



## Unsafe injections Practice transmitted Blood Borne pathogens in rural Kingdom of Cambodia

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**ABSTRACT** Unsafe injections practices are very common in developing countries. Such practices, through contaminated needles/syringes, reused needles and syringes, place injections recipient, health care workers and health provider at risk of infections with blood borne pathogens such as hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV).

### KEYWORDS

Unsafe injections, Blood Borne pathogens, contaminated needles / syringes, health provider.

### INTRODUCTION

Injection is the most commonly medical devices in health care setting. The World Health Organization (WHO) estimates, approximately 16 billion injections are given annually worldwide, most of them for medical injections purpose and a very few for immunization. In some situations, as many as nine out of ten patient's likes to go to a private health care provider receive an injection, of which over 70% are unnecessary or could be given orally. Patients prefer injections because they believe them to be more effective. They also believe that doctors regard injections to be the best form of treatment or drugs used. In turn, doctors over-prescribe injections because they believe that this satisfies patients best, even though patients are often open to alternatives. In addition, giving an injection sometimes reasonable charging a higher fee for the service provided but many injections administered in the world are unsafe.

Unsafe injections are the cause a substantial proportion of infections endemic with blood borne pathogens such as hepatitis B virus (HBV), hepatitis C virus (HCV), human immunodeficiency virus (HIV), and these chronic infections that lead to disease, disability and death a number of every years. WHO estimated that up to 16 million HBV, 4.7 million HCV and 160,000 HIV infections are attributable each year to such unsafe injections practice. The risk of infections is injections recipients, health care provider through contaminated needles/syringes and reuse needles/syringes. A recent study indicated that each year, unsafe injections cause an estimated 1.3 million early deaths, a loss of 26 million years of life. Return in the developing countries unsafe injection practices have been reported to occur in 15%–50% of cases. Cambodia is also the developing country which higher injections and higher prevalence infections epidemic of HBV and HCV and HIV. These problems in Cambodia complex due lack of social commitment and lack of availability of sufficient resources in health care system. According WHO estimate, the prevalence of HBV in Cambodia ranges between 5 and 10%. However about HCV the previous reports showed that prevalent HCV ranges from 0.7 to 14.7% and 21% are patients with the hepatocellular carcinoma (HCC). So, the most commonly identified routes of HCV and HBV transmission include intravenous drug use, blood transfusions, needle-stick injuries among health professionals, tattooing, sexual intercourse and perinatal infections. According in 1991 community-based study indicated that 8.0% of the population was HBV surface antigen positive and 6.5% was antigen HCV positive. But the proportion blood borne virus infections endemic in Cambodia attributable to unsafe injections is still not know. In 2002 community-based survey in Takeo province rural in Cambodia, found the prevalence of overuse and assessment injections and the studied showed that Cambodia have one of the world's highest rates of overall injections use. 64% people in Takeo Province distribution of injections by health provider (nurse). The aim was to studies unsafe injections practices and outbreak blood borne pathogens with the health provider by contaminated needles/syringe injections of the people in rural area

Kingdom of Cambodia.

### METHODOLOGY

Unsafe injections transmitted blood borne pathogens such as HBV, HCV, and HIV with the general population has not been well understood as the national prevalence was never carried out, exception HIV population are outbreak. Addition the various surveys were done with deference simple sizes, special populations, methods, and locations at various time periods. According to WHO conduct unsafe injections account have 33% of HBV infections, and 42% of HCV infections, and around 2% HIV infections in the developing countries. 5% of the injections are immunization children and adult, and 5% are other procedures like blood transfusions and injections contraceptives, 90% of injections are given into muscle to administer medicines. The proportion of injections given with contaminated and reuse needles/syringe without sterilization ranges from 1.5% to 69.4% in developing countries. So, in many cases these unnecessary injections could be replaced by oral medication. According the previous surveys, Rapid assessment of injection practices 2002 in Takeo province southeastern in rural Cambodia. The surveys showed that overuses injections infections risk in the province. 30 injections providers was accessed through the province's five public hospitals (n=30), and regarding their knowledge of disease transmission risk through unsafe injections. 20% of who had received the complete hepatitis B vaccination series. 98% providers reused needles/syringes. 90% of injections providers stated aware HIV, HBV, and HCV transmitted through by unsafe injections. Most people injections 5.9 times per year. 74% most of them have therapeutic injections, 16% followed by intravenous injections, and 10% followed by immunization. Some of general population received injections at home by injections health provider. So, injections practices increase both private hospital and public hospital in Kingdom of Cambodia nowadays.

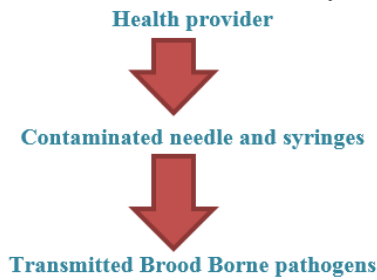
### DATA COLLECTION OUTBREAK

Data outbreak in the ROKA commune Battambang province northwest in rural Cambodia by unsafe injections practices Blood Borne pathogens such as HIV used the needle /syringes by the health provider (nurse). 242 people had been deemed Blood Borne pathogens with the HIV-positive during December 2014 - February 2015. Most of them are adults, children and also have the monks and grandmothers. The parts of this problem are used contaminated needle/syringes by health providers. Many Cambodians have injections practiced with the health care providers and they like intravenous injections. Therapy injections are the most comment risk both private hospital and public hospital. Data analyses with the quantitative variables were expressed people injections and qualitative variable were expressed as number with percentage and compare antigen HCV, HBV, and HIV.

### RESULT

Most of health provider used contaminated and reused needle and

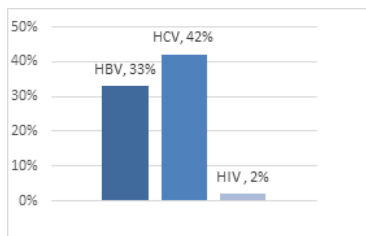
syringe transmitted Blood Borne pathogens such as HBV, HCV, and HIV. **Route of transmission from unsafe injections**



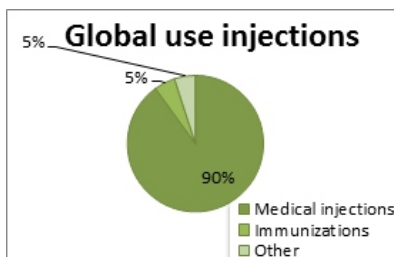
HBV particularly dangerous for a new born who have a 90% risk of developing chronic HBV (which can lean to cirrhosis or liver cancer) if infected. It is estimated that unsafe injections practice account for 21million HBV infections annually (33% of new HBV infections worldwide). HCV without any vaccine to prevent, it's the danger and the present for all age group. Maybe 75%-85% of people will injections chronic HCV. Unsafe injections are the leading cause of HCV infections causing 2 million infections each year. (42% HCV new infections worldwide). HIV it is estimated that in 2009, 1.8 million people died as a result of AIDS and 2.6 million people were a newly infections with the virus. Of those new infections 260000, 2% were cause by unsafe injections. Figure 1: WHO Annual number of infections attributed to unsafe injections.

Many people all around the world like injections; Cambodia is one of countries also like injections and has reported overuse injections in the world. Almost of them (90%) infections by medical injections. 5% of them injected by immunizations and 5% of them all other injections. Figure 2: Global use of injections.

**Figure 1: WHO Annual number of infections attributed to unsafe injections**



**Figure 2: Global use of injections**



**DISCUSSION**

My present studies affirms unsafe injections the cause in the outbreak Blood Borne pathogens as a HIV in Battambang province in rural Cambodia. Unsafe injection practices prevalent in the area as all the victims gave history of receiving injections from one particular development health worker and health provider of clinical signs and symptoms. Government authorities confirmed that the mode of transmission was from continuous use of contaminated needle/syringes as well as injections practices are spreading unchecked and investigations into this outbreak may be just an indicator of a major disaster waiting to occur. Contaminated needle/syringes transmitted Blood Borne pathogens (HIV), the parts of these problem are lack of knowledge health worker and health care provider.

A similar outbreak had been reported from Takeo province. The overuse injections rate was 5.9 times of injections for people per year (95% CI: 5.3-6.7), and most of people was therapeutic injections and most 92% prescribes were aware that HBV, HCV, and HIV could be transmitted through unsafe injections. The high prevalence of blood borne pathogens infections may reflect past practices of reused needle/syringe and contaminated needle/syringe. Most of 98% health provider use of needles /syringes, 58% practiced with two hands recapping of used needles, 25% injections administration area.

These two outbreaks show that there has been no progress in raising awareness regarding safe injections practices at the grass root level. The problem of unsafe injections practices continues to occur, and outbreaks like this might occur in the future if no awareness in this matter.

Unsafe injection practices include a number of causing practices considered unsafe for patients or health workers and health providers, such as used of injections medication when safer alternatives are available, reused needle/syringes, contaminated needle/syringes, multiple injections using a single needle and syringe, using a common container of virus fluid for more than one patient, recapping of needles, not inadequately monitored needle/syringe cleaning, sterilization practices, improper disposal of sharps, syringes leading to recycling of these device. All these practices put the patients, the risk of serious blood borne pathogens infections such as HCV, HBV, and HIV.

The reasons and prevalence of unsafe injections practices from country to country, and depend on a multitude of factors such as knowledge, awareness, combining social, economic and legal factors. Developed nations, where resource constraints are not a problem, not immune from the hazards of unsafe injections practices. The risk of nonsocial infection with Blood Borne pathogens as a consequence of unsafe injections practices was recognized in high-income countries in the middle of the last century, and was brought into sharper focus by the advent of HIV/acquired immunodeficiency syndrome in the 1980s. Reusable glass syringes and reused needles were replaced by disposable plastic syringes and single use needles during the 1950s and 1960s. For many years, the used of a new disposable and sterile needle/syringe for each every injection has been standard practiced. Infections control policies, guidelines and practices to increases the safety of patients, health workers and health provider have been widely researched, implemented and evaluated. As a result, the risk of Blood Borne pathogens infections due to unsafe injections practices in high-income countries has been brought under control.

In developing countries, resource constraints and lack of routine surveillance system regarding safe injection practices have led to several outbreaks of Blood Borne pathogens in these regions. As seen in my study, worker in private clinicians and public hospital in rural areas surely lack of knowledge health provider or health care. It's responsible for the spread of this kind of causing death infections in the country. Unsafe injections practices in ROKA commune Battambang province in rural Cambodia, there are people 242 transmitted Blood Bone pathogens are in danger of HIV. According WHO and the previous reports unsafe injections infections HBV and HCV higher in the further if not fix these problems. So, injections practice is continuous with contaminate needle syringes with the health provider. There is an urgent needs for organizational commitment to the occupational safety of health care workers and health providers along with the provision of training in injections safety and universal precautions, supplies of personal protective equipment injections, and have a strong any more such drastic outbreaks. There is a need to train service providers to choose the proper type of treatment (oral or injectable) and proper method of handling of injections equipment. According WHO planning in 2020 will released new injection safety guidelines urging all countries to universally adopt the modern syringes, which disable after a single use.

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