

Feature Health

A Unique Centre for Medical Research

by Fayza Haq

"PLASMA Plus is an application laboratory in medical science. This centre is for scientists and doctors to find the optimum use. In order to know the efficiency of the machine, if you really want to teach someone what radiology is, you need certain number of patients, as you cannot use 'dummies'," said Humayun Quader Chowdhury who runs the centre.

"We do accept a certain number of patients everyday to see how a machine works, such as how the ultrasonography machine, X-ray machines, and blood testing machines function. We are not here to mint money from patients."

"If you, for instance, buy an automatic blood counting machine we teach you how these instruments should be used. There are machines too for biochemistry, for cardiac analysis, gamma spectroscopy system to improve the isotopes; gas chromatography and high performance liquid chromatography equipment, which are instruments to maintain quality control of any product," Chowdhury elaborated.

Talking of the various equipment and state-of-the-art gadgets at Plasma Plus, H Q Chowdhury said, "Last year some children died after taking Paracetamol. In order to find out if they were using the right ingredients or not, one required certain analytic instruments, such as gas chromatographs, which are used to isolate those components that make the 'Paracetamol' syrup. There is a guideline according to the British, US or Japanese pharmacopoeia (international guidelines for making drugs). We try and detect if all the required components are really there in a questionable drug. One of the possible machines that could be used for this is a gas chromatograph or a spectrometer."

Various instruments are required to maintain quality control for accurate manufacture according to international standards. To ensure quality control, various machines are thus required. Any product that is brought into the market whether it be a food item or drug, is there today in Bangladesh, just because it is functional or is simply there because of its brand name. Sometimes some machines are available but the local people do not know the correct uses

for it. This is found, for instance, in hospitals, clinics or pharmaceutical companies. This applies even to the fertilizer factories," Chowdhury added.

Asked what about the clinics that had mushroomed recently around Dhanmandi, such as "Delta", he explained that they were simply diagnostic laboratories.

"The 'Plasma Plus', he elaborated, "is an application laboratory in medical science. In the making of scientific medicines various machines

When asked to give some information about the people who use the "Plasma Plus" centre, Chowdhury continued, "The people who come here are people who run and maintain the machines at various centres. They get information which is not readily available elsewhere. We would probably let one know what is the best method for, say, protein analysis: We give the latest information about it. Suppose a person has suddenly had a stroke; we try to analyse the best method for the cure; find the

and BARDEM are well equipped, as they have their own engineers and sets of machines.

"There is, in general, no accurate record of the X-ray radiations or the medicines that the patient is taking. In such a case Plasma Plus can come to rescue. There is no proper college of radiology. We require a certain number of patients to detect this. We ask doctors to send their patients to us as 'dummies'," he added.

"Plasma Plus works for a fee. We help monitor ma-

Man-made radiation is what we are mostly concerned with.

"There is the ALARA (As Low as Reasonably Achievable) concept that we follow. This is the inbuilt philosophy of our X-rays. Suppose a patient has a congestion in the lungs; one can detect the bad effects of the dosages of the medicine given, while doctors giving the medication are only interested in the end product of their own attempts. If a chest X-ray appears fine, the doctors will say, e.g., there is no pleurisy," he continued.

"There is often no record of the dosage of the X-ray exposure. Meanwhile, X-ray machines that are used may be old or not properly calibrated. There is little quality control of most of the X-ray machines in Bangladesh. Heavy dosages of X-ray may result in a clear plate. By this, say a young woman who is pregnant and is not protected well, the radiation passes through her sexual organs, so that the child ultimately born may be defective," Chowdhury explained, furthermore.

"The basic purpose of 'Plasma Plus' is thus to let doctors know how to operate machines so that there is an ensuing transfer of technology."

Chowdhury is a medical instrumentation specialist. He got his Honours degree in Physics from the Dhaka University, and has been trained in India, Pakistan, Japan, Europe and USA. He has been marketing scientific analaysis for 22 years.

Chowdhury admitted that he could not sell his know-how in the West as well as he wanted it. As a consequence, he took long-term loans from his friends, who are scientists, chemists and doctors, both at home and overseas, and set up "Plasma Plus" with Bangladesh experts.

Chowdhury got his funds, equipment, and then organised "Plasma Plus" in '92 in a related premise at Dhanmandi R/A, Road No 1, occupying 4,500 sq. ft with eight rooms, equipped with high-technology machines for various tests. His main purpose is to provide and pass on up-to-date scientific information.

He feels remarkably confident and optimistic about his project.

Situation of Mother and Child Health

by Parvez Babul

IN the developing countries approximately 14 million children are dying every year at the age of five or below. Over 90 per cent of those deaths are preventable with the help of scientific knowledge which are readily available. Two thirds of these deaths can be prevented with the application of a few low-cost interventions including immunizations, oral rehydration therapy for diarrhoea, antenatal child birth and postnatal care, nutrition and breast feeding promotion, early diagnosis and treatment of respiratory infections.

In September 1990, 71 presidents and prime ministers came together for the world summit for children. This gathering made the political commitment to try to end child deaths and child malnutrition by the year 2000.

Each year atleast half-a-million women die as a consequence of pregnancy and child birth; 99 per cent of those deaths occur in the developing countries.

Women in the developing countries face a risk of dying that is as much as 200 times greater than the risk faced by women in the industrial world in each pregnancy.

According to UNICEF, 100,000 women die each year as a result of unsafe abortions. It is estimated 300 million women do not have access to quality family planning procedure worldwide. One fifth of all the pregnancies in the developing countries are unplanned or in many cases unwanted.

According to WHO, 13 million of women will be infected with HIV or AIDS virus by the year 2000. About four million women will die from it.

Mother and Child Health Services

Basically, mother and child health services have to be tailored well to fit into the local circumstances. Universal solution to the problems are still an illusion.

Health depends, first on a person's ability to regulate his own habits and the environment he lives in. Secondly, on the availability of good medical care. MCH services should help to ensure both. They can provide help to individuals and contribute to the educational

and economic progress of the community at a minimum cost. Ultimate objective of the MCH services is, therefore, not only to reduce mortality, but also to reduce the incidence of violence, crime, drug abuse, alcoholism, neglected and unwanted children.

In the developing countries, one-fifth of the population are under the age of five and two-fifths are below the fifteen year mark. Mother and children together make up over two-thirds of the whole population. Likewise, it is among these vulnerable groups that disease and death take their highest toll, largely from preventable ailments. The most important determinant of maternal mortality, however, is the management of actual complications associated with pregnancy-labour and delivery, incomplete abortions, obstructed labour, hemorrhage, toxemia, infection etc.

To reduce maternal mortality the mothers require: a) Education on marriage and child-bearing, b) supervision during pregnancy, c) skilled care at the time of delivery, d) postnatal care for the mothers and for their children, e) supervision, advice and support, especially during the tender age and in case of abnormalities, f) medical care for the mothers and for their families when necessary, g) access to advice and supplies with respect to family planning, nutrition and other problems.

Situation of Mother and Child Health

In Bangladesh, the neonatal and infant mortality rates are 85 and 110 per 1,000 live births respectively — one of the highest in the world. The under five mortality rate of 180 per 1,000 live birth is very high even by any developing country's standard. Ninety four per cent children under five years of age suffer from malnutrition and more than 30,000 children go blind every year due to vitamin-A deficiency. Some 540,000 infants die every year and another 313,000 children die before reaching their 5th year of life. The top four causes of death of the children are diarrhoea, acute respiratory infection (ARI), malnutrition and low birth weight. The other major

causes of death of the children are tetanus, diphtheria, measles, whooping cough, tuberculosis, meningitis, acute renal failure, glomerulonephritis, leukaemia, etc.

The maternal mortality rate of 500-700 per 100,000 live births is more than twice of that of most developing countries and more than 100 times than the developed countries.

Annual death of about 26,000 mothers in this country due to maternal mortality is also very high. The high number of neonatal deaths is directly related to maternal health, pregnancy and child birth. The nature and causes of maternal mortality indicate to the poor obstetric care they receive and these are mostly due to toxemia during pregnancy, postpartum sepsis, haemorrhage and obstructed labour.

Current Initiatives of Govt and NGOs

Ministry of Health and Family Welfare of the Government of Bangladesh took the initiative for the first time, through the "Mother and Child Survival Fortnight" from 25th August to 5th September, 1994. The main objectives of the fortnight were to: a) Reduce the rate of maternal and child death, b) save the lives of mothers and children through social mobilizations, c) make successful awareness on health and nutrition targeted in the nineties, d) work in co-ordination with GOs and NGOs in the areas of mother and child health services, etc.

To make the fortnight successful, people of all levels, such as the government apparatus mass media, journalists, teachers, imams, scout, girl guides, students, public leaders, heads of the household as well as all of the members of the family, administrators, health workers, GO and NGO workers, doctors, nurses, midwives, VDP members, union council chairmen/members, women alliances, etc vowed to offer their services.

On the other hand, Government of Bangladesh is the signatory to the Alma Ata Declaration pledged to attain Health For All by the Year 2000 and also heralded a significant decision to improve the conditions and opportunities for children in the country by making education free for the girl child upto class VIII. This will surely encourage all those who are working in this field.

Impotence and Its Management

by Dr Mohd Ali Belal

As it is generally understood, impotency can be defined as the inability to attain and maintain a penile erection sufficient to permit satisfactory sexual intercourse. And erection results from a complex interaction between muscles, nerves and blood vessels and is influenced by psychological and behavioral factors. The term impotence has been used to describe a range of sexual problems. The more specific term to use is erectile dysfunction.

The risk of this certain kind of dysfunction increases with age, but men who have diabetes, hypertension, high cholesterol, low level of high density lipoproteins (HDL), certain diseases, depression, injuries of disorders affecting the nerves or blood vessels or those who take prescription or other drugs are also at risk. Though cigarette smoking does not directly cause dysfunction, it can increase the risk of vascular disease and hypertension. Because erectile dysfunction is most often the result of a combination of psychological and physical factors, education about anxiety's role may help prevent or reduce the duration and severity of this dysfunction.

Examination of Patient

For men complaining of this condition, a careful, detailed history both medical and sexual followed by a thorough physical examination and basic

laboratory studies is a must to identify psychological factors as well as the unrecognized disease. Sexual history is very much vital to assess a man's true complaint expectations and motivations for further diagnosis and treatment. The opposite partners perceptions should also be obtained if possible.

The physical examination should include the testicles, penis, prostate anal sphincter tone, femoral and lower extremity pulses and neurological examination of perianal sensation and bulbocavernosus reflex. Suspected neurological problems may require more extensive tests.

Laboratory studies include a complete urine analysis and blood tests for complete blood count, creatinine, lipid profile, fasting blood sugar, thyroid function and morning testosterone. Low testosterone indicates a second test for this hormone, and testosterone hormone and prolactin should also be measured.

Additional tests include nocturnal penile erection testing may be useful for men who report a complete absence of erections or when a primary psychogenic cause is suspected.

Only men who are seriously considering penile injections, implants or vascular surgery require intracavernous pharmacological injection of a vasodilating agent to assess penile blood supply. If this test

produces an erection, home penile injection therapy may be an option. However, anxiety or discomfort during the test may prevent an erection even in man who have adequate blood vessel function. Duplex colour ultrasonography, penile angiography etc to be done by experts in the vascular aspects of erectile dysfunction. These tests are to be done before doing vascular surgery to the selected group of patients.

Treatments

The most common treatments — vacuum devices, injections, and implants are effective in producing erections in most men, many discontinue their use. Treatment may be more successful when the sexual partner participate in the evaluation and when the treatment is already underway.

Hormone related male dysfunction is relatively rare, but in cases of confirmed low serum testosterone the related experts in this field recommended intramuscular injections of testosterone enanthate or cypionate. In cases of confirmed hyperprolactinaemia, the oral drug bromocriptine is appropriate. However, these treatments are inappropriate and may increase the risk of prostate cancer when testosterone function is normal. Vacuum devices are very effective in producing an erection and are relatively risk free, although they may cause some discomfort. The most effective agents for penile injection are pa-

paverine, phenolamine and prostaglandin EL. They can be used in combination to reduce pain, penile corporal fibrosis, fibrotic nodules and priapism (persistent erection). Injections can be a problem for men who have poor vision, psychiatric disease and for those who receive anti-coagulant therapy or who cannot tolerate transient hypertension. In addition, drugs used to reverse persistent erection can cause death in men taking monoamine oxidase inhibitors for hypertension.

Mechanical failure, prosthesis associated infection (most common in men with diabetes, spinalcord injuries, or urinary tract infections) and erosion can occur with rigid malleable, or inflatable penile prosthetics. Inflatable implants produce the most natural flaccid and erect states but also have the highest failure and reoperation rates. No problems related to silicone implants have been reported. The experts recommended health education in human sexuality for health professionals, multidisciplinary approach to future investigations and urged researchers to develop diagnostic and treatment outcome standards, epidemiological, racial, cultural, ethnic and social perceptions and exceptions of erectile function and dysfunction studies. Studies to identify ways to prevent this dysfunction and clinical trials to assess and compare behaviour, mechanical, pharmacological and surgical treatments, must continually be carried out.

The writer is Civil Surgeon, Bangladesh Secretariat Clinic, Dhaka

Americans Flood South for Cheap Medicare

John Ross writes from Mexico

RECORD numbers of United States citizens are fleeing to Mexico — for health care. Tens and perhaps hundreds of thousands drive south from First to Third World each year to find attention they can both afford and trust.

A report from the Families USA Foundation, a Washington-based health care reform lobby, compiled from interviews with 242 Mexican doctors and 300 US citizens and long-term residents seeking health care in Mexico is revealing:

- Pharmaceutical drugs bought in Mexico cost one-third of those sold in the US.

- A doctor's visit costs two-and-a-half times less south of the border.

- US citizens now constitute 30 per cent of all patient visits in two border cities reviewed in the study.

- US health insurers are beginning to cover treatment in Mexico.

From the alternative cancer treatment clinics south of Tijuana to the brightly-painted smiles gleaming on the billboards advertising Ciudad Juarez's dental crops, the health care industry is booming all along the Mexican side of the border. The appeal is aimed at luring an Anglo clientele.

Walk into a cool coral and turquoise-tinted waiting room. Soft Broadway showtunes are being piped through the walls. The closest magazine at hand is US News & World Report. "Thank You For Not Smoking" says the sign beside the blonde receptionist.

Dr Gilberto Tostado, who practices in the border town of Agua Prieta, just south of Douglas, Arizona, is a second generation dentist serving largely Anglo patients. His key to success, he speaks fluent English and does a root canal for about one-third of what it costs in Arizona.

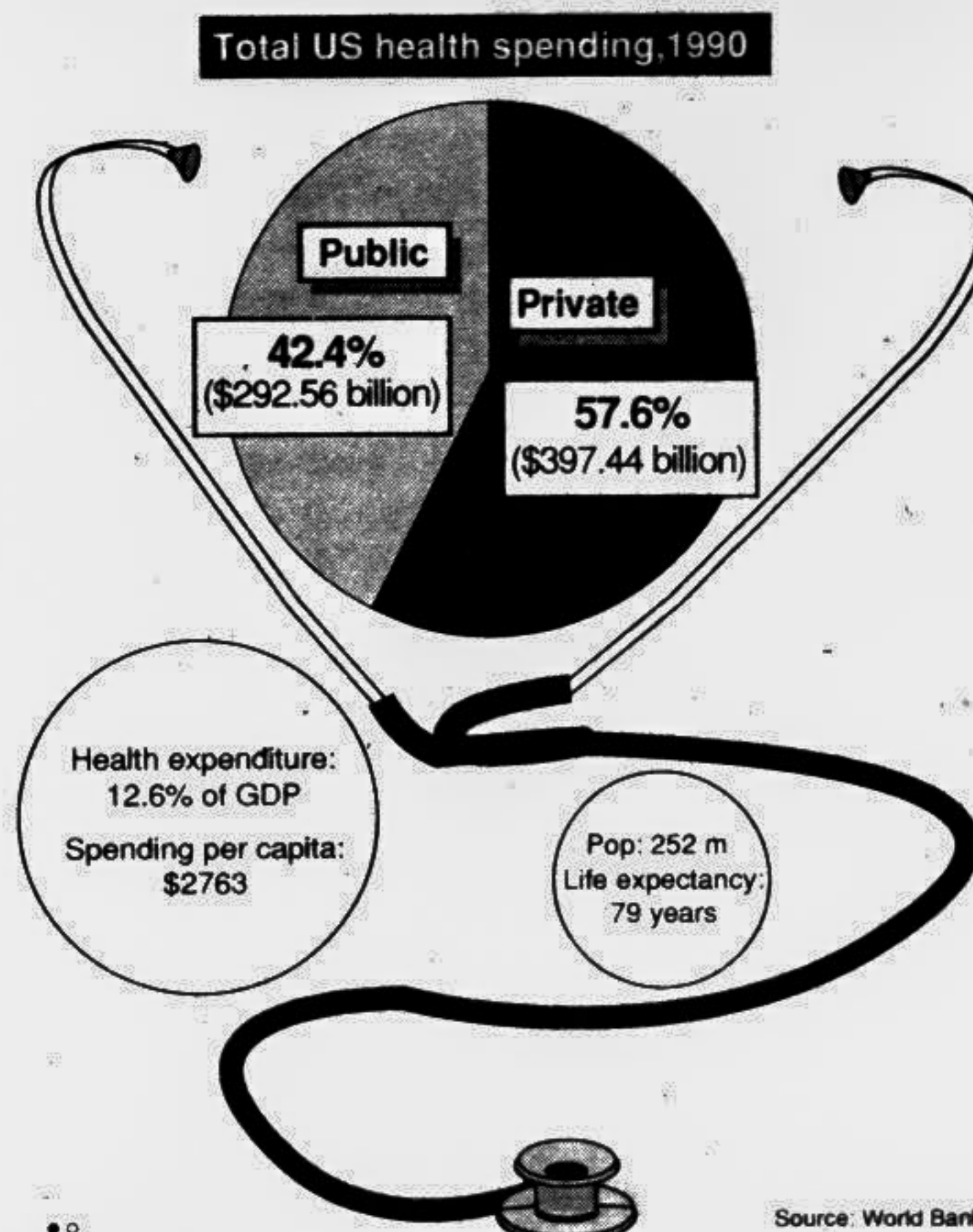
All along the Mexican side of the border, practitioners confirm that one-third to one-half of their patients come from "the other side." Half are English-speaking Americans.

Sufferers of chronic illness dissatisfied with treatment in the US form a sizeable chunk of the thousands of Americans seeking relief in Mexico. Many cancer sufferers annually visit the 30 alternative treatment clinics around Tijuana.

The Contreras Hospital, one of the dozen most reputable, treats 2,700 cancer patients a year, most of them Americans, with a sprinkling of German

Thousands of US citizens drive south to the Third World each year to find health care they can afford and trust. Pharmaceutical drugs bought in Mexico cost one-third of those in the US. A physician's visit costs two and a half times less. As President Bill Clinton tries to reform the health service, reports Gemini News Service, more and more Americans are going to Mexico for cheap medicine.

Public vs. private



and Japanese patients.

In El Paso, Marta Tovar, a clerk at a local hospital, was dissatisfied with treatment she received in the US for an aneurysm (a blood vessel condition) and crossed the Rio Grande River to Juarez for care.

She echoes a sentiment heard repeatedly: "At least they give you the time of day over there." Another constant refrain: "Doctors are more human over there."

Many streaming south for treatment are retired and seek to stretch a buck to soften the debilities of encroaching age.

"We get our eyes and teeth done over here," beamed Mr and Mrs Patrick Smith, putting on their best smiles at a frigid Saturday morning in a Ciudad Juarez waiting room while the dentist filled out their insurance forms.

Hyper-inflated US health care costs have forced along plans for reimbursement for treatment in Mexico. The Western Growers Association, whose members grow 90 per cent of the crops in California and Arizona, now offer their Mexican temporary employees a health plan that provides coverage in Mexico.

One feature of the Mexican system Americans like is that physicians can dispense drugs themselves. Many own their own pharmacies in the same buildings in which they have their practice.

People in the US will sometimes pay \$70 for a doctor's visit just so they can get a prescription written. But, says a doctor in Juarez, it is all included. "Cheap drugs sold over the counters of legitimate pharmacies are perhaps the biggest attraction. The Benavides chain, operating 68 pharmacies on the Mexican side of the line, requires all personnel to speak English and all store signs are in English. Half the chain's sales come from US customers, says manager Pedro Lozano.

The attraction of border pharmacies is enhanced by their well-deserved reputation for stocking many drugs prescribed in the US. A "grey market" of drugs not yet licensed by the US Food and Drug Administration that the Mexicans smuggle back across the border includes anti-ageing drugs and so-called "smart" drugs (Amino acid compounds). Alternative drugs to combat Aids, such as those confected from Chinese mushrooms, are gobbled up by California buying clubs.

The huge savings on cross-border-bought pharmaceuticals may be blurred by the enactment of the North American Free Trade Agreement (NAFTA), which ensures that US patent protection on exclusive manufacture supersedes Mexican production of the same drug.

In Canada, free trade is already threatening low Canadian pharmaceutical prices. US 20-year exclusivity protections are being substituted for shorter seven-year Canadian patents.

President Bill Clinton made reform of the ailing US health care system the cornerstone of his State of the Union message. Even with Hillary Clinton heading the forces of reform, increasing access to treatment and limiting profit-taking in the US health care industry will take years to legislate and enforce.

The hemorrhage of US citizens fleeing to Mexico will remain an acute embarrassment to one of the wealthiest nations on earth.

— GEMINI NEWS
JOHN ROSS is a freelance journalist based in San Francisco specialising on Latin America. He also contributes to El Financiero in Mexico.

New Heart Failure Guidelines to Prolong Lives

THE US Public Health Service has issued new guidelines calling for increased use of medications that could prolong the lives of millions of heart failure patients by making it easier for their hearts to pump blood.

The guidelines released June 28 are based on the results of the latest clinical trials and research. They address, among other things, the problem that doctors often underuse new medicines that help control heart failure symptoms.

Heart failure is a chronic condition in which the heart fails to pump with enough force to deliver adequate blood and oxygen to meet the body's needs, often resulting in shortness of breath, fatigue or swelling of the feet, ankles and legs.

Dr Philip Lee, director of

the Public Health Service, said that heart failure does not mean that the heart stops, as the name implies, making it one of the most misunderstood medical conditions.

"The condition called heart failure, despite its name, is not a sudden and complete failure of the heart," he said. "It is not heart attack." Instead, he added, heart failure often occurs in people whose heart function is already reduced by a heart attack.

More than two million people in the United States have heart failure, which contributes to over 200,000 deaths annually. The death rate attributed to the condition rose by 64 per cent from 1970 to 1990.

Lee said the death toll can be reduced by using the recommendations in the new guidelines, which were devel-

oped through a contract with RAND, a non-profit research organization that convened a 16-member private-sector panel of experts and consumers. The panel based its recommendations on findings obtained from reviewing more than 1,000 published articles and on the judgement of experts in areas where scientific evidence was lacking.

One of the main recommendations calls for expanding the use of a type of drug known as ACE inhibitors, which relax blood vessels and make it easier for the heart to pump blood.

"Controlled clinical trials have shown that ACE inhibitors prevent heart failure, extend lives and relieve symptoms," said Dr Marvin Konstam, professor of medicine at Tufts University School of Medicine and co-chairman of the guide-

lines panel. "In patients with reduced cardiac function after heart attack, ACE inhibitors prevent the development of clinical heart failure."

"Use of these drugs in 1,000 patients with heart failure for three years will prevent approximately 200 cardiac hospitalizations," he added. "ACE inhibitors are presently under prescribed and under dosed."

The estimated cost of treating heart failure surpassed \$10,000 million in 1990, which included \$7,000 million for hospitalizations.

The guidelines also recommend prescribing diuretics to reduce swelling, and using digoxin to strengthen heart-beat in patients with moderate to severe heart failure or when symptoms persist despite use of ACE inhibitors and diuretics.

— USIS.