

Global Health Organizations and Viet Nam Public Health Policy

Jasmin Yaeger
Interdisciplinary Studies
Southern Oregon University

Introduction

Global health is the study or research of the health of populations in a global context, including health issues that could spread internationally, beyond borders of countries. Global health is also the study of health issues that may involve political and economic concerns. This branch of public health has been defined by the Global Health Council as the area of study, research and practice that places a priority on improving health and achieving equity in health for all people worldwide (Global Health Council, 2011). To apply this concept of global health to Viet Nam and the health issues threatening an individual country it is necessary to assess health issues historically.

Nearly 35 years after the end of the Viet Nam War the United States has begun negotiating and rebuilding a relationship with the Southeast Asian Island of Viet Nam. There are increasing health studies being conducted by the Centers for Disease Control (CDC), United States Agency for International Development (USAID), United Nations (U.N), United Nations Children's Fund (UNICEF) and the World Health Organization (WHO). These global health agencies are concerned with many aspects of health care policies and programs and the health services being provided to mothers and their children.

The main concerns in this research on maternal and child health in Viet Nam are the percentage of vaccines being administered, infant mortality rate, malnutrition, incidence and prevalence of HIV/AIDS, and incidence and prevalence of tuberculosis. During the summer of 2010, I conducted a literature review examining the most current research being conducted in Viet Nam by these global health organizations regarding the above health concerns, including program and policy effectiveness.

Indicators

Epidemiology of Diseases

Aside from risks of childbirth there are extremely high risks of catching several severe diseases. Amongst the many diseases prevalent in tropic environments the most deadly and common in Viet Nam are: bacterial diarrhea, hepatitis A, typhoid fever, dengue fever, malaria, Japanese encephalitis, plague, leptospirosis and H5N1 avian influenza (CDC, 2009). These diseases are spread through contact with insects, birds (wild and domestic), and water sources. Of these, insects carry many of the most serious infectious diseases: the dengue fever, chikungunya, filariasis, and Japanese encephalitis. The use of treated mosquito nets and insect sprays, to protect oneself against insect bites helps prevent the contraction of these diseases (CDC, 2009).

In 2006, Avian influenza (H5N1) caused outbreaks in domestic and wild bird populations in Viet Nam and, through extended contact with these birds, caused a rapid proliferation of human cases. The virus continued to spread in poultry populations in Indonesia; the CDC strongly advised travelers to avoid direct contact with wild birds, domestic poultry, and poultry farms and bird markets where live birds were raised or kept (CDC, 2009).

The CDC and WHO have released traveler warnings about not swimming in fresh water. Fresh water harbors schistosomiasis and leptospirosis. These are bacterial infections that could be contracted if an individual comes in contact with the native Viet Nam water. Measles still occur from time to time in Southeast Asia; however, measles/mumps/rubella vaccine coverage has been improving substantially due to the aid efforts by global health organizations (CDC, 2009).

Vaccines are available for many of the more serious bacterial infections. There are vaccines available (for travelers) for hepatitis A, hepatitis B, measles/mumps/rubella (MMR), diphtheria/pertussis/tetanus (DPT), polio-virus, typhoid fever and rabies. The CDC requires all travelers to be up-to-date on United States vaccines and have boosters for overseas travel. Tuberculosis also has a vaccine, but it is extremely painful and its effectiveness is questionable. There are anti-malarial drugs that can be taken two weeks before leaving and for the duration of the trip. Anti-malarial drugs can cause minor psychosis, heart-related failures, and even death, however the potential side effects of the drugs are minimal compared to the dangers of actually contracting malaria. The effects of malaria affect a person for life because the symptoms and illness are persistent and can leave a person sick for a week or more. Other factors about anti-malarial drugs to consider are that after a prolonged usage of a certain drug the malaria parasites tend to mutate and create drug-resistant strains; the drugs are highly expensive and are not widely available except through a doctor's prescription (CDC, 2009).

Infant Mortality Rate

Across all organizations, the statistics for infant mortality rate are varied and have been collected for many years. Some of the data has shown improvement (decrease in occurrence) yet other data show an increase in occurrence in the mortality of children. The World Health Organization states that in 2006 there were 15 infant deaths out of every 1000 live births (WHO, 2008). The Central Intelligence Agency (CIA) fact book has data that shows 21.57 infant death per 1000 live births in 2010 (CIA, 2010). The World Bank demographics have shown a steady decline in the number of infant deaths, placing the infant mortality rate at 11.81 out of 1000 live births in 2008 (WBI). Even using CIA statistics Viet Nam is placed at 98 in a global ranking of 224 countries (CIA, 2010).

There are many causes of infant mortality, with considerable studies done to see what exactly the major influence of infant death is. Three-fourths of the population of Viet Nam lives in rural areas, although there is expanding urbanization. This central rural focus means there are complications when there is a health-related maternal emergency; there is rarely transportation efficient enough to have a pregnant woman be transported to the hospital to give birth in sanitary conditions. Also since there is no transportation to a clinic there are few opportunities for the woman to receive prenatal care; care which is given during the duration of the pregnancy. Therefore, the mother is unaware or cannot fix current problems with her pregnancy, increasing the risks of infant and maternal mortality and complications (Swenson, 1993).

Until the recent eradication of polio and tetanus, these were the most common diseases contracted by children; although syphilis and HIV/AIDS are currently growing awareness and concern (Bulatao, 2000). Women, who are often illiterate in the rural areas of Viet Nam, do not have sufficient health education and cannot identify warning signs before the signs turn into severe symptoms. These symptoms could be related to medical complications that can injure the mother and infant. Anemia is pervasive in women in Viet Nam. Due to the lacking of prenatal care, especially in rural areas, women are not treated for anemia, examined for HIV/AIDS, examined and treated for syphilis, or examined and treated for hypertension (Bulatao, 2002). These illnesses and diseases are consequently passed on to the infants at birth or in-vitro and babies are stillborn or live only a few short months. On the Maternal and Neonatal Program Effort Index of 0 to 100 (0 being a low score and 100 being a high/good

score), prenatal care in rural areas got a rating of 69 and in urban areas where there is transportation there was a rating of 91 (Maternal Health Study, 2001).

Percentage of Vaccines Being Administered

UNICEF has heralded the complete elimination of polio in the year 2000 and in 2005 the complete elimination of maternal and neonatal tetanus. The prevalence of measles is still oscillating with continued surges interrupted with times of 90% or more elimination of occurrence (UNICEF, 2008). This is due to the fact that, in 2006, there was a 94% coverage rate of one-year-old children that were receiving three doses of diphtheria tetanus toxoid (WHO, 2008). The percentage of babies protected at birth from tetanus was 88% (WHO, 2008). There have been upsurges of measles outbreaks, and through vaccine efforts, in the rural areas 80.7% of one-year-olds are being immunized and in the urban areas 94.3% are being immunized (WHO, 2008).

The elimination of maternal and neonatal tetanus, dubbed the “silent killer”, shows considerable progress in the sanitization of birthing practices and the cooperation of women of birthing age in getting immunized before pregnancy (WHO, 2006). UNICEF, WHO and the Ministry of Health of Viet Nam established an Expanded Programme on Immunization (EPI) in 1991. Through rapid and highly effective health information practices by these organizations through EPI, Viet Nam celebrated the program’s twentieth anniversary in 2006, simultaneous to the complete elimination of tetanus. Viet Nam is the “ninth country and first East Asian country” that has been assessed and validated to have actually eliminated tetanus (WHO, 2006:1).

Child Malnutrition

Child malnutrition is a common and prevalent problem facing most developing countries, Viet Nam included. Malnutrition is the lack of the proper essential vitamins, minerals and nutrients necessary to build a strong body. Therefore, the children affected by malnutrition face stunted growth, bone diseases, mental dysfunctions, and possible cell mutations (Kahn, 2007). The World Health Organization stated in 2009 that “malnutrition affects a third of children under five” (WHO, 2009:1).

Nguyen and his colleagues did a study ranging from 1990 to 2004 concerning the reduction in childhood malnutrition in Vietnam. The lower the education, the more destitute the family and the higher the malnutrition; however, through the participation of organizations like UNICEF, Women’s Union, the Youth Union and the Farmer Association in malnutrition campaigns there has been steady decrease in the occurrence of malnutrition (Kahn, Tuyen, Ngoc, Duong & Khoi, 2007). UNICEF regarded Viet Nam as “one of the countries in the region with the most striking reduction of malnutrition” (Kahn, et al, 2007:274).

The size of the sample for study by Khan and his colleagues was 1500 children, under five years of age, from Viet Nam’s 64 provinces (Kahn, et al., 2007). In 1990, 45% of the children were underweight, and this amount steadily declined, reaching a low of 26.6% of the children in 2004. When underweight percentages were broken up into rural and urban areas and at the end of the decade-long study, both areas showed substantial improvement. Rural areas in 1990 had 40.6% of the children underweight, whereas, in the urban areas in 1990 47.5% of the children were underweight. In 2004, in the rural areas the number of underweight children had dropped to 30.8% and in the urban areas the number of underweight children had dropped to 21.2%. As the levels of malnutrition dropped, the number of children able to be

reported on in the surveys went up significantly over the decade. In 1990 the total number of children of the age five and under was 37,972 from all 64 provinces; by the end of the survey period in 2004 the number of children had jumped to 95,380 (Kahn, et al, 2007). This data shows that through malnutrition awareness and aggressive prevention policies and programs more children were staying alive to see their fifth birthdays.

Years	1990		2004	
Percentage of Underweight Children	45.7%		26.6%	
Number of Healthy Children	37,972		95,380	
Percentage of Underweight Children (Urban vs. Rural)	Urban 47.5%	Rural 40.6%	Urban 21.2%	Rural 30.8%

Figure 1. The percentage of underweight children and number of children, in Viet Nam, in the years 1990 and 2004 (Kahn, et al, 2007).

Incidence and Prevalence of HIV/AIDS in Children

The World Health Organization in 2005 found that 15 out of 100,000 children had HIV/AIDS. There is a very small chance of losing a child to AIDS, and according to information from the year 2000, only 1% of children less than five years old died from HIV/AIDS (WHO, 2008). These surprisingly low HIV/AIDS numbers may be attributed to the 78.5% of women who use some form of contraception.

In a study by Bulatao and Ross, they found that on a scale of zero to 100, zero being worse and 100 being best, Viet Nam had a rating of 30. In the Maternal and Neonatal Program Index (MPNI) (Maternal Health Study, 2001) it says that the HIV counseling and testing were entirely voluntarily; the rating in MNPI for HIV testing is 43 out of 100 (Bulatao, 2000). Although this is not considered a pressing problem in Viet Nam in many provinces, in those provinces where it is a problem that rating is too low. The low MNPI is attributed to the lack of health education needed to protect women and their children from acquiring this sexually transmitted disease.

Incidence and Prevalence of Tuberculosis in Children

Tuberculosis is a bacterial infection that affects the lungs, and if left untreated it can affect the kidneys, bones, joints and lymph nodes (CDC, 2010). People who have weakened immune systems are at higher risk of contracting tuberculosis (CDC 2010). For this reason, tuberculosis is often studied alongside HIV/AIDS. HIV/AIDS is an immunodeficiency virus that disables a person's immune system over the course of 10 or fewer years and when the immune system is disabled it is easier to contract other illness amongst them, tuberculosis (CDC, 2010).

The United States has been providing assistance to Viet Nam since the 1990s to combat tuberculosis. The U.S. government has provided assistance in the war against tuberculosis through Viet Nam's National Tuberculosis program and in 2004 the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) expanded their support for TB/HIV activities (PEPFAR, 2010).

According to a national survey of tuberculosis prevalence in 2010 in Viet Nam by Hoa, Sy, Nhung, Tiemersma, & Borgdorff, 196.8 out of 100,000 people 15 or older had tuberculosis (2010). WHO estimated in 2006 that the prevalence of tuberculosis in Viet Nam was

approximately 86 per 100,000. However, without including children in the Hoa, et al. study and only counting those over 15 years, the prevalence was 145 per 100,000 (Hoa, et al., 2010). This indicates that prevalence might be higher amongst children than adults, which is highly irregular. The Viet Nam's National Tuberculosis Programme's (NTP) diagnosis is based on several common symptoms of tuberculosis, however Hoa, et al. stated that about 53% of the people who tested positive in 2009 did not have the telltale cough associated with tuberculosis. These people probably would not have been treated by NTP because of the lack of the cough (Hoa, et al., 2010). Also the people with placid symptoms were probably not treated or accounted for originally; however, it is possible they were treated at a later date. NTP also did not account for the people already starting or currently in treatment for TB; thereby skewing the data for how many people actually had tuberculosis (Hoa, et al., 2010).

Program Efforts

Without the construction of the current programs and policies in Viet Nam, there would still be a struggle against some of the most primitive diseases that have been eradicated in the industrialized world for centuries. Four major organizations combat sickness and create programs aiding in prevention and provide personal support in Viet Nam.

A. U.S. President's Emergency Plan for AIDS Relief (PEPFAR)

Launched in 2003 by President George W. Bush, PEPFAR is renowned "as the largest effort by any nation to combat a single disease" (PEPFAR, 2010:1). The program is singly funded by the United States Government. In the preliminary years of the program's inception the focal point was based on health education programs and information on how to prevent contracting AIDS; also the program focused on starting efficient programs that involved caring for and treating those already infected (PEPFAR, 2010). The program began to gain publicity and success in Viet Nam, and later it expanded into prevention, care and treatment of HIV (PEPFAR, 2010).

On the PEPFAR website the organization claims that, "During its first phase, PEPFAR supported the provision of treatment to more than 2 million people, care to more than 10 million people, including more than 4 million orphans and vulnerable children, and prevention of mother-to-child treatment services during nearly 16 million pregnancies" (PEPFAR, 2010:1). There are at least 84 million people in Viet Nam, so a substantial percentage of the population are being serviced by the PEPFAR program.

The accelerated program within PEPFAR now provides services to tuberculosis patients with the possibility of HIV/AIDS prevention, treatment, and care (PEPFAR, 2010). PEPFAR, in the fiscal years of 2005 to 2008, saw an increase in funding from 26 million dollars to 140 million dollars. This enabled the program to treat an additional 395,400 patients with TB/HIV related illnesses (PEPFAR, 2010).

B. Viet Nam's National Tuberculosis Programme (NTP)

The war against tuberculosis in many developing countries is led by DOTS. The program DOTS stands for Directly Observed Treatment Short-course, and is funded by World Health Organization (WHO). DOTS is a medical procedure that administers a medical drug cocktail that has effects resembling chemotherapy. DOTS has five key elements that make it effective for implementing in any program, including NTP. The first element is concerned with the commitment and involvement of political parties and that these parties provide a consistent

level of funding. The second element takes the cooperation of a population to provide adequate bacteriology smears, which means that population must be educated and diagnosed accordingly, so that the laboratory can identify prevalence in bacteria of drug-resistant strain types. The third element of DOTS involves creating a program or treatment system that fits the population and type of tuberculosis. The treatment must follow nationalized standards and guidelines of supervision, as well as provide the patients with culturally appropriate support and information about tuberculosis. This includes making the treatment available to the entire population and not discriminating by status, money, race, gender, etc. The fourth element is that there needs to be sufficient drug supply and the drug supply has to match the strain of tuberculosis. With the tuberculosis drugs comes a staff of personnel that monitor and report TB drug usage by day, week and month. In the past, tuberculosis drugs could be sold to the highest bidder. By using trained personnel to monitor and provide regular reports the process now allows little opportunity for this to happen. Monitoring TB drug usage prevents any further mutation in TB, preventing further drug-resistant strains. The fifth element of DOTS studies the effectiveness and efficiency of the TB treatment program. If there is little progression toward better health in the population it is caught early on in the treatment program and remedied through policy changes (WHO, 2005)

In Viet Nam's National Tuberculosis Program (NTP), DOTS is the "heart" (WHO, 2005) of the operation. NTP is funded by WHO through the approval of the Ministry of Health of Viet Nam. However, NTP has many guidelines embedded within its own program. The main issue with the way that NTP operates is its public operation. There are no private physicians working within NTP.

Women and girls were more likely to seek support, diagnosis, education and treatment from NTP. Males tended to go to a private physician. A private physician would be unable or unwilling to share the state of their patients' health (Hoa, et al., 2010). NTP has made little effort to actively seek out the men and boys and have them treated by the publicly-operated organization. This lack of outreach to males has caused skews in the measurement of the prevalence of tuberculosis (Hoa, et al., 2010). Of those who attend NTP and had a smear that tested positive for tuberculosis, approximately 92% had chest x-rays, cough screening and a screening interview that discussed gender, age, and other socioeconomic factors (Hoa, et al., 2010).

NTP works closely with PEPFAR and has agreed, through the approval of the Ministry of Health of Viet Nam, to start providing TB/HIV screening and diagnosis. The new process has been reviewed by NTP and has showed effectiveness in prevention education, diagnosis, support and treatment of TB and HIV/AIDS alongside one another in the publicly-operated organization (PEPFAR, 2010).

C. Expanded Programme on Immunization (EPI)

The Expanded Programme on Immunization is a program that provides education and routine immunization to people in multiple countries. Routine vaccinations given through EPI include measles, diphtheria, pertussis, tetanus, polio and tuberculosis. The vaccines are provided through static clinics that provide outreach care and support. The vaccines do not cost anything to those patients who are eligible. Children, for example, get the tetanus shot for free while older people who have had a tetanus shot already do have to pay a small fee (WHO, 2007).

The EPI in Viet Nam started in 1981 and it has provided such efficient care and educational outreach that Viet Nam has been polio-free since 1997 and had virtually eliminated

neonatal tetanus in 2005 (WHO, 2009). Working side by side with the WHO Western Pacific Region, EPI has worked toward a new goal of the eradication of measles and the prevention and management of hepatitis B (WHO, 2009). The year 2002 heralded the arrival of the hepatitis B vaccine and the new vaccine has been welcomed and successful as of 2007 (WHO, 2009).

The Expanded Programme on Immunization is assessing complications to success in Viet Nam including cold storage, safe injection (requiring clean needles), properly trained personnel, toxic waste disposal, sanitation, enough vaccines for the current population, and reaching the remote poorer regions of Viet Nam (WHO, 2009). Through multiple funding sources, EPI has been able to remain adequately funded and they are aided in their efforts by the National Expanded Programme on Immunization, National Institute of Hygiene and Epidemiology, National Institute for Control of Vaccine and Biologicals, and the Ministry of Health in Viet Nam (WHO, 2009).

D. United Nations Children's Fund (UNICEF)

The United Nations Children's Fund (UNICEF) has sent many researchers to Viet Nam to research unsafe drinking water and malnutrition. Both of these problems have caused adverse health issues in the Vietnamese children. UNICEF states that "malnutrition is responsible for over half of all child deaths worldwide" (UNICEF, 2000:4). UNICEF has provided a decade of research in Viet Nam focusing on malnutrition, finding that malnutrition weakens the body's defenses allowing disease and infection to proliferate. This problem is exacerbated by lack of clean drinking water.

UNICEF did not establish an official program within Viet Nam. Through funding, Viet Nam has been able to create its own child-focused approach to malnutrition and poverty. The approach taken by the Ministry of Health of Viet Nam is based upon the basic needs of children centering on: education, health, shelter, social inclusion and protection. Providing education to the parents will allow the parent to be informed about when water and food is safe and nutritionally satisfying for their child (UNICEF, 2004). Providing healthcare, shelter and social inclusion to children of lower-income families will allow the child to receive regular medical appointments and receive the supplements needed to maintain positive growth trends. Shelter will make sure that the child is protected against the seasonal environment. Social inclusion, also listed as social support, has been repeatedly studied and supported in the conclusion that social support can increase positive health outcomes.

These efforts by the Ministry of Health of Viet Nam are being funded by UNICEF and UNICEF and continue to do a wide range of work in Viet Nam. With the funding from UNICEF, malnutrition in Viet Nam has seen a decline of over 25% from the 1990s until 2000 (UNICEF, 2004).

Conclusion

The global health organizations use millions of dollars every year to fund programs designed to aid developing countries in the formation of sufficient public health policies to solve health care issues. Of the four programs reviewed, two of the programs, PEPFAR and NTP, have self-monitoring agencies in place. These monitoring agencies are there to make sure that the program achieves its objectives within its mission and provides care with efficiency and effectiveness. The other programs, UNICEF and EPI (rural outreach), were either in hiatus, temporary installments, still being properly established or need further research and

supervision to ensure that the proper benchmarks are being met by the program (UNICEF, 2004)(WHO, 2009).

Viet Nam has seen the eradication of two diseases, and has witnessed the declination of malnutrition and infant mortality. Mothers are still attempting to receive the proper amount of health care through all stages of life and pregnancy. Due to this increased effort and outreach to females, the indicators of children's health have seen an increase. Every year that progresses has another advance in the ability to provide efficient public health programs and policies to the developing country of Viet Nam. As the United States continues its negotiations and partnership agreements with Viet Nam there will be more research into the health care services and improving the health of the people of Viet Nam.

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