THE SOURCE OF WASTE IN INDONESIA'S HEALTH CARE EXPENDITURE: SMOKING ATTRIBUTABLE DISEASE

Policy Brief

Center for Indonesia's Strategic Development Initiative
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The National Health Insurance Program (Jaminan Kesehatan Nasional, JKN) faces accumulated deficits of Rp51.0 trillion, partly due to illnesses attributed to uncontrolled tobacco use in the past decades. While the government is facing political challenges to increase public funding for the national health insurance, BPJS Kesehatan (BPJS-K) needs to ensure its sustainability, especially considering the COVID-19 pandemic. Therefore, it is critical to examine sources of waste in the BPJS-K budget. Identifying tobacco-attributable diseases as Indonesia's most significant but preventable cause of disease and death, and measuring its significant economic burden, is a start.

METHOD

This study follows the standard approach of the World Health Organization (WHO, 2011) to calculate Smoking Attributable Direct Cost (SDE) by multiplying the sum of direct health care cost of smoking by the smoking attributable fraction (SAF). SDE includes the expenses of medical treatment incurred by individuals (out-of-pocket, OOP) and health insurance providers to access inpatient treatment and outpatient visits, including medical and non-medical cost. The health care cost of smoking is estimated for the entire population to compare the estimate with the previous study using data from Indonesia Basic Health Research (RISKESDAS) 2018, National Socio-Economic Survey (SUSENAS) 2018-2019, and BPJS-K administrative data 2019.

KEY FINDINGS

The estimated direct cost of smoking in Indonesia for the total population ranges between Rp17.9 and Rp27.7 trillion, depending on the assumed relative risk (RR) of mortality from smoking. This estimate is higher than previously estimated by Kosen et al. (2017) at Rp13.7 trillion in 2015, or Rp15.7 trillion in 2019 prices.

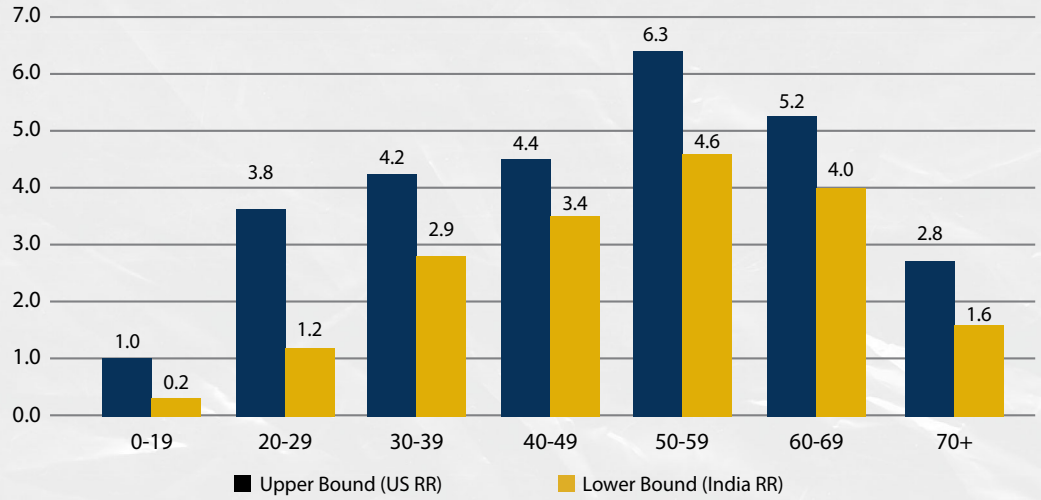
The largest component of this cost (between 56.3 and 58.6 percent) is covered by BPJS-K, with the inpatient and referral treatments being its major component, representing between 86.3 and 87.6 percent of BPJS-K cost. In other words, BPJS-K allocated between Rp10.5 trillion and Rp15.5 trillion to cover the health care cost of smoking, which represents between 61.76 and 91.8 percent of the 2019 deficit.

Table 1. Direct Cost of Smoking Attributable Diseases in Indonesia in 2019 (Rp billion), by using different RR

Description	Total Population				Population 20+			
	RR India		RR US		RR India		RR India	
	Rp Bilion	%	Rp Bilion	%	Rp Bilion	%	Rp Bilion	%
Medical Treatment of BPJS-K	10,510	59%	15,582	56%	10,409	59%	15,165	57%
Inpatient and Outpatient	9,206	51%	13,446	49%	9,128	52%	13,123	49%
Outpatient Primary Care	1,303	7%	2,136	8%	1,281	7%	2,042	8%
Uncovered Cost	7,412	41%	12,087	44%	7,268	41%	11,490	43%
Medical Treatment of Non-BPJS-K	434	2%	749	3%	421	2%	694	3%
OOP Cost (SUSENAS)	4,733	26%	7,664	28%	4,652	26%	7,327	27%
Transportation Cost (SUSENAS)**	2,245	13%	3,674	13%	2,195	12%	3,469	13%
Total Direct Health Cost	**17,922**	**100%**	**27,670**	**100%**	**17,678**	**100%**	**26,655**	**100%**

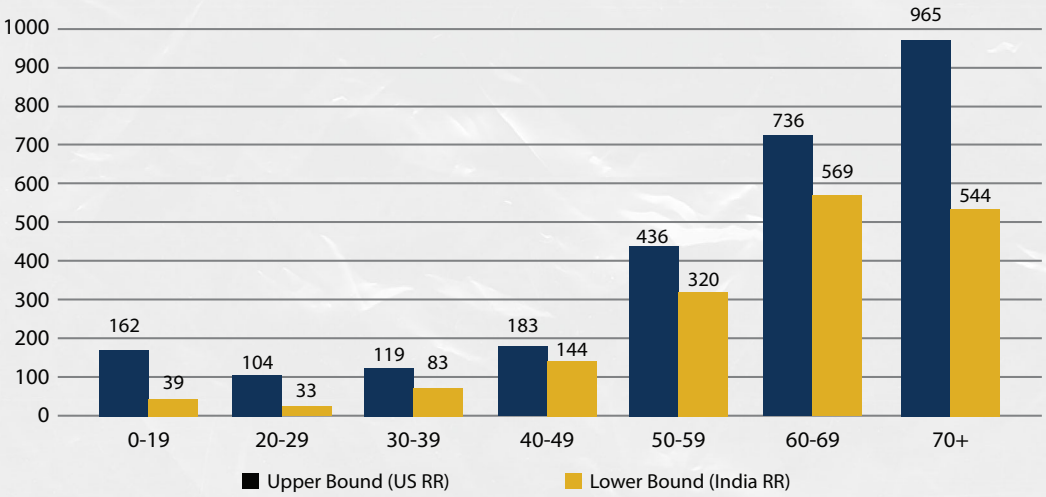
Notes:
* Medical treatment of non-BPJS Kesehatan defined as medical expenditure financed by private insurance.
**Data from SUSENAS 2018 was used to estimate the expenditures in 2019 due to a revision of questions in 2019 SUSENAS
Source: Authors' calculations

Figure 1. Direct health care expenditure by age group (in Rp trillion)



Source: Authors' calculation

Figure 2. Direct health care expenditure (in Rp thousand) from BPJS-K per ever-smoking individual by age group



Source: Authors' calculation

Most of the direct cost of smoking occurred for 20+ population (between Rp17.7 trillion and Rp26.7 trillion). The direct health care expenditure increases with the age of smokers, reaching the maximum level in the age group 50-59 (increases by between 122 and 138 percent relative to the younger age group), with the estimated cost between Rp4.6 trillion and Rp6.3 trillion. The average annual health care cost of ever-smokers per person per year is between Rp299,335 and Rp462,145. This finding is consistent with the notion that many of the negative consequences will accumulate in the longer term and will affect ever-smokers' health status as they age. As the prevalence of young smokers continue to rise, Indonesia will carry the burden of SDE in the long term.

The burden to BPJS-K to cover SDE for the entire population is significantly higher than the estimated maximum allocation of 2019 local cigarette tax and tobacco excise profit-sharing fund (Dana Bagi Hasil Cukai Hasil Tembakau or DBHCHT) for Indonesia's health care system at only Rp7.4 trillion (26.7 percent of the SDE). Hence, the tobacco industry's claim that the cigarette excise has been a helping hand for JKN is false and a manipulation of public opinion.

The 2020 tobacco excise tax policy was also not sufficient to cover the costs of smoking as the government only allocated a fraction of it for JKN. Adjusted for inflation, the 2019 cost estimates translate to approximately Rp18.2 to 28.2 trillion in 2020 (between 0.1 and 0.2 percent of GDP). While in 2020 the government received Rp170.2 trillion in tobacco tax revenues (YOY growth at 3.3 percent), the allocation earmarked for JKN was only at the maximum of Rp8.1 trillion (comprised of Rp6.4 trillion from local cigarette tax and Rp1.7 from DBHCHT).

THE BOTTOM LINE FOR POLICY

Reducing costs from smoking-attributable diseases would be a game changer for the sustainability of JKN. Reducing 'preventable waste' from treating tobacco-attributable diseases through further tax increases,

swift merger of tax tiers, and earmarking of the revenues for JKN can shift a burden into an opportunity. The combination of these approaches would allow more funds to be deployed quickly. It could also facilitate the transformation of urgent spending of supplementary expenditures for the pandemic into a budgetary category earmarked for short term response and to sustain JKN in the long term.

Dedicating the revenue derived from tobacco excise taxes for a special purpose allows more transparency in how tax revenues are used; in this case, for COVID-19 responses and sustainability of the national health insurance program. These earmarked funds can be viewed as a strategic investment. Indeed, when revenue is used to improve health—directly via health care or indirectly via prevention programs and research—it is, in effect, a form of investment to facilitate healthy behavior, better population health, and a more productive workforce.

POLICY RECOMMENDATIONS

1. **Set large, rapid increases in tobacco tax rates with swift merger of the tax tiers**

   The rise of cigarette excise tax by only 12.5 percent in 2021 risks losing the gains made in improving health outcomes from higher tax increases as was done in 2020 (by 23.8 percent). MOF data show that the production of cigarettes declined by 9.7 percent in 2020 relative to 2019, in line with RPJMN mandate to decrease consumption. However, expensive cigarette brands still maintain a large market share, suggesting many Indonesian consumers still find these products affordable. This study provides evidence for a stronger government role in reducing negative externalities from smoking.

   Smoking cessation is made more difficult by the multi-tiered excise tax structure. This encourages smokers to switch to cheaper brands rather than quitting altogether. The Ministry of Finance should reissue the tobacco excise simplification roadmap to allow swift merger of the tax tiers.

2. **Earmark tobacco excise revenue for JKN**

   The level of earmarked tobacco tax for universal health coverage is far behind the cost needed for treatment of smoking attributable diseases. Price measures for tobacco control could be an effective and important means to reduce tobacco consumption and its associated health care costs as well as provide a revenue stream to finance JKN.

   A modest proposal for the future of JKN is soft earmarking of the additional tax revenues to cover the health costs of smoking-related diseases. This requires the amendment of the DBHCHT allocation policy in the Excise Law and JKN earmarking policy in the Presidential Regulation for JKN and MOF Regulation for DBHCHT.

   Giving BPJS-K greater control over the use of funds should be accompanied by processes to track and report spending for transparency and accountability.

3. **Tackle non-price factors at the same time**

   While continuing to reduce affordability, tobacco control policy in Indonesia can further improve results by aggressively restricting tobacco advertising, enforcing smoke-free areas in public spaces expanding the use of pictorial health warnings, and related tobacco control measures. The pervasive cultural perception of smoking as normal for adult men can and must be changed.

Suggested Citation

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About CISDI

CISDI is a civil society organization with the area of focus include strengthening health policy implementation in Indonesia, empowering youth and communities at the grassroots level, as well as advocating the mainstreaming of the SDGs into the National Development Agenda. Related to tobacco control specifically, CISDI has supported the advancement of tobacco control policy in Indonesia through research and community mobilization.

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