

McKinsey
& Company

Prioritizing health: A prescription for prosperity

Penny Dash, Senior Partner and Lead for
Healthcare, Europe

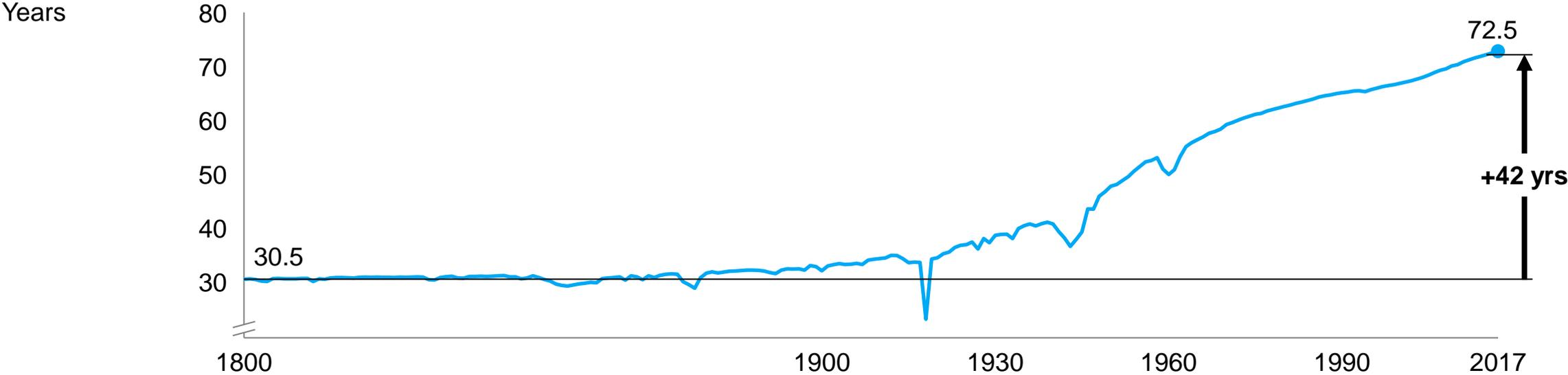
December 2020



As health improved in the 20th century, life expectancy more than doubled and the global labor force expanded

Life expectancy at birth, 1800-2017

Global life expectancy at birth



Global population

1 1.7 2 3 6 7.5

Source: Gapminder.org; McKinsey Global Institute analysis

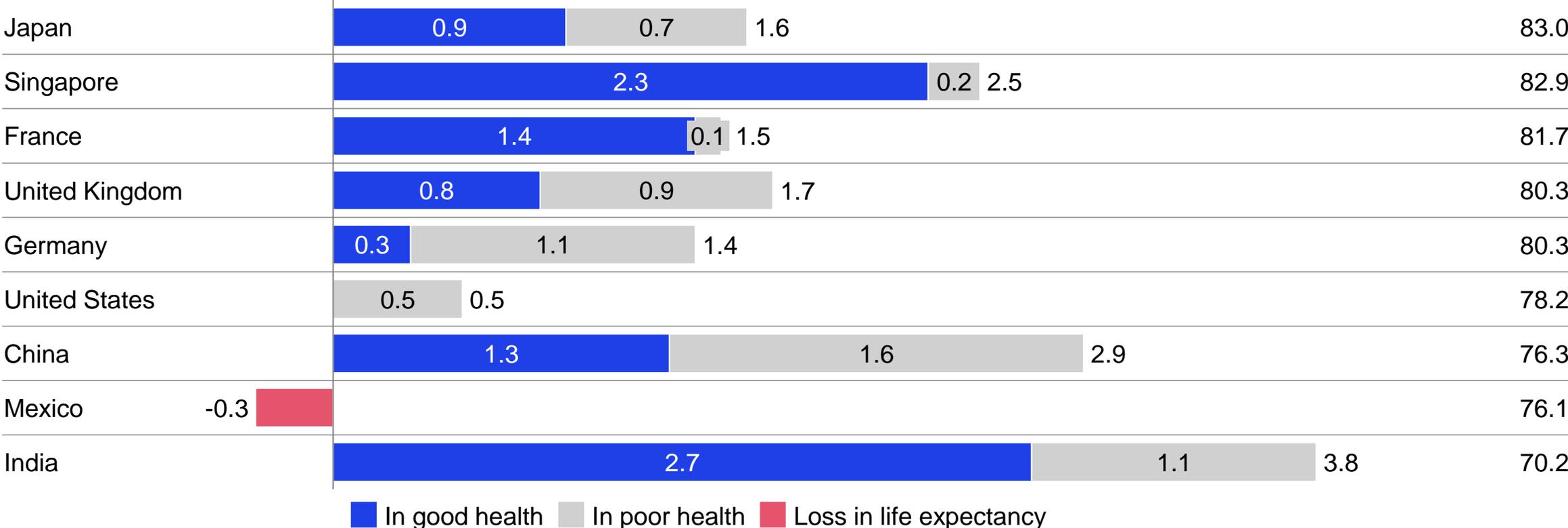
More recently people are continuing to live longer but not necessarily in better health

Change in life expectancy between 2007 and 2017

Years

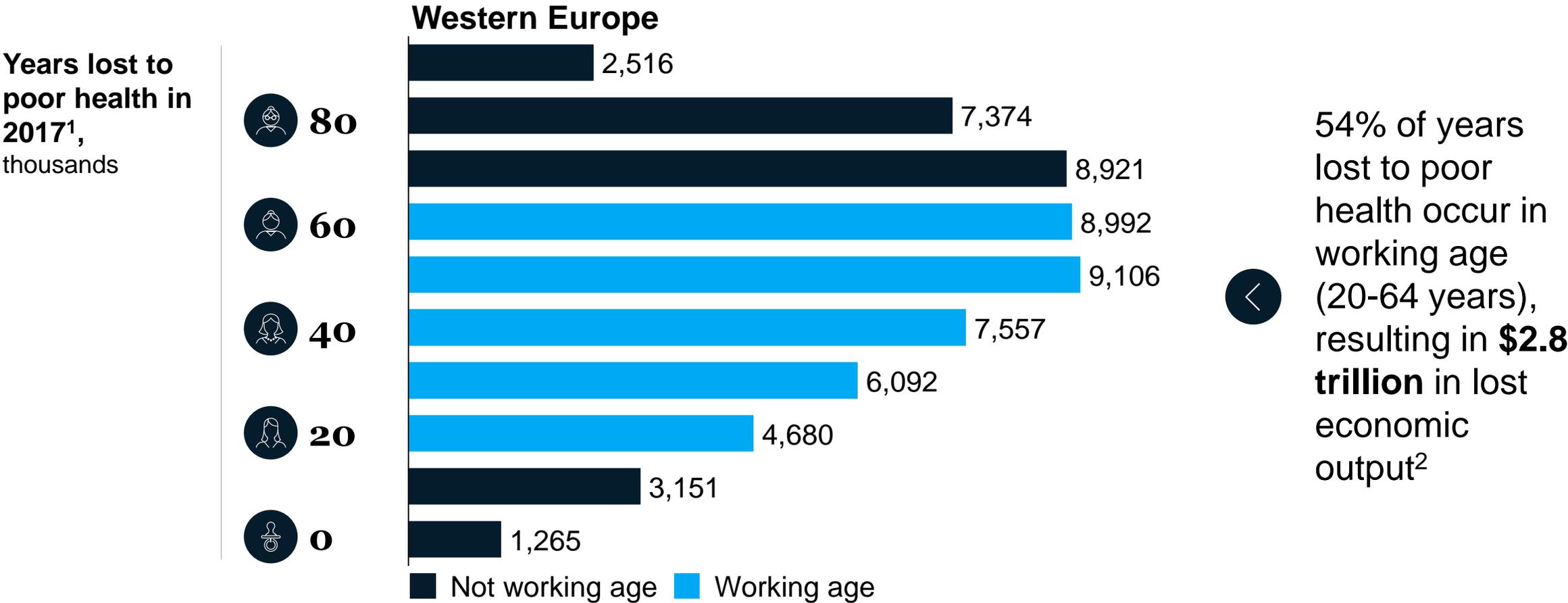
Life expectancy, 2017

Years



1. Healthy life expectancy also called Health Adjusted Life Expectancy (HALE) is the disability-free life expectancy where years lived with disability are subtracted from overall life expectancy as a share of life expectancy.

More than half of years lost to poor health occur in the working age population, resulting in an economic cost of \$2.8 trillion a year



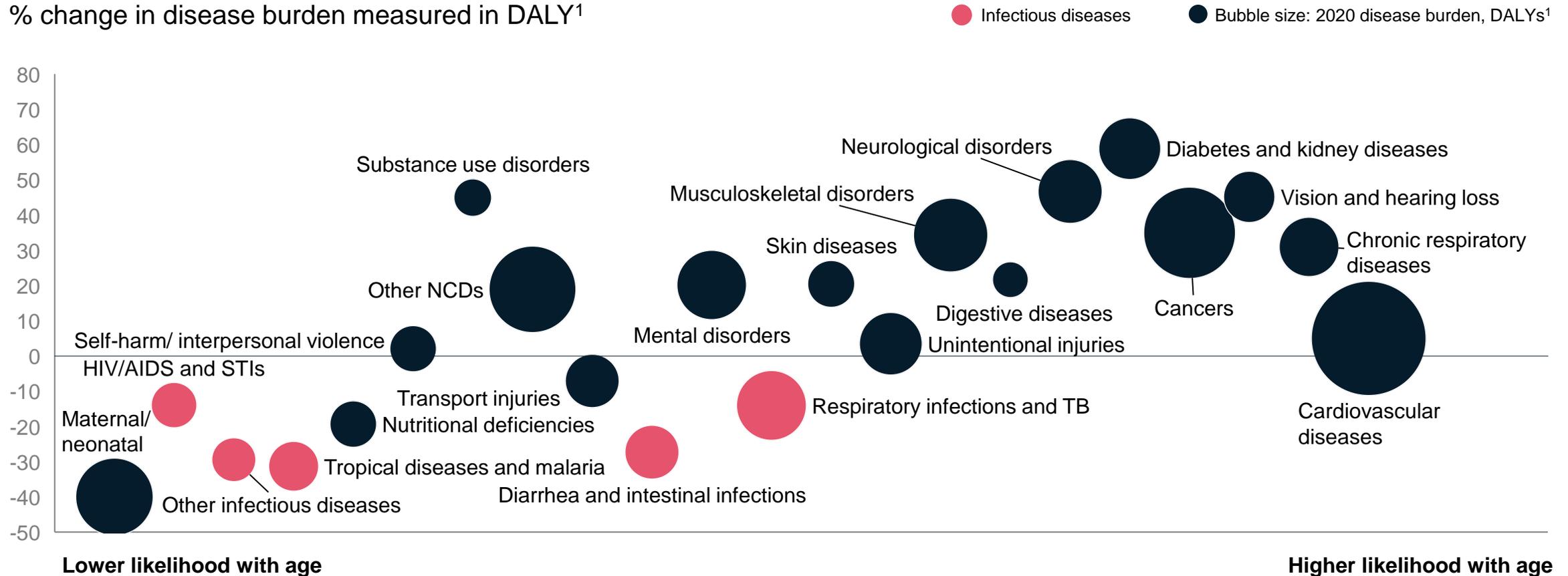
1. Years lost to poor health is the sum of years lived with disability and years of life lost in this year due to premature death
 2. Calculated for 2017, include cost from loss of labor supply from early deaths in 2017, poor health and loss of productivity; does not include healthcare costs to address ill health

Looking ahead, age-and lifestyle-related diseases is expected to rise while many infectious diseases could decrease significantly

Disease Baseline Forecast

Change in disease burden between 2020 and 2040 globally

% change in disease burden measured in DALY¹

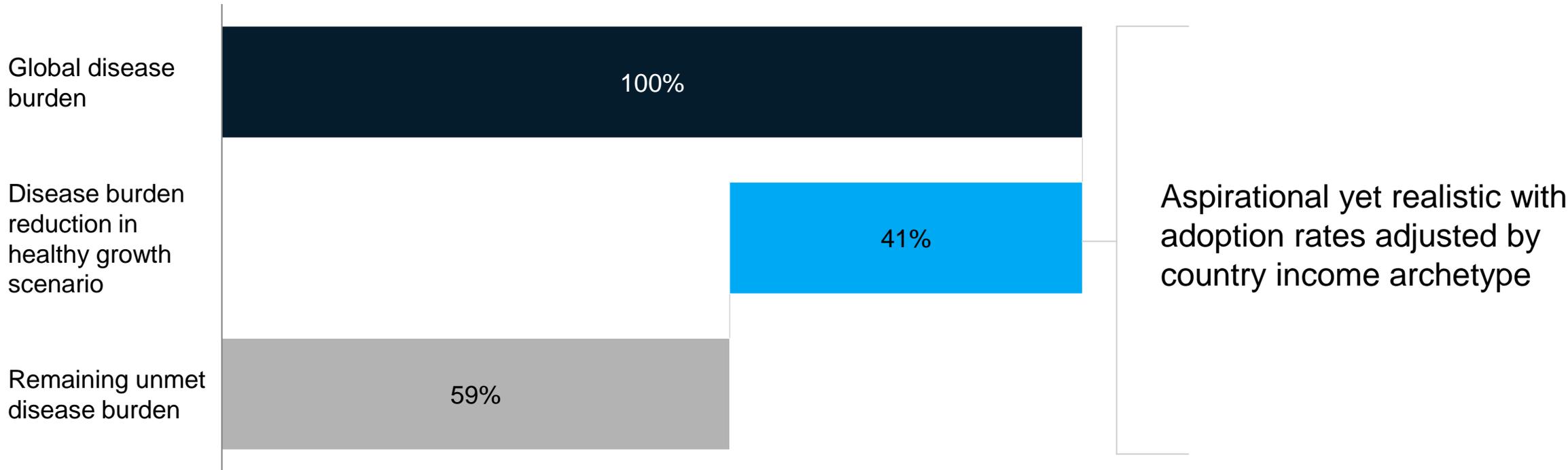


1. DALY = disability-adjusted life year

Using interventions that already exist today, the global disease burden could be reduced by about 40 percent over the next two decades

Disease burden impact by 2040

% of disability-adjusted life years (DALYs)



1 Based on evidence from Australia. Greenhalgh, Elizabeth, Michelle Scollo, and Margaret Winstanley, Tobacco in Australia: Facts and issues, Cancer Council Victoria, 2020. Source: Global Burden of Disease Database 2016 IHME; McKinsey Global Institute analysis

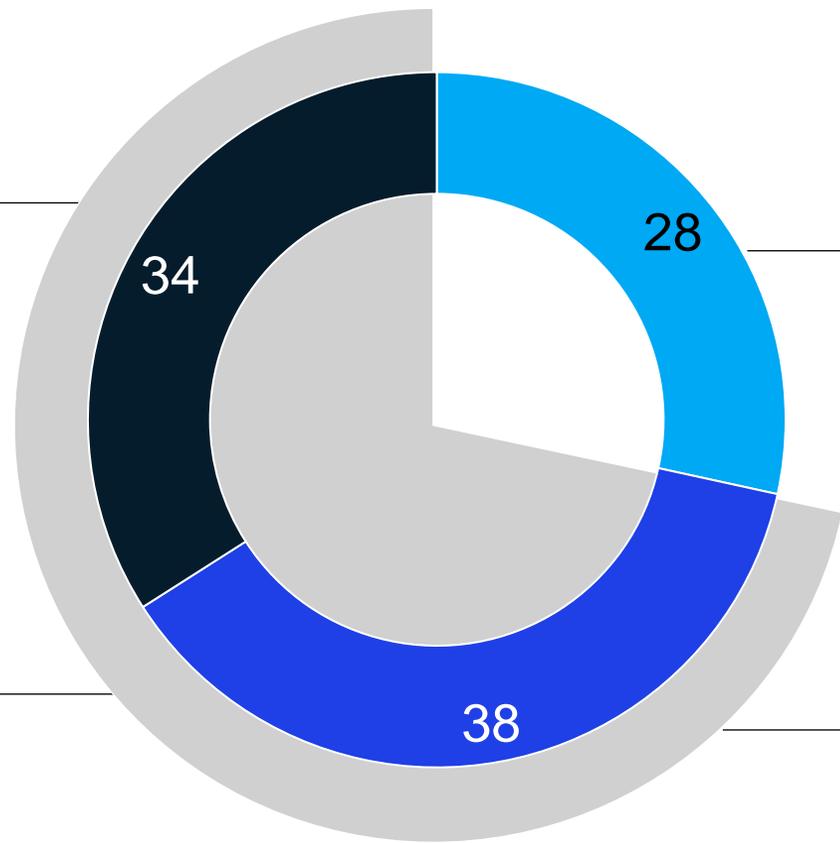
Over 70% of the health improvement potential from known interventions would come from environmental, social, behavioral and preventive interventions

Environmental, social and behavioral

Dietary interventions	9%
Education for behavioral change	7%
Smoking cessation	4%

Prevention and health promotion

Vaccines	11%
Safe child birth	9%
Medicines for heart disease, stroke prevention, and diabetes	7%



Therapeutic

Anti-infective medicines ¹	10%
Specialist surgery	5%
Psychological	3%

70%

1. 84% of impact comes from low and lower middle income countries

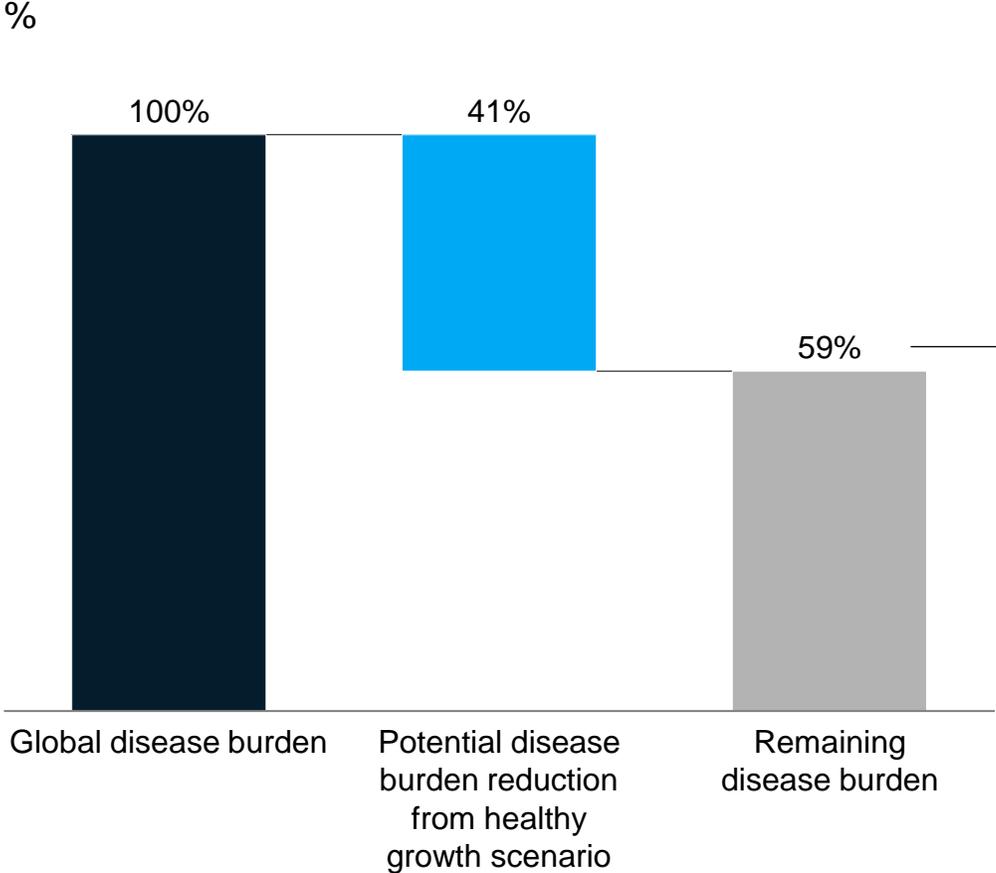


40%

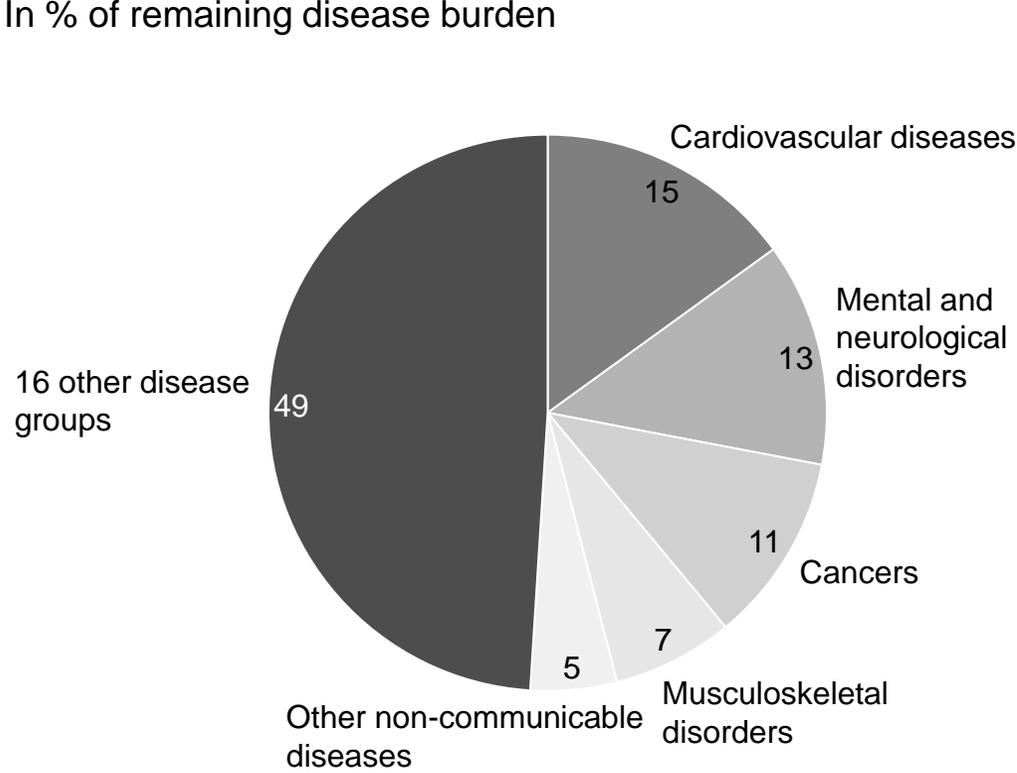
of health improvements
could be achieved at
under \$100 for each
additional healthy life
year

Some diseases have limited effective prevention and therapeutic interventions, for example, cardiovascular diseases, cancers, and mental and neurological disorders

Disease burden impact



Disease burden by disease group



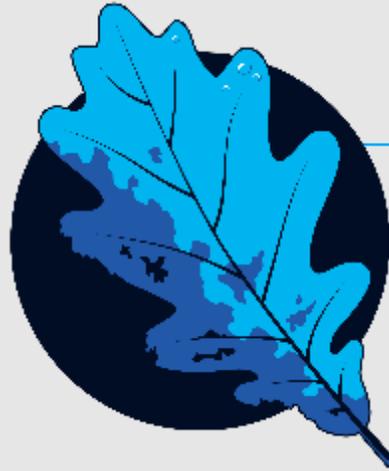
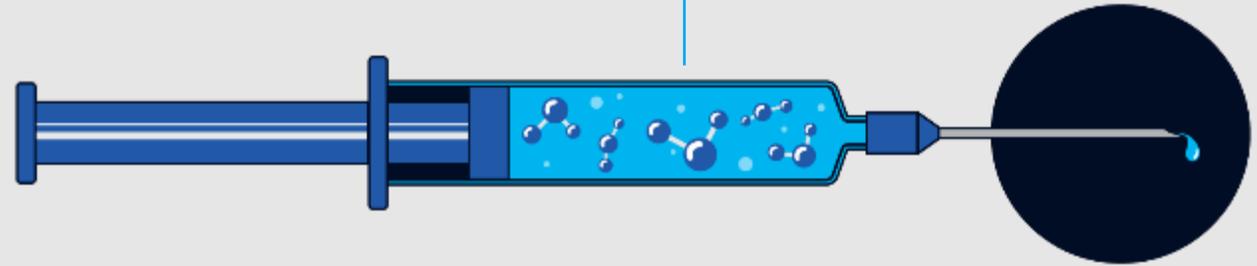
Source: Global Burden of Disease Database IHME; MGI disease reduction model

**Innovations in
the visible
pipeline that
may enter the
market by
2040...**



Omics and molecular technologies
CRISPR and curbing malaria

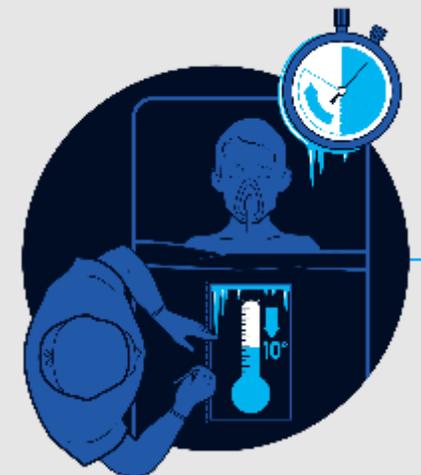
Innovative Vaccines
Cholesterol-lowering vaccine



Next-generation Pharmaceuticals
Senolytics and regulation of cellular aging

Advanced Surgical
Suspended animation for severe trauma patients

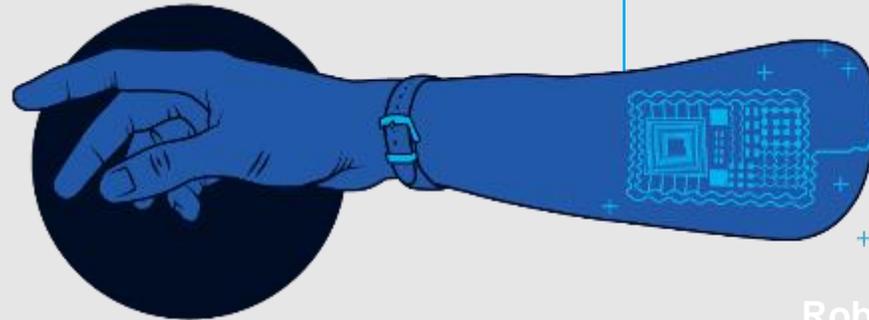
Cell Therapy and Regenerative Medicine
CAR-T Cell therapy for solid tumors



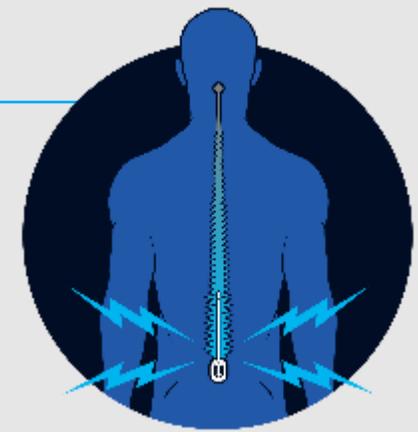
...could further
reduce disease
burden by

6-10%

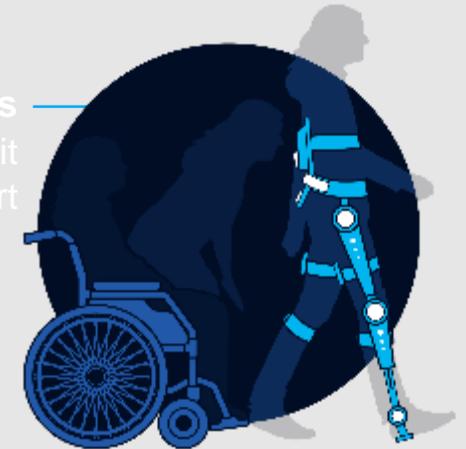
**Connected and
cognitive devices**
E-Tattoo for
Heart Diagnostics



Electroceuticals
Implantable microchip
mitigating chronic pain



Robotics and Prosthetics
Exoskeleton suit
for mobility support



**Tech-enabled
care delivery**
Multichannel
care delivery

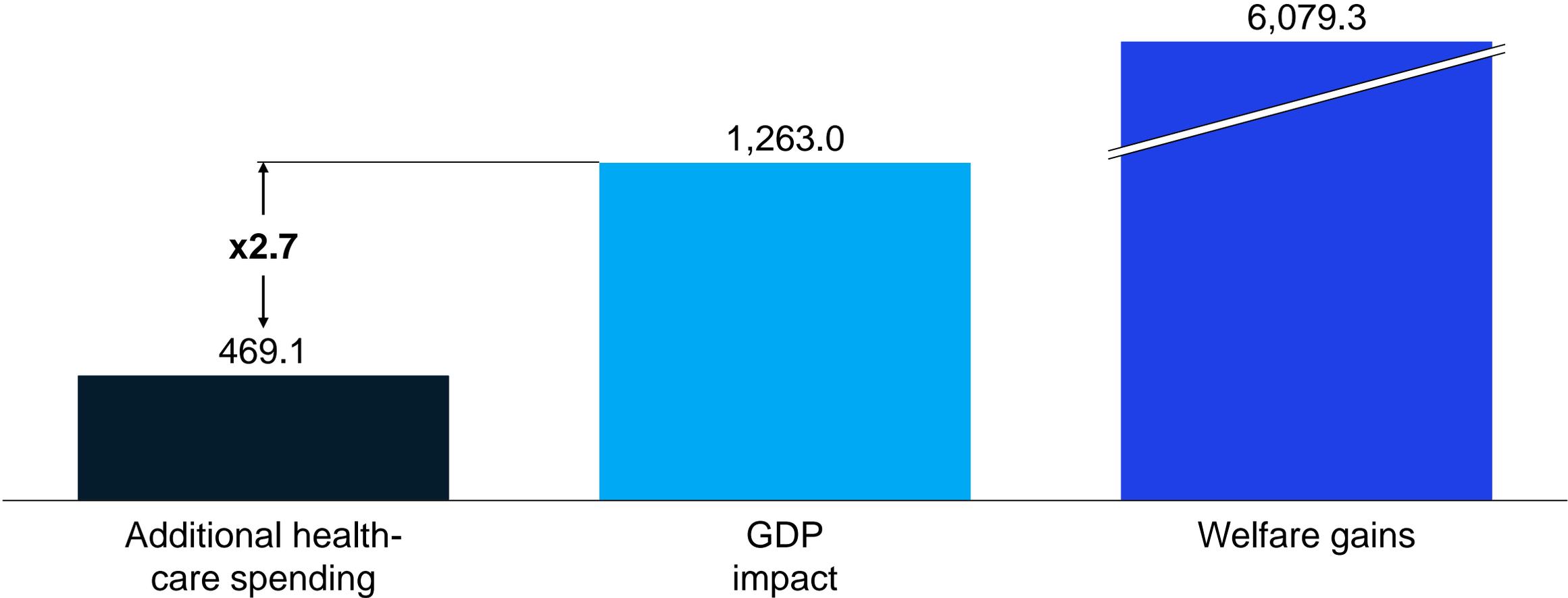


Digital therapeutics
AI-powered app to
enable behavior change



We estimate that for each \$1 invested in improving health, an economic return of \$2.7 is possible

Healthy growth scenario, Western Europe, 2040, USD billions



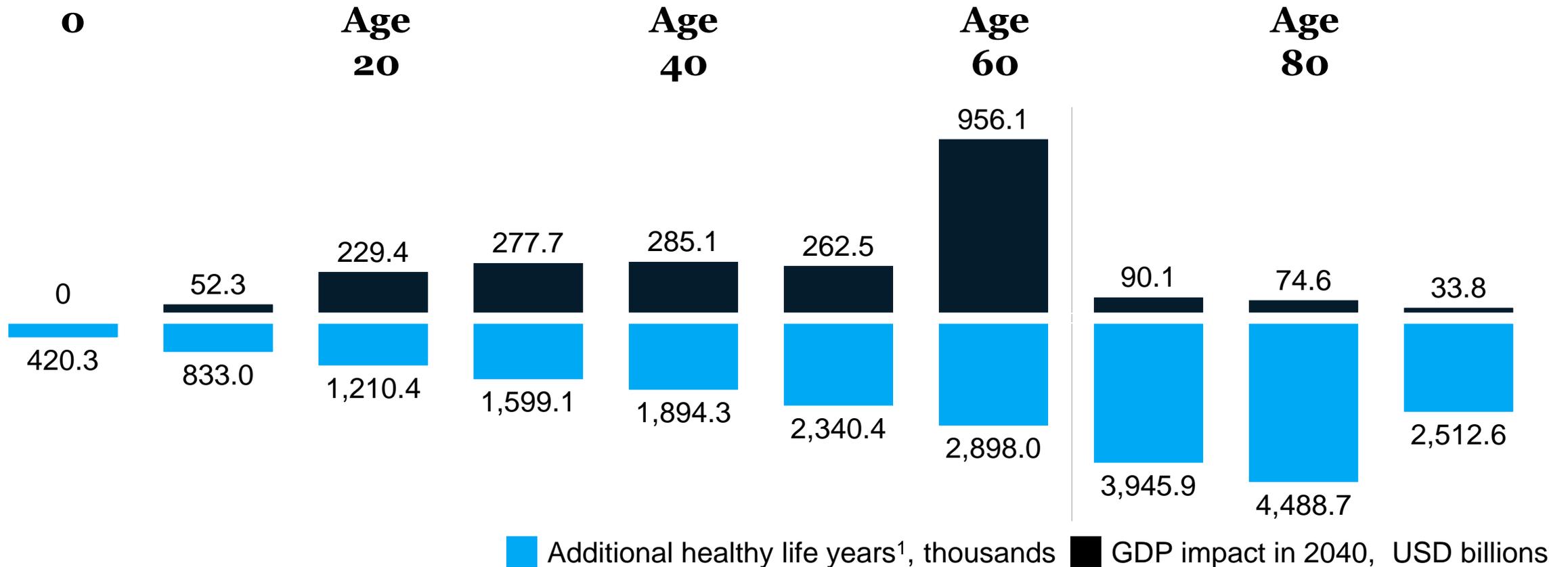
Note: Snapshot view of the healthy lifespan scenario in 2040. Additional healthcare spending, GDP impact and welfare gains account for health improvements (without expanded participation). They include both the baseline and incremental opportunity in 2040

Source: Global Burden of Disease Database 2016 IHME, Oxford Economics, ILO Stat, National Transfer Accounts Project, MGI Model, Cost per DALY averted from WHO NCD Appendix 3, DCP-3, Tufts Cost Effectiveness Analysis Registry

51% of the potential healthy life years are added to those aged under 70 where the economic contribution is the highest

Healthy growth scenario, Western Europe, 2040

Additional healthy life years lived in 2040 and respective GDP impact by 10 year age group



1. Additional healthy life years from averting deaths and reducing disability

Covid has demonstrated that (rapid) change is possible: UK example

9

days to build London's Nightingale Hospital with an initial capacity of 500 and potential to scale to 4,000 patients

99%

of GP surgeries have capabilities for online consultations and ~90% of primary care has gone online

2,000

additional critical care beds made available in 2-3 weeks

29%

year-on-year drop in A&E attendance

750,000

volunteers mobilised to support the NHS

>20k

former NHS staff return to service and 24K students with accelerated certification to join the NHS

1,000,000

new users on the NHS App

£30m

raised for the NHS by a single individual walking in his garden - unprecedented public support for the service

Other health systems also made rapid changes



Workforce transformation

11,000 volunteers applied through a digital platform, created by the MoH, to provide assistance to the health system including administrative or technical support



Reimagined system management

Nationalisation of Spanish private hospital facilities in March to increase capacity for COVID-19 patients



Re-imagined second line care

Sheba Medical Center established a Telemedicine Program including a robot, controlled remotely by clinical staff, to check vital signs of quarantined patients and a digital platform to monitor less critical patients at home



Integrated digital first local health and care systems

A coalition of New York City leaders from the private and non-profit sectors developed a process to serve at-risk populations that included a dynamic texting platform and a network of 60+ social and clinical services



Data and analytics spine

Taiwan used big data analytics leveraging its national health insurance database and integrating it with its immigration and customs database to identify and contain cases



Digitally enabled integration between institutions

Inter-agency cooperation between the contact tracing teams of the Ministry of Health and the Police Force to track infected people, using social media scrapes

Across health systems, six common enablers allowed rapid change during the COVID crisis

-
- | | | |
|---|---|---|
| 1 Clarity of purpose and a real sense of urgency |  | <i>"We must go hard and we must go early"</i> - Jacinda Arden, NZ PM declaring a State of Emergency and imposing blanket lockdown. |
| 2 A balance of command and control on key outcomes with local freedom to implement |  | NHSE requirement for GPs to use phone or video consultations to assess people but flexibility on implementation |
| 3 Innovation in regulation to enable action: <ul data-bbox="152 606 789 821" style="list-style-type: none">• Data protection• Workforce• Service change• Licensing (digital and otherwise) |  | Temporary regulatory waivers and new rules to enable flexibility – e.g., relaxing supervision requirements for nurse anaesthetists and nurse practitioners |
| |  | Reductions of restrictions on telemedicine, no longer requiring prior face-to-face communications with the physician in question |
| |  | Coronavirus Act 2020 powers to relax regulations in a range of sectors including NHS, social care, schools, local councils and courts. |
| 4 Change in culture with a willingness to experiment and orientation to action |  | <i>"There is always resistance to change. Patients had never been asked what they wanted and physicians hadn't had the opportunity to try these services. Now they have"</i> – IT Director, Spanish hospital |
| 5 Supportive workforce, managerial, political and community environment |  | Digital solidarity campaign to support work and study from home |
| 6 Relaxation of financial constraints |  | Advance payments of EUR 2.8 billion for regions to support additional health expenditure |
-

A reimagined operating model for the health and care wider ecosystem



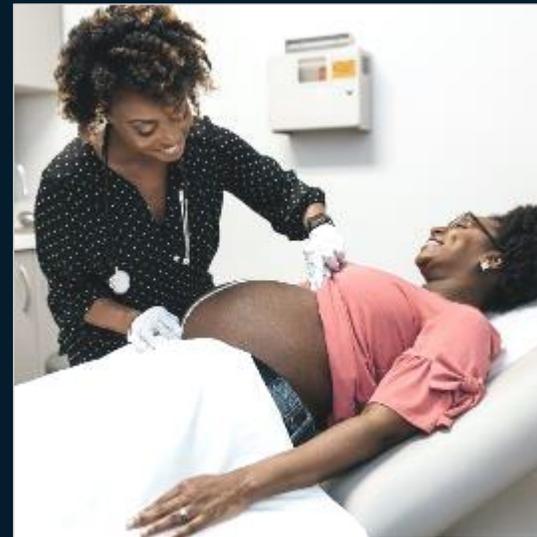
Imperatives for healthy growth



**Make healthy growth
a social and
economic priority**



**Keep health
on everyone's
agenda**



**Transform
healthcare
systems**



**Double
down on
innovation**