



Research Article

SOCIAL DETERMINERS OF PUBLIC HEALTH IN SWEDEN AND INTERNATIONAL HEALTH POLICY ACTION

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ABSTRACT

This research project compares the different types of Regional and Social Determiners (RSD) as well as the state of public health in Sweden, Denmark, and Norway. Levels of wealth and poverty, access of food and shelter, educational attainment as well as availability of schools, access to public health services including housing and sewage disposal will be fully analyzed. Final emphasis on health promotion and education amongst migrant and native populations in Sweden will be thoroughly elaborated on.

Keywords:

Environment, Social Determiners of health (SDH), Education, Health Care, Policy, Legislation, Collaboration, HIV/AIDS.

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INTRODUCTION

Social Determiners of Health (SDH) may be argued to be the same in all regions of the world. However, the way people in different types of population relate to their environment directly affects other SDH such as lifestyle and type medical care available. Dr. Blum (2016) described the environment as the most important SDH and greatly is affected by sub-factors that include socioeconomic, political, cultural and physical factors such as water and air pollution. Any imbalance in the factors previously described results in vehicles or avenues for diseases transmission and environmental degradation. For example, a migration crisis currently is a vehicle for transportation of persons possibly carriers of infectious microorganisms such viruses, bacteria, fungi, protozoa and so forth. The HIV virus is a good example of a disease-affecting people globally. The World Health Organization (2012) European regional report on HIV and Viral Hepatitis states that migrants constitute 35% of new HIV cases in the European Union (EU) with a distribution of below 10% of HIV cases residing in eastern and central European countries, where as 40% of HIV infected persons residing in northern European countries and 20 -40% in western European counties. Migration of persons from developing countries with destabilized or poor both political and health infrastructures

facilitates more HIV/AIDS transmission in populations of developed countries in Europe such as Sweden, Germany, Denmark, Norway, and France. It is therefore essential to create health promotion and education policies against HIV/AIDS amongst migrant population with a global goal of preventing the spread of HIV/AIDS. The beginning step of the process of policy implementation against communicable diseases such as HIV/AIDS, tuberculosis, and measles includes humane actions by most European governments by offering shelter, food, clothing, and screening for infectious diseases such HIV/AIDS,

Social Determiners and Public Health Advancements

Sweden, Denmark, and Norway are Scandinavian countries that are located in Northern Europe. These three countries share certain similarities and cultures that make them similar as the Nordic Countries. These 3 countries have made significant improvements in consistently developing their infrastructure and public health system over the last 100 years (Global Trends, 2013). Environment, heredity, medical care, and lifestyle constitute Social Determiners of Health (SDHs) as described by Dr. Blum (2016) in his famous Force Field paradigm of Health and Well-Being. The Swedish, Danish, and Norwegian governments have all ensured that environmental measures such as use and recycling of renewable forms of energy, a reliable disposal and recycling of both garbage and sewage waste, reductions of smoke emissions from motor

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vehicles, and stringent policies as well as legislation of environmental conservation are all highly maintained.

Fiorino (2006) specifically elucidates on both goal-driven and collaborative strategies on environmental conservation between governments and industries as in Sweden that previously adopted a collaborative process of environmental conservation while working with industries on deciding how to avoid environmental degradation (p.30). It is important to conserve the environment as it dictates the health status of a region, community, and or country. Collaborations to improve the state of emissions of toxic chemicals into the atmosphere have been previously discussed and deliberated in conferences where 87 nations met in 1992 in Copenhagen, Denmark to stop the production of Halon and advance the deadline for halting the production of CFCs to January 1996 (Hilgenkamp, 2006, p. 32). All the 3 countries learnt from previous public health trends in the past that a high quality of life is the result of protecting and conserving the environment via efficient water and air supplies being the main physical determiners of health. Hilgenkamp (2006) underscored the latter point that indeed the first attempt to discuss global environmental issues was in 1972 in a United Nations summit that lasted 2 weeks in Stockholm, Sweden (p.30).

The goals of the latter statement are all geared towards improving the quality of life through provision of cleaner air and water supplies as well as prolonging the average life expectancy of its citizens. Dr. Blum (2016) explained that the environment is the most important social determiner of health, which encompasses physical, socioeconomic, political and cultural sub-factors. All 3 Scandinavian countries mentioned have stable governments, high socioeconomic statuses, and friendly cultures that are ingrained in all its citizens with a goal of improving the state of health. In other words, a high socioeconomic status results in better access to health care services associated with residing in good neighborhoods. However, as in every region differences in wealth and health may be prudent to conceptualize both the socioeconomic status and health in all 3 countries. In 2013, Denmark reported a Gross Domestic Product (GDP) of \$42,480 and a life expectancy of 80 years, while Sweden and Norway both reported GDPs of \$43,450 and \$63,320 with life expectancies of 82 and 81 years respectively (Global Trends, 2013). As reported in Global Trends (2013) it would be meaningful to conclude that the average life expectancy in the 3 Nordic countries was 81 years thanks to good and effective leadership, stable political systems, efficient infrastructures that all align to environmental factors, relatively better health statuses and food security.

Accessibility to Health Care, Water and Public Health Systems

Amongst the 3 countries Sweden is regarded as having the best access to health care systems and re-invests its GDP back to the health care system compared to Denmark and Norway respectively. Swedish HealthCare (2016) states that the reasons that back the quality of the high quality of healthcare in Sweden includes lowest rates of chronic conditions such as asthma (22 per 100 000 population) and high a quality tracking system of patients across the country. Health management and policy in Sweden has benefited both native Swedish and

immigrants in tremendous ways. One of these ways includes free and affordable healthcare services to all its citizens. Sweden reinvests approximately 9.2% of its GDP annually in the healthcare system (Swedish Healthcare, 2016). Norway, Sweden, and Denmark share a decentralized system of provision of healthcare that ensures that accessibility of healthcare is free and available to all persons. The Norwegian Medicine Agency (2016) elucidates that healthcare policy is controlled centrally; responsibility for the provision of healthcare is decentralized and organized by local authorities. However, in Denmark the health care accessibility program is stratified into a primary healthcare and hospital sector that ensure that less critical to severe patients have access to doctors in this order respectively. This latter ensures that a good sifting or triaging mechanism exists in all 3 countries and eliminates waiting times in emergency departments as seen in other developing and developed countries.

Accessibility of water supply to citizens of Sweden, Norway, and Denmark is well established with lots of similarities. The government of Denmark has established policies and strategic plans that ensure that water supply and sewerage systems are well maintained. There are set schedules for maintenance programs that ensure that water pipes and reservoir systems meet standardized safe standards set by respective Environmental protection Agencies. This ensures that environmental conservation is well checked and not violated. The Danish government has also presented its agenda on water supply and environmental conservation is world summits and this module can be extrapolated as a module for developing countries that lack adequate water and environmental infrastructure to emulate. For example, in 2002 prior to the World Summit in Sustainable Development in Johannesburg, South Africa the Danish government published a set of sustainable indicators in Denmark, which included indicators for Denmark's "Sustainable Development Strategy (Sanitation Country Profile, 2004, p.2).

The Swedish government just at its counterpart in Denmark has legislated and enforced water-recycling laws that ensure that hazardous elements are filtered from water reservoir points and supply systems before reaching consumers. The goal of the Swedish government is two-fold in the sense that water and environmental conservation standards are at its highest, which aligns to Dr. Blum's (2016) Forcefield that asserts the importance of environmental physical factors such as water in relationship to good health. This is evidenced in Sweden's Sanitation County Profile (2004) that in 2002 the Swedish Environmental Protection Agency at the request of the its government presented as action plan for recycling phosphorus in waste water with a goal of reducing infection via tighter limit values for metals when using sludge on arable land and other productive land. Norway has similar methods of recycling of biological waste products before elimination from sewerage systems that have been researched and developed by both environmental and public health scientists. The use of Greywater treatment option has been well utilized in Norway. Jenssen (2002) proposed the Greywater treatment as an important part of a complete ecological sanitation system. This Greywater system utilizes simple LWA biofilter systems that have been constructed on wetland with emptying systems for irrigation, to open water and ground water recharge. Alternatively, contents from the sewerage wastes are collected

in a septic tank then collected and transported to facility for aerobic or anaerobic digestion stored and used as fertilizer for agriculture (Guldbrandsen, 1999; Jenssen, 1988; Jenssen & Krogstad 2001). The most important lesson from this Norwegian method of recycling of sewerage waste products has benevolent reasons that are a very high level of environmental conservation, which results in negligible acquirement of infectious water-borne diseases and better health.

Public Health Issues

Just as in any other country Sweden, Norway, and Denmark are not exempt from public health problems despite boasting robust improvements in access to health care services and a well-developed infrastructure. Norway has rising prevalence rates of tobacco related smoking side effects such as respiratory ailments and malignancies as well as obesity. It is approximated that 6.700 people die of smoking while losing an average of 11 years of life according to The Norwegian Institute of Public Health status report of 2010. In Sweden the mortality rates of death from cardiovascular diseases and cancer has significantly down trended from 1950s through 1980s particularly due to improvements in public health awareness and programs on better lifestyle habits, excellent health care services, good health legislation and policy. However, mortality rates from lung cancer in women has increased in Swedish women compared to men possibly due to behavioral attitudes, economic and financial empowerment. However more men succumbed to death from cardiovascular disease and suicide than their female counterparts according to Danielsson and Talback (2012). Denmark's public health status report (2007) reported cancer related deaths from risk factors such as smoking leading the pack with approximately 5000 cases each year, overweight, physical inactivity, unhealthy diet, increased alcohol consumption, sun worship as well exposure to carcinogenic chemicals. It is clear that in all 3 countries the main public health issues stem from non-communicable diseases and less from infectious diseases that the main public health issue in developing countries.

Role of PHAs in Sweden

Public health agencies are essential in subsidizing and offering instrumental support to government agencies such as the Sweden Environmental Protection Agency (SEPA) and the Ministry of Health and Social Affairs (MHSA). Ensuring that citizens of Sweden maintain a healthy lifestyle in a non-polluted and safe environment is not an easy task for the Swedish Ministry of Health under the supervision of its government. Sweden has a vibrant economy and is one of the richest nations of the world that has a very well established healthcare model, which developing nations can emulate. Evidence from Global trends (2013) in relation to the latter statement reveals that Sweden's GDP is \$43,450 with a life expectancy of 82 years. A life expectancy of 82 years is reflective of relatively good health enjoyed by Swedish senior citizens. However, it would also be prudent to analyze factors such as rates of migration, crime, and public travel safety at a later stage in order to substantiate the latter point. Important PHAs includes The World Health Organization (WHO), Center for Disease Control and Prevention (CDC), United Nations (UN) with its affiliates such as United Nations Development

Program (UNEP), and SEPA. The WHO attempts to give a global and international depth of the public health status with enormous contributions of Swedish Non-Governmental Organizations (NGOs) towards global programs such as Millennium Development Goals (MDGs). In lieu of enhancing its promotion and commitment towards MDGs, Sweden in conjunction with the United Nations (UN) has very strongly emphasized and fostered the duty of the international community in prevention of genocide and abuses (Swedish Government, 2015). Why are programs such as MDGs important to discuss in relationship to Sweden? In order to answer the latter question it is essential to recognize that Sweden as a country has taken an important role in Global and International health issues. The government of Sweden (2015) asserts that on the international stage, Sweden has an enduring tradition of widespread support of international solidarity. It is also reflective of the nurtured public health success in Sweden that can be extrapolated to other developing countries. However with the latter being mentioned, it does not exclude pressing public health issues such as migration in Sweden. Migration in Europe is a problem that is affecting most developed countries such as Sweden, Norway, Denmark, Germany, Italy and many more. Wente (2015) points out that Sweden takes in more refugees per capita than any other European Country mainly from Middle East and Africa. Immigrants from politically and social disgruntled countries in Africa and Asia tend to introduce multiple public health and social determiners of health imbalances in the previously mentioned countries. Wente (2015) asserts that equality that was once revered in Sweden has been entrenched by inequalities in the latter statement with 48% of welfare payments going to immigrants.

There is a high risk of transfer of infectious and communicable diseases in some of the European countries immigrants migrate from. Albeit not yet reported, Ebola Viral Diseases (EVD) is a good example of infectious diseases that has affected many persons including professional medical personnel from developed countries. The WHO reports that as of February 18, 2015, a total of 23,253 persons were infected with EVD and 9,380 persons succumbed to EVD related complications in Sierra Leone, Guinea and Liberia (CDC, 2015). A few suspected cases of infected medical personnel were reported in some European countries. EVD serves as a prime example in which public health agencies precisely WHO and CDC work collaboratively with other departments of public health such as in Sweden in tracking and ensuring that persons migrating from EVD infected regions do not transmit the disease in a new setting. CDC's (2016) EVD report states that the CDC is actively assisting ministries of health and working with other organizations to end the spread of EVD in West Africa and potentially limiting its spread to other countries. The Swedish Ministry of Health has not reported any case of EVD but the latter shows the emergency preparedness of CDC and other public health agencies in containing the spread of this disease. Swedish Aid (SIDA) is a good example of a public health agency that works closely with its counterpart agencies in containing the spread of EVD. SIDA (2016) issues a comprehensive report in April 2014 that SIDA has contributed 549 million Swedish Kronors via United Nations (UN-bodies) UNICEF, UNFPA, WFP, WHO, Swedish Red Cross, Save the Children and Swedish Plan to eliminate and prevent EVD in Guinea, Liberia and Sierra Leone.

HIV/AIDS is a problem that is also threatening the infectious diseases cycle of transmission in Sweden that can be predominantly attributed to migration, unsafe sexual behavior, and use of recreational drugs such as heroine. UNAIDS/WHO 2004 Epidemiological Fact Sheet on Sweden states that in most countries the HIV epidemic is driven by behaviors such as multiple sexual partners and injection of drugs. However, due to a good infrastructure and access of health care services, the Swedish government along with stakeholders ensures that persons infected with HIV/AIDS receive appropriate care and follow up. Information from Government of Sweden (2014) together with UNAIDS works with governments, civil society, stakeholders to ensure that people have access to health care without any discrimination. Additionally, HIV surveillance in Sweden is highly modernized while incorporating the use of technology to facilitate this process.

Future Planning and Direction of PHAs in Sweden

The environment is the most important determining factor of the status of public health most regions just as discussed in Dr. Blum's (2016) Forcefield paradigm of Health as well as Koop, Pearson and Schwartz's (2002) topic on Healthy Lifestyles in a Health Promotion Environment. Sweden has made tremendous improvements towards environmental conservation. United Nations Environment Program (UNEP) is a Global Environment that was launched in 1995 as a product of the Stockholm, Sweden Conference of 1972 with goals of monitoring population growth while ensuring that natural resources needed to be conserved and the human environment protected from negative effects of industrialization amongst member states (Hilgenkamp, 2006, p.30). The latter was an initiative of the Swedish government based on positive outcomes of environmental conservation and an improvement of population health dynamics. Sweden has very tough laws and regulations in ensuring that environmental pollutants are controlled through thorough and efficient use of catalytic converters in vehicle exhaust or emission systems. Sweden's Environmental Zones Program (1999) retrofitted older diesel vehicles with emission controls such as catalyst and particulate filters. The goal of these catalytic converters ensures that the emissions from motor vehicles are safe and thus minimize air pollution. The legislation and enforcement of catalytic converters was geared towards two goals, which are prevention of respiratory diseases such as bronchitis and environmental conservation. In order to sustain the latter goals WHO came up with four objectives at the Stockholm Conference of which assessment of information between the exposure to environmental pollutants and human health and setting exposure limits led to more and better innovations such catalytic converters (Hilgenkamp, 2006, p.30 & 146).

Community Involvement, Cultural-Diversity Inclusion in the Target Population.

Human Immunodeficiency Virus (HIV) is a viral disease that may be transmitted via exchange of body fluids through unprotected heterosexual intercourse, kissing, use of infected needles when utilizing recreational drugs such as heroin amongst intravenous drug users and contamination blood transfusions products in health care institutions. Most commonly people get or transmit HIV through sexual behaviors and needle or syringe use (Aids.gov, 2016).

Acquired Immunodeficiency Syndrome (AIDS) is the final stage of the HIV disease process that renders the human immune system powerless and vulnerable to attack from any pathogen such as viruses, fungi, bacteria, and protozoa.

However, 33% of unprotected heterosexual transmission with emphasis on Men who have sex with Men (MSM) at 42% according to European Center for Disease Control and Prevention (ECDC, 2014) remains the commonest route of transmission of the HIV virus in most European countries, which includes Sweden. The current focus in Sweden and other European countries has been the influx of migration from immigrants predominantly from Asia and Africa in association with high HIV/AIDS prevalence rates. The Swedish Institute for Infectious Diseases Control (2009) and Wouters, Arneborn, and Velicko (2009) in Kalengayi, Hurtig and Krantz (2012) report that 54 percent of all new HIV infections in 2009 were immigrants from countries with generalized epidemics. One of the main reasons for high numbers of new HIV infections may be attributed to fear of deportation, lack of education, inadequate community involvement of both local community leaders amongst immigrants and Swedish public health practitioners. Kalengayi, Hurtig and Krantz (2011) found that 40 % of residents enrolled in the study were reluctant to seek medical attention if they were found to be HIV/AIDS positive for fear of deportation from Sweden possibly back to their native countries.

It would be prudent to develop a public health policy on health promotion via educational and pragmatic methods such as contact tracing with a goal of preventing HIV/AIDS infections in the immigrant population in Sweden. Lloyd, Handsley, Douglas, Earle and Spurr (2007) point out that health education creates knowledge, critical consciousness, and the pressure to change to healthier policies (p.42). The most difficult part of creation and implementation of this policy would be determination of screening process at the point of entry and final assimilation of the immigrants with the local population in Sweden. One possible solution to this problem would be to screen immigrants at points of entry in European countries that receive arriving immigrants. Upon receiving the blood test results of HIV statuses whether positive or negative would result in separation of the immigrants in two groups that is those with negative or positive HIV tests. Immigrants who tested positive for HIV will be enrolled for treatment and further behavioral counseling as required. The group of immigrants that test HIV negative are followed up in separate and isolated camp and retested for HIV after three months representing the latent period of the HIV virus that would replicate in the human genome testing positive on such a subject. Those who test negative for HIV infection can be transitioned for further processing for integration into the society while the newly tested HIV positive immigrants would be treated as the initially immigrants who tested positive for HIV on the first attempt. Refer to the algorithm on the appendix page for a more detailed analysis and explanation of how the process of screening immigrants will be performed.

While in these immigrants continue to reside in these concentration camps, educational as well as language services can be offered and taught to them enabling successful transition into both Swedish and or other European societies. At the same time public health and medical experts, as well other experts from the Swedish government may offer

vaccination services against other infectious diseases with thorough health screening services prior to releasing the immigrants after three months into the Swedish societies as previously discussed. Persons who test positive and already on HIV treatment will be mandated to present themselves to healthcare facilities for prescription refills while effecting contact tracing to locate and keep track of the HIV levels within the population. This same HIV screening model that has been elucidated on can also be applied to native Swedes as well as other persons residing in Sweden who test positive for HIV infection except that mandatory follow-up of these persons in health care facilities be made immediate compared to the transitional proposed screening process of migrants as previously mentioned. The importance of local leaders or elders where these migrants have a huge role to play by encouraging testing and disclosure of the HIV status to health care personnel in Sweden without fear and coercion of deportation. In similar scenario elucidated by Chino and DeBruyn (2006) found that the importance of strategies for community capacity building amongst American Indian and Native Alaska Health otherwise defined as community's potential for responding to health issues was effective in empowering the local people in addressing health concerns and disparities that may exist in their communities. Chino and DeBruyn's (2006) example can be emulated in smaller towns that migrants reside in and may serve as the initial phase of emphasizing openness of HIV status disclosure amongst immigrants.

Planning and Implementation Strategies towards Health Policy on HIV Prevention Development in Migrant Populations

It would be essential to incorporate contact tracing techniques with use of internet-based media such as mobile phones and computers to immensely educate persons in migrant communities previously mentioned prior to perfectly implementation of a pragmatic policy on migration of immigrants thus significantly reducing the rate of HIV infection in Sweden. The Center for Disease Control and Prevention (CDC) serves as a good example of contact tracing methods in tracking Ebola Viral Disease in West Africa that greatly assisted in reducing high incidence rates of EVD in Sierra Leone and Liberia. CDC (2014) elaborates that CDC and partners have effectively utilized contact tracing to identify new cases of EVD quickly by isolating such suspected persons preventing the spreading the disease to other persons in the community while stressing that one missed contact can keep Ebola spreading but careful tracing of contacts and isolating the cases can stop the outbreak. The same method utilized by CDC in containing EVD can be applied to the preventing the spread of HIV in both immigrants and native Swedish citizens. CDC (2014) elaborates on a detailed method of observing suspected persons with EVD who initially had contact with a positively diagnosed EVD person for 21 days via contact tracing techniques. The proposed health and prevention policy against HIV in immigrants would be very feasible in Sweden thanks to a functional and efficient health care system.

Global Vision in Enhancing Public Health through creation of the new Public Health Policy

One of the ways of ensuring that an effective public health and prevention policy against HIV infection would be to address

both the goals and visions of infectious diseases prevention by the Swedish Department of Infectious Diseases and international organizations such as the WHO and European Center for Disease Prevention and Control (ECDC). These goals as previously mentioned must be synchronous and ensure that no contradictions arise elsewhere in this important process of policy implementation. A joint report of HIV/AIDS Surveillance by ECDC and WHO in 2014 stated that almost 30,000 people were diagnosed with HIV infection in the European Union and member states at rate of 6.4 cases in every 100,000 people. Sweden is one of the countries included by ECDC in the prevention of HIV/AIDS infection in Europe. Statistics from ECDC (2014) states that Men who have sex with Men (MSM) is the group of people with highest rate of HIV transmission in Europe with a total of 10,000 newly infected HIV persons in 2014. Sweden has a dual problem of rising numbers of HIV/AIDS infection amongst MSM (42%) and migrant populations (37%). As a result the goals of ECDC (2014) in response to evidence-based data in preventing HIV/AIDS includes including education of MSM as well persons infected with HIV/AIDS through early HIV counseling and testing and most importantly migration-sensitive prevention services are crucial owing to the overwhelming evidence of high proportion of HIV cases amongst migrants.

Concluding Remarks and Recommendations

Non-communicable diseases and malignancies are the current public health issues in Sweden, Norway, and Denmark as previously mentioned. It is important to address and treat behavioral attitudes, increased physical activity, and create new public health policies that will envision significant reductions in the aforementioned public health issues in all Scandinavian countries. The latter is only feasible and pragmatic with support from all three governments with collaborative ventures between public health agencies and stakeholders. Wilson and Mabhala (2009) elaborate that policy direction as was seen in the gradual public transformation in England reflects on the understanding that health cannot be imposed on people without the support from the government (p.14). It is essential to state that better legislation by the Swedish, Norwegian, and Danish governments in conjunction with environmental protection agencies as well as evidence-based decisions from scientific research results on reductions of non-communicable diseases may be the cornerstone of eliminating the aforementioned public health issues. Wilson and Mabhala (2009) elucidate that consistently application of policy across a countries of states sets clear parameters for action and enables local action to have a stronger resonance across a wider population (p.14). Sweden has made tremendous improvements in both environmental and health improvements as aforementioned. However, increased collaborative ventures between SEPA and PHAs are essential in order to ensure more successful outcomes and a better health status just as elucidated in Obel's (2015) methods of collaboration between federal health care institutions and stakeholders in the United States (U.S). Examples of such ventures have been put to test and have reaped successful outcomes between industrialization plants and government environmental agencies in European countries such as Netherlands, Sweden, Denmark, and Germany. Fiorino (2006) compares and contrasts the old environmental regulation of the U.S with European Nations of Sweden, Netherlands and Japan by stating that the U.S. ought to take lessons on new

environmental regulations from the aforementioned countries with a goal of increased environmental conservation. Revision and amendments of old health policies with a goal of developing new health policies in Sweden plus other European countries on dealing with migration may pave the way for a more effective way of screening persons and thus preventing any introduction of infectious diseases. In addition to infectious disease prevention aforementioned, issues of urban migration and settlement by refugees may have a negative effect on the environment in most parts of Europe such as the United Kingdom, Belgium, Denmark and Sweden. It is therefore imperative to address urban migration and settlement in order not to imbalance environmental factors as well other social determiners of health. Koop, Pearson and Schwartz (2002) elucidates that in order to prevent ill health in European countries emphasis should not focus solely on reducing pollution of air, water, food, and soil but integrating the wider aspects of human settlements, urban planning, and region wide environmental protection (p.42).

As previously discussed HIV infection health policy creation, development, and implementation requires an algorithm-based approach as elucidated in the appendix section. The gap or loophole that exists in the process of HIV infection lies in contact tracing and a rigorous screening process of immigrants at different borders in Europe. Education and counseling on methods of avoiding and prevention of HIV/AIDS remains essential in this process of policy development. Richter, Chersich, Vearey, Sartorius, Temmerman and et al. (2014) reported that in South Africa, one of the contradictory reasons of rising prevalence rates of HIV infection was that cross-border migrants compared to internal or non-migrant sex workers were fearful to seek medical attention albeit were more educated compared to their South African counterparts. However, this does not deter the fact that more education and counseling in addition to community integration are essential in HIV infection policy prevention. Social integration and comprehension of different cultures of immigrants is crucial in the process of HIV prevention and spread amongst migrants. Omollo, Simbiri, Hausman, Wadenya and Lidicker (2010) found that in addition to educating Francophone immigrants through a more culturally sensitive infectious diseases treatment and prevention program was essential in accessing health care services in Philadelphia, USA compared to their Anglophone counterparts who had no language barrier problems and a high level of acculturation in accessing health care services. It is also very important for organizations such as ECDC and various departments health across Europe to integrate and include HIV/AIDS screening policy as a mandatory test to incoming persons or immigrants in all counties in Europe. Implementation and application of a mandatory HIV screening policy is possibly pragmatic through partnerships between ECDC and European governments. An example where partnerships has been fruitful is The Global Alliance for Vaccines and Immunization (GAVI) that includes governments, the WHO, UNICEF, the Bill & Melinda Gates Foundation, non-governmental organizations, research institutes and vaccine manufactures is a public/private global public health partnership, which provides partners with a forum to develop policies, strategies, and priorities for immunization (Lloyd, Handsley, Douglas, Earle & Spurr, 2007, p.129). ECDC and European government in preventing the spread of HIV infection across Europe via effective migration policies as

already elucidated can apply the partnership model used by GAVI.

It also the responsibility of European governments to inform all persons planning to migrate to Europe that HIV/AIDS screening will be a mandatory process. This may improve behavioral attitudes of taking necessary precautionary measures such as use of condoms during sexual intercourse and avoiding associated bad habits such as heavy alcohol usage that may impair somebody's ability to make wise judgment prior to engaging in risky sexual activities. Making HIV/AIDS screening mandatory may have a direct correlation of reducing the rate of migration and HIV infection transmission rates in European countries such as Sweden by not intimidating migrants but improve their psychosocial and behavioral perspectives and thus lead responsible lives. Koop, Pearson and Schwartz (2002) concluded that it is imperative to increase benevolent acts of informing the public via education and health promotion awareness programs with use of new technologies such as screening and diagnostic testing that qualifies the already discussed mandatory HIV screening as the way to infectious disease prevention in future of improved global health (p.323).

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Algorithm Key:

- Immigrants who test positive after HIV ELISA screening test receive a confirmation western blot HIV confirmatory test.
- Immigrants who test negative after ELISA HIV testing receive HIV prevention education and behavioral counseling.

Appendix


