



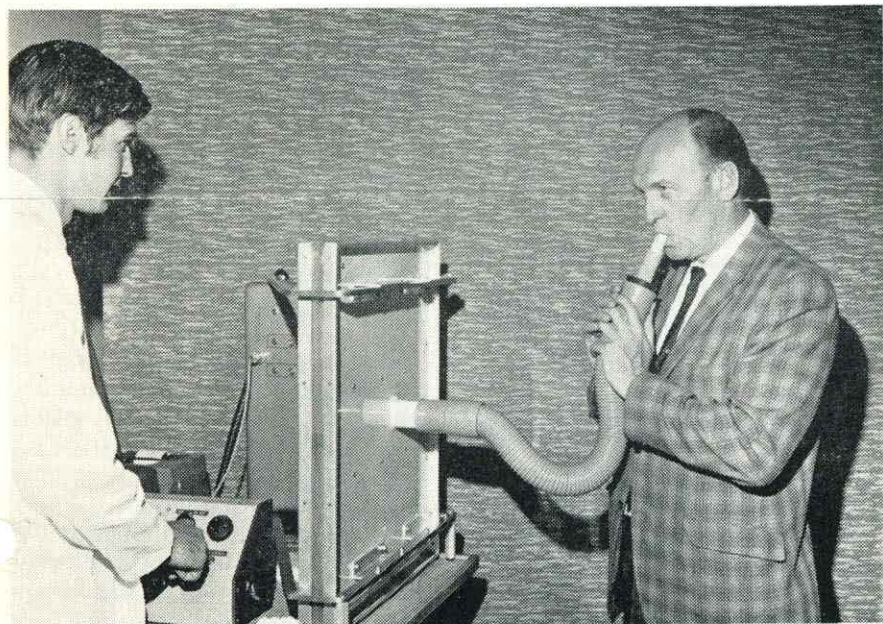
Spirometer Gets Trial Run

Dr. Reuben Cherniack's custom-built, computerized wedge spirometer made her maiden trip into the community on June 20th. The occasion marked the first time that pulmonary function tests (to detect early bronchial disease) have been included in Sanatorium Board preventive surveys.

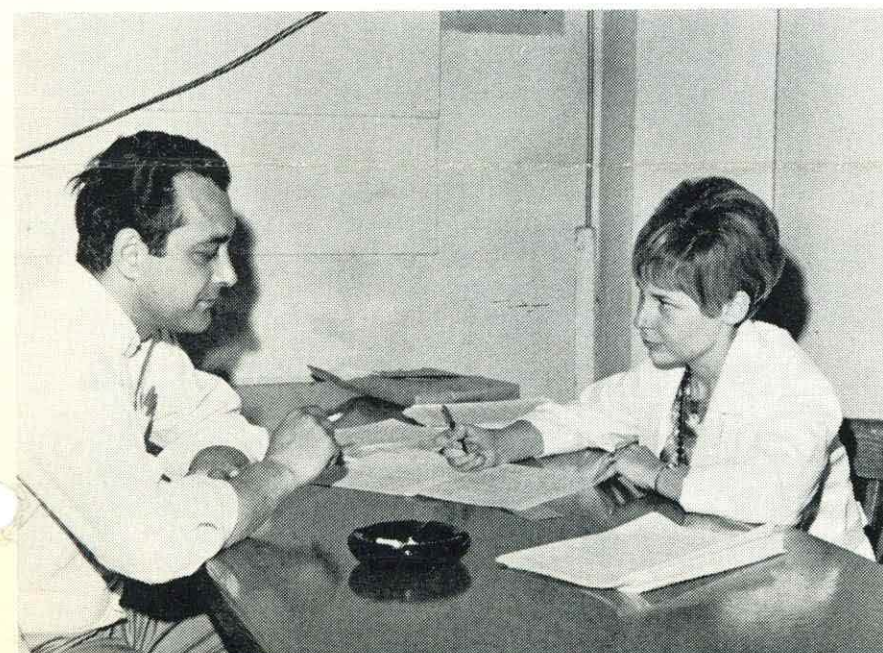
The first subjects were 177 employees of the Canadian Broadcasting Corporation, who volunteered to take breathing tests during a routine tuberculin and x-ray survey of radio and television staff. They also answer-

ed a questionnaire which, when used on a mass basis, will hopefully give researchers more information about the natural history of respiratory diseases and the factors in their development.

This was a trial survey, designed primarily to uncover and rectify any problems that may be encountered when the Sanatorium Board of Manitoba embarks on a large survey of the city of Transcona this fall. There the Board plans to combine lung function studies with chest x-rays and diabetes tests for all adult residents.



Medical student administers pulmonary function test to CBC staff member.



Another CBC employee answers the Sanatorium Board respiratory questionnaire.

TB Association Changes Name, Sets New Goals

The Canadian Tuberculosis Association — which began in 1900 as the Canadian Association for the Prevention of Consumption and Other Forms of Tuberculosis — has again changed its name.

At the 68th annual meeting in Vancouver in June, out-going president Dr. Herman Gauthier of Mont Joli, P.Q., announced that henceforth the association will be known as the Canadian Tuberculosis and Respiratory Disease Association, in order to reflect its new activities in a broader field of health.

In his opening address Dr. Gauthier compared respiratory diseases to "a new monster on our horizon, presenting a challenge equally as formidable as tuberculosis a half century ago."

For some time both the national and provincial TB associations have been increasingly confronted with the many problems caused by such other chronic lung conditions as bronchitis and emphysema. Since no comprehensive surveys have been undertaken the extent of the situation has never been fully assessed; but it is claimed that chronic bronchial disease is the fastest rising threat to health today and that deaths due to bronchitis and emphysema have increased sixfold during the past 16 years.

It is not the deaths, however, but rather the incapacitating nature of chronic respiratory disease that concerns health workers the most. Disturbed function is the crippling factor; and while the actual cause has yet to be determined, air pollution (both personal and environmental) seem to be especially implicated. Studies have shown that airway resistance increases after inhaling smoke from only one cigarette. Continued inhalation of harmful substances over a long period of time has been linked with marked obstruction to airflow, cough and sputum, shortness of breath, and eventually very limited physical capacity.

So from now on, in addition to the anti-tuberculosis campaign, the new Canadian Tuberculosis and Respiratory Disease Association (along with its provincial affiliates) plans further development of Christmas Seal preventive programs, aimed primarily at educating the public and health professions about chronic lung disease and stimulating action against such problems as cigarette smoking and air pollution.

Much research will also be required to better define chronic bronchial disease and to learn more about the cause. And in some areas, such as in Manitoba, case-finding surveys will be carried out among the general public.

TB FIGURES

Approximately 4,700 new active cases and 760 reactivated cases of tuberculosis were reported in Canada in 1967. These figures are about the same as those reported in the country for the past five years, which have averaged about 5,000 new active cases and 700 reactivations.

The big landmark in 1967 was that for the first time ever, a Canadian province (Prince Edward Island) had no deaths from tuberculosis. In the rest of Canada 669 people died from the disease.

Address all communications to:

THE EDITOR, SBM NEWS BULLETIN,
800 Sherbrook Street, Winnipeg 2, Manitoba

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Name New Chief



JEAN COLBURN

The Sanatorium Board is pleased to announce the appointment of Miss Jean Colburn to the position of Chief Occupational Therapist at the Manitoba Rehabilitation Hospital.

A highly capable member of our staff since October 1962, Miss Colburn is a 1959 graduate of the Dorset House School of Occupational Therapy at Oxford, England. She was born in Gloucester, England, educated at Wynstones School near Gloucester, and trained and worked as a secretary before entering the occupational therapy profession.

Prior to her arrival in Canada, Miss Colburn served for three years as assistant head occupational therapist at the Devonshire Royal Hospital at Buxton, Derbyshire. In 1962 she came to this continent to attend the International Congress of Occupational Therapists at Philadelphia and afterwards stayed on to work for a while in Toronto, thence for two years at the Workmen's Compensation Board Hospital in Vancouver.

Since joining the M.R.H. staff, Miss Colburn has been especially interested in the research activities of the hospital and during the past year she spent many extra hours collaborating with Dr. F. D. Baragar in a special hand assessment project among arthritis patients.

She is also an active member of the Manitoba Society of Occupational Therapists and was recently appointed to the executive committee of this organization.

Need Books, Magazines

The Manitoba Rehabilitation Hospital Volunteer Services urgently requires books and magazines (of all types) for the patients' library.

Hard cover books and paper backs (in good condition) will be greatly welcomed. Magazines in the library are presently in extremely short supply. If you have any that are not more than three months old and which you are now ready to discard, please think of the patients at the M. R. H.

U.K. DOCTOR WARNS

Smokers Risk Untimely Death

Dr. B. H. Bass, consultant physician from Birmingham, England, rounded off a spirited talk to the CTRDA meeting in Vancouver June 18th with a projected picture of a sleek jet aircraft.

Turning to the 200 or so delegates attending the session he asked: "Would you come with me on a jet to Hawaii if it was announced just before takeoff that one in every eight flights crashes, killing all aboard?"

Cigarette smoking, he pointed out, presents similar risks. Yet for some inexplicable reason people go on smoking despite warnings about developing bronchitis, lung cancer, coronary artery disease and so forth.

These same people would worry about drinking polluted water and contracting cholera and all sorts of bad things, he said. But breathing in polluted air? That's a different matter!

One of the main speakers at the 68th annual meeting of the Canadian Tuberculosis and Respiratory Disease Association, Dr. Bass said that carcinoma of the bronchus is reaching pandemic proportions in the United Kingdom; and that deaths have risen astronomically from 592 in 1920 to 25,288 in 1961.

More than 50 percent of U.K. doctors who previously smoked have been sufficiently convinced by evidence to give up cigarettes, he said. Yet British youth cling to the habit. One survey showed that 70 percent of the teenagers smoke by the time they reach 19 years of age; 58 percent smoke at age 17; and 15 percent smoke at 12 to 13 years.

Dr. Bass' graphic accounts left no doubt that cigarette smoking is injurious to health. Even newsmen were impressed. And when former columnist Jack Wasserman interviewed Dr. Bass on his morning radio show, he gave up cigarettes right then and there.

"It wasn't so much the cancer or bronchitis that got me," he told listeners. "It was an awful picture of a gangrenous foot!"

LIFE MEMBERS

The Sanatorium Board expresses warm congratulations to six outstanding tuberculosis workers who were presented with life memberships in the Canadian Tuberculosis and Respiratory Disease Association at the annual meeting in June.

The recipients are Tom Saul of Kenora, a former president and long-time member of the CTA; Dr. Joe L. Gayton, Senior Medical Officer of Health, Vancouver, and a former member (in the 1930's) of the medical staff at Manitoba Sanatorium, Ninette; Miss Esther Paulson, former director of nursing at the Pearson Tuberculosis Hospital in Vancouver; Miss Wilma Wood Marsden, who retired last year from her post as director of nursing at Willow Chest Centre, Vancouver; Dr. H. E. Peart, Mountain Sanatorium, Hamilton; and Dr. D. S. Thurber, medical director of the Quebec North Shore Paper Company and Boisvert Memorial Hospital, and Medical Officer of Health at Baie Comeau, Quebec.

Receives ACHA Membership

Edward Dubinski, assistant executive director of the Sanatorium Board of Manitoba, has successfully completed his examinations to qualify for membership in the American College of Hospital Administrators.

Conferral of membership will take place at a special convocation ceremony to be held Sunday afternoon, September 15, just prior to the College's annual meeting at Convention Hall in Atlantic City, New Jersey.

The ACHA is a professional society founded about 35 years ago for the purpose of providing recognition to men and women whose life's work is in the field of hospital administration. The membership comprises over 7,000 administrators, assistant administrators or administrative assistants in the United States and Canada. The only other Sanatorium Board member is our executive director T. A. J. Cummings.

Mr. Dubinski has been a member of the Sanatorium Board staff for 21 years, serving at first in the accounting department of our former Clearwater Lake Hospital at The Pas and from 1952, in the Board's executive offices in Winnipeg.

He has been very active in regional hospital organizations. At present, he is first vice president of the Manitoba Hospital Association and a member of the association's board of direc-



EDWARD DUBINSKI

tors since 1960. He is also a past president of the Upper Mid-west Hospital Conference, and a 1956 graduate of the Canadian Hospital Association's two-year extension course in hospital organization and management.

The Sanatorium Board is very proud of Mr. Dubinski's contributions to the hospital field, and we all extend to him our warmest wishes and congratulations on his receiving this latest honor.

Group to Examine TB-RD Programs

A Program Evaluation and Development Committee, which will take a long, thorough look at the organization and aims of national and provincial tuberculosis and respiratory disease programs in Canada, has been announced by Colin Dobell, of Gibsons, B.C., new president of the Canadian Tuberculosis and Respiratory Disease Association.

Dr. G. E. Maddison, director of Tuberculosis Control, New Brunswick Department of Health, is chairman of the committee. Other members include T. A. J. Cummings of Winnipeg; F. M. Bradley, Cornwall, Ontario; Dr. Herman Gauthier, Mont Joli, Quebec; Dr. A. G. Jessamine of Ottawa and D. M. Rae of Stratford, Ontario.

The terms of reference of the committee, as approved by the CTA Management Committee and Executive Council, are:

1. To assess the general tuberculosis situation in Canada and to suggest principle avenues of corrective effort.

2. To assess the importance, desirability, appropriateness and advantages of drawing attention to chest diseases, and to indicate the extent and manner to which any such integration of effort might be achieved.

3. To consider the best type of central organization to discharge the functions of corrective effort and to amend appropriate procedures and practices to this end.

4. To review the general world situation (with respect to tuberculosis) and the need for financial support . . . and to suggest the role which would appear to be appropriate for Canada to play in this regard.

5. Based on the foregoing conclusions, to outline the general order of magnitude of the appropriations and resultant overall budgets to carry out these tasks.

6. To consider the most satisfactory and efficient arrangements for provincial association support of CTA financial needs.

Ten Pin Bowling

The Manitoba Medical Centre Recreation Club extends a cordial invitation to Sanatorium Board staff members and their friends to join the Ten Pin Bowling Club. The season begins on September 11 at 7 p.m. at the Northgate Bowling Plaza. Inquiries should be directed to the new Bowling Club President, Mrs. Mary Spencer, S.B.M. Executive Office.

NEW PERSONNEL

Among the recent additions to our staff at the Manitoba Rehabilitation Hospital are *Miss Jody Baker*, *Miss Donna Ariss*, *Miss Catherine Slimmon* and *Miss Miriam Galloway*, all new members of the physiotherapy department; *Miss Michelle D. Campbell*, occupational therapist; *Mrs. J. Bielgut*, social worker; *Miss Janet Gail Prouten* and *Mrs. Linda King*, licensed practical nurses.

Mrs. Beatrice Lowen has been promoted to assistant head nurse on R-4.

New members of the clerical and secretarial staff include *Mrs. Patricia Armstrong*, Prosthetics and Orthotics Research and Development Unit (she succeeds *Mrs. Harriet Brown* who after five years on our staff resigned her position to be married), *Miss Dorothy James*, Department of Communication Disorders, *Mrs. Helga Mohamed*, Physiotherapy Department, *Mrs. Jean Shmyr* and *Miss Terry-Ann Steffens*, M.R.H. Business Offices, *Mrs. Helen Buffie*, Occupational Therapy Department (formerly medical secretary in the D.A. Stewart Centre), *Mrs. Louise Nuttall* and *Mrs. Maureen A. Joss*, D.A. Stewart Centre.

Out at our Manitoba Sanatorium, *Ninette Murray Maxwell* has joined the staff as assistant storeskeeper. He is the husband of *Gladys Maxwell*, secretary to the medical superintendent.

Ex-Smokers Fare Better

Dr. Leslie Wollostan, president of the British Tuberculosis Association, has encouraging news for people who give up smoking.

"If you give up for five years you halve your risk of death," he says. "After 10 years you approach the happy fate of a non-smoker."

"The only social class in England that has significantly reduced smoking is the doctors, and they are the only class in which the incidence of cancer has fallen."

Implant Unit Ready for Testing in People

At the end of last month Prof. Robert N. Scott packed up his electronic equipment and headed for home in Fredericton, after completing a year of hectic but rather exciting field work at the Sanatorium Board's Prosthetics and Orthotics Research and Development Unit.

Scott, who is associate professor of electrical engineering and executive director of the Bio-engineering Institute at the University of New Brunswick, arrived with two graduate engineers (Bob Brittain and Peter Nelson) last September to collaborate with POR-DU's medical director in the development of a surgically implantable myo-electric control system for artificial arms. The work so far has shown some promising results, he feels. By mid-winter the engineers had designed the implant unit for use in an adult amputee; and early last spring this unit was successfully placed in the thighbone of a dog. It has been working in the dog since then, with no indication that the dog's condition is deteriorating . . . or, for that matter, that anything is wrong with the idea.

The next step, says Prof. Scott, is to implant another unit in a second dog, and then as soon as possible to get it tested in a human subject. In this, the New Brunswick engineers and the Winnipeg research group will continue their co-operative venture from a distance, with Winnipeg providing most of the surgery, and Fredericton being primarily responsible for the electronic end of things. A suitable candidate for the first implant, however, has yet to be found.

As we've mentioned in previous articles, the whole idea of the project is to develop a method whereby electric signals given off by contracting muscles deep within the human body can be used to give refined motion to various components in an artificial arm. The transmitter designed by the engineers (It measures $\frac{1}{2}$ -inch in diameter and $2\frac{3}{8}$ inches long) will be placed in the marrow cavity of the upper arm bone, and from this electrodes will connect to various control sites in the surrounding (brachialis) muscle. Thus, when the individual

contracts a specific muscle fibre, the myo-electric potential that ensues will be picked up, amplified and transmitted to a receiver outside the body. This then will provide the control for externally powered prostheses.

The concept of implanting electronic equipment in the human body to control artificial limbs is not new; its feasibility having been demonstrated in experiments in the United States and Sweden. But the New Brunswick-Manitoba project differs in several important respects. Rather than embedding the system in soft body tissue, as has been done elsewhere, our researchers have chosen the bone as the more secure anchor; and instead of designing special parts for the unit, they have selected the lower cost method of using electronic components that are already available commercially. Finally, this system is being developed for one specific level of amputee (i.e. above-elbow) with the expectation that it will perform better for the patient than a general purpose system.

If the idea proves workable in people, the team will next set their sights on adapting a similar system for the shoulder amputee and the quadriplegic. Here the biggest problems will be reshaping the contents of the transmitter into a flat-shaped packet to fit against the bone, and devising a different type of coil system to transmit power into the prostheses. (For the above-elbow amputee the coil encircles the arm.)

Prof. Scott has been working on myo-electric control for about 10 years. His earlier studies were primarily concerned with establishing the fact that normal persons can fairly quickly achieve voluntary control over the myo-electric activity in various muscles; and this without disturbing their ability to use other muscles for concurrent activities.

Although the investigations are still in the pioneering stage, he feels that eventually myo-electric control systems will have a very important role in the rehabilitation of upper extremity amputees, particularly among high level amputees who require the most assistance, but who are still encumbered with primitive appliances that provide little or no useful action.

With the myo-electric apparatus, Prof. Scott predicts that the patient will one day be able to gain precise control over six, eight or more functions in his artificial arm — and this relatively easily and without the sometimes grotesque exertion required for harnessing physical movement (such as shrugging the shoulders) to move a device.

Embedded units will also tap a stronger signal than the surface electrodes (attached to the skin) which are presently being used in other myo-electric research. And because lesser used muscles or muscle remnants are selected for control sites, there should be less interfering "cross-talk".

The new system is far from being perfected, and much more research is also needed to develop a more sophisticated type of prosthesis. Yet it is the feeling of Prof. Scott and many others that we are standing on the threshold of an exciting era in the rehabilitation of the disabled.

Co-operative Effort Will Continue

Professor R. N. Scott returns to Fredericton this month minus one of the two graduate electrical engineers he brought with him to Winnipeg last year. Bob Brittain is going back to the University of New Brunswick to continue his graduate studies; but Pete Nelson has elected to stay on with our POR-DU staff to look after the electronics operation that must be continued here in the joint New Brunswick-Manitoba effort to develop a myo-electric control system for artificial arms.

With Pete serving as a sort of anchor man, it is hoped that further collaboration between Winnipeg and U.N.B. will proceed smoothly. Dr. F. R. Tucker, medical director of POR-DU, will be consultant in the surgical part of the project, and Prof. Scott will remain chief consultant in electrical engineering.

Doug Hobson, mechanical engineer in charge of POR-DU's design activities, is also taking a year's leave of absence to initiate orthotics research in Fredericton. One of his primary objectives is to find out whether or

not the electronics developments at U.N.B. would have any practical application in designing better types of braces for the disabled. He will also serve as consultant in mechanical engineering and perform other little jobs, such as lecturing to student engineers.

Both New Brunswick and Winnipeg encourage staff interchanges and the co-ordination of projects and programs between research units.

In a recent paper on this subject, Prof. Scott pointed out the reasons:

"It is always desirable to utilize resources effectively. It is absolutely essential to do so when these resources are as inadequate as those with which we are attempting to combat the deficiencies of prosthetics and orthotics treatment in Canada . . . co-ordination of research projects and programs saves money and avoids undesired duplication . . . and co-operation among research groups ensures that excellence is never sacrificed for want of talent which is available elsewhere in the overall program."



COMPLETE TRAINING — The 15th group to complete the M.R.H. Nurses' Assistants and Nursing Orderlies Training Program happily clutch their certificates as they pose for this picture following graduation exercises in the hospital auditorium on June 7. Standing left to right are: *Mrs. Doris Setter*, nursing instructor, *Robert Reed*, *Abram Dyck* (Winner of the Manitoba Association of Certified Orderlies prize), *Allan Bittle* and *Jerrold Janz*. Seated are: *Mrs. Denise Ruhl* (valedictorian), *Miss Louise Ksenych*, *Miss Elizabeth McLeod* and *Miss Judith Olson*. (Photo by David Portigal)

TB Outbreak in Maritimes Affects 234

An outbreak of tuberculosis is not unique in Canada. There have been well over 20 of them in the past five or six years.

But a recent flare-up in a small, middle class Nova Scotia community has shaken health workers to the roots. It was confined almost entirely to the students in a regional high school where, out of an enrollment of 574, a total of 35 developed active tuberculosis and 234 converted from negative to positive reactions over a period of only a few months.

The Municipality of Clare, where the outbreak occurred, is a semi-rural area of some 9,000 persons who make their living primarily in the fishing, ship building and lumbering industries. The people, largely of Acadian French origin, are industrious, community-minded and relatively affluent with good homes for the most part, new schools and well cared for children.

The area has a good tuberculosis control program, provided by the public health staff who routinely examine school students, teachers and other school personnel and provide thorough follow-up of positive tuberculin reactors. Prior to the outbreak, the incidence of TB infection was about the same as other average Canadian communities, being 26.5%.

Yet despite this, tuberculosis did gain a foothold in the school and spread with alarming rapidity, as one can see in the following excerpts from a paper presented at the CTA annual meeting by Dr. V. K. Rideout and Dr. J. E. Hiltz:

* * *

In the Clare District High School there had been some previous experience with tuberculosis. In the spring of 1964 a 15-year-old boy in Grade 8 was found to have extension of a lesion recognized in 1963 . . . A tuberculin survey of the school . . . did not disclose anything of significance . . .

In late 1964 a girl in Grade 9, who had had a negative tuberculin test in March, was found to have a positive reaction. She was admitted to the sanatorium with far advanced, bilateral pulmonary tuberculosis . . . Her source of infection was considered to be a girl friend in another county who also was found to have active tuberculosis at the time.

In January, 1965 another Grade 9 student was sent to sanatorium where

he was diagnosed as having primary infection tuberculosis . . . His source of infection was considered to be the previous case or his aunt who was also found to have active tuberculosis in October, 1964.

At the same time a 15-year-old male Grade 8 student was admitted to sanatorium with discharging tuberculous glands of the neck.

Following discovery of these cases, an intensive school and community survey was begun in February-March 1965. The school survey yielded 21 new tuberculin converters, eight of them in Grade 9 classes, all of whom had been tuberculin negative the previous October. No new tuberculosis cases were found but all 21 converters were treated with the drugs INH and PAS for one year. The survey of teachers, bus drivers . . . and others in the community failed to yield any positive findings . . .

In the fall of 1965 spot checks plus routine testing of Grades 9 and 12 were again carried out. In March 1966 a complete tuberculin survey of all students and staff . . . revealed no new converters. All previously known positive reactors were given chest x-rays. There was no evidence of active tuberculosis among them.

In November, 1966, in a routine survey of Grades 9 and 12, ten tuberculin converters were found, all of whom had been negative in March. The following week a tuberculin survey of the whole school was begun. This time another 44 tuberculin converters were discovered. And four more occurred later in the month, bringing the total to 44 converters found.

(In addition to these there were 42 previously known positive tuberculin reactors in the school.)

These 100 positive tuberculin reactors were given chest x-ray examinations and they yielded three active cases of pulmonary tuberculosis, two of them among the new converters and one from previously known positives.

The last mentioned, whom we designate as Case A, was a 16-year-old girl whose tuberculin test had been positive since 1961 and who had yearly chest x-rays since then . . . In December, 1966 she was found to have far advanced bilateral pulmonary tuberculosis with tuberculosis lymphangitis. Her sputum was strongly positive for tubercle bacilli. She entered Sanatorium . . .

The second case was a 17-year-old Grade 10 student who had moderately advanced disease and positive sputum.

The third was a boy of 14 in Grade 8 who had an active primary infection lesion with a tuberculous gland . . . which ulcerated into the bronchus. His sputum, too, was positive . . .

Investigation of the contacts of these three cases and the new converters was begun immediately on a house to house basis . . . no new cases were found. ①

But the first three cases found in the high school in December, 1966 would appear to be the seeding source for the rest of the outbreak. Investigation of their families was non-productive at the time, but later a young cousin of Case A was found to have active primary disease. Later still, her 25-year-old brother in Halifax was found to have moderately advanced tuberculosis with positive sputum and his girl friend was found to have an active extending primary infection tuberculosis. . .

During January, 1967 every student reported to have any symptoms or who went to a doctor's office was tuberculin tested. Fifteen converters were found in this manner and nine of these had demonstrable tuberculous lesions.

In early February another tuberculin survey of the school was carried out and 119 new conversions were found. During February 31 additional ones were found, bringing the total number of converters to 223. X-ray follow-up produced 21 new cases of tuberculosis for a total of 33 cases during this period.

Further tuberculin surveys throughout the spring turned up 11 new converters, and another new case who was admitted to hospital. Continuing surveillance was carried out in the summer and at the start of the new school term in September a complete survey was carried out. No new converters were found and chest x-ray examinations of previously known positive reactors yielded no new cases. (The school leavers were also tracked down.)

In October, 1967 a 17-year-old Grade 11 school girl was admitted to sanatorium with a pleural effusion and sputum positive . . . she had been sent out of the province previously for the treatment of a severe allergy which occurred following the administration of penicillin for what was thought to be a pneumonia.

This, then, brought the total number of high school students who developed tuberculous lesions to 35.

The 35 patients spent 9,337 days in hospital, which is the equivalent to one patient spending 25.6 years in sanatorium. The average hospital stay was 267 days, varying between five and 15 months.

Thirty-three of the patients who entered hospital were from the group of 234 tuberculin converters. The remaining 201 converters underwent chemoprophylaxis for a year at home.

① In all, some 6,500 people or over 75% of the population received tuberculin tests and/or chest X-rays during the period of the epidemic.

BULLETIN BOARD

Dr. Gastao Luis Fuzeta, former medical resident at the Manitoba Rehabilitation Hospital and for the past year a resident at Deer Lodge Hospital in Winnipeg, has returned to the M.R.H. to assume duties as our chief medical resident.

Other new members of the M.R.H. resident staff are Dr. P. C. Fang, Dr. T. N. Tandigan, Dr. C. D. Cruz and Dr. S. M. Chaudhry.

* * *

Among the Sanatorium Board representatives at the annual meeting of the Canadian Tuberculosis and Respiratory Disease Association in Vancouver last June were T. A. J. Cunnings, executive director, John Baldner, member of the Board's executive committee, Miss Mary Gray, Christmas Seal Supervisor (who took part in a panel discussion on centralization in campaign procedures) and Dr. R. M. Cherniack, medical director of the Tuberculosis and Respiratory Disease Service, who presented a paper on the Rational Use of Oxygen in Respiratory Insufficiency.

* * *

Dr. F. D. Baragar, M.R.H. physician, was also in Vancouver in June to take part in the annual sessions of the Canadian Arthritis and Rheumatism Association. Dr. Baragar presented a paper on an M.R.H. research project, an analysis of the results of synovectomy of the knee in rheumatoid arthritis patients.

* * *

Dr. R. R. P. Hayter, director of physical medicine at the Manitoba Rehabilitation Hospital, flew to England in late June to attend an international seminar and exhibition on World Problems in the Rehabilitation of the Disabled, sponsored by the British Council for Rehabilitation of the Disabled at Brighton. From August 24 to 28, Dr. Hayter and Dr. Michael Newman (consultant in neurology) along with Dr. S. W. Lee, Dr. A. Ezzeddin and Dr. A. Mehta will attend the Fifth International Congress of Physical Medicine in Montreal.

* * *

Dr. B. J. S. Grogono, director of the M.R.H. Paraplegic Unit, has made plans to attend the Fourth Pan-Pacific Rehabilitation Conference, which will be held in Hong Kong from September 2 to 7.

Applications Are Invited

11th REHABILITATION NURSING COURSE

Oct. 21 to Nov. 8, 1968 -- Manitoba Rehabilitation Hospital

This intensive course is designed to teach registered nurses the special skills and philosophy involved in the rehabilitation of the physically disabled. Day-long sessions include lecture and classroom demonstrations, plus observation in the treatment departments and on the nursing wards. Many disciplines contribute to the teaching program. Nursing lectures are related both to the general principles of rehabilitation nursing and the specialized skills required for the nursing care of specific disabilities.

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800 Sherbrook, Winnipeg 2, Manitoba.