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Alcohol Abuse in Urban Moshi, Tanzania

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Executive Summary

Alcohol abuse is a global public health problem. About 50 percent of all traumatic brain injuries in the intensive care unit at the Kilimanjaro Christian Medical Centre (KCMC) in Moshi, Tanzania, involve alcohol (Kaino 2011). Interviews with stakeholders in the area have suggested that alcohol abuse is a growing problem in Moshi.

Alcohol abuse is defined as the unhealthy or excessive consumption of alcoholic beverages (Government of Kenya 2010). Alcohol abuse afflicts all social groups, and alcohol abusers often hurt family members and friends, as well as themselves. Factors that contribute to alcohol abuse in Moshi include the abundance of home brewers, lifestyles that are dominated by social pressures, and traditional expectations such as the excessive consumption of alcohol at weddings, funerals, and other distinct occasions.

A number of factors hinder efforts to curb this rising problem: the power of the alcohol industry; inadequate capacity to monitor alcohol production, sales, and consumption; the lack of public awareness about the risks of alcohol abuse; and the widespread availability and accessibility of alcohol in Moshi. The situation is worsened by the abundance of bars in the area as well as the sustained popularity of producing and selling traditional brews, even though the practice is illegal.

The main stakeholders in developing and implementing policies to address the problem are the Tanzanian government, the Parliament, the Ministry of Health and Social Welfare, and the Ministry of Internal Affairs. Others include the alcohol industry, the World Health Organization, social support agencies, local bar owners, community members, and the drinking public.

Here we propose policy options that aim to reduce the availability and accessibility of alcohol through laws, fiscal policies, and public health education measures.

Your assignment is to use the information provided about the current alcohol abuse situation in Moshi and the relative interest and influence of the stakeholders to further evaluate the

policy options. Considering feasibility and effectiveness, choose which policies would be best implemented in this particular situation, or formulate your own, and support your decision.

Background

Epidemiology

Alcohol consumption is common in many cultures around the world and is frequently a part of social gatherings. Although alcohol may always have a place at social occasions, excessive drinking can have serious health consequences and is a rising concern in many countries around the world. In 2005, worldwide per capita consumption of alcohol was 6.13 liters of pure alcohol per person (age 15 years or older). This is an estimated increase of 23.5 percent from 2001 (WHO 2011b). Globally, alcohol consumption is also the leading risk factor for death among males aged 15–59 and the greatest risk factor for disease and disability in middle-income countries (WHO 2011a, b). While alcohol consumption is higher in developed countries, alcohol-related problems are increasingly significant in developing countries.

Alcohol Availability in Moshi Town, Tanzania

Tanzania is subdivided into regions, then divisions, districts, wards, and finally villages. Tanzania is currently 30 percent urbanized, but to be considered a middle-income country its population must be at least 40 percent urban. Urbanization is on the rise, though, and the government aims to reach the 40 percent mark by 2025 (United Republic of Tanzania 2000). However, examining the rate of alcohol abuse in the country, one might think that the country has already reached middle-income status.

Moshi is in the Kilimanjaro region of Tanzania, close to the Kenyan border. Proximity to Mount Kilimanjaro has generated tourism that is of great importance to Moshi's economy. An abundance of hotels and bars serve a wide variety of alcoholic beverages and local brews. Sales of beer in Moshi have noticeably increased in the past five years. Tanzania produced 2.1 million

hectoliters of beer in 2003 and also imports a lot of beer from neighboring Kenyan beer companies (PKF Consulting 2005). In the 2010/2011 financial year, Tanzania Breweries Limited recorded a 17 percent growth in revenue, from TZS 251 billion to TZS 293 billion (Bloomberg Businessweek 2010). A bar manager in Moshi mentioned that he “used to sell 15 crates a week, but now it’s 40 crates of beer a week” (bar manager, personal interview, 28 June 2011).

The area’s tourism industry is only one reason contributing to Moshi’s disproportionately high rate of alcohol abuse. Alcohol consumption is very much a part of tradition for many Moshi dwellers. The largest share of the Moshi population identify themselves as Chagga or descendents of Chagga—a traditionally agricultural people of the Kilimanjaro region. For generations, the Chagga have brewed *mbege*, a fermented banana beverage that is sold widely and has been instrumental in the local economy. Brewing activities are widespread in Moshi, despite the fact that home production of traditional alcoholic beverages is currently illegal in Tanzania (International Center for Alcohol Policies 2011). According to our interviews, alcohol abuse and its related consequences are starting to become noticeable and concerning to certain community members. Depending on who was asked, alcohol was either a problem of youth, middle-aged men, or teachers, or not a problem at all. Overall, however, the consensus was that alcohol abuse in Moshi is on the increase.

Current Alcohol Sales in Tanzania

The World Health Organization categorizes traditional alcoholic beverages as “unrecorded” alcohol, largely because the alcohol is produced, distributed, and sold outside formal channels. In other words, unrecorded alcohol includes any alcoholic beverages that are not taxed and are outside the normal venues of governmental regulation (WHO 2011b). Since it is illegal to brew or sell traditional beverages in Tanzania, much of this activity is carried out underground, making it even more difficult to track how much of these unregulated alcohols is being consumed by the public.

Factors Contributing to Increasing Alcohol Abuse

Traditional alcohol is both cheap (for example, TZS 400 or US\$0.27 per liter) and high in alcohol, making it attractive to consumers (Bovet 2001). According to citizens, one of the most significant factors contributing to increasing alcohol abuse in Moshi is the affordability of local brews. Stress, peer pressure from fellow students, and parents who set a bad example for their children are also feeding the rise in alcohol consumption.

Demographic and Economic Factors

Traditional alcoholic beverages—rather than “recorded alcohol” such as beer, wine, or spirits—account for almost 90 percent of the alcohol consumed in Tanzania (WHO 2004). Because unrecorded alcohol cannot be taxed, the at-home brewing of traditional beverages using cheap, locally grown inputs is cost-effective for community members trying to make extra money. In the Moshi region, the two main types of traditional alcohol are *mbege* and *gongo*, a potent alcohol banned by the government because its alcohol content and purity level are unknown (Nikander 1991). Although they are illegal, both are widely available (KCMC medical student, personal interview, 28 June 2011). Both traditional and commercialized forms of alcohol are consumed with no formal restrictions at nearly all ceremonies and celebrations. In the eyes of the youth and adults, alcohol consumption is a symbol of status and prestige, and it has become synonymous with good times, relaxation, and positive experiences (Jernigan 2001).

According to the *Global Status Report: Alcohol and Young People*, men in Africa are more likely to drink than women, and alcohol use increases with age (Jernigan 2001). In an interview at Mkombozi, an orphanage for street children in the district, an employee reported that middle-aged men in rural villages drink because they have nothing to do at home. Almost all domestic work, including farming, is done by women (Program Coordinator at an orphanage, personal interview, 29 June 2011).

Stress

In many African countries, alcohol is used as a coping mechanism to relieve stress and unwind. It is often the only entertainment available because alternative social activities such as sports equipment and facilities are inaccessible or non-existent (Jernigan 2001). In Moshi, brightly lit bars on almost every corner (when electricity is available) look like the most inviting, convenient way to escape from the pressures of everyday life (KCMC medical student, personal interview, 28 June 2011).

The Ministry of Health and Social Welfare conducted a survey among secondary school students in the Dar es Salaam region, about an eight-hour drive from Moshi, and found that 5 percent used alcohol, 10.8 percent had taken a drink before age 14, and 26.2 percent had a parent who abused alcohol (Nyandindi 2008). Students make up a large portion of Moshi's population. In addition to a college and specialty schools, multiple primary and secondary schools are scattered throughout the district. This transitional life stage makes youth especially susceptible to the harmful short-term and long-term effects of alcohol.

Other Factors: Peer Pressure and Role Models

Studies suggest that a culture of sporadic heavy or "binge" drinking among young people may be spreading from developed to developing countries (Jernigan 2001). In Sub-Saharan Africa, interviews with young drinkers found that they think drinking is vital to having a good time and that the aim of drinking is to get drunk (Strijdom 1992; Meursing and Morojele 1989). A form four student claimed that most students start drinking because of peer pressure (personal interview, 28 June 2011). Young people increasingly feel the need to drink to fit in with their peers and consider alcohol the "liquid courage" that will make social interactions less awkward. Youth-targeted marketing and lack of oppositional campaigns contribute to the fact that the global burden of

disease from alcohol surpasses that of tobacco (Mbatia et al. 2009).

Youth in Moshi are also exposed to excessive drinking by parents, who often drink as a way to relieve stress and fatigue (Secondary school student, personal interview, 28 June 2011). Such consumption often results in tense family situations or abuse. Family strains may put young people at greater risk of developing antisocial behaviors, emotional problems, and problems in school (Velleman 1993). Alcohol abuse at home is a factor in the rise of the number of street children in Moshi (Program Coordinator at an orphanage, personal interview, 29 June 2011).

School is not necessarily a haven for children or teens seeking to escape the consequences of parental alcohol abuse. The head of a secondary school in Moshi claimed that "a lot of teachers, not only students, use alcohol excessively" (personal interview, 28 June 2011). A teacher concurred, saying that teachers have shown up late for work, hung over and smelling of alcohol (Secondary school teacher, personal interview, 28 June 2011). Such exposure to excessive alcohol consumption and negative consequences of alcohol abuse can be physically and emotionally taxing on youth.

Effects of Alcohol Abuse

The effects of alcohol abuse have been extensively documented. Table 1 shows how the effects of alcohol consumption in Moshi, based on our interviews with key individuals, correlate with effects recorded in the literature.

Alcohol consumption has a more pronounced effect on disability-adjusted life years (DALYs) than on mortality for two reasons. First, alcohol attributable deaths occur relatively early in life (youth are affected), resulting in many years lost due to premature mortality. Second, alcohol use disorders are often very disabling (WHO 2011b). Thus, the increase in excessive alcohol consumption in Moshi, Tanzania, is a problem that needs to be remedied.

Table 1: Effects of alcohol consumption

Source	Variable	Effects	Observations in Moshi
Jernigan 2001	Social	Marital break-down, family instability	60% of family instability is due to alcohol and violence (social welfare officer, personal interview, 28 June 2011).
Scholten 2010	Psychological	Depression, altered mindset, abuse	Domestic abuse is a result of a family member's drinking problem (KCMC resident personal interview, 27 June 2011).
Jernigan 2001	Physical	Accidents, injury, disease, violence	50% of traumatic brain injuries in the KCMC-ICU involve alcohol (Kaino 2011).
WHO 2011b	Economic	Medical cost, decreased productivity	Alcohol abuse adversely affects the productive functioning of both intimate and professional relationships (KCMC medical student, personal interview, 28 June 2011). Excessive consumption can also lead to a loss of capacity to perform a job function.

Policy Issues

Lack of Monitoring of Legal Age for Access to Alcoholic Beverages

In Moshi, alcoholic beverages are very accessible, in part because the government does a poor job of monitoring and enforcing the laws that are in place. Although the legal drinking age in Tanzania is eighteen years, little is done to prevent underage people from buying or consuming recorded alcohol. There is no enforcement of the national legal minimum age for on-premise sale of alcoholic beverages (serving) or for off-premise sale of alcohol beverages (selling) (WHO 2011a). Anyone can go to a bar or restaurant, sit down, and order a drink without being asked for identification (secondary school student, personal interview, 28 June 2011). Restaurant and bar owners have no incentive to check young people's identification because they are eager to have the business.

Power of the Alcohol Industry

One major obstacle to effective action against the rising rates of alcohol consumption is the beverage industry's predatory marketing strategy. According to the WHO's *Global Status Report on Alcohol*, dissemination of information about the harmful effects of excessive alcohol consumption and strict enforcement of

laws have led to a decrease in consumption in industrial countries such as Great Britain and the United States (Jernigan 2001). As the wealthy industrial-country market has shrunk, beverage companies have begun to target developing countries, and specifically young drinkers (Jernigan 2001). The alcohol industry employs numerous techniques to attract younger people, and the lack of restrictive laws works in their favor. Overall, it attempts to associate the product with certain desirable values, not presenting alcohol as a commodity, but marrying it to certain concepts, experiences, and lifestyles (Klein 1999).

The alcohol industry holds power over not only consumers, but also governments because of its ability to generate income. Brewing companies like Tanzania Breweries Limited fund projects such as clean water campaigns that induce goodwill from both the government and the public. According to the SABMiller Annual Report on Tanzania Breweries, "Growing with Tanzania," sales and earnings have steadily increased since 2002. The largest jump, a 25 percent increase, occurred in 2001. In 2011 total payments to the government were TZS 235 billion—roughly US\$157 million (SABMiller 2011).

Lack of Monitoring of Alcohol-related Incidents

No proper records are kept of how many traffic accidents are alcohol related (traffic officer, personal interview, 27 June 2011). According to a resident at KCMC, a lack of equipment, such as blood alcohol analyzers, makes it difficult for medical staff and police officers to measure how much alcohol a person has consumed (resident at KCMC, personal interview, 27 June, 2011). This lack of proper analytical equipment makes it difficult to cite alcohol as a cause of accidents. Medical staff and police officers must depend on family members and friends to give them accurate records of a patient's alcohol history. Furthermore, because there is a shortage of doctors in hospitals, many traffic accident victims must wait for extended periods of time before being examined. Blood alcohol levels can therefore subside before a patient is seen.

Low Awareness of Risks

Educational programs and campaigns to inform the public about the risks of excessive alcohol consumption are lacking. This is especially a problem among youth, who can misinform each other in peer discussions. An administrator at a secondary school eagerly expressed interest in informational seminars not only for students, but also for teachers, who reportedly show up hung over or smelling like alcohol on occasion (personal interview, 28 June 2011). The administrator explained that in past years, alcohol consumption had been a greater problem among female students, but that there had been no cases so far that year. The improvement can be attributed to stricter rules (Secondary school teacher personal interview, 28 June 2011).

There is no law requiring alcohol companies to put warnings on containers about the negative effects of excessive alcohol consumption. In Africa, 80 percent of alcohol advertisements and 87 percent of alcohol containers have no warnings about the risks associated with alcohol consumption (WHO 2011b). In Tanzania, warnings on alcohol containers are nearly concealed on the rare occasions when they are present at all (SABMiller 2011). Because the alcohol industry is a major source of revenue for the government, there is little incentive for the government to spend money on health education

campaigns warning people about the detrimental effects of alcohol (resident at KCMC, personal interview, 27 June 2011).

Stakeholders

Many stakeholders are involved in the rising problem of alcohol abuse in Moshi, Tanzania. These stakeholders, listed below, are separated into two categories: more influential and less influential. Influence is defined as the amount of power a certain stakeholder has over making and implementing a policy that would address the problem of excessive alcohol consumption. The stakeholders are also ranked by their importance, which is defined as how important the issue of alcohol abuse is to them.

More Influential Stakeholders

The Parliament. The Parliament of Tanzania has the power to create and pass laws, but it may not have an interest in establishing a policy targeted at reducing the increasing rates of alcohol consumption. Many government officials do not consider alcohol consumption in Moshi to be excessive (Program coordinator at an orphanage, personal interview, 29 June 2011). In addition, the government is more interested in addressing other problems in Moshi, such as preventing malaria and reducing the number of street children, than in addressing excessive alcohol consumption, which is less pressing and of less concern to the public. It is also important to note that the brewing industries generate a lot of revenue for the government, which seeks to keep these industries happy and not restrict their business.

Ministry of Health and Social Services (health-care professionals). Unlike the Parliament, the Ministry of Health and Social Services (MHSS) is extremely interested in addressing the swelling problem of high alcohol consumption. Indeed, the MHSS is actively involved in recommending and implementing policies aimed at improving the health of the population. Unfortunately, the ministry is burdened with other major health issues, such as reduction of infectious diseases (for example, malaria, HIV/AIDS, and tuberculosis). Given that most of its resources are directed toward these current epidemics,

excessive alcohol consumption is a secondary priority of the already overstretched MHSS.

Ministry of Home Affairs (police). The Ministry of Home Affairs (MOHA) is very interested as well as very influential in promoting and enforcing actions against excessive alcohol consumption. One aim of the MOHA is to prevent road accidents and other violent and nonviolent crimes. Community members acknowledge that the police force and traffic officers directly monitor and enforce laws across the country (KCMC medical student, personal interview, 28 June 2011). According to the MOHA web page, the force should institute and review legislation related to public safety, in addition to supervising all matters affiliated with security and/or safety in Tanzania (Ministry of Home Affairs, Tanzania 2008).

Alcohol industry. The alcohol industry has little interest in reduced alcohol intake, which would reduce sales and in turn profits. Because of its high revenue generation, the industry has some power over the government and can influence actions taken to reduce alcohol intake. In addition, its marketing campaigns reach a large portion of the population (resident at KCMC, personal interview, 27 June 2011). The brewing companies are powerful, generating demand and supplying the product so that almost 2.2 million bottles of beer are consumed daily in Tanzania (Sebastian et al. 2010).

World Health Organization. The World Health Organization (WHO) has an interest in reducing the intake of and controlling the sale of alcohol, given that alcohol consumption is currently the third-highest risk factor for disease and disability worldwide. The WHO, however, can only make recommendations; it cannot force legislation. Fortunately, many countries aim to follow WHO recommendations because it helps them to secure funding for strategic projects.

Less Influential Stakeholders

Bar owners. Like alcohol companies, bar owners want to maintain high sales to keep their businesses running profitably. In addition, they receive sales incentives from alcohol companies,

such as two free beer crates every three months to sell their products (bar manager, personal interview, 28 June 2011). By reducing sales, laws restricting alcohol purchases could result in the closing of bars and the loss of jobs. Unlike the alcohol industry, though, bar owners have little influence on any actions the government might take to reduce alcohol abuse.

Young drinkers. Young drinkers have little interest in changing policy because alcohol is a part of their current lifestyle. The general consensus of teachers and students interviewed in Moshi was that youth between the ages of 12 and 20 experience few if any restrictions on alcohol and use it as a way of relieving stress from emotions, peer pressure, and academic situations. In extreme cases, street children use alcohol to numb their feelings of hunger and to keep warm at night. It takes time and effort to convince them they can leave behind the life and coping mechanisms they know and move on to better things (Program coordinator at an orphanage, personal interview, 29 June 2011). Young drinkers have even less influence on policies than the adults of the community; it is unlikely that their opinions are heard or taken seriously.

Social support agencies. Social support agencies, such as orphanages, in Moshi have a strong interest in addressing the rising excessive alcohol consumption. As mentioned, alcohol is both a cause and a consequence of the proliferation of orphans and street children. Children may lose parents in alcohol-related accidents or may choose to leave home after falling victim to alcohol-related abuse. Once on the street, children sometimes use alcohol to desensitize themselves to hunger or cold weather (Program coordinator at an orphanage, personal interview, 29 June 2011). The social support agencies do not have the capacity to assist or care for the large volume of children. In addition, these agencies have little influence. The government does not involve social support agencies in the policy making process, and a lack of funding restricts the actions they can take on their own.

Box 1: An Alcoholic's Perspective

Today I sat down at the bar with a friend of mine and reminded him of the importance of his children. Two years ago, a woman did the same to me. Of course, we were not at a bar, but rather in my home at around 9 am. I was already three Serengetis [beers] into my day. This visit turned out to be the first of a long series of visits. They say the Chagga are businessmen. Well, my business was drinking.

When the woman asked about my land, I said, "Ah, *shambas* are for mama." When she asked how many goats and cows I owned, I could not tell her. My wife tended to the house, the field, and the animals. When I was home, I had nothing to occupy my time. I had retired from my job as a primary schoolteacher after providing my family with a nice house, solar power, and a yard with banana trees. What more needed to be done? According to this woman, a lot.

She worked for Mkombozi, a transitional housing center for street children. She sought me out that day two years ago because she found my boy in town, on the streets. She told me that when asked why he was on the street, he described how his schoolteachers would harass him for the 20,000 TZS school fee that I hadn't paid. He didn't want to deal with the persecution anymore and thought life would be easier on the street. At home, Mama always took care of everything. I would just go to the store with my money and buy alcohol. I would drink from morning until evening, then go to sleep. Sometimes, just before dawn, the tremors and dehydration would shake me from sleep. Only another bottle would sooth me back to a peaceful slumber.

It never occurred to me that I should put aside money for my son's schooling before going to spend it on alcohol. Money was never an issue. We had fruits, vegetables, and livestock that we could have easily sold for extra money. My pensions got us by day to day though, and we lived comfortably. There is enough money for my family to get sufficient medical care. Just last week I visited the clinic. After consulting the test results, the doctor told me that my liver was no longer fully functional. He recommended that I cut down on the drinking. How would that help? My grandfather is still alive and well, and I drink just as he always has. Plus, the alcohol dulls the pain in my side. It's the cure, not the problem.

Alcohol has been present in my life since I was three years old. My grandfather would give me *mbege*, a traditional drink brewed from bananas, to help me sleep and to make me grow up to be a strong man. The brewing and selling of *mbege* was the livelihood of my ancestors, like it was and is for many in the Chagga community. Growing up with my father meant drinking all of the time. He believed it helped build and maintain a strong man. "A lot" is relative. For me, drinking like I do is normal. So here comes this woman, telling me that my drinking is affecting my child negatively. I was never hurt because of my father's drinking. None of it made sense. She then told me that she had visited my neighborhood previously to speak with community leaders, neighbors, and friends. It was these people who told her of my quarrels with other villagers and how many people did not like to be around me. I had ruined many relationships due to drunken actions.

Mkombozi proceeded with an intervention program with my family in order to keep my son off of the streets. They taught me how my behavior could drive my son to the streets and the types of things he could end up doing if he were to live there. I had not thought about it much before. She also taught me to prioritize. She showed me that it was my responsibility to provide for my family. My wife swore that my relative had bewitched me to drink so much all the time. I think she only said that because the lady from Mkombozi made her think my drinking was bad. It's part of my life, though. It is my tradition. It might not be hers, but that doesn't mean it's wrong. I refused to stop drinking.

I am thankful someone had been there to help show me the truth. I realized then that I didn't need to stop drinking; I just needed to get my priorities straight. It occurred to me that I had to make sure there was enough food for my family and that I paid my child's school fees.

Today I sit with my friend. I describe to him how our children are our future and that it is important to make sure their needs are met before carrying on with our own activities. I have not stopped drinking, as I believe it is a normal part of my lifestyle, but I have been shown the importance of family and the future generations. With the pain in my side increasing, though, I hope I will be around for my son's graduation

Community members (parents and teachers)

Parents and teachers in Moshi are very interested in addressing rising alcohol consumption. This interest is both positive and negative. Some parents and teachers drink heavily, and restrictions on alcohol could disrupt their lifestyles. Interviews with teachers and community members indicated that excessive alcohol consumption has been and continues to be a problem among primary and secondary school teachers (Secondary school administrator, personal interview, 29 June 2011). Middle-aged men are often seen at bars at the end of the day. Some parents make and sell alcohol (local brew and industrial) as a source of income. These adult drinkers and marketers have an interest in keeping the status quo in alcohol-related issues. On the other hand, many parents and teachers also support restrictive legislation because they are responsible for the health and well-being of their children. In some cases, adult victims of alcohol-related domestic abuse are interested in restricting alcohol availability so that their children can grow up in a more stable environment. Regardless of whether their interest is positive or negative, parents and teachers have little influence because they are not involved in policy making and can do little to change the decisions of parliament.

Policy Options

Alcohol abuse is a complex issue, and so there are many recommendations that could be implemented to effectively address the problem. In previous campaigns, community-level interventions, changes in policies on drinking and driving, restrictions on access and sales of alcohol to young people, and control over where and when alcohol is available have shown promising results (Holder et al. 2000). Each policy option proposed here is assessed based on feasibility, effectiveness, and consequences, among other things. Box 2 contains a few details from the relevant policies implemented in Kenya's 2010 Alcoholic Drinks Control Act, which addresses the increasing problem of excessive alcohol consumption in that country.

Legislative Recommendations

Permits for at-home brewers. It is impossible to know exactly how much unrecorded alcohol is consumed or sold in the area. Requiring permits for the making and selling of these beverages not only would allow the government to keep tabs on the movement of the alcohol, but could also help generate revenue for spending on other campaigns. In 2010 Kenya enacted a law legalizing the traditional brew, *busaa*. The Alcohol Act allowed women who depend on selling these brews for income to become legitimate businesswomen, selling their products the way a brewery would (Majiwa 2010). Thus, legalizing the production of at-home brews could be an effective policy. Though a similar law could legitimize and recognize the major role traditional beverages play in Moshi, a permit system would take time to implement and have effects only in the medium or long term.

Laws restricting the sale of alcohol. Laws regulating where and when alcohol may be purchased could also be effective. Such laws would have an almost immediate impact by diminishing the availability of alcoholic beverages, reducing the amount of time that the public is exposed to the potential harm of intoxicated persons. In the Brazilian city of Diadema, a licensing law introduced in 2002 prohibited on-premise alcohol sales after 11:00 p.m. After the law was implemented, homicides and assaults dropped significantly, according to local police records (Anderson, Chisholm, and Fuhr 2009).

Without proper manpower, such laws would be difficult and costly to enforce. The government's revenue could drop if the alcohol industry and bar owners lose sales. As a residual effect, the burden on law enforcement could be increased as people try to circumvent the laws—or corrupt police officers could accept bribes and prevent the laws from taking full effect. To address the issue of police corruption, incentives must be given to police officers. A point system could be used to evaluate whether police officers are filling their quotas each month. If an officer fills his or her quota for the month, he or she would receive a bonus.

Box 2: An Overview of the 2010 Alcoholic Drinks Control Act, Kenya

Part II: Administration

1. Responsible for maintaining data on alcoholic drinks, consumption, and deaths as well as carrying out research, documentation and dissemination of information on alcoholic drinks.

Part III: Licensing

1. Liquor Licensing Act: District Alcoholic Drinks Regulation Committee to issue licenses, inspect licensed premises, etc.

Part IV: General Requirements for Alcoholic Drinks

1. The prohibition selling of alcoholic drinks to persons under the age of 18 years. Failure to adhere leads to fine of Kshs. 150,000 or 12 months imprisonment or both.

Part V: Sale and Consumption of Alcoholic Drinks

1. Drunkenness and being disorderly in public is outlawed and attracts a fine of Kshs. 500.
2. Selling to an already intoxicated person or encouraging the person to consume alcoholic drinks is an offense.

Part VII: Enforcement

1. Powers of authorized officers shall include inspection for compliance, analysis and testing of alcoholic drinks, entry into premises and seizure of alcoholic drinks.

Part VIII: Education and Information

1. Promote public awareness and education on health consequences of excessive alcoholic drink consumption.

Source: Government of Kenya 2010.

Stricter drinking and driving laws. The legal age to consume or purchase alcohol in Tanzania is 18 years. In addition, it is illegal to drink and drive at any age with a blood alcohol level of 0.08 or higher (WHO 2011b). Because driver's licenses are granted to persons 18 years and older, the two laws are complementary. The laws, however, need to be better enforced. Proper enforcement would lead people to start to drink at a later age. This outcome would reduce their chances of alcohol dependence later in life and protect the public from the risks posed by inexperienced drinkers. Enforcing these laws more stringently would reduce the number of traffic accidents and allow the people who cause accidents to be held accountable. The driver's licenses of those involved in crashes due to intoxication could be suspended. In a review on alcohol and public health, it was reported that a policy that includes sobriety checkpoints with random breath testing was effective in reducing alcohol-related casualties (Anderson, Chisholm, and Fuhr 2009). Better enforcement of these laws would require manpower and training. Blood alcohol analyzers, plus the training to use them correctly, would cost both time and money.

Fines for alcohol-related misconduct. The government could choose to fine people for alcohol-related misconduct. This law could have a nearly immediate effect as people learn they cannot get drunk to the point where they lose self-control and become disruptive. Failure to pay the fines would result in jail time. The government could profit from the fines and put the money toward funding campaigns against alcohol, among other things. A downside would be the increased burden on jail personnel and police who must deal with the abusers and those who cannot afford to pay the fine. This policy may also lead to corruption among police officers, who might choose to accept a bribe instead of jailing a person who cannot afford a large fine. Nevertheless, this policy was part Kenya's Alcohol Drink Control Act and proved to be effective, giving authorized officers the power to inspect, analyze, and test alcohol drinks, and keep overall order (Government of Kenya 2010).

Tax Policies

Increases in taxes on alcohol in some developed countries have been shown to be effective in reducing harmful consequences of drinking such

as traffic casualties, cirrhosis deaths, and violence [Cook 1981; Cook and Moore 1993]. Tanzania currently has a fixed 20 percent value-added tax on all local goods [Tanzania Revenue Authority 2011]. By increasing taxes on alcoholic beverages, the government could generate revenue to fund other campaigns, such as public awareness campaigns that warn individuals about the risks of alcohol consumption. The high tax would also create an economic deterrent, making the purchase of expensive alcoholic drinks less feasible or desirable to working poor and middle-class citizens.

Increased Public Awareness

Health promotion in the public media. In many countries, increased public awareness has proven to be an effective way to reduce per capita alcohol consumption and alcohol-related harm. In Kenya's campaign against alcohol, a fund called the Alcoholic Drinks Control Fund was established (with money from purchasing permits, fees, grants, donations) to support research and dissemination of information about the negative effects of excessive alcohol consumption [Government of Kenya 2010]. These campaigns proved to be highly effective. A similar campaign could be implemented in Moshi, focusing on Moshi's strong drinking culture and emphasizing the importance of drinking in moderation. In addition, the government should require warnings at the end of alcohol commercials about the negative effects of alcohol consumption. Information about rehabilitation programs could be included as well. Such a campaign would be effective because it would target all high-risk groups of drinkers—both the youth and the middle-aged—while simultaneously decreasing the power of the alcohol industry. Still, the campaign would be expensive, and it would take some time to gather funding and come up with effective slogans and advertisements.

Health education measures in schools. To address the problem of alcohol consumption in young people, there must be increased education in schools for both teachers and students.

An administrator at a secondary school stressed the need for seminars and educational pamphlets about the consequences of alcohol consumption to be given to both teachers and students

[Administrator at a secondary school, personal interview, 28 June 2011]. Kenya's effective Alcoholic Drinks Control Act called upon the government to integrate alcohol education into school curricula [Government of Kenya 2010]. Giving the knowledge to students early on could help eliminate initiation at a young age. Creating an effective curriculum would cost money, and the policy would require long-term implementation, but it could be very successful. To monitor its effectiveness, schools should implement sobriety checks for teachers and institute punishment for teachers who fail the test.

It is important to note that this policy would affect only young people who are in school. It would not affect children living on the streets, who are often more likely to abuse alcohol at a young age. In addition, while education provides knowledge to students, the decision about whether or not to drink at an early age remains theirs.

Table 2 provides an assessment of the policy options described here. Each policy is ranked based on a six-point scale in four different criteria. A score of 6 indicates that a policy option meets that criterion very well, and 1 means the option does not meet this criterion well. The criteria are promotion of equity, minimization of cost, minimization of time, and overall effectiveness. Because effectiveness is considered the most important, it is weighted double. Promotion of equity, on the other hand, is considered less critical, given that targeting various groups will naturally create some inequity, so this value was halved.

Assignment

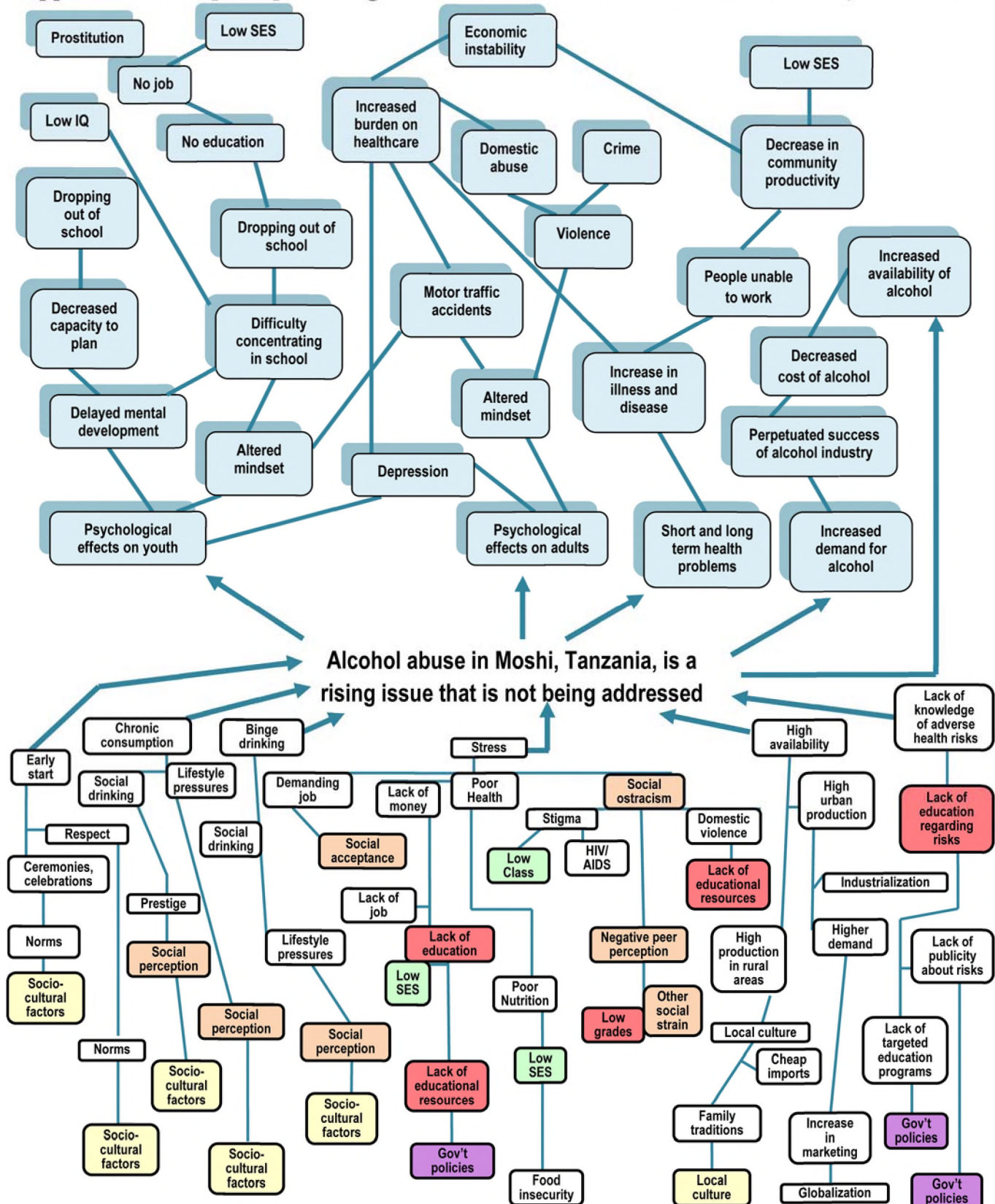
Your assignment is to use the information provided about the current alcohol abuse situation in Moshi and the relative interest and influence of the stakeholders to further evaluate the policy options. Considering feasibility and effectiveness, choose which policies would be best implemented in this particular situation, or formulate your own, and support your decision.

Table 2: Assessment of policy options according to four criteria

Policy alternative	Criteria				
	Promotion of equity (x0.5)	Minimize Cost	Minimize Time	Effectiveness (based on target) (x2)	Total
Increasing tax on alcoholic beverages/ decreasing on non-alcoholic beverages	2	5	5	6	23.0
Permits for at-home brews and sales	5	3	1	5	16.5
Increased education for teachers/ students	3	4	2	4	15.5
Stricter underage consumption and drinking and driving laws (BAC analyzers)	6	2	3	6	20.0
Heightened awareness/ advertisement campaigns (dangers)	6	1	3	5	17.0
Fines for alcohol-induced misconduct	3	4	5	5	20.5
Laws restricting sales of alcohol (location/ time of day/ amount)	4	5	5	5	22.0
Laws restricting sales of alcohol (location/ time of day/ amount)	4	5	5	5	22.0

Note: The options are rated on a scale of 1 to 6. The higher the number, the more successfully the policy fulfills the indicated criteria. BAC stands for blood alcohol concentration.

Appendix: Concept map showing causes and effects of alcohol abuse in Moshi, Tanzania



Note: Colors are meant to show the frequency of certain underlying causes as well as highlight their distribution in the causal map.

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Additional Readings

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List of Interviews

Interviews were conducted by the four authors all over Moshi Town. The majority of interviews were conducted in Swahili and then translated, but whenever possible they were conducted in English.

- Interview #1. Bar manager. Interviewed at bar, Moshi, by Felix Luginga. Notes taken by Benjamin Shayo. 28 June 2011.
- Interview #2. Program coordinator of an orphanage. Interviewed by Vicky Castens. Notes taken by Christine Tolias. 29 June 2011.
- Interview #3. Administrator, secondary school, Moshi. Interviewed by Felix Luginga. Notes taken by Benjamin Shayo. 29 June 2011.
- Interview #4. KCMC medical student A. Interviewed in KCMC classroom, Moshi, by Vicky Castens. Notes taken by Christine Tolias. 28 June 2011.

- Interview #5. KCMC medical student B. Interviewed in KCMC classroom, Moshi, by Christine Tolias. Notes taken by Victoria Castens. 30 June 2011.
- Interview #6. Primary school teacher A. Interviewed at home, Moshi, by Christine Tolias. Notes taken by Christine Tolias. 25 June 2011.
- Interview #7. Form IV secondary school student A. Moshi. Interviewed by Felix Luginga. Notes taken by Benjamin Shayo. 28 June 2011.
- Interview #8. Form IV secondary school student B. Moshi. Interviewed by Benjamin Shayo. Notes taken by Felix Luginga. 28 June 2011.
- Interview #9. Secondary school teacher, Moshi. Interviewed by Felix Luginga. Notes taken by Benjamin Shayo. 28 June 2011.
- Interview #10. Regional social welfare officer. Interviewed by Benjamin Shayo and Vicky Castens. Notes taken by Felix Luginga and Christine Tolias. 28 June 2011.
- Interview #11. Medical school resident. KCMC, Moshi. Interviewed by Felix Luginga. Notes taken by Benjamin Shayo. 27 June 2011.
- Interview #12. Regional traffic officer. Interviewed by Felix Luginga, Benjamin Shayo, Christine Tolias, and Vicky Castens. Notes taken by Benjamin Shayo. 27 June 2011.

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