Health and Safety of Health Workers

Through the pages of this bulletin we have tried to focus on Occupational Health and Safety (O.H.S) issues of many sections of women and men workers. The indifference demonstrated by the concerned authorities comes out clearly in the example of Occupational Health and Safety problems of health workers. Workers, technicians, nurses, doctors in hospitals are affected by many health problems related with their occupation.

We have covered some problems in this issue. We have not covered all the departments in hospital and all the issues in the departments mentioned here. In the interviews various problems were brought forward and we have covered them in this bulletin. Actually there is a need for a more detailed write-up on Occupational Health and Safety problems of health workers. If you are interested in such a booklet do write to us about the Occupational Health and Safety problems you want to be covered and also how such a booklet can be made more useful. Our effort to go ahead depends upon your response.

The discussions for this issue were with workers, technicians, nurses, unionists in public hospitals. All the interviews were mainly in Marathi and conducted in Bombay. These hospitals are not run for profits but are run as a public service. Being part of essential services there are constant attempts to curb the rights of organised health workers, and the authorities do not seem to be interested in Occupational Health and Safety problems of health workers.

In case of Public hospitals this lack of interest cannot be explained by simple profit motive. In hospitals run for profit the conditions may be worse. The lack of concern about problems of patients who come to public hospitals and neglect of Occupational Health and Safety problems of health workers (providing relief to patients) shows a deeper malice different than sheer profit motive.

The management not only (manage or mismanage) resources but also human beings. The basic tenants of managing human beings are (1) manipulation of information (2) manipulation of persons (3) looking at workers, doctors etc. as a collective of irresponsible persons which needs to be controlled, and to be controlled even by draconian means.

These basic attitudes lead to increasing accidents and increasing Occupational Health and Safety problems.

The managements, owners of hospitals need to be made more aware of Occupational Health and Safety problems. The workers, technicians, doctors, unions need to become more active on Occupational Health and Safety issues.

This bulletin is produced by the Municipal Mazdoor Union and the union of Nurses, paramedical workers, technicians took active interest in compiling this bulletin. Many activities among casual workers, technicians, nurses shared their experience enthusiastically. We hope that this bulletin will be helpful to them in bringing in healthier working conditions in hospitals.
Unhealthy Situation of Hospital Workers

Foul-smelling suffocating room. A ditch full of water right in its midst. Dim lights and dull atmosphere. This description doesn’t quite fit, but it is of the clothes department of a big municipal hospital in Bombay. All the used and soiled clothes from all the wards of the hospital are brought into this room and then sent for washing. The clean, washed clothes are again brought into this room and then distributed to all the wards.

The soiled clothes have been used by patients suffering from all sorts of illness and diseases – skin diseases, infectious diseases like tuberculosis, viral infections etc. Clothes stained with blood, urine, faeces are among those that are brought here. Workers in this department have to regularly day in and day out “handle” these clothes, but no gloves are provided. Nor are there any masks, which would provide at least some degree of protection from the onslaught of germs and viruses. The only masks provided are the pieces of thin cloth, precariously tied, and not capable of protection from germs and viruses.

There are many such departments in the basement. In these departments, there is no proper ventilation. No special exhausts have been installed which would have greatly helped the circulation of air in these departments. The few exhausts that exist are not maintained in functioning condition.

The departments continue to remain suffocating and foul-smelling. The ditch which is inside the departments and is filled with water (at least during the monsoon) are not sprayed with insecticides. Tilt these conditions are ripe for the thriving of infections, workers working in these conditions are exposed to all possible diseases.

One of the badi workers said, “we work here in our own clothes and after working in these conditions we go back home in the same clothes’. Permanent workers are given ‘work-clothes’ by the hospital so when they go home, they do not have to wear the soiled and possibly infected clothes. But badi workers are not entitled to this basic facility. As if, before launching their attack, the germs inspect the worker, see if he/she is permanent badi and then decide whether to attack or not. The logic that applies to a change of clothes for permanent workers, applies to whoever is on the job.

“We feel some of us have been affected by tuberculosis. We get treatment because we are working in a hospital. But ultimately our health is affected, isn’t it?” “And not just our health, but also that of our family members. Especially, when we have to go back in the same clothes. Our children and other family members are also vulnerable.” This fear is extremely real. The agency responsible for this spread of ill-health and the difficulties that workers and their families face is none other than the management of hospitals.

The situation described above is found in large public hospitals (it is quite likely that the same conditions are prevalent in private hospitals too, but for the purpose of this bulletin, we have covered only public hospitals). In the context of public hospitals, there is no question of the primary objective being the profit-motive. Yet there is total indifference towards the health of workers and employees working in the hospital. This situation is common to all the departments in these hospitals. For example, the materials’ trolley has to be pulled/pushed on a slope which is about 10-12 feet. If there is a slight misjudgement or slip, the trolley may cause serious injury to the workers.

ACCIDENTS
The day I went to the hospital, one worker working in the garden was hurt. The injury had been caused by a window-glass, which had slipped and crashed on him. The wound was large and he needed stitches for the wound. It was said that the window-panes are loose and not fitted well. In studies of industrial accidents, it has been observed that for every accident
causing injury, there are about 300 which have not resulted in any injury ("near-miss accidents"). This means that when a worker is injured, it's not purely accidental. There have been several such instances prior to the injury. The situation is ripe for an accident causing injury. Just as when a fruit is ripe, it has to give way, similarly if there is repeated neglect of near-miss accidents, an injury-causing accident is bound to occur. Some people said that he should have moved away with greater speed and tried to avoid the glass. However, the basic question is the entire situation - the indifference to maintenance of the building, to the unhygienic and dangerous conditions workers have to work which itself gives rise to the conditions under which accidents occur, workers contract illness and disease.

Some years ago, one job that badly workers were allocated was breaking glass bottles. While doing this, glass particles would fly and hit workers. Three years ago, a glass particle hit an eye of one worker. He was treated immediately; but one eye has been permanently affected. He has not been able to get any compensation for his loss. The hospital management hid under some finer, technical excuses and deprived the worker of his lawful dues.

In the•1•4m•op•e•t•i•0•n, as well as after wards, hospital workers have to regularly hit patients. Patients with serious fractures, postoperative patients etc. have to be lifted. It is necessary that workers be given the couple manner of lifting weights they have otherwise given no such training. If workers continue to carry heavy weights in an unsuitable manner, gradually they begin to get severe pains in the lower part of their backs. This may develop into chronic low-back pain.

In one public hospital, there is a good system which may be beneficial for workers suffering from a condition due to working on the same heavy job for several years. This system is as follows: while getting medically treated, if a worker relates his medical condition, he is entitled to be given lighter work temporarily. If the health condition persists, it is possible that the worker be assigned light duty on a permanent basis. But the worker need to take the extra initiative to building on this case.

Actually, it is necessary that the management is made responsible for training workers on usual lift exercises, which by in part of their job workers would know the scientific manner of working lifting weights etc. Such work should be avoided and know the types of work which cause greater problems when performed incorrectly. Encourage and hinder which workers are while working should also fulfill basic ergonomic criteria. For example, in industries etc. the choice on which the technical work need to be of particular specifications as the need may be.

1. CLOTHES DEPARTMENT

In the clothes departments, torn and soiled clothes which are to be destroyed are seen lying around for months together. Some were beginning to rot. After working in such an atmosphere for the whole day, a thorough bath is a must. But there is neither the space, nor the time. No soap is provided either. Bathing should in fact be part of the work and time should

NURSING

The ILO has made specific resolutions and recommendations in the case of the nursing profession (resolution number 149, recommendation number 177). One of the points made by the ILO is that it is necessary to conduct a detailed study of the occupational health problems of the nurses. As far as we know, there is no such detailed study. Even if there is one, it may have been a part of discussions at national or international seminars; however, it has not reached people who could put it to some concrete use - nurses, hospital workers, unions. Such a study needs to be taken up by the Government in collaboration with unions with the active participation of hospital workers and employees. The results of such a study should also be easily accessible to everybody.
be provided for in one's working hours. In fact, workers have their lunch in the same atmosphere in the same room. Nor are workers vaccinated against any of the infectious diseases. There has not been any study of the health status of these health workers either.

2. CLEANING, DRESSING DEPARTMENT

In the cleaning and dressing department, wounds are cleaned and bandaged. Thus workers have to continuously 'handle' infected areas. As a precaution against self-infection, workers keep washing their hands and applying insecticides. "After continuously handling soiled bandages, especially of patients suffering from piles etc., you don't feel like touching food," one of the workers said. An assistant added, "we do not have gowns, uniforms, masks. No separate allowance. Not even the status of a skilled worker".

The chemicals in the germicides cause severe itching. Year after year of exposure to these destroys the hands themselves, as germicides are applied to the hands fairly frequently. [Joseph Masserensans and Ramji Balu] retired from this departments. They can no longer use the palms of their hands for the simple purpose of eating; they burn. Not only have their hands been affected by this, but their lifestyle itself. Ramji Balu is not used to eating with a fork and a spoon. He has to learn this after his retirement, for no fault of his own. They have not been able to get any compensation for the loss of such a vital function. Are there any future programs for taking precautions that no further danger takes place where other workers are concerned? When workers complain of skin problem with their work. This complaint is treated as any other and superficial treatment administered.

Whenever anybody is suffering from any disease or is injured, it is necessary that the doctors during diagnosis relate the problem with the workers' occupation, the nature of her work. This is not generally done. However, in the case of hospital workers at least, doctors need to begin doing this.

3. NURSING

We talked to many nurses and the information they related was quite disturbing.

The floor of the ward was just scrubbed and cleaned. While crossing it, the sister slipped and her foot was badly injured. She had to stay away from work for two days. The matron told her to take her own personal leave and fill in the form accordingly. The sister refused. "The accident occurred when I was on duty. I was entitled to accident leave. It was wrong to go on personal leave, isn't it?" She asks. She insisted on applying accident leave. For one whole year, her leave was not sanctioned. So the accounting of her leave for the year could not be completed. She had to forego her leave travel allowance and her annual leave. The two days accident leave was sanctioned almost 18 months after the accident. In the meantime, she had to forego her annual leave and all this caused her a great deal of tension. All this happened due to the delaying methods and the indifference of the management. This was an indirect way of telling workers, "See what will happen if you try to insist on your rights of getting accident leave when you actually meet with an accident".

Accidents on slippery floors are quite common, given the type of footwear people use, the speed with which they have to move, especially in cases of emergencies and the tension that emergencies, injuries etc. cause.

Besides accidents, nurses face other very severe problems:

1. The majority of nurses are women and they have to continuously deal with male attitudes - of other hospital workers, of doctors, of patients. The rape case in KEM hospital is a glaring example of what nurses have to go through every day in terms of "casual" touch, sexist, jokes etc. These types of behavior cause enormous tension and pressure. Many nurses are young, stay away from their homes, have other tensions like in their training etc. Added pressures create more problems and it has been observed that these tensions are sometimes expressed in self-destructive ways like painful relationships with men who are unscreanious and frivolous.

2. Nurses have to continuously relate to people-patients and their relatives who are under tension. This is especially in times of emergencies. Nurses have to relate to patients and yet keep their cool. "After my own
issues. Ms. Kulkarni would not be dead.

The doctors, nurses, sweepers, ward attendants who work directly with patients are vulnerable to infectious diseases like hepatitis. However, even workers and employees who do not directly deal with the patients are also prone to be affected. One important section is the personnel working in laboratories. The urine, stools, blood and sputum of patients contain germs and viruses. These excretions have to be tested in laboratories. Workers working in these laboratories - technicians, assistants, sweepers etc. come into contact with these germs through both inhalation and touch, while testing the samples.

In most general hospitals, there are about 17-18 types of laboratories. In these laboratories, doctors, technicians, sweepers, helpers etc. constantly come into contact with hazardous chemicals and all types of germs. “Blood bank, microbiology, histopathology pathology, clinical pathology, dialysis, out patient department (OPD) have their own laboratories and the atmosphere there is extremely hazardous”, a technician said. “There are certain types of illnesses which are common and recurrent among us” another informed. “Some of these are hepatitis, tuberculosis, typhoid, anemia, worms etc.” “That is there”, another technician added. “But there is no record on statistics of incidence of these illnesses/diseases. It is difficult to agree and prove that these are related to our work. So we are not even entitled to special leave when we fall ill.” “Actually, the work process and conditions of work should be such that workers working here should not be made to suffer. But the actual situation is the opposite”. An interesting observation was “our work method is such that instead of destroying germs and building up peoples health, here we give rise to more germs and destroy our health”.

The other oft-repeated illnesses/diseases are: cancer, virus infections, skin diseases, allergies, respiratory diseases, spondilitis, effects of mild poisons etc.

During the course of one of these discussions, I went to a microbiology laboratory. The air was hot; besides, a burner was on; the seating arrangement was quite unscientific. The technicians had to continuously bear down a microscope and there was no footrest, the chairs were not adjustable ones. All this affects the backbone adversely. In the room next door, the pressure indicators of the huge distillation machine were out of order. “If pressure increases beyond the safe limit, nobody in this room will survive”, the worker informed.

An officer of this same laboratory had arranged for all the workers there to see films on AIDS. All the workers had seen what an AIDS testing laboratory should be like how it should work. As most women and men in the department were fairly well-read, all of them knew the implications of the possibility of contracting a disease like AIDS.

The same officer who had organised the film show asked the laboratory personnel to be prepared for AIDS testing. But there were not enough preparations and no protection was ensured. Some workers began thinking in times of special allowances. However, it was decided that until the hospital ensured sufficient protection, workers would refuse to do AIDS testing.

The officer was furious. “You people are not prepared to learn new skills. You are flouting orders”, he stormed. At last he threatened. “This will be recorded in your confidential record. Your record will be blemished”. However, the officer himself was also aware that safe work practices do exist, protection for workers is possible. But the only thing he did was to threaten people.

<table>
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<tr>
<th>Experience of an activist, a laboratory technician.</th>
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<td>I was affected by Lofflers Syndrome. We analyse infected stools. There are various types of worms such as E. Vermaealitis, Ascari - Lumbaroides, Antilobosa - oedemina (hook worms), Trichinae Trichure, H. Nandakumar.</td>
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<td>Some of these worms after entering the body, travel even to the lungs and give rise to breathlessness. Initially, I was diagnosed as affected by asthma. In 1984, I suffered for almost three months. Afterwards due to proper treatment of worms I recovered.</td>
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We have to make repeated doses of medicines against worms as we are repeatedly affected. Do you know - sometimes worms come out of lungs on the post-mortem table.

We are affected due to unhygienic working conditions.
operation, suddenly I went cold. I started shivering and chattering. My temperature suddenly shot up. I was almost sure I am dying. People around me, my relatives must have also been very scared. The two nurses on duty however were calm and composed. One of them calmly came and disconnected the drip; the other brought me some tablets”. Of course, they had had a great deal of experience; but even if they are alarmed at a situation, they cannot show it. They have to face many such situations, which are much more serious, work long hours, combine hospital work and housework, complete their studies and training, sometimes live far away from home. All this also causes mental strain. A study conducted in France indicated me that nurses have to take more leave because of the tension and strain due to their work and working conditions.

Nurses are extremely vulnerable vis-a-vis infectious diseases. The list of infectious diseases prevalent in India is given in the end of this article.

Tuberculosis seemed to be the most prevalent disease. In theory, patients of tuberculosis who are in the “infecting” stage are not supposed to be admitted into general hospitals; there are separate tuberculosis hospitals for this purpose. However, many doctors admit their own private patients into general hospitals, even when they are likely to infect others. “Nurses who have very little information can come into contact with such patients”. “How do you know which patient is in this stage?” I asked. “Actually, it is not written in the papers. But we can observe. Doctors try to avoid the patient and we know that there is a likelihood that this patient is being affected by some infectious disease”. I suggested that this issue should be taken up with the doctors’ union. The activist of the nurses’ union agreed to think about it.

Recently, a few months ago, one sister came down with infective hepatitis. She was admitted into a hospital specially meant for patients suffering from infectious diseases. The bilirubin in her blood however continued to be dangerously at high levels. Infective hepatitis has often led to death due to the weakening of the liver. Luckily, she was shifted to another hospital and gradually her condition improved. In this entire period however, she had to exhaust her own leave, pay for the exorbitant expenses out of her own pocket. The incidence of hepatitis among health workers is about 4,000% more as compared to the rest of the population.

This itself is an indication that hepatitis is an occupation-related disease.

Thus health personnel suffering with such diseases should be granted special leave with full pay, the entire medical expenses and compensation. In some hospitals, workers have been able to win leave with full pay when they were affected by hepatitis. But this is not the generalised situation, which it should be. Over the last few years, there have been several cases of deaths of nurses and doctors due to hepatitis.

4. LABORATORIES

In the year 1987, Ms. Kulkarni, a laboratory technician died due to severe liver infection. She had no history of liver infections. Suddenly, while playing badminton, she felt giddy, fainted and died in the hospital. In those days, pippets were used for laboratory testing. The glass tube used to be dipped in the secretion to be tested and the secretion would be pulled into the pipette by sucking at the other end, and then the secretion would be transferred onto the slide etc. In this process, the entry of germs into the technicians body was almost inevitable. These days pippets have been replaced by auto-pippets. If more sensitivity had been shown by by management in at least trying to disseminate informations about such
The indifference to the basic protection against ill-health of health workers is quite alarming. If workers indicate their awareness and attempt to act on it, they are severely reprimanded.

One technician said "There aren't any germicidal soaps in the laboratory, there aren't enough clean aprons for technicians, there is no washing allowance. Earlier all the work with secretion etc. had to be done with manual pipettes; now at least in places where work is more hazardous, auto pipettes are provided".

Another technician said, "you will really understand the meaning of health in this setting if you go to the morgue. Rats are munching away at dead bodies. Earlier, after an operation, parts of the body, which needed to be tested, would be carried on a tray straight from the operation theatre, and exposed. What happened to us due to exposure to infected parts of the body is anybody's guess. Now at least there is a supply of formaline near the operation theatre itself.

"Chemicals like benzidine, formaldehyde, formalin are hazardous in the long run. One of our colleagues used to do occult blood tests for some years. He is suffering from cancer of the intestines".

"Another colleague used to work on acid fast bacilli and prepare smears. He is now suffering from tuberculosis. He was told to go on "TB leave". But there are no attempts to change the conditions which give rise to these tragedies", one activist said.

One activist has prepared a brief note on the conditions of work in hospitals. He feels that workers' health should be an important concern in the work allocation, work practices and management of the hospital. If management infringes on the legal rights of workers, stringent punishment should be accorded.

5. X-RAY DEPARTMENT

Workers including doctors working in departments like X-ray department, nuclear medicine department, radiation therapy department etc. are continuously exposed to radiation. This has a number of very dangerous implications in the long run. This is especially true for pregnant women and for men and women in the reproductive age-group. Pregnant women have to avoid the X-rays reaching their abdomen, as X-rays affect the foetus adversely in its normal growth; children exposed to X-rays in their foetal stage are known to be vulnerable to blood cancer. Similarly, X-rays affect the reproductive capacities of men and women.

In order to avoid these effects, people constantly working with X-rays are supposed to wear lead aprons. Lead sheets of a certain width do not allow X-rays to pass. A registrar (doctor) in a hospital said, "we do not think these aprons are of good quality. When aprons are bought, only a few samples are tested. The rest of the aprons are far below quality. We feel each apron should be tested for safety".

"These aprons are totally useless" an X-ray technician said. "We put a pen below the apron and X-rayed the apron. The pen is visible in the X-ray, which means that X-rays do pass through these aprons".

Some people wondered whether the poor quality had something to do with the money passing hands from the suppliers of equipment, aprons etc. to people who have a say in decision making. If this is so, it is a very serious issue that needs to be investigated further. One way of ensuring that the aprons do protect workers from radiation is, as has been suggested, to get every single equipment tested. Hospitals, administration and the Bhabha Atomic Research Centre need to be pressured into doing this.

Another protection against excessive radiation is the radiation badge. These badges are to be pinned on their bodies by workers who are exposed to radiation as a part of their work. These badges record levels of exposure to radiation. The films in these badges are analysed by the BARC. An example of such an analysis is given below:

The summary report for the month of January to October 1989 came in March 1990. The report indicated that in the X-ray department, 26 percent of the personnel were overexposed to X-rays. These include doctors, technicians, helpers etc. Some of them were likely to be affected around the month of July 1989. If results of July 1989 were made available immediately, some of them would have argued for work which involved less exposure to x-rays. But the report is a summary report of the month and is accessible to the affected people only in the 15th month. It is necessary that these reports are made available more often at short intervals, so that the reports can be used practically and do not remain mere academic exercises.
WORKMEN'S COMPENSATION ACT

According to the workmen's Compensation Act, section 2, Definitions: "Any worker may claim compensation; the only exception is when the following two conditions are simultaneously applicable: a) the worker is a casual worker, and b) the worker is also not employed for trade or business of the employer.

This means that not only permanent workers, but also casual workers required to run the hospital may claim compensation under this Act.

The Act further states that those occupations listed in schedule 2 will be entitled to compensation under the Act.

According to Sub-section 32 of schedule 2 persons who are included in the definition of workmen include "persons employed in any occupation ordinarily involving outdoor work by any Municipality by any District/Local Board.

The wordings are slightly misleading. Hence they have been misinterpreted to mean that indoor municipal workers are not entitled to compensation under the Act. This interpretation is included under the Act, not those excluded. The basic definition at the beginning of this section specifies those excluded, (the two simultaneous conditions.

The schedule only means that outdoor municipal workers are also definitely included within the purview of the Act.

This is stated clearly in schedule 3 of the Act. Schedule 3 lists the occupational diseases for which compensation may be claimed.

**PART A**

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<tr>
<th>Disease No.</th>
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<tr>
<td>1.</td>
<td>All work involving exposure to health or laboratory work;</td>
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<tr>
<td>2.</td>
<td>All work involving exposure to veterinary work;</td>
</tr>
<tr>
<td>3.</td>
<td>Work relating to handling animals, animal carcasses, part of such carcasses or merchandise which may have been contaminated by animals or animal carcasses;</td>
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<tr>
<td>4.</td>
<td>Other work carrying a particular risk of contamination.</td>
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From (a) in Employment above it is clear that permanent and casual workers working in hospitals, hospital laboratories, private laboratories are included in the purview of the Act. So are municipal sewerage workers, dumping ground workers, workers in abattoirs. If these workers - permanent and casual - contract infectious diseases they may claim compensation.

For greater clarity about the above interpretation and for the Act to be effective it is necessary that workers/ unions file a test case. As number of issues come to mind when one thinks of such a test case - the death of the technician in Sion hospital, incidence of tuberculosis among nurses, attendants etc., problems caused due to radiation etc. There will be many more issues which can be taken up and cases may be filed.

Occupational Health and Safety Centre and Clinic (OHSC) About 15 unions, including Municipal Mazdoor Union, Dock Workers' Union, CITU, AITUC, Blue Star Workers' Union, Maharashtra Association of Resident Doctors (MARD), and other together with lawyers and researchers set up the OHSC in 1988. Dr. Santosh Karmarkar from MARD is the convenor and the doctors have also taken initiative in starting a clinic as a part of the OHSC.

The idea is that workers and unions who need medical/legal advice could come to the clinic where they could meet the doctors/lawyers as well as other workers. Advocate Gayatri, one of the initiators of the centre, has also agreed to be available to unions/workers for filing claims regarding occupational health issues.

The clinic is open every first and third Monday of each month from 5 to 8 p.m. The OHSC and the clinic is housed at the office of the Blue Star Workers' Union at 6, Neelkanth Apartments, Gokuldas Posta Road, Dadar (East), Opp. Guta Soap Factory. Bombay - 400 014.

If you need any help/information or what to relate any incidents involving the issue of occupational health and safety, do please come to the clinic. If you know anybody else who does, ask her to come too.
Besides, these badges are not available to all workers working in the x-ray departments. Casual workers are not given badges at all. This is because, apparently, badges are very expensive! We were also told that when a new doctor comes into the department, just as he carries over the work of the doctor who has left, so also he continues to wear the same badge his colleague had left behind! This, in no way would indicate the level of exposure of the new doctor.

Thirdly, after the badges are analysed and it is found that certain workers are over-exposed, then what? We were told that the management asks such workers to go on leave for some period of time. This is no special leave, though the reasons for the leave would warrant such a provision. Workers have to avail of their own personal leave. In such a situation, it is no surprise if workers would go to conceal their level of exposure to x-rays. It is necessary to evolve other alternatives and this can be done through discussions between x-ray personnel, hospital management and the BARC.

Regular monitoring of x-ray machines and other equipment is necessary. Is there a leakage in the x-ray machine? Are machines maintained in proper condition?

BARC needs to take the responsibility for the monitoring of machines, especially in public hospitals, where x-ray machines are in constant use.

Safety Committees

There are many other departments in hospital where the health problems of workers are serious and workers need to do something about these. It may not be possible to evolve a common solution for all these departments. But, it may be possible to evolve broad guidelines and directions which would help all departments to articulate their problems and proceed towards their resolution in some way.

### RADIATION

Exposure to high doses and also to repeated small doses may lead to cataract after a latent period usually six months to two years but in rare cases it may extend up to twelve years.

Changes in blood composition - proportion of white blood cells may increase initially. Later possibility of anemia, reduction of proportion of white blood cells. Due to effects on bone marrow possibility of leukemia cancer of bones and other forms of cancer are possible.

Effects on reproductive systems may lead to infertility.

If embryo is exposed abnormalities of nervous system and death of fetus is possible and possibility later effects such as leukemia.

Blood tests for exposed persons are a must especially when it is known that they are over-exposed.

### FORMAL DEHYDE, FORMALIN

Formalin is 37 percent solution by weight of formaldehyde gas.

Low atmospheric concentrations cause irritation of eyes, respiratory tract.

Skin is affected due to formaldehyde. Effects first may be seen at back of hands, wrists, forearms and parts of the body that have friction with clothes.

In presence of hydrogen chloride in humid air, may produce bischloromethyl ether which is a chemical causing cancer. NICOSH (USA) has recommended that formaldehyde be treated as potential occupational carcinogen.

Due to sensitivity to formaldehyde some persons may demonstrate asthmatic symptoms. 50 to 100 ppm ie. 50 parts in million parts of air may produce choking, spasm of glottis, death due to oedema - kidney injury may occur in excessive and repeated exposures.
Some points that emerged out of discussion with workers are:

1. While negotiating with management, general statements like ‘many people in Department A have TB’ may not help. May be it is necessary to systematically record these types of information.

2. In each department there would be one or two individuals at least who would be willing to keep a list of health problems faced by workers in their own department. These individuals from different departments could occasionally come together to discuss common problems, or share with each other their specific problems. Union

**Infectious and Parasitic diseases recorded in India**

**Disease, signs and symptoms:**

**Anthrax**
- Red spot at the place of infection, develops into papules, oedema.
- Anthrax of lungs develops suddenly, severe pneumonia and death are possible.

**Brucellosis**
- Swelling of the joints and spleen, excessive perspiration, weakness, anemia.

**Catarrh**
- Inflammation of mucous membranes of throat.

**Erysipelas**
- Dermatitis, usually on hands.

**Herpes virus infections**
- Small eruptions with bladder-like shape with thin walls are formed on skin. Herpes virus may cause meningitis.

**Infectious hepatitis**
- Jaundice, fever, malaise, pain in liver area of abdomen, upset stomach, muscle pain, loss of appetite, loss of weight.

**Leishmaniasis**
- Skin (pigmentation around malar bones on face), cavities of nose, pharynx are affected. Fever, chronic ill health, lassitude, protuberant abdomen with massive enlargement of spleen and liver.

**Leprosy**
- Muscular pain, fever, jaundice.

**Lymphocytic choriomeningitis**
- Fever, headache, contracted pupils, delirium, coma, possibly death.

**Mice infections**
- Scabies.
- Q fever.
- Headache, fever, loss of appetite, dry cough.

**Rabies** (commonly known as dog bite, hydrophobia)

- Problem in breathing, fever, depression or aggressiveness, vomiting, unusual salivation, usually fatal.

**Rat bite fever**
- Headache, vomiting, back pain, joint pain, rash, recurring fever.

**Ringworms**
- Red ringed patches on skin, itching.

**Salmonellosis**
- Three types possible: typhoid; sepsisemia i.e. presence of bacteria in blood, chills, fever, possibly death; acute gastro-enteritis.

**Toxoplasmosis**
- Muscle pain, fever, rashes, pneumonia-like symptoms.

**Tuberculosis**
- Well known symptoms of TB. TB may affect many other parts of the body, besides lungs.

**Infectious Skin Diseases Caused by Biological Agents**
- Bacterial, fungal, parasitic and viral infections of skin are possible.

**Signs and Symptoms**
- Diffuse redness or discoloration of skin, glandular tumor or growth on skin is possible due to above infections. In fungal infections, yellow disks around hair or all parts of the body, swollen patches in between fingers or folds of fingers are possible. In case of herpes, eruptions with bladder-like shape and thin walls develop on skin. Herpes virus may also cause meningitis.
activists could play a role in this. This interaction itself will be a rich source of data. Suggestions for dealing with the situation, what changes are required etc. could also be one of the focus of such a meeting.

Hospitals are routinely involved in preparing their financial audit. Can we think of evolving a method for conducting a safety audit? Our main aims regarding the safety audit would be:

1. To reduce the number and severity of accidents. If an accident does occur, to see that steps are speedily taken to radically change the situation and avoid similar accidents in future. To process claims for leave, compensation etc. speedily;

2. To reduce the incidence impact and effects of occupational health problems, see that her claims for leave, compensation etc. are processed speedily;

3. Greater part of the expenses of the hospital should be spent on improving the health situation of the workers, rather than on pomp and show. With these claims in view, we can work with committees from each department and evolve the social audit.

Some activists seemed to feel interested in their suggestions. Some activists felt quite strongly that all of us have a right to hazard-free work. Especially, those workers who work for the health of others should not allow this right to be trampled underfoot. The right however, cannot be automatically won one fine morning. Only, if those of us - workers, unionists, doctors, lawyers, activists, researchers who are interested in hospital workers' health continue to systematically work for it, would things change for the better. And may be we can conduct a similar audit about our own attempts also, bringing about these changes.

If workers/unions in Bombay want to take up this issue, the Occupational Health and Safety Centre, Bombay would be prepared to help out. Others may also contact Occupational Health and Safety Centre, Baroda, at Shree Shakti Apartments, near Shastri Polo, near Kothi, Baroda, or Society for Participatory Research in Asia (PRIA), 45, Safik Farm, Khanpur, New Delhi - 110062.

This Bulletin is prepared by Vijay P Kanhere

Letter to Editor

Question: Two Municipal workers died in Bombay, while clearing a nala in Bhandup. What actions can be taken by concerned activists? From what we know the fatalities were avoidable. The nala was choked due to garbage. Due to rains there was water clogged behind the piled garbage. They were asked to clear up choking and do it upstream. When the workers cleared the block the water slowed with force and workers were facing the flow and were thrown back on pipelines in the nala. They also got trapped under garbage and gases trapped in the garbage.

Answer: It is necessary to analyse these deaths. The activists should hold an enquiry and question - 'Was it correct to ask workers to clear the nala upstream? Who were the responsible officers? Are there any guidelines about safety?'

The workers should have been given ropes tied to their waist. In case of emergency as above others could have pulled them up with the safety rope. It needs to be seen if the families have filed claims under the Workers' Compensation Act? Is the Corporation going to punish negligence of officer whose action led to the fatalities?
Municipal Corporation of Bombay introduced compactors - machines which (1) lifts containers of garbage, empties them through rear end (2) compresses the garbage (3) carries it to dumpsite; unloads garbage. (1) This reduces workforce (2) garbage of two trucks is carried off by one compactor so vehicular traffic is reduced (3) contact of workers with garbage is reduced.

Some experts say that (2), (3) above are laudable goals and should be supported. This sort of modernisation does not include modern (even pre modern) or updated concepts of OHS and concepts of management.

Workers were not consulted in the decision about compactors. The officials argue that no workers is aid off it is not necessary to consult workers or their representatives. No permanent workers would be laid off immediately but contact workers would be cut off jobs immediately after introduction of compactors and at a later date employment of permanent workers would be reduced. And even if not a single job is lost, isn't it necessary to consult with workers while ringing in changes?

The officials have not considered the health and safety aspects of compactors. Experts who support compactors should take note of what encyclopaedia of OHS by M.O says about compactors. It says compactors are 'the modern rear loading enclosed compactor is one of the most hazardous'. The rate of accidents in municipal work in USA is very high. Most probably Bombay or other Municipal Corporations in India do not keep any records of accidents so we may not know the accident rates here.

In a demonstration run of a compactor at Dadar (Bombay) the garbage container got unhooked in Midair. There is a possibility that such accidents may lead to injuries.

The containers do not get fully emptied so the workers manually push remaining garbage. The compressor plate is at the rear side and the above action may lead to fingers getting caught by the compressor plate.

Huge loans must have been negotiated for these compactors from the World Bank but there is no money for change clothes for the casual workers. The clothes infested due to contact with garbage are worn to go home, there are no washing facilities. No soaps are given, no thought about immunisation against infectious diseases. Will the experts note that immunisation is not very modern but still not used for workers' health. No record of health status of workers is kept on the contrary 'I will send you for medical check up' is a threat, meaning we will throw you out as medically unfit. The bringing in of compactors is unbalanced modernisation.

It is said that World Bank has also stipulated that maintenance of compactors should be taken away from Municipal workers and should be given on contract. So more vulnerable workers will replace municipal workers. Once there are contractors middlemen we know what follows. What follows won't be good for OHS of workers and the health of the Corporation. Actually all the stipulations, recommendations of the World Bank should become public so that unions can take note of them.

The Municipal Majdoor Union asked for a report on OHS aspects of compactors and is interested in bringing in changes accordingly.

After a strike the whole issue of compactors has gone for adjudication.

Some of the changes needed in compactors are noted below, these points are based on a short observation, consultation with workers and a thorough study may suggest any more.

1. The garbage is compressed and some of it is wet or leafy and the liquid coming out of the pulp, the essence of the garbage just drops down the lower side of compactor and may drip for kilometers. A tray should be built in to collect and cover the essence of garbage so that it does not contaminate workers or others on the roads.

2. The engine of the compactor drives the vehicle as well as supplies power for compression. Every time the plate compresses, flames are given out by the exhaust in the breathing zone of workers and people on the streets. Exhaust needs to be thoroughly tested and its design improved.

There are compactors in many other cities. Union workers need to take note of OHS aspects of compactors. Do write to us if you want to know more about compactors or OHS problems of Municipal workers.
India sought a further strengthening of dialogue between governments and representatives of the working population from the North and the South in an effort to cope with the challenges emerging from occupational and health hazards posed by advancing technologies, especially in the extremely large range of toxic chemical substances produced by the chemical industry, while participating in an international round table organised here by the International Labour Organisation (ILO) in cooperation with the German Foundation for International Development.

The problems of health hazards and environmental pollution in the work environment in the Indian context was highlighted by Mr. H. Ghosh, joint secretary, ministry of labour, who focused on the unorganised and small scale sectors to make his point that a serious danger existed where employers with limited resources could do precious little in educating, enlightening and protecting their workforce about risks lurking at the workplace.

Published at: Economic Times
Dated: 14 May 1990

The Bihar government has identified 740 industrial units as hazardous for the environment on the basis of the first schedule of the Factory Act. Of these, 40 industrial units have been described as most hazardous.

According to a survey conducted by the state environment department, units that run simple hazard risk number 464. About 236 industrial units have been described as moderately hazardous requiring off-site planning.

The list that has named units within private and public sectors includes some big names like the foundry forge plant of the HEC at Ranchi, Indian Oxygen Limited, Jamshedpur, Tata Engineering and Locomotives, Jamshedpur, Indian Drugs and Pharmaceuticals Limited in Muzaffarpur, Tata Yogyawa Limited, Ganganjira in Singhbhum.

The Tata Iron and Steel Company Limited, Jamshedpur, Fertiliser Corporation of India, Sidri, Patratu Thermal Power Station, Indian Explosives Limited, Gomia, the Associated Cement Company, Chaibasa, Barauni Refinery (Indian Oil Corporation), Begusari and the Bihar Caustics and Chemicals Limited, Garhwa in Palamau district.

Most of these industries let out effluents that are extremely injurious to health. Effluents from coke oven plant contain phenolic wastes and acids, ammonia, fly ash, coal fines, shale, and dirt.

Published at: Times of India
Dated: 1 May 1990

In a meeting of the women workers was decided to bring out a Women Workers’ Newsletter. The broad purposes of the newsletter would be as follows:

- sharing experiences of work in the organised and unorganised sector
- conveying news about struggle events, trends, court judgements and cases
- discussing how to increase the proportion of women in the organised sector and improve the conditions of women in the unorganised sector
- coordinating attempts to combat social conditions which prevent women workers e.g. Equal Remunerati Act (ERA), the non-inclusion of sexual harassment in lab legislation etc.

If you would like to write for newsletter and if you would like to receive it please write to the following address:

1347 - 17B MHB Colony
TATA Power House Road
Borivali (East)
Bombay-400066
Rohtak: Five workers of a factory were killed when a poisonous gas leaked in the factory at Dhib village, 5 km from here. Four of the victims were identified as Arun Singh (25), Lallan Singh (23), Kishan, alias Papu (25) and Bhura Singh Chauhan (25).
Name of the paper: Tribune
Published at: Chandigarh
Dated: 17 April 1990

Bangalore: Three persons of a family died after inhaling a lethal gas that leaked from a lime stone kiln in Cholanayakanahalli near Hebbal on Wednesday night. Police said the people living near the kiln complained of suffocation and nausea after a pall of smoke from the kiln enveloped the area in the night.
Name of the paper: Indian Express
Published at: Bangalore
Dated: 11 May 1990

Bombay: Nearly 150 villagers had complained of suffocation and vomiting after chlorine gas leaked out from the Standard Alkalies Plant.
Name of the paper: Deccan Herald
Published at: Bangalore
Dated: 6 April 1990

Jamshedpur: At least 23 people were taken ill after inhaling poisonous gas leaking from a blast furnace of the TISCO workshop here last evening reports UNI.
Name of the paper: Statesman
Published at: New Delhi
Dated: 5 May 1990

Three labourers, including two women, were killed as one of the ‘Badarpur’ mines caved-in in Mahipalpur village in south-west Delhi on Monday morning. According to eye witnesses, nearly 30 workers were working in the Rajokri Khanpur mines, when suddenly a mound of red sand caved-in. While others rushed to safety three persons were trapped within the mound of earth.
Name of the paper: Patriot
Published at: New Delhi
Dated: 8 May 1990
LAND AND PEOPLE

This is a quarterly newsletter of PRIA on the issues related to Land, Forests and Water and people access to and control over these natural resources. If you are interested in receiving it, we shall be happy to send it to you regularly.

Before you forget, drop a letter.

DISEASES AT WORK

This is the first and second set of reference sheets on diseases at work, prepared by Vijay Kanhere. These reference sheets focusses on these diseases for which compensation can be claimed under the Workmen’s Compensation Act and the Employees State Insurance Act.

Both these sheets are available with us.
Occupational Hazards in Hospitals

This booklet is a report of a meeting of Working Group (of 11 European Region countries) on Occupational Hazards in Hospitals convened by WHO. The report focuses on occupational hazards of hospital employees and considers how to eliminate such hazards.

Women and Occupational Health Risks

This booklet is a report of a meeting of (13 countries of European Region) working group on women and occupational health risks convened by WHO. The main focus of this report is on reviewing the current legislation and health and safety problems in participating countries.

Education and Training in Occupational Health, Safety and Ergonomics

This is a report of joint ILO/WHO committee on occupational health. This report contains the collective views and recommendations of an international group of experts on Training and Education in Occupational Health, Safety and Ergonomics.

Visual Display Terminals and Workers’ Health

This book records the conclusions of an international WHO working group after it had examined the results of pertinent studies.

This book will be of great interest to both office managers and health scientists. Office managers will find straightforward recommendations concerning management of the operators, selection of equipment, design of the workplace, organisation of work practices, the incidence of adverse health effects, and also suggestions for answering some of the commoner questions that workers ask about working with visual display terminals.

For copies write to: World Health Organisation, World Health House, Indraprastha Estate, Mahatma Gandhi Road, New Delhi–110002.

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