

Editorial: What we can do to stop TB in our lifetime?

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March 24: World TB Day

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On March 24, every year world commemorates World Tuberculosis Day. For this year the slogan is "Stop TB in My Lifetime" which is the second year of a two-year campaign with this slogan calling for a world free of TB. Tuberculosis, an infectious disease caused by Mycobacterium tuberculosis is a leading cause of death in the world and the important public health problem in Nepal.

About 45% of the total population in Nepal is infected with TB. According to National Tuberculosis Center statistics, around eighty thousand people have active TB and around 45,000 contracts the disease every year of which 20,000 have infectious tuberculosis. According to National Tuberculosis Program, TB causes an estimated 5,000-7,000 death per year in Nepal.

The government of Nepal has worked to combat this disease since 1937. Directly Observed Treatment Short Course (DOTS) is a very successful program of Nepal and, as a result, Nepal has already achieved both the global target of tuberculosis as 70.0% case detection with its 72% detection rate and surpassed the 85% treatment success rate with a rate of 88.0% and has maintained these achievements over the last several years. However, there is need for much work to be done. A TB free world can only be achieved if we all are committed to stop it in our lifetime. Stopping TB in our life time can be achieved by:

Active involvement in the TB programs and activities

The government of Nepal, National Tuberculosis Control Program and international and national organizations working on TB organize various programs. People should fully support such programs by

actively being involved in their planning, implementing, and evaluation of such programs.

Think globally, Act locally
TB is a global and social disease that affects millions of people every year. Therefore, all the people irrespective of the caste, religion, ethnicity, gender, profession should advocate for the action on factors that support the prevention of TB. The social factors include many non-medical factors such as poor quality of life, poor housing, and overcrowding, under nutrition, and lack of education among others. These factors are interrelated and contribute to the occurrence and spread of tuberculosis.

BCG Vaccination

Children should be immunized with BCG vaccine soon after birth or at their first institutional visit for those who did not receive at birth.

Follow healthy habits

Use of a cloth /handkerchief is recommended while coughing and sneezing since TB is transmitted mainly by droplet infection and droplet nuclei generated by sputum-positive patients with pulmonary tuberculosis.

Seek medical care

All those who have persistent cough for more than two weeks, fever, and chest pain should seek medical advice on their own initiative.

Chemotherapy

Every case of active tuberculosis should undergo chemotherapy.

Patient compliance

It is critically important; the TB client being treated must take the right drugs at the right dosage for the right length of time. Incomplete treatment puts the patient at risk of relapse and the development of bacterial resistance.

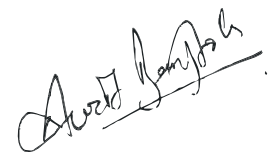
Support DOTS

DOTS remain central to the public health approach to tuberculosis control, which is known as the Stop TB Strategy. DOTS is a strategy of treatment to provide a cure by providing the most defined effective medicine and confirming that it is taken regularly. It is the only strategy which has been documented to be effective worldwide on a program basis. In DOTS, during the intensive phase of treatment a health worker or other trained person watches as the patient swallows the drug in his presence. During continuation phase, the patient is issued medicine for one week in a multiblister combipack. The consumption of medicine in the continuation phase is checked by return of empty multiblisters. The patient comes to collect medicine for the next week.

Political commitment

Recently, political leaders of major parties of Nepal have shown their written commitment to stop TB in their lifetime which can be viewed as a positive action toward the TB control program. In addition to this, the government of Nepal should manage and provide oversight to TB programs by the MOH and private providers to ensure that components of stop TB strategy proposed by WHO are effectively implemented.

As we commemorate this day, we would like to call upon our readers, national authorities and development partners to strengthen TB prevention and control initiatives in Nepal in order to stop it our lifetime.



Amrit Banstola

Helipad in hospital rooftop

KATHMANDU, MAR 02 -

Keeping in mind medical complications that could arise when critical cases do not reach hospitals on time, Vayodha Hospital at Balkhu has started an emergency evacuation service with the



use of a helicopter. A spinal injury patient on Friday was successfully airlifted from Pokhara in a helicopter that landed on the hospital's rooftop helipad. "We have accomplished a change, from wheels to wings, in transporting patients requiring urgent admission," the hospital said in a statement. "This is a glorious day in the medical history of the country."

The hospital staff helped in the successful transportation and admission of the patient in minimal time, the statement said. The hospital claimed that it has expertise in airlifting critical patients from all over the country.

"We have an entire range of medical equipment needed for emergency medical services," the hospital further said, adding that Vayodha offers a 'perfect combination of advanced technologies and skilled manpower to the patients.'

Source: ekantipur.com

Workers from India prone to HIV/AIDS

KANCHANPUR, MAR 16 -

Most of the workers, who In Kanchanpur district

National News

most of the Nepali workers, who have returned from India, are at a high risk of HIV / AIDS.

Ashok Pandey, Coordinator of the District AIDS Coordination Committee said that the workers returned from India and their families are affected by the AIDS. Some 175 males and 148 women and their 46 children are infected by it in the district, Pandey said.

Some 71 infected in the district who had returned from India died due to HIV / AIDS between 2006 to 2012, Pandey added.

An awareness program targeting the workers should be launched before they go to India, local community people said.

Source: RSS

Primary centers refer patients to hospitals even for minor ailments

KATHMANDU, MAR 21 -

A four-year old boy visited the Primary Health Care Centre (PHCC) in Sangla-4 of Kathmandu with a swollen right wrist. The health worker there prescribed a painkiller and asked the boy's grandmother to take him to the Tribhuvan University Teaching Hospital (TUTH) in Mahara-jung for a simple x-ray. Lacking even the most basic medical equipment such as x-ray machines and 'moderate'



laboratories, many PHCCs in the country's capital city, are unable to handle cases and

need to refer patients to hospitals for even minor ailments. Dr Ram Chandra Sapkota, medical officer at the Mulpani PHCC, said that a lack of equipment and infrastructure means that they often refer patients with minor illnesses that could potentially have been easily treated at the centre. This trend of referrals eventually create a 'burden' on the referral hospitals such as the TUTH and the Bir Hospital or a financial burden on patients if they choose treatment at private hospitals.

The National Health Policy 1991 had envisioned catering primary health care to rural population, which led to the establishment of sub-health posts in all VDCs and the formation of PHCC by upgrading health posts in all 205 electoral constituencies. Sub-health centers remain ground-level health institutions followed by health posts, PHCCs, district hospitals and zonal hospitals. However, the policy of extending "basic primary health services and making modern medical facilities available at the village level" is in dire need of restructuring, especially inside the Kathmandu Valley, said experts. "Prior to the promulgation of the 1991 policy, studies had shown that health services should be at the doorsteps," said Dr Laxmi Raj Pathak, former director general of the Department of Health Services. "The need might have been fulfilled then but as over 20 years have passed since then, new assessments are required to restructure these primary health care facilities." Apart from curative services, these centers have been able to provide preventive services such as vaccinations, which have played a significant role in decreasing child mortality. Furthermore, around 35 drugs provided free-of-cost by the government are reportedly available at these centers.

Dr Biplav Sapkota, medical

officer at the Tokha Chandeswori PHCC and former medical superintendent of the Jumla-based Karnali Zonal Hospital, claimed that PHCCs outside the valley serve the people better than ones inside the valley. Providing an example of Tokha VDC in the valley, Dr Sapkota said that because people are able to reach nearby hospitals in around 15 minutes and since the PHCC don't have equipment required for handling cases, a majority of people prefer bigger government and private facilities/hospitals. Reports show that the total number of patients treated by the 10 PHCCs inside the valley (excluding Lalitpur district) was 82,782 in the 2010/11 fiscal year. Dr Ramesh Acharya, chief of the emergency department at TUTH, said that good referral mechanisms are required in the country if the work load on government hospitals is to decrease.

"The care-seeking behavior of people has increased but the government has failed to fulfil expectations. Hence, people now believe that only big institutions can give good results and so, end up in referral hospitals in the Valley even for minor illness," said Dr Acharya. Dr Praveen Mishra, secretary at the Ministry of Health and Population, admitted that they had not been able to create awareness among the people on the primary health care imparted by the PHCCs. "However, with the present day demand, especially in the Kathmandu Valley, the municipal corporation and local development mechanisms should be more responsible in the matter," Dr Mishra said.

Source: ekantipur.com

Kantipur Hospital caught having uncertified workers

KATHMANDU, MAR 22 -

The Tinkune-based Kantipur Hospital has been found to have employed health workers and assistants who are not [Continue on page 4](#)

Bovine tuberculosis: A potential public health risk in Nepal



Dr. Santosh Dhakal, Veterinary Officer, National Zoonoses and Food Hygiene Research Centre, Kathmandu, Nepal

According to the 2012 Global Tuberculosis Report of World Health Organization (WHO), there were an estimated 8.7 million new cases of Tuberculosis (TB) and 1.4 million deaths in the world in 2011. Geographically, the burden of TB is highest in Asia and Africa and almost 60% of cases are in the South East Asia and Western Pacific regions. As per the annual report (2010/11) of National Tuberculosis Control Program (NTP), in Nepal, 35,964 cases of tuberculosis were registered from mid July 2010 to mid July 2011. Similarly, between 5,000 to 7,000 deaths occurs in the country each year due to TB. Though progress has been made towards global targets for reductions of tuberculosis cases and deaths, the burden still remains enormous due to TB/HIV co-infection and drug resistant TB.

Mycobacterium tuberculosis is the most common cause of human TB but certain proportion of cases is due to *Mycobacterium bovis* (a bacterium responsible for bovine TB). Infection of bovine TB (bTB) occurs mainly through consumption of contaminated, unpasteurized milk or dairy products. Infection can also occur from direct wound contact as in case of slaughtering of buffalo and cattle or by inhaling the bacteria in air exhaled by infected animals or also through consumption of meat products contaminated by *M. bovis*. TB caused by *M. bovis* is clinically indistinguishable from TB caused by *M. tuberculosis* which also includes fever, night sweats, and weight loss. *M. bovis* also causes TB that can affect the lungs, lymph nodes, and other parts of the body. As per the Nwanta et. al. (2010) review, the contribution of *M. bovis* accounted for 3.1% of all forms of human tuberculosis; 2.1% of pulmonary; and 9.4% of non-pulmonary forms in and the burden is likely to be higher in developing countries like Nepal.

As per the Joshi et. al. (2012) report, the overall prevalence of bTB in buffalo and cattle were respectively 9.08% and 5.78% in Nepal. Since livestock is the indispensable part of our agricultural system, buffalo and cattle are often kept in very close vicinity or in the same dwelling owing to the lack of land or a shed for shelter. This increases the chance of spread of *M. bovis*. In a recent study by Pandey et. al. (2012), in Chitwan district, bTB prevalence in cattle and buffalo was found to be 15%. The study was carried out among the buffalo and cattle raised by tuberculosis clients who were under DOTS treatment. Raw milk consuming habit was also demonstrated in some of those TB infected farm family members. This raises suspicion over how TB was acquired – perhaps from animals or from else?

“M. bovis also causes TB that can affect the lungs, lymph nodes, and other parts of the body.”

In industrialized countries, animal TB control and elimination programs, together with milk pasteurization, have drastically reduced the incidence of TB disease caused by *M. bovis* in both cattle and humans. However, pasteurized milk and milk products consumption are not common among Nepalese especially among those living in rural areas. Besides, buffalo and cattle suffering from bTB are also slaughtered and sold in the market as we don't have enough ante mortem and post mortem examination facilities. In addition, there are limited laboratory facilities in Nepal to determine the *M. bovis* contribution in human tuberculosis. Lack of awareness about bTB is the other issue. The situation is even aggravated by the limited reporting of bTB in animal populations, close human-animal interaction and lack of sufficient prevention practices surrounding animal tuberculosis.

In these circumstances, periodic screening of animals, provision of diagnostic laboratory facilities, enforcement of Animal Slaughterhouse Act and Meat Inspection Act (1999), proper coordination among human and animal health sectors and more importantly public awareness campaigns are recommended for better understanding and reducing the risk of acquiring bovine tuberculosis by humans .



“Infection of bovine TB (bTB) occurs mainly through consumption of contaminated, unpasteurized milk or dairy products.”

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World TB Day 2013



SOUTH ASIAN ASSOCIATION FOR REGIONAL COOPERATION SECRETARIAT

MESSAGE



As we all know, progress towards attaining global targets for reduction in TB cases and deaths in recent years has been impressive: TB mortality has fallen over 40% worldwide since 1990, and the incidence is further declining. In spite of this success scenario, it is estimated that one-third of the world's population is still infected with TB.

Against this backdrop, World TB Day, which is also observed as the SAARC TB Day, is an opportunity to raise awareness about the burden of TB and to assess the status of its prevention and control efforts. It is also an opportunity to mobilize political and social commitment to make further progress in curtailing TB cases. This is the second year of a two-year campaign with the slogan 'Stop TB in My Lifetime' calling for a world free of TB.

Tuberculosis is a contagious and airborne disease that disproportionately affects young adults in their most productive years. According to the global report, one-third of the world's population is thought to be infected with the microbe that causes TB. Worldwide, TB is not only the primary cause of death among people living with HIV/AIDS, but also leads to infertility and poor reproductive health outcomes. It is so despite the fact that TB prevention, treatment and control are among the most cost-effective public health interventions available.

The SAARC region, with an estimated annual incidence of 2.87 million TB cases, carries 33% of the global burden of TB. Four of the eight Member States in the region are among the 22 high burden countries with the highest burden of TB with countries as Afghanistan, Bangladesh, India and Pakistan, which represents 97.6% of total new smear positive cases notified in the region. And out of the sputum smear-positive pulmonary TB patients in the SAARC Region in 2010, 89% were successfully treated. Additionally, all the SAARCH Member States had achieved either close to 70% or above of case detection rate of new smear positive cases.

Established in 1992 in Kathmandu, SAARC TB & HIV/AIDS Centre (STAC) aims to support the efforts of National TB and HIV/AIDS Control Programs through evidence-based policy guidance, coordination and technical support with an end to minimize the mortality and morbidity due to TB and HIV/AIDS in the region. With the support of STAC, the good news is that all the SAARC Member States have developed their strategic plans for expansion of TB/HIV collaborative activities. In addition, Member States have also initiated management of MDR-TB under the National TB Control Programs.

As we commemorate this day, I would like to call upon national authorities and development partners to strengthen TB prevention and control initiatives in the region in order to stem the tide of this epidemic in our lifetimes.

Ahmed Saleem
Secretary-General
SAARC

National News

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certified by the Nepal Health Professional Council (NHPC). In an inspection conducted by the NHPC on Wednesday, three assistants at the radiology department of the hospital were not able to produce licenses to practise, which are issued by the council. The NHPC raided two hospitals—the Kantipur Hospital and the Gwarko-based B&B Hospital—following complaints that "uncertified health workers are working there." The NHPC registers health workers such as health assistants, auxiliary health workers, lab technicians, medical/health laboratory technicians, public health

professionals, microbiologists, physiotherapists, auxiliary Ayurved workers, dental hygienists and ophthalmic assistants, before providing them with a certificate to practise. Dhana Prasad Poudel, NHPC registrar, said they have instructed the hospital authorities to make sure they employ only those registered with the council. Executive Director of Kantipur Hospital, Himalaya Malla refuted the NHPC findings, claiming that the hospital had only certified candidates.

Source: ekantipur.com

**MARCH 24 IS
WORLD
TB DAY**

Global Health

HIV cure: a game changer or just a lucky little girl?

10 March 2013 -

Scientific report on the "functional cure" of a HIV-infected infant has set the world's media ablaze with discussion and speculation. Is this truly a "game-changer," as media outlets like NPR have reported?

The baby girl was born to an HIV-infected woman in Mississippi who was unaware of her HIV status.

Having missed the window for prevention, the girl's astute pediatrician recognized the risks of infection and promptly started the girl on an aggressive three-drug antiretroviral treatment for HIV.

HIV infection was confirmed in repeated tests just hours later. Eventually, the girl's medications reduced the quantity of the virus in her blood to undetectable levels. Amazingly, the girl's "cure" didn't require a pie-in-the-sky Buck Rogers solution or a yet-to-be discovered vaccine.

The antiretroviral medications she was treated with have been available around the world for many years. Indeed, her care shows us once again that HIV treatment medicines can also prevent some HIV infections. But the costs of standard three-drug treatments for children infected with HIV can be out of reach in many countries.

More importantly, this aggressive intervention was only possible because the little girl was delivered in a hospital by skilled attendants knowledgeable about HIV/AIDS.

Like many families affected by HIV, the child and her mother did not stay connected to the medical clinic. The child's mother continued treatment for about 18 months, but then stopped medications.

While it remains possible that

there was something unique about this little girl that allowed her to recover, current reports suggest that there was nothing about her genetic profile that made her uniquely capable of recovery.

Source: *Global Post*

Tuberculosis threat needs more funding, UN warns

18 March 2013 -

United Nations agencies warned that the fight against tuberculosis needs a large funding boost to stave off the disease's spread.

The World Health Organization (WHO) and the Global Fund to Fight AIDS and Malaria said that an extra \$1.6 billion is needed to fight the disease that ravages poorer nations.

The warning comes just a week before World Tuberculosis Day and amidst worries that a drug-resistant form of the disease is spreading, said Pakistan Today.

AFP reported that WHO director-general Margaret Chan said that now is the time to increase the response to the bacterial infection.

Source: *Global Post*

Build a better condom: Bill Gates offers \$100,000 to inventor

23 March 2013 -

The Bill & Melinda Gates Foundation is offering \$100,000 to anyone who can make a condom people actually like to use - a "next-generation" condom.

The feel of latex prophylactics has been central to why men choose not to use them, putting their partner at risk for sexually transmitted diseases and unwanted pregnancies. A lack of use has caused the spread of HIV/AIDS and has hindered family planning around the globe.

The contest is part of the Foundation's Round 11 Grand Challenges Explorations initiative and will offer financial support above the initial funding if a new condom is chosen. The description of the challenge reads: "The primary drawback from the male perspective is that condoms decrease pleasure as compared to no condom, creating a trade-off that many men find unacceptable, particularly given that the decisions about use must be made just prior to intercourse." The initiative seeks to create a condom that enhances pleasure and comfort.

"Material science and our understanding of neurobiology has undergone revolutionary transformation in the last decade yet that knowledge has not been applied to improve the product attributes of one of the most ubiquitous and potentially underutilized products on earth."

It is estimated that about 15 billion condoms are produced every year. There are 750 million users worldwide.

Source: *Global Post*

Novel coronavirus infection - update

26 March 2013 -

The Robert Koch Institute informed WHO of a new confirmed case of infection with the novel coronavirus (nCoV). The patient was a 73-year-old male from United Arab Emirates, who was transferred from a hospital in Abu Dhabi to Munich by air ambulance on 19 March 2013. He died on 26 March 2013. In the United Kingdom, the index patient in the family cluster reported on 11 February 2013 with travel

history to Pakistan and Saudi Arabia prior to his illness, died.

To date, WHO has been informed of a global total of 17 confirmed cases of human infection with nCoV, including 11 deaths. Based on the current situation and available information, WHO encourages all Member States (MS) to continue their surveillance for Severe Acute Respiratory Infections (SARI) and to carefully review any unusual patterns. WHO is currently working with international experts and countries where cases have been reported to assess the situation and review recommendations for surveillance and monitoring. All MS are reminded to promptly assess and notify WHO of any new case of infection with nCoV, along with information about potential exposures that may have resulted in infection and a description of the clinical course.

Source: *WHO*

Cashless treatment for road accident victims in India

27 March 2013 -

Minister of Road Transport and Highways (MoRTH) unveiled a pilot project under which road accident victims would be provided cashless treatment, an initiative that could bring down the high rate of fatalities in the country.

The MoRTH and an insurance company will jointly launch the pilot project by May on the 225-km Delhi-Gurgaon-Jaipur route that claims about 250 lives annually. The private insurance company will be providing back end support for managing the control room,

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Journal Watch

Attitudes among healthcare professionals to the reporting of adverse drug reactions in Nepal

Practice of Tuberculosis (TB) management is not much satisfactory among private medical Healthcare professionals working at four Regional Pharmacovigilance Centers (RPCs) of Nepal have positive attitudes towards Adverse Drug Reaction (ADR) reporting, according to the study published in the 2013 issue of BMC Pharmacology and Toxicology.

A cross sectional study was carried out using a self-administered structured questionnaire among 450 healthcare professionals working at four RPCs of Nepal. Out of these, 333 were received back with an overall response rate of 74.0%. The four RPCs were Manipal Teaching Hospital (MTH), Pokhara; Tribhuvan University Teaching Hospital (TUTH), Kathmandu; Nepal Medical College Hospital (NMCH), Kathmandu and KIST Medical College Hospital (KISTMCH), Lalitpur.

According to the study, there were 74.8% of healthcare professionals who had seen patients experiencing an ADR; however, only 20.1% had reported. The study found that unavailability of reporting form (48.1%) and other colleagues not reporting ADR cases (46.9%) had significantly discouraged the ADR reporting among healthcare professionals working at these four RPCs. However, healthcare professionals perceived that seriousness of the reaction (75.6%); unusual reaction (64.6%); reaction to new product (71.2%); new reaction to existing product (70.2%); and confidence in diagnosis of ADR (60.8%) were important factors on the decision to report ADR.

The authors of the study recommend that awareness among healthcare professionals, training and collaboration would likely improve reporting, provided they would also receive appropriate feedback from the national pharmacovigilance program.

Full text article is available at: *BMC Pharmacology and Toxicology* 2013, 14:16.

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Global Health

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monitoring ambulances, and tying up with hospitals to provide the 'golden period' treatment.

Source: *The Hindu*

China: Bird flu kills two in Shanghai

31 March 2013-

Two Chinese men have died of bird flu in Shanghai after contracting a strain of the disease not previously seen in humans. Both men, aged 27 and 87, became ill with the H7N9 strain in February and died in March.

A third person — a 35-year-old woman — also caught the virus while in Chuzhou, in the eastern province of Anhui. She is said to be critically ill.

Source: *Global Post*

The association between having no sons and using no contraception among a nationally representative sample of young wives in Nepal

The modern contraception use is more likely among wives with sons and less likely among wives with daughters, demonstrating that son preference continues to affect contraception use among the next generation of women in the country, a May 2013 issue of International Journal of Gynecology & Obstetrics study found.

Data were obtained from 15-24 year old married females participating in the Nepal 2011 Demographic and Health Survey (n=2439). Multivariate models predicting modern contraception use included having no sons, social inequities (wealth, education, rural residence, and caste), gender inequities (early age at marriage, spousal age and education gaps), respondent age, parity and geographic region.

The study found that most (79%) married women use no modern contraception. As per the study, non-use was more likely for those having no living son (AOR=1.6, 95% CI=1.2, 2.2), as well as those married as a minor (AOR=1.4, 95% CI= 1.02, 1.9) and residing in a rural area (AOR=1.6, 95% CI=1.3, 2.5). Exploratory analysis further indicated having no daughter was negatively associated with non-use (AOR=0.7; 95% CI=0.5, 0.9).

Full text article is available at:

International Journal of Gynecology & Obstetrics - May 2013 (Vol. 121, Issue 2, Pages 162-165, DOI: 10.1016/j.ijgo.2012.12.011)

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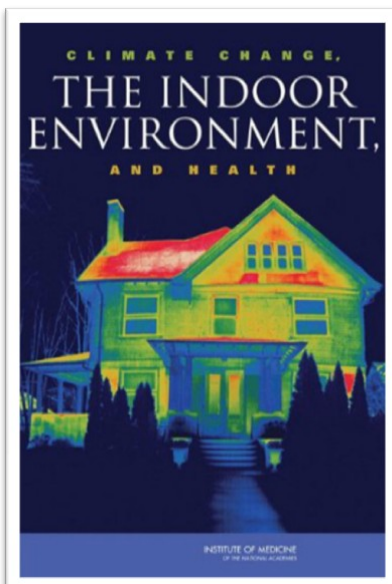
Why the effect of climate change on the indoor environment and health constitutes an important issue?

The indoor environment affects comfort, health, and productivity. People in developed countries spend most of their time indoors, so most of the adverse exposures that they encounter regularly take place indoors. Many exposures that are potentially hazardous to health are exposures to substances emitted indoors from indoor sources. Such emissions can occur from building materials; from products used or stored indoors; from processes that occur in indoor environments; from the microorganisms, insects, other animals, and plants that live indoors; and from the behavior of building occupants. Because of the contributions from indoor sources, indoor levels of many pollutants are higher than those found outdoors. In addition to pollutants attributable to indoor sources, ventilation may draw pollutants into buildings from outdoor air. Buildings offer protection against some pollutants that are of predominantly outdoor origin; but that protection is generally incomplete. And some outdoor pollutants that enter a building interact with its components or contents and thereby alter the composition of indoor air in ways that can affect the health and welfare of occupants.

Climate change has the potential to affect the indoor environment. Ambient conditions in the outdoor environment serve as boundary conditions to the ambient conditions of the indoor environment. Outdoor air temperature, humidity, air quality, precipitation, and land surface wetness can all influence the indoor environment, depending on such factors as the integrity of a building's envelope; the state and air-conditioning systems; the ecosystem; and the characteristics of the buildings around it. If climatic conditions in a particular area change—come more severe or if there are frequent episodes of high heat or intense precipitation—structures that were designed to operate under the "old" conditions may not function well more, in responding to climate changes that cannot be mitigated. Some of their responses will play out in how built structures are designed, used, maintained, and retrofitted, and the actions taken may well have consequences for indoor environmental quality and public health.



There is a body of literature on how the indoor environment influences occupant health and how the external environment influences the internal built environment under past and present climate conditions. And research is emerging on the possible effects of climate change—such as extreme temperatures and thermal stress, vector borne infectious diseases, and outdoor air quality—on human health. However, the body of research specific to the effects of climate change on human health in the indoor environment is very small. Such studies are complicated by the fact that the effects of climate change on, say, indoor air quality depend on the geographic region and are a function of the age and condition of the regionally dependent built environment.



Against that backdrop, the US Environmental Protection Agency (EPA) approached IOM with a request to summarize and benchmark the state of the science concerning the health effects of climate change-induced alterations in the indoor environment, raise awareness of crucial issues, and suggest a way forward. The Committee on the Effect of Climate Change on Indoor Air Quality and Public Health was formed to respond to that request.

>> This article is an extract from the IOM (Institute of Medicine). 2011. *Climate Change, the Indoor Environment, and Health*. Washington, DC: The National Academies Press.

This book is available to download at:

http://www.nap.edu/catalog.php?record_id=13115



Being Healthy

Hypertension— A Silent Killer

How many of you check blood pressure regularly? The proportion who answers in the affirmative might be quite low.

One should be careful to check your blood pressure periodically because High Blood Pressure (HBP) also known as Hypertension— the condition when blood pressure takes its height above normal range 120/80 mmHg for a long period, is now the leading cause of death among non-communicable diseases worldwide. In Nepal, the problem of the disease has tripled in the last 25 years. About every fourth adult Nepali is likely to have HBP.

World Health Organization (WHO) states in its report, "more than one in three adults worldwide have HBP, with the

proportion going up to one in two for people aged 50 and above". It further adds that hypertension kills nearly 1.5 million people every year in South-Asia making it the single-most important risk factor for non-communicable diseases like heart attack and stroke". Normal blood pressure is recorded, as systolic number (120) over diastolic number (80) where systolic is the peak of the wave when a heart contracts, and diastolic is the dip of the wave when the heart relaxes.

Early warning signs

There are no any early warnings of HBP but some conditions like dizziness, headaches or blurred vision are some predisposing factors. For this reason, HBP is called a 'Silent Killer'.

Causes and Remedies

There are basically two principal causes of hypertension. The first one is physical causes such as kidney disease or hormonal disorders which accounts for about five to 10 percent of HBP patients. Many of the other causes are responsible for the remaining 90-95 percent of patients. Some contributing factors include:

Diet

More than five gram salt per day is responsible for raising the blood pressure. So cutting back of salt intake and consumption of fruits and vegetables can enhance the maintenance of blood pressure range.

Obesity

Obese people are about two to six times more likely to develop HBP than the non-obese. Losing even a small amount of weight is helpful for prevention.

Exercise

Physical inactivity is one of the predisposing factors for HBP. People who perform regular physical exercise (even light exercise) for 45 minutes per day have less chance of developing HBP than those who do not exercise.

Stress

Stress contributes to a rise in the blood pressure and over time it leads to the HBP. Per-



forming yoga and meditation can be helpful.

Smoking and alcohol

Smoking and alcohol consumption raise the blood pressure making the heart labor to maintain blood flow. They also cut back the effectiveness of blood pressure reducing drugs. Reducing or quitting smoking and alcohol is a valuable action to lower blood pressure.



provider immediately.

By adopting these simple but potentially effective activities one can reduce high blood pressure, delay the development of HBP, enhance effectiveness of blood pressure medications, and consequently lower the risk of heart attack, stroke and kidney damage.

>> By Anoj Gurung

Blood pressure level

Normal	Systolic=less than 120 mmHg Diastolic=less than 80 mmHg
At risk hypertension) (Pre-	Systolic=120-139 mmHg Diastolic=80-89 mmHg
High	Systolic= 140 mmHg or higher Diastolic= 90 mmHg or higher

Birth control pills

In some women, birth control pills raise the blood pressure. If the woman experiences a rise in blood pressure, she should consult her health

Hypertension: Men Vs Women

Age	Men (%)	Women (%)
20-34	11.1	6.8
35-44	25.1	19.0
45-54	37.1	35.2
55-64	54.0	53.3
65-74	64.0	69.3
75 and older	66.7	78.5
All	34.1	32.7

Women are about as likely as men to develop high blood pressure during their lifetimes. While, for people under 45 years old, the condition affects more men than women, for people 65 years and older, it affects more women than men.



WHO Publications

Bulletin of WHO Vol. 91, No. 03, 2013

The Bulletin is one of the world's leading public health journals. It is a peer-reviewed monthly with a special focus on developing countries, giving it unrivalled global scope and authority. The Bulletin is one of the top 10 public and environmental health journals with an impact factor of 5.4, according to the Institute of Scientific Information (ISI). It is essential reading for all public health decision-makers and researchers who require its special blend of research, well-informed opinion and news. Full bulletin is available at:

<http://bit.ly/Z16QoB>

WHO Global Status Report on Road Safety 2013

In 2010, member states at the United Nations General Assembly unanimously adopted a resolution proclaiming a decade of action for road safety (2011 - 2020). The extent of support for this resolution by member states indicates a growing awareness of the scale and devastation of road traffic injuries as a global public health and development concern. The report is available for download at:

<http://bit.ly/12yevuR>

APPLY FOR CAMPUS LIASION

Participation on the PHP team is an opportunity to get involved in PHP activities, develop and demonstrate leadership skills, as well as work with some terrific colleagues. The campus Liaisons will have opportunities to shape the activities and strategic directions of PHP. In addition, Liaisons serve as their college representative to the PHP by helping to: reporting news from their college in general and the program of study in specific.

Serving as a campus liaison does not require a large time commitment. Campus liaisons distribute information, for example, by speaking at new student orientations and to your student society or association about PHP. PHP will provide necessary materials needed for this position. This position will also provide students with a unique opportunity to become more cognizant of health news around the nation.

Being a campus liaison for PHP is a great way to demonstrate the team work ability with the professional development as campus liaisons names and their colleges are mentioned in every issues of PHP.

If you are interested in participating as a Campus Liaison and have any questions about the Liaison position, please contact us.

Email: newsletter.php@gmail.com

OUR CAMPUS LIASIONS

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Call for Articles for April/May Issue

- 500-700 words on topic of public health importance (see website)
- Do not include any graphs, tables and citations
- PP size photo in jpeg format
- email your articles to newsletter.php@gmail.com with the subject '**article for PHP**'
- For more information:
<http://www.bmhall.yolasite.com/information-for-contributors.php>

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