NEWSLETTER FROM KIYOSE



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The Research Institute of Tuberculosis, JATA 3-1-24 Matsuyama, Kiyose-shi, Tokyo 204-0022, Japan

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DOTS and Health Sector Reform How is DOTS Robust?

Dr. Toru Mori

The current strategy of the Directly Observed Treatment, Short course (DOTS), has been accepted quite extensively and effectively in many countries. It was even announced that DOTS

strategy virtually stopped the upward surge of the tuberculosis epidemics around 1997. It is further believed that its wide-scale use could reduce incidence of TB by half within the next decade. However. this is a rosy outlook, particularly in the face of obstacles such as the restructuring of health service systems currently place in taking developing many countries, as well as

developed countries. This restructuring takes place as a health sector reform, and is often associated with decentralization or devolution in the general administration. In general, the rationale behind these reforms appear sound:

government services need to be responsive to the local people's needs, services need to be more efficient, and users need to accept the health service more wisely. In actuality, however, the



DOTS Supervision in Mongolia

implementation of these reforms has been reported to be far from ideal in many countries. As a result, the NTP in those countries has been seriously affected, if not disrupted.

personally believe that the key to the success of an NTP is a balance between the TB control technology and health infrastructure of a country. Even a weaker technology such as standard chemotherapy could be successful if the infrastructure to apply that technology were well developed. This is what was seen in post-war and in Singapore. Specifically, Singapore's high treatment completion rate in the 1960s was due to its increased education, health centre network, and political stability. health infrastructure factors are poor, long-term treatment has rarely been satisfactory. situation changed after we began employing DOTS. Very simply, DOTS does not appear to need very high infrastructure, though it may be robust with regard to social conditions. It has achieved a measure of success in many countries dealing with poor infrastructure and difficulties such as severe poverty, civil war, nomadic lifestyles and population displacement. The truly important requirement for DOTS is a strong political commitment, as stated in the World TB Control Policy Package of GTB/WHO, who first stated DOTS as an NTP strategy. In this sense, the DOTS is more or less characterized by a An easy-going health sector vertical nature. reform would blur this government responsibility on



DOTS in Mongolia

TB control so that vertical components of NTP, such as supervision, training and logistics support may be neglected. As TB professionals, the responsibility may fall heavily upon us to entreat policymakers to promote reform in ways which would not encourage repeated TB epidemics; not allowing reforms to compromise DOTS which is sensitive to the political neglect by the central government or lack of ownership by local governments. If we simply accept each item of reform due to shortsightedness, such as the introduction of a use-free system, we could lose the very reasons to claim reform assists people or patients.

Obituary (By Dr. T. Shimao)

Since 1967, when the international training course on TB control was jointly organized by JICA and the WHO, we have been able to invite eminent international lecturers to our course through WHO, such as Prof. G. Canetti and Prof. W. Fox for the chemotherapy of TB, and in the field of edidemiology, two great epidemiologists, **Prof. S. Grzybowski and Dr. K. Styblo**. (To be continued on page 9)



Dr. Styblo (the first standing from the left) & Prof. Grzybowski (the second standing from the left) At the Second Mathematical Modeling for Tuberculosis Conference, San Francisco, U.S.A., Feb. 1995

(Presented by Dr. T. Mori)

DO7S in Nepal with International Cooperation

Dr. Dirgh Singh Bam ('82C, '93 A)
Director, National Tuberculosis Centre, Nepal

he National Tuberculosis Programme, or Tuberculosis Control programme (TBCP) as it was known at that time, was established with the help of UNICEF and WHO in 1965. At first, the programme focused on BCG vaccination, but later introduced long course chemotherapy, mainly through active case finding. Looking back at the reports from that period, it is striking that Nepal, though only a small country, was still able to attract such remarkable and influential figures as Dr. Shimao, Sir John Crofton, and Dr. Aoki as WHO short-term consultants to the programme. According to their reports, it was clear that we were not making much progress against TB. District coverage was poor and treatment outcomes were unknown. For two decades we achieved little, despite the hard work and commitment of many health workers and NGOs. High BCG coverage was not controlling TB, and like many other developing countries of the world, TB control in Nepal went through a dark period marked by lack of international interest, inadequate resources, and ineffective strategies.

It was not until the late 1980's that the light began to shine again. The remarkable programmes developed by Dr. Karel Styblo of IUATLD in several African countries help the world to recognize that increasing case finding was not going to control Rather, it was case holding that was important; keeping patients on treatment until they were cured. We had to wait several years before Nepal picked up this message. A few people recognized this early, such as the German Nepal TB Project in Kathmandu, which introduced DOTS in 1986. However, it wasn't until the early 1990's that the National TB Programme began to get serious about curing patients. Short Course Chemotherapy was introduced in two Central Region districts with the help of JICA as a programme of operational research. Simultaneously, the Britain Nepal Medical Trust embarked on a research project utilizing short



course chemotherapy in eastern Nepal. results of these projects helped us to realize that good cure rates are achievable in Nepal, even despite difficult terrain. A review of the NTP conducted by the NTP and WHO showed us that indiscriminate use of Short Course Chemotherapy was not only useless, but dangerous. Cure rates were as low as 25% in some districts and only 40% across the country. Drug resistance was increasing, as was the threat of HIV. Clearly urgent action had to be taken, and WHO recommended DOTS. Prior to this recommendation in 1996, Short Course Chemotherapy was being used in 36 districts of Nepal, in all five regions of the country. Since 1996, we have introduced DOTS strategy in Nepal to improve treatment and to achieve high cure rates.

In April 1996, we established four DOTS centres across the country, and were astonished at the results within just a few months. In the first cohort of patients registered, numbering nearly 300 people, we achieved a cure rate of 87% -- more than double the national average.

Since then we have rapidly expanded DOTS and the programme now covers 40 centres and nearly four million people -26% of our population. We continue to achieve excellent cure rates, and plan to expand DOTS to every district of the country by the end of the year 2000.

This article is an excerpt from Dr Bam's speech in a Symposium sponsored in Tokyo by the Japanese Pharmaceutical Manufactures Association on 27 May 1998. The symposium focused on Japan's cooperative efforts with Nepal to control tuberculosis in that country.

The Evaluation of the Requests of the Anti-Tuberculosis Chemotherapy of Short-course

(A. Ajata Chura, J. Linarez, I. Van Engeland, J.J. Meunier)

The Department of Oruro forms part of the Bolivian ALTIPLANO. It covers an area of 53.588km² and has a population of 344,071 inhabitants on an altitude of 3,706 meters. Oruro's departmental health directory consists of six districts in the rural area and another nine

areas in the town. Forty-two percent of the population falls within the age group between 15 and 44 years old.

To obtain an optimal work, the regional (PRCT) Tuberculosis Control Programme organized the Expanded Commission of Anti-Struggle (CALA: Commissión tuberculosis Ampliada de Lucha Antituberculosa) in 1990. This organization has made possible the unification of criteria about diagnosis, treatment and follow-up of the patients with tuberculosis. It also discusses problematic cases and looks for solutions to difficulties that emerge in the work of the tuberculosis control.

Since 1986, modifications in the National Tuberculosis Control Programme (PNCT) have been introduced. These modifications have been in relation to the technical-administrative activities in the programme and the introduction of an antituberculosis chemotherapy of seven months:

2 RSZH and 6 H₂R₂, completely supervised.

The purpose of this article is to briefly relate the evaluation of results by the Regional Tuberculosis Control Programme for its anti tuberculosis short-course chemotherapy from 1990 to 1994. All the data presented in this work were obtained from the "Book to Register and Follow-up" and from the "Tuberculosis Treatment

Card" of each patient.

The incidence rate (No. of cases/100,000 inhabitants) went from 126 to 90, which shows a decrease by 28.6% in four years.

Analysis of the variables: sex, origin and age groups, confirms what is published in other articles. Mainly, that tuberculosis affects economically active population groups, thereby hindering their development as well as economic and social welfare.

Classification is presented according to the site of tuberculosis and to bacteriological studies: smear positive and smear negative. The cohort study, according to the results of the treatment, helped to appreciate the morbidity and mortality of the different cohorts. Moreover, according to the analysis obtained for each cohort, the study helped in orienting and decision-making.

In considering the annual risk of TB infection (ARTI) for 1990 (0.9%) and 1995 (0.61%), we were able to identify the tendency toward tuberculosis infection in this region and to calculate the yearly average of reduction at 7.48% in the last five years. This permits us to affirm that, in this part of Bolivia, the problem of tuberculosis is under control. However, we must continue to maintain and improve activities in order to obtain the global targets set by the World Health Organization for the year 2000.



This article is a summary of Dr. Chura's work who was awarded the prize from IUATLD in 1996.

Directors

No.3

In this column, the director of NTP (among RIT alumni/alumnae) introduces their activities.

Dr. Tsogt Gombogaram ('92 C)

Director, National Center for Tuberculosis, Mongolian Anti-Tuberculosis Association, **Mongolia**

Dr. Tsogt, the first participant from Mongolia, was awarded the prize from IUATLD in 1997.

participated in the 1992 TB Control II International Course as the very first attendant from Mongolia in a training event of this kind. At this particular period, radical political and social



changes were taking place in Mongolia resulting in collapse of the former socialist system and an ensuing economic Due to that, crisis. it was impossible for us to maintain the highly expensive methods of TB control, which we were using on to

practice internationally recognized methods of TB diagnosis and treatment. Scare information on contemporary methods of TB control was one of the main factors affecting the situation. Moreover, our TB physicians were only familiar with the control system operated in Russia and none of our personnel had been trained through any other international experiences.

In my training at the RIT in Japan, I received knowledge in theory in order to implement a future NTP in Mongolia. At the discussion of a tentative action plan by the participants to be realized on their return to their homelands after the training, I promised to introduce substantial changes to the existing TB control activities in Mongolia and to obtain the Government's approval for new Programme. I remember with appreciation a welcoming reaction from the audience following my assurances in response to Dr. Ishikawa's question as to whether or not I would be able to handle it. Upon arrival in Ulaanbaatar, I began to work on preliminary arrangements for launching the TB control programme and conducted training for our national personnel. The NTP was

approved by the Government in 1994. Prior to this time, TB control activities were regulated only by a decision of the Health Minister and a few TB physicians carried out this work. Now, with the approval of the NTP, this issue has been raised up to a new level state policy. The knowledge brought from Kiyose was really significant for working out the new programme. A laboratory network has been established since that time through the supplying microscopes to each aimag (province) and district as well as conducting training among laboratory technicians. I'm very pleased to take this opportunity to express again our appreciation to the JATA for its kind support to produce training materials.

Mongolia's former TB reporting and registration system has been revised with the view of further improvements, and we are proud of the fact that present methods of reporting and registration are considered as the most effective in Mongolia's health field.

My teachers Drs. T. Mori, M. Aoki and their colleagues made a valuable contribution to the training of 2 National seminars in Mongolia. The newly adopted NTP, with the arrangements, have become a guidebook for the TB physicians in our country.

Integration of professional TB control institutions with the grass-root entities was an important step towards the involvement of the family and soum (village) physicians in the TB case finding.

In our country's situation, where X-ray examinations have been used for case-finding with a proof of 8.6% of cases by bacteriological examinations the physicians, especially TB experts, were skeptical about the passive case-finding only by smear examination and a full recovery of the patient after only a 6-month course of treatment. Therefore one of the aimags was selected for experimental work for passive case finding. The result was that 136 TB cases were reported per 1000 suspects. Afterwards, the TB physicians were in favor of short-term treatment.

One of the major components of TB control is a regular supply of drugs. The issue has been handled with an assistance from DANIDA. Today our patients are shown the medicine stored for a 6-month treatment as evidence of its availability during complete course and are explained the reasons for regular use of drugs under the observation of a doctor or one of the medical staff. The treatment is given free of charge; however, the patient is warned about paying for treatment, in case of default, in order to prevent escapes from

treatment. Additionally, the doctor visits the patients at their home if they miss the regular attendance for some reason, and that helps to reduce considerably the abstention from treatment.

At present, I would say that nearly all of family and soum physicians have been enrolled in training on the NTP and we are planning to conduct some training in the future for public health nurses.

Educational activities are conducted free of charge on local TV and radio programs in Mongolia. For instance, farmers in Bayanhongor aimag, who obtain state loans to run their private business, must attend mandatory health training on TB and other infectious diseases. The managers of the aimag health centers are obliged to involve their staff in TB training, in conformity with an agreement made with the TB Center, and the trainee is supposed to work continuously for 3 years in particular position. Cooperation among

local administration and medical establishments, based on the professional support of the TB Center, brings fruitful results in executing TB Control.

In 1998, TB diagnosis is now proven by 67%, and cure rate of patients in aimags, who have undergone short course chemotherapy under direct observation of the medical personnel is estimated to be 88%.

I'm very grateful for presentation of the "Public Health Prize" award issued to me by the IUATLD in high appraisal of our efforts to contribute to the TB Control Programme. The achievements in the implementation of the NTP in Mongolia were possible to attain thanks to the knowledge given in Kiyose, and through the great assistance of RIT and JATA consultants. I'm very happy to take this opportunity to express my heartfelt gratitude to the RIT and JATA staff for all their kind support and help.

TRAINING COURSE REPORT

Group Training Course for Tuberculosis Control II, FY 1997 (Jul. 7 – Oct. 17, 1997)

When I attended the first day at RIT, I did not realize that the following three and a half months would completely revolutionize my thoughts and approach toward TB control activities. The atmosphere at RIT was so congenial that learning did not require much effort, and our learned teachers (both from overseas as well as Japan) put great effort into interacting with participants so that everyone could learn with utmost ease.

The field trip to different parts of Japan enabled me to closely understand the health system as well as familiarize me with Japan culture. The hospitality we received was unforgettable.

I had a deepest sense of feeling secure in Japan, and although the language was a barrier, the helping attitude of Japanese people went beyond our expectations. The people of Kiyose



in particular, need to be given special appreciation.

Although the training is now over, the enlightened path to TB control shown to us at RIT will definitely enable us, as a programme managers, to look and judge clearly regarding how to proceed within our own situations and conditions. We have just begun the long path.

no basilsar ad ol aldagio Dr. S. C. Verma (Nepal)

International Training Course on HIV/AIDS Prevention and Care in Asia, FY 1997 (Nov. 4 – Dec. 12, 1997)

We, came from 15 countries of the Asian region.

The course provided us with a chance to learn and perceive the knowledge and experiences of the national AIDS program of Japan, as well as to consider other diverse topics presented through various teaching methods such as lectures by experienced experts, self-organized workshops

and field trips. Topics include basic and clinical sciences on HIV/AIDS, laboratories, epidemiology, surveillance, sociology, community care, counseling, health education, AIDS-related diseases such as TB and STDs, and program management.

At the RIT dormitory, where we stayed, the weather was very fine and the changing color of

the leaves was extremely beautiful. It appeared very romantic. Apart from hours of serious study, we also spent time visiting historical and cultural relics, sightseeing Tokyo, Hiroshima and Kyoto, and shopping. One item that impressed us was visiting some of the families of RIT and Fukujuji Hospital staff, where we found a happy and cozy llife, hospitality and Asian traditions.

The well-organized work and the dedicated heart of RIT and JFAP staff made us able to truly benefit from the course and enjoy our stay in Kiyose. In saying our goodbyes in choked voices, we simply said, 'A-ri-ga-to-u-go-za-i-ma-su', and 'please keep in contact with us'.



Dr. Dao Quang Vinh (Vietnam)

Tuberculosis Control Laboratory Services Course, FY 1997 (Oct. 27, 1997 – Feb. 13, 1998)

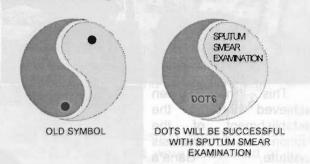
ne memorable incident was when the group decided to watch a video film after 10 p.m. (lights are off at this time) in the dark at the TV lobby without permission from Ito-san. We just saw Ito-san with a torch quietly coming towards us and pointing to the dormitory rooms without uttering a word, we all stood up and quickly went into our rooms. He was a strict time-keeping disciplinarian father (Oto-san). Indeed, we shall miss him and his wife (Oka-san). Homestay weekends with the Japanese families were and unforgettable. We really eniovable Thank you, dear families. appreciated them. The homestay should continue, for it gave us an an opportunity to learn and know the cultural and social aspects of Japan.

Our Course Director, Ms. Fujiki, had incomparable, tremendous, immeasurable experience in TB laboratory work, which was mostly needed by those of us from developing countries. She taught and equipped us with tools for basic techniques in quality direct sputum smear



examination for proper and accurate diagnosis of TB suspects. We learnt using the RIT motto of 'seeing, doing and thinking'. This made some of the participants with many years of laboratory work experience realize that their prior basic knowledge

and skills were insufficient. They needed to learn and practice the techniques for quality direct sputum smear examination. The course was crowned with study tours which were very educational and interesting. We thank our Course Coordinator, Ms. Minemura, for her caring and understanding attitudes towards us.



The above emblem is an old symbol signifying the unity of pairs of natural elements: man and woman, fire and water, earth and sky. It also denotes two fish continually moving around together in the closed circle. Our logo and motto comes from this emblem. Similarly, we can say that DOTS as NTP strategy and Direct Sputum Smear Examination should be joined and move together for the success of TB Control.

Lastly, we are all going back with one motto and logo "DIRECT OBSERVED TREATMENT SHORT-COURSE (DOTS) WILL BE SPUTUM SUCCESSFUL WITH EXAMINATION BY YEAR 2000". Direct sputum examination is the core of DOTS for diagnosing and monitoring treatment. As TB Laboratory Manager in our countries, let's utilize the tools Ms. Fujiki has provided us to fight the tubercle bacilli. Thus, reducing the incidence of TB together, we shall overcome. DOMO ARIGATO GOZAIMASHITA.

Ms. Grace C. Kahenya (Zambia)

Much Progress Achieved in Yemen

Dr. A. Shimouchi

The Research Institute of Tuberculosis has cooperated with the Yemeni Government in developing a National TB Programme through Japan International Cooperation Agency (JICA) since 1983. As a result, the reported case notification rate of new smear positive TB cases has increased from 11.4 per 100,000 population in 1989 to 26.2 in 1997, with estimated case detection rate of 66% (annual risk of TB infection was 0.9%, according to the tuberculin survey conducted in 1991).



This has been achieved through the establishment of the National Tuberculosis Institute. Sana'a (Yemen's capital), and Tuberculosis National Centres in Hodeidah and project The Taiz. emphasized diagnosis by bacteriological examination and X-ray

findings in the 1st phase of JICA support (1983-1992). Integration of the TB Programme into general health services, especially Primary Health Care, has been the focus of the 2nd phase (1992-1998) of the project. This phase was, however, interrupted by the civil war in 1994 and resumed in 1995. During the interruption, increase of case findings slowed down. Despite this, DOTS, which was promoted by WHO, began in Taiz in 1995 with the initiative of the Yemeni Government. From 1996 onward, DOTS has been adopted as the main area of JICA support.

Consequently, in 1996, 40% of new smear positive cases were treated under DOTS and overall cure rate of new smear positive cases exceeded 50% for the first time in Yemen. The latest data showed that the cure rate of daily DOTS

in the 1st and 2nd quarter of 1997 was 90% in Taiz

City, 86% in Hodeidah City and 82% in Aden. Thus it has already demonstrated that daily DOTS in city areas can achieve a cure rate of 85% in Yemen. It is for the now time Government of Yemen and JICA to proceed step further one through implementing DOTS in other cities



and rural areas so that it can achieve an 85% cure rate nationwide in the near future.

Important factors of this achievement are: growth in human resources and political commitment. The National TB Programme Manager, National Supervisors and TB Coordinators in main governorates (mentioned above), have participated in RIT training courses. They are now the promoter of the National TB

Programme. With this technical support and dedication, the Ministry of Public Health pledged greater effort to secure TB funds for the Previously, Programme. JICA had been partly responsible for providing anti-TB drugs. However. the Government currently orders a sufficient amount





of anti-TB drugs, making the TB Programme more sustainable than before.

We hope in the near future NTP in Yemen may be a good model among countries with similar socioeconomic conditions.

Two Great Epidemiologists

(Continued from page 2)

It is interesting to know that both are refugees from Eastern European countries.



Prof. Grzybowski moved to England following the NAZI invasion of his mother country, Poland, while he was serving as a medical assistant on a Polish passenger liner. From there, he proceeded to the University of Edinburgh, where

he continued to study medicine. In 1954, he moved to Canada to work in TB Control. Ten years later, in 1964, he began to epidemiological investigations for TB in British Columbia. In particular, his work with TB in Eskimos has gained world renown, as it is one of the post marked achievements in quickly reducing TB in a highly prevalent community. Similar to most other TB epidemiologists, he also showed interest in clinical aspect of TB. He was a cheerful person, giving lectures which mixed humor with scientific strictness, so that everyone found them enjoyable. He passed away on 9 September 1997 at the age of 77.



Dr. Styblo was born and educated in Czechoslovakia. He is known for his work in the Kolin district, which clearly showed both the role and limitation of repeated mass examination for TB. He discovered the detection of

new TB cases increased whenever mass survey was carried out after two or three years. However, most of these new cases were identified through smear negative culture positive cases or culture negative X-ray active cases, with no significant changes in the number of smear positive cases. Following the failure of the Prague Spring, he moved to the Netherlands. Through the generous support of the Royal Dutch TB Association (KNCV), he began to serve as the Director of the TB Surveillance Research Unit (TSRU) jointly organized by the IUAT and WHO. He created the idea of annual risk of TB infection, based on a tuberculin survey with Dr Sutherland. We

currently base our estimation of TB situations using his concepts. Dr. Styblo also became the Director of Scientific Activities of IUAT. As such, he introduced short-course chemotherapy under the field conditions of East Africa, finally achieved high cure rates for these field conditions by introducing hospitalization during the initial two months of treatment. His experience in East Africa was then applied in China, with excellent treatment outcome. These activities currently form the scientific and practical basis for global DOTS strategy of TB control. Dr. Styblo passed away in April 1998 at the age of 76.

I would like to express deep condolences to the family of these two great epidemiologists, and pledge to promote further epidemiological investigations throughout the world.

(Dr. T. Shimao)

PDr. Sukeyoshi Kudoh

Dr. Sukeyoshi Kudoh, a prominent clinical mycobacteriologist in Japan, died on 13 February 1998 at the age of 77. He started his career as TB bacteriologist at RIT in 1948 under Dr. T. Ogawa, who

developed the egg media for TB bacilli culture. Dr. Kudoh's contribution in the area of clinical TB bacteriology was enormous. "The Growth Mode of Mycobacterium Under Microculture (Act Tuberc.Scand. 32, 1956)" was one of his famous papers, illustrating dynamic growth process under microscopy using his unique microculture method (see below). Another paper "A Simple Technique for Culturing Tubercle Bacilli (Bull. WHO 51, 1974)" proposed a simplified swab culture method, using a modified Ogawa egg media. Retired from RIT as deputy director in 1983, he joined BCG Laboratory and became its Director in 1991. In the international realm, he worked primarily with TB laboratory in Thailand and Indonesia. He taught in the RIT international courses for the last 30 years.



Mode of growth of TB bacilli Rod Stage

wish to thank you for regular supplies of Newsletters from Kiyose. I received the latest one on 13 October 1997 (No.12 September 1997). In addition, kindly convey my condolences the JATA and RIT staff on the death of Dr. T. Iwasaki, which took place on 15 July 1997. I am very sorry.

Some comments on:

1. Low incidence on TB by Dr. Hans L. Rieder

Dr. Rieder talked about the Genome project in France (i.e., the mapping project which deals with identifying areas with TB patients). More specifically, the project deals with improved diagnosis of TB, intervention strategies, and the identification of TB bacilli virulence.

In Tanzania, mapping is used to identify some areas where STDS (sexually transmitted diseases) are prevalent. This method deals with: the identification of patients with STDS, the diagnoses, and the improved treatment of STDS. This method intervenes to stop the spread of HIV/AIDS nationwide. It has been proved to be efficient in the fighting against the spread of HIV/AIDS.

2. DOTS: this means TB patients take their anti-TB drugs in the presence of health workers.

Dr. J.F. Broekmans, in his lecture, said that in the Netherlands, DOTS is useful for drug abusers and homeless people who have contracted TB. I wish to congratulate Dr. Broekmans for his efforts to advocate DOTS in the Netherlands.

DOTS is a big challenge, but it could be carried out worldwide; especially in developing countries where TB is quite prevalent. In order for DOTS to be successful:

(1) we should train village health workers, in order to practice DOTS at the village level.

(2) we should train the TBS (Traditional Birth Attendants). TBS perform births in the local villages. So, TBS are the managers of DOTS in their villages and are accepted by the villagers guite easily.

(3) we should encourage rural dispensaries and rural health centers to practices DOTS, as these health facilities are run by trained rural medical aides, medical assistants and other trained medical cadres, such as nurses, health assistants and nurse assistants.

(4) District, Regional and Consultant hospitals should carry out DOTS as part of their PHC package. This is inclusive of private health sectors in urban and rural areas.

So far, DOTS improves the cure rate of TB patients. The cure rate is almost 100%, if it is practiced correctly.

In addition to this, DOTS reduces incurable multidrugs resistance (MDR), which is still a big problem worldwide.

Dr. G. M. Arbogasto (TANZANIA '81C)

RIT NEWS

New edition of "TB MICROSCOPY"

Author: Akiko Fujiki

Published by RIT & JICA

Revised and newly designed manual has just

been completed.



This book is focused on the fundamental procedures of tuberculosis examination. It is written in simple, step-by-step explanations with many illustrations. It can be easily utilized by anyone who wants to learn the examination techniques.

Staff News

♣ Welcome:

Mr. K. Uchimura
To Department of Applied Research
Ms. E. Komatsuda

To Administration Department

*Farewell:

Dr. R. Komatsu Retired Ms. C. Endo
To Fukujuji Hospital
Ms. J. Nemoto
To JATA Head Office

+Promotion:

Dr. M. Wada

To Deputy Head, Department of Applied Research Dr. H. Hoshino

To Chief, Medical Doctors Training Div.

F URL: http://www.jata@or.jp

Access to RIT Home-page!

Your news and voices are always welcome!

NEWSLETTER FROM KIYOSE

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