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Incentives for Life

Cash-on-Delivery Aid for Tobacco Control
in Developing Countries

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Introduction

Fewer people are smoking in the United States, Europe, and most of the developing world. Excise taxes, bans on smoking in public places, and graphic health warnings are achieving such dramatic reductions in tobacco use in developed countries that a recent Citigroup Bank investment analysis speculated that smoking could virtually disappear in wealthy countries over the next thirty to fifty years.

But as tobacco use declines in the United States and most developed countries, it is on the rise in low- and middle-income countries. Despite widespread participation in the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC), tobacco taxes remain lower and warning labels smaller than the WHO recommends in most developing countries. No-smoking requirements often do not yet exist or go unenforced, even in hospitals and schools. With stagnating sales in high-income nations, multinational companies target low- and middle-income countries with still-limited tobacco tax and regulatory systems, using cartoon characters, sports sponsorships, purse packs, and other advertising gimmicks long prohibited in most of the developed world. Unless international tobacco control efforts improve, and soon, the WHO projects that tobacco will kill hundreds of millions in the coming decades, mostly in developing countries.

Few global health threats can compare with the human and economic toll of tobacco-related diseases in developing countries. If global health and preventing avoidable disease among the poor are priorities for the United States, philanthropic foundations, and international development institutions, then tobacco control must be as well. Tobacco control programs are evidence-based and cost-effective. If implemented and enforced in more developing countries, these programs offer a sustainable way to save millions of lives. The international community can support the implementation of these programs in three ways. First, the United States and other developed countries with experienced tobacco tax and regulatory authorities should increase their mandates and resources to support the tobacco control efforts of their developing-country counterparts.¹ Second, the United States and its trading partners should also stop trying to reduce tobacco tariffs and protect tobacco-related investments in their trade agreements with low-income nations; these countries should be allowed the opportunity to implement the same tobacco-control programs as the United States has.² Finally, donor governments and foundations should help developing-country governments overcome tobacco industry opposition and prioritize the health needs of their citizens by providing the incentives for outcome-driven, bottom-up approaches to tobacco control. Third, a particular incentive model, Cash-on-Delivery (COD) Aid, could make a tremendous difference against the tobacco epidemic sweeping many low- and middle-income countries and should be implemented.

The Gathering Cloud

Between 1970 and 2000, cigarette consumption tripled in developing countries.³ Tobacco use is widespread in Asia, Eastern Europe, and Latin America and is expanding in Africa, where tobacco consumption has historically been low.⁴ Tobacco use is increasing among the poor and women, who once used tobacco in fewer numbers than men in most parts of the developing world.⁵ Eighty-four percent of the world's smokers, more than nine hundred million people, now live in developing countries.⁶

Tobacco is perhaps the greatest health threat facing developing countries and the leading cause of disease and premature death worldwide. Tobacco use and secondhand smoke are the only leading risk factors common to all the major disease groups of the noncommunicable diseases: cancer, diabetes, and cardiovascular and respiratory diseases.⁷ Tobacco use increases the health risks at every stage of life: pregnancy complications, congenital abnormalities, childhood illnesses, tuberculosis (TB) infection, drug resistance, poor treatment outcomes, and increased mortality.⁸ According to the WHO, tobacco use already kills more people globally than HIV/AIDS, malaria, and TB combined.⁹ Unless urgent action is taken, tobacco-related illnesses will kill more than eight million people annually by 2030 and one billion by the end of this century.¹⁰ More than 80 percent of those deaths will be in low- and middle-income countries.¹¹

Expanded tobacco use in developing countries has dramatic economic consequences as well. Tobacco-related illness is already the top health expense in many developing countries.¹² Increased and early onset of tobacco-related disease consumes scarce health-care resources and undermines the capacity of developing-country health systems to respond to infectious diseases and other health threats. Tobacco-related disease in the young and middle-aged consumes household budgets, robs families of their primary wage earners, and hinders economic development. The World Economic Forum's 2009 global risk report ranked noncommunicable diseases, for which tobacco use is a leading risk factor, as a greater threat to global economic development than fiscal crises, natural disasters, transnational crime and corruption, and infectious disease.¹³

Platforms for Progress

Tobacco is among the most preventable threats to health in low- and middle-income countries. Comprehensive tobacco control programs are cost-effective and evidence-based.¹⁴ Excise taxes, bans on smoking in public settings, and marketing restrictions have halved adult smoking rates (from 42 percent to 19 percent) in the United States since 1965.¹⁵ Smoking rates have also declined dramatically over the same time period in France, Germany, the United Kingdom, Japan, and most of Eu-

rope.¹⁶ Based on these trends, a recent Citigroup investment report speculated that tobacco control programs could succeed in eradicating smoking entirely from developed countries by 2050.¹⁷

Platforms for establishing and expanding effective tobacco control programs in developing countries already exist. The WHO Framework Convention on Tobacco Control provides a blueprint for comprehensive tobacco control by prescribing specific domestic tobacco control strategies to reduce the supply and demand for tobacco products. FCTC demand-reduction strategies include price and tax measures as well as non-price measures such as smoke-free legislation; tobacco product advertising, packaging, and labeling regulation; and cessation support programs.¹⁸ FCTC supply-reduction strategies include controlling the illicit trade in tobacco products, sales to minors, and crop substitution.¹⁹ The FCTC is binding and one of the world's most widely subscribed treaties, with 173 member countries representing nearly 90 percent of the world's population.²⁰ WHO, with the support of Bloomberg Philanthropies, has developed MPOWER, a package of evidence-based, actionable, and measurable strategies to support FCTC implementation at the country level.²¹ The U.S. Centers for Disease Control and Prevention (CDC), WHO, and Canadian Public Health Association (CPHA) conduct the four surveys that make up the Global Tobacco Surveillance System (GTSS), which monitors tobacco use and control policies in 167 WHO member states and other territories.

Tobacco Control in Low- and Middle-income Countries

Since the adoption of the FCTC and MPOWER, some low- and middle-income countries, particularly in Latin America, have made significant progress in their tobacco control efforts. Twelve Latin American countries plus Djibouti, Mauritius, Turkey, and Zambia have instituted comprehensive smoke-free laws.²² Uruguay has instituted an advertising ban and mandated large, graphic warning labels on all cigarette packs. Panama banned all tobacco advertising, promotion, and sponsorship, and Madagascar and Jordan improved their restrictions in these areas.²³ Low- and middle-income countries such as Bhutan, Poland, South Africa, and Thailand have likewise implemented successful tobacco control programs.²⁴ According to a 2011 WHO report, more than one billion additional people have been covered by one or more MPOWER-prescribed policies since 2008.²⁵

Despite these pockets of progress, tobacco control efforts in many developing countries remain stalled. The tobacco control programs in most developing countries do not meet WHO standards and are often ineffective. According to a 2011 WHO report on the global tobacco epidemic:

- 94 percent of low- and middle-income countries impose taxes at less than the WHO-recommended 75 percent of retail cigarette price.
- 90 percent of low- and middle-income countries do not ban tobacco advertising, promotion, and sponsorship.
- No low-income country and only 13 percent of middle-income countries have health warnings on tobacco products that meet WHO-recommended criteria.

- Only 11 percent of low- and middle-income countries have run antitobacco media that include all the WHO-recommended elements.
- 85 percent of low- and middle-income countries do not mandate smoke-free public environments.²⁶

In many low- and middle-income countries, antitobacco laws are on the books but go unenforced. Youth smoking laws are often circumvented.²⁷ Smoke-free bans are routinely violated without consequence.²⁸ Youth continue to be exposed to advertising, even in countries that ostensibly ban advertising.²⁹ Tobacco excise tax evasion is widespread.³⁰ Most countries in Southeast Asia require health warnings on cigarette packs, but only four of these countries enforce them.³¹

Lack of capacity and fierce industry opposition have slowed progress in many low- and middle-income countries in implementing effective tobacco control programs. Some developing countries lack the capacity and technical expertise to administer and collect tobacco excise taxes. Effective tobacco tax programs require a degree of coordination that can be difficult to achieve among the law enforcement, finance, and health ministries of affected states. Most developing countries do not have the regulatory acumen to oversee product labeling and the regulation of nicotine, tar content, and tobacco additives, which are important components of limiting the public health impact of cigarettes.

Tobacco control in these countries is severely underfunded, particularly relative to other global health programs. The health development assistance spent per death from HIV/AIDS (\$782), malaria (\$1,189), and tuberculosis (\$1,127) far exceeds the amount spent on tobacco-caused diseases (\$35).³² Ninety-seven cents of every dollar devoted to tobacco control is spent in high-income countries.³³ More than five billion people live in low- and middle-income countries that spend \$30 million per year combined on tobacco control.³⁴ Per capita spending on tobacco control ranges from a tenth of a cent per capita per year in low-income countries to half a cent per capita annually in middle-income countries and roughly \$1.80 per capita per year in high-income countries.³⁵ More than three-quarters of low- and middle-income countries devote fewer than five full-time staff to tobacco control.³⁶ Enforcement of tobacco control laws and regulations is impossible without personnel and investment, particularly when the tobacco industry devotes substantial resources to circumventing tobacco control.

Tobacco industry investments and promotion in developing countries dwarf amounts spent on tobacco control.³⁷ With diminishing sales in high-income nations, multinational tobacco companies have aggressively sought to expand markets for their products in low- and middle-income countries.³⁸ The tobacco industry has fiercely opposed marketing and labeling regulations, even when more modest than those currently imposed in high-income countries.³⁹ Multinational tobacco companies employ advertising tactics in lower-income countries—billboards, cartoon characters, and music-event sponsorships—now prohibited in the most developed countries.⁴⁰ Young women are major targets of these campaigns. In the world's poorest countries, where tobacco has not historically been consumed, multinational cigarette companies use investments in local tobacco production and corporate social responsibility programs to win support from politicians and future customers.⁴¹ Increasingly, multinational tobacco companies use dispute resolution under trade and investment agreements to block labeling and advertising restrictions in developing countries.⁴²

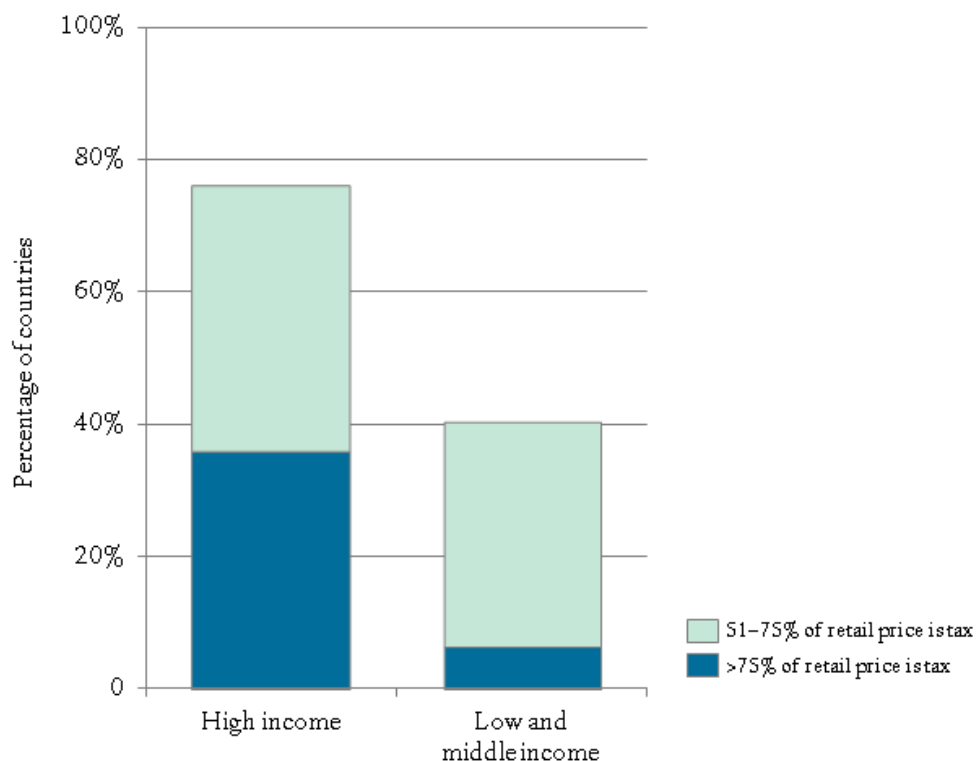
Many low- and middle-income countries lack the necessary political will to implement and enforce effective tobacco control programs in the face of this industry opposition. Middle- and low-income governments respectively collect 1,339 and 4,304 times more in annual tobacco-tax revenues than

they spend each year on tobacco control.⁴³ China is a party to the FCTC, has trillions of dollars in foreign reserves, and is home to three hundred million smokers, but only spent \$31,000 on its tobacco control programs in 2005.⁴⁴ Local tobacco producers may be fully or partly owned by the government.⁴⁵ Governments fear that increased tobacco taxes will harm local economic interests and incite political unrest among low-income smokers. Consumers and policymakers in many developing countries are not fully aware of the health consequences of tobacco use.⁴⁶ Governments lack accountability to their constituents for the consumption of a legal product for which the health consequences are not apparent for years. Patient groups are nonexistent or a minor presence in most developing countries. Civil litigation, which helped improve tobacco control and education in the United States, is far less common and successful in developing countries.⁴⁷

The limited implementation of tobacco control in low- and middle-income countries can be partly attributed to the design of the FCTC itself. The FCTC is among the most widely subscribed-to treaties in the world, the first that the WHO developed and adopted pursuant to its treaty-making authority, and an enormous achievement. The FCTC represents, however, a top-down approach to global tobacco control. Member countries are required to implement specific domestic tobacco-control strategies to reduce the supply and demand for tobacco products.⁴⁸ The FCTC does not contain specific standards for national tobacco control strategies.⁴⁹ The FCTC is legally binding but essentially unenforceable. Though the convention has been most successful in engaging national health ministries, which often have limited political and budget authority in low- and middle-income countries, there has been less success in engaging the finance, trade, customs, education, and law enforcement ministries that must be mobilized and coordinated to achieve effective tobacco control at the country level. In sum, the FCTC prioritizes tobacco control inputs—specific supply- and demand-reduction measures and policies—over health outcomes; that is, reduced tobacco use.⁵⁰

Perhaps accordingly, most developed countries have adopted the FCTC-prescribed measures that encounter the least industry resistance rather than the policies that have proven to be the most effective at cutting tobacco-use prevalence.⁵¹ Health warning labels on tobacco packaging and educational campaigns, which are essential components of a comprehensive tobacco control program but are less effective on their own, are the most widespread tobacco control measures in developing countries.⁵² Conversely, tobacco excise taxes are the single most effective tobacco control measure, particularly in low- and middle-income countries, but they remain much lower in developing countries than in high-income countries and than WHO-recommended levels (see Figure 1).⁵³

Figure 1. Total Tax on Cigarettes



Source: WHO, *Report on the Global Tobacco Epidemic, 2011: Warning about the Dangers of Tobacco* (Geneva: WHO, 2011), p. 66.

Each 10 percent increase in the retail price of tobacco products in low- and middle-income countries reduces tobacco consumption by roughly 8 percent and tobacco-use prevalence by about 4 percent.⁵⁴ Tobacco taxes also generate scarce new revenues for developing-country governments, which can be used for tobacco control and other important health and social programs. Yet tobacco-tax implementation is particularly poor in some regions. Ninety-eight percent of African countries impose tobacco excise taxes below the WHO-recommended 75 percent of price tax rate.⁵⁵ No low- and middle-income countries in Asia or the Pacific region meet that tobacco tax threshold.⁵⁶ Overall, the affordability of tobacco products has increased over time in most lower- and middle-income countries.⁵⁷

A New Approach to Improving Tobacco Control in Developing Countries

Tobacco control works. It is evidence-based, cost-effective, and succeeds in developed and developing countries alike. If implemented and enforced in more developing countries, tobacco control programs offer a sustainable way to save millions of lives. A 20 percent global decline in adult smoking by 2020 would prevent one hundred million premature tobacco-related deaths.⁵⁸

Effective tobacco control requires sufficient political will for governments to overcome industry opposition, competing health and development priorities, and resource scarcities. To help address those challenges, the U.S. government, philanthropic foundations, and other donors can help establish relatively low-cost incentives for an outcome-driven, bottom-up approach to FCTC implementation in developing countries to complement the top-down, policy-prescriptive approach of the FCTC.

One such approach would be the COD Aid concept, developed by Nancy Birdsall and William Savedoff at the Center for Global Development.⁵⁹ The basic COD Aid concept is that a funder and recipient enter into a contract in which the parties agree to a mutually desired outcome and fix a payment for each unit of confirmed progress. The funder pays a fixed sum for incremental progress on an outcome—in this case, some indicator of reduced tobacco-use prevalence—rather than specific policy inputs or outputs. The recipient is free to achieve the outcome according to its own capabilities. An independent third party collects data and verifies progress on the outcome in order to ensure both the funder and recipient have confidence in the result. Once progress is verified, the funder pays for the improved outcomes. The arrangement is transparent and public. The recipient is free to spend the payment according to its own needs.⁶⁰

In the case of tobacco, several of the major elements required for COD Aid already exist. Most potential funder and recipient governments have a shared goal to which they are willing to commit. With 173 states party to the FCTC, most potential funder and recipient countries have signed the FCTC and agreed to its goals for reducing tobacco use. The Global Tobacco Surveillance System already collects data on tobacco-use prevalence in low- and middle-income countries. The GTSS surveys are conducted and verified by entities—the WHO, the CDC, and the CPHA—that would likely be third parties to any COD Aid contract. The Global Youth Tobacco Survey (GYTS) is a school-based survey of thirteen-to-fifteen-year-olds and has been conducted in 154 mostly low- and middle-income countries since 1998. Most countries have been surveyed two or three times during this period. The Global Adult Tobacco Survey (GATS) is a household survey of men and women over fifteen years of age. Since 2007, the GATS has been conducted in fourteen countries—mostly large, emerging economies with high tobacco-use prevalence—and there are plans to expand GATS to another fourteen countries in the next few years. If the outcome measure in a COD Aid contract for tobacco control is already linked to an indicator in these global tobacco surveillance surveys, the additional costs for the data collection and verification required for COD Aid for tobacco should be minimal.

COD Aid is well suited to address many of the shortcomings that currently plague tobacco control efforts in low- and middle-income countries. Depending on the amount of the reward and the target country, COD Aid payments would help create the necessary political will for implementation and enforcement of effective tobacco control programs. By rewarding outcomes rather than policy inputs, COD Aid encourages institution-building and local solutions to best achieve reductions in tobacco-use prevalence. By providing unrestricted rewards, COD Aid aligns the incentives of local leaders, not just health ministries, with tobacco control objectives.

In many low- and middle-income countries, governments may lack accountability to their constituents for prevention and chronic care. Many high-income countries and global health donors likewise have paid relatively little attention to international tobacco control. COD Aid would introduce accountability for recipient governments on tobacco consumption because the arrangement and its objectives are public and transparent. Conversely, COD Aid tobacco funders would be more accountable to their citizens and constituents by linking increased assistance to reduced tobacco consumption rather than tobacco control policies.

Finally, COD Aid for tobacco would complement and not disrupt ongoing tobacco control programs, whether funded by local or external sources. By tying rewards to reduced tobacco-use prevalence, COD Aid would increase participating low- and middle-income countries' demand for technical assistance on effective tobacco control strategies like MPOWER and improved tobacco-use surveillance. Thus, a COD Aid program would facilitate more effective use of available resources on tobacco control.

Designing a Pilot for COD Aid for Tobacco

One way forward would be to develop a COD Aid tobacco control pilot and test its feasibility and desirability. The design of that pilot must identify the indicators for its success, the size of the award, the target recipient countries, and the most likely donors.

THE RIGHT INDICATOR OF SUCCESS

The first step in applying the COD Aid concept to tobacco control is identifying the most appropriate indicator of progress. A recent paper by William Savedoff and Katie Douglas-Martel sets forth criteria of good indicators for COD Aid in health generally, which can be adapted to the tobacco context.⁶¹

Policy based. The COD indicator must be a tobacco control outcome that is responsive to changes in government tobacco control policy. In other words, the purpose of the COD Aid arrangement is to incentivize the recipient government to take actions to achieve a desired outcome. If a recipient country can do nothing to achieve the agreed-upon outcome, the goal of COD Aid is frustrated.

Clear and transparent. One of the primary benefits of the COD Aid idea is that it helps increase the accountability of aid donors and recipients to their constituents. For this goal to be achieved, the recipient government and funders should be able to understand both the tobacco control outcome that they are trying to achieve when they sign a COD Aid agreement and the metric for assessing success or failure. The indicator for tobacco use should be easily explainable and disseminated to the public.

Measurable. If the outcome cannot be measured accurately, reliably, and annually, the incentive to achieve that outcome will become less meaningful to a potential recipient government. Linking the COD Aid payments to existing data collected by the WHO and CDC in the well-regarded GTSS surveys is a good way to proceed. The CDC, WHO, and Health Canada conduct GTSS surveys that can be considered independent of recipient country politics and pressures. Using the existing GTSS system will lower costs of collecting and verifying future data for COD Aid, as survey instruments have already been tested and verified repeatedly around the world. Using the GTSS system will also allow the use of historical GTSS data to calculate the progress of a recipient country against the projected increases in tobacco use so that a funder can reward tobacco-use prevention, such as averted youth smoking, in addition to success in convincing tobacco users to quit.

Reduces the risks of unintended consequences. Financial incentives can be powerful and can distort tobacco control programs by overemphasizing the needs of a particular subpopulation or type of tobacco control intervention. A highly publicized COD Aid pilot might also encourage the industry to file lawsuits to block effective tobacco reforms and try to thwart the success of the pilot.

For these reasons, a broad tobacco control outcome, such as reduced tobacco-use prevalence among the adult population, may be best for a tobacco COD Aid pilot. Tobacco-use prevalence is associated with important shared goals and is responsive to taxes, advertising bans, and other tobacco control interventions. In some countries, however, narrow indicators such as reduced youth smoking rates or rates of quitting may be easier to measure with accuracy and sufficient frequency. For example, the school-based tobacco-use surveys in a given country may be more reliable than a general household survey, which would favor an emphasis on youth over adults. A third possibility worth considering is using a basket of several narrow indicators that reflect the nature of the tobacco epidemic in a particular country. One basket of indicators that might demonstrate broad-based tobacco control achievement would be to tie potential COD Aid payments to combined reductions in the projected incidence of youth smoking, rates of quitting in the general population, and prevalence of smoking among medical personnel.

THE RIGHT TARGET COUNTRY

Choosing which countries to target for a COD Aid pilot should be driven by the determination of where a pilot is most likely to succeed, have the largest impact, and require the least amount of donor funding. Given the practical limits in the funding that can be mobilized to support a COD Aid model, there are two likely alternatives.

First, a COD Aid pilot for tobacco control could target a state or province of an emerging-economy country where tobacco-use prevalence is now the greatest. Any vehicle for reducing the staggering human and economic toll from tobacco use in these countries would be welcome. Howev-

er, tobacco control financial incentives are unlikely to be meaningful in these settings at the national level. Rewards of unrestricted aid to cash-strapped local governments are likely to be more persuasive. The WHO and CDC have already conducted the GATS at the subnational level in Brazil, Egypt, India, the Philippines, and Thailand and have data available for the provinces and regions in those countries.

Second, a COD Aid pilot could target at-risk countries—in which tobacco-use prevalence is relatively low, but is expected to increase in the near future. For example, many expect Africa to be the next big potential market for the tobacco industry. Tobacco use is relatively low in most African countries—less than 30 percent for men and much less for women—but the consequences of its increase would be substantial. Many African governments lack the capacity to implement effective national tobacco control programs and the resources to cope with a pandemic of tobacco-related diseases. Financial incentives for tobacco control may also be most effective in low-income countries where the rewards provided would be compelling. The availability of GTSS data would be more limited, however, in Africa. The WHO and CDC have conducted the Global Youth Tobacco Survey in eleven African countries, but they have not conducted adult tobacco surveys in the region.

THE RIGHT REWARD

COD Aid payments need not necessarily exceed the costs of improving tobacco control in a recipient country, but must be sufficient to attract policymakers' attention, which will likely depend on the political consequences of improving tobacco control in that country and the amount of aid already flowing to policymakers in the health sector. Countries that have a substantial local tobacco industry may require larger COD Aid rewards to alter the recipient's decision processes. Likewise, a contract that promises a few extra million dollars for reducing tobacco-use prevalence may not be compelling to policymakers already receiving millions of dollars of aid from the Global Fund to Fight AIDS, Tuberculosis, and Malaria.

One way to establish the most appropriate reward amount for a COD Aid tobacco control pilot would be for donors to establish country eligibility requirements and the health outcome sought for the pilot and to invite eligible countries to bid on the reward required to participate in the COD Aid contract. The lowest bid from an eligible country would win that country the right to participate.

Alternatively, donors could determine in advance what they would be willing to spend on achieving the desired reduction in tobacco use in target countries, fix a reward, and publicize the COD Aid contract as an open offer to eligible countries. In their book on COD Aid, for example, Birdsall and Savedoff proposed paying \$200 for each additional child who takes a competency test in the final year of primary school. This would generate initial aid flows of \$2 million per year, rising to \$30 million per year as progress accelerated, for a country with more than half a million children in each age cohort.

Finally, donors should structure a COD Aid reward payment to encourage countries to achieve the targeted reduction in tobacco-use prevalence in a sustainable and effective manner. The reward should incorporate both intermediate and final goals. Payment amounts could be scaled to encourage threshold reductions in tobacco-use prevalence (higher at first and declining over time) or to reward sustained reductions in tobacco-use prevalence (lower at first and increasing).

THE RIGHT FUNDERS

COD Aid requires external funding. It is possible to link COD Aid for tobacco control to an innovative financing mechanism such as a tobacco surtax in high-income countries. Otherwise, the funding for a COD Aid pilot must come from bilateral donors, multilateral development banks, and philanthropic foundations. In the current environment of tightening global health budgets and scarce new donor funding, this may be a challenge. Although a \$500 million, multiyear commitment from the Bloomberg Initiative and the Bill & Melinda Gates Foundation has injected sorely needed resources into global tobacco control, donor support for international tobacco control is limited. The United States, for example, dedicated less than \$7 million of its \$8.4 billion global health budget to international tobacco control. It may also be difficult for some donors, particularly governments, to enter into arrangements by which new or existing aid or loans are made contingent on the achievement of an uncertain health outcome.

One possibility is that the COD Aid idea itself might help raise donor funds for international tobacco control. For example, the development of the Advance Market Commitment concept, an innovative financing mechanism, generated new funds from the Group of Eight (G8) member countries for expanding access to pneumococcal vaccines by providing a compelling and effective vehicle for using those funds.⁶² Once established, COD Aid might likewise encourage low- and middle-income countries to spend more on tobacco control themselves. Prize-seekers often spend more on trying to obtain a prize than the prize itself is worth.

Case Study: Uttar Pradesh, India

To demonstrate how COD Aid might create incentives to scale up tobacco control in practice, below is a look at how the approach could work in the state of Uttar Pradesh in India.

Tobacco use poses a significant health and economic threat in India. Tobacco use in India is widespread among men, at 48 percent, and increasing in women.⁶³ India has the second-highest number of tobacco users of any country worldwide—275 million.⁶⁴ The majority of tobacco consumers in India use indigenous products—most men smoke bidis, a local variety of cigarettes, and the majority of women use smokeless tobacco.⁶⁵ Most Indians begin using tobacco products before the age of eighteen.⁶⁶ India is the third-largest producer of tobacco products and the sixth-largest exporter.⁶⁷ According to surveillance reports from the CDC and WHO, nearly one million Indians die annually from tobacco-related illness and more than two-thirds of those deaths are individuals under the age of seventy.⁶⁸ India is experiencing the fastest increase in deaths attributable to tobacco of any country worldwide, increasing from a projected 1 percent of all deaths to a projected 13 percent in 2020.⁶⁹ Tobacco-related illnesses represent a significant percentage of Indian health expenditures and decimate household budgets, particularly among the poor.⁷⁰

India, like many low- and middle-income countries, has tobacco control laws on the books, but they suffer from inconsistent application and enforcement challenges. Bidis are taxed at significantly

lower rates (8 percent on average) than filtered cigarettes (between 34 and 59 percent, depending on the type of cigarette).⁷¹ These differential tax rates drive smokers to keep using low-cost bidis. Tax evasion is also reportedly rampant in India.⁷² Finally, tobacco products in India have become more affordable in recent years.⁷³

A similar story exists with regard to tobacco control measures other than tax. India instituted regulation on tobacco advertising in 1975, banned youth smoking in 1997, and required smoke-free public places in 2003, but these measures depend on state implementation and local enforcement, which have often been lacking.⁷⁴ Despite the formal embrace of policies to restrict smoking in public settings in India, there is little evidence of their impact.⁷⁵ A recent report assessed tobacco control programs in twelve countries with different levels of economic development and found that only India was not in compliance with its own laws on warning labels on tobacco packages.⁷⁶ The penalties for selling tobacco to youth are low—100 rupees, or \$2.40—and an ineffective deterrent to such sales.⁷⁷ In 2008, the Indian health minister reported that his ministry had no legal power to punish any state that refused to implement the smoke-free public places law.⁷⁸

The greatest hope for progress on tobacco control in India resides at the state and local levels. Several WHO initiatives have reported progress working with civil society and local governments on implementation and enforcement of smoke-free laws.⁷⁹ A COD Aid approach should target such settings as well.

Uttar Pradesh is India's most populous province, with 125 million people.⁸⁰ In terms of tobacco use, however, Uttar Pradesh is a typical Indian state. Thirty-five percent of all Indians use tobacco; 34 percent of those in Uttar Pradesh do. The majority of Indians in Uttar Pradesh that consume tobacco use bidis, as do most Indians. The gender split and age at which Indians begin using tobacco are likewise close to the national average.⁸¹ As in the rest of India, few individuals who begin using tobacco in Uttar Pradesh are able to quit.⁸²

Here is a hypothetical COD Aid agreement for tobacco control in Uttar Pradesh. The proposed outcome—reduced adult tobacco-use prevalence—meets all four of the criteria outlined above. First, it is policy based in that it is an objective that India has already endorsed by joining the FCTC, and it is achievable by the provincial government of Uttar Pradesh through policy measures. A recent study in India, for example, demonstrated that a 10 percent increase in the price of bidi, cigarettes, and chewable tobacco through increased tobacco excise taxes reduces use prevalence of the products by 9 percent, 3.5 percent, and 8.8 percent, respectively.⁸³ Second, reduced adult tobacco-use prevalence is a measurable outcome monitored by the CDC and its partners at the provincial level in India as part of the GATS that they conduct. Third, success on this outcome would be clear and transparent; progress would be defined as a percentage point of reduction in adult tobacco-use prevalence and easily measurable at the population level through GTSS surveys. In this case, Uttar Pradesh would allow the CDC and its partners to conduct their standard, independent GTSS survey every eighteen months and publish the results of that survey, as they do now. Fourth, reduced adult tobacco-use prevalence is a broad goal that avoids creating unintended consequences. The state government can achieve progress on tobacco control through a variety of measures, including higher excise taxes, better enforcement of existing taxes, advertising bans, smoke-free legislation, and other measures within the authority of the local government. Accordingly, the COD Aid pilot creates incentives for the government to adopt and enforce any mix of tobacco control policies so long as the measures are effective.

In this proposal, the funder would agree to pay \$1.5 million for every percentage point decline in adult tobacco-use prevalence up to a maximum budget of \$31.5 million over five years.

As discussed earlier, there are many possible ways to calculate the possible COD Aid payment. The proposed method would be to fix an amount that tobacco control donors would be willing to pay for a high-profile demonstration project in a populous province in a country with high tobacco-use prevalence. The objective of the COD payment is to pick the minimum amount necessary to inspire the recipient, in this case the Uttar Pradesh state government, to make progress toward an already agreed-upon priority. The reward need not reflect the costs of a tobacco control program since they can be minimal, especially if tobacco taxation is increased.

Thirty million dollars is a reasonable amount for donors to spend, relative to their current funding for international tobacco control, on demonstrable progress in a populous state with persistently high tobacco-use prevalence. Conversely, a \$1.5 million payment for every percentage point decline in tobacco use can represent a sufficient financial incentive in Uttar Pradesh, if the state matches the progress demonstrated in other emerging-country settings. Better performing developing countries have been able to achieve average declines in tobacco-use prevalence between 1.9 and 4.2 percent annually (see Appendix table). If Uttar Pradesh replicated a well-performing country such as Brazil, where tobacco-use prevalence has declined 4.2 percent on average each year since 2000, the total COD budget would come to approximately \$6.3 million annually ($4.2 \times \1.5 million/year) for five years. Again, recent studies have demonstrated that such declines are achievable in Uttar Pradesh through increased and better-enforced taxes on bidis, cigarettes, and leaf tobacco.⁸⁴

Though \$6.3 million annually is a small amount of money in the context of Uttar Pradesh's overall annual budget, the public budget of states in India are highly earmarked to salaries and benefits.⁸⁵ Therefore, even this small amount of COD Aid reward may provide sufficient incentive to improve performance, because the resources can be used flexibly. In addition, in a context where spending on health amounts to only six dollars per person, the resources represent a highly visible incentive in the health sector.⁸⁶

Conclusion

Tobacco use is on the rise in developing countries, driven by an industry looking to compensate for declining developed-country revenues and to exploit countries with still-nascent tax and regulatory systems. Tobacco control measures are well known and prescribed in the FCTC, but developing-country governments lack the incentives to implement and enforce the most effective measures in the face of fierce industry opposition and in the absence of local patient and media pressure. A COD Aid approach can help by providing monetary incentives for good tobacco control outcomes and increasing public accountability for their implementation via a well-publicized COD Aid contract. One way forward would be to develop a COD Aid tobacco control pilot and test its feasibility and desirability. Using the case model of Uttar Pradesh in India, a pilot should be conducted at the subnational level, where the modest and unrestricted COD Aid rewards would be most compelling, and in settings with high tobacco-use prevalence, where such incentives could make the greatest difference. It is a relatively low-cost initiative worth undertaking. Governments in developed countries have shown great courage and leadership in protecting their own citizens from the perils of tobacco. It is past time they support the world's poorest countries in their efforts to do the same.

Endnotes

1. Thomas J. Bollyky, "Developing Symptoms," *Foreign Affairs*, vol. 91, no. 3 (2012).
2. Thomas J. Bollyky, "Forging a New Trade Policy on Tobacco," Policy Innovation Memorandum No. 7 (Council on Foreign Relations Press, 2011).
3. Katharine M. Esson and Stephen R. Leeder, *The Millennium Development Goals and Tobacco Control* (Geneva: WHO, 2004), p. xi.
4. "Teaming up for tobacco control," *Lancet*, vol. 372, no. 9636, August 2008, p. 345.
5. Valentin Fuster and Bridget B. Kelly, eds., *Promoting Cardiovascular Health in the Developing World: A Critical Challenge to Achieve Global Health* (Washington, DC: The National Academies Press, 2010), p. 73; Omar Shafey et al., *The Tobacco Atlas, Third Edition* (Atlanta: American Cancer Society, 2009), p. 68; WHO, "WHO Calls for Protection of Women and Girls from Tobacco," press release, May 28, 2010, http://www.who.int/mediacentre/news/releases/2010/women_tobacco_20100528/en/index.html.
6. Eric A. Feldman and Ronald Bayer, "The Triumph and Tragedy of Tobacco Control: A Tale of Nine Nations," *Annual Review of Law and Social Science*, vol. 7, December 2011.
7. Fuster and Kelly, *Promoting Cardiovascular Health*, p. 73.
8. *Ibid.*, pp. 103–4.
9. WHO, *Report on the Global Tobacco Epidemic, 2011: Warning about the Dangers of Tobacco* (Geneva: WHO, 2011), p. 8; Thomas J. Bollyky, *Beyond Ratification: The Future of U.S. Engagement on International Tobacco Control* (Washington, DC: Center for Strategic and International Studies, 2010), p. 1.
10. WHO, *Report on the Global Tobacco Epidemic*, p. 8.
11. *Ibid.*
12. Lawrence O. Gostin, "Global Regulatory Strategies for Tobacco Control," *JAMA*, vol. 298, no. 17, November 2007, p. 2057.
13. World Economic Forum (WEF), *Global Risks 2009: A Global Risk Network Report*, (Cologny/Geneva: WEF, 2009), <https://members.weforum.org/pdf/globalrisk/2009.pdf>.
14. See Fuster and Kelly, *Promoting Cardiovascular Health*, pp. 320, 338–47, which summarizes the substantial literature that supports the cost-effectiveness of antitobacco regulatory interventions, such as taxation, smoke-free public places, restrictions on marketing, and youth cessation.
15. See U.S. Centers for Disease Control and Prevention (CDC), "Trends in Current Cigarette Smoking among High School Students and Adults, United States, 1965–2007," 2009, http://www.cdc.gov/tobacco/data_statistics/tables/trends/cig_smoking/index.htm.
16. Feldman and Bayer, "The Triumph and Tragedy of Tobacco Control."
17. Adam Spielman, *Tobacco: What If the Last Smoker Quits in 2050?* (New York: Citigroup Global Markets, 2011), p. 1.
18. WHO, *WHO Framework Convention on Tobacco Control (FCTC)* (Geneva: WHO, 2003), pp. 7–13.
19. *Ibid.*, pp. 13–16.
20. There are currently 174 parties to the FCTC, but one is the European Community, which is not a state. WHO, Parties to the WHO Framework Convention on Tobacco Control, http://www.who.int/fctc/signatories_parties/en/index.html.
21. The acronym stands for: Monitor tobacco use and policies; Protect people from secondhand smoke, Offer help to quit; Warn about the dangers of tobacco; Enforce bans on advertising, promotion, and tobacco company sponsorship; and Raise taxes on tobacco products. See WHO, *Report on the Global Tobacco Epidemic, 2008: The MPOWER Package* (Geneva: WHO, 2008), p. 23.
22. Campaign for Tobacco-Free Kids, "Brazil to Become World's Largest Smoke-Free Country," press release, December 15, 2011, http://www.tobaccofreekids.org/press_releases/post/2011_12_15_brazil.
23. WHO, *Report on the Global Tobacco Epidemic, 2009: Implementing Smoke-Free Environments* (Geneva: WHO, 2009), pp. 52, 54.
24. See *Ibid.*, pp. 61, E238–41, E258–261, E284–85; Molly Kinder, "Curbing Tobacco Use in Poland," in Ruth Levine, ed., *Millions Saved: Proven Successes in Global Health* (Washington, DC: Center for Global Development, 2004), pp. 113–20; Sonam Ugen, "Bhutan: the World's Most Advanced Tobacco Control Nation?" *Tobacco Control*, vol. 12, no. 4, December 2003, p. 431; Mia Malan and Rosemary Leaver, "Political Change in South Africa: New Tobacco Control and Public Health Policies," Joy de Beyer and Linda Waverly Brigden, eds., *Tobacco Control Policy: Strategies, Successes, and Setbacks* (Washington, DC: World Bank Publications, 2003), p. 121; Prakrit Vateesatokit, "Tailoring Tobacco Control Efforts to the Country: The Example of Thailand," de Beyer and Brigden, eds., *Tobacco Control Policy*, p. 154.
25. WHO, *WHO Report on the Global Tobacco Epidemic, 2011: Warning about the Dangers of Tobacco* (Geneva: WHO, 2011), p. 7.

26. Ibid, pp. 42, 52, 55–56, 60, 62, 66.
27. Dhirendra N. Sinha et al., “WHO Framework Convention on Tobacco Control and its Implementation in South-East Asia Region,” *Indian Journal of Public Health*, vol. 55, no. 3, 2011. Reporting that 75 percent of Sri Lankan youth and 98 percent of youth in Bangladesh are able to get cigarettes without refusal from stores.
28. Jiemin Ma et al., “Workplace Smoking Restrictions in China: Results from a Six Country Survey,” *Tobacco Control*, vol. 19, no. 5, October 2010; Xinhua, “Harbin to ban smoking in restaurants,” *Chinadaily.com.cn*, February 22, 2011, http://www.chinadaily.com.cn/china/2012-02/22/content_14671029.htm.
29. Ashleigh Cussen and Judith McCool, “Tobacco Promotion in the Pacific: The Current State of Tobacco Promotion Bans and Options for Accelerating Progress,” *Asia-Pacific Journal of Public Health*, vol. 23, no. 1, January 2011.
30. See, for example, Prakash C. Gupta et al., “Smokeless Tobacco: A Major Public Health Problem in the SEA Region: A Review,” *Indian Journal of Public Health*, vol. 55, no. 3, 2011.
31. Nyo Nyo Kyaing et al., “Social, Economic and Legal Dimensions of Tobacco and Its Control in South-East Asia Region,” *Indian Journal of Public Health*, vol. 55, no. 3, 2011; “Pictorial health warning law violation goes unchecked,” *News International*, February 5, 2012, <http://www.thenews.com.pk/TodaysPrintDetail.aspx?ID=91298&Cat=6&dt=2/5/2012>; Hassan Mir et al., “Cigarette Pack Labelling in 12 Countries at Different Levels of Economic Development,” *Journal of Public Health Policy*, vol. 32, no. 2, 2011.
32. Cynthia Callard, “Follow the Money: How the Billions of Dollars that Flow from Smokers in Poor Nations to Companies in Rich Nations Greatly Exceed Funding for Global Tobacco Control and What Might be Done About It,” *Tobacco Control*, vol. 19, no. 4, 2010, pp. 285, 288.
33. WHO, *Tobacco Report 2011*, p. 71.
34. Ibid.
35. Ibid.
36. Ibid, p. 73.
37. See, for example, Shafey et al., *Tobacco Atlas*, p. 68, citing that the tobacco industry spends \$13 billion per year on marketing in the United States alone; Kirill Danishevski, A. Gilmore, and Martin McKee, “Public Attitudes Towards Smoking and Tobacco Control Policy in Russia,” *Tobacco Control*, vol. 17, no. 4, 2008, p. 276, estimating transnational tobacco industry investments in Russia between its political transition in 1991 and 2000 at \$1.7 billion.
38. J. B. Bump et al., *Towards a Political Economy of Tobacco Control in Low- and Middle-income Countries* (Washington, DC: The International Bank for Reconstruction and Development/The World Bank, 2009), pp. 1, 17–19.
39. Ibid.
40. Duff Wilson, “Cigarette Giants in Global Fight on Tighter Rules,” *New York Times*, November 10, 2010, <http://www.nytimes.com/2010/11/14/business/global/14smoke.html>.
41. See, for example, Jeffrey Kluger, “Big Tobacco Sets Its Sights on Africa,” *Time*, July 24, 2009, <http://www.time.com/time/health/article/0,8599,1911796,00.html>.
42. “Tobacco company files claim against Uruguay over labeling laws,” International Centre for Trade and Sustainable Development, March 10, 2010, <http://ictsd.org/i/news/bridgesweekly/71988>.
43. WHO, *Tobacco Report 2011*, p. 72.
44. Feldman and Bayer, “The Triumph and Tragedy of Tobacco Control.”
45. See, for example, Wilson, “Cigarette Giants”; Bump et al., *Towards a Political Economy*, pp. 18–19; Sebastián Albuja and Richard A. Daynard, “The Framework Convention on Tobacco Control (FCTC) and the Adoption of Domestic Tobacco Control Policies: The Ecuadorian Experience,” *Tobacco Control*, vol. 18, no. 1, 2009, p. 18; K. Alechnowicz and Scott Chapman, “The Philippine Tobacco Industry: The Strongest Tobacco Lobby in Asia,” *Tobacco Control*, vol. 13, no. 2, 2004, p. 71.
46. Prabhat Jha et al., “Tobacco Addiction,” in Dean T. Jamison et al., eds., *Disease Control Priorities in Developing Countries*, 2nd ed. (Washington, DC: World Bank, 2006), p. 876.
47. Lawrence O. Gostin, “The ‘Tobacco Wars’—Global Litigation Strategies,” *JAMA*, vol. 298, no. 21, December 2007, p. 2537.
48. WHO, *FCTC*, pp. 5–7.
49. See Gostin, “Tobacco Wars,” p. 255, noting that the FCTC is vulnerable to the critique that its provisions are hortatory, nonobligatory, and soft rather than hard law.
50. See Rebecca L. Haffajee and M. Gregg Bloche, “The FCTC and the Psychology of Tobacco Control,” *Asian Journal of WTO & International Health Law and Policy*, vol. 5, no. 1, March 2010, pp. 87, 92–97, criticizing the command-and-control approach of the FCTC and its guidelines for failing to address the psychological and cultural reasons why people engage in risky behavior.
51. WHO, *Tobacco Report 2011*, pp. 50–57, 63–69.
52. Ibid, pp. 50–57. These health warning labels and media campaigns comply with WHO recommendations in only eleven and fourteen developing countries, respectively.
53. WHO, *Tobacco Report 2011*, pp. 66–69.
54. WHO, *MPOWER: A Policy Package to Reverse the Tobacco Epidemic* (Geneva: WHO, 2008), p. 27, http://www.who.int/tobacco/mpower/mpower_english.pdf; Frank J. Chaloupka et al., “The Taxation of Tobacco Products,” in Frank J. Chaloupka and Prabhat Jha, eds., *Tobacco Control in Developing Countries* (Oxford: Oxford University Press, 2000), pp. 2737–72.

-
55. WHO, *Tobacco Report 2011*, pp. 94, 98.
56. *Ibid.*, pp. 102, 104.
57. Evan Blecher and Corné van Walbeek, *An Analysis of Cigarette Affordability* (Paris: International Union Against Tuberculosis and Lung Disease [The Union], 2009), p. 1.
58. Thomas R. Frieden and Michael Bloomberg, "How to Prevent 100 Million Deaths from Tobacco," *Lancet*, vol. 369, no. 9574, May 2007, p. 1758.
59. See Nancy Birdsall et al., *Cash on Delivery: A New Approach to Foreign Aid*, (Washington, DC: Center for Global Development, 2010), p. 17.
60. *Ibid.*, pp. 17–20. In the health context, this approach has some similarities with the Global Alliance for Vaccines and Immunization (GAVI), which in the past has rewarded countries for each child immunized.
61. William Savedoff and Katie Douglas-Martel, "Cash On Delivery Aid for Health: What Indicators Would Work Best?" Center for Global Development Working Paper No. 275, December 2011.
62. See <http://www.gavialliance.org/funding/pneumococcal-amc/>.
63. CDC et al., *Global Adult Tobacco Survey: India 2009–2010* (New Delhi: Ministry of Health and Family Welfare, Government of India, 2010), p. xxxv.
64. *Ibid.*
65. *Ibid.*
66. *Ibid.*, p. xxxvi; CM Singh, Amit Kaushik, and PK Jain, "Tobacco Control in India—Lots Need to be Done," *Indian Journal of Community Health*, vol. 23, no. 2, December 2011, p. 51, reporting that nearly 20 percent of boys and 8 percent of girls aged thirteen to fifteen use tobacco.
67. Prashant Mathur and Bela Shah, "Evidence Building for Policy: Tobacco Surveillance Surveys/Research in India," *Indian Journal of Public Health*, vol. 55, no. 3, 2011, p. 177.
68. CDC et al., *Global Adult Tobacco*, p. 5.
69. Melissa H. Stigler et al., "A Meditation Analysis of a Tobacco Prevention Program for Adolescents in India: How did Project MYTRI Work?" *Health Education & Behavior*, vol. 38, no. 3, 2011, p. 231.
70. Rijo M. John et al., "Counting 15 million more poor in India, thanks to tobacco," *Tobacco Control*, vol. 20, 2011, p. 349.
71. Rijo M. John, "Price elasticity estimates for tobacco products in India," *Health Policy and Planning*, vol. 23, no. 3, 2008, pp. 200–9.
72. Gupta et al., "Smokeless Tobacco," pp. 199–209.
73. Rijo M. John et al., *The Economics of Tobacco and Tobacco Taxation in India* (Paris: International Union Against Tuberculosis and Lung Disease [The Union], 2010), p. 1, http://www.tobaccofreecenter.org/files/pdfs/en/India_tobacco_taxes_report_en.pdf.
74. Feldman and Bayer, "Triumph and Tragedy."
75. *Ibid.*
76. Mir et al., "Cigarette Pack Labelling," pp. 146–64.
77. R. Mehrotra, V. Mehrotra, T. Jandoo, "Tobacco Control Legislation in India: Past and Present," *Indian Journal of Cancer*, vol. 47, no. 5, 2010, p. 75.
78. Feldman and Bayer, "The Triumph and Tragedy of Tobacco Control."
79. Mina Kashiawabara et al., "Local Governments and Civil Society Lead Breakthrough for Tobacco Control: Lessons from Chandigarh and Chennai," *Indian Journal of Public Health*, vol. 55, no. 3, 2011, p. 234.
80. CDC et al., *Global Adult Tobacco*, p. 25.
81. *Ibid.*, pp. 34–39.
82. *Ibid.*, p. 45.
83. John, "Price elasticity estimates for tobacco products in India."
84. Authors' analysis based on John, "Price elasticity estimates for tobacco products in India."
85. http://articles.timesofindia.indiatimes.com/2011-02-08/india/28544244_1_water-supply-provision-budget.
86. http://www.macrosan.org/anl/oct06/pdf/Health_Expenditure.pdf.

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