### Tuberculosis: No More a Disease of the Past

UBERCULOSIS, most of us consider it to be a disease of the past. At one time there was even a certain romance to it. The young, the talented, the doomed Browning or Thomas Mann. seeking respite in fresh Alpine air, all suffered from the vague illness labeled consumption. Then it became a disease of the elderly and the poor. And then something seldom encountered in the Western world.

For me, there was a personal impact. The medical society in the dairy state in which I grew up, finally dictated the pasteurisation of milk. Many prophesied a disturbing change of taste, but the law went through. Not many vears later my father, a physician, one of whose responsibilities was the county 'San' came home and announced that it had been his last day. The Sanitarium was closing. I broke into tears: I thought my father had lost his job.

Today, my father would be much in demand. So serious is the situation worldwide, that in April of last year, the World Health Organization (WHO) took the extraordinary step of declaring tuberculosis a global emergency, warning that the disease will claim over 30 million lives in the next decade unless serious action is taken. Tuberculosis is humanity's greatest [adult] killer and is out of control in many parts of the world. This disease, which is preventable and treatable. has been grossly neglected and no country is now immune, states Arari Kochi, Tuberculosis Programme Manager at WHO. "Modern transportation, increasing global business and migration, and refugees from wars and famines will ensure that TB continues to spread in the industrialised as well as in the developing world."

It doesn't take an impinging outer world to account for the rising incidence of tuberculosis in the United States. Poverty, homelessness, failed programmes and AIDS have been more than sufficient to fuel the resurgence of a disease almost extinct, but now returned in a more dangerous and frequently more virulent

The resurgence is neither fluke nor mystery, but a combination of input from a newly introduced disease and tragic social failure for a large part of our society.

For years, tuberculosis hadbeen the nation's leading killer but with benefit of the by Sarah E Coghlan

antitubercular drugs introduced in the mid-fifties, the US had achieved the lowest tuberculosis rate in modern history. Then within a seven vear span, 1985-92, the total number of cases jumped 20 per cent. In 1992, the last reported year, 26,673 active cases were cited, up a further 1.5 per cent. This, according to the United States Centers for disease Control, despite the fact that 11 per cent of doctors surveyed are so out of touch they don't even recognize TB as a reportable disease.

An Urban Disease Tuberculosis, in the United States is an urban disease. On the East Coast, New York City, Newark. Philadelphia and Atlanta report the highest incidence. Chicago, Detroit and Houston score in the Midwest: San Francisco and Los Angeles in the West. Dr Mark R Chassen. Commissioner of Health for New York state says, "We've got overcrowding housing, drug use [and] inadequate health care." The Harlem Hospital Center's Drs. K Brudney and J Dobkin agree, arguing that the resurgence of tuberculosis in New York city has been largely attributed to the acquired immune deficiency syndrome (AIDS) epi so evident demic, but "that historical events predating the advent of AIDS and worsening economic and social conditions, including the rise of homelessness. have contributed significantly

to the disease." Densely Populated

Areas In addition to constantly increasing crowded living conditions, the current social milieu supports other spectacular sources for the spread of tuberculosis: jails, shelters, and migratory workers' housing. TB is an airborne infection. The tubercular germ spreads on droplets released from deep within the lung when the TB sufferer coughs. The only certain way to defeat the spread is to isolate infective sufferers. The crowded conditions in jails, shelters, and in most migratory housing act, instead, as fertile incubating grounds. These settings place at risk, in addition to the families of victims, prison inmates or fellow shelter dwellers, the police, guards, lawyers nurses and doctors who are in contact with those infected. Tightly insulated and non-ventilated office settings are also becoming suspect as disease spreaders, as are the

cabins - or even more specifically, the cockpits - of airplanes

Demographic Forces Tuberculosis, even in Third World countries, is not a disease of infants or small children. Youngsters born in the last few decades in regions with high population growth rate are now reaching young adulthood, the age where mortality from tuberculosis is high. Thus, we are inheriting a

Public Policy Neglect Public-policy neglect has allowed TB control programmes to disintegrate over the past twenty years. The public now reacts to this phenomena of the resurrection of a 'dead' disease with great surprise. It should have been obvious as the public health measures that had contained TB were increasingly abandoned. The declining incidence triggered a loss of concern, which in turn initiated a drop in funding. TB was not a priority in America during the Reagan or Bush administrations. Money were diverted - some argue correctly - to AIDS and other pressing needs. The symbiotic relationship between AIDS and TB had not yet become

> Poorly Managed Programmes Programmes - poorly man-

aged - have actually contributed to the emergence of dangerous drug resistant strains of the tuberculosis bacteria. Antitubercular drugs are, as a TB specialist put it. are 'tricky instruments'. The six months treatment, with isoniazid, rifampin and pyrazinamide is the most common regimen. In the Third World, dictates a less expensive, but longer and therefore even more rocky regimen. Getting patients to complete the course is not easy. In some cases, of multiple drug-resistant TB, patients must take as many as six or seven different drug treatments, all of which involve different schedules, i e, different pills, different numbers, varying days — a veritable nightmare for even the most competent of patients. This demands time and patience on the part of the physician and perhaps more important, should involve home therapy and visiting of nurses to widely scattered patients. The real kicker is that the patients may feel better early on during the course of the therapy and then abandon the medication. A par-

tial course is worse than none at all, actually becoming the means of cultivating new drug resistant strains. With the early elimination of the most susceptible germs, the most obstinate remain. The explosive potential of this situation can be imagined from a recent study at the Harlem Hospital in the USA indicating that only 11 per cent of patients in treatment completed the

treatment. Figures from developing countries indicate rates ranging from 40 per cent to 90 per cent, varying by country. Obviously, the Third World has something to teach the First in health delivery sys tems. The suggestion is even out there to present 'honorariums' to those who keep their monthly clinic appointment the rationale being, a small bribe now better than a long hospitalisation down the

AIDS, a Devastating Link

The largest increase in the current tuberculosis epidemic is, of course, the input of AIDS. A devastating link between TB and the HIV virus (precurser to AIDS) is responsible for contributing to the breakdown of the cell-mediated immunity protecting against TB. Tuberculosis is unique amongst the world's opportunistic infections and common diseases whether viral, bacterial, protozoan or helminthic - in that it alone is exacerbated by HIV. While 90 per cent of persons infected with TB do not go on to develop the clinical disease. the relative risk of clinical TB among those with HIV is six times greater. HIV is probably the most potent activator or TB known.

What Now? There is it seems, a necessity of bringing back the sanitariums of my father's day. That even such a thought may seem like a mockery of the fifty years of progress towards the eradication of one of the great scourges of mankind. The approaches may differ from those of the previous era, directed more towards sub-populations with high rates of substance abuse and homelessness, accompanied by continuous monitoring. The extremity of the current situation, however, demands immediate attention from a community which can no longer consider tuberculosis to be a disease of the past.

The writer is a Health Planning Consultant at the Friends of Bangladesh.

tients. The drug costs alone for

one patient on short-course

treatment are about US\$30.

The average costs per patient

cured - including drugs, staff

salaries, transport, and use of

# 'Medical Disaster' Warning as Bacteria Fight Back

EADING scientists are increasingly concerned that a medical disaster is looming because bacteria are becoming more resistant to the powerful antibiotics used to treat serious infections.

World-renowned microbiologist Professor Alaxander Tomasz of New York's Rockefeller University is the latest expert to warn that within the next decade we could see curable diseases such as pneumonta, blood poisoning and tuberculosis returning as the killer diseases they used to be.

In a keynote address to the American Association for the by Andrew Chetley

great natural resource was squandered and where the bugs proved smarter than the scientist," he says.

These and other infectious disease control experts are convinced that indiscriminate use of antibiotics has led to the development of bacteria resistant to the standard, effective and inexpensive drugs nor mally used to treat common diseases. A Dutch specialist in paediatric infections. Ronald de Groot, describes this as "a global problem with a major impact on healthcare in developed and developing coun

thirds of antibiotics prescribed in settings as diverse as the US. New Zealand and Nigeria are inappropriate.

in developing countries, more of the national health budget and personal income is spent on antibiotics than on any other class of drug. In industrialised countries, too, sales are high. The result is a global market worth \$22 billion. By the turn of the century, the market is expected to top \$40 billion.

In some countries, a large percentage of the antibiotics produced are given to animals.

libiotics containing many of the newer formulations on the grounds that such antibiotics were inappropriate for unrestricted use because of the need to reduce the risk of resistance or because of high

A report on Problem Drugs by Health Action International (HAI) - the global network of health, development, consumer and public interest groups that campaigns for a more rational use of drugs says that "Antibiotics are too valuable a public health tool to waste simply because the pharmaceutical industry wants to recoup its investments a lit-

Antibiotics were hailed as a 'magic bullet' for their efficacy in combating bacterial diseases, and were seen as ushering in a revolution in healthcare. But they have been over-prescribed on a massive scale, reports Gemini News Service, and now doctors are warning that an epidemic of antibiotic resistance could lead to a global medical dis-

#### Antibiotics action recommended by Health Action International Refresher courses With other ations | Strict guidelines and independent Clear product with other active information for warnings about in every country chemicals resistance and use In the US, for example, about tle faster." Advancement of Science in

San Francisco recently, he said: "Already some strains of bacteria have been found to carry resistance to every an tibiotic known to medicine. If that resistance spreads into some of the other, more deadly strains ... we will have a medical disaster on our hands."

Doctors have recently found that some stains of enterococcus - a bacterium which causes wound and urinary tract infections — cannot be killed by any antibiotic. "For the first time in five decades we now have a bacterial infection for which there is no cure," said Prof. Tomasz.

Australian microbiologist Dr Ken Harvey echoes the concern. He says that the global misuse of antibiotics in humans and animals may leave us defenceless against severe infections. "We may look back at the antibiotic era as just a passing phase in the history of medicine, an era in which a

The inability to treat infections with the usual antibiotic of choice (or any other drug.) can be disastrous. In recent years, resistant strains of bacteria have triggered severe outbreaks of gonorrhoea dysentery, pnemonia, meningitis and deadly hospital infections in many countries. Infections caused by resistant bacteria are more likely to cause prolonged illness, frequent and prolonged hospitalisation and a higher death rate. This human suffering is accompanied by financial burdens. In the United States alone, the cost of antibiotic resistance has been estimated at more than \$100 million a year.

There is no shortage of evidence about misuse. Studies from the US, Britain, Canada, Italy, Australia, New Zealand, Uruguay, Nigeria, Brazil and the Middle East confirm the indiscriminate and often unjustified use of antibiotics. Between one-third and twohalf of all antibiotics produced are used to prevent or treat animal disease or to promote growth in animals. One consequence has been the spread of antibiotic-resistant salmonella infection from animals to humans. The pharmaceutical industry invests heavily in promoting antibiotics, often with misleading claims. It encourages doctors to prescribe the latest — and most expensive antibiotic as first-line therapy for a broad spectrum of infec-

advice from bodies such as the American Medical Association, the British National Formulary or Australia's Antibiotic Guidelines is that these newer antibiotics should be used only for well-defined indications or due to resistance.

when other drugs have failed The World Health Organization (WHO) argued in 1990 that governments establish

such a "reserve list" of an-

In most cases, independent

Health Action International has called on governments to develop strict antibiotic policies as part of their national health and drug policies . It suggests that policies should include development of a limited list of antibiotics; production and regular review of a set of therapeutic guidelines for antibiotic use; and study of usage with a view to introducing education programmes to encourage more rational use where necessary. HAI also recommends that governments introduce stronger controls to prevent misleading promotion of antibiotics. As Prof. Tomasz points out, when problems of resistance occurred in the past, doctors simply turned to another antibiotic. However, that option is rapidly disappearing: "We have always assumed we will have another antibiotic saviour up our sleeves. We can't make that assumption any more." Gemini News

## TB Emerges Anew on Centre Stage

T may not be a surprise that three Nobel Prize winners were given the awards because of their work in connection with tuberculosis.

After all, the bacteria tuberculosis, even today, is the world's foremost cause of death from a single infectious agent killing three million people each

In 1905, German physician Robert Koch was awarded the Nobel Prize for Medicine. He discovered the tubercle bacillus in 1882 and later developed a diagnostic test for TB infection.

Earlier in 1901, the Nobel Prize for Physics was awarded to Wilhelm Conrad Roentgen who discovered the use of Xrays in 1895. For the first time, it was possible to visualise tubercular lesions in the chest.

The 1952 Nobel Prize for Medicine went to Selman A Walksman who, with his American colleagues, discovered in 1944 streptomycin, the first antibiotic effective against TB.

Mycobacterium tuberculosis is the germ that carries TB infection, in droplets in the air. spread by coughing or sneezing. entering the body through airways. If the immune system does not stop infection, it spreads and destroys tissues in the lungs where the bacteria multiply. Large numbers of bacteria are coughed out. spreading the infection.

TB kills more people worldwide than any other infectious diseases, including malaria and

Currently, a third of the world's population harbours the tubercle bacillus and is at risk for the disease.

Untreated, TB kills about half of those affected. Preventable and curable (more than 95 per cent of patients are cured), TB nevertheless accounts for over a quarter of avoidable deaths among adults. TB occurs mainly in poor countries where 95 per cent of 10 of the 8 million cases and 3 mil-

lion deaths occur each year. 'Unless immediate action is taken, it will claim more than 30 million lives during the coming decade,' warns Dr Hiroshi Nakajima, Director-General of the World Health Organisation (WHO). The disease is out of control in many parts of the world.

TB was never really eliminated anywhere, even after the discovery of effective drugs between the 1940s and 1960s. But for a while the number of TB cases and deaths declined. rapidly in industrialised countries.

In 1921, French scientists Albert Calmette and Camille Guerin created a vaccine against tuberculosis. BCG (standing for Bacillus-Calmette-Guerin) is still the only vaccine against the disease.

is resistant to a particular drug. By that time, the sufferer may have already died.

Unless immediate action is taken, it will claim more than 30 million lives during the coming decade,' warns Dr Hi-

bers of staff with the increase of

TB patients. Enough space

should be made available for TB

patients in hospitals and treat-

drugs are available for all pa-

Funds should guarantee

OST parts of the

world face a ca-

**▲** ▼ **▲** tastrophe because

of AIDS," says Dr Michael

Merson, Director of the WHO

Global Programme on AIDS.

The World Health Organisation

in a press release on 21st May,

1993 reports that the world's

worst AIDS affected area is

sub-Saharan Africa where over

eight million men, women and

children have been infected by

HIV. But the most alarming

trends of HIV infection are in

South and South East Asia,

where the majority of infec-

tions have been reported by

India and Thailand. The infec-

tion is spreading world wide in

pandemic form. A source from

Harvard, USA, predicts that

the present 12 million HIV

infections worldwide, will rise

to 100 million by the year.

2000, with 46 per cent of

these in Asia in countries like

Thailand, India and Myanmar.

In Bangladesh, till June 1993,

only 10 HIV positive cases

have been reported with one

known case of AIDS, though

the true prevalence is un-

known as Bangladesh is in the

early stage of the HIV epi-

HIV can be sexually trans-

mitted in the same way as any

sexually transmitted diseases

or STDs. HIV and STDs are

interrelated. The prevention

will reduce HIV transmission.

STDs used to be called vene-

real diseases or VD. The most

common serious STDs are

gonorrhoea, syphilis, chlamy-

and early treatment of all STDs

demic.

ment facilities.

roshi Nakajima, Director-General of the World Health Organisation (WHO). The disease is out of control in many parts of the world.

campaign was carried out in 1948-51 by the Scandinavian Red Cross Societies, with the support of the UN Children's Fund (UNICEF). Today, mass vaccinations are common. For more than a century,

The first mass vaccination

physicians used to send TB patients for rest and exercise to sanatoria, often in mountain areas with plenty of fresh air. But by 1960, it became apparent that TB cases could be treated at home with the new anti-TB drugs just as effectively Sanatoria began to close all around the world.

Now, after 35 years in decline, TB is back in industrialised countries (TB was never really licked in developing countries). In New York, the number of cases rose by 150 per cent since 1980. In the United States alone — where health care tends to be more expensive but has only a tiny minority of TB cases - the epidemic has cost US\$640 million since 1985.

Health authorities believe the disease cannot be controlled in industrialised countries unless it is also significantly reduced (and controlled) in developing countries.

Successful treatment requires six to eight hours of consistent, uninterrupted medication. TB drugs are comparatively cheap but underused. Many patients do not finish even the minimum six-month treatment course.

Today, doctors use antiquated (but still effective) diagnostic tools. This is because TB research stopped before the age of biotechnology.

This is a disadvantage. The TB bacterium grows extremely slowly in culture and is so infectious that only certain laboratories are equipped to handle it. Using current methods, it can take at least two weeks to confirm TB and even longer to discover that a particular strain

While 80 per cent of infectious patients are cured, health programmes can only be maintained by adjusting the num-

hospitals and other facilities arc around US\$200. Thus, treatment of TB is a very cost-effective health inter-

vention. Not to say, life-saving. Which is why TB should not have cut sort many lives, in-

cluding those of painters Antoine Watteau and Amedeo Modigliani, poet John Keats, composers Carl Maria von Weber and Frederic Chopin, South American liberator Simon Bolivar, writer Anton Chekhov and philosopher Henry David Thorcau.

Like millions more, they succumbed to TB.

Sexually Transmitted Diseases and AIDS

by Dr Mohd Ali Belal

dia, chancroid, herpes and

genital warts. A person can be-

come infected with STD when

he or she has vaginal or anal

sexual intercourse or oral sex

with an infected person. The

male and female genitals and

mouth provide the ideal envi-

ronment from which STD

germs can invade the body.

STDs are serious and painful

and they can cause a lot of

damage to the body — resulting

in illness, infertility, impo-

tency and ultimately death

Most STDs in pregnant women

can infect babies in the womb

or during delivery, causing se-

STDs have early symptoms

which go away without treat-

ment, but the germs remain in

the body causing damage to

different organs. Some STDs

give no symptoms at all, par-

ticularly in women, who only

harbour the disease. A person

infected with an STD may look

and feel healthy but can still

infect partners or unborn ba-

vantages to concentrating on

the prevention and treatment

of STDs, rather than just focus-

ing on HIV infection and AIDS.

This is true especially as HIV

communities.

is not yet common in our

change their behaviour to pre-

vent a problem which affects

them now, than to prevent an

illness which they have never

· People are more likely to

There are a number of ad-

Like HIV infection, many

vere handicaps and deaths.

— Depthnews Asia

#### Fighting against Fate HEN life became di-Every year thousands of Nepali girls are sold or tricked into fficult in her native working as prostitutes in India's brothels. Jan Sharma village of Melamchi reports on the fate of those who contract HIV and are sent

in the Nepal hills, Geeta moved to Kathmandu where she worked as a housemaid. When her cousin promised her a better job in a carpet factory in India, she jumped at the opportunity.

"I didn't realise that I was sold to a Nepali brothel keeper in India until the lady told me to engage in business," she said. "I wept and wept. I was shocked to be sold by my own relative. I went mad. They admitted me into a mental hospital. After a year, I was ultimately forced into prostitution. I never liked it — that was not what I had wanted. But you can't fight against luck and fate.

Thousands of girls from

seen and which may not ap-

STDs will prevent HIV, so

people at low risk of STDs are

will also reduce HIV trans-

mission. This is because HIV is

more easily transmitted when

discharges from another STD.

will prevent a lot of infertility.

with partners who have genital

rashes, redness, sores or dis-

lar check-ups if they cannot

practice safe sex or as soon as

they notice any signs of physi-

cal illness. Women should in

particular have STDs check-

ups when they have medical

exams, perhaps during a family

planning visit. This is because

women often have no obvious

the person gets the correct

treatment from a health

worker. The germs are hard to

kill, so people must take pre-

scribed medicines exactly as

· Encourage people to in-

form their partners or nearest

of kins when they have STD.

Otherwise, the partners will go

on spreading the disease, and

they can infect healthy people

rector, Prevention and Control

of Sexually Transmitted Dise-

The writer is Project Di-

they are told.

with the virus.

ases in Bangladesh.

Most STDs can be cured if

charges.

person has sores or

The reduction of STDs

People should avoid sex

People should go for regu-

· The actions which prevent

The reduction of STDs

pear for another ten years.

also at low risk from HIV.

Nepal meet Geeta's fate every year. They are promised an attractive salary and a film heroine's lifestyle by the pimps and 'dream merchants' who travel through Nepal's villages.

back home.

In India, where Nepali girls are considered sexually attractive and are in high demand, they are sold to brothel keepers. Many resist but are beaten and repeatedly raped until they submit. The girls are then held in the brothel until they can pay back the owner the amount spent for them. In Bombay brothels alone, there are at least 20,000 Nepali girls, and more than 200,000 in the country as a whole.

But now the Indian health authorities are testing prostitutes for HIV, an increasing number of them — like Geeta are sent back to Nepal when they test HIV positive.

Up to 25 per cent of prostitutes are HIV positive in some Indian cities — and the rate is even higher for Nepali prostitutes, reaching 35 per cent in places, according to the Kathmandu-based Women's Rehabilitation Centre, who provide support for some returning girls.

But the facilities for those women are few and fair between. Eighteen-year-old Laxmi, who was diagnosed with HIV after escaping from a Bombay brothel, found that her back when she came home to Nepal. After a brief spell in hospital, she was discharged and disappeared in Kathmandu. "We discharged her because we could do so little for her," explained Dr Gopal Gajurel. "Another reason was that local youths made a beeline to her cabin in the evenings and nights.'

Prostitution is illegal in Nepal, but many returning prostitutes are "doing brisk business back home", say senior police officials. An estimated 25,000 girls, many of them infected with HIV, are engaged in prostitution in Kathmandu. Rejected by their families, unskilled and stigmatised, most of them have no other option to survive.

AIDS is already a political issue in the Himalayan kingdom, where at least 5,000 people are estimated infected with HIV. According to Dr Bal Gopal Baidya, of the National Planning Commission, many factors facilitate the spread of HIV in Nepal. These included large-scale migration across the 2,000-mile open border with India, widespread sexually-transmitted diseases and drug use, inadequate health care and a low level of condom use - even by South Asian standards.

Opposition MP Asta Laxmi

Shakya has already raised the issue of AIDS and women in parliament: "There is an urgent need to provide proper treatment to the AIDS-infected women returning from India in parents refused to take her order to check the spread of the disease," she said. She alleged that women who tested HIV positive were being discriminated against by medical staff in hospitals.

AIDS carries a heavy stigma in Nepal. When Maya, another returning prostitute, died of AIDS in a Kathmandu hospital, her body was removed and buried with the help of bamboo sticks - no-one dared even touch her body for fear of in-

Geeta was sent home with 200 Indian Rs (US\$6.50) for her transport after she tested HIV positive. Back in Melamchi, she found her mother had died and her father refused to take her back. Determined to begin a new life, she rented a liquor shop with her savings. The shop was successful until her HIV status became known in the village then business collapsed and she was forced to close down.

Geeta is now sheltered at a home for HIV-infected girls run by the Women's Rehabilitation Centre in Kathmandu, learning to knit sweaters to earn a living. But homes are not the answer.

"It's financially and practically impossible to open hostels for all these girls because of their sheer numbers," says Dr Aruna Upreti, who works with the Centre. - PANOS



Thousands of women from Nepal end up in the brothels and streets of Bombay.