

# WHY CIRCULATORY DISEASES MATTER...

## 1. The heart and brain are our best companions: LET'S TREASURE THEM!

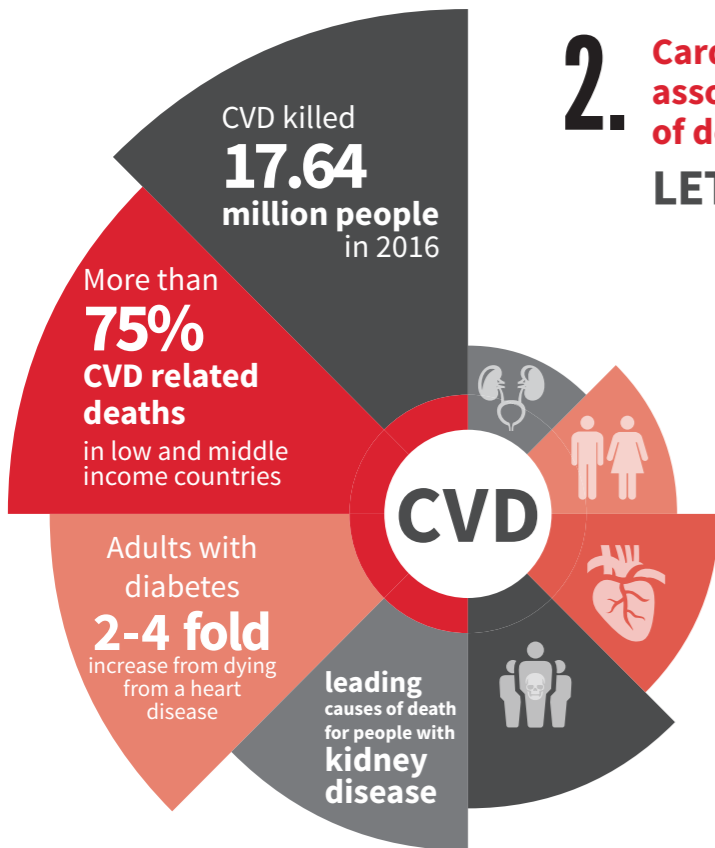
- The average heart beats about 100'000 a day, and the brain's 80 billion neurons communicate thousands of times every second to make humans human. It takes just a few minutes after cardiac arrest before a person experiences brain death and therefore complete death.

- Controlling hypertension, the number one risk factors for mortality and disability worldwide, is believed to significantly reduce the risk of stroke, coronary heart disease and heart failure<sup>1,2,3</sup>.



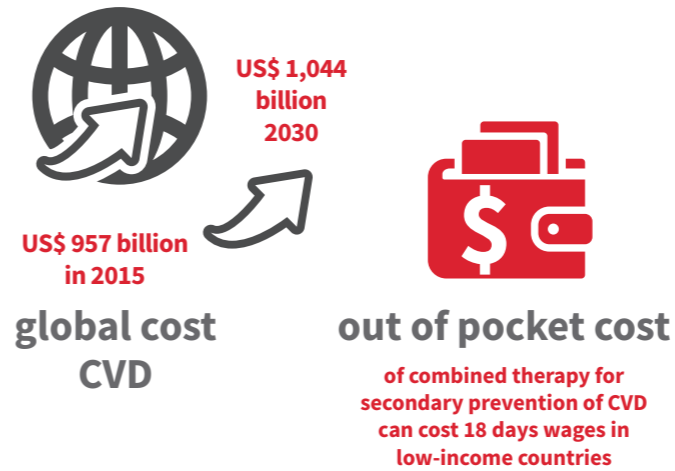
## 2. Cardiovascular disease (CVD) and associated conditions are leading causes of death and disability: LET'S CHANGE THAT!

- CVD, including heart disease and stroke, are the leading cause of mortality worldwide<sup>4</sup>. CVD killed 17.64 million people in 2016<sup>5</sup>. The global burden of CVD, diabetes and kidney disease, expressed in disability-adjusted life years (DALYs) equalled almost half a billion years in 2016<sup>6</sup>.
- More than 75 percent of CVD-related deaths occur in low- and middle-income countries<sup>7</sup>.
- Adults with diabetes have a 2-4 fold increased risk of dying from heart diseases compared to those without diabetes<sup>8</sup>. Life expectancy is reduced by 12 years in diabetes patients with previous CVD<sup>9</sup>.
- An estimated 7.1 million people died as a result of uncontrolled hypertension<sup>c</sup>. Almost 1 billion individuals are affected by hypertension, which is a significant risk factor for cardiovascular diseases, stroke and end-stage renal disease<sup>10,11</sup>.
- Heart disease and stroke are the leading causes of death for people with kidney disease and acute and chronic kidney disease (CKD) are major risk factors for CVD<sup>12,13,14</sup>.
- Interventions in the 21st century have demonstrated that preventive health actions can reverse and improve circulatory health<sup>15</sup>.



<sup>c</sup> Hypertension is defined as systolic blood pressure  $\geq 140$  mmHg, and raised blood pressure as systolic blood pressure  $\geq 110-115$  mmHg.

## 3. CVDs are costly: LET'S FOSTER BEST-BUY INTERVENTIONS!



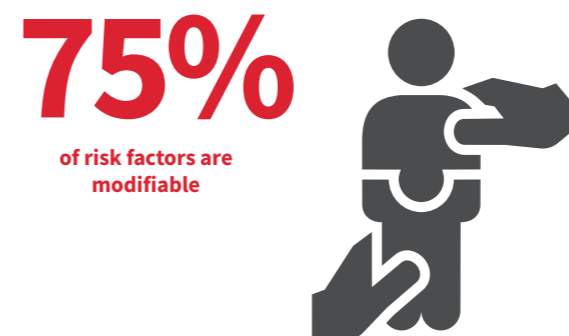
- By 2030, the total global cost of CVD is set to rise from approximately US\$ 957 billion in 2015 to a US\$ 1,044 billion. 55 percent are direct healthcare costs, and 45 percent are due to indirect costs, mainly losses of productivity<sup>16,17</sup>.
- Heart disease and stroke-related care represents the largest proportion of diabetes health expenditures: 25 percent of diabetes inpatient costs are a result of heart disease and stroke. Conversely, diabetes is responsible for more than 25 percent of all CVD expenditure<sup>18</sup>.
- The out-of-pocket cost of a month's supply of combined therapy for secondary prevention of CVD can reach as much as 18 days' wages in low income countries<sup>19</sup>.
- US\$ 1 invested in reducing tobacco use can yield a return of US\$ 7.43. Managing CVD and diabetes can yield a return of US\$ 2.8, and reducing unhealthy diet can bring a return of US\$ 12.82!<sup>20</sup>
- Keeping blood pressure under control significantly reduces the number of cardiovascular events and deaths, making hypertension control one of the most cost-effective population-based interventions in public health.

## 4. CVDs can affect everyone: LET'S PROMOTE A LIFE-COURSE APPROACH!



- Improving maternal and child health will make a difference for the circulatory health of future generations: the risks of CVD, diabetes, hypertension and kidney disease begin in utero and accrue throughout the life course<sup>21</sup>.
- Ageing increases the risk of heart disease, stroke and other comorbidities. The risk of stroke doubles every decade after the age of 55.
- 8-10 percent of the population worldwide suffers from chronic kidney disease. This figure increases to 20 percent in individuals in their 60s, and to 35 percent in those aged 70 years and over<sup>22</sup>.

## 5. Integrated strategies are scarce: LET'S CLOSE THE GAP!



- Approximately 75 percent of CVD is attributable to modifiable risk factors such as high blood pressure, diabetes, high cholesterol and obesity, tobacco use, alcohol consumption, physical inactivity and unhealthy diet<sup>23</sup>.
- Prevention can yield positive results. Yet, although most countries have a national strategy that addresses either unhealthy diet, tobacco or diabetes, only 42 percent of countries have national strategies for all three issues<sup>24</sup>.
- Worldwide, less than 1 in 3 countries have smoke-free environments in all indoor workplaces, public transport and indoor public places<sup>25,26</sup>.
- Only 20 percent of countries worldwide have set up an NCD surveillance and monitoring system that includes data on mortality by cause and risk factor surveillance, and very few are in low-income countries<sup>27</sup>.
- Screening for comorbidities in high risk patients leads to reduced costs, reduced cumulative incidence of grave disease progression and improved overall life expectancy, and should therefore be part of integrated national NCDs strategies and tailored to each setting according to available resources<sup>28,29,30</sup>.