

( 調查資料 3 )

VŨ VĂN CĂN

PUBLIC HEALTH WORK

IN THE SOCIALIST REPUBLIC OF

VIET NAM in 1978

MINISTRY OF PUBLIC HEALTH

## GEOGRAPHY - POPULATION

The Socialist Republic of Viet Nam is located on the Indochinese peninsula, in Southeast Asia. It lies between

8°30' and 23°22' North,  
and 102°10' and 109°30' East.

Its area of 329, 566 square kilometres varies in topography between three different types of regions - plains, midlands, and highlands. Half the country is covered with forests, and the coastline of 3,260 kilometres long.

As regards climate, the country is located in the tropical zone :

- the average temperature ranges between 21.4° and 27.2°C,
- average yearly rainfall from 1,332 mm to 2,303 mm,
- the summers are hot and wet.

Thanks to its relief and climate, Viet Nam has abundant and varied natural resources (fauna and flora included).

Population :

1976 : 49,160,000 inhabitants

1977 : more 50 millions (estimated figure)

(48% male, 52% female), 79,4% of whom live outside the towns.

The belong to 60 ethnic groups (the Kinh accounting for 84.4%).

Average demographic density : 149 inhabitants per square kilometre.

The birth-rate is high. Efforts are being made to bring it down to 2 - 2.2% in 1980.

September 2nd 1945 is the day national independence was proclaimed and the Democratic Republic of Viet Nam was founded.

Rate ( per 1000 )	Democratic Republic of Viet Nam								Socialist Republic of Viet Nam	
	Year	1936	1957	1960	1965	1970	1974	1975	1976	1977
Birth-rate	48	46.7	46	37.8	34.6	34.4	31.3	31	30.2	
Death rate	26	12.2	12	6.7	6.6	7.2	5.5	5.5	6.8	
Demographic growth . . . .	22	34.5	34	31.1	28	27.2	25.8	25.5	23.4	

After the victories of the two wars of resistance 1946-1954 and 1956-1975, Viet Nam's National Assembly (6th legislature) decided to reunify the country, which thus became the Socialist Republic of Viet Nam in June 1976. Hanoi is the capital of the Socialist Republic of Viet Nam.

The Socialist Republic of Viet Nam has 38 provinces and municipalities, over 500 districts, and over 8,000 communes (a commune grouping from 5.000 to 6.000 inhabitants).

Some Aspects of Public Health Before  
the August 1945 Revolution and Before the  
Liberation of Southern Viet Nam

There were frequent epidemics in Viet Nam before 1945 : cholera, smallpox, typhoid fever, plague, poliomyelitis ... ; and serious infectious diseases like malaria, trachoma, tuberculosis and venereal diseases -- were rife.

Documents of the time show a death rate of 26 ‰ (1936 - 1939) and an infant mortality rate of 300 - 400 ‰.

Public health services were extremely scant : the country had in all 47 only hospitals and 9 maternity-homes totalling about 4,000 beds, and these were concentrated mainly in the towns and urban centres. There was one physician per 180,000 inhabitants as average.

Up to may 1975, epidemics were frequent in southern Viet Nam. Plague, cholera and dengue spread all over the delta provinces, and malaria, tuberculosis, leprosy and venereal diseases were widespread : about 10 million people had malaria and more than one million had venereal diseases. Many of these were also war invalids and drug-addicts (300,000 of the latter, most of them young people). There were 600 medical doctors working for the administration in 65 hospitals, and 1,900 "private" doctors working in 85 hospitals and consulting rooms. Pharmaceutical factories and pharmacies were privately owned, and were concentrated mostly in towns and cities, chiefly in Saigon. There was no rural sanitary network, i.e. at communes and districts level.

Since the August 1945 Revolution, efforts have been made to accelerate the training of medical cadres. This has enabled us to set up a medico-sanitary network down to commune and agricultural cooperative level; the

Red Cross Association the Viet Nam Women's Union, the Hô Chi Minh working Youth Union have actively participated in relevant work in the sanitary and social field.

A network of health stations and other medical establishments, from commune through district and province to central level, has been built up, providing steadily improving medical assistance to the whole population. Meanwhile, we have mounted campaigns against malaria, trachoma, tuberculosis and leprosy. Systematic vaccination was carried out alongside improvement of rural sanitary conditions.

The epidemiologic situation in the North, has been considerably improved : smallpox, plague, cholera, venereal diseases have virtually been wiped out for many years, and the number of people contracting malaria, trachoma, tuberculosis and leprosy is dropping rapidly.

In the South, efforts are being made to rapidly normalize the medico-sanitary situation and transform the public health organization left by the old regime and integrate it as soon as possible in the socialist medical-system throughout the country. Meanwhile, we are doing our best to rouse the masses to take part in the application of some urgent sanitary measures : urban and rural public hygiene, prophylactic and curative measures against cholera, plague and dengue ... and campaigns against malaria, tuberculosis, leprosy and venereal diseases ...

#### Guidelines and Principles for Public Health Work

The right of the working people to medical care and to rest was recognized by the First Constitution of Viet Nam of January 9, 1946 (Chapter 3, Articles 31 and 32).

The documents and resolutions of the national congresses of the Viet Nam Workers' Party (now the Communist Party of Viet Nam) indicate clearly what the line and guiding principles are for the development of public health work in each stage of economic development. "The first thing is to prevent diseases"; "Medicine must serve all workers" in and integration of traditional medicine and modern medicine : such are the principles on which medico-sanitary work is based.

The resolutions of the 4th national congress of the Communist Party of Viet Nam (December 14-20, 1976) define the line and orientation for the development of public health work after the reunification of the country as

follows :

"Medical assistance, physical education and sports must actively contribute to improving the health and increasing the physical strength of the people, doing away rapidly with the aftermaths of the war and sequels of neocolonialism in the social field.

"We must persevere with preventive medicine, combine hygiene and prophylaxis with physical culture and sports : Improve the sanitary conditions of the environment, insist on hygienic handling of foodstuffs, hygiene in work and hygiene at school, organize preventive vaccination well, and prevent and stamp out epidemics in time. We must wipe out serious diseases, first and foremost malaria and tuberculosis ... And we must deal with the consequences of wounds of war. We must keep one step ahead in environmental matters to prevent pollution of the environment in the course of industrial development, and prevent and fight occupational diseases efficiently. We must improve the quality of medical care, pay the keenest attention to the health of children, women, the ethnic minorities and aged people. We must persuade the population to give up backward customs and superstitions harmful to health, and promote a healthy, hygienic mode of life.

"Combine modern medicine with national traditional medicine. Develop the abundant sources of materia medica in the country rapidly build and industry of pharmaceutical products, and step up the manufacture of medical instruments and equipment.

"Consolidate and improve the local medico-sanitary network, chiefly at base and district level, by paying special attention to mountainous regions and new economic zones. Strengthen the establishments of medical and pharmaceutical research, improve the basic and ongoing training of health cadres and pharmacists in the spirit of President Hồ Chí Minh's teaching : "A good physician should also be a kind mother".

" ... Mother and child welfare work must be done well. Step us the family planning campaign; prevent and combat women's diseases and occupational diseases among women as far as possible ..."

Under the leadership of the Viet Nam Workers' Party (now the Communist Party of Viet Nam), whose line is : that medicine must serve the working people, our public health service has been built up the developed according to the following principles :

- public health based on preventive medicine;
- combination of modern medicine and national traditional medicine ;

- reliance on the masses, on our own ability to achieve and improve public health; while acquiring foreign assistance and broadening international cooperation in the medical field.

It is on this basis, that we, a developing country torn by a long war, have built up a fairly complete medicosanitary network. We have involved the masses and social organizations such as the Red Cross, youth and women's organisations and trade-unions ... we have overcome great difficulties to rapidly meet the enormous requirements of caring for people's health.

#### Structure and Organization of Public Health Work

The Ministry of Public Health of the S.R.V.N. organizes and leads all work throughout the country, connected with caring for people's health, in the fields of both prevention and treatment of diseases. The Ministry of Public Health also manufactures and distributes medicines, trains health cadres and carrying out medical research.

Public health work is organised parallel to that of the administration, and is thus a four-tiered service : grass-roots level, or the *commune*, the district level, the provincial level and the central level.

1/The grassroots level consists of communes or town quarters, industrial enterprises, schools, and administrative services. In each of these units, there is a health station whose task is to guide prophylactic hygiene, ensure medical assistance and checking of each family, give consultations and cure common diseases, mainly with Vietnamese medicine and by acupuncture, give first aid care, to make prenatal checks, and attend normal confinements.

2/The district level (or town-ward level) has a public health office which leads and supervises health protection work in the district. The district level has a polyvalent hospital, a consulting room for each speciality, hygiene brigades and anti-epidemic brigades and a pharmacy.

3/The provincial (or city level) has a public health service which leads all the medico-sanitary work in the province or city. The medico-sanitary network at this level is composed of polyvalent hospitals,

polyclinics, specialized hospitals, a hygiene and epidemiology centre, centres for tuberculosis and malaria. It has a materia medica depot, a bureau for checking pharmaceutical products, pharmaceutical factories, companies specializing in buying and selling pharmaceutical products, pharmacies, secondary medical schools, etc...

4/The central level has institutes of medicine and pharmacy, polyvalent hospitals, specialized hospitals, sanatoria, colleges of medicine and pharmacy, a public health college, pharmaceutical factories, a company producing medical equipment and chemical products, a publishing house for medical literature, and a central medical library.

The Minister of Public Health is a member of the Council of Ministers and is in charge of the management of all public health work. He is assisted in his work by the vice-ministers, the offices of the Ministry and specialized departments. In addition there is a scientific and technical council which advises the minister.

THE PUBLIC HEALTH SYSTEM  
AND THE PREVENTION AND TREATMENT  
OF DISEASES

We began with the pathetically small medical organization left by the French, and we have gradually built up a health system with unified organization from base to central level. Ours is a country where 80% of the population live in the countryside, so we have concentrated our efforts on building up a basic health network. Systematically establishing commune health stations is a success of the public health service which testifies to the Party's and the Government's solicitude for the working people.

The success of this work is due to the leadership of the Party and of the State and to the experience we have accumulated over the years. The greater part of the organizing work is done by the people themselves, who also provide most of the medical cadres' and personnel's pay. The funds for the construction of the commune health station (maternity and medical post) is supplied by the cooperative; health service is reckoned in work-days and remunerated in the same way as work done by the other cooperative members. The State is responsible for equipment supply and for training cadres.

Thus setting up a basic health network is closely related to knowledge of the people's life and aspirations. Prior to the Revolution, there was



no medical infrastructure to speak of in the rural sector. The communes had neither health stations nor physicians. At most there was just a dispensary looked after by a hospital attendant, but this was the case only in certain districts of the delta.

Nowadays all communes in the North and nearly all the southern communes have a maternity-medical post with 5-10 beds for emergencies and 5 maternity beds, a small dispensary for common medicines. Each of these health stations is staffed by 4-6 medical cadres, including one or two assistant-doctors, a midwife, 2-3 nurses and in some communes, a traditional medicine practitioner. There are already a certain number of commune health stations in the delta who are staffed by full doctors. About one half of all commune health stations have a medicinal herb garden for partial self-supply of galenical remedies.

Although the local health network is extensive it is still poorly equipped materially-speaking. Nevertheless it has helped to make considerable improvements in the prophylactic situation in the countryside. Certain epidemic diseases have been virtually eliminated. Mortality from social diseases has decreased, and the public health situation has been improved. During the years of war, this network played an important role, providing first aid while fulfilling other medico-sanitary tasks.

The developpement of the medico-sanitary network has been rapid :

At the end of 1976, the Socialist Republic of Viet Nam had 8,215 commune health-stations with 60,726 beds, 546 polyvalent or specialized hospitals, 912 infirmaries with 87,100 beds, 102 sanatoria, 20 research institutes, 38 specialized health centres, 33 tuberculosis centres, 32 venereal diseases centres, 37 malaria centres, 20 ophthalmologic centres, 38 centres for mother and child welfare and family planning, 27 leprosaria, 8 colleges of medicine and pharmacy, 34 secondary school level medical colleges which also train laboratory attendants. By the end of 1976, the number of health cadres had reached 8,300 doctors of medicine, 2,394 pharmacists and 38,933 auxiliary medical cadres (paid by the State).

All the patients whether they are administrative officials, workers, children or older people, are treated in state-run hospitals in which treatment is free. Invalids, those whose working capacity has been impaired, and orphans all receive State allowances.

Retired cadres and workers (retirement age is 60 years for men and 55 for women) or employees and functionaries on prolonged leave for health

reasons receive an allocation of up to 75% of their salary from the social security funds.

Wounded members of the armed forces are assessed for pensions according to the state of their wounds by a medical commission. Beside the salary they derive from their present function, they receive an allocation according to their category. Invalids are boarded in rest-houses and their convalescence is paid for by the state. They are also given their artificial limbs and orthopedic apparatus free. Moreover they are taught a trade suitable or adapted to their physical.

Burial expenses for deceased cadres and workers are paid for by the state. Their children receive an allowance until they are 18 years of age.

Women cadres and workers are kept under close medical surveillance during their pregnancy (an average of three prenatal inspections) and have 60-days' paid leave in connection with childbirth. The leave is extended by 10 days for mothers of twins and by 20 days for mothers of triplets. Another 15 days are granted to young mothers employed in hard physical work. Premature births or accidental miscarriages entitle women to from 7 to 30 days' leave according to the stage of pregnancy and the patient's condition.

Cadres and workers of over one year's service are entitled to a paid 10-day annual leave (plus travelling time). Those employed in hard physical labour or who work in polluted environment have 12 day leaves. They may spend their annual leaves in rest-houses built by the trade-unions and enjoy a special food there without having to pay more for it.

There is a statutory 48-hour working week for cadres and workers. Nursing mothers whose babies are less than 12 months old may take an hour off every day to feed their babies.

Cadres and workers have a total of eight days leave with pay on the occasions of various annual holidays.

	Prior to the Revolution	Democratic Republic of Viet Nam							Socialist Republic of Viet Nam	
		1939	1955	1960	1965	1970	1974	1975	1976	1977
Commune Wealth Stations		200	3298	5463	5692	5566	5786	8215	8779	
Polyvalent and specialized hospitals	47	57	65	252	441	447	437	540	666	
Infirmaries		17	180	350	595	760	672	978	978	
Sanatoria		4	6	16	73	99	82	93	93	
Research Institutes (medicine and Pharmacy)	1	1	6	6	9	11	17	20	20	

	1939	1955	1960	1965	1970	1974	1975	1976	1977
Health and Epidemiology Centres		54	59	29	26	26	26	38	38
Provincial Tuberculosis Centres			1	24	25	21	21	33	30
Venereal Diseases Centres				24	23	21	20	32	29
Malaria Control Centres		18	24	22	25	25	25	37	31
Ophthalmology Centres		18	26	21	22	21	19	20	19

	1939	1955	1960	1965	1970	1974	1975	1976	1977
Mother and child welfare and family planning centres				20	26	17	26	38	38
Leprosaria		3	6	5	16	17	16	25	27
Pharmaceutical Plants				18	32	30	28	29	47
Pharmacies				646	538	309	369	564	570
Colleges of Medicine and Pharmacy		1	1	3	4	4	4	7	7
Secondary-level schools of Medicine and Pharmacy		2	2	26	27	27	28	34	36

The number of hospital beds per 10,000 inhabitants varies according to the following table:

Year	Democratic Republic of Viet Nam						Socialist Republic of Viet Nam	
	1955	1960	1965	1970	1974	1975	1976	1977
per 10,000 population	10.5	13.2	16.1	23.6	25.6	27.6	20.4	23.04
Hospital beds	10.5	13.2	16.1	23.6	25.6	27.6	20.4	23.04
Beds in hospitals and commune health stations	11.5	28.0	37.1	45.0	46.7	44.07	33.1	35.83

The number of physicians is still low, but when compared with 1955, the first year after the reestablishment of peace, it has increased many times over.

	Democratic Republic of Việt Nam							S.R.V.N.	
	1955	1960	1965	1970	1974	1975	1976	1977	
One doctor of medicine for	126,685	39,077	11,973	5,591	3,611	3,816	5,278	4,458	
One doctor and one assistant doctor for	20,229	6,520	1,950	911	763	1,387	1,355	1,144	

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Both in the prevention as well as the treatment of aiseases, we have always comoined modern medecine with traditional medicine. This is one of the basic principles in developing Vietnamese medicine. In 1957 the National Medicine Institute and The Vietnamese Traditional Medicine Association were founded. In 1960 the Medical Products Institute was created, and after the liberation of southern Viet Nam another institute for national medicine came into being in 1975 in Hô Chi Minh-City. A great number of provinces already have their own hospital where traditional medicine treatment is given or at least a department of galenical medicine within their polyvalent hospital. Most of the co unal health stations have a garden of medicinal plants and are trained to combine modern medicine and traditional medical practice.

#### Mother and Child Welfare and Birth Control

The protection of mothers and children's health, one of our medical profession's main tasks, had its place in the first 1946 Constitution of Viet Nam (chapter 3, article 24).

Nowadays, the health service proviced for women and children includes such establishments as the Indtitute for Mother and Child Welfare, the Institute for the Protection of Children's Health, Pediatric hospitals, pediatric departments of polyvalent hospitals, Mother and Child Welfare and Birth Control Centres, and commune health stations. Over 90% of pregnant women living in town and the delta countries and over 70% of those living in the highlands have their babies in health stations, maternity clinics or hospitals. Home-births are supervised by health cadres.

In 1971, a Central Commission for Mother and ChildWelfare directly responsible to the Council of Ministers was created supervise management of the nursery network and the portection of infants' health. It is also in charge of the family planning movement.

Besides paid leave, women cadres and workers have various childbirth allowances.

In northern provinces birth control measures have been carried out since 1962, whereas in the South this movement only began to take effect from May 1975. All contraceptive measures are in use, with priority given to I.U.D.S. In 1970, 354,000 I.U.D. were performed, or three times more than scheduled.

With the attention paid by the Party and the State to mother and child welfare, the collaboration of the various branches of the national economy and our own efforts, we are endeavouring to reduce childbirth mishaps and infant and maternal mortality.

The childbirth mortality rate is as follows :

Year over 1000 births of living children	Prior to the Re- volution	Democratic Republic of Viêt Nam				S.R.V.N.	
	1936	1968	1970	1974	1975	1976	1977
Maternal mortality	20	2.9	0.9	0.8	0.85	0.9	1.3
Infant (under 12 months) mortality	300-400	32.9	30.7	30.5	32.6	34.2	34.2

#### HYGIENE AND EPIDEMIOLOGY

The tropical climate in Viet Nam makes contamination an ever-present and considerable health hazard. Work in the fields of hygiene and epidemiology is therefore of prime importance.

With a view to eradicating contagious diseases, we have adopted a serie of measures consisting of :

- 1/ timely detection of persons suffering from contagious diseases for purposes of quarantine and providing medical care;
- 2/ establishing a strict check at ports, airports, in border zones and at communications cross roads, for carriers of epidemic diseases, especially during epidemics;
- 3/ universal vaccination and mass immunization;
- 4/ improving sanitary conditions by public hygiene efforts;
- 5/ improving hygiene education and inculcating in the population basic notions of prophylaxis.

To this end, we have established an extensive network grafted into that of the general medical service. Each province has a hygiene and epidemiology centre, as do the cities directly responsible to and run by

the central level (Hanoi, Haiphong and Hô Chi Minh-City). Each district has a polyclinic responsible for hygiene, vaccination and immunization work in the district and for combatting malaria. At the grassroots, commune medicosanitary stations both treatment and prevention of diseases. On the technical level this network is headed by the National Institute of Hygiene and Epidemiology in Hanoi, which is reinforced by regional institutes in Hô Chi Minh City, Nha Trang and Buôn Thuôt.

We have regularly carried out mass vaccinations ever since 1964, the drives being based on epidemiological data. Our hygiene and epidemiology institutes have supplied sufficient quantities of the main vaccines of different kinds to meet the country's needs.

In addition to this work, we have painstakingly carried out mass health education work, arranging talks, using the mass media (press, radio and television), and by having notions of hygiene and prophylaxis taught at schools ... we have appealed to the people to discontinue uncivilized and unhygienic customs, to adopt new habits, to take part in the movement for physical training, to develop public hygiene, and kill animals and insects that carry pathogenic germs ... The movement of hygiene and prophylaxis has gone on over the past many years under concise and easy-to-remember mottos : Three "Clean" (clean food, clean body and clean house), Four "Kill" (kill flies, mosquitoes, rats and bugs), "A clean village means fertilizer for the fields", "Health is a weapon against U.S. Aggression" and so on.

When a contagious disease breaks out, the population tells the local health cadres or cadres at the hygiene and epidemiology centre, then various measures to stop the disease spreading are taken.

These efforts have led to good results. Starting in 1959, cholera and small-pox, which were widespread in South East Asia and other parts of the world, were gradually eliminated in the northern provinces, the territory of the former Democratic Republic of Viet Nam. The last poliomyelitis epidemic was in 1961. The incidence of most infectious diseases has diminished noticeably.

In the southern provinces, there were epidemics of cholera, plague and dengue every year throughout the U.S. occupation ... Since liberation we have carried out mass vaccination there and have encouraged public hygiene with a view to improving the sanitary conditions of the environment. As a result of these measures, much fewer people have fallen victims of these diseases recently.



Incidence of some contagious diseases in  
 Viet Nam from 1961 to 1977  
 (number of patients per 100,000 inhabitants)

Disease	Democratic Republic of Viet Nam				Socialist Republic of Viet Nam		
	1961	1965	1970	1975	1976		1977
					North	South	
Poliomyelitis	3.1	0.61	0.54	0.75	0.15	0.61	0.25
Typhoid fever	14.5	10.37	5.04	0.52	0.94	8.4	2.25
Diphtheria	10.2	3.24	0.02	3.17	2.24	5.9	0.56
Neasles	664	347	504	274	544	10.2	26.94
Whooping-cough	1032	550	452	167	113	3.7 <sup>k</sup>	3.64

\* Data for southern provinces is incomplete.

Of all social diseases that occur in Viet Nam, malaria is the most widespread, hence the priority given to the antimalaria programme conducted on a national scale. The antimalaria network includes the Institute of Malariology, Parasitology and Entomology at the central level, and anti-malaria stations at the provincial level. North of the 17th parallel, the programme for the eradication of malaria which has been in progress since 1958 has had considerable results. The plasmodial index was brought down from 5.64 % (in 1958) to 0.4% (in 1977). In 1976 the number of persons protected from malarial infection thanks to DDT spraying increased, and reached 2.4 million and 1.2 million in the malaria zones of the North and the South respectively. In the same year, malaria surveys and studies of how to combat it were conducted in several pilot regions, with a view to drawing up a programme for its eradication in the southern provinces. It has been estimated that by the end of the 1976-1980 Five Year Plan, this disease will be under control in almost all parts of the country, and that it will be completely eradicated in the fairly near future.

Incidence of malaria in Viet Nam  
from 1958 to 1977  
(Plasmodial index per 100 smear tests)

Democratic Republic of Viet Nam				Socialist Republic of Viet Nam			
1958	1964	1970	1975	1976		1977	
				North	South	North	South
5.64	0.28	0.56	0.39	0.40	15	0.40	7.8

Tuberculosis, which ravaged the population under former regimes, has been fought systematically. Since 1959, BCG vaccination has been used on a large scale, covering all persons suspected of having been affected by T.B., either by direct exposure, by reason of their age or their profession. Vaccination of new-born babies is now obligatory in post natal procedure at all levels. For many years now we have used fluorescent radiography and especially bacteriological examination of sputum as a means of mass detection of tuberculosis. In northern provinces, T.B. morbidity between 1970 and 1977 ranged between 1.1% and 0.8%, and the open tuberculosis morbidity rate revealed by direct bacilloscopy was from 2% to 1.8%/ According to statistics established by the saigon Administration, tuberculosis morbidity in the South varied between 8 and 10%. In 1976, investigations made in Hô Chi Minh City and some southern provinces showed it to be fluctuating around 3% then.

Incidence of tuberculosis  
(cases X-rayed between 1955 and 1977 (%))

Democratic Republic of Viet Nam					Socialist Republic of Viet Nam			
1955	1960	1965	1970	1975	1976		1977	
					North	South	North	South
2.5	2.0	0.8	1.1	1.06	1.1	3.0	0.8	1.6 - 1.8

Leprosy morbidity at present is 1.7% (as against 2.1% between 1965 and 1970) in the North, where 16,000 lepers are being under medical supervi supervision. In the South it is estimated that 20,000 persons, or 3<sup>o</sup>/oo of the population, have leprosy.

In the South, venereal diseases, a sequel of the former regime, are still widespread, affecting as many as one million people. These diseases will be combated as part of an extensive programme in which health work is to be coupled with educative work and other social measures.

If contagious diseases are to be eradicated, it is necessary to develop prophylactic work, especially public hygiene, and to improve the sanitary conditions of the environment. In Vietnamese rural area, stress has been laid on 3 major problems : human and animal faeces, waste water and garbage.

The faecal peril, which was particularly serious under former regimes, has receded satisfactorily over the last 15 years -- since the introduction and spread of a double compartment toilet model which enables on-the-spot composting of faeces. The faeces that are thus aseptitized and the eggs of intestinal parasites killed, become fertilizer conforming to the norms of hygiene.

To solve the problem of waste water in rural areas, we have appealed to the peasants to put curb-stones to around their wells, filter the water in their pools, and build reservoirs that suit local conditions, and we have advised them not to use water from natural ponds. At the same time, we have encouraged them to build bathrooms for public use and where possible for family use.

We have also begun to get the problem of garbage under control : we may dig a ditch, dump the garbage in it, bury it with earth, and let it decompose; we may also burn it, and use its ashes in toilets; garbage may also be used for composting manure.

Compliance with the "rural hygiene triptych" -- the double-tank water-closet, the curb-stone well and the bath-room -- has encouraged vigorously in the communes, supervised by the health and administrative authorities, and it has been an objective of patriotic emulation.

In the southern provinces, immediately after liberation, great efforts were made in prophylactic activities, especially in improving the sanitary conditions of the environment and solving faecal, waste water and garbage problems.

With a view to making an effective contribution to the socialist industrialization of our country, we have proposed measures regarding standards of hygiene in industrial branches, and began training the working masses to pay attention to health conditions at work.

We have stepped up research work on occupational diseases and began to work out regulation norms for industrial hygiene, and to study work processes in unhealthy environments together with the branches concerned.

Our hygiene and epidemiology institutes and centres have stepped up their supervision of food hygiene in restaurants, cafeterias and food shops. We published rules and regulations concerning food hygiene as well as a table of elementary composition of vietnamese food.

Nutrition has for many years been the focus of our attention in child health care work. There are clear cases of undernourishment due to economic under-development and aggravated by the sequels of war, in protein and caloric deficiencies, and even in numerous cases of marasmus. We have studied the constituents of different kinds and of different complete food powders made of cereal flour and fish, as substitutes, as the raising of milch cows in our country is still limited.

#### TRAINING AND REFRESHER COURSES FOR CADRES

The development of medico-sanitary work requires an increasing number of competent cadres. Hence the necessity of training cadres and giving them refresher courses, considered a strategic task by our health service.

The August 1945 Revolution confronted us with an acute shortage of cadres, and we set about giving a two-year training as second level health officers to students who had finished their "upper primary" classes. These studies were later extended to three years, and the level of general education required remained roughly unchanged : the 2nd level of general education, or the equivalent of Western school leaving exams, or higher, up to the equivalent of college entrance level exams. These "assistant physicians" as they were called - usually practiced at grass-roots level, in commune health stations, also called commune infirmary cum-maternity hospitals or rural health centers. Each province or centrally-run city (Hanoi, Hô Chi Minh City and Haiphong) now has its own secondary school level medical training for middle-level health cadres and of grass-roots level cadres working in the provincial network. Thanks to this method we managed to train sufficient medical staff for immediate purposes in a relatively short time. They certainly could not be equipped with extensive theoretical knowledge, but were able to discharge efficiently

the practical duties assigned to them : giving general medical advice to patients, treating common diseases, first aid and emergency care, especially in war time.

The basic staff of hospital attendants, midwives and laboratory attendants for the grass-roots network were given training programs lasting from 9 to 18 months, and second-level general education was required for enrolment. They are now being gradually replaced by a staff of secondary - level cadres doing the same work but with a three-year training programme behind them on top of the third level general education required of them. Large-scale training of doctors, of midwives and of secondary level hospital and laboratory attendants make it possible to progressively reduce the numbers of assistant physicians trained.

Higher level medical training has likewise developed considerably. Reunified Viet Nam can boast six College-level medical schools at present, and one school of pharmacy (The medical school in Hô Chi Minh City is a mixed school with a department for general medicine, one for pharmacy and one for odonto-stomatology). They have 2,000 students, of both sexes, each year graduates from 3rd level general education classes who pass an entrance examination. The duration of their studies is six years for medicine and five for pharmacy. Students have to do practical work right from the first year. These schools are scheduled by 1980 to be graduating 1000 - 1200 physicians and 300 - 350 pharmacists annually by 1980.

Post-graduate training is only in its first stages. In wartime we generally sent our physicians and pharmacists to other socialist countries to continue their studies. Many of them took their Master's degrees there, and some their Doctor's degrees. From 1970 on, we started organizing post-graduate studies in our country, in 1st and 2nd degree specializations.

A system of crash refresher courses is still in operation under the supervision of the Department for Cadre Training of the Ministry of Health. Mention should also be made of the central administration's special school of Public Health: for the training of leading and managing staff of health organs and hospitals, and its sub-department in Hô Chi Minh City.

Thanks to those realistic and flexible measures taken in the field of cadre-training, the number of trained Vietnamese health cadres has rapidly increased. Viet Nam now has 8,300 physicians, 2,394 fully qualified pharmacists and 38,933 secondary-level health officers.

## PHARMACY

For years now we have made efforts to meet the country's needs in both therapeutic as well as in prophylactic medicines. One of the main difficulties has been the absence of a national chemical-pharmaceutical industry. The full potential of growing medicinal plants and the exploitation of local materia medica has only begun to be exploited. Private pharmaceutical laboratories in the South hitherto so dependent upon foreign countries for both their equipment and raw materials, are now being transformed into State enterprises.

Viet Nam now has 29 national and regional pharmaceutical factories, 570 pharmacies, not including medicine stores attached to commune health stations. A broad network for producing and distributing medicines has thus been set up parallel to the general health service network, and covers the whole country.

We have made great efforts to gradually reduce the volume of imported medicines. Thus for instance in 1976, national pharmaceutical output met 30 percent of the country's needs as against 18 percent in 1955. To make up for the shortage of medicines, we boosted the growing of medicinal plants especially in rural communes, within the framework of a movement to "keep an on-the-spot medical watch". Each peasant household is required to be self-sufficient in the most commonly used medicinal plants. Almost all rural health stations have their own garden of medicinal plants and thus can meet up to 15 and even 30 percent of their own medicine requirements. The Institute of Materia Medica, the Hanoi Institute of Traditional Medicine and the Hô Chi Minh City Institute of Traditional Medicine and Pharmacy constitute the main centres for research on the classification, exploitation and development of our traditional medical legacy.

The distribution of medicines is carried out through the State store network. All communal health stations have their own medicine stores. State pharmacies are connected to district and provincial hospitals, and sell medicines to patients who have been examined in those hospitals. In 1976 per capita expenditure for medicines increases threefold compared with 1955.

## MEDICAL RESEARCH

We pay great attention to medical research, which in our view constitutes an impulse to the development of our health work.

Medical research is carried on in :

- Institutes of medicine and pharmacy
- Higher schools of medicine and pharmacy
- Specialized study groups
- Centrally-run provincial and municipal hospitals.

Viet Nam now has 20 centers and 6 units for medical and pharmaceutical research.

The leadership in medical research is assumed by :

- a) The Scientific and Technical Council of the Health Ministry, which has an advisory status vis-a-vis the Minister. Institutes, big hospitals, higher schools of medicine and pharmacy, etc... all have their own scientific and technical councils.
- b) The Scientific and Technical Department of the Health Ministry, which is an administrative body entrusted with the task of leading and coordinating medical research in the whole country. Institutes, big hospitals and higher schools of medicine and pharmacy have their own scientific and technical bureaus.

In Viet Nam, medical research follows the following orientations :

1. To develop prophylactic medical practice suitable for conditions in Viet Nam.
2. To reinstate traditional medicine to its rightful position in the light of modern science, with a view to building up national, vietnamese medicine.
3. To closely combine medical research and teaching, as progress made in research will be of the greatest value to the immediate and long-range needs of teaching.

In accordance with these orientations, research concentrates mainly on basic surveys, more particularly on the general state of public health, on the evolution of diseases, on the biological constants of the Vietnamese, on materia medica, on ecology, on social diseases, etc... , and also on therapeutical means to be used against infectious diseases

in Vietnam, on the application of modern medical techniques, etc... Due attention is paid to research in basic sciences.

As a result of long years of basic research survey work, we have been able to collect information about more than 400 biological constants of the Vietnamese, which will serve as a basis for our health work as well as for medical research. Investigations made on the general state of public health, the evolution of diseases and on materia medica are of great significance in working out health programs and planning pharmaceutical production.

Successful production of vaccines against poliomyelitis, leptospirosis, Japanese encephalitis B, etc... have made it possible to wipe out these diseases, making a considerable impact on the general health situation as well as on the national economy.

In the field of surgery, several projects are worth mentioning. First and foremost, exsanguine surgery on the liver developed by Prof. Tôn Thất Tùng, a more rapid, and in certain respects more efficient method than classical liver surgery. To Prof. Trần Hữu Tuộc's credit is the development of surgery on post-pharyngeal cancer, saving the lives of many patients.

A group of surgeons and immunologists under the leadership of Prof. Tôn Thất Tùng is now working on a new method for the treatment of liver cancer; tying the arteries feeding the diseased organ during non-specific immunotherapy by means of BCG and LHL. The preliminary results obtained are better than results of simple surgery.

In the pharmaceutical field, we have made up many medicines from local materia medica, including plant antibacterials, anti-inflammatories, anti-allergics, sedatives, and hemostatics ... We have produced various medicinal plant extracts and essences, more particularly menthol essence (*Mentha arvensis* Lin), cinnamon essence (*Cinnamomum obtusifolium* Nees), essence of *Ocimum graveolens* Lin, etc...

It was during our anti-US resistance that we worked out Viet Nam's first pharmacopeia, the first volume of which appeared in 1971.

Modern techniques for analysing and curing diseases have begun to be applied in big hospitals, where specialists have made use of radio-active isotopes, bio-energetic recording apparatuses, electrocardiographs, electro-encephalographs, electropunctors, pace-makers, monitoring and so on.

Broadly speaking, medical research aims at finding practical solutions to immediate problems, which arise from the lack of material and technical



means. Our scientific workers have not yet the required conditions to carry out long-range projects.

Scientific information work has made some progress in the last few years. The Central Medical library founded in 1963 is concurrently responsible for scientific information. Health services in provinces and cities, and big health centers as well, all have their own medical libraries.

The Medical Publishing House, under the Health Ministry, published hand books and treatises on medicine and pharmacy, and simplified pamphlets for popular consumption.

Scientific and technical cooperation with foreign countries is making headway and will help in developing national medicine.

Under the clear-sighted leadership of the Communist Party and the Government of the Socialist Republic of Viet Nam, thanks to the immense efforts of our health cadres and to the support given by fraternal socialist countries and the world peoples, we have been able to record some initial achievements in caring for our people's health in peace time as well as in the trying years of war.

As our activities are closely linked with the people's life and social safeguards, we have the full support from the masses of the people. It is also thanks largely to the people's support that we have been able to set up an omnipresent health network in a short time, and to carry out activities in several fields at the same time.

The Socialist Republic of Viet Nam has been proclaimed on our reunified land, and more arduous tasks are awaiting us, in the work of rapidly healing the wounds of war, building our national economy and the improving the working people's living conditions. Armed with the experiences acquired and with the help given by friends throughout the world, we are convinced that we will fulfil all new tasks entrusted to us.







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