Year after year, experts cite social and physical components of health as two of the top three drivers of life satisfaction for individuals.⁴ Global healthcare spending is often over (or about) \$8 trillion each year and increases faster than GDP.⁵

Over the past centuries, scientific progress, innovation, greater investment, and trade and exchange across the public, private, and social sectors have led to great advancements in prolonging and improving life. Between 1800 and 2017, average global life expectancy more than doubled, from 30 years to 73 years.⁶ In some of the least advantaged global regions, life expectancy has increased by ten years in just the past two decades.⁷ Since 1900 in the United States, infant mortality has fallen by 90 percent, and maternal

mortality has decreased by 99 percent.⁸ Major breakthroughs in vaccination have enabled humanity to eradicate or suppress deadly infectious diseases such as smallpox and polio.⁹ Since 1990, we have seen breakthroughs in human genomics, a substantial reduction in cancer mortality, and improvements in smoking cessation.¹⁰

While it's important to recognize and learn from our progress, we must also acknowledge how much more we have to accomplish collectively.

The share of our lives we spend in poor health has not diminished over time. On average, people spend about 50 percent of their lives in less-than-good health, including 12 percent in poor health.^{11,12} The best available data suggest that this ratio has not changed much in the past 50 years. The upshot is that we spend more time in

⁴ *World happiness report 2021*, Sustainable Development Solutions Network, 2021; social health is the ability of individuals to form healthy and rewarding interpersonal relationships with others.

⁵ *Global spending on health: Weathering the storm*, World Health Organization, December 2020.

⁶ Gapminder.org: Life Expectancy; McKinsey Global Institute analysis.

⁷ Esteban Ortiz-Ospina, Hannah Ritchie, and Max Roser, "Life expectancy," Our World in Data, October 2019. *World Bank country and lending groups*, World Bank, 2022.

⁸ "Healthier mothers and babies," *Morbidity and Mortality Weekly Report*, Centers for Disease Control and Prevention, October 1, 1999.

⁹ David Sharrow et al., "Levels and trends in child mortality," United Nations Inter-agency Group for Child Mortality Estimation, 2020; "Ten great public health achievements—United States, 1900–1999," *Morbidity and Mortality Weekly Report*, Centers for Disease Control and Prevention, April 2, 1999.

¹⁰ "1990: Launch of the Human Genome Project," National Human Genome Research Institute, May 6, 2013; Global Data Health Exchange, Institute for Health Metrics and Evaluation, 14 February 2022; deaths from diarrhea, lower respiratory infection, and other common infectious diseases declined by 60 percent between 1990 and 2019. Globally, the annual number of new HIV cases decreased by 39 percent since its peak in 2000. Polio cases decreased 99.99 percent since 1980. Deaths attributed to smoking per 100,000 decreased by 40 percent, from 146 in 1990 to 90 in 2017. Globally, suicide rates per 100,000 decreased 35 percent from 1990 to 2017. The global age-standardized cancer mortality rate decreased 15 percent between 1990 and 2017.

¹¹ An individual in "good health" is defined as a person without a relevant chronic medical condition impacting quality or duration of life, but who may have very well managed chronic conditions or acute injury with high potential for swift and complete recovery. "In moderate health" defines a person suffering from one or a combination of several acute or chronic conditions that are impacting quality and/or duration of life, but without relevant impairment of activities of daily living. An individual in "poor health" is defined as suffering from one or more acute or chronic conditions requiring constant or frequent attention by carers and/or impacting activities of daily living significantly and/or reducing quality of life or shortening life expectancy significantly.

¹² McKinsey analysis; Life Expectancy at Birth, Total (Years) Database, World Bank Data, accessed 13 December 2021; *Global Burden of Disease Study 2019, Demographics 1950–2019*, Institute for Health Metrics and Evaluation, accessed 13 December 2021.

absolute terms in moderate and poor health than we have at any other point in history. The situation may be gradually worsening, particularly in high-income countries, where chronic conditions now afflict growing numbers of people for a significant portion of their lives (Exhibit 1). Literature on life satisfaction shows that having a substantial health problem—defined as declining from “good health” to “poor health”—reduces life satisfaction twice as much as losing a job or becoming widowed, divorced, or separated and five times as much as losing half of one’s income.¹³

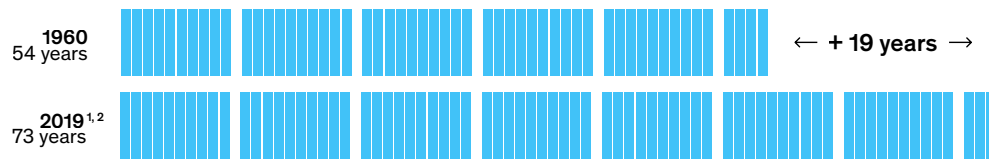
Numerous known threats to human health remain insufficiently addressed. Infectious diseases still account for eight million deaths per year, and there are substantial unmet patient needs within oncology, diabetes, cardiovascular conditions, and brain disorders.^{14, 15, 16} The prevalence of mental-health conditions has risen by 55 percent since 1990, and researchers anticipated 17 percent growth between 2020 and 2040 before COVID-19.^{17, 18, 19} The suicide rate in the United States has risen over the past 20 years to become the second-leading cause of death for people

Exhibit 1

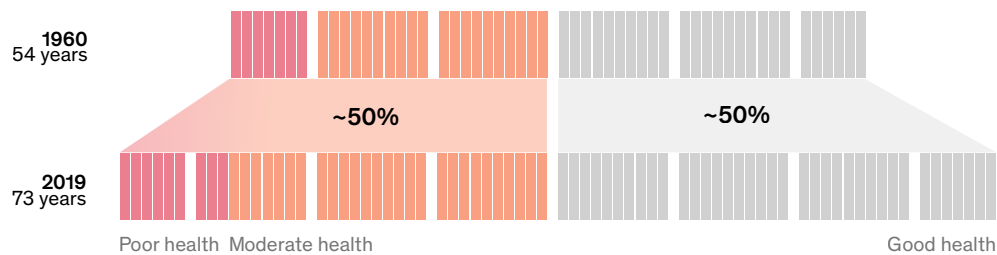
Globally, lives have gotten longer but not healthier.

The past 60 years have seen massive improvements in global life expectancy...

Average global life expectancy and healthy years



...but the proportion of life spent in poor or moderate health has not changed.



¹Assumptions-based extrapolation of proportion of good/ok health from 2019 data.

²Assumptions-based extrapolation of proportions across geographies.

Source: WHO and World Bank health and life expectancy data; country-level health system and survey data, McKinsey Global Institute Prioritizing Health report; McKinsey Health Institute analysis

¹³ Arie Kapteyn et al., “Life satisfaction within and across countries; The role of societal capital and relative income,” University of Southern California, August 2016; Paul Frijters et al., “A happy choice: Wellbeing as the goal of government,” Centre for Economic Performance discussion paper number 1658, October 2019, cep.lse.ac.uk; *World happiness report 2021*.

¹⁴ Global Burden of Disease Collaborative Network Databases, Institute for Health Metrics and Evaluation, accessed 16 February 2022; *Global Burden of Disease Study 2017*, Institute for Health Metrics and Evaluation, 2018.

¹⁵ World Bank; *Global Burden of Disease 2017*.

¹⁶ *10 global health issues to track in 2021*, World Health Organization, December 2020; *The top 10 causes of death*, World Health Organization, December 2020.

¹⁷ “Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990–2019: A systematic analysis for the Global Burden of Disease Study 2019,” *Lancet*, February 2022, Volume 9, Number 2.

¹⁸ Mental health fact sheet, WHO, accessed 20 January 2022.

¹⁹ “Prioritizing health,” July 2020.

between the ages of ten and 34.²⁰ Global cases of dementia are expected to triple by 2050, afflicting more than 150 million people.²¹ The rise in chronic, impairing lower-back pain is likely linked to obesity, which has tripled globally since 1975, from 4 percent to 13 percent of the world's population.²² There are also concerns about the potential negative effects of climate change on health, including challenges related to food security and infectious diseases. The impacts of climate change would disproportionately affect the health of vulnerable populations and people in low- and middle-income countries (LMICs), which is likely to exacerbate existing inequalities.^{23, 24}

Health inequity remains a major problem, with disparities in access and outcomes persisting between and within countries and regions and across gender, wealth, and other demographic identifiers. There is an 18-year gap in average life expectancy between low- and high-income

countries, and a 30-year gap between the lowest and highest life expectancy.^{25, 26} Maternal mortality rates are 50 or even 100 times higher in some low-income countries than in high-income countries.²⁷ Childhood cancer survival rates are above 80 percent in high-income countries but as low as 30 percent in LMICs.²⁸ In New York City, Black non-Hispanic women are eight times more likely to die of pregnancy-related complications than White women.²⁹ In England, the residents of London have a life expectancy three years longer than their fellow citizens in the North East.³⁰ Globally, women's mental and emotional health is at its lowest in 15 years and significantly below the overall population average.³¹ While there is some increasing awareness among healthcare stakeholders regarding sex- and gender-related needs, gaps remain. For example, women make up only one-third of cardiovascular clinical trial participants globally, and large knowledge gaps exist in gender-specific mechanisms and optimal drug doses for women in heart failure.³²

²⁰ Centers for Disease Control and Prevention (CDC) WISQARS Leading Causes of Death Reports, 2019.

²¹ "Estimation of the global prevalence of dementia in 2019 and forecasted prevalence in 2050: An analysis for the Global Burden of Disease Study 2019," *Lancet*, January 2022, Volume 7, Number 2.

²² Janet K. Freburger et al., "The rising prevalence of chronic low back pain," *Archives of Internal Medicine*, February 2009, Volume 169, Number 3; "Obesity and overweight," (fact sheet), WHO, accessed January 20, 2022.

²³ *The state of food security and nutrition in the world 2021: Transforming food systems for food security, improved nutrition and affordable healthy diets for all*, Food and Agriculture Organization of the United Nations, October 2021.

²⁴ Nick Watts et al., "The *Lancet* Countdown on health and climate change: from 25 years of inaction to a global transformation for public health," *Lancet*, February 2018, Volume 391, Number 10, 210.

²⁵ "Uneven access to health services drives life expectancy gaps," World Health Organization, April 2019.

²⁶ "Life Expectancy," October 2019.

²⁷ Robert L. Goldenberg, Elizabeth M. McClure, and Sarah Saleem, "Improving pregnancy outcomes in low- and middle-income countries," *Reproductive Health*, June 2018, Volume 15.

²⁸ *Childhood cancer factsheet*, World Health Organization, December 2021.

²⁹ "De Blasio administration launches comprehensive plan to reduce maternal deaths and life-threatening complications from childbirth among men of color," City of New York, July 20, 2018.

³⁰ "Life expectancy for local areas of the UK: between 2001 and 2003 and 2017 to 2019," Office for National Statistics, September 24, 2020.

³¹ "Women's emotional health is at its worst in 15 years," Global Women's Health Index, Hologic, September 2021.

³² Carolyn S.P. Lam et al., "Sex differences in heart failure," *European Heart Journal*, December 2019, Volume 40, Number 47.

Setting a higher aspiration: Adding 45 billion years of higher-quality life

Humanity has the wealth, technology, capacity, and know-how to set and pursue a bolder aspiration for our health. MHI's estimate of achievable impact includes *lifting* average quality of life; *squaring*, or increasing the portion of life we spend in good health; and *extending* life expectancy over the baseline trend (Exhibit 2).³³

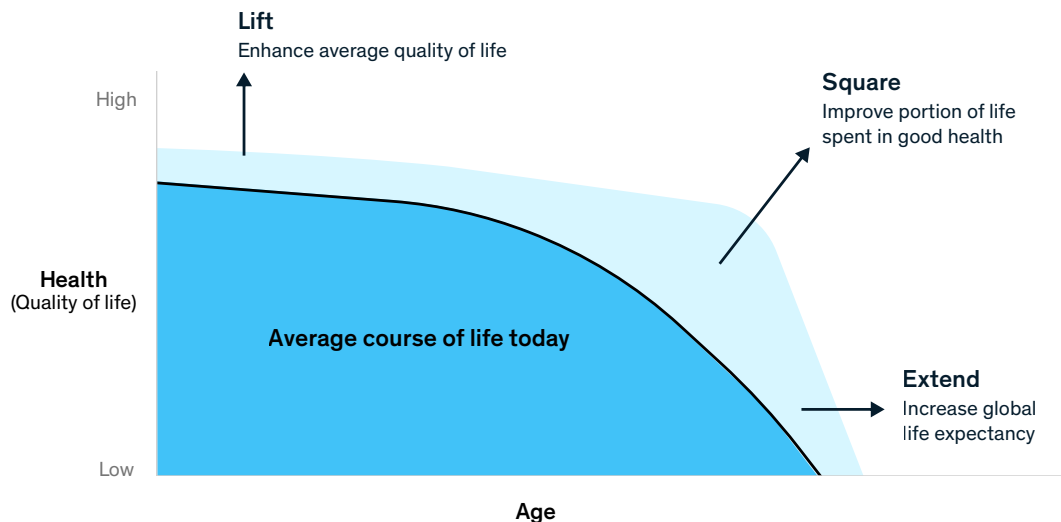
The gains in LMICs could be even larger than the global average.

What leads us to conclude such a feat is possible?

First, many countries across income levels have, in recent history, achieved significant gains in healthy

Exhibit 2

We have the opportunity to lift, square, and extend the curve mapping the average course of life over the next decade.



³³ On current trajectory, life expectancy is expected to increase 2.6 years on average over the next decade disproportionately in LMICs.

life expectancy within a decade: 3.8 years in Bolivia, 3.0 years in Ireland, 2.6 years in Oman, 6.5 years in South Africa, and 4.5 years in Thailand.³⁴ There are also countries and regions—the so-called blue zones—that appear to have achieved particularly high levels of longevity and stronger health in older age.³⁵

Second, tremendous untapped potential exists in the systematic, equitable, and extensive application of *existing knowledge*. Previous research led by the McKinsey Global Institute in 2020 concluded that applying existing and close-to-market interventions could eliminate about 40 percent of the current global disease burden by 2040.³⁶ Health innovation in the visible pipeline could cut the disease burden by a further 6 to 10 percent.^{37, 38}

Third, the world's response to COVID-19 demonstrates that remarkable innovations and behavior changes can happen quickly when

intense focus is combined with resources and collaboration across governments, for-profits, nonprofits, and communities. The world created not only multiple safe and effective vaccines but also numerous treatments and treatment protocols used by millions of clinicians across the world.^{39, 40} The pandemic also proved that it is possible for billions of people to rapidly modify their behavior in favorable ways (for example, safeguarding protocols, handwashing, self-administered diagnostic testing) when they are convinced it's in their interest and are properly equipped. Even outside of the COVID-19 response, other industries (for example, technology, mobile, and automotive) have also demonstrated significant progress in improving product output, safety, and quality at the same or lower cost over a single decade.

The remainder of this article describes the shifts MHI believes society will need to make to realize the possible gains in both life expectancy and quality of life.

The world's response to COVID-19 demonstrates that remarkable innovations and behavior changes can happen quickly when intense focus is combined with resources and collaboration.

³⁴ Healthy Life Expectancy at Birth Years Database, World Health Organization, 20 January 2022; Population (Total) Database, World Bank, 20 January 2022; HALE at birth over the periods 2000–2010 (for Ireland and Thailand) and 2010–2019 (for Oman, South Africa, and Bolivia): WHO income data.

³⁵ Anne Herm, Gianni Pes, and Michel Poulain, "The Blue Zones: Areas of exceptional longevity around the world," *Vienna Yearbook of Population Research*, 2013, Volume 11.

³⁶ "Prioritizing health," July 2020.

³⁷ Amy Westervelt, "The medical research gender gap: How excluding women from clinical trials is hurting our health," *Guardian*, April 30, 2015.

³⁸ "Prioritizing health," July 2020.

³⁹ COVID-19 Treatments Database, European Medical Agency, February 2, 2022.

⁴⁰ "Know your options for COVID-19," US Food & Drug Administration, January 27, 2022.

The foundation: Embracing a modernized understanding of health

Historically, society has defined health in terms of the presence or absence of disease. Someone is deemed to be “in good health” if disease has no impact on their life expectancy or physical function. To add up to 45 billion years of higher-quality life, MHI proposes that we embrace a broader definition of health that better aligns with individual aspirations and the latest scientific research. The World Health Organization (WHO) proposed just such a broad definition of health, with a greater emphasis on well-being, back in 1948: health is a “state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.” The subcomponents of spiritual health⁴¹ have also been recognized as relevant to health for decades.⁴² MHI uses the term “spiritual” because it is the most common way for other healthcare institutions and leaders to refer to these concepts. Strong spiritual health does not necessarily imply the adoption of religious beliefs. Unfortunately, a broad vision of health has not taken hold. MHI proposes that society fully embrace the proposed foundation and act on it.

MHI proposes an understanding of health with the following characteristics:

- **Holistic.** It recognizes the relevance and interdependencies of physical, mental, social, and spiritual dimensions.
- **Uses a positive frame.** The objective on each dimension is optimal health given an individual’s physiological capacity, not simply the absence of disease.
- **Anchored in function.** Health is relevant only to the extent it enables people to live fully—to build relationships, work or volunteer, and contribute to society while also enjoying pursuits.
- **Affected by a multitude of influences.** This understanding of health recognizes the vast set of factors that affect health, including personal attributes, personal behaviors, interventions, and environmental attributes.
- **Objective.** It is measurable across time, geographies, health systems, and cultures.

MHI proposes four interconnected dimensions of health in greater detail (Exhibit 3):

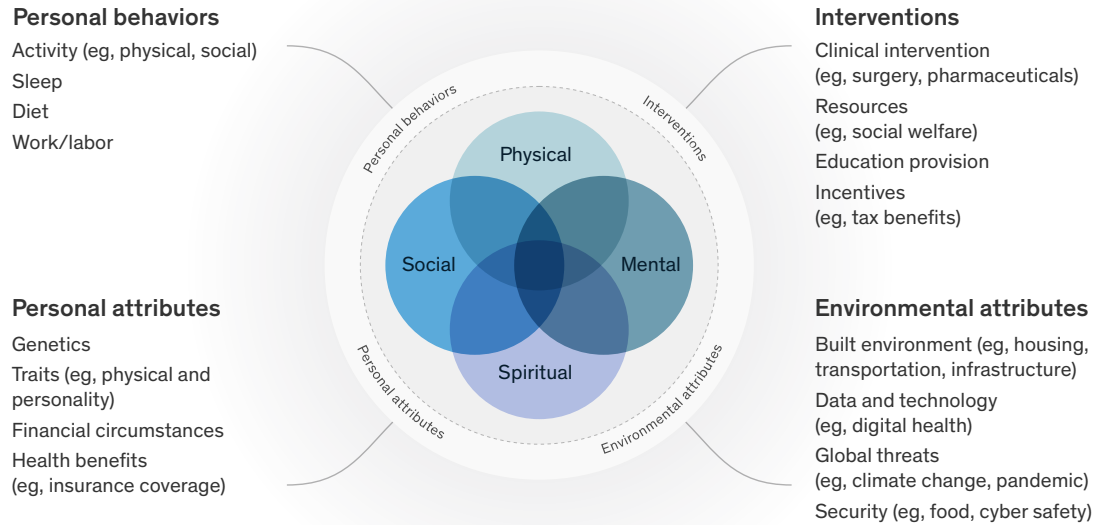
Physical health is the extent to which an individual can competently perform physical tasks and activities without substantial discomfort. It includes the capacity to move through the environment in which one lives with confidence and independence and to control one’s interactions with the physical world via fine motor control. People with good physical health have sharp sensory capacities

⁴¹ Spiritual health includes meaning, belonging, purpose, and identity. It does not necessarily require or include religious belief.

⁴² S.K. Chaturvedi, Nera Dhar, and Deoki Nandan, “Spiritual health, the fourth dimension: A public health perspective,” *WHO South-East Asia Journal of Public Health*, January 2013, Volume 2; Francesco Chirico, “Spiritual well-being in the 21st century: It is time to review the current WHO’s health definition,” *Journal of Health and Social Sciences*, March 2016, Volume 1; Christina M. Puchalski, “Integrating spirituality into patient care: An essential element of person-centered care,” *Polish Archives of Internal Medicine*, September 2013, Volume 123, Number 9; Giancarlo Lucchetti et al., “Spirituality and health in the medical schools in Brazil,” *BMC Medical Education*, August 2012, Volume 12; *Spiritual aspects of health: Global strategy for health for all by the year 2000*, South-East Asia Advisory Committee on Medical Research, World Health Organization, March 1984.

Exhibit 3

A modern understanding of health comprises four dimensions of health and a comprehensive set of influencing factors.



with keen senses of touch, vision, hearing, taste, and smell. Physically healthy individuals are full of energy and vitality, free from the twin scourges of debilitating pain and fatigue.⁴³

Mental health is an individual's cognitive, behavioral, and emotional state of being. Mental health is needed for an individual to understand and interact with the world through memory and language. Mental health allows us to experience joy, direct anger, limit harmful impulsive behavior, and avoid serious depressive episodes. Mentally healthy individuals have the resilience to cope with normal stresses and adverse events while maintaining a positive and realistic sense of self.^{44,45}

Social health represents an individual's ability to build healthy, nurturing, genuine, and supportive relationships. People in good social health have the capacity to form meaningful connections with others, to both receive and provide social support. Social health gives people a strong sense of belonging to a community.^{46,47}

Spiritual health enables people to integrate meaning in their lives. Spiritually healthy people have a strong sense of purpose, belonging, or identity. They feel a broad sense of connection to something larger than themselves, whether to a community, a calling, or a form of divinity. Spiritual

⁴³ The World Health Organization quality of life (WHOQOL) - BREF, 2012 revision, World Health Organization, 2012.
⁴⁴ Silvana Galderisi et al., "Toward a new definition of mental health," *World Psychiatry*, June 2015, Volume 14, Number 2.
⁴⁵ Vikram Patel, "The Lancet commission on global mental health and sustainable development," *Lancet*, October 2018, Volume 392, Number 10,157.
⁴⁶ Linda J. Waite, "Social well-being and health in the older population: Moving beyond social relationships," *Future Directions for the Demography of Aging: Proceedings of a Workshop*, June 2018.
⁴⁷ Corey Lee M. Keyes, "Social well-being," *Social Psychology Quarterly*, June 1998, Volume 61, Number 2.

health helps people feel rooted and mindful in the present moment.^{48, 49, 50, 51}

Strong anecdotal and empirical evidence suggests that these four health dimensions collectively contribute to both longevity and quality of life. Individuals often suffer harm when their health fails along even one of these dimensions. For example, global data indicate that severe mental-health disorders can reduce life expectancy anywhere from 10 to 25 years.⁵² On the social health dimension, loneliness and social isolation are associated with higher risks of heart attack and strokes.⁵³ In fact, research shows that loneliness and social isolation can be as damaging to an individual's health as smoking 15 cigarettes per day,⁵⁴ which is especially concerning when we note that up to 29 percent of elderly people report feeling lonely.⁵⁵ A lack of social connections has been associated with an increase in inflammation at the same magnitude as physical inactivity in adolescence, and in old age, the effect of social isolation on hypertension exceeded that

of clinical risk factors such as diabetes.⁵⁶ On a more hopeful note, for older American adults, greater purpose in life has been linked with a lower risk of stroke.⁵⁷

A more complete understanding of human health also includes acknowledging the extensive set of factors that affect it. These *influencing factors* fall into four groups: personal attributes, personal behaviors, environmental attributes, and interventions. Personal behaviors refer to individual actions such as sleep, diet, exercise, and adherence to treatment regimens. Personal attributes are individual characteristics such as genetics, education, and relationships that typically cannot be modified, at least in the short term. Environmental attributes are factors that shape the health of all individuals within a given context and include the context's political and economic system as well as global threats such as climate change. Interventions refer to deliberate actions intended to bring about change, such as clinical interventions, financial support, or incentives.

⁴⁸ "Personal well-being in the UK quarterly, April 2011 to September 2020," Office for National Statistics, February 2021.

⁴⁹ Eric S. Kim et al., "Purpose in life and reduced incidence of stroke in older adults: 'The health and retirement study,'" *Journal of Psychosomatic Research*, May 2013, Volume 74, Number 5.

⁵⁰ Grant W. Edmonds, Sarah E. Hampson, and Patrick L. Hill, "A purposeful lifestyle is a healthful lifestyle: Linking sense of purpose to self-rated health through multiple health behaviors," *Journal of Health Psychology*, May 2017, Volume 24, Number 10.

⁵¹ Glenn N. Levine et al., "Meditation and cardiovascular risk reduction: A scientific statement from the American Heart Association," *Journal of the American Heart Association*, September 2017, Volume 6, Number 10.

⁵² WHO, Information sheet: Premature death among people with severe mental disorders.

⁵³ "The Loneliness Epidemic," US Health Resources and Services Administration, January 2019.

⁵⁴ Kavita Chawla et al., "Prevalence of loneliness amongst older people in high-income countries: A systematic review and meta-analysis," *PLOS One*, July 2021.

⁵⁵ Kim ES, et al., "Purpose in life and reduced incidence of stroke in older adults: The Health and Retirement Study," *Journal of Psychosomatic Research*, May 2013.

⁵⁶ Yang Claire Yang et al., "Social relationships and physiological determinants of longevity across the human life span," *PNAS*, January 2016, Volume 113, Number 3.

⁵⁷ "Purpose in life," May 2013.

From possibility to reality: Six shifts

Our research suggests that adding up to 45 billion years of higher-quality life would require at least six material shifts in societal mindsets and actions (Exhibit 4). These shifts are highly interdependent and mutually reinforcing, and adopting them would represent a material reorientation of public policy and the economy.

1. Invest more, disproportionately on prevention and promoting optimal health

Unlocking up to 45 billion years of higher-quality life will require individuals, governments, and private institutions to invest more financial and human capital as a percentage of GDP to improve health. Greater investment in health-related

interventions is justified in areas traditionally considered part of the healthcare system and in other parts of the economy—such as education, nutrition and agriculture, consumer products, financial services, and technology—that have the potential to improve health.

The case for greater investment in health is economically sound and responsive to citizen and consumer preferences. McKinsey Global Institute's *Prioritizing health* report estimates that improving the health of the global population by effectively scaling known interventions could generate an ROI of two to four times, even when only considering economic benefits. Individuals consistently place a high priority on improving health.⁵⁸ Year after year, experts cite social and physical elements of health

Improving the health of the global population by effectively scaling known interventions could generate an ROI of two to four times, even when only considering economic benefits.

⁵⁸"Prioritizing health," July 2020.

Six shifts are needed to reach the full potential for human health.

WHERE WE ARE TODAY	WHERE WE NEED TO BE
Health spending is not a priority, but a cost to be minimized	<p>Invest more, disproportionately on prevention and promoting optimal health</p> <p>Recognize that health is one of highest-return investments society can make, and increase investment in prevention and promotion</p>
Our current understanding of health is inconsistent and limited by huge gaps in comparison data	<p>Improve measurement of a modernized understanding of health with better data</p> <p>Standardize measurements and data collection to support a modern understanding of health</p>
Proven health interventions are often scaled slowly or not at all	<p>Scale what works</p> <p>Apply proven strategies and interventions consistently and equitably across countries, systems, and populations</p>
R&D in the health industry is narrow in scope and concentrated on clinical interventions, pharmaceuticals, and medical products	<p>Innovate more, and more quickly</p> <p>Invest more in innovation, focusing on the intersection of digital, technology, and services</p>
Most companies outside the healthcare industry are exploring greater participation in the health economy, but few report on how their products impact health	<p>Unleash the full potential of all industries</p> <p>Recognize the fundamental relevance of health to every business, and invest in bold, disruptive strategies to participate in the health economy</p>
Modifiable behaviors (eg, diet, smoking) still contribute to over half the world's death toll	<p>Empower individuals to steward their own health</p> <p>Improve healthy behaviors through health education, public-sector innovation, and robust application of public policy</p>

as two of the top three drivers of life satisfaction for individuals.⁵⁹ A significant positive correlation exists between greater investment in health and improvements in living standards and wealth across

countries and time. MHI believes a causal link exists. High-income countries do not appear to have reached a point of diminishing returns.⁶⁰

⁵⁹ *World happiness report 2021*; social health is the ability of individuals to form healthy and rewarding interpersonal relationships with others.

⁶⁰ In 2019, EU countries devoted on average 8.3 percent of their GDP to healthcare; this figure has remained largely unchanged since 2014 as growth in health spending remained broadly in line with overall economic growth. In the US, the share of national health expenditure has increased six percentage points over the last two decades, in line with the pace of economic growth. "Health Expenditure in Relation to GDP," *Health at a Glance: Europe 2020: State of Health in the EU Cycle, 2020*; "Current Health Expenditure (% of GDP)," World Health Organization Global Health Expenditure Database, World Bank, January 19, 2021; "Historical: National Health Expenditure Data," Centers for Medicare & Medicaid Services, January 19, 2021.

MHI further proposes disproportionately investing in disease prevention and health promotion in addition to treatment to help people truly thrive (Exhibit 5). Promotion is defined here as actions that help individuals achieve and sustain the best possible physical, mental, social, and spiritual health given their intrinsic biological capacity.

Currently, health spending is heavily tilted toward curative care. OECD countries spend just 2.8 percent of their health budgets on organized prevention programs such as vaccinations, disease screenings, and health education.^{61, 62} Low-income economies spend ten times as much (as a proportion of budget) as OECD countries do on preventive measures, which amounts to 20 to 35 percent of these low-income

economies' healthcare budgets.⁶³ At the moment, most investment and innovation in achieving optimal health come from the private sector. The global wellness market, for example, is valued at \$1.5 trillion, roughly four times the size of what governments and NGOs spend globally on preventive care and health promotion.⁶⁴

Finally, MHI proposes disproportionately investing in underresourced populations as both a moral imperative and a good financial decision. Improving the health of populations with historically reduced access to care or worse-than-average health outcomes can give societies a potent economic boost. Better health is associated with improved labor productivity and higher income. For example, 11 percent of economic growth in LMICs from

Exhibit 5

Society should empower people to thrive, going beyond treatment to promoting a healthy way of life for all.



Promotion

Actions that help individuals achieve and sustain the best possible physical, mental, social, and spiritual health



Prevention

Interventions aiming to minimize the burden of diseases and associated risk factors



Treatment

Care given to an individual to combat disease

⁶¹ "Countries need to up spending commitments on health promotion, urge think tanks," International Longevity Centre, November 2021.

⁶² "Health spending in most OECD countries rises, with the U.S. far outstripping all others," OECD, March 2004.

⁶³ *Global spending on health: A world in transition*, World Health Organization, December 2019.

⁶⁴ McKinsey analysis; global wellness-market figure pulled from McKinsey's *Future of wellness* report and encapsulates products ranging from personal health trackers to nonsurgical aesthetic procedures.

1970 to 2000 resulted from reduced rates of adult mortality.⁶⁵

As a first step to realizing this shift, governments might consider conducting a “health opportunity assessment” across all government agencies, including those outside of healthcare (for example, environment, education, treasury, trade, agriculture, housing, and infrastructure) to understand the most critical links to health and to unearth potential high-ROI investments for consideration, including the net effect of laws, regulations, and government activity on private-sector activity.⁶⁶

2. Improve measurement of a modernized understanding of health with better data

Attaining the aspiration requires improving global standards and systems to measure a modernized understanding of health, collecting significantly more comparative data on each element and dramatically increasing transparency.

The rationale is straightforward: measurement is foundational to improvement. Measurement helps us understand what works and what doesn't so we can allocate resources effectively. Conversely, weak (or nonexistent) measurement leads to waste and prevents us from investing more in what might be promising innovation. Overly generalized measurements are also ineffective; for example, the absence of a diagnostic framework for autism specifically for women leads to underdiagnosis.^{67,68} It's clear that researchers need subgroup-specific data collection and measurement initiatives.

MHI estimates that fewer than 5 percent of factors that influence and measure a modern understanding of health are defined consistently (or at all), captured systematically, and made broadly available as data. Most elements of a modern definition of health have very modest, if any, reliable measurement standards or data, including social and spiritual health and large categories of influencing factors such as the role of nutrition, employment, housing, and sleep. An estimated 75 percent of studies related to health can be classified as having primary endpoints that measure physical health, while just 12 percent address mental health, 6 percent address social health, and 1 percent examine spiritual health.⁶⁹ Most countries have very limited or no data regarding mental health, and data that are comparable across regions are lacking. For example, more than 100 countries have no data about mental-health conditions among adolescents.⁷⁰ And of the 23 mental-health indicators measured by OECD, only two—life satisfaction and death by suicide—were available in more than 90 percent of OECD countries.⁷¹ Finally, there is only a modest attempt to define or consistently measure the extent to which individuals have achieved optimal possible health.

Even physical-health measurements, the area with the best standards and data, offer considerable room for improvement. High-income countries capture primarily disease prevalence and select health interventions (for example, prescriptions, office visits, and procedures). Few data are systematically captured or available with respect to function itself or health status such as mobility, toxin levels, pain, and sexual function. Challenges in lower-income countries are more fundamental and

⁶⁵ Dean T. Jamison, Laurence J. Lau, and Jia Wang, “Health’s contribution to economic growth in an environment of partially endogenous technical progress,” in *Health and Economic Growth: Findings and Policy Implications*, ed. Guillem López-Casasnovas (Cambridge, MA: MIT Press, 2005), 67–91; Blake C. Alkire et al., “The economic consequences of mortality amenable to high-quality health care in low- and middle-income countries,” *Health Affairs*, June 2018, Volume 37, Number 6.

⁶⁶ A similar perspective with a UK lens is explored in *Whose Health Is It, Anyway?*, by Sally C. Davies and Jonathan Pearson-Stuttard, published by Oxford University Press in 2021.

⁶⁷ Jean Golding, Ginny Russell, and Colin Steer, “Social and demographic factors that influence the diagnosis of autistic spectrum disorders,” *Social Psychiatry and Psychiatric Epidemiology*, October 2010, Volume 46.

⁶⁸ Katharina Dworzynski et al., “How different are girls and boys above and below the diagnostic threshold for autism spectrum disorders?,” *Journal of the American Academy of Child & Adolescent Psychiatry*, June 2012, Volume 51, Number 8.

⁶⁹ Sample analysis based on PubMed.

⁷⁰ H.E. Erskine et al., “The global coverage of prevalence data for mental disorders in children and adolescents,” *Epidemiology and Psychiatric Sciences*, August 2017, Volume 4.

⁷¹ “Key findings and recommendations,” *A new benchmark for mental health systems: Tackling the social and economic costs of mental ill-health*, OECD, June 2021.

include undigitized patient records, siloed reporting due to unintegrated care, and lack of access to diagnostic technologies.^{72, 73} Positive examples, such as India, have shown how LMIC economies can still build robust nationwide health registries over time.⁷⁴

An example of the tangible downside associated with weak measurement is the challenge high-income countries face in subjecting nonpharmaceutical interventions to rigorous empirical analysis. Since 2007, only 11 percent of food-related health claims—a large component of the nonpharmaceutical-intervention category—have met the EU criteria for robust scientific evidence.^{75, 76, 77} Of the estimated 20,000 mental-health apps available for download on personal computers and smartphones, five have been formally vetted and approved by the US Food and Drug Administration.⁷⁸

3. Scale what works

McKinsey Global Institute's *Prioritizing health* report estimates that applying existing and proven interventions could reduce the global disease burden by about 40 percent (Exhibit 6).⁷⁹ Scaling known interventions could reduce child mortality by 65 percent and help a typical 65-year-old to be as healthy as a typical 55-year-old today. These numbers only account for improvements in physical and, to some extent, mental health. The potential for improved outcomes when health

is considered more broadly is even greater. For high-income countries, most of the potential is in addressing diabetes, cancer, and cardiovascular disease. Low-income countries would benefit from more investment in known, basic health infrastructure.⁸⁰ Furthermore, scaling up largely preventive solutions and targeting infectious diseases and nutritional disorders as well as maternal, neonatal, and child health are high-potential improvements.

Past experience shows that scaling existing technologies can be very challenging—the global rollout of hepatitis B vaccines took more than 17 years, and survival after a diagnosis of type 1 diabetes in some LMICs is as low as one year, often due to the unaffordability of insulin.^{81, 82, 83}

To scale what works, societies need awareness and a commitment from people, governments, payers (including employers), and healthcare providers to adapt. Each group has an opportunity to overcome myopia and biases and establish strategies, policies, and incentives to increase the application of known solutions with high ROI. In many cases, such adaptation also requires greater net investment, as previously stated.

Another key to scaling what works is applying proven interventions across contexts, including countries and populations. Literature extensively describes differences in health outcomes for the same diseases by health provider, even within the

⁷² Philomena Ngugi et al., "Development of standard indicators to assess use of electronic health record systems implemented in low- and medium-income countries," *PLOS One*, January 2021.

⁷³ Susannah H. Mayhew, Nicholas Mays, and Sandra Mounier-Jack, "Integrated care: Learning between high-income, and low- and middle-income country health systems," *Health Policy and Planning*, November 2017, Volume 32.

⁷⁴ Katherine Hay, Manoj Mohanan, and Nachiket Mor, "Quality of health care in India: Challenges, priorities, and the road ahead," *Health Affairs*, October 2016, Volume 35, Number 10.

⁷⁵ EU Register of Nutrition and Health Claims Made on Foods Database (v.3.6), European Commission, January 7, 2022.

⁷⁶ *Mobile health approaches to weight management: Food for thought*, Organisation for the Review of Care and Health Applications (ORCHA), January 2021.

⁷⁷ Andrew Mernin, "App warning in addressing cancer care backlog," *Health Tech World*, April 14, 2021.

⁷⁸ Jenny Gold, "In a murky sea of mental health apps, consumers left adrift," *California Healthline*, June 21, 2021.

⁷⁹ "Prioritizing health," July 2020.

⁸⁰ "Prioritizing health," July 2020.

⁸¹ Ding-Shinn Chen, "Hepatitis B vaccination: The key towards elimination and eradication of hepatitis B," *Journal of Hepatology*, April 2009, Volume 5, Number 4.

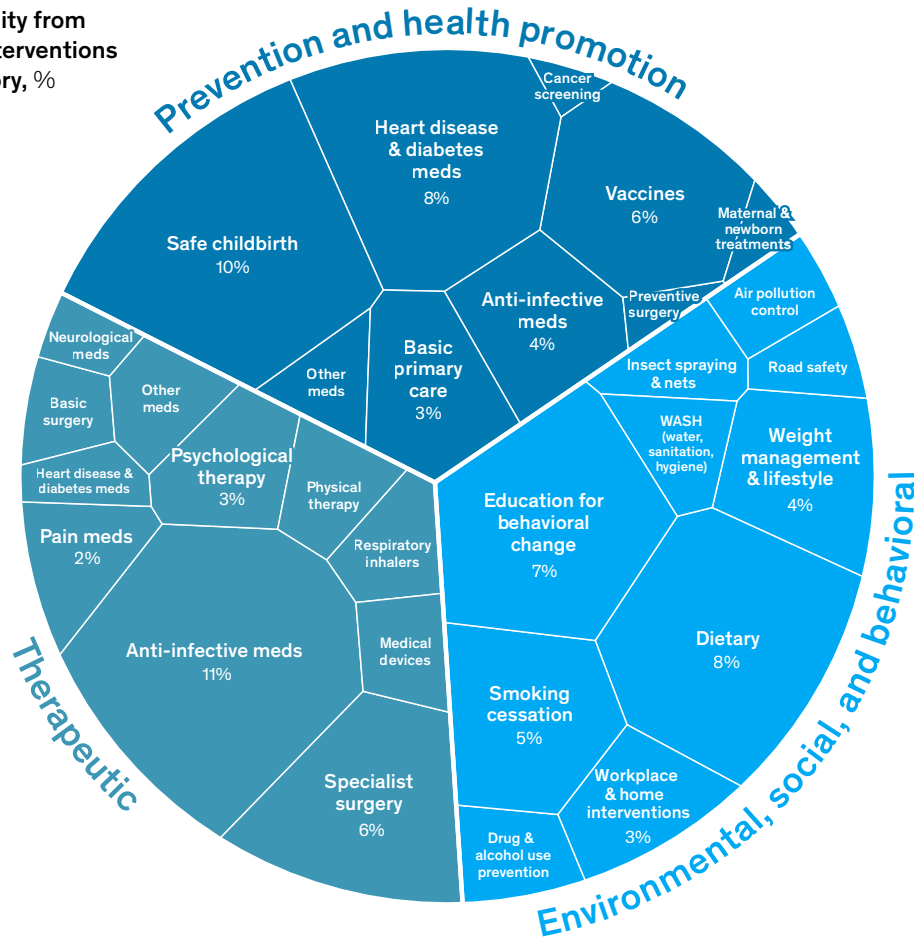
⁸² Ding-Shinn Chen and Jia-Horng Kao, "Global control of hepatitis B virus infection," *Lancet*, July 2002, Volume 2, Number 7.

⁸³ J.S. Yudkin, "Insulin for the world's poorest countries," *Lancet*, March 2001, Volume 355, Number 9.

Exhibit 6

There is potential to reduce global disease burden by 2040 through known interventions.

Opportunity from known interventions by category, %



Note: 100% in the chart represents the 38% reduction in total disease burden (~2.5 disability-adjusted life years); figures may not sum to 100%, because of rounding.

Source: *Prioritizing Health: A prescription for prosperity*, McKinsey Global Institute, July 8, 2020; McKinsey Health Institute analysis

same geography.^{84, 85, 86, 87} At their worst, healthcare systems and especially providers can be overly focused on their own systems. For example, the Aravind Eye Care System in southern India

developed a successful and efficient system for delivering high-quality and low-cost cataract surgery.⁸⁸ Despite the potential for meaningful application in other parts of the world, including

⁸⁴Paulina Daw et al., "A systematic review of provider- and system-level factors influencing the delivery of cardiac rehabilitation for heart failure," *BMC Health Services Research*, November 2021, Volume 21.

⁸⁵Gustavo Saposnik et al., "Hospital volume and stroke outcome: Does it matter?," *Neurology*, September 2007, Volume 69, Number 11.

⁸⁶Bruce K. Armstrong, Katharine E. Jong, and Paula J. Vale, "Rural inequalities in cancer care and outcome," *Medical Journal of Australia*, January 2005, Volume 182, Number 1.

⁸⁷Laura K. Stein et al., "Correlations between physician and hospital stroke thrombectomy volumes and outcomes: A nationwide analysis," *Stroke*, June 2021, Volume 52, Number 1; Vijay Govindarajan, "Profitable audacity: One company's success story," *Harvard Business Review*, January 25, 2012.

⁸⁸"Our story," Aravind Eye Care System, February 26, 2022.

Increasing innovation will require more foundational research, better collaboration, and quicker and more effective nurturing and scaling of the most promising concepts.

high-income countries, this system remains primarily anchored in the local context.

4. Innovate more, and more quickly

More innovation in all forms will be required, including in such areas as business models, government policies, incentive schemes, pharmaceuticals, medical devices, clinical standards, mobile apps, medical products, process improvements, and novel applications of existing technologies such as artificial intelligence. Increasing innovation will require more foundational research, better collaboration to break through silos, and quicker and more effective nurturing and scaling of the most promising concepts.

Innovation, along with greater investment in health, has been the driving force behind most advances in health. Once scientists identified the link between diabetes and insulin production in the pancreas a century ago, a continuous chain of discovery and commercialization has transformed the lives of diabetes patients.⁸⁹ Cancer mortality in the United States fell 32 percent from 1991 to 2019,⁹⁰ in part due to new surgical techniques, detection tools, and targeted therapies.⁹¹ The

exceptional pace of development and deployment of vaccines for COVID-19 is illustrative of the opportunity to drastically accelerate progress in public health when societal will, incentives, and resources are aligned. COVID-19 vaccines progressed from discovery to global distribution of the finished product in less than 12 months. Vaccine development is a high-risk process that traditionally takes more than a decade to complete. Prior to COVID-19, the fastest vaccine ever developed—for mumps in 1967—took four years from discovery to market launch.

Yet there are many areas where innovation has not occurred as hoped, often in the context of market failures. Despite the urgent threat of antimicrobial resistance (AMR), innovation in new antibiotics and alternatives has been weak, due in part to lack of incentives to invest in research and development.^{92,93} The antibiotic pipeline is substantially weaker than those for other therapeutic areas, such as treatment for cancer. One comparison: between 2017 and 2020, 1,751 immuno-oncology drugs were in preclinical and research phase, and 45 received approval. In the same period, just 292 antibiotics were in preclinical and research phase, and 11 received approval.^{94,95}

⁸⁹ Thomas Kjeldsen and Peter Kurtzhals, "A hundred years of insulin innovation: When science meets technology," *Diabetes*, September 2021, Volume 70, Number 9.

⁹⁰ Rebecca L. Siegel et al., "Cancer statistics, 2022," *CA: A Cancer Journal for Clinicians*, January 2022, Volume 72, Number 1.

⁹¹ "Advancing cancer therapy," *Nature Cancer*, March 2021, Volume 2.

⁹² *Antimicrobial resistance: Invest in innovation and research, and boost R&D and access*, IACG, June 2018.

⁹³ "Global shortage of innovative antibiotics fuel emergence and spread of drug-resistance," World Health Organization, April 2021.

⁹⁴ FDA, New Drug Therapy Approvals (2021, 2020, 2019, 2018, 2017) and Biologic Approvals by year; approvals of anti-infectives and antibacterials between July 1, 2017, and September 30, 2020. Only FDA approvals counted. Count of drugs, not indications. Approvals given for total/new molecule.

⁹⁵ *2020 antibacterial agents in clinical and preclinical development: An overview and analysis*, World Health Organization, April 2021.

In addition to even more innovation from the life sciences industry, humanity would benefit from substantially more innovation from other industries and domains, especially via the application of emerging technologies⁹⁶ such as applied artificial intelligence, next-generation computing, and distributed computing. In addition, society has yet to realize the full potential of digital health innovation to improve health outcomes. Good momentum for catalyzing new or greater innovation exists, especially among venture- and private-equity-backed companies. Venture capital investments in digital health reached an all-time high of \$29 billion in 2021, nearly doubling 2020's investments.⁹⁷ Promising concepts include wearables (for example, activity tracking, cardiac anomaly detection, patches for blood sugar monitoring, physiotherapy for pain relief with body-posture detection), telesurgery, and AI-enabled diagnostics. Telemedicine exploded worldwide in 2020 due to COVID-19; in the United States, it grew by 3,800 percent in 2020, and some consumers continue to indicate a preference for it.^{98, 99}

Finally, capturing the full potential impact from innovation will require a broader rethinking of innovation. This should involve creating an ecosystem of innovation by looking at all processes and influencing factors and engaging all stakeholders who affect a desired health outcome. This kind of innovation allows for better implementation mechanisms, end-to-end coordination, and collaboration to effectively

and efficiently support sustainable behavior change and improve patient pathways. One such example is the Stop TB Partnership, which aims to end tuberculosis worldwide by 2030.¹⁰⁰ The organization defined the optimal end-to-end care flow for tuberculosis, identified key interventions, and mapped stakeholders against each. It then aligned all contributors on the same data standards and coordinated their efforts, which resulted in an ecosystem that is both effective and scalable. Another example of an effective ecosystem can be found in Amsterdam, where multiple city departments (beyond the health department) work together in a coalition to achieve highly ambitious health and well-being targets.^{101, 102, 103}

Impactful innovation requires integrated, purposeful action across governments and the private sector. Governments might consider how to adapt investments, budgets, regulations and regular processes, intellectual property schemes, reimbursement principles, and laws to better catalyze innovation in areas with the greatest societal needs. Government action may be particularly relevant where the risk of market failure is high. Individuals and private payers, including insurers and employers, might consider how to adapt their consumption patterns and reimbursement policies to seek and reward promising innovations. Finally, greater innovation requires businesses from outside the healthcare sector to view health as an emerging or core market to enter, disrupt, and pursue.

⁹⁶ Jacomo Corbo, Nicolaus Henke, and Ivan Ostojic, "The top trends in tech," McKinsey, June 2021.

⁹⁷ Bill Evans, Adriana Krasniansky, and Megan Zweig, "2021 year-end digital health funding: Seismic shifts beneath the surface," Rock Health, January 10, 2021.

⁹⁸ Oleg Bestseny, Greg Gilbert, Alex Harris, and Jennifer Rost, "Telehealth: A quarter-trillion-dollar post-COVID-19 reality?," McKinsey, July 9, 2021.

⁹⁹ Jenny Cordina, Eric Levin, and George Stein, "COVID-19 consumer healthcare insights: What 2021 may hold," McKinsey, November 19, 2021.

¹⁰⁰ "Re-imagining TB Care," Stop TB Partnership, accessed February 26, 2022.

¹⁰¹ "Dutch health targets for future," *Open Access Government*, December 11, 2017.

¹⁰² *The Amsterdam healthy weight approach: Investing in healthy urban childhoods: A case study on health diets for children*, UNICEF, November 2020.

¹⁰³ *Aiming for zero new HIV infections in Amsterdam by 2026*, Fast-Track Cities, May 2020.

5. Unleash the full potential of all industries

Achieving the set aspiration requires institutions outside of the traditional healthcare industry to pursue health-related business opportunities much more aggressively, better enable and empower their employees, and better define and honor health-related environmental, social, and governance (ESG) commitments.

Health is deeply relevant to every business in the world, at minimum because employers affect the health of their employees, and the health of employees affects their performance. Sixty-eight percent of companies say employee well-being and mental health is a top strategic priority.¹⁰⁴ Poor employee health costs about \$3.5 trillion annually.¹⁰⁵ In the United Kingdom, 17.9 million working days were lost to mental-health illnesses from 2019 to 2020, which was more than half of the total working days lost to poor health.¹⁰⁶ For many businesses, health is also part of their ESG commitments.

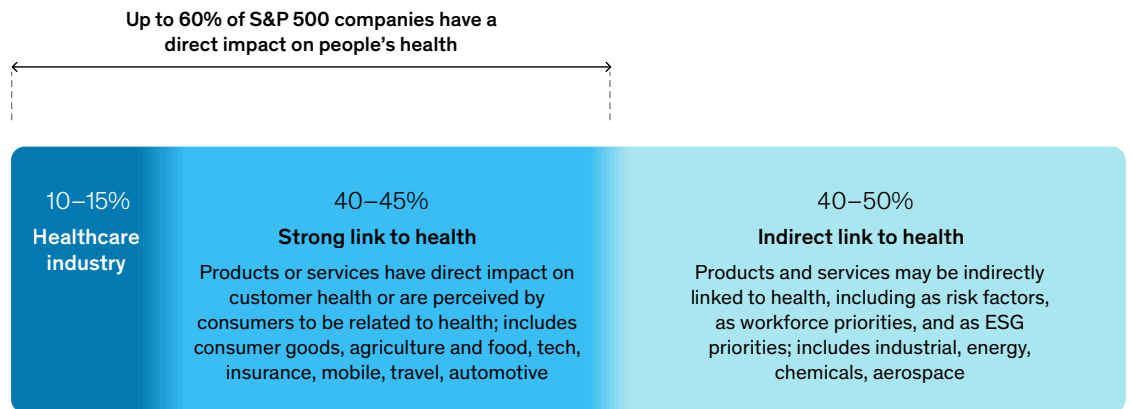
Yet, while 66 percent of Fortune 500 companies publish sustainability reports, only about 4 percent published health impact reports prior to COVID-19.¹⁰⁷ Fewer have developed or implemented systemic policies to improve employee health.

Even more critically, MHI estimates that 40 to 45 percent of companies in the S&P 500 that are not considered part of the healthcare industry deliver products or services that directly affect the health of individuals (Exhibit 7), sometimes favorably and sometimes unfavorably. Industries with highly health-relevant products or services include food and nutrition, consumer products, social media, transportation, gaming, travel, consumer financial services, non-health-related insurance, housing, and heating and cooling systems. Companies in these industries have an opportunity to leverage their relevance much more aggressively to explore even more significant, more disruptive entry into healthcare in both traditional and emerging domains. In some cases,

Exhibit 7

Health is deeply relevant to all companies.

S&P 500 companies by their relation to health, % of all companies



¹⁰⁴ Jeanne Meister, "Five strategic HR priorities for 2021," *Forbes*, May 28, 2021.

¹⁰⁵ McKinsey analysis, WHO, WTO Integrated Benefits Institute.

¹⁰⁶ "Working days lost in Great Britain, 2019–20," WHO Health and Safety Executive, accessed 14 December 2021

¹⁰⁷ Ashish K. Jha and Peter Sands, "Most CEOs don't have a global health strategy. That needs to change," *Fortune*, March 25, 2019.

Individual health behaviors are the single biggest driver of an individual's health.

companies face an imperative to understand and mitigate the potentially unfavorable effect of their products or services.

Moreover, companies that don't have a direct or strong link to health still have the opportunity to empower employees to improve their health and honor health-related environmental, social, and government commitments.

6. Empower individuals to steward their own health

To unlock up to 45 billion years of higher-quality life, individuals need to be empowered as the primary stewards of their own health and their loved ones' health. Individual behaviors are the single biggest driver of an individual's health. Multiple studies have shown that modifiable behaviors—including unhealthy diet, activity levels, sleep practices, medication use, and tobacco use—contribute to as much as 60 percent of deaths worldwide.¹⁰⁸ Individual mindsets and behaviors are likely even more relevant when considered through the lens of a modernized, holistic understanding of health that also includes the role of mental, social, and spiritual functioning. Almost every aspect of our lives and most of our choices affect our health.

Consumers across cultures and countries are increasingly demanding more empowerment. Their expectations are shaped by experiences of speed, convenience, personalization, and access to information from other industries, and they expect

the same with respect to their health. Trust in institutions is declining in many regions, increasing the felt need of many individuals to be more self-directed.¹⁰⁹ Finally, in many parts of the world, healthcare remains largely self-funded, which puts an even greater onus on the individual.

Recent experience shows that massive changes of behavior are possible. Billions of people significantly changed their daily actions, such as wearing face masks and social distancing, to protect themselves and their families during the COVID-19 pandemic. Insights from behavioral economics also show how to motivate and empower individuals so they are most likely to make decisions that are in their own best interest. Nudging—which behavioral science defines as a means of altering people's behavior without restricting their choices or changing their economic incentives—can influence the behavior and decision making of individuals and groups. For example, nudging has been shown to improve hand hygiene among healthcare workers to decrease the number of healthcare-associated infections.¹¹⁰ In addition to purposeful nudging, social networks and their associated culture, mindsets, and behaviors are highly correlated with individuals' health-relevant decisions and behaviors.

Empowering individuals will require action from the government, more innovation, and adaptation from traditional healthcare stakeholders. Governments can consider how they might adapt laws, regulations, incentives, and government-operated healthcare services to better empower people. Governments

¹⁰⁸ Robert F. Kushner and Kirsten Webb Sorenson, "Lifestyle medicine: The future of chronic disease management," *Current Opinion in Endocrinology, Diabetes and Obesity*, October 2013, Volume 20, Number 5.

¹⁰⁹ Jonathan Perry, "Trust in public institutions: Trends and implications for economic security," UN Department of Economic and Social Affairs, July 20, 2021; Esteban Ortiz-Ospina and Max Roser, "Trust," *Our World in Data*, 2016.

¹¹⁰ M.G. Caris et al., "Nudging to improve hand hygiene," *The Journal of Hospital Infection*, September 2017, Volume 98, Number 4.

might also consider how to adapt (or create) environments, structures, or systems to make it easier for consumers to make healthy choices.

Empowering individuals will require substantially more technology-based innovation, including mobile or remote access that optimizes exercise, sleep, caloric intake, posture, and the like. Innovation that empowers individuals is exploding across low-, middle-, and high-income countries. In rural India, for example, smartphones enable individuals to have greater access to healthcare providers.¹¹¹ Approximately 200 million Chinese consumers have used Ping An's Good Doctor

mobile platform to receive consultation, referrals, and appointments.¹¹² In 2019, 21 percent of Americans reported using smart watches or fitness trackers.¹¹³

Finally, healthcare stakeholders, especially provider institutions and clinicians, might consider how to embrace many patients' desire to be self-directed. Providers have an opportunity to operate more as coaches who help patients define and execute a coauthored care plan. Providers also have an opportunity to embrace many of the previously described technology-based solutions emerging outside the traditional healthcare industry.

Addressing health inequity

As highlighted in this report, addressing health inequities across countries and populations is both the right thing to do and a requirement to reach the aspiration. MHI acknowledges that this is an arena where more research and work could be critical, especially to achieve impact at scale. Moreover, equity priorities will vary considerably across communities based

on contexts and cultures. That said, research suggests a few foundational actions are needed. The first is to acknowledge and measure inequity to encourage accountability, motivate action, and better understand root causes of poor health. The second is for governments, businesses, and social institutions to be even more intentional in creating focused

strategies to address inequities. Finally, MHI believes a focus on equity can and should be considered and integrated into all other actions to improve health, both to uncover potential opportunities to reduce inequity and to mitigate the risk of unintentionally exacerbating it.

¹¹¹ "Smart doctor: How smartphones hold the key to improving rural health in India," Nanyang Technological University, July 16, 2020.

¹¹² "Technology empowers Ping An's health care amid coronavirus," Ping An, August 13, 2020.

¹¹³ Emily A. Vogels, "About one-in-five Americans use a smart watch or fitness tracker," Pew Research Center, January 9, 2020.

Entering the arena

Dramatically improving our health requires an ecosystem approach—exchanging ideas, aligning around standards, working across multiple stakeholder silos. It will require unprecedented collaboration to shift society’s mindsets and actions enough to realize possible gains in life expectancy and quality of life.

McKinsey Health Institute is an enduring, non-profit-generating global entity within McKinsey that strives to catalyze actions across continents, sectors, and communities to extend and improve lives. MHI is committed to contributing to this collective ecosystem. MHI is fostering a strong network of organizations committed to this aspiration through a range of collaboration types—convening and enabling leaders, advancing

research, creating and promoting open-access data assets, and stimulating innovation. MHI is sharing resources, innovations, data, and findings in the public domain so others can replicate what proves effective and looks to its ecosystem partners to commit to the same.

MHI welcomes connection with committed organizations interested in building out this ecosystem together. MHI is actively seeking opportunities to collaborate across its identified six shifts as well as seven initial key focus areas: brain health, healthy living, infectious diseases, equity and health, sustainability and health, aging, and healthcare-worker capacity.

Dramatically improving our health requires an ecosystem approach—exchanging ideas, aligning around standards, working across multiple stakeholder silos.

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