CURRENT AWARENESS BULLETIN ON HEALTH JULY-SEPTEMBER 1998

HAPPEN

Health Action by People
PUBLICATION

DIS-375

HAPPEN

Anything is possible, but only a few things actually happen.

— RICHARD ROSEN

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Volume1, Number 1
July-September 1998

http://www.hapworld.org

EDITORIAL

It's Happening!

At HAP, (Health Action by People), things are happening! We are launching our newsletter, *Happen* with the current issue. Happen will be a compendium of news, views, and current trends in the health world. We will include articles on treatment, diagnostics, and developments in technology. Current trends in medical research and news about conferences and courses will also be there. Part of the fare will be about how to keep yourself informed on various aspects.

Health Action by People is a not-for-profit organization based in Trivandrum. We are a group of health and communications professionals keen to act as conduits in transferring the latest in health research and technology to the practising professionals. We also want to help policy makers and others in achieving public health goals. For this, we organize 'Problem Solving for Better Health' (PSBH) workshops. This is part of a global movement initiated by the Dreyfus Health Foundation, New York. We have set up an information search service in our office that is accessed by health professionals from all over Kerala. We offer Medline on CD-ROM and a host of other databases. Clients can order searches from any of them.We also organise searches from the vast treasury of medical information on the World Wide Web (WWW). HAP also has a very active research programme. One of our current projects is estimating the prevalence of diabetes in Neyyattinkara taluk in Trivandrum district.

Through *Happen* we hope to keep in touch with informed professionals and lay people. This is our organic link with the health field. Please feel free to write to us about trends in medical care and public health, and also about any article which we have published. Together, let us build a partnership for health!

HAP is proud of its partnership with Dreyfus Health Foundation, that has made *Happen* real.

C R SOMAN

V RAMANKUTTY

CONTENTS

Drug Therapy in Asthma

CURRENT TRENDS

ASTHMA is perhaps the most common affliction which a general practitioner is called upon to treat. Western estimates put the prevalence of asthma at around 15% of the population, i.e., about one in seven persons is affected. It is further estimated that two-thirds of these patients suffer from mild asthma, which does not lead to major functional disability. Nevertheless, it is important that proper scientific principles are followed in long term management.

Guidelines for therapy in asthma from United States National Asthma Education and Prevention Program (NAEPP) and the British Thoracic Society emphasize the need for aggressive approach to establish proper control at the onset of asthma. Both these guidelines were published in 1997.

The key points of the recommendations are:

1. Early use of inhaled corticosteroids to gain control and prevent inflammatory damage to the airways. This is recommended in children under five years also, as an alternative to cromolyn sodium (sodium cromoglycate).
2. Prompt control of symptoms, according to severity of symptoms. Thus,starting with high dose of inhaled or oral steroids and tapering down, once control is achieved is recommended instead of starting with low doses and raising the dose if found inadequate.
3. Long acting beta agonists (Salmeterol)can be added to low/ medium- dose steroid inhalation for control of symptoms.
4. Patient involvement in management plans, especially the use of peak flow meters by patients to measure their own peak expiratory flow rate (PEFR)on a regular basis is encouraged.

Therapeutic Strategies In Asthma

LONG TERM CONTROL OF SYMPTOMS

Need	What to use	Drug names
Prevent long term symptoms	Inhaled corticosteroids	Beclomethasone, Triamcinolone
Prompt control of inadequately treated symptoms	Oral corticosteroids	Methylprednisolone, prednisolone, prednisone
Long term control of symptoms, especially nocturnal symptoms and exercise induced asthma	Long acting beta agonists	Salmeterol (inhalation) Salbutamol
Prophylaxis against known allergens and for prevention of long term symptoms	Mast cell stabilisers	Nedocromil, sodium cromoglycate
Long term control of nocturnal symptoms	Methylxanthines	Theophylline

RELIEF FROM ACUTE ATTACK		
Need	What to use	Drug names
Fast relief from symptoms	Inhaled beta agonists	Salbutamol, Terbutaline
Relieve acute bronchospasm	Anticholinergics	Ipatropium bromide

RELIEF FROM EXACERBATIONS		
Need	What to use	Drug names
Prevent progression of exacerbations	Oral corticosteroids	Methylprednisolone, Prednisolone, Prednisone

Step-wise approach to managing asthma in adults and children aged >5 years according to the new US National Asthma Education and Prevention Program (NAEPP) disease categories.

Disease	Symptoms				Daily long term medication
	Frequency	Physical activity	Exacerbation	Nocturnal	
Mild intermittent (Step 1)	≤2/week	activity normal between episodes	Rare. PEFR normal when not in exacerbation	2 episodes/ month	None
Mild persistent (Step 2)	>2/week	activity likely to be affected	sometimes	> 2 /month	Low-dose inhaled corticosteroid OR mast cell stabiliser OR theophylline OR leukotriene antagonist
Moderate persistent (Step 3)	Daily	somewhat limited	≥2/week	1 episode /week	Medium dose inhaled corticosteroid OR low/ medium dose inhaled corticosteroid + long acting inhaled beta agonist (with as needed medium/ high dose inhaled corticosteroid + long acting bronchodilator)
Severe persistent (Step 4)	Continual	limited	often	≥2 episodes /week	High dose inhaled cortico-steroid + long acting broncho-dilator + long term oral corticosteroid

The use of Inhaled corticosterolds in mild asthma

Even though early use of inhaled corticosteroids has been advocated even in mild form of the disease, long term complications of such use are not yet clear. Hence it has been recommended that mild forms of adult asthmawhen the patient is largely symptom free and lung function is near-normal, can be treated with inhaled beta-agonists like salbutamol alone, and steroid inhalants added only when symptoms are not controlled with these. Over two-thirds of sufferers from asthma have mild form of the disease, and hence the decision of when to put the patient on long term inhaled corticosteroids is one affecting a large number of people.

Use of Inhaled beta-agonists in asthma

1. In mild asthma, beta-agonist inhalation should be used as needed; there is no advantage in using them on a regular basis.
2. In patients with asthma who have regular symptoms, inhaled cortico-steroids have an advantage over the use of long term beta-agonists.
3. Regular use of inhaled cortico-steroids in patients with moderate symptoms reduces the frequency of acute attacks, but regular use of inhaled beta-agonists does not.
4. Beta-agonists are extremely useful in providing rapid relief from acute attacks, and in preventing allergen or exercise induced asthma.

Sources:

Prompt Control of Asthma Essential: The Emphasis from the New US and UK Guidelines. Drugs andTherapeutics Perspectives 1997;9 (8): 6-8.

Jeffrey M Drazen. Treating mild asthma- when are inhaled steroids indicated? Editorial, New England Journal of Medicine 1997; 337,9.

Paul M O'Byme and Huib A M Kerstjens. Editorial, New England Journal of Medicine 1996;334,8.

Diabetes Mellitus

LABORATORY DIAGNOSIS

Diabetes mellitus is a disorder of multiple etiology, characterised by hyperglycemia, glycosuria and a wide spectrum of clinical and pathological manifestations. Diagnosis of this metabolic disorder is simple and straightforward when patients present with typical symptoms such as thirst, polyuria and weight loss. Glycosuria is invariably heavy, often associated with ketonuria and blood glucose concentration is so grossly elevated that a single measurement confirms the diagnosis.

Problems in diagnosis arise where routine testing of either asymptomatic subjects or patients with unrelated or non-specific symptoms reveals lesser degree of glycosuria and random blood glucose levels that are not grossly elevated. Diagnosis then depends on the level of blood glucose measured under specific conditions and related to diagnostic criteria, which mark the cutoff points between normal and abnormal.

Over the last three decades, the glycemic criteria defining diabetes have been refined and reset at considerably higher values than in the past and a category of impaired glucose tolerance (IGT) has been interposed between normal and diabetic levels. The recommendations of the expert committee of the World Health Organization (1980,1985) have been widely accepted. Recently, the American Diabetic Association have suggested further simplification of the diagnostic criterion. They suggest fasting venous plasma glucose level as the sole criterion for diagnosing diabetes.

Oral Glucose Tolerance Test (OGTT)

In over 80% of subjects presenting with clinical symptoms, diagnosis of diabetes is established by a single blood glucose estimation. At present, diabetes is diagnosed if the random venous plasma glucose level is above 200 mg/dl (11.1mmol/lt) or if fasting values are above 140mg/dl (7.8mmol/lt). However, efforts towards early chemical diagnosis, in the hope of preventing long term complications, stimulated research into more sensitive techniques for detecting hyperglycemia, even in the absence of symptoms and signs. The use of two-hour OGTT has now been accepted as a standard procedure for the detection of diabetes mellitus. The current consensus on OGTT, recom-mended by WHO is furnished below:

Diagnostic criteria for diabetes using fasting and two-hour post glucose, blood sugar (venous plasma glucose)

Fasting	2-hr. after glucose	Remarks
≥ 140 mg/dl	≥ 200 mg/dl	Diabetes
≥ 140 mg/dl	< 200 mg/dl	Diabetes
< 140 mg/dl	≥ 200 mg/dl	Diabetes
< 140 mg/dl	< 200 mg/dl ≥ 140 mg/dl	Impaired tolerance

A fasting blood glucose level of 140 mg/dl or more and a two hour value of 200 mg/dl or more establishes diabetes unequivocally even in the absence of symptoms, provided the abnormality is confirmed by one more testing. A two-hour level between 140 mg/dl and 200 mg/dl, even when the fasting level is below 140 mg/dl, is termed impaired glucose tolerance (IGT). Inorder to achieve feasible international comparisons, WHO recommends a standard procedure for oral glucose tolerance test.

Glycosuria of pregnancy is also an indication for an OGTT. WHO recommends the same criteria for diagnosing pregnancy diabetes as for non-pregnant adults.

Recommendations of the American Diabetic Association

An international expert committee constituted by the American Diabetic Association has recommended further modifications of the WHO criteria. They have suggested still lower fasting venous plasma glucose levels for a

Note: The expert committee considers FPG as the preferred test and recommends a move towards its universal use for testing and diagnosis based on ease of administration, convenience, acceptability to patients and lower cost. The expert committee also has introduced a new category named impaired fasting glucose, which includes values ≥110 mg/dl but < 126 mg/dl.

Procedure for OGTT

Glucose load	:	Adults : 75g in 250-300ml of chilled water Children : 1.75g/kg body weight Drink within 5 minutes
Preceding diet and activity	:	Unrestricted carbohydrate (>150g daily) and physical activity for at least 3 days before test.
Fasting period	:	10-16 hr on the night before test. Pure water allowed in the morning of the test.
Timing of samples	:	Before and 2hr after oral glucose (also 30, 60 and 90 minutes if required)* Remain seated and no smoking through test.
Types of samples	:	Venous or capillary; whole blood or plasma**
Precautions	:	Note any drugs (e.g. Thiazide diuretics, corticosteroids) which may influence OGTT responses. Note departures from desirable OGTT conditions.

* Under special circumstances.
** Venous plasma recommended for uniformity.

Gestational Diabetes

Quite often, glucose intolerance is noted during pregnancy, particularly in the last trimester. This requires attention since severe glucose intolerance is often associated with increase fetal and perinatal mortality and morbidity. Previous history of obstetric problems such as still births, large babies and respiratory problems or hypoglycemia of newborn should alert the physician. confirmatory diagnosis. The summary recommendations are:

- An FPG of ≥ 126 mg/dl (at least 8hrs of fasting) *or*
- A casual plasma glucose ≥ 200 mg/dl (taken at any time of the day without regard to the time of last meal) in combination with classic symptoms of diabetes like increased urination, increased thirst or un-explained weight loss.

DIABETES FACTS

- Indians are believed to have a higher prevalence of NIDDM than Caucasians.
- Expatriate Indians have a higher prevalence of diabetes than Indians at home.
- Prevalence of diabetes among urban Indians exceeds 10% in many parts.
- Rural people have much less prevalence than their urban counterparts.
- Malnutrition-related diabetes mellitus (Pancreatic diabetes) that was once common in Kerala is not a common disease now.
- Diet and Exercise form the cornerstone in the management of early diabetes. Oral drugs shall be taken only under medical advice.
- Most of the much advertised herbal cures for diabetes have no scientific basis.
- The best biochemical index of control of diabetes is the level of glycated haemoglobin determined once in three months.

Hepatitis B

HEALTH ALERT

HEPATITIS B is a serious disease of the liver caused by **hepatitis B virus**, or **HBV**. All people, no matter how old they are or where they live, may be at risk for **hepatitis B.**

HBV attacks and destroys the liver, which is such an important organ that you cannot live without it.

Hepatitis B may cause:

- Scarring (cirrhosis) of the liver
- Liver cancer
- Lifelong (chronic) HBV infection
- Liver failure
- Death

Why is hepatitis B a problem for pregnant women and their babies?

Pregnant women may have **HBV** in their blood without knowing it and can pass it on to their babies at birth. Many of these babies develop lifelong **HBV** infection and can pass the virus on to others throughout their lives. At first, babies may not look or feel sick, but as they grow up, they may have liver damage. About 25% of babies who develop lifelong **HBV** infection die of liver disease or liver cancer.

How does one get infected with hepatitis B?

HBV is spread from person to person by direct contact with infected blood or body fluids. Even small amounts of infected blood can cause infection.

HBV infection can be spread by:

- an infected mother to her baby during birth;
- sharing needles for injecting drugs;
- having sex with an infected person.

You are at increased risk for hepatitis if

- you live in the same household with someone who has lifelong **HBV** infection;
- you have a job that exposes you to human blood.

If you feel healthy, can you still have hepatitis B?

Some people who have **hepatitis B** have no symptoms and may not know they are infected. Others who are infected with **HBV** never fully recover and carry the virus in their blood for the rest of their lives. These people are known as carriers, and they can infect other household and sexual contacts throughout their lives.

How do you find out if you have hepatitis B?

Get a blood test under doctor's recommendation in a dependable laboratory. If the test is positive, the doctor will tell you how to take care of yourself and how to prevent infecting your baby and others.

How do you protect your baby if your hepatitis B blood test is positive?

A safe vaccine has been used since 1982 to prevent **hepatitis B**. The vaccine is given in a series of three shots. If you have **HBV** infection, your baby should get the first shot within 12 hours of birth, along with another shot, hepatitis B immune globulin. The next two injections of **hepatitis B** vaccine will be given along with other immuni-

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Medicine Today

NEWS & VIEWS

Communicable diseases should receive high priority

As a result of the 'health transition' which saw death rates falling across the world and the important causes of morbidity shifting slowly away from infections and deficiency diseases to chronic degenerative diseases, there is an argument that research and intervention priorities should also move more in favour of chronic degenerative diseases. However, though non-communicable diseases are becoming important health problems even in poorer parts of the world, in terms of total burden of disease, communicable diseases still claim first priority. Moreover, communi-cable diseases as agents of death and disability are more important in the poorer regions of the world and among the world's poor, when compared to affluent areas. Non-communicable diseases caused 34% of deaths among the poorest 20% of the world's population and 85% among the richest 20%. This clearly shows that a shift of emphasis in funding and attention away from communicable diseases would be to the disadvantage of the poor and underdeveloped commu-nities in the world. Enormous health gains have accrued to all the nations in the world in the last fifty years; however, the extent to which the world's poor have shared in these gains is questionable. The health problems of the poor are thus even at the present age, distinct from those of the rich.

Davidson R Gwatkin, Patrick Haeuveline.
British Medical Journal 1997; 15,7107

Non-surgical abortion: an emerging option

Attempting to induce early first trimester abortion by prescribing orally administered drugs is not new. Many agents have claims to this property including hormonal preparations. However, none have been generally available which had the universal approval of the medical profession.

Surgery continues to be the method of choice for abortion wherever it has been legalised, including India. There is some indication that the future may hold something different. Two drugs have been found to have abortifacient properties: methotrexate and mifepristone. Mifepristone was developed in France as RU486 and has been available to women in Europe since 1986. It has been estimated that approximately 250,000 women all over the world, in countries such as France, Sweden, China and Great Britain have used it. It is a derivative of a synthetic progestin, norethindrone. It is a competitive blocker of progesterone and cortisol, and thus prevents establishment of pregnancy, for which progesterone is essential. Methotrexate is a folic acid analogue which inhibits production of folates which are essential for nucleic acid synthesis, thus preventing cell division. It is also cytotoxic to neoplastic and non-neoplastic trophoblastic tissue. Either of these drugs, for inducing abortion, is administered together with another drug, Misoprostol which is a synthetic prostaglandin that induces uterine contractions.

Surgical termination of first trimester abortion is 99% efficacious and has a complication rate less than 1%. Compared with this, oral abortifacients have an efficacy rate of only from 90-98% at less than 6 weeks' gestation and 80-90% at 6-8 weeks' gestation. However,

the non-invasive nature of the new approach, and the preservation of privacy, are features which may attract more women.

With further research, many of the problems associated with these drugs may be overcome. Oral abortifacients may emerge as the choice for the future.

Eric A Schaff, Steven H Eisinger, Lisa S Stadalius. Weighing the options in medical abortion. Medscape: Women's Health

Genetic engineering to control disease

Insect borne diseases take a major toll of life and cause a lot of suffering all over the world. Malaria, filariasis, Chagas' disease, sleeping sickness, cholera, encephalitis and yellow fever are all scourges which are borne by insect vectors. Despite various approaches such as extensive use of chemical insecticides, biological control, and use of other techniques like radiation to control the insect population, the arthropods seem to have the last laugh in this battle with man. Large scale killing of insects has also been shown to have adverse ecological consequences. Recently, basic researchers have reported a novel approach which may ultimately hold great promise in the future: instead of trying to destroy insect populations, alter them so that they can no longer effectively act as carriers of disease. Trypanosoma cruzi, the agent of Chagas' disease, is carried by Rhodnius prolixus, commonly called the reduviid bug. Researchers have tried to alter the genetic composition of a bacterium normally present in the bug's gut, so that it produces peptides that kill T. cruzi. Thus without killing the bug, its capability as a vector is neutralised. Though this approach is still in the experimental stage, it could hold great promise for human disease prevention by other means also. Think of a lactobacillus (a normal occupant of the human gut), that can produce antibodies against diarrhoea producing organisms. This may be the ultimate vaccine.

John E Conte Jr. A novel approach to preventing insect borne diseases. New England Journal of Medicine 1997;337:785-786

Should professional organisations officially endorse products?

In the US, the decision of the American Medical Association to enter into an agreement with a company, the Sunbeam corporation, which makes home use products such as scales, air cleaners, massagers, thermometers, vaporisers, and humidifiers to officially endorse their products (and receive a royalty from the sales of such products) has come in for sharp criticism. Though the royalty goes to the organisation and not to individuals, critics feel that the knowledge that the organisation stands to gain from the transaction would seriously undermine its credibility. Though the AMA has declared that this money would be used only for research and education, it is easy to see how this could readily be changed once the money starts accumulating. The question whether the AMA does indeed have the expertise to examine the quality of such products has also been raised.

Contrast this debate with the tame acceptance of the receipt of financial cut backs by doctors from laboratories and hospitals in our country. All over the world, the credibility of the profession is at a low ebb. Medicine, like politics, is a profession which demands adherence to the highest moral principles from its practitioners. Deviation from these standards taints not only the individual, but the whole community practising the profession, as we are finding out in India too.

Jerome P Kassirer and Marcia Angell. New England Journal of Medicine 1997;337,700

Is alcohol good for the heart?

It has been held by many in the medical profession that drinking in moderation may be good for health. Recent evidence on consumption of alcohol and the risk of coronary heart disease seems to point to a beneficial effect for alcohol on the heart, in quantities which do not exceed one or two drinks a day. Sir Richard Doll, one of the pioneering epidemiologists to probe the relationship between mortality and the use of tobacco, reviews the evidence on alcohol and the heart in the December 20/27 issue of British Medical Journal. His major conclusion is that there seems to be a U-shaped relationship between consumption of alcohol and mortality risk, with risk decreasing with the quantity consumed up to a point, and then increasing with increasing consumption. **So there is an optimal level for alcohol consumption, which seems to be around 8 gms of ethanol /day.** The decreasing limb of the U, from all evidence, seems to be attributable to the protective effect of alcohol on vascular episodes including coronary events, and the rising limb of the U due to its effects in larger quantities on the liver and other systems, greater risk for violent deaths and accidents, and greater risk for cancer. The optimal quantity may also depend on age and gender. Contrary to popular belief, however, the type of drink seems to make no difference to the effect. Consumption of small and moderate amounts of alcohol is estimated to decrease risk of death by about a third, but in any individual, the degree of protection will be decided by the competing risks for other causes of death.

What are the public policy implications? Does this mean that the public should be encouraged to take up drinking on a regular basis? Hardly. Among regular users of alcohol, a considerable proportion may be imbibing a quantity much larger than the desirable maximum. **Arrack, the common form of alcohol used by Indians, is dispensed in a minimum pack of 100ml, providing 40ml of ethyl alcohol; 5 times the prescribed optimal amount.**The useful part of the finding to be emphasised would be that any consumption greater than moderate is harmful. As for the rest who have not yet taken up drinking, is it not better to leave them like that rather than introduce them to the potential dangers of drinking too much alcohol?

Doll R. One for the heart. British Medical Journal 1997;315

Gene Therapy for Sickle Cell Anemia

Gene therapy may offer the first opportunity to correct the cell defect that causes sickle cell anemia, say Duke University researchers in a report released recently.

After adding the ribozymes to red blood cells taken from several patients with sickle anemia, senior author Dr. Bruce Sullenger and others found that the ribozymes correctly repaired the hemoglobin defect in each case, by correcting the genetic defect at the messenger RNA levels of defective hemoglobin.

His team will next try to use the new technology to correct the sickle cell defect in mice with the disease. If these experiments work, the researchers hope to test the gene therapy in human patients with sickle cell anemia within the next two to three years.

Science 1998;280:1593-1596

Fertility drugs not linked to ovarian cancer

Ovulation inducing fertility drugs do not appear to increase a woman's risk of developing ovarian or breast cancer, according to a study published in the current issue of the American Journal of Epidemiology.

Researchers at the Chaim Sheba Medical Center in Tel Hashomer, Israel and elsewhere, found that women who were given ovulation inducing drugs were not more likely to develop breast or ovarian cancer than those who were not treated with the drugs. Whether the drugs boost the risk of endometrial cancer is still unclear, concluded the authors of the study.

American Journal of Epidemiology 1998;147:1038-1042

Cont'd from page 7 Hepatitis B

zations. All other members of your household should get a blood test for hepatitis B. Ideally, if the blood test is negative, hepatitis B Vaccine should be given to the other household members.

Do you need to protect your baby if the hepatitis B blood test is negative?

In the West, Hepatitis B vaccination is recommended for all infants to protect them from becoming infected with HBV. The baby may get the first injection either before leaving the hospital or with the first injection at the doctor's office or clinic. The doctor will advise you on the injection schedule. Paediatricians in our country advise their clients to protect their children with HBV vaccine.

Should not HBV administration be included in routine children's immunisation package?

Many people think that cost considerations make it difficult for government to recommend HBV vaccination as part of the immunisation package. While cost is an important factor (it may cost between Rs 600-1200 for each child, depending on the make of vaccine), we also need more information on the prevalence of the infection in our population and efficacy of the vaccine under Indian conditions, before such a policy is considered for adoption.

Reprint of Articles

HAP provides reprint of articles compiled from various important medical journals for the academic community.

The reprints are available on request against payment at Rs 3 per page.

The current list of full text articles available on Asthma:

- Descriptive epidemiology of asthma. Lancet 1997; 350 (suppl 11): 1- 4
- The cellular and mediator basis of asthma in relation to natural history; Lancet 1997; 350 (suppl 11): 5-9
- Environmental factors. Lancet 1997; 350 (suppl 11): 10-13
- Towards prevention. Lancet 1997; 350 (suppl 11): 14-17
- Treatment of acute asthma. Lancet 1997; 350 (suppl 11): 18-23
- Limitations of current treatment Lancet 1997; 350 (suppl 11): 24-27
- Prompt control of asthma essential: The emphasis from the new US and UK guidelines; Drugs & Ther. Perspect. 9(8): 6-8,1997
- Ragweed immunotherapy in adult asthma; NEJM vol. 334(8) Feb 22,1996
- Inhaleed(beta) 2 agonists in the treatment of asthma; NEJM.vol.335 (12) Sep 19, 1996
- Is immunotherapy for Asthma worthwhile? NEJM- vol. 334(8) Feb 22, 1996
- Treating mild asthma- when are inhaled steroids indicated? NEJM-Vol.331(11) Sep 15, 1994

Medline Searches at HAP

HAP has been offering Medline services for more than three years. This is the most popular service that HAP offers the medical profession and is enjoyed by a wide spectrum of students, residents, young professionals and researchers from all over Kerala.

What's happening at HAP

NEWS AT HAP

The recent availability of free **Medline** through Internet has not diminished the popularity of the CD-ROM search at HAP. This may be due to a variety of reasons. Most importantly, though there are at least two other government institutions in Trivandrum which offer Medline search facility, **Medline** at HAP continues to be as popular as ever! This is a tribute to the high degree of professionalism with which our staff handle the requests.

FAQs on Medline

Here are some FAQs (Frequently Asked Questions) on **Medline** for your easy reference:

What should I do to ensure a thorough literature search?

You need to clearly identify:

(a) the search terms, which are *key words* that one uses to narrow down your search

(b) the *period* of the search, i.e., the years you would like to scan for articles /documents of your interest

(c) any *special* requests.

It would help us greatly if you state your research question, if any, or the specific purpose of your search, very clearly.

Which are the most popular databases?

There are several health related databases which can be accessed through HAP. The most frequently accessed ones are: Medline, AIDS line, Toxline, Health Star, Cancerlit, PDQ and Embase.

Which search option shall I choose?

If you are only interested in medical literature, it saves you a lot of time and money to confine your search to *Medline*. If you are interested in a broader scientific question, you have to request for a search of science databases also. You may also order a search of AIDSline, Toxline, Health Star, and Cancerlit. A detailed list of over 250 databases can be had from HAP.

Medline Search: For a Medline search, you can hand over your search request personally at HAP or mail it to us. We will make a professional search for you and have the results ready within 24 hours for collection or despatch by mail. You can also sit with our search professional and browse the CD for articles of interest to you. If you are planning for a broader search, CD browsing would be the right option.

Online Database Search: Owing to the inability to establish internet connection during business hours, online access to

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Urinary Tract Infections

Acute Renal Failure

Hepatitis-C

Laboratory Diagnosis of Thyroid Disorders

databases are not practical. You can place your search request using the 'Request for Search' forms available at HAP. Searches will be made by us against your requests and made ready for collection or despatch normally in 24 hours. However, if there is a delay in establishing internet connection, results will also be delayed.

How much will it cost me to make a search?

Database searches involve utilisation of resources such as computer time, skilled personnel, lease charges for the telephone lines, charges for access to certain databases, and other overheads. As such, they are generally expensive. However, h@pnet's linkages with international organisations and our professional search strategies help us keep down costs to the minimum. We assure you that our searches will be competitively priced, and that you are guaranteed the best available service in terms of approachability, thoroughness, and speed of delivery. You may do well to remember that generally the browse option works out to be more expensive than conventional search, and online searching much more so than CD-ROM search.

Some of the specific online-science databases charge rather heavily for downloading (taking articles or other materials from their server into our computer). You should order online searches only after having exhausted other options, and ascertain beforehand, the rates charged for such searches.

On an average, a routine search costs about Rs 50 to Rs 100, and the browse option costs around Rs 200. The online searches of priced databases work out to be much more expensive. We shall provide you a rough estimate of the cost before we initiate the search.

LETTER

Dr. Barry H. Smith MD, Ph.D
Director, Dreyfus Health Foundation

Dear colleagues,

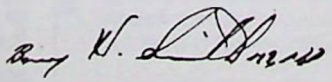
I am honored to have the opportunity to write a few introductory words for the first issue of HAPPEN. This is especially so because HAPPEN is directed toward the primary care physicians of Kerala. I can't imagine a more important group of colleagues to address because it is you who play such a critical part in healing and improving the health of the people of Kerala.

HAPPEN is a product of Health Action by People, an outstanding group of Keralite physicians, scientists, and concerned, caring human beings with whom we of the Dreyfus Health Foundation have had the privilege of working for over five years. HAPPEN is dedicated to achieving better health for more people in the State of Kerala through the enhancement of the communication of experience and ideas among all front-line physicians. This is an incredibly important effort because all of you have good ideas that can be used to achieve better health and those ideas, as well as the ideas of other colleagues in India and around the world need to be communicated and shared with us all if they are to achieve all they can.

You will likely see the initial issues of HAPPEN in print, but, as we all know, the information technology available today enables us all to communicate over vast distances without any real limitation. The information that you find in, and contribute to, HAPPEN will be distributed widely throughout the world through the Health Action by People website and the Dreyfus Health Foundation's communications for better Health/ Problem Solving for Better Health electronic network. We are excited about this because your ideas and experience can be of help to health professionals everywhere. We hope that you share our excitement.

There is no greater goal, I believe, than the achievement of "Health for All" as set by the World Health Organization. We all know the enormous problems associated with attempting to achieve it, but we can do it if we all work together. HAPPEN is an important contribution to that end both in and of itself and as a model for all of us outside Kerala to emulate. Congratulations on its publication and on the great work that all of you are doing for the people of the great State of Kerala.

Warmly - and with the greatest respect for your commitment and the work that you do.



(Barry H. Smith)

Problem Solving for Better Health is a global network supported by the **Dreyfus Health Foundation**, New York, and operated in 20 countries through universities, voluntary agencies and professional bodies. *Health Action by People* are proud partners in the movement and co-ordinate PSBH activities in India.

PSBH

PROBLEM SOLVING FOR BETTER HEALTH

In 1998, the first PSBH workshop exclusively for nurses in India was conducted in Trivandrum on April 13-15, at the College of Nursing. 16 MSc Nursing students from the host college as well as 8 from Calicut, along with a number of faculty, participated in the workshop. It was co-sponsored by **Action in International Medicine**, a UK based NGO. Dame Sheila Quinn, renowned nursing expert, educationist and chairman of AIM, participated as a resource person along with Jan Sabotka from the Polish Academy of Hygiene and Lenin Gross from the DHF, New York. HAP hopes that nurses' PSBH in India grows into a nationwide movement.

As a follow-up of the PSBH workshop in Madurai in December 1997, a committee has been formed with Dr. Lakshmi Rehimatullah as chairperson to co-ordinate the progress of the projects. Lenin Gross from the DHF and Dr. Raman Kutty from HAP met Dr. Rehimatullah in Madurai in April to finalise the arrangements.

PSBH Project Summary

PSBH in Kerala and India is about five years old. During this period, we have had several unique projects which took shape in our workshops, and were completed successfully, thanks to the efforts of the participants and support from many institutions. Most important of these is the **Dreyfus Health Foundation**, which have initiated this process in India.

HAPPEN proposes to profile one project in every issue. Naturally, we may not be able to cover every project, but we consider all of them equally important. The selected ones are included as encouragement to our new participants to get on with their work.

In this issue, we include an unique project which came out of the medical students' workshop at Medical College, Calicut. It demonstrates what collective student effort can do in focusing on health problems of the community, the first step towards intervention.

Survey of morbidity in a population affected by pollution from a Rayons factory and a control population

Aparna Govindan, Biju Simon, Sajid Jamal, Shamsuddeen M, K P Aravindan

BACKGROUND

The study is an attempt to gain insights into a local environmental problem. It was conducted by a group of medical students in the Medical College, Calicut, Kerala, India.

"Gwalior Rayons" factory near Calicut is the largest private sector industrial concern in Kerala, employing about 5000 people. The factory manufactures pulp and staple fibre from bamboo and wood. Chemicals like sulphuric acid

needed for pulp and fibre production are also manufactured. Smoke from the factory flows south and south east towards Vazakkad, which, incidentally, is at a higher altitude. The emissions contain sulfur dioxide, hydrogen sulfide, carbon disulfide, carbon monoxide etc, which, when inhaled in quantities above permissible limits can cause respiratory disease. The industrial effluent, after anaerobic and aerobic processing, is taken by pipe to Chungapalli, seven kilometers to the west and discharged into the Chaliyar river. For about two decades, people affected by pollution from the factory have been complaining of ill health. Previous studies directed towards resolving this issue have not been conclusive.

QUESTION

Do populations living in areas affected by water and air pollution from "Gwalior Rayons" factory suffer more morbidity than unaffected populations?

SUBJECTS AND METHODS

One area each was selected for household health survey to study the effects of air pollution (A) and water pollution (W). A third area, approximately the same distance away from the factory but not subjected to water or air pollution - because of the direction of flow of the wind and water- was chosen as control (C). In areas A and C, 10 clusters of ten houses each were chosen by systematic random sampling. For area W, 300 houses on either side of the river bank were listed, and five clusters of ten houses on each bank were selected by systematic random sampling.

The survey was conducted by 3 groups of students in the three areas on a single day. The teams received prior training. The questionnaire touched on demographic details, economic indicators of the household, drinking water and sanitation, and morbidity (sickness) in the past two weeks.

RESULTS

Morbidity rate, i.e., proportion of people who reported sick in the two study weeks, expressed as number of persons / 1000 population, were 122.3 in the control area C, 134.4 in the air pollution area A, and 217.3 in the water pollution area W. Clearly, the area affected by water pollution shows a considerable increase in sickness compared to the other two areas. Further break-up of the data according to type of sickness is shown in the table below:

Relative risk of specific morbidities in air and water pollution areas.

Category of Sickness	Relative risk when compared to control area C	P value
Diarrhoea in area W	6.99	0.032
Asthma in area A	3.38	0.044
Skin disease in area W	2.91	0.086

Variables such as socio-economic conditions, quality of drinking water and proportion of households with access to sanitary facilities were similar in the three areas, and therefore unlikely to have influenced the results.

CONCLUSION

The areas suffering air and water pollution reveal excess morbidities. The most likely cause is industrial pollution caused by "Gwalior Rayons" factory.

Continued from page 15 **Smoking...**

9. About eight out of ten heart attacks in men under 45 are associated with smoking.
10. Arterial disease is associated with smoking and kills more people than cancers.
11. Nine out of ten people with circulation problems are smokers.
12. Smoke is an irritant and within hours can cause eye irritation, sore throats, nasal symptoms, dizziness, nausea and headaches in those who share closed spaces with smokers.
13. Children exposed to a parent's smoke are more likely to suffer from asthma and more likely to be admitted to hospital with bronchitis and pneumonia.
14. Glue ear in children is more common when exposed to parent's smoke.
15. Babies born to smoking mothers tend to be smaller at birth.
16. Parental smoking is associated with cot death.
17. Smoking ages the skin prematurely.
18. Teeth get stained brown with nicotine.
19. Smokers suffer from more gum disease than non-smokers.
20. At the rate of 20 cigarettes/day, a smoker will pay around Rs. 10,950 per year to support the habit. Even if the price were to remain steady for the next 30 years (we all know it will never happen) a smoker has to spend Rs. 3,285,00 – enough money to educate two children through medical or engineering colleges.

If after reading this piece, you still want to smoke, it is time for an IQ check!

The Hazards of Smoking

LIFESTYLE

Each year, tobacco is responsible for the death of more than three million people, one death every ten seconds. These numbers are increasing, and unless current trends are reversed, by the 2020s or early 2030s, tobacco will kill 10 million people each year, with 70% of these deaths occuring in developing countries. Since the early 1950s, scientific evidence has been accumulating to the point where more than 25 diseases are known or strongly suspected to be causally related to smoking. However, the costs of smoking extend well beyond the tragic health consequences, encompassing large economic and social costs as well.

Reflecting the concern of the international community, the World Health Assembly has adopted a number of resolutions on tobacco control, including a call for the implementation of comprehensive tobacco control strategies. These measures are urgently needed in countries with an already burgeoning tobacco epidemic, yet are just as important in countries where there is still potential to prevent what is a wholly avoidable tobacco epidemic.

Absence of reliable information on tobacco related deaths and morbidity acts as a major impediment to making governments take stern regulatory measures on tobacco promotion and sales. The serious health consequences of tobacco use begin to appear only two to four decades after tobacco use becomes widespread. Disease registries have been identified as a very promising source of data on tobacco-related illness and death. Detailed methods for estimating the number of deaths attributed to tobacco are described by international agencies. However, these methods should only be used when all the criteria for their use are met.

As useful as additional information on tobacco use and related health effects will be, it is already known that tobacco is the most important preventable cause of premature death in many countries, and that half of persistent smokers who start smoking in adolescence will die from their use of tobacco. The need for effective global action against the tobacco epidemic is urgent.

20 good reasons to stop smoking

1. Tobacco smoke contains at least 50 known toxic or cancer forming substances.
2. Smoking is linked to cancer of the lung, mouth, larynx and esophagus.
3. Nine out of ten lung cancer deaths are due to smoking.
4. Lung cancer deaths exceed death from any other type of cancer.
5. Smoking helps promote cancers of the bladder, pancreas, kidney, stomach, and cervix.
6. Nine out of ten deaths from bronchitis and emphysema are due to smoking.
7. Women who smoke have greater risk of infertility, miscarriage, premature labor, still birth, early neonatal deaths, earlier menopause and osteoporosis.
8. Smoking, while using oral contraceptives, increases the risk of heart disease and stroke by at least 10 times.

Cont'd on page 14


Some people
think it is style to smoke.
Last year 3,000,000 such people
died in style.
QUIT SMOKING TODAY!
AND LIVE IN STYLE TOMORROW!!
Health Action by People