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Prioritizing health: A Prescription for Prosperity

McKinsey Global Institute

July 2020

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Today's speakers . . .

Jaana Remes
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An economist and a Partner at the McKinsey Global Institute (MGI), leads research on health, productivity, competitiveness, and urbanization

Advises global business and government leaders on issues related to her areas of research and expertise

Has authored numerous articles and reports referenced by leading publications, including "Prioritizing health: A prescription for prosperity"

Contributes to policy debates and frequently speaks at industry conferences

Katherine Linzer
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A leader of the Firm's state healthcare practice, focuses on health and human services strategy and special needs populations across U.S. states and payers

Collaborates with states and healthcare payers on healthcare strategy and innovation, with a focus on the Medicaid and long-term care populations

Previously served as a Fellow with McKinsey's Health Systems Institute in London, where she served health systems in Europe, Asia, and Australia

Has authored numerous healthcare-related articles, including "The Medicaid Agency of the Future"

Kana Enomoto
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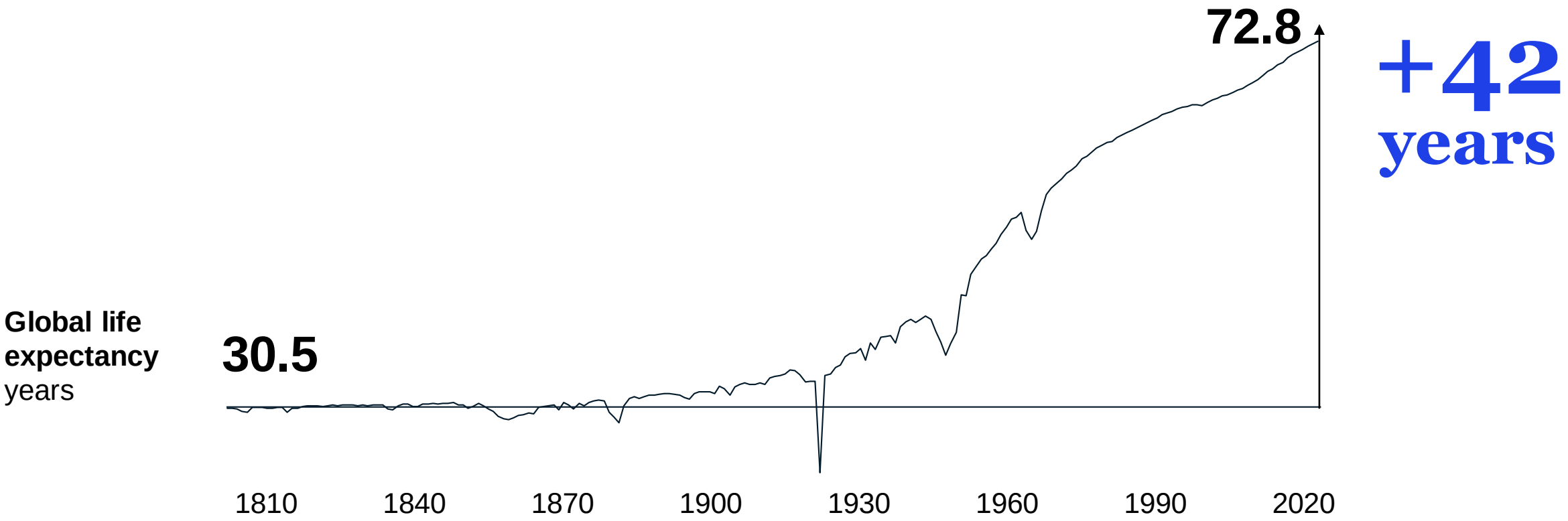
Co-leads the Firm's Center for Societal Benefit through Healthcare, which invests in research and mitigating social determinants of health, rural health, maternal health, and behavioral health – including mental health and substance use

Serves clients on optimizing the delivery of behavioral-health services, improving public health, and increasing the impact of advocacy programs

Previously served as Acting Administrator of the Substance Abuse and Mental Health Services Administration and Chief of Staff to the Surgeon General of the United States

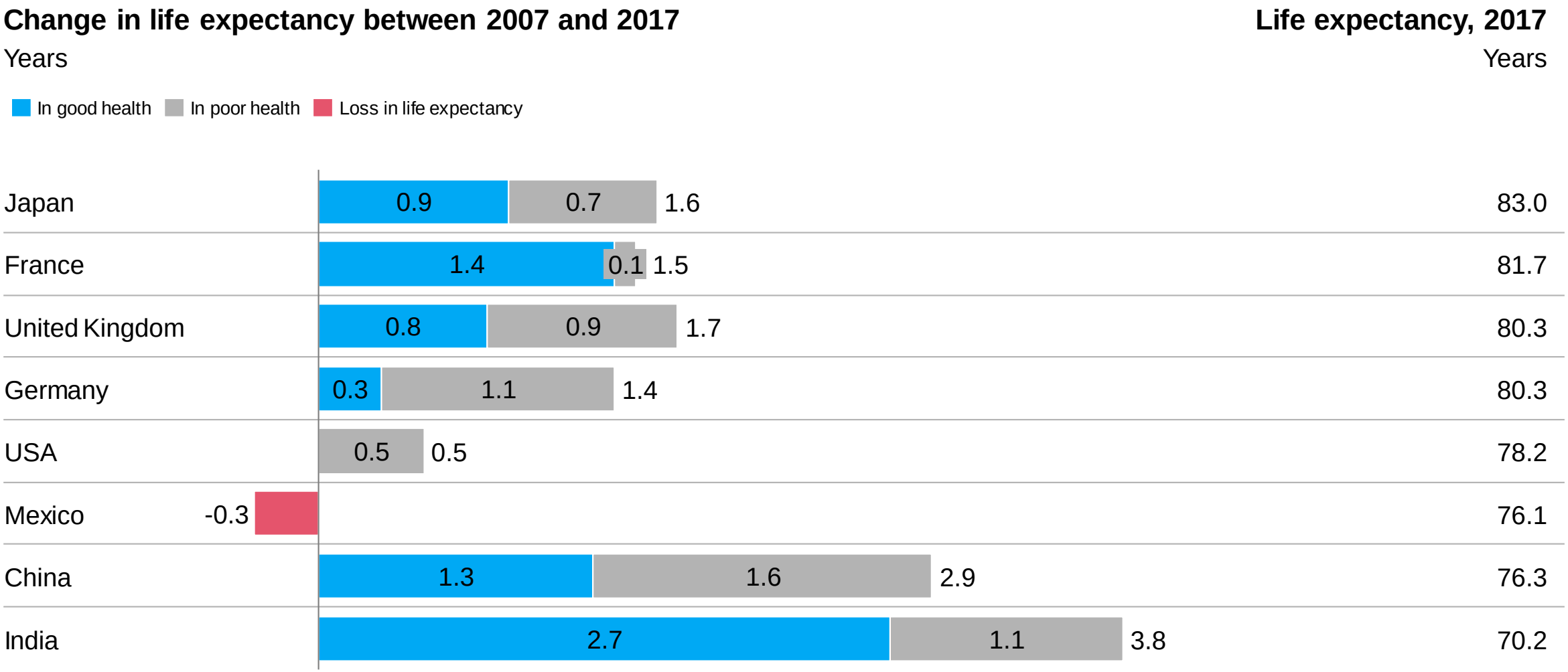
Life expectancy has increased dramatically over the last 80 years



1 Health Human Productivity and Long-Term Economic Growth, Arora 2001
2 Health's Contribution to Economic Growth in an Environment of Partially Endogenous Technical Progress from 1960-1990
3 MGI backward looking analysis assuming constant mortality and morbidity rates from 1990 until 2017
4 To be calculated; current hypothesis

We are living longer… but not always in better health

Change 2007–17, years

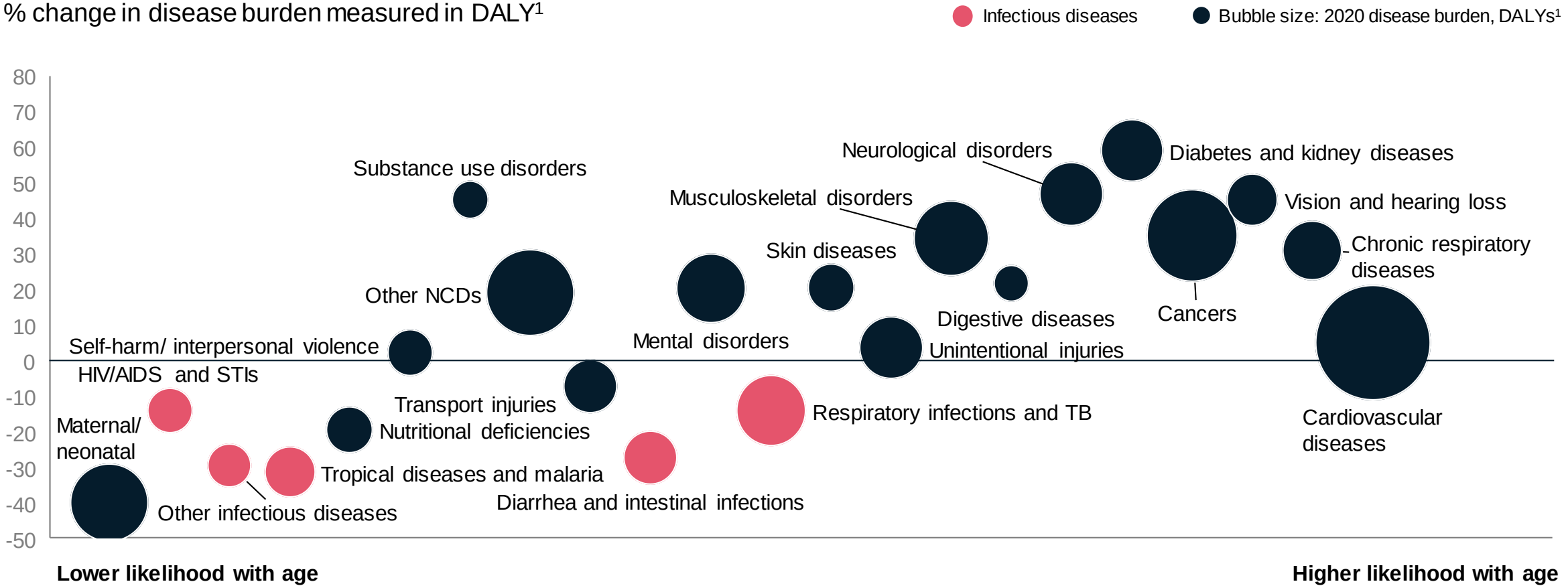


Looking ahead, age-and lifestyle-related diseases is expected to rise while many infectious diseases could decrease significantly

Disease Baseline Forecast

Change in disease burden between 2020 and 2040 globally

% change in disease burden measured in DALY[1]



1. DALY = disability-adjusted life year

Source: Global Disease Burden Database Institute for Health Metrics and Evaluation (IHME); University of Washington (this view excludes "Other non-communicable diseases"); McKinsey Global Institute analysis

What would the benefits be from improving health globally?

How much could we improve health with interventions we know work?

What is the potential from innovation in the visible pipeline?

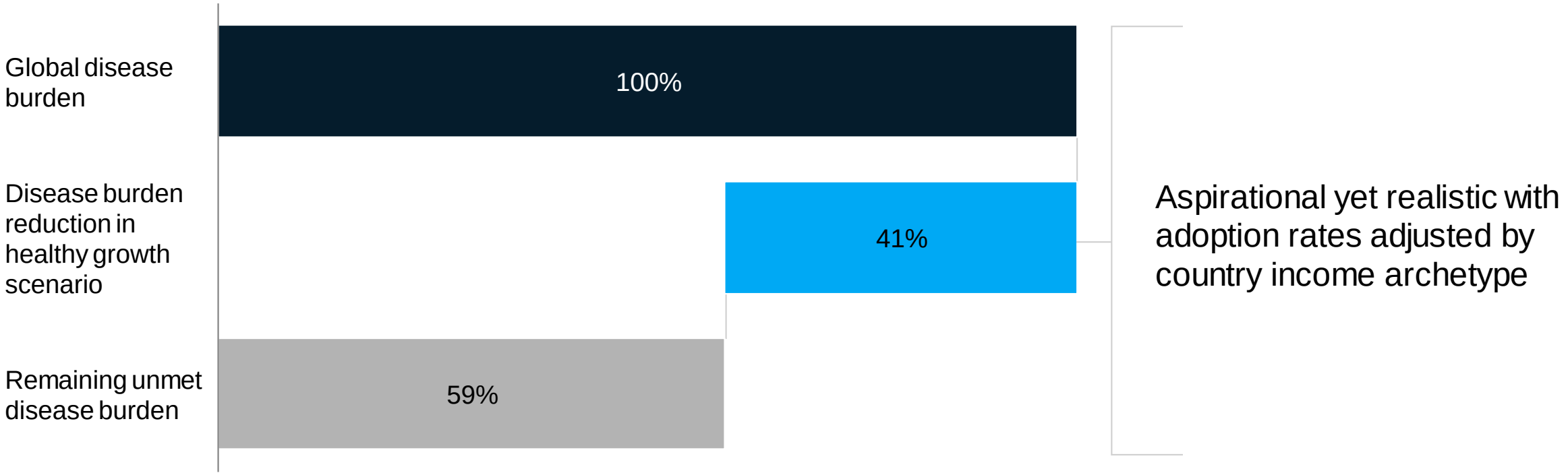
What would be the economic prize?

What would it take to achieve the healthy growth path?

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

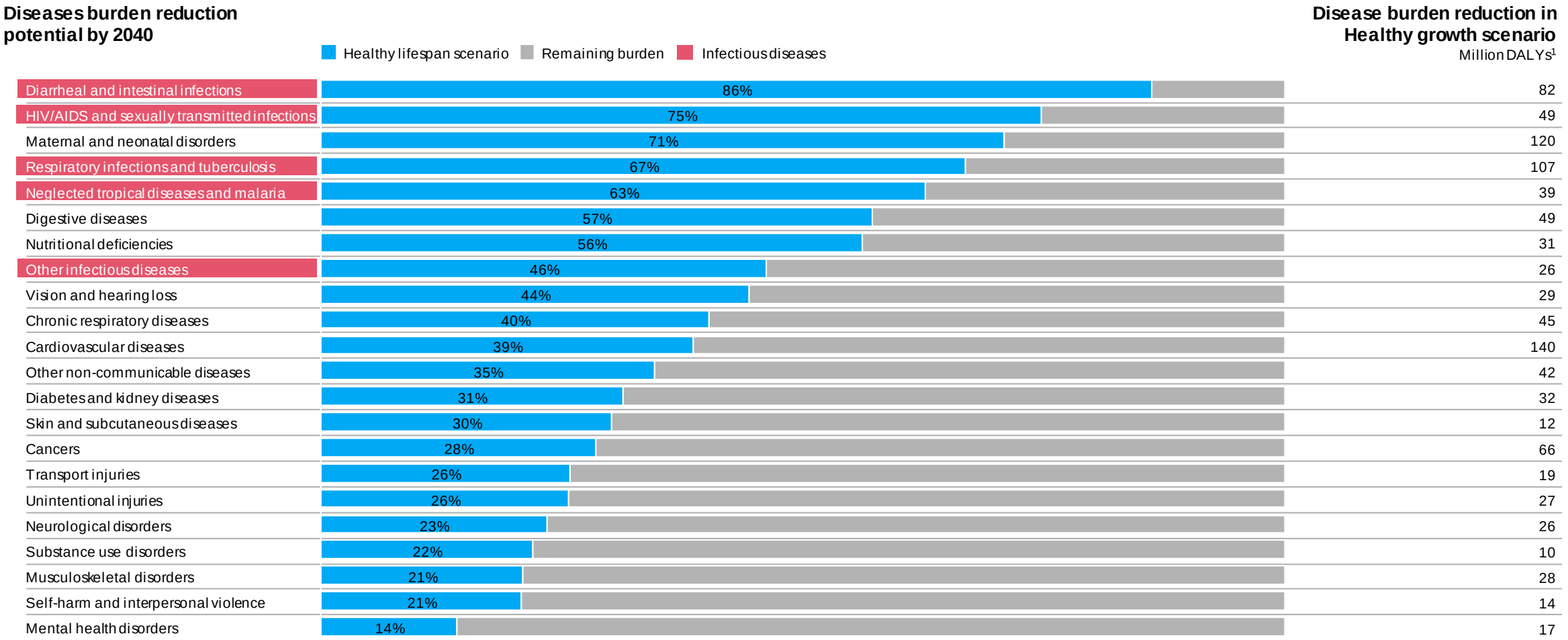
Disease burden impact by 2040

% 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

The potential to reduce the disease burden varies significantly by disease type: Chronic conditions are more challenging to tackle



1. DALY = disability-adjusted life year; list represents all 22 level 2 disease burden according to IHME.

Source: Global Burden of Disease Database 2017 IHME; McKinsey Global Institute disease reduction model

65 is the new 55

A 65-year-old in a healthy growth scenario has the same likelihood to be as healthy as a 55-year-old in baseline scenario

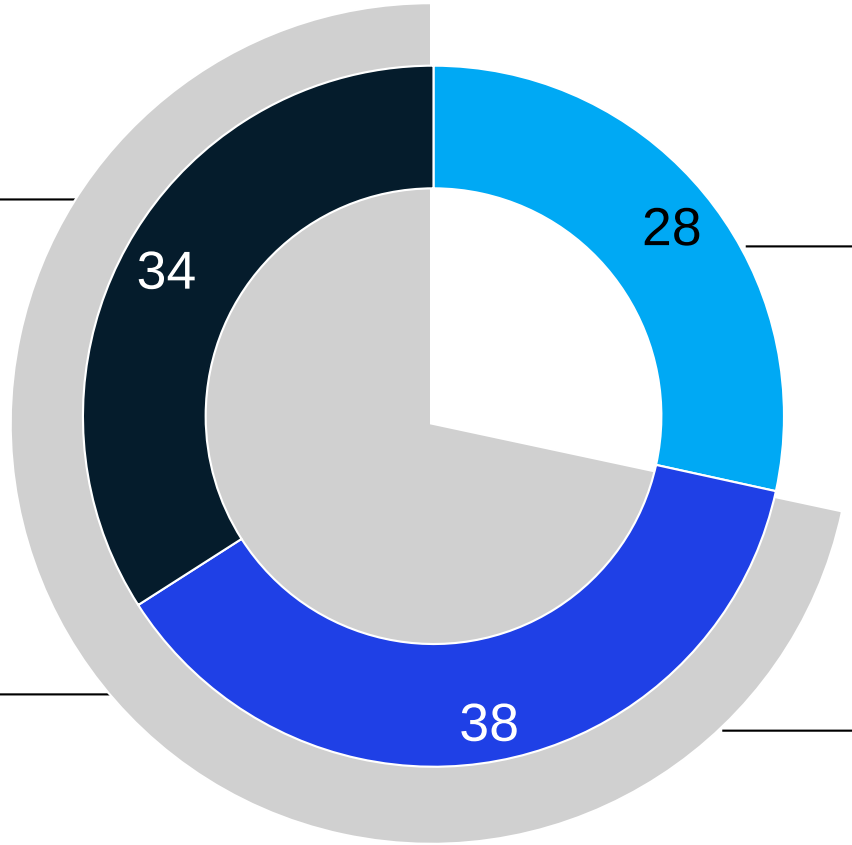
Over 70% of the health improvement potential from known interventions would come from environmental, social, behavioral and preventive interventions

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%

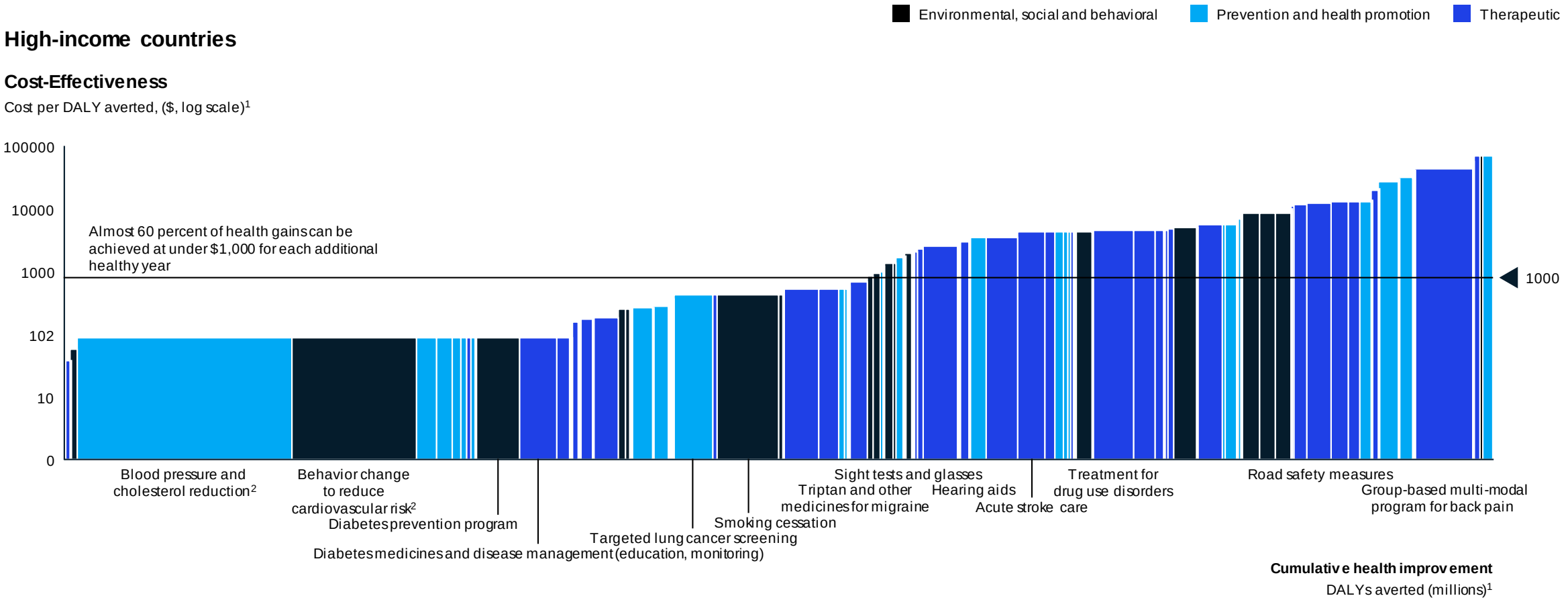
1. 84% of impact comes from low and lower middle income countries

Source: Global Burden of Disease Database 2017 IHME, McKinsey Global Institute analysis

40%

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

Even in high-income countries, almost 60% of health improvements would come at under $1,000 for each additional healthy life year



Note: Interventions are ordered in ascending order of cost for every healthy life year. The higher the disease burden reduction potential, the larger the width under each intervention.
1.DALY = disability-adjusted life year.
2.Pharmacological prevention of cardiovascular disease includes use of antihypertensives and statins (and/or other cholesterol -lowering medicines). Cardiovascular lifestyle education includes physical activity, diet, smoking cessation, and alleviation of other risks. These interventions are delivered as a combined program.

Sources: Institute for Health Metrics and Evaluation, used with permission, all rights reserved; WHO, "Updated Appendix 3 of the WHO Global NCD Action Plan 2013-2020: Technical Annex (Version dated 12 April 2017)", 2017; "Disease Control Priorities 3 (DCP-3): Economic evaluation for Health," University of Washington Department of Global Health, 2018; Tufts Cost-Effectiveness Analysis Registry; McKinsey Global Institute analysis

What would the benefits be from improving health globally?

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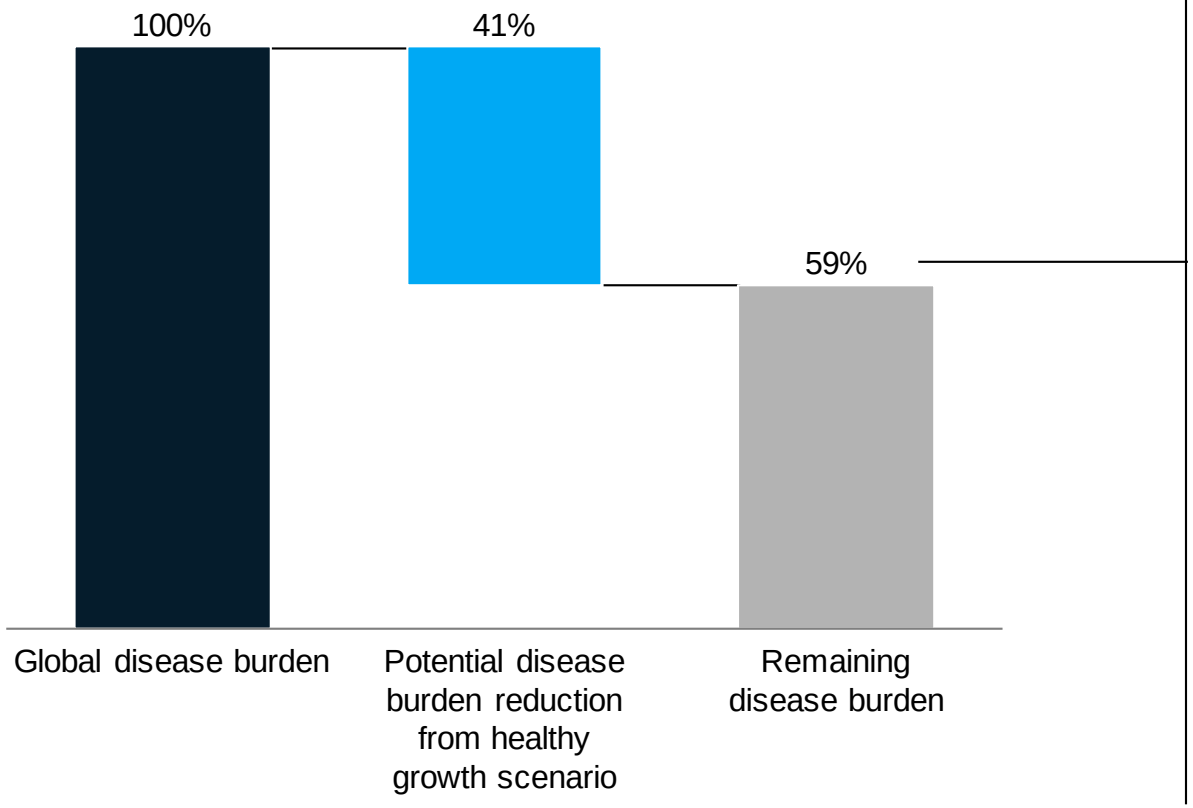
Some diseases have limited effective prevention and therapeutic interventions, for example, cardiovascular diseases, cancers, and mental and neurological disorders

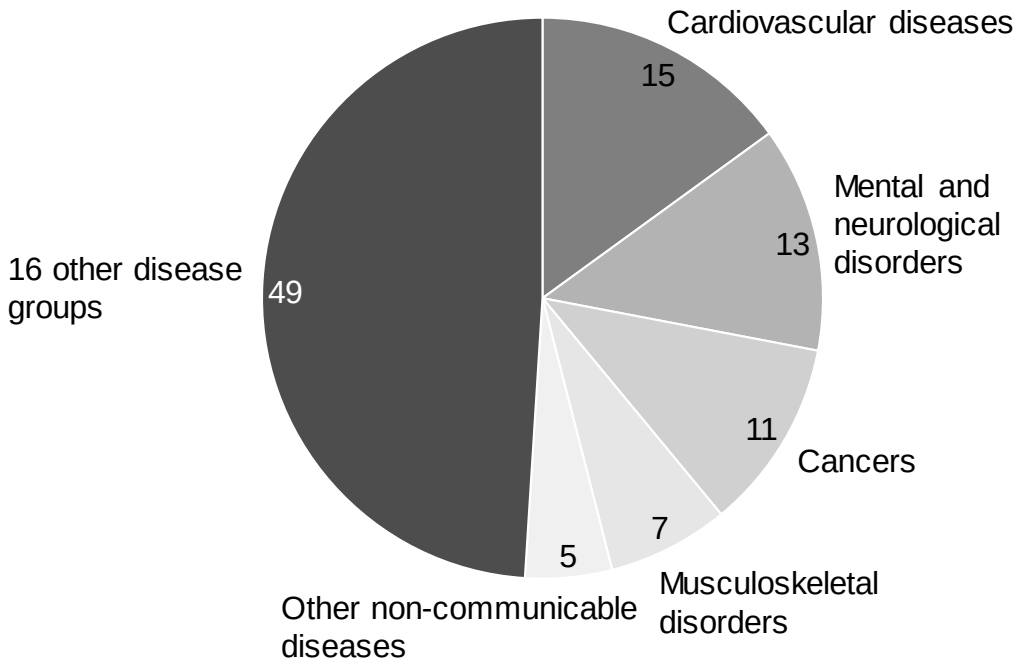
Disease burden impact

%



Disease burden by disease group

In % of remaining disease burden

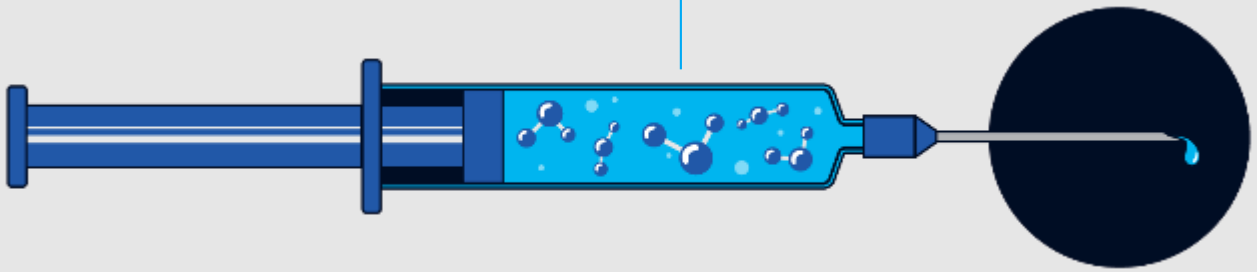


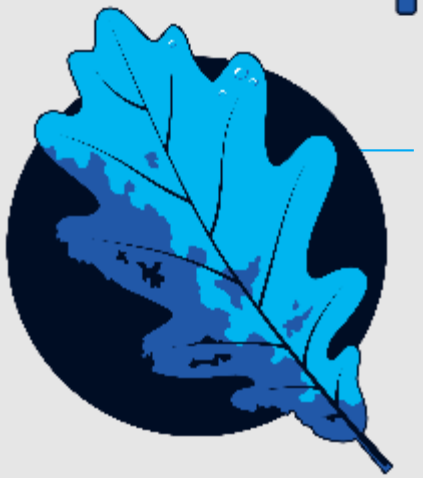
Source: Global Burden of Disease Database IHME; MGI disease reduction model

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

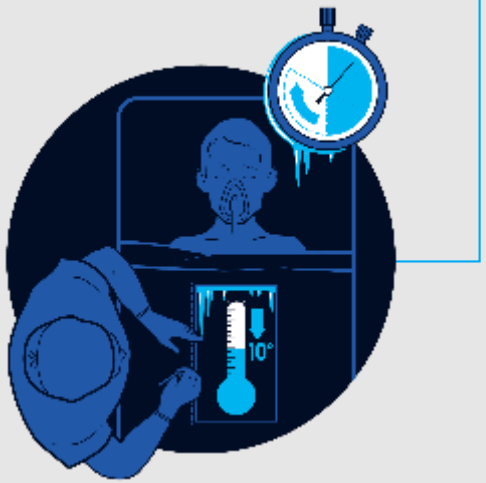




Next-generation Pharmaceuticals
Senolytics and regulation of cellular aging

Advanced Surgical
Suspended animation for severe trauma patients

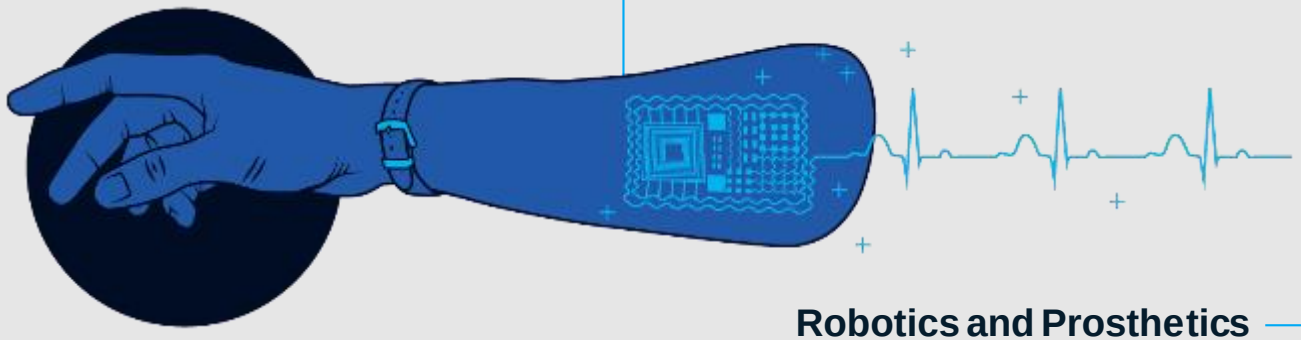
Cell Therapy and Regenerative Medicine
CAR-T Cell therapy for solid tumors



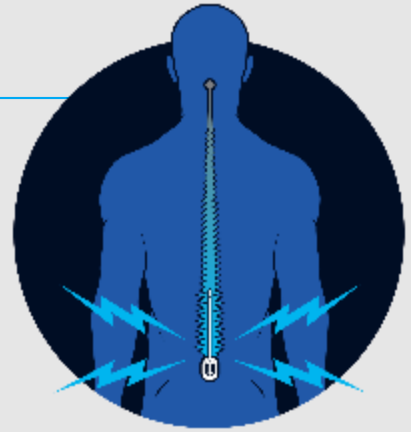
…could further reduce disease burden by

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

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Better health impacts GDP through four channels

Better health

Fewer early deaths

Preventing premature deaths to extend active life

Fewer health conditions

Reducing disability in the potential labor force

Expanded participation

Enabling people to stay in workforce longer

Increasing participation of people with disabilities

Increasing participation of informal caregivers

Increase in productivity

Boosting productivity of current workforce

Improving children's health to boost productivity as adults

The potential GDP impact globally in 2040:

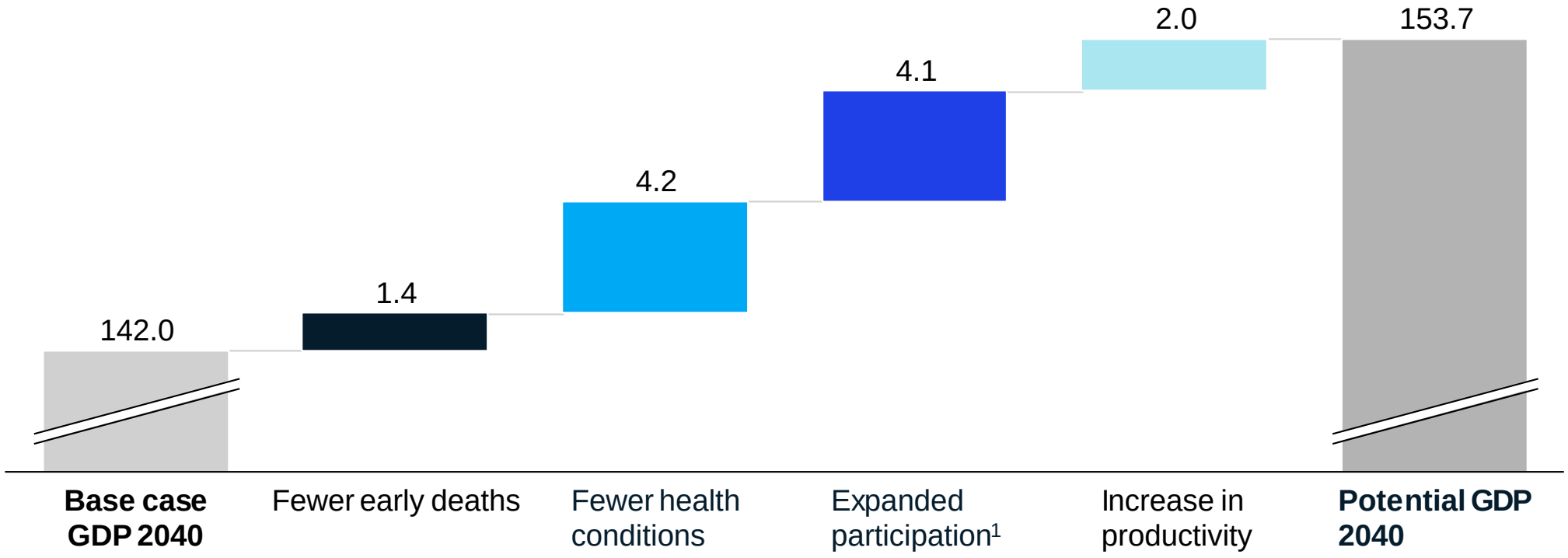
$12 trillion

8% of GDP

0.4 ppt additional growth 2020–40

A majority of the increase in GDP would come from people suffering fewer health conditions and expanded participation

$ trillion,[1] 2040



Annual Growth Rate 2020-2040

2.6%

3.0%

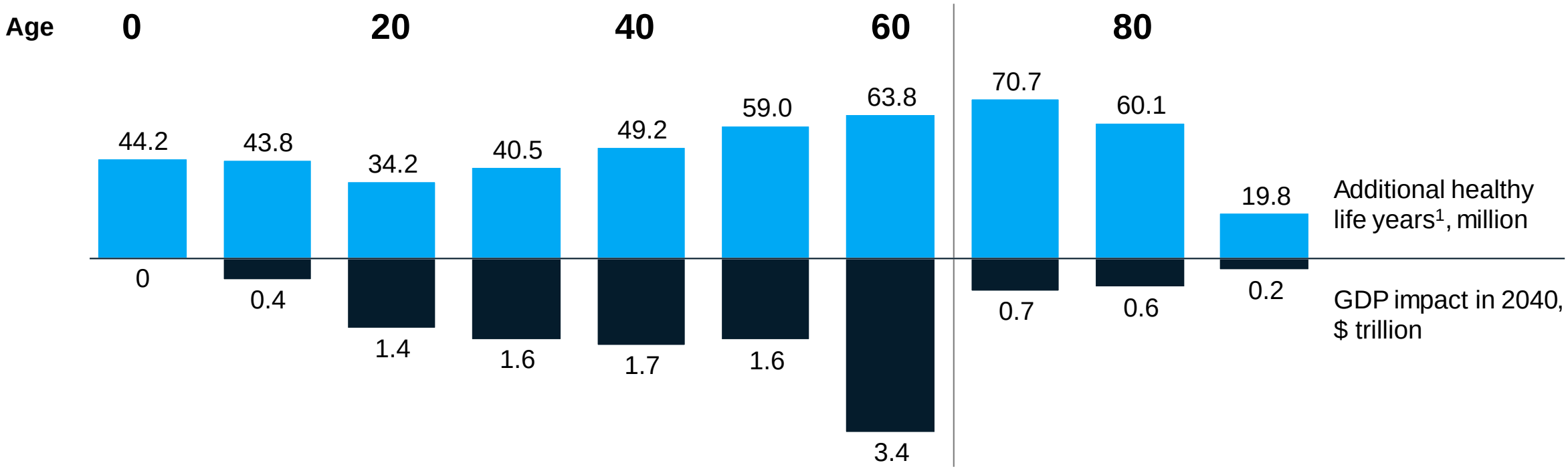
1. Includes impact on older adults (only high income and upper middle income), informal caregivers (only in OECD due to data availability), people with disability (global).

Source: Global Burden of Disease Database 2016 IHME; Oxford Economics; ILO Stat; McKinsey Global Institute analysis

Almost 70% of the healthy life years we estimate are added to those under 70 where the economic contribution is the highest

Global perspective, healthy growth scenario

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



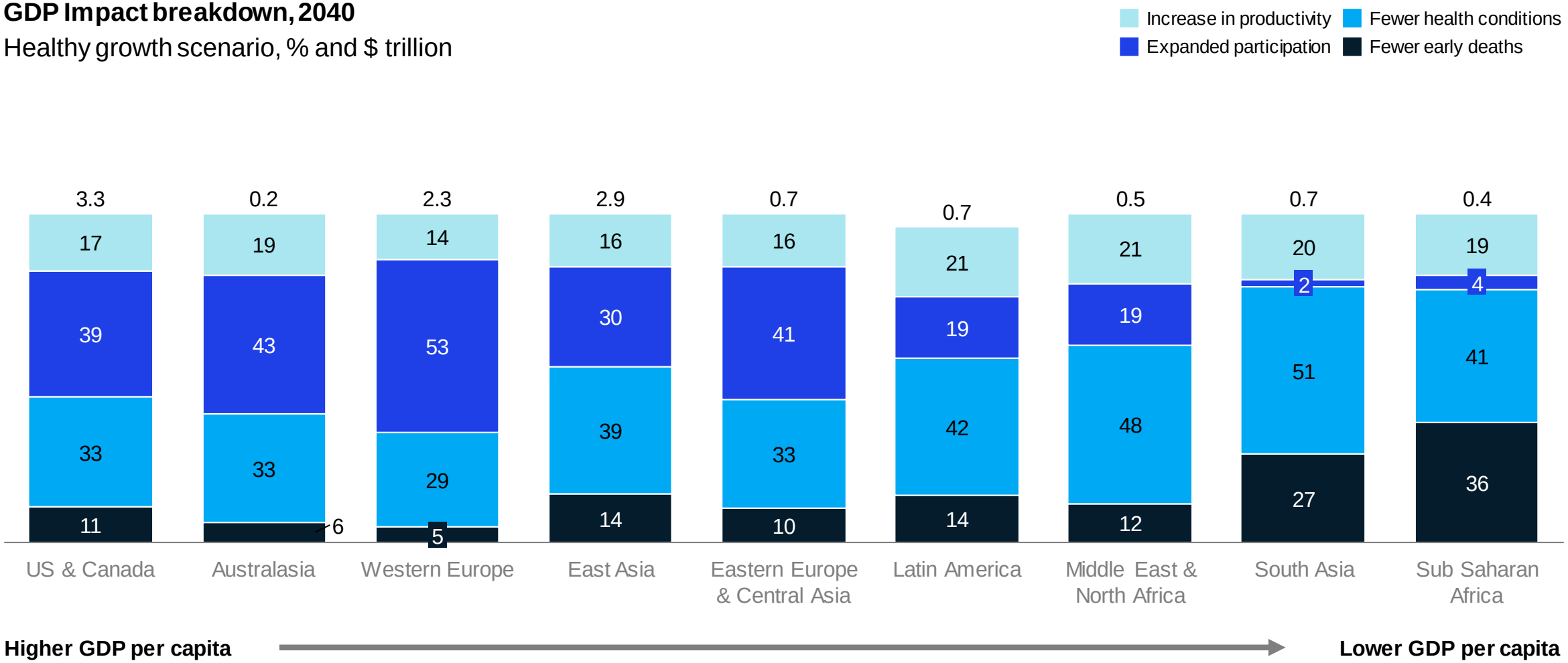
1. Additional healthy life years from averting deaths and reducing disability.

Source: Global Burden of Disease Database 2016 IHME; Oxford Economics; ILO Stat; OECD; EUROSTAT; National Transfer Accounts Project; McKinsey Global Institute model

The economic benefits are driven by differences in the underlying health outcomes and labor market structures of countries

GDP Impact breakdown, 2040

Healthy growth scenario, % and $ trillion



Source: Global Burden of Disease Database IHME; Oxford Economics; ILO Stat; OECD; EUROSTAT; National Transfer Accounts Project; MGI Model

The societal benefits are likely to far exceed the economic impact

$100 trillion

Economic welfare unlocked through additional years lived

>$3 trillion

Reduction in the social and economic costs of mental health

$20-30 billion

Incremental value of volunteering time for 65+

21 days

Average additional days of better health per year

65%

Reduction in child mortality (<5 years) by 2040

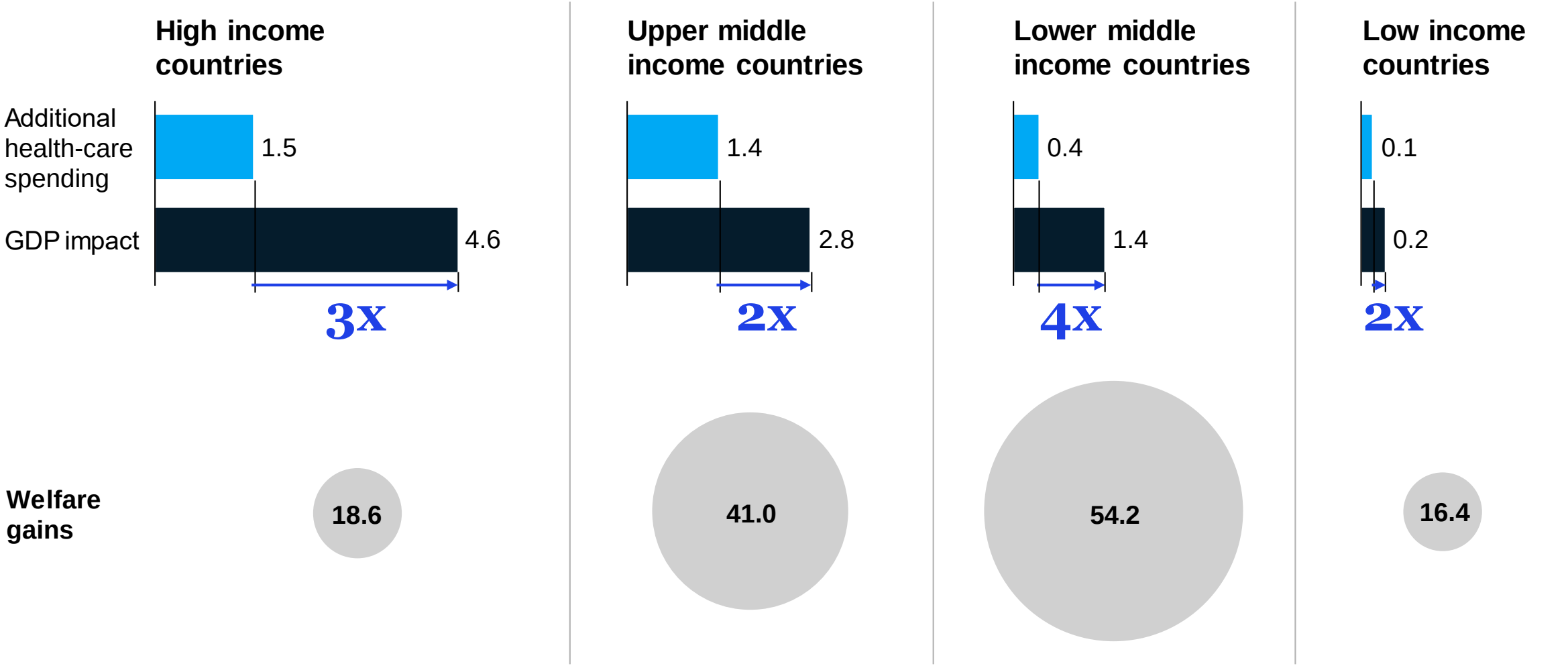
230 million

More people living in 2040

Source: Global Burden of Disease Database 2016 IHME; OECD; The Lancet Commission on global mental health and sustainable development; Gallup; MGI Model

For each $1 invested in improving health, an economic return of $2 to $4 is possible

Healthy growth Scenario, 2040, USD trillions



Note: Snapshot view of the healthy growth scenario in 2040. Additional healthcare spending, GDP impact and welfare gains directly attributable to better health only (excluding expanded participation)

Source: Institute for Health Metrics and Evaluation, used with permission, all rights reserved; Oxford Economics; ILOSTAT; National Transfer Accounts Projects; WHO, "Updated Appendix 3 of the WHO Global NCD Action plan 2013-2020: Technical annex (version dated 12 April 2017)", 2017; "Disease control priorities 3 (DCP-3): Economic Evaluation for Health," University of Washington Department of Global Health, 2018; Tufts cost-Effectiveness Analysis Registry; McKinsey Global Institute analysis

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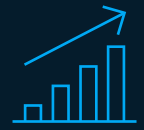

Make healthy growth a social and economic priority

Keep health on everyone's agenda

Transform healthcare systems

Double down on innovation

McKinsey & Company

Thank you for your participation

You can download the report here:
mckinsey.com/prioritizinghealth

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Reimagining healthcare in response to COVID-19

McKinsey Center for Societal Benefits through Healthcare

July 2020

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The Center for Societal Benefit through Healthcare aims to drive positive innovation in areas that are critical for the benefit of society

Initial focus areas

The Center is a **global network of experts**, combining McKinsey's business insights with **leading thinking across five focus areas**

Behavioral Health

Mental Health

Each year, 1 in 5 adults experiences a mental illness, and one in two will experience one at some point in their lives. Those with poor mental health are four times more likely to have multiple unmet social needs. As with physical health, racial/ethnic minorities have less access to mental healthcare and are less likely to receive high-quality care when treated.

Substance Use

~20 million adults have a substance use disorder; more than 130 people in the United States die every day after overdosing on opioids. Though opioid use disorder rates are similar across racial groups, there is a 35:1 ratio of white patients receiving a buprenorphine Rx vs. patients of another race/ethnicity.

Rural Health

One in six Americans – 46 million people – live in rural areas. There is a **significant gap in health between rural and urban Americans**, with rural Americans more likely to die from conditions such as heart disease, cancer, and opioid overdoses; disparities in health access and outcomes also exist by race/ethnicity.

Social Determinants

Nearly **40% of health outcomes are based on underlying social factors** such as economic stability, employment, education, food security, housing, transportation, social support, and safety. In addition, factors such as race or ethnicity can influence health status and the level of unmet social need.

Maternal Health

Over the past two decades, **maternal mortality rates in the US have increased by 50-70%**, and rates of severe maternal morbidity have more than doubled. Pregnancy-related mortality ratios for Black women with at least a college degree are five times as high as white women with a similar education.

Mental and substance use disorders affect a substantial number of individuals across the world

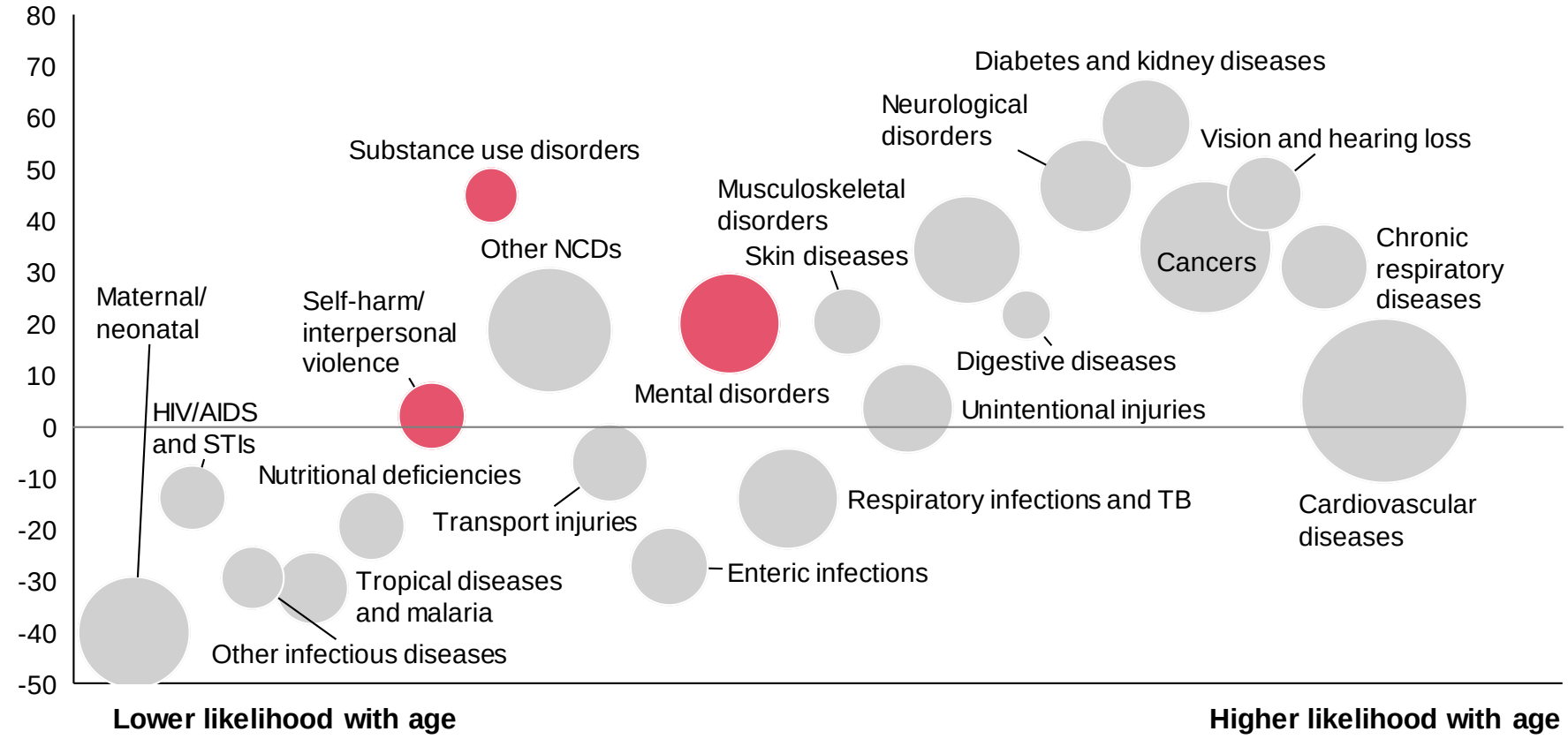
Almost **1 billion** people worldwide suffer from mental and substance use disorders, including more than 200 million children[1]

Globally, the disease burden from mental and substance use disorders is projected to increase by **~20%** and **~45%** respectively, before accounting for the impact of COVID-19 on exacerbating these conditions

Children affected by mental health problems go on to earn **20%** less than their peers, the result of diminished educational attainment and additional challenges in finding and retaining employment

Bubble size: 2020 disease burden, DALYs[1] — Mental and substance use disorders

Change in disease burden between 2020 and 2040 globally,
% change in disease burden measured in DALY[2]



1. Institute for Health Metrics and Evaluation | 2. Disability adjusted life years

Source: Prioritizing health – a prescription for prosperity, MGI, July 2020

Mental and substance use disorders are increasingly relevant across generational cohorts

In the United States, we have seen a…

126%

increase in post-traumatic stress disorder diagnoses among teenagers between 2013 and 2017[1]

47%

growth in major depression diagnoses for commercially-insured millennials between 2013 and 2016[2]

300%

increase in drug overdose deaths in the 45-54 age group between 1999 and 2017[3]

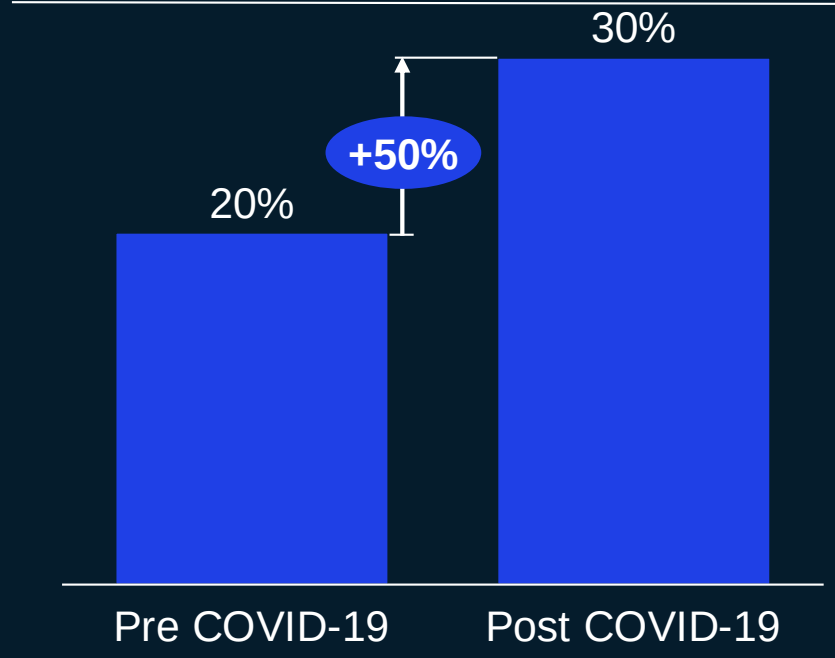
75%

increase in the number of older adults living alone between 2000 and 2019[4], contributing to loneliness and low social connectedness

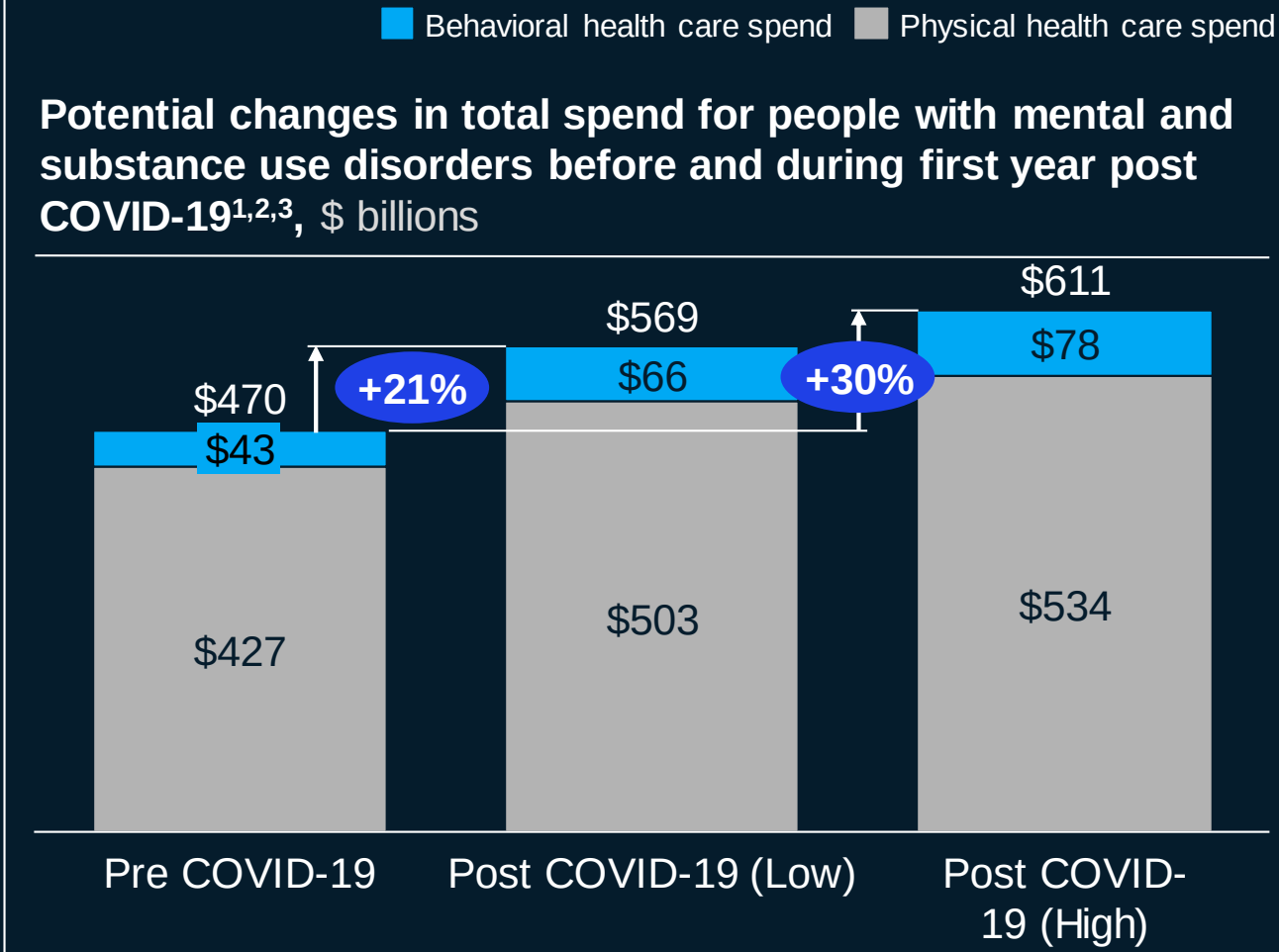
1. Athenahealth – Pediatric PTSD as a Diagnosis, 2018 | 2. The Health of America Report – Major Depression: The Impact on Overall Health, 2018 | 3. CDC – Drug Overdose Deaths in the United States, 1999–2017 | 4. U.S. Census Bureau, American Community Survey – Living arrangements of adults 65 to 74 years old, 1967 to present

COVID-19 could drive a ~50% increase in the prevalence of mental and substance use disorders, potentially leading to ~20-30% (i.e., $100B to $140B) of additional spend in the US alone

Anticipated prevalence of mental and substance use disorders pre and within 12 months post COVID-19[1], % of total population



Potential changes in total spend for people with mental and substance use disorders before and during first year post COVID-19[1,2,3], $ billions

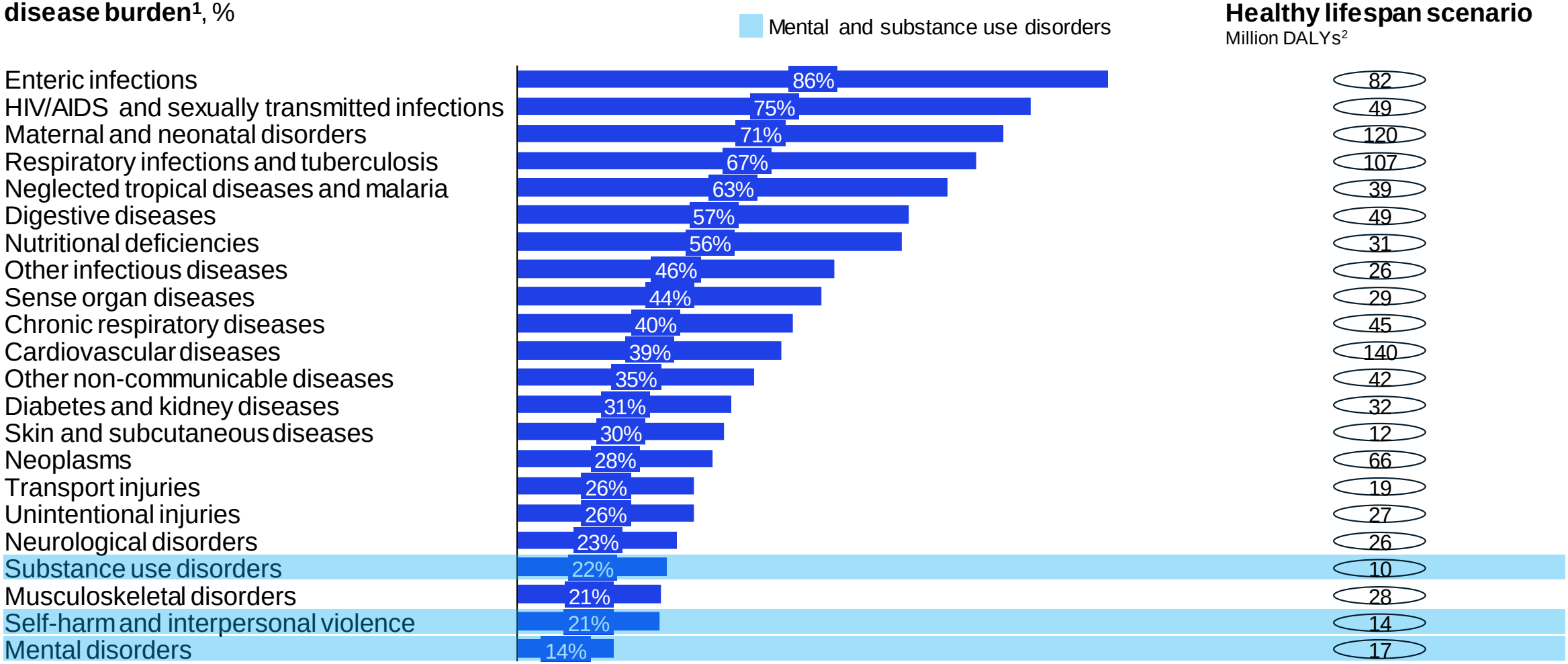


1. Analysis includes claims data from the Medicare FFS Limited Data Set from the Centers for Medicare & Medicaid Services, de identified Medicaid data, and the International Business Machines Corporation's Truven MarketScan Commercial Database. Any analysis, interpretation, or conclusion based on these data is solely that of the authors and not International Business Machines Corporation

2. This does not include Tricare, individual market, or uninsured populations | 3. Accounts for reduction in spend for people losing employment and not gaining Medicaid coverage

The potential to reduce disease burden from mental and substance use disorders is hindered by systemic barriers

Diseases burden reduction potential by 2040 in the "healthy lifespan" scenario, based on 2017 disease burden[1], %



Disease burden reduction in Healthy lifespan scenario
Million DALYs[2]

Enteric infections	82
HIV/AIDS and sexually transmitted infections	49
Maternal and neonatal disorders	120
Respiratory infections and tuberculosis	107
Neglected tropical diseases and malaria	39
Digestive diseases	49
Nutritional deficiencies	31
Other infectious diseases	26
Sense organ diseases	29
Chronic respiratory diseases	45
Cardiovascular diseases	140
Other non-communicable diseases	42
Diabetes and kidney diseases	32
Skin and subcutaneous diseases	12
Neoplasms	66
Transport injuries	19
Unintentional injuries	27
Neurological disorders	26
Substance use disorders	10
Musculoskeletal disorders	28
Self-harm and interpersonal violence	14
Mental disorders	17

1. List represents all 22 level 2 disease burden according to IHME | 2. DALY = Disability Adjusted Life Year

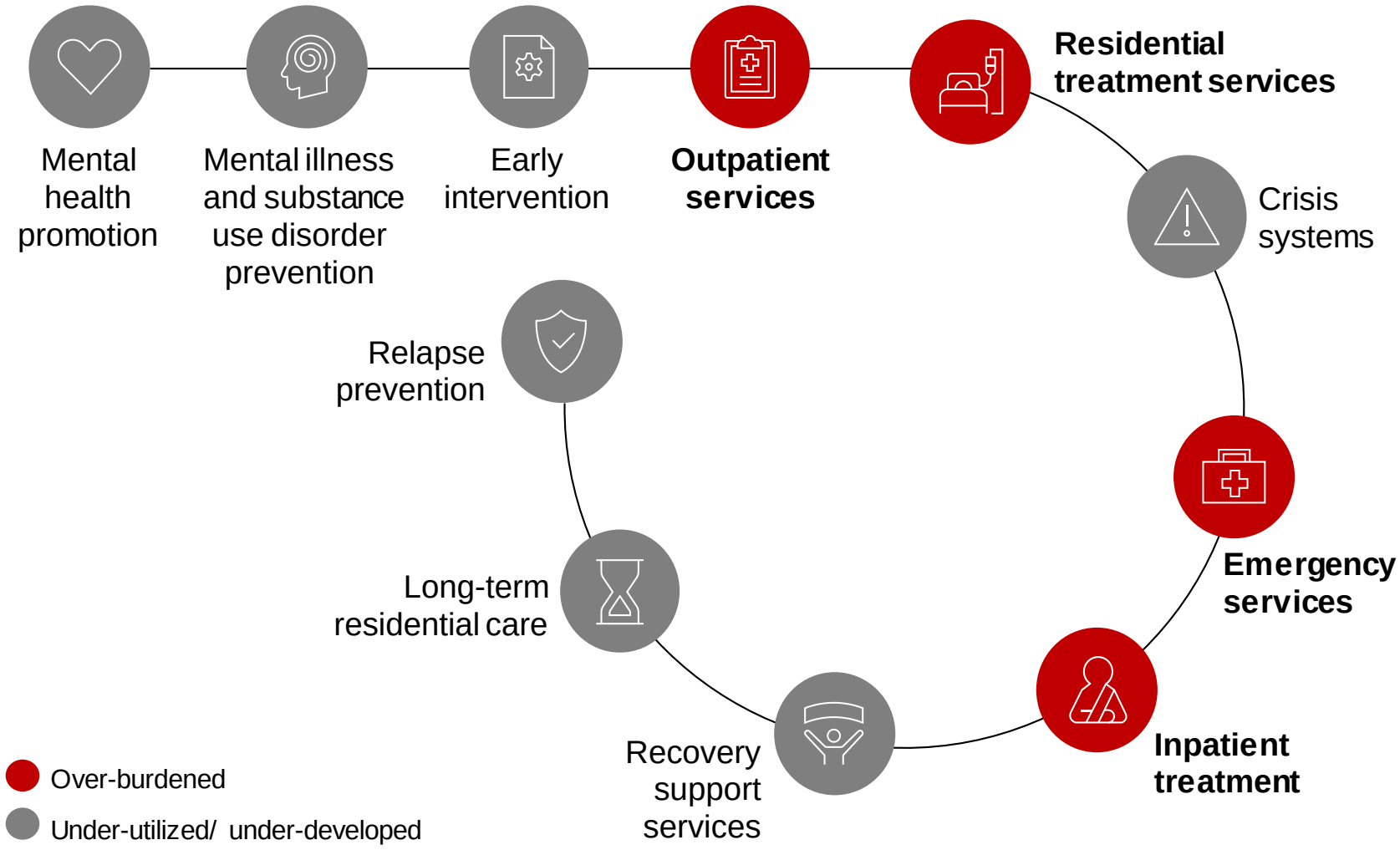
Source: Prioritizing health – a prescription for prosperity, MGI, July 2020

These systemic barriers are underpinned by a set of cross-cutting, but actionable challenges

Behavioral health care faces a range of challenges, including:	These challenges are evidenced by the fact that:
Shortage of behavioral health professionals and physical health professionals with behavioral health competency	**63%** of US counties have a shortage of psychiatrists[1]; only **8%** of medical schools have a required course on addiction[2]
Inadequate reimbursement policies and under-funding of behavioral health services	Reimbursements were **~20%** lower for behavioral healthcare than for primary care in 2017[3]
Lack of scale for evidence-based interventions for mental and substance use disorders	Only **5%** of adolescents with first episode psychosis and **10%** of preschoolers with ADHD receive guideline-concordant care[4]
Poor integration of physical health, behavioral health, and social determinants of health	Individuals reporting poor mental health are **1.9x** as likely to report not receiving the healthcare they need, and **2.5x** as likely to report having multiple unmet social needs[5]
Low levels of behavioral health literacy and lingering stigma relating to mental and substance use disorders	**37%** of Americans view opioid use disorder as a personal weakness and not a disease[6]; **53%** of psychiatrists report discriminatory attitudes from other providers to patients[7]

1.McKinsey Vulnerable Populations Dashboard | 2. Surgeon General- Facing Addiction in America, 2016 | 3. Milliman Research - Number of Psychiatrists Rising, but 1-in-5 Children Still Live in County Lacking a Psychiatrist, 2019 | 4. Variability in ADHD Care in Community-Based Pediatrics, 2014 | 5. McKinsey Consumer Mental Health Survey, 2019 | 6. Politico/ Harvard T.H. Chan School of Public Health 2018 | 7. Canadian Psychiatric Association

Today, multiple points along the behavioral health care continuum are over-burdened, while others are under-utilized or under-developed

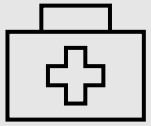


A well-functioning system that optimizes **access, affordability, quality,** and **experience** requires **adding capacity** as well as **increasing access** to under-utilized and under-developed points of care

Stakeholders must work together to address these challenges and optimize the current state of behavioral health care

Detail follows

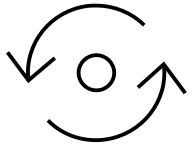
The emerging vision for behavioral health would include:



Adequate behavioral health professionals and increased behavioral health competency of physical health professionals

Reimbursement policies that align incentives to increase network participation and optimize total cost of care

At-scale availability of evidence-based interventions to ensure access to high-quality behavioral health care when, how, and where people need it



Tech-enabled end-to-end integration of physical, behavioral, and social determinants of health in primary and specialty care

Behavioral health needs addressed with the same **urgency, skill, and compassion** as physical health

We are supporting Shatterproof in their development and execution of a national strategy to reduce the stigma around opioid addiction

SHATTERPROOF™ STRONGER THAN ADDICTION is a national non-profit organization **dedicated to reversing the addiction crisis in the United States**

Why opioid addiction?

Nearly **1 in 3 people know someone addicted** to opioids. **Every 11 minutes someone dies** from an opioid overdose (more than deaths from car crashes). Even though it is a preventable, treatable health condition, only **1 in 5 people with an opioid addiction get care** they need.

Why does stigma matter?

The consequences of stigma include **lower rates of diagnosis, poorer quality of treatment**, and **a more difficult road to stable recovery**

What is the overarching vision?

Society…

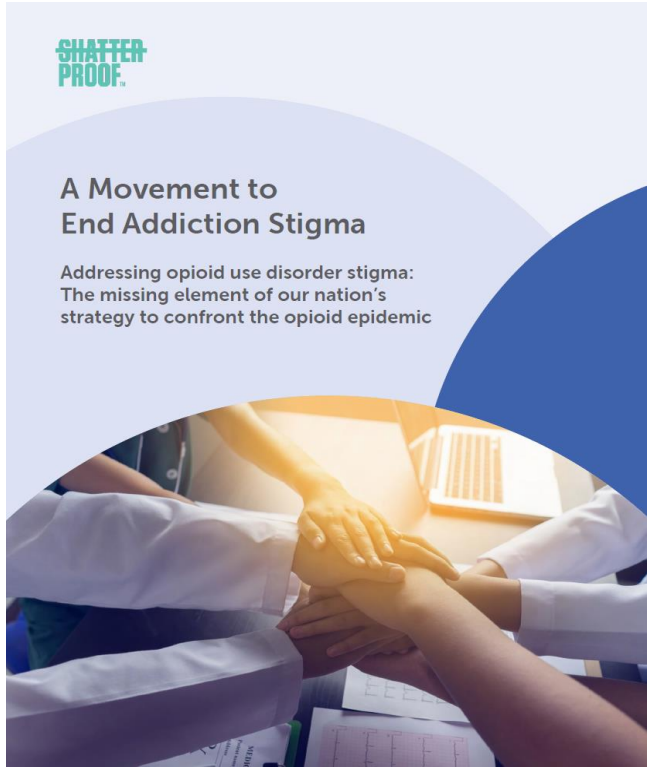
- **views and treats opioid addiction** as a chronic disease
- **views and treats evidence-based treatment** for opioid addiction – including medications for opioid use disorder – as useful and necessary
- **views and treats people addicted to opioids** with respect and compassion

… just as it does for other chronic illnesses like diabetes or cancer – **all so more people lead productive, fulfilled lives**

Shatterproof Stigma Report

Shatterproof recently released the [Stigma Report](), a comprehensive plan to reduce stigma related to opioid use disorder

The report includes **specific action plans to engage employers** across the country in this movement



Educate through empowerment

- ❑ **Sharing stories**: Implement campaigns sharing stories using contact- based strategies connecting those with OUD and those without OUD
- ❑ **Education**: Implement education program to educate on six specific topics related to addiction

Affirm through cultural change and norm-setting

- ❑ **Language**: Initiate standards to remove stigmatizing language across all communications
- ❑ **Events**: Participate in recovery-focused community events

Support through policy

- ❑ **Sponsorship**: Establish an executive-level sponsor accountable for advocating for employees with OUD and improving their workplace environment
- ❑ **Benefits**: Align organization health benefits and guidelines to better support those with OUD

Recent publications

May 20, 2020 | Article

[The implications for COVID-19 for vulnerable populations]

McKinsey's open-access dashboard looks at individuals with physical or behavioral health vulnerability and their risk for developing COVID-19.

April 24, 2020 | Podcast

[Changing views on mental and substance use disorders: An interview with Patrick Kennedy]

Former congressman, Patrick Kennedy, discusses mental and substance use disorders and how healthcare stakeholders can help these populations especially during the COVID-19 pandemic.

April 2, 2020 | Article

[Returning to resilience: The impact of COVID-19 on mental health and substance use]

As governments race to contain COVID-19, it is important to know the actions society can take to mitigate the behavioral health impact of the pandemic and economic crisis.

February 20, 2020 | Survey

[Understanding the impact of unmet social needs on consumer health and healthcare]

Income, employment, education, food security, housing, transportation, safety, and social support are all factors that affect health and well-being.

February 14, 2020 | Survey

[Insights on mental health from a 2019 McKinsey Consumer Survey]

McKinsey conducted a national survey to understand the impact of unmet social needs on consumer health outcomes, utilization, and preferences.

The Center for Societal Benefit through Healthcare

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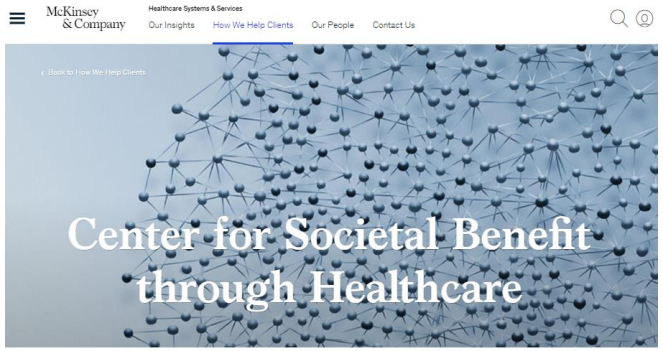
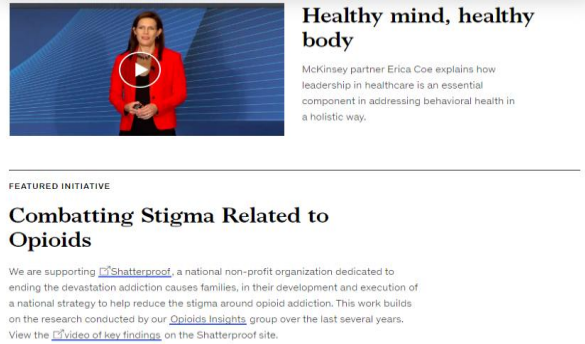
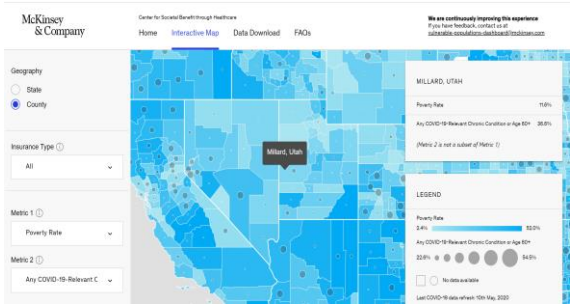
Center website





Vulnerable populations dashboard



Key features:

Interactive map at the county or state-level, with dual-axis functionality

Data download for underlying data source

Use case driven auto-filtering

Thank you for joining today's webcast!

Questions? Please reach out . . .

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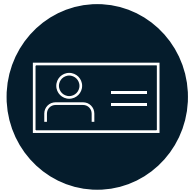
Alumni Website resources

Alumni Directory: Search for alumni and Firm members by name, office, company, and many other criteria using search and filtering capabilities

Career Services: Access and post job opportunities, indicate an interest in new roles, and access best practice transition resources

News & Insights: Read a variety of alumni and Firm news, access the latest Firm thinking, and search the webcast library

Events: See upcoming events around the world and register for upcoming Alumni Webcasts



Questions: please contact us at alumni_relations@mckinsey.com