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# INTERNATIONAL COMMITTEE OF THE RED CROSS

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## MEDICAL DIVISION

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Internal and Contagious Diseases  
in Prisoner of War and Civilian Internee Camps  
during the Second World War

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GENEVA

1950



## I N T R O D U C T I O N

On the outbreak of the Second World War, the International Committee of the Red Cross resumed its traditional duties; the Central Prisoners of War Agency again opened its doors. On September 15, 1939, the Committee's chief Delegate, Dr. Marcel Junod, reached Berlin for preliminary talks with the German Foreign Office. A few days later he saw a prisoner of war camp in Pomerania, and another in East Prussia, where several hundred Polish prisoners were held; on passing through Warsaw, bombarded early in October, he learned that there were over ten thousand wounded and sick, that several hospitals had been destroyed and that there was an epidemic of typhoid fever (1,800 cases, two-thirds of them Jews).

In the following months, and particularly from May 1940 onwards, the War assumed vast proportions and the number of prisoners and civilian internees grew rapidly. Red Cross Delegates were dispatched from Geneva to all parts of the world, or appointed locally; they were to provide prisoners with relief and ascertain whether living conditions were in conformity with the Geneva Conventions.

The Delegates reported on each visit to Geneva; the Committee was thus kept closely informed and able to make direct application, in case of need, to the Detaining Powers. The reports gave detailed information about the site and organization of camps, prisoners' quarters, food, clothing and work, facilities for recreation, camp hygiene, state of health, prevalent diseases, epidemics and so on.

Now that all camps are officially closed and prisoners and internees, with certain exceptions, have been released, we propose to study Delegates' reports from the medical point of view, and give some account of diseases and epidemics which were noted in prisoner of war camps from 1939 to 1949. The study will not include battle casualties, working or other accidents, or surgical cases - these could be the subject of a separate paper - but will deal only with general complaints and contagious diseases or epidemics in camps and hospitals in belligerent countries and occupied territories.

Under the heading "General Complaints", we shall not dwell upon common disorders, such as bronchitis, rheumatism, tonsillitis, digestive trouble, etc., which, as a general rule, were not serious or unusually prevalent. Even influenza never reached epidemic stage, but remained seasonal and without serious consequences; the same remark applies to mumps, measles and whooping-cough, which occurred in practically all countries at war. All these affections took their usual course and do not call for comment. The reports have also remarkably little to say about chest complaints (with the exception of tuberculosis), pneumonia and broncho-pneumonia in particular.

The various illnesses, with their particular features, have been classified by countries, beginning with the most important diseases, namely : Tuberculosis, Venereal and Skin Diseases, Malaria, Typhoid and Paratyphoid Fever, Exanthemic Typhus, Dysentery, Diphtheria, Nervous and Mental Disorders - followed by those of lesser prevalence and importance. At the close of each principal chapter a summary of the most important points has been added.

It should be understood that the following study makes no pretence of being "statistical"; the figures are simply those given to Delegates during camp visits. In many countries, particularly in the opening stages of the war, visits took place only two or three times a year. Furthermore, it will be readily understood that camp doctors and spokesmen were not always able to keep up-to-date records of the sick and that these papers were sometimes lost. This applies also to Delegates' reports, some of which never reached us.

We believe, nevertheless, that the figures given below supply a fairly accurate picture of health conditions in prisoner and civilian internee camps during the second World War and the first four years of the post-war period.

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## T U B E R C U L O S I S

Pulmonary tuberculosis was the most prevalent disease in prisoner of war and civilian internee camps, but its frequency varied greatly as between different countries.

Non-pulmonary tuberculosis (larynx, bones, glands, eyes, etc.) recorded was, by comparison, negligible.

### AFRICA (North)

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From 1942 to 1947, Delegates reported 154 cases amongst German, Italian and Polish PW, as follows :

Algeria	91
Tunisia	57
Morocco	6

Several cases, between 25 and 50 years of age, had not been stabilized. Two deaths occurred in hospital, one at Fez, and another at Meknès.

### AFRICA (Central and South)

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From 1942 to 1944, there were 483 cases and 6 deaths. Deathrate : 1,24 %.

In 1942, of a total of 14 cases, 2 German PW died at Pretoria Hospital.

In 1943, about 150 cases were notified amongst the 140,000 PW who had passed through, or were still resident, in Zonderwater Camp.

In 1944, the figure was still higher - 319 pulmonary cases, 18 with other forms and 4 deaths, including two Italian officers.

Of 807 tuberculin tests, 67 were positive; in Zonderwater Camp Hospital, 38 positive and 24 negative. Monthly sputum tests were made and radiosopic examinations bi-monthly (more often, if required). The Hospital carried out 10 adhesion operations, as well as thoracoplastics and pneumothorax.



48 cases improved, 7 grew worse and 12 remained stationary. Prognosis was satisfactory in 21 cases, poor in 8, and doubtful in 28. The patients were cared for by an Italian specialist, who prescribed extra food, gluconate of calcium injections, vitamin B and malted cod-liver oil.

#### Sudan.

In April 1942, Ruenda PW Hospital received Abyssinians, amongst whom the disease is common and has a rapid form. No pneumothorax apparatus was available, but a few patients had phrenicectomy.

#### Kenya.

A total of 130 cases (98 in 1943), including 34 open and 6 renal (all Italian and German PW). The majority had contracted the disease before arrival.

There were, in 1944, in the internee and civilian evacuee camp, East African Command, 32 pulmonary cases (4 civilian internees and 28 Italian military personnel).

#### Southern Rhodesia.

From 1943 to 1945, 84 cases (mostly with closed lesions) were recorded amongst Italian nationals in Umwuma, Fort Victoria and Gatooma Camps - all treated in the camp hospitals. There were 44 cases in 1943, 26 in 1944 and 14 in 1945.

#### AUSTRALIA =====

Between 1944 and 1946, 106 cases were recorded amongst German, Italian and Japanese civilian internees; two deaths only occurred, in June and November, 1946. Patients were treated in camp hospitals at Loveday, Hay, Murchison and Tatura-Victoria. The cases were mostly closed lesions, and chiefly amongst Italian internees.

#### AUSTRIA =====

609 cases (161 open); all German and Austrian PW.  
No deaths recorded.

In 1945, a few cases amongst the first Austrian repatriates (Nov. 17 to 30) included a French political detainee, aged 47, charged with Gestapo membership; he was detained in Kufstein Fortress, French Zone.

In 1946, in Reichenau Release Camp (French Zone), cases amongst repatriates from France were relatively few. X-ray examination was made on arrival, and serious cases sent to Innsbruck Hospital. In the American Zone, the records for political detainee camps, and German and Austrian civilian internee camps and hospitals, showed 355 cases (284 closed, 71 open); political detainee camps, French Zone : 122 cases (80 closed, 42 open); British Zone, 132 cases (84 closed, 48 open). No deaths recorded.

#### BELGIUM

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Between Sept. 1945 and June 1947 : 265 cases (German PW); 21 deaths.

In 1945, 5 cases only (admitted to Vilvoorde Hospital, under British management).

In 1946, about 160 cases amongst German PW from British, American, and Belgian camps; 20 deaths (Charleroi Hospital, under British management).

In 1947, about 100 cases, chiefly amongst young men of 18 to 20, who fell ill while at work in the mines. Some were primary infections; the majority had bilateral lesions; others had a laryngeal or intestinal form. One death in May, 1947, at Beverloo Hospital.

A pneumothorax apparatus was given by the ICRC to Fléron Camp, which had as yet no X-ray equipment; the German MO was anxious to investigate by X-ray, particularly amongst the PW workers.

#### BURMA

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In 1946, 79 cases recorded (Japanese). Figures reached a peak in September and October. Tuberculosis is a principal disease in Burma.

#### CANADA

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Between 1942 and 1945, about 30 cases amongst German PW. The patients, treated in a special hospital, complained of the accommodation and hot-air heating; they asked that a lung specialist be attached to the permanent staff.

#### CORSICA

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Between 1944 and 1946, 81 cases (38 open) on record for German and Italian PW, mostly treated at Ajaccio Military Hospital.

In 1944, 23 cases amongst German and Italian PW; 20 were of long standing and 3 serious (including one with meningitis).

For 1946 in the same hospital, -food rations were increased as from July 1945 - the figures from March to May showed 53 cases (35 open) :

	<u>All patients</u>	<u>Open</u>	<u>Closed</u>
March	76	4	6
April	64	6	8
May	<u>59</u>	<u>25</u>	<u>4</u>
	199	35	16

In Corsica tuberculosis was fifth in order of prevalence; according to camp MOs, the incidence was decreasing.

The general report on Corsican camps mentioned two German nurses at Bastia with tuberculosis, awaiting repatriation (June, 1946).

#### CZECHOSLOVAKIA

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Tuberculosis was reported as being common, with a heavy deathrate, both in PW and internee camps. Reports between 1946 and 1949 quote 197 cases and 7 deaths; according to the Delegate, these figures probably underestimated the position.

In 1948, a child of 15 died in the Frysawa Children's Home; 6 deaths occurred in an internee camp (a man aged 22 and

five women between 22 and 27). There were a few cases of pleu-  
risy, probably tuberculous, in a camp for aged invalids, and  
at Losany Assembly Camp some cases of caseous and bone  
tuberculosis.

Several deaths were recorded at Ruwang-Teplice Sanov  
Camp Hospital in 1949. The same year, 40 German children in  
a home at Opava were vaccinated against tuberculosis with  
vaccine supplied by the Danish Red Cross.

To sum up :

1946	70 cases	-	27 open, heavy deathrate among PW
1947	83 "		1 death (child)
1948	33 "		6 " (5 women, 1 man)
1949	11 "		several deaths
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	197 cases	-	7 deaths recorded
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#### DENMARK

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In May, 1945, 150 cases were recorded in a camp for  
German civilian refugees.

#### EGYPT

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Records for the three main camps in Egypt (Nos 305,  
306 and 309), and the 19th General Hospital, showed 649 cases  
(11 bone), and about 100 deaths amongst German, Italian and  
Libyan PW.

In 1942, 92 cases. No deaths recorded. The pneumothorax  
treatment needed by several patients was impossible, as appa-  
ratus was not available. The Italian MO requested their transfer  
to a hospital, where proper treatment could be given.

In 1943 (January to November) : the records for the  
same camp and two hospitals showed 243 cases amongst Italian,  
German and Libyan PW, with 6 deaths. 15 patients had pneumotho-  
rax treatment, apparatus having been supplied.

In 1944 : 142 cases (about one half active). 25 pleuri-  
sies. Patients passed for repatriation were assembled at 19th  
General Hospital.

In 1945 : 40 pulmonary and 11 bone cases sent to hospital from Greek camps.

In 1946 : 52 German PW treated in camp, 64 at 19th General Hospital. Records showed an average of one death for each period of 6 to 8 weeks.

FRANCE  
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From 1940 to 1948, Delegates' reports showed 5,776 cases (115 open) and 270 deaths - a deathrate of 4.6 %.

Of the total, 2,724 were recorded during the Occupation (deathrate 0.92 %), and 3,052 after the liberation (deathrate 8 %).

From Nov. 1940 until the end of 1941, there were 1,500 cases in the Front-Stalags of most regions, particularly in the South-West (Bordeaux, Bayonne), the North-West (Finistère, Ille-et-Vilaine), the North-East (Somme, Vosges, Meurthe-et-Moselle) and east of Paris (Marne). The patients were mostly North and Central African PW (Senegal, Madagascar, etc.). On arrival in camp the men were X-rayed by the mobile unit, which according to the German MOs detected 10 to 20 % of all cases. For African PW, the camp doctors found, however, that radioscopies often showed that the lungs were clear, whereas the patient had manifest symptoms - temperature, positive test, etc.; from this they concluded that the disease was not identical in coloured and white races. Other doctors believed the contrary; the matter will be given further reference below.

PW found to be tuberculous were sent to the Front-Stalag or other hospitals (Bordeaux, Orléans, Nancy), or direct to the Free Zone (Fréjus), when their state of health and available transport permitted. During this period, civilian internee camps sent 33 British cases, all serious, to the Val-de-Grâce, pending their transfer to Brévannes Sanatorium. Other internees were admitted to St. Jacques Hospital, at Besançon.

The German MOs were of the opinion that many internees and PW had developed the disease during captivity, as radiography tests made prior to internment had shown the lungs to be normal. They also believed tuberculosis due, not to malnutrition, but to the climate, low morale and depression.

Prevalence was apparently less in 1942, with 924 cases and 19 deaths (deathrate 2 %).

Serious cases amongst the natives of North Africa, Senegal, Madagascar and Martinique were sent from South Western camp to St. Nicolas Hospital, Bordeaux, or to Bayonne PW

Hospital. Most of the patients arriving here were too weak to stand transport into the Free Zone; this applied particularly to the North Africans, who were apparently the most affected amongst the non-Europeans. According to the camp MOs, the principal forms of tuberculosis were, firstly, mediastinal adenopathy, and then pulmonary, pleural lesions, articular and bone tuberculosis, and, lastly, tubercular meningitis.

The symptoms noted above also occurred in X-ray examination of North Africans in Front-Stalags in Northern France. A German staff officer observed, after a series of X-rays, that several PW with negative tests had nevertheless been admitted to hospital with open tuberculosis (one with two cavities). The same MO believed that mass radioscopy should be made in all camps. Mass X-rays in Vésoul Front-Stalag of 450 PW, showed 20 cases (2 open) amongst North Africans. At Nancy Front-Stalags, from September 1 to 30, 1942, tests for men from North Africa, Senegal and Martinique registered 445 closed lesions; 18 open, 34 with disease of other organs, including 11 bone cases.

Delegates' reports quoted 88 cases in 1943 and 212 in 1944, (total 300) with 6 deaths (deathrate 2 %).

In the Front-Stalag Hospital at Rennes, about 40 Indians were treated, several with haemoptysis, one with meningitis. All patients were X-rayed on arrival and, after positive sputum and sedimentation tests, radiographs were made. 28 Indians from a Front Stalag in the Vosges were in a Nancy hospital. The doctors estimated that 60 % of the coloured patients had tuberculosis. In the camp for colonial troops at Morancey (Eure et Loir), Dr. Malespine noted a marked decrease among Negroes, but there were several cases of fibroid tuberculosis.

From civilian internee camps at Compiègne (Oise), about 15 British and American patients (internees and ex-internees) were sent to a sanatorium in the Seine area, for treatment by Dr. Chauvin. Several British patients with active disease from Vittel Camp were under treatment at the Palace Hospital. 11 British non-contagious cases from Val de Grâce were kept at St. Denis Hospital (Seine).

An ICRC Delegate, Dr. de Morsier, visiting camps in France from June 20 to 24, 1944, saw at Compiègne a number of Indian and South African PW, already classed as "unfit" in their camps; they were waiting to be sent to Germany, for examination by a Mixel Medical Commission which could not sit in France.

After the liberation in 1945, the camps were occupied by German, Austrian, Italian and Hungarian PW.

The civilian internees - of about sixty nationalities, mostly German - included stabilised cases; they were treated in camp hospitals. In Northern France (Pas-de-Calais, Oise) in

an Aliens Assembly Centre (Ille-et-Vilaine) and an Assigned Residence Centre (Vienne), records showed two deaths (an infant of 2 months and a woman of 81). Serious cases on record were: 1 woman with haemoptysis and fever, under pneumothorax treatment for four years; two children, with primary infections, one a girl of 12 with high temperature, whom the MO was anxious to send to Switzerland. These patients were all being treated in the camp infirmary, some even in the general ward, isolation not being possible through lack of room; the doctors feared that, on this account, infection might increase to 10 %.

There were about 525 cases (25 active) from all parts - camps in the Nord, Haute-Vienne, Indre, Sarthe, Ardennes, Eure-et-Loir, Loiret, Rhône (officers' camp), Savoy and Upper Savoy (Evian). After diagnosis they were sent to camp hospitals, or to civilian and military hospitals such as Baccarat, Villemin Hospital (Orleans), or to Aix-en-Provence Sanatorium, Doubtful cases were X-rayed, the necessary apparatus then being available in nearly all camps. At Morancey, near Chartres, half the PW (youths from 17 to 18) were examined; 3 % were found to have active disease. In January, 1945, X-rays were taken of all sick German PW in the Loiret. Few were made elsewhere, generally owing to lack of films.

In the PW Hospital at Thonon, 28 PW from St. Pierre de Rumilly Camp, suffering from tuberculosis of the eyes, were in a separate hut. When visiting PW camps of South West and Western France in 1945, the ICRC Delegate noticed that many patients in infirmaries and camps had no proper care and their condition was growing worse. Several were not considered eligible for repatriation, owing to their supposed contagious condition, even in the absence of positive tests. The Delegate suggested their being sent to the French Occupation Zone - to the Black Forest, for instance - where a tuberculosis camp could be set up and they could have the necessary treatment, instead of being left scattered throughout the country.

In 1946, there were 1,780 cases and 183 deaths. Repatriation was dilatory, either through lack of transport facilities, or because many, owing to their serious or contagious condition, could not be removed.

In the North, several hundred cases in hospital were from the mining districts (Douai, Lens). In the Upper Rhine, tuberculosis was a leading disease. In Baccarat Hospital, from March to July, 12 patients died of it; there were 31 deaths in Limoges Hospital, from October 11, 1945, to March 3, 1946. Of the 506 sick at Rennes Camp, 152 had tuberculosis.

In hospitals in the South (Gironde), a third of the PW patients had tuberculosis, some with large cavities. In the Eastern Pyrenees, where the climate was not favourable (sea-air) and where no extra food was available, all such patients finally died, lack of transport having prevented their repatriation. In many camps food was short; soya flour proved indigestible. In some hospitals, particularly in the wards for

SS troops, patients with open lesions and not properly isolated were a danger to the others. About 60 cases, however, in Labadie Hospital, near Marseilles, were visited thrice weekly by Professor Vergès, assisted by two German practitioners. X-rays were taken at three-weekly intervals and sputum tests weekly, with intubation, if necessary. Rations were satisfactory; patients with open and closed forms were kept separate.

In 1947, 703 cases and 60 deaths were recorded; 511 were repatriated to Germany between January 1 and September 10, 1947, by special or hospital train, to Weingarten, Tuttlingen, Breitenheim and Weissnau. By October, there still remained in hospital some 192 cases, all due for repatriation.

In 1948, only 17 cases were recorded in camps in Northern France. One death : a German PW in a labour detachment at Ugine steelworks (Savoy) was treated in the dispensary and died without the camp being notified of his illness; the German MO stated that the cause of death was certified as "broncho-pneumonia".

#### Note on Tuberculosis amongst Africans and Asiatics.

During May and June 1941, Delegates visited several Front-Stalags in the Occupied Zone, holding non-European troops brought to France (Senegal, Indo-China, Madagascar, North and Central Africa, etc.).

The Delegates received valuable data from the camp MOs about tuberculosis in coloured people, as follows.

Two French Colonial MOs, Lt-Cols. Caron and Tallec, stated that tuberculosis in North Africans is practically the same as in white races, but that bacilli are hardly ever found, even in the closing stages.

The absence of bacilli, or appearance only at a final stage, in patients definitely tuberculous under clinical observation, was also noted by the MOs of Saumur Front-Stalag.

Capt. Robert Aumenier, MO in an Amiens Front-Stalag, considered that it was difficult to diagnose tuberculosis in coloured patients. Clinical tests were often wholly contradictory to the X-rays. Patients apparently tuberculous, with high temperature, gave pictures that were absolutely free, and sputum tests were negative.

A French MO at the Henri Marti Hospital, St. Quentin, however, a specialist in colonial diseases, did not share this opinion. He said that bacilli were to be found at all stages of the disease, if one took the trouble to make careful search. In his opinion, tuberculosis is comparatively rare amongst Negroes, but common amongst North Africans.



The MOs of an Ille-et-Vilaine Front-Stalag emphasized the importance of gland tuberculosis in Negroes and North Africans; they believed the starting point of the disease is always located in the hilar glands and rarely in the lungs.

The total absence of bacilli in coloured patients, even in the final stages, had already been noticed, during the first World War, by Professor Borrel, of the Pasteur Institute. In a report on the subject of tuberculosis in coloured troops ("Annales de l'Institut Pasteur", March, 1920, No.3, p. 105), he stated that sputum tests for tuberculous non-Europeans, even in a very advanced stage, were almost always negative. By ordinary tests, in 100 advanced cases, bacilli could be detected in only about 20 instances. This, he added, was fortunate from the point of view of contagion.

The writer offered no explanation of the absence of bacilli. This has, however, certainly some connexion with other points mentioned in his report, namely, the gravity and rapid evolution of the disease amongst Senegalese (sometimes in a few weeks only), which he attributed to lack of immunization during childhood and early life.

Tuberculosis is, in fact, a rare disease in Senegal. Professor Borrel quoted as an example the Senegalese infantry sent direct from home to Fréjus Camp in France, during the first World War; positive cutaneous reactions barely reached 4 to 5 %, whereas the figure was <sup>often</sup> 20 to 30 % amongst the French urban population, rising to 60 to 90 % in the Paris area. The few doubtful or manifest cases (2 to 3 %) detected on the men's arrival were all found to be residents of urban centres, who spoke French and had been in contact with Europeans in Africa. It would have been interesting to know whether the patients found, at the Henri Martin Hospital, to have bacilli at all stages did not belong to this particular group.

Their lack of immunity is said to have made the Senegalese particularly prone to the disease, which they contracted by contagion in camp life. The disease was immediately serious, with acute symptoms similar to those in children. There can here be no question of race or predisposition; no such proneness occurred amongst natives of Annam or Madagascar who reached France at the same period. Tuberculosis is not uncommon in Madagascar, and many of the men might have been exposed to contagion or slight but repeated infections during childhood and youth. Amongst them, the disease assumed practically the same form as among Europeans; they showed, in particular, fibrous reactions which do not occur in the Senegalese. Lack of acquired immunity is thus apparently the reason for the predisposition of the Senegalese troops, as for the serious and rapid evolution of the disease and the absence of fibrous reaction. The last-named symptom was, however, observed in Morancey Colonial Camp (Eure-et-Loire) in 1943.

Borrel also comments upon certain warning symptoms in coloured patients which are common and most useful for early detection. Most important is the presence of one or several

supra-clavicular ganglions; these were detected in 60 to 80 % of the cases under examination, and their value as evidence became fully apparent by the reaction to tuberculin tests, which are always positive in such cases. This ganglion can be the seat of primary infection, or the visible proof of the tubercular condition of the tracheo-bronchial group, of which it is part. These ganglions are the initial centre of infection amongst Negroes, who seldom contract tuberculosis initially in the lungs. In such cases skin tests are unnecessary.

In 1942, the MOs of several French camps reported that mediastinal adenopathy was a starting point for the disease amongst African Negroes.

According to Borrel, there are other symptoms of lesser importance which should not, however, be overlooked; a rough, scaly, dry skin (in contrast to the smooth, fine skin of Negroes in good health), dull complexion, atrophy of the arm and shoulder muscles, loose skin and loss of pigmentation of the breast and the supra and sub-clavicular cavities. It would be valuable to know if this combination of symptoms existed amongst the coloured troops arriving in France in 1940, and if the absence of bacilli remained, if not an invariable, at least a common symptom.

It should be remembered that conditions are not quite the same as thirty years ago. Amongst the native troops who returned home after the first World War, some had not wholly recovered from tuberculosis contracted in France, and these may have been a source of infection. Furthermore, travelling facilities, particularly by air, have brought the colonies much closer to the home land. Europeans can now reach the colonies with far greater ease; by their contact, coloured races may have acquired a certain degree of immunity, which may lead to forms of the disease similar to those of Europeans.

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The 5,776 pulmonary cases in France may be summarized as follows :

	<u>Year</u>	<u>Number of cases</u>	<u>Open lesions</u>	<u>Deaths</u>
Occupied Territory	(1940/41	1,500 )		
	( 1942	924 )		19
	( 1943	88 )	20	
	( 1944	212 )		6
		-----	-----	-----
		2.724	20	25
		=====	=====	=====
Liberated Territory (German PW)	)1945	525 )		2
	)1946	1,780 )		182
	)1947	703 )	95	60
	)1948	44 )		1
		-----	-----	-----
		3,052	95	245
		=====	=====	=====
<u>TOTALS :</u>		<u>5,776</u>	<u>115</u>	<u>270</u>
		=====	=====	=====

The figure by nationality (where given) were as follows :

Germans . . . . .	3,000
North Africa, Senegal, Martinique, etc.	1,800
British and U.S.A. . . . .	70
Indians . . . . .	68
Austrians . . . . .	44
Italians . . . . .	5
Hungarians . . . . .	3

GERMANY  
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From 1940 to 1948, Delegates reported some 10,000 pulmonary cases and 1,659 deaths - a deathrate of 16.22 %.

These figures do not represent the total number of tuberculous patients in camps. A great many slight cases were not diagnosed; others, as may be readily understood, were not registered or brought to the Delegates' notice.

In Eastern Prussia and Pomerania, during the closing months of 1940, there were 165 cases amongst Polish, British, French, Dutch, Ukrainian, White Russian and Belgian PW (including 56 coloured patients). One Pole died of granulitis, and two French of generalised tuberculosis.

There was systematic examination in camp hospitals from 1940 onwards. Doubtful cases, especially contacts, were X-rayed when apparatus was available. French PW showing definite lesions and bacilli were sent to Tangerhütte Sanatorium (Prussia), within 6 to 8 weeks of their entry to hospital; others were repatriated direct to France via Bad-Soden, which served as an assembly centre for such patients, and from there to Châlons. By November 1940, 2,000 men had been repatriated, some 40 with tuberculosis.

In 1941, in North German PW Camps (Berlin and Hamburg areas, Lübeck, Pomerania) there were 1,605 cases (126 open) and 370 deaths. According to the French MO, cases were becoming increasingly numerous and grave, especially amongst Polish and French PW, and those who had been in labour detachments. Case histories being negative, it was presumed that the disease had developed during captivity; there were some pre-war cases, however, and a number had already spent several months in sanatoria.

The German MOs passed for repatriation, as a rule, all cases with positive reaction and/or radiological and clinical lesions, slight lesions with sedimentation, and cases of exudative pleurisy. Some MOs, however, not considering pleurisy as bacillary, refused repatriation of such cases. In the Hamburg

area, some PW with pleurisy had been sent back to working detachments and soon returned with active tuberculosis. In other instances, the MOs refused to send to hospital patients with bacilli whose sedimentation was normal, whereas French MOs claimed that amongst those who died were cases in which sedimentation had remained normal until the end. In diagnosis and prognosis, most German doctors attached great importance to sedimentation.

Repatriation was also granted to cases of bone, glandular and renal disease. 400 Asiatic and Africa PW who suffered from the cold climate were sent from camps in the Berlin area to France (Gironde); so were 4 doctors (one with tubercular ulcer of the cornea, two former cases, and the fourth with obvious primary infection) and two new cases (Indian PW from North Germany).

In a N.E. German Stalag (French Cadets) were several cases which called for radioscopy; the same remark applied even to labour detachments. In this camp, as in many others, there was as yet no X-ray apparatus, hence no pneumothorax treatment was possible. Patients were merely kept in bed and given inadequate extra food (less than a pint of milk). In Neukölln Hospital (Berlin), in Westphalia and the Ruhr, patients were given 1.75 pints of unskimmed milk, eggs, butter, calcium and vitamin C, but even in Neukölln there was no pneumothorax apparatus. In a military hospital near Hanover, however, where there were many cases, X-ray apparatus was available, mass X-ray and sedimentation tests were made, and brought to light many unsuspected cases, particularly among French PW. In one day's testing, seven were detected, one with bacilli. The German senior MO in charge of a Wurtemberg Hospital stated that, of the many open cases he had examined, not one could be considered of recent date.

By the end of 1941, Tangerhütte Hospital, where most of the patients were French, recorded 181 deaths from the opening of the hospital in October: 104 Poles, 53 French, 15 Belgian, 5 African and 4 British.

Of the 1,605 cases recorded in 1941, 126 were open; there were also 21 laryngeal cases (of whom 10 were treated at Tangerhütte) and 2 bone.

In 1941, morbidity and mortality according to nationalities indicated were as follows :

<u>Nationality</u>	<u>Cases</u>	<u>Deaths</u>
French	380	70
Jugoslav	136	20
Polish	134	104
British	38	7
Belgian	25	15
Asiatic and N.African	56	5
Negroes	400	--

In 1942 the figures were : 2,360 cases, 659 deaths; 441 cases of open tuberculosis.

In order of prevalence, the French came first, followed by the Yugoslavs, Poles, Russians and Belgians. British and American PW were rarely affected. The deathrate was heaviest among the Yugoslavs, followed by the French, Poles and Belgians, the British coming last.

The fact that certain German MOs took the rate of sedimentation as determinant may explain the high figures (several hundreds) reported in the French Cadet Camp in North Germany.

From March 1942 onwards, in several military hospitals in Saxony and East Prussia, X-ray apparatus became available; this made collapse therapy possible; adhesion operations and intravenous calcium injections were practised. Ultraviolet ray treatment, gold salts and radiotherapy were used for gland tuberculosis.

Frequent reference was made in reports to differences of opinion between French and British MOs with regard to methods of treatment, collapse therapy in particular. Among the PW doctors in Tangerhütte Hospital - all tuberculous - there was no specialist, nor was the German senior MO one. A German expert called at the hospital once or twice weekly. In the hospital were 30 bone, renal and genital cases.

Morbidity and mortality in PW camps in 1942 :

<u>Nationality</u>	<u>Cases</u>	<u>Deaths</u>
French	624	133
Yugoslav	395	147
British	215	39
Polish	125	120
(Russian)	( 83)	-
Belgian	53	1
Indian	4	2
Australian	3	2

In 1943, there were 1,616 cases (245 open, 428 deaths). Most of the patients were Yugoslavs, followed by the French, British, Poles and Indians. In several Stalags of N. E. Germany, and in a North Austrian hospital, there was an increase of active tuberculosis; great attention was paid to sedimentation by the German MOs (see above). From this time onward, repatriation of the French, although not rapid, was fairly regular, particularly from the North German camps.

The British cases were evacuated after five weeks to Königswartha Hospital (Saxony); the Yugoslavs were kept in Neukölln Hospital, sent to Lückenwalde Hospital, or sometimes given no particular attention at all. Radioscopy in many hospitals, particularly in Saxony, allowed detection of active disease (e.g. in a Stalag for Indians).

Officers had pneumothorax treatment; as a rule, it was not carried out in other ranks. Thoracoplastics were rarely done for lack of instruments; in most camps, however, the men were systematically examined by X-ray. In a Westphalian camp, examination of 2,500 men showed 37 tuberculous French PW (22 active, 3 stabilised, 12 inactive); the percentages were as follows :

Tuberculous	37	=	1.4	%
Active	22	=	0.88	%
Less active	3	=	0.12	%
Stabilized	12	=	0.48	%

In some Stalags in Silesia pneumothorax treatment could not be given, as no radiological apparatus was available. From June 1943, the French Cadet Camp in East Prussia had the services of a French Red Cross mobile X-ray unit. 1,318 French and Belgians were examined and 5 cases were detected in September, 1943.

In July 1943, the German MO of a Silesian camp referred to a new ruling of the German Supreme Command, whereby inactive cases would no longer be considered as unfit for service, even if X-ray examination had shown infiltration of the lungs. The Delegate's report on the subject stated that within a few months many patients would no doubt return to hospital with advanced pulmonary disease.

The figures for 1943 were :

<u>Nationality</u>	<u>Cases</u>
Jugoslavs	324
French	127
British	25
Polish	21
Indian	3

Total deaths : 428.

In 1944, 2,589 cases (533 open). 157 deaths.

From 1944, radioscopy could be done fairly regularly, and often revealed tuberculosis - for example, in the Hamburg-Lübeck area and amongst French patients in Sandbostel Hospital (where 90 % of the patients were Russian PW).

In Tangerhütte Sanatorium, on the coast, where the climate was not suitable for long-period treatment, the seven doctors who cared for some 300 patients had full freedom of action, and enough medicaments and instruments. Pneumothorax and thoracoplastics were carried out. The number of deaths diminished every year, thanks also to fairly regular repatriation and the increase in Red Cross parcels.

The deaths in this sanatorium were as follows :

<u>Deaths</u>		<u>Nationalities</u>	
1940	151	Poles	189
1941	130	French	121
1942	73	Jugoslavs	47
1943	24	Belgians	18
1944	6	British	5
	-----	Colonial etc.	4
Total :	384	Total :	384

A Red Cross mobile X-ray unit was sent to Fallingsbostel Camp Hospital (Hanover), and was intended by the French Red Cross to travel to four other military Regions. The vehicle did not, however, leave Fallingsbostel; it was used by the German MO for all the hospital X-ray work and as an ambulance for neighbouring PW detachments. One reason for not moving the unit was lack of petrol.

Later, almost all hospitals had apparatus for pneumothorax treatment. Mass radioscropy in the French Cadet Camp, from Sept. 1942 to March 1944, showed that of 19,320 French examined, 70 were suspects; of 300 Belgians, 3 suspects; and of 400 Poles, one doubtful case. The Elsterhorst Sanatorium, near Dresden, was used for British and Yugoslav PW; the latter frequently suffered from laryngeal complications. During 1944, 250 African and Indian PW were sent from Nancy to Stalags in the Nuremberg area, all with active disease.

From January to October, 1944, a number of Polish and Yugoslav PW were patients in a Saxon hospital; they were treated by Polish and Yugoslav doctors, and by an Italian specialist who had the necessary surgical instruments. The deathrate was high, particularly among the Poles of Bor-Komorowski's forces.

In 1944, there were, by nationalities, 2,589 cases :

Jugoslavs	698
Russians	300
French	259
Poles	210
Italians	71
British	61
Belgians	25
Americans	19
Norwegians	4
Indians	4
Dutch	1
Others (no nationalities given)	937
Total	2,589

There were 157 deaths.

In 1945, the number of cases had dropped to 490 (34 active); 42 deaths. The Yugoslavs were the chief sufferers, followed by the French, Poles, Belgians and Germans. Very few cases amongst the British, Americans and Czechs; 40 French, half of them seriously ill. The Poles suffered from acute anaemia and malnutrition, in particular those recently arrived from Warsaw.

The 42 deaths recorded during 1945 included :

20 Yugoslavs  
22 Poles (7 from Warsaw).

Figures in the French, British and American Zones were :

In 1946 : - 738 cases (79 open); all German nationals, except one Hungarian; no deaths recorded. The greatest number of cases (400) were in the British Zone; 190 in the French and 148 in the American Zones.

In 1947 : 295 cases (3 open); 240 in the American, 46 in the British and 9 in the French Zones. The latter included 4 men in prisons and 2 political internees in a sanatorium. No deaths recorded.

In 1948 : - 97 cases; 12 in the British Zone (Hanover) and 85 in the French Zone (Sarrebuck).

Total for the three Zones from 1946 to 1948 : 1,130 cases.

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#### Summary of Figures for Germany

<u>Year</u>	<u>Cases</u>	<u>Open cases</u>	<u>Deaths</u>
1940 (end)	165	3	3
1941	1,605	126	370
1942	2,360	441	659
1943	1,616	245	428
1944	2,589	533	157
1945	490	34	42
1946	738	79	-
1947	295	3	-
1948	97	-	-
	<u>9,955</u>	<u>1,464</u>	<u>1,659</u>

Deathrate : 16.65 %

Percentage open cases : 14.78 %.



By nationalities (where stated) :

Jugoslavs . . . . .	1,577	Belgians . . . . .	103
French. . . . .	1,390	Italian. . . . .	71
German. . . . .	1,130	Asiatic, North African. .	367
Poles . . . . .	515	South American . . . . .	19
Russians. . . . .	413	Indians. . . . .	8
Negroes . . . . .	400	Norwegians . . . . .	3
British . . . . .	339	Dutch. . . . .	1

Cases were also recorded amongst other nationals (Ukrainians, Australians, etc.), but these were few in number.

At the armistice in 1945, when Germany was occupied, 1,130 cases were on record in the three Zones, namely :

British Zone . . . . .	458
American Zone. . . . .	388
French Zone. . . . .	284

They included 82 open cases.

GREAT BRITAIN

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Between 1941 and 1948 : 225 cases (29 open); 25 deaths (frequent in age group 21 to 33).

	<u>Cases</u>	<u>Deaths</u>
1941	1 open)	-
1943	32	2
1944	9	-
1945	3	-
1946	50	7
1947	91 (9 open)	7
1948	59 (20 open)	9
	-----	-----
	225	25

In the Channel Islands, in March, 1946, the ICRC doctor found amongst Allied PW several advanced, open cases needing prompt repatriation.

GREECE

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In 1944, seven cases were recorded in a Yugoslav internee camp and an Italian internee camp at Salonika. Four Yugoslav internees died.

INDIA (British)

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Tuberculosis causes great havoc in India, where the number of cases is put at 2,500,000, while deaths are estimated at 500,000 per annum.

The reports of the ICRC Delegates on PW and internee camps in British India from 1942 to 1945 record only some 500 cases and 28 deaths, as follows :

	<u>Cases</u>	<u>Deaths</u>
1942	61	6
1943	217	12
1944	116	3
1945	109	7

The patients (mostly Italian, with a few German and Japanese) were nursed in the camp infirmaries, of which there were four groups :

Southern Group	-	Bangalore area;
Central Group	-	Bhopal area;
N. Eastern Group	-	Dehra Dun (N.E. of Delhi);
Northern Group	-	Kangra Valley.

The Groups differed greatly in respect of climate, living conditions and hospital organization, those of the South being far the best. The Delegate indicates the division of patients amongst the four Groups, from November 1943 to March 1944 (four months) as follows :

<u>Group</u>	<u>Open cases</u>	<u>Closed lesions</u>
Southern	24	11
Central	4	9
North Eastern	32	30
Kangra Valley	1	5
	61	55

The total was thus 116 cases, but the Delegate added that this was not a true picture, as patients were frequently transferred from one Group to another - for instance, those from Northern camps to the North East, and those in the Central Group to the South. It could not therefore be said that tuberculosis was more frequent in one Camp Group than another.

The climate of the Central Group did not suit patients, owing to extreme heat from June to October and a moist atmosphere. The climate in the South was fairly good, and the hospitals in this area were well organized. The climate of Kangra Valley proved to be good, except for active cases, when it was found to be irritant and to accelerate the course of the disease. The MO in charge accordingly asked British HQ to send these cases to a sanatorium; he was informed that there were no

sanatoria in India, except those for Indians, where conditions were even more rudimentary than in the camp hospitals.

Of the 500 cases, about one third were open; in 17 cases both lungs were affected, and 75 were under pneumothorax treatment. In 1942 and 1943, an Italian doctor (Southern Group) did two phrenicectomies.

In the internee camps (Premnagar, Dehra Dun, Deoli-Ajmer, Family Camp and Satara Parole Centre, all in Northern India) about fifty cases only were recorded (two open) and four deaths (Germans between 33 and 58). In the Japanese compounds at Deoli, there were 11 cases (2 open). Two deaths.

The 28 deaths for 1942-1945 were of Italian PW and three German women, as follows :

<u>Group</u>	<u>1942</u>	<u>1943</u>	<u>1944</u>	<u>1945</u>	<u>Totals</u>
Southern	1	1	2	1	5
Central	2	4	-	-	6
Dehra Dun	2	3	1	3	9
Kangra Valley	1	1	-	-	2
Internees	-	3	1	2	6

#### ITALY =====

1942 to 1948 : about 470 cases (3 open), and 10 deaths recorded in ICRC reports.

1942 to 1943 : 84 cases, including two officers (Jugoslavs). 4 deaths : one in Caserta Military Hospital, one in Lecco Military Hospital, one at Treviglio Sanatorium and one French internee, on December 19, 1941.

16 British, American, Yugoslav and Greek PW from a camp near Turin were admitted to San Giuliano Military Hospital.

In 1944, in Northern Italy, 6 civilian internees (two Croats, two Montenegrese, one Dalmatian and one Greek) were treated for acute tuberculosis.

A coloured South African and a Moroccan in a hospital at Bologna both had active disease with cavities.

An Italian civilian (from a British camp in Southern Italy) was treated in Saluzzia Sanatorium. A British PW in the tuberculosis ward of Lecco Hospital died on March 29, 1944, from blood-poisoning, general debility and tubercular hepatization of both lungs.

At the armistice in 1945, a few cases only amongst PW in British and American hands. Two deaths occurred in two hospitals under British control, one from Potts disease.

In 1947, 100 Ukrainians and 100 Yugoslav Royalists from Rimini Camp (British) were admitted to Casano Hospital. Several cases were recorded in the Alien Refugee Camp of Frosinone.

In 1948, 150 Germans in hospital with pulmonary disease, including one woman with gland tuberculosis and one case with dental complications (Rieti).

#### MALAYA

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194 cases (52 in 1946, 142 in 1947).

The majority were nursed in Kuala-Lumpur Japanese Military Hospital. 43 patients had pulmonary infiltrations, 5 open disease, and several, tubercular pleurisy.

#### NORWAY

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In 1944, 1946, and 1947, a total of 295 cases (3 active) and two deaths, were recorded. 90 patients were sent to Lillehammer Hospital, where a hut was set apart for Yugoslavs, under treatment by a Russian doctor. Each patient had an X-ray examination and a sputum test on arrival; but afterwards, the Yugoslav and Polish patients were often left without further attention, beyond receiving calcium and a few cough tablets.

Of 80 pulmonary cases recorded in 1947, three were serious, one being bilateral, with tubercular laryngitis, and another with pulmonary gangrene.

#### PALESTINE

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From 1943 to 1948, the reports showed 32 cases, the highest figures being in 1945 and 1946 (14 to 15). These included several cases of pleurisy, probably tubercular, treated

in the hospitals, where those requiring a pneumothorax were also sent.

13 Italian and German PW were treated at the 16th General Hospital, set aside for tuberculosis. Pulmonary and bone cases were sent to Jerusalem; here the Arabs complained of having less attention than the Jews, whilst the doctors were of a contrary opinion; actually the treatment was the same, the hospitals being under ICRC control.

1943	4 cases	
1944	4 "	
		8 cases of pleurisy (probably tubercular, amongst Italians sent to hospital for pneumothorax);
1945	14 cases	(Italian and German PW; only one serious);
1946	15 "	(Italian Collaborators Camp);
1948	2 "	(Arab PW Camp, Sidonia, near Aere Fortress; one with haemoptysis)
Total	39	

#### POLAND =====

398 cases (about 160 open) and 20 deaths were recorded from 1942 to 1949. Deathrate 5.2 %.

In 1943 there were 180 cases. The MOs in most camps (Front-Stalag Rawa-Ruska, Lemberg Citadel, General Government Hospital and camps in various areas) complained that patients could not have proper treatment, through lack of X-ray apparatus. Many had to wait several months for repatriation. In an Upper Silesian mining camp a Delegate saw PW with tuberculosis doing heavy work in the saw-mills. 40 % of the cases seen were open.

Total figures were :

1942	39 cases
1943	180 "
1947	80 "
1948	98 "
1949	1 "
	-----
	398 cases - 20 deaths.

UNITED STATES

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In the very numerous camps in the U.S.A., 371 cases and 2 deaths were recorded from 1942 to 1945.

In most camps or camp hospitals, a few isolated cases were recorded amongst German, Italian and Japanese PW, many of whom had already contracted the disease before reaching the U.S. Several were sent to hospital at Florence (Arizona), where the climate and food were more suitable. In Virginia, California, Georgia and Colorado, there were a few odd cases, mostly of a mild nature. In Georgia, there was one Russian with serious bilateral lesions, and another in Ogden Camp (Utah) with an active lesion.

In the civilian internee camp of Santa Fé (New Mexico), 16 Japanese were treated.

Total figures for the U.S.A. :

1942. . . . .	9 cases
1943. . . . .	5 "
1944. . . . .	217 "
1945. . . . .	140 "

Total : 371 cases (German, Italian and Japanese PW); 2 deaths (one a Russian).

S U M M A R Y

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Reports by the Delegates show 21,000 cases of pulmonary disease and 2,154 deaths, i.e. a deathrate of about 10.2 %. These figures are however an underestimate, as they include the patients in camp infirmaries, hospitals and sanatoria, but not the minor cases, often not diagnosed, or looked upon as mere colds or bronchial catarrhs.

Morbidity and mortality figures were as follows :

	<u>Cases</u>	<u>Deaths</u>	<u>Deathrate per 100</u>
Germany	9,955	1,659	16.65
France	5,776	270	4.67
Egypt	649	100	15.40
Austria	609	---	---
British India	500	28	5.60
South Africa	483	6	1.24
Italy	470	10	2.14
Poland	398	20	5.02
United States	371	2	0.52

There were less than 300 cases in each of the other countries.

The deathrate was highest in Germany, followed by Egypt, India, France, Poland, etc. In 1945, deaths in German internee camps in France included an infant of two months and a woman of 81 (the latter with haemoptysis); in Czechoslovakia, in 1948, a child of 15 and 5 women of 22 to 27 years of age.

The PW most affected were, by nationality :

Germans	5,865 cases	Poles	760 cases
Asiatic and African	2,570 "	British	420 "
Italians	2,430 "	Negroes	400 "
Jugoslavs	2,160 "	Japanese	380 "
French	1,870 "	Belgians	183 "

#### Open Tuberculosis.

Open tuberculosis represented at least 10 % of the total pulmonary cases, or a little over 2,000 cases. These occurred chiefly in British India, the Channel Islands and Germany, especially amongst the French and Polish PW in German labour detachments. A German MO in Wurtemberg said that of all the cases he had examined, no single one could be considered of recent date. Reference to cavities was rarely made, but in Italy a South African and a Moroccan had large cavities.

#### Primary infections.

Rarely mentioned. In 1941, a French PW medical assistant and two North Africans showed evident symptoms of primary infection, so did a few young Germans of 18 to 20, working in the Belgian mines. In an internee camp in France, two primary infections were observed, one a girl of 12, seen by the Delegate during the feverish stage.

Pleurisy was often not considered by German MOs to be of tubercular origin; 25 cases were recorded in Egypt, a few in Malaya and Czechoslovakia, and at least 20 amongst Negro troops in France.

#### Other forms of Tuberculosis.

Laryngeal:- Fairly frequent (particularly among Jugoslavs) in Germany, in the Dresden area, in Belgium, Czechoslovakia, and Norway .

Bone:- 11 cases in Egypt (Italian and Libyan PW), a few in Germany, Czechoslovakia (assembly camp), Palestine (Italian PW) and France (coloured PW).

Renal:- 2 in Kenya (German and Italian PW).

Glandular:- Especially in Italy, and in Germany and France amongst native troops.

Eyes:- At an auxiliary hospital near Thonon (France) in 1946, 28 PW from St. Pierre de Rumilly Camp were treated in a separate ward for tuberculosis of the eyes; two German doctors among them had tubercular ulcers of the cornea.

#### X-ray Examination.

Mass radioscopy revealed many cases, especially in North Germany; over 150 unsuspected cases were brought to light, three already with bacilli. Shortage of apparatus in many hospitals, particularly during the first two war years, prevented pneumothorax treatment; it was provided later by Red Cross Societies and the ICRC. Owing to shortage of film, X-ray photos were rarely made.

#### Treatment.

In some camp infirmaries or hospitals, where the necessary equipment was available, thoracoplastics and sections were performed (Pretoria Hospital, and Germany); also phrenicectomies (Abyssinians in Egypt, and Indians in the South of France, by an Italian doctor).

When pneumothorax was not advisable, or the apparatus lacking, patients were kept in bed and given extra food (often inadequate, e.g. less than a pint of milk, eggs), malted cod-liver oil, vitamin B, intravenous injections of calcium, calcium gluconate. Glandular cases were treated with ultra-violet rays, radiotherapy, and aurotherapy.

Reference is made to the vaccination - once only, in 1949 - of 40 children at a home in Czechoslovakia, with BCG supplied by the Danish Red Cross.

#### Repatriation.

In Germany, and for French PW in particular, repatriation was very slow, although fairly regular. After three or four weeks, the men were sent to Tangerhütte Sanatorium, and from there repatriated through the Assembly Centre for



tuberculosis cases at Bad-Soden, from where they were sent to Châlons, Fréjus or, in the case of North Africans, to hospitals in Southern France.

Patients were passed for repatriation when they showed evident radiological and clinical lesions, also slight lesions when sedimentation was positive. German MOs attached great diagnostic and prognostic value to the latter test, so that manifest cases (even with bacilli) who had normal sedimentation, were refused. British and Yugoslav PW who could not be repatriated were sent to sanatoria in Saxony.

Most German MOs did not consider pleurisy as of tubercular origin; such patients were not repatriated, but sometimes even discharged from hospital and sent back labour detachments (Hamburg), from which several returned shortly with active disease.

In Silesia, in 1943, a new ruling of the High Command prescribed that men with closed lesions should no longer be considered eligible for repatriation; they were sent back to labour detachments, even if X-ray tests were positive and clearly showed pulmonary infiltration.

The repatriation of German tuberculous PW in France was slow, often even impossible owing to the men's condition and the lack of transport. Patients were usually sent to South-West France (Eastern Pyrenees), where the sea climate (iodine) was not suitable and the food insufficient. From 1947, repatriation was more frequent; 511 cases were sent back to Germany between Jan. 1 and Sept. 10, 1947. In October of the same year there were still about 200 cases due for early repatriation. In 1948 only 17 cases remained in camps in Northern France.

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## VENEREAL AND SKIN DISEASES

### AFRICA (North)

#### Algeria.

Between 1942 and 1946, the reports make no reference to syphilis. There were only 5 cases of blenorrhagia amongst German and Italian PW.

Skin diseases were, however, fairly common; several cases of chronic eczema, particularly of the hands, but not of a serious nature, were treated at Laveran Military Hospital (Constantine) and Orléansville Hospital.

#### Morocco.

In a French camp for Italian PW, 10 out of 16 patients suffered from venereal disease.

Several cases of psoriasis in a foreign labour camp; one German PW in Meknès Hospital had eczema.

#### Tripolitania.

The Italian Senior MO reported 51 cases of syphilis in an Italian PW camp in 1944.

In 1945, the 89th General Hospital treated a few cases of syphilis (primary and secondary) with penicillin. In a case of chancre, the spirochetæ disappeared nine hours after initial treatment; 2 cc were injected every three hours, the total number of injections was apparently 60 (40,000 O.U.); the treatment lasted eight days. A PW suffering from primary syphilis was discharged cured, but returned shortly afterwards with a fresh chancre. The treatment had cost 60 pounds.

A company of Italian PW attached to the 72nd Pioneer Group had 32 cases of VD; this the British authorities attributed to the liberty enjoyed by the men.

In 1946, one case of para-syphilis in a labour camp (German PW, treated in Benghazi Hospital).

With regard to skin disease, 11 cases of pyodermatitis were recorded in 1944 (Italian, Libyan and German PW, all from the same labour camp; treated in Benghazi and Tobruk Hospitals).

To summarize : little syphilis in Algeria and Morocco, against 84 primary and secondary in Tripolitania. Skin diseases (chronic eczema, much psoriasis and pyodermatitis) were fairly common.

#### AFRICA (Central and South)

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##### Eritrea.

In an Italian PW camp (1944), the Italian Senior MO reported 12 cases of syphilis, of which 4 were new; among the poorer Italians at Senafed, 46 were under treatment.

Total : 58 cases (4 new). No skin disease.

##### Kenya.

VD was common among Italian PW of the Nairobi camps and was treated regularly with mercury; patients were isolated in camp infirmaries until no longer contagious.

In 1942, in an Italian PW camp, East African Command the Italian senior MO reported that 30 to 35 % of the sick in camp were syphilitic, but that there were few primary cases.

In 1943, the area had over 3,500 cases (six camps and one hospital). The majority had contracted the disease before capture. One Italian died.

An Italian evacuee camp recorded : 1 choroiditis, 1 keratitis, 1 endarteritis, all of syphilitic origin; also two cerebral syphilis, 1 syphilitic polyarthrititis and two meningitis.

In Camp No 365, according to the MOs, 20 to 25 % of the men were syphilitic, whereas for the labour detachments of the same camp the figure was 5 % only. Records for an Italian evacuee camp and a camp for collaborator PW, for the second half-year of 1944, showed 4 VD cases out of 59 patients, and 18 VD cases in all for 1945.

Total : 3,522 cases in Kenya; only a few primary; in addition, 2 meningitis, 2 cerebral, 1 polyarthrititis, 1 endarteritis, 1 choroiditis, 1 keratitis, all of syphilitic origin. One death only.

##### Rhodesia.

In 1940, much VD reported (Italian internee camps Gatooma, Victoria, Umuuma and Lusaka).

In 1942 : 70 gonorrhoea and 300 syphilis (PW from Abyssinia).

In 1943 : 20 gonorrhoea and about 150 syphilis; 52 cases amongst men working outside camp. In August, Fort Victoria Camp still had over 110 cases of chronic syphilis (one retinitis) amongst Italian PW.

In 1944, 71 gonorrhoeas were treated in hospital (anti-gonococcal serum), of whom 3 were fresh. Records showed 900 syphilitics, including 208 primary, 213 secondary, 4 tertiary and 1 inguinal adenitis (Italian PW). From the opening of Rusapa Polish Refugee Colony in February 1943 until August 4, two secondary syphilis cases, treated with bismuth and mercury.

In 1945, amongst the 2,726 inmates of Fort Victoria Internment Camp, there were 85 secondary syphilis cases; 3 old; 10 new; 1 tertiary and 162 gonococcal, including 3 fresh cases. 4 Italians suffered from orchi-epididymitis.

There were 78 gonorrhoea and 90 syphilis cases in the internee camps of Zonderwater, Bavianspoort and Koffiefontein. Syphilis was treated only if Wassermanns were positive. The highest figures were for Italians in Zonderwater Camp, in 1944, and were due to employment outside the camp, syphilis being fairly common in that area.

In Bavianspoort Camp, 20 French legionaries of the 5th Indo-Chinese Regiment were given periodical anti-syphilitic treatment; they were isolated from other patients and occupied huts with separate baths and wash-basins. PW in Koffiefontein Camp also were given treatment only if Wassermanns were positive, owing to shortage of medicaments.

To summarize : in Rhodesia, 2,122 syphilis cases, a fair number primary; 401 gonorrhoeas.

Skin diseases were rare; only a few eczemas were recorded.

#### Sudan.

In 1944, a PW camp hospital admitted 350 VD cases, and a fair number of skin affections. The latter were not easy to classify and were perhaps due to the heat, wind and sand.

#### Tanganyika.

In 1943, in an Italian camp 400 syphilis cases were given salvarsan treatment; the MO asked for further supplies to continue the cure. In an Italian internee camp, in Uganda, 6 nervous cases of syphilitic origin were recorded. No skin disease.

Total (for Central and South Africa) : 6,358 syphilis cases, of which 222 new and 305 old; 3 tertiary; 1 retinitis, 1 inguinal adenitis; 4 orchio-epididymitis of syphilitic origin; 479 gonorrhoeas (8 acute). Skin disease very rare.

#### AUSTRALIA =====

Between 1940 and 1944: 1 gonorrhoea, about 30 syphilitics in New South Wales PW and Victoria internee camps (Gathooma, Loveday, Tatone, Cowra, Murchison) amongst German, Italian, Japanese and Javanese. A case of nasal syphilitic ulcer, also a case of cerebral syphilis, both sent to Loveday Group Hospital.

Skin disease : a good deal of scabies in New South Wales and most internee camps. Amongst Italian PW some psoriasis, acne, seborrhoea, erythema and eczema were recorded.

Total : 1 gonorrhoea, 30 syphilis, 1 syphilitic nasal ulcer, frequent scabies, some psoriasis, eczema, acne, seborrhoea and erythema.

#### AUSTRIA =====

From 1945 to 1946, a few gonorrhoea cases were treated in camps, particularly those for political deportees in the French Zone; 75 VD cases recorded, namely :

37 in Liebenau Camp Hospital (British Zone)

12 in St. Martin's Hospital do.

25 in political PW camp (French Zone)

1 Austrian with tertiary syphilis and mental affection in Marcus Orr Camp (American Zone).

Total : 76 cases, including 1 tertiary syphilis and some gonorrhoea.

#### BELGIUM =====

In 1946 : 3 Germans with syphilis in an American hospital and four in a Belgian camp, where necessary medicaments were short.

In 1947 : 1 aortal syphilis, sent to Beverloo Hospital.

Skin disease : 11 pyodermatitis in a British camp; in Wintersleg Camp, 4 German PW with dermatitis (apparently mycosis) were being sent to Beverloo Hospital for further examination. 18 eczema cases were under treatment in this hospital.

Total : 2 syphilis, 1 aortal syphilis, some pyodermatitis, some dermatitis-mycosis and eczema.

BURMA  
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In 1946, (June - November), in Japanese SEP Camps at Monkey Point and Mandalay, 248 cases of skin disease, 23 of which were treated in the dormitories.

June . . . . .	21
July . . . . .	23
August . . . . .	40
September. . . . .	67
October. . . . .	47
November . . . . .	50

CANADA  
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In 1942, 1944 and 1945, a few syphilitic German PW were treated at the Red Cross Hospital. Patients with dermatitis of the arms and wrists were admitted to Toronto Hospital.

CEYLON  
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Precautions taken in 1943 led to a marked decrease in VD; furthermore, fresh cases were punished and lost a fortnight's pay. Six cases of blenorrhagia were treated in Colombo Hospital.

Delegates visiting an Italian auxiliary pioneer camp, during 1944 and 1945, found 42 PW suffering from an affection which was difficult to cure and apparently contagious; the Italians called it "epidermofizia". Fourteen similar cases were recorded in other Italian camps, and were treated in the infirmaries.

CORSICA

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No reference to VD in reports.

From Corte Citadel and Tatone Camp, the Military Hospital in Ajaccio received, between 1942 and 1946, a fair number of skin eruptions and open sores (particularly toe-amputees); many scabies, septic scabies, impetigos, sores due to scratching, etc. Patients had no disinfectants and were short of body-linen. Vermin were abundant, and skin ailments were common among Italian and German PW.

CZECHOSLOVAKIA

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In 1946, 6 gonorrhoeas and 4 syphilitics in civilian and assembly camps.

In Liberce Camp, (1947) - VD was reported amongst the women, also 5 children between 10 and 15; all were isolated in a separate dormitory. In the German civilian camp at Brno, 2 syphilitics in hospital for the past two years.

In 1948, at the camp for aged German invalids, 10 syphilitics; two women of 64 and 67 died. Four cases in an assembly camp, including a woman who had worked in the camp kitchen for several months before being treated.

Skin disease : much scabies in the civilian camps, which soon yielded to treatment.

Total : 25 syphilitics - 2 deaths - 6 blennorrhagias.

EGYPT

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In 1943, German PW suffering from gonorrhoea, on which sulphamides had no effect, were sent to hospital and given penicillin treatment. 510 syphilitics, most of whom had contracted the disease before capture, were at the Umberto Hospital. Five primary cases only were recorded for Camp No. 307. In Camp No. 306, 12 German, Italian and Libyan PW, who had passed through Crete and Sicily and who were quartered outside the camp, were syphilitics of long standing.

Of 406 VD cases in 1944, one only was new (German), 50 were active and the remainder non-active; seven serious cases amongst Greeks and Germans from a camp in Greece were in hospital. The supply of medicaments was always adequate in Egypt.

Skin disease was common; some 40 % of the German and Italian patients were affected; 2 cases of psoriasis were recorded in 1942 (German PW); 1 septic eczema of the ear (Italian PW) and 5 pyodermatitis in the German ward of the 4th General Hospital.

To summarize :- a few cases of gonorrhoea; 935 syphilis (6 primary) and numerous skin diseases - psoriasis, eczema (septic) and pyodermatitis.

FRANCE  
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Relatively few VD cases mentioned in the reports, whereas skin diseases were frequent.

From 1941 to 1942, a few VD cases were reported from Front-Stalags in the North of France - 10 gonorrhoeas and a few tertiary gummas, which were treated with bismuth and mercury, no iodides being available. British and American internees, Senegalese and North Africans were treated, either in the camps or at the Val-de-Grâce, for old VD.

After the armistice, towards the end of 1945, about 60 syphilitics were reported amongst German PW in the Rennes area, of whom 12 were in an internment centre. 1 chronic gonorrhoea, Twenty women syphilitics in the Fort Barreau camp (Isère) could not be treated owing to shortage of medicaments (distilled water, neo-salvarsan).

In 1946, in the Côte d'Or, Orne and Upper Savoy, 32 syphilitics were reported, including 2 tertiary and 1 syphilitic chancre (German PW from North Africa, in Northern France).

Several cases of nervous syphilis were reported in 1947 in the Vénissieux, Grenoble, Clermont-Ferrand and Fontainebleau areas. During this period repatriation trains brought 4 syphilis and 4 blenorrhagias from North France, and 4 syphilis from the South.

Total for France : 122 syphilitics, including 1 chancre, 2 tertiary, a few gummas and several nervous cases; also 15 gonococcal (1 chronic and 14 acute).

Skin disease - many cases in all camps.

At least 500 to 800 scabies patients were treated near Chartres; a great many came from a labour detachment of a British camp. One case of acute infection died in January, 1945.

Frequent furunculosis of the back and face; a fair number of ulcers and open sores, also sores of amputation stumps.



Much psoriasis and impetigo reported from labour detachments; impetigo amongst children in assigned residence camps at Noé, internees at Clermont (Oise), Marguerite Residence Camp, near Rennes (30 impetigos), and at the Vieille Chauvignerie, where 150 cases of scabies and much pyodermatitis were recorded (75 % of the inmates). The number of skin diseases was apparently due to lack of soap and vitamins. Numerous cases of dermatitis were reported amongst PW working in the mines, at Méricourt for instance. The Delegate urgently requested that skin cases should be exempted from work in the mines till their complete recovery. Prisoners from the Pierrefitte Detachment (Camp 171) suffered from sores which were slow to heal, owing to the kind of ore (lead and zinc) in the Pennaroya Mines, where they worked.

In 1946, of 180 patients, 23 % suffered from skin disease - simple and weeping eczema, 4 chronic eczema, 29 scabies, 2 psoriasis, 18 dermatitis - all from the Auxonne district. In a military commando attached to the Rennes camp, several German PW had erythematic sores of legs and feet, liable to develop impetigo when septic. The German MO said these cases were due to vermin, whereas the Delegate thought the cause was lack of socks, broken footwear, and the abundance of gorse and heather in the region, all of which caused scratches to fester. Shortage of soap was also a frequent cause of dermatitis.

In the Lower Rhine Tile Works the Delegate saw several PW whose arms were covered with septic boils and pimples, due to lack of underclothing.

In 1948, of 350 patients in the Castelsarrasin Hospital (South-West) 65 were in the skin disease ward.

To summarize - 1,000 scabies (one septic, which was fatal), 59 weeping eczemas, 4 chronic eczemas, several psoriasis, open sores, wounds from scratching, 50 impetigos among children, 83 dermatitis among PW working in mines.

#### GERMANY =====

In 1940, in PW camps in Pomerania and the Berlin area, from May to October, a good deal of VD amongst the French, Poles and men of the African colonial troops; the estimate for the latter was 60 % syphilitic, mostly old cases. All were treated in the camp with neo-salvarsan and bismuth; those suffering from gonorrhoea with sulphur derivatives.

In 1941, several cases of tertiary syphilis were treated with bismuth and mercury, no iodides being available.

In 1942, in Thuringia, syphilis and gonorrhoea patients shared dormitories with TB patients, as there was no infirmary.

In 1943, an increase in the number of syphilis and gonorrhoea cases was noted amongst French, Polish and Yugoslav PW. These were often sent back to labour detachments before the cure was completed. The rise was attributed to the comparative freedom granted to PW in several Stalags. Five cases of primary syphilis were recorded in Westphalia. An American PW in the Berlin area contracted roseola.

In 1944, the number of cases had not increased and could be properly treated with medicaments sent from Geneva. For about a year, however, there had been several primary cases and much acute gonorrhoea, attributed to the fact that a good many French women workers in the large towns (Hamburg, Bremen) were no longer under medical supervision. A PW in a Lübeck Stalag suffered from syphilis with mouth sores.

Early in 1945, VD was fairly common amongst French, British, Belgian and American PW. As salvarsan was short in most camps, this treatment was only applied when Wassermanns were positive.

Records during the Allied occupation of Germany showed, in 1946, for Schleswig-Holstein : about 50 cases of syphilis, 156 gonorrhoeas (German and Hungarian PW in the French Zone) and numerous cases of gonorrhoea in a camp for political deportees in the American Zone.

In 1947, 30 VD cases in Garmisch Central Prison (American Zone) and an "outbreak" of VD in a camp for political deportees in the French Zone. In the British Zone (Hanover), the increase of VD was attributed by the MO to inadequate prophylaxis.

### Skin disease.

In 1941, a good deal of pyodermatitis amongst British PW. In an Oflag of the Dresden area, 8 cases of a kind of "general impetigo", which started locally and then spread over the entire body, lasting two or three months before recovery. This might have been a form of avitaminosis.

In the French Cadet Camp (North Germany), skin disease was particularly common, as it was in the Stalags and Oflags of North Austria. Sores were difficult to heal.

In 1942, East Prussia and the Hamburg and Lubeck areas recorded : 1 sycosis, many cases of eczema, impetigo and dermatitis, caused by bug and flea bites; also, pseudo-eczema of the scalp, which the Polish doctor attributed to conditions in the camp hair-dressing "saloon".

In 1944, skin diseases were treated by an Italian specialist, the German authorities having decided that the French dermatologist was not qualified. In the Hamburg and Lubeck areas there were many cases of occupational dermatitis (hands and forearms) caused by handling cement. In the second half of the

year, many skin eruptions among PW suffering from debility; a good deal of pyodermatitis (British and American PW).

In 1945 and 1946, a few cases of eczema among German PW; also burns caused by handling gasoline, and much scabies.

In 1947, in Germersheim Central Prison, 163 German PW were treated for eczema, due to poor food, lice and fleas. In Dietz Central Prison, 20 women had skin disease; an epidemic of scabies was reported in June.

To summarize : from 1940 to 1947, syphilis and gonorrhoea were fairly common in Germany and were usually contracted before capture. Total : 85 syphilis cases (5 primary) and 156 gonorrhoea (several acute).

Skin diseases : pyodermatitis, infections due to bug and flea bites, a good deal of eczema, scabies, occupational dermatitis (due to cement, gasoline, etc.).

#### GREAT BRITAIN

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For 1941 and 1942, several German and Italian camps recorded syphilis and gonorrhoea, especially amongst men arriving from Africa. The MOs thought that the number of such cases was due rather to the men's negligence, and to inadequate treatment in their own units, than to any source of contamination in Africa. In Britain, the usual treatment was given; sulfathiazol for gonorrhoea.

Under proper treatment, VD decreased, from 2 gonorrhoea and 17 syphilis in 1944 to 2 VD only in 1945. The records also mention 4 orchitis and 1 balanitis.

Skin disease : about 20 cases of eczema (one German PW with seborrheal eczema), 9 impetigos (1 contagious), a few cases of pyodermatitis and dermo-mycosis, 2 psoriasis. Wounds and sores were long in healing. One case of "epidermofizia" (see above) reported in March, 1947.

#### INDIA (British)

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In October 1941, in spite of precautions and advice by the MO for camps in the Calcutta area (West Bengal), records showed 1 gonococcal infection, 2 soft ulcers and about 30 syphilitics.

In 1942, out of 634 patients in Central India (Bhopal), 25 were syphilitic.

In 1943, treatment was given in 1,200 cases (mostly slow-developing, among Italian PW).

Early in 1944, 13 cases of VD were reported and, at the close of the year, 2 syphilo-sclerosis, 5 soft ulcers and 10 acute blenorrhagias.

In this camp group, 306 Wassermann tests were made (16 positive) and 14 cephalo-rachidian (all negative); also 39 tests for treponemiasis and 133 for gonococcal (18 positive).

In 1945, one primary syphilis was in hospital, together with 5 VD ulcers and 2 acute blenorrhagias.

To summarize : in the Central Group, about 1,250 syphilitics, (mostly pre-capture), 1 primary syphilis, 10 VD ulcers, 15 acute gonorrhoeas, 130 chronic gonorrhoeas and about 140 skin diseases (including 6 ring-worm).

#### Northern Group (Dehra Dun).

In 1942, 550 syphilitics (30 positive Wassermanns). The tests were often negative, patients having had previous treatment. 5 skin diseases also on record.

Kangra Valley camps - 1942 to 1944 : 276 syphilitics - (23 positive Wassermanns).

In 1944 (Jan. 1-Sept. 20) - 164 VD, 332 syphilitics; among gonorrhoea patients, 1 testicular teratoma and 1 urethral stenosis.

In the skin ward : 65 patients.

Total for Kangra Valley : 772 syphilitics, 65 skin disease.

Quetta camps. In 1943, 35 VD (30 recent, due to intercourse with prostitutes).

Southern India (Bangalore) : 2 acute gonococcal, 2 primary syphilis (lack of precaution in contacts with the population, many of whom are infected. This applied especially to PW in labour detachments with greater liberty.)

Of 4,938 patients in the British Military Hospital, 2 acute blenorrhagias, 8 primary syphilis, 2 VD ulcers, some chronic gonorrhoeas, 2 soft ulcers. After treatment patients were given monthly tests (Wassermann and Kahn).

Skin diseases were few.

Karachi labour detachment : 3 VD, 3 skin diseases (2 eczemas, 1 dermatitis).

### Civilian Internee Camps.

Satara Family Camp - In 1944, 1 acute gonorrhoea, 1 chronic gonorrhoea, 2 congenital syphilis, which the MO said were receiving the usual treatment.

Deoli-Ajmer Camp - 1 Japanese syphilitic.

Premnagar-Dehra Dun - 1 VD and 6 skin diseases (2 eczema and 1 dermatitis).

To summarize : In British India, 2,655 syphilitics, including 41 primary and 27 blenorrhagias (25 acute), as follows :

	<u>Syphilis</u>	<u>Blenorrhagia</u>
Calcutta area	30	1
Central group (Bhopal)	1,251 (1 pri- mary)	15 (acute)
Northern (Dehra Dun)	550	-
Kangra Valley	772	-
North-West (Quetta)	35 (30 pri- mary)	-
Southern (Bangalore)	10 (all pri- mary)	9 (acute)
Karachi	3	-
Northern (internee camps)	4 (2 conge- nital)	2 (1 acute)
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	2,655 (41 pri- mary)	27 (25 acute)
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1,130 Wassermanns (69 positive); 14 cephalo-rachidian, all negative.

Of the 33 tests for treponomasis and 133 for gonorrhoea, 18 were positive.

INDIES (Dutch East)

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In 1946, of the 247 patients in Batavia Hospital, several (Japanese PW) were syphilitic or had skin disease.

Little syphilis in Java. Internee camps registered a great deal of septic scabies (20 % of the inmates). Only 4 eczemas amongst 152 patients.

IRAQ

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From 1945 to 1946, very little syphilis but a fair number of eczema and skin disease, due to the heat.

ITALY

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From 1941 to 1944, a good deal of precautionary treatment was given to Greek, British, Yugoslav and Polish PW and internees, particularly in the Masserata province (Central Italy). One woman was treated for syphilitic hepatitis and ascitis.

Skin disease was fairly common amongst British and French PW. 5 cases of contagious impetigo.

After the occupation of Italy, the reports quoted 130 syphilitics, 21 gonorrhoeas, 28 epididymitis amongst German, Lithuanian and Yugoslav PW in British and American hospitals. In 1947, 12 VD were still in quarantine; about 20 skin affections and 19 psoriasis.

Total for Italy : 142 syphilitics, 21 gonococcal, some contagious impetigo, psoriasis.

NORWAY

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In 1946, in the Austrian hospital at Hamar, were 8 syphilitics, 15 gonorrhoeas, 11 skin cases.

Out of 179 patients in the German Naval PW Hospital, north of Trondhjem, in 1948, 17 VD and skin cases.

#### PALESTINE

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From 1942 to 1948, in German and Italian internee camps, many syphilitics (mostly Italians), and few skin cases.

In 1948, in the Arab PW Camp at Sidonia (Acre Fortress) 1 syphilitic among 16 patients.

When visiting Jericho Camp in 1949, Dr. Krikorian referred to a number of cases of tinea and scabies, with dry skins, amongst under-nourished patients. Much xerophthalmia, particularly amongst children under three. About one hundred children were sent to Akaba Clinic daily for treatment.

To summarize : a fair amount of syphilis, scabies and tinea.

#### POLAND

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From October, 1939, prophylaxis of VD was carried out. All prostitutes were arrested; 37 were affected (31 blenorrhagia; 6 syphilis).

Scabies was very widespread in the Warsaw camps in 1946.

#### UNITED STATES

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In 1942, in a Japanese camp, 7 syphilitics, unaware of their condition. An Italian PW who had suffered a bruise and pain following an anti-syphilis injection refused further treatment, despite efforts at persuasion and had to be isolated until he consented. PW who were in contact with syphilitics objected to such promiscuity and asked to be separated from them, in spite of assurances that there was no risk of infection.

In 1943 and 1944, some 75 syphilitics were recorded in several Italian and German camps; 17 cases were being treated.

In 1945, in Florida and Virginia, about 20 cases were reported amongst German PW.

Skin disease : about 20 cases of psoriasis (one acute) and pityriasis amongst German and Italian PW were reported.

In 1944, 15 to 20 German and Japanese PW in Sutton Camp (North Carolina) suffered from rash caused by poison ivy, which is fairly common in the district; the affection was painful, but lasted only a few days and left no after-effects.

In Virginia, out of 900 German PW, 2 cases of eczema were reported. The Delegate saw at a labour detachment in Florida a German PW with severe facial dermatitis, but declared fit for work by the American MO. According to most camp MOs the commonest ailment was mycosis pedis, which affected 80 % of the German PW.

To summarize : little syphilis (102 cases), a fair amount of skin disease, including psoriasis, pityriasis, eczema, mycosis pedi and dermatitis (due to poison ivy).

#### VENEZUELA

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Amongst the crew of a ship scuttled in 1942, and interned at San Esteban, four syphilitics, who were treated at Puerto Cabello Hospital.

#### SUMMARY

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Cases of VD, syphilis and gonorrhoea recorded in numerous PW and internee camps were apparently less common than might have been expected. But reports frequently spoke of "numerous cases" or "many cases" without quoting exact figures. For some countries, therefore, the VD percentage seems unduly low.

The figures ascertained for the countries named were - syphilis 10,634 (317 fresh infections, the remainder pre-capture) - 34 soft ulcers - 758 blenorrhagias (at least 100 acute).

The highest figure (6,358 i.e. more than half the total) was reported in Central and South Africa; of these 222 were primary. Kenya had 3,522 and Southern Rhodesia 2,122. Blenorrhagia was also frequent (479 cases, only 8 fresh).

British India reported 2,655 syphilitics (41 primary), 16 soft ulcers, 2 congenital syphilis, 27 gonorrhoea (25 acute).

Egypt : 935 syphilis (6 primary) and a few blenorrhagias.



Italy : 142 syphilis; 21 blenorrhagias.

France : 122 syphilis (1 primary); 15 blenorrhagias (14 acute, 1 chronic).

United States : 102 syphilis.

Germany : 85 syphilis only (5 primary). But the disease was said to be common (60 % of French, Polish, British and German PW). 156 blenorrhagias, mostly acute.

Austria : 76 VD cases; a few gonorrhoeas.

In other countries, the figures are lower - maximum 42 cases of syphilis.

### Primary Syphilis.

About 97 % were old cases, contracted before capture, the remaining 3 % were primary : mostly men employed outside the camps (India, Rhodesia), or who profited by the freedom they enjoyed to frequent prostitutes (Tripolitania, Germany, Rhodesia, India). In 1944, primary syphilis was attributed in Germany to the excessive liberty granted to PW in some Stalags, and to the presence of many French women workers in the large towns (Hamburg, Bremen), who were no longer under medical supervision. Inadequate precautions and lack of preventive measures amongst the population showing a high percentage of syphilis (India), were also a cause of primary infections. In Ceylon, the decrease in 1943 was attributed to preventive measures, the men concerned being punished and their pay docked for a fortnight.

### Specific Affections.

The following were of syphilitic origin : nervous disorders (Austria, Australia, France, Kenya, Tanganyika); 1 heart disease (German PW, Belgium); 1 endarteritis (Italian PW, Kenya); 1 inguinal adenitis (Italian PW, Rhodesia); 1 choroiditis, 1 keratitis, 1 retinitis, 1 polyarthrititis, 2 meningitis (Kenya); 1 syphilitic hepatitis and ascitis (Italy); 4 orchio-epididymitis (Rhodesia).

### Tests.

1,130 tests were made, including 14 cephalo rachidian. 69 Wassermann blood tests were positive; all cephalo-rachidian were negative. 39 tests for treponomasia and 133 for gonococcus were carried out (India), of which 18 were positive.

### Treatment.

Anti-syphilitic drugs were lacking, or supplies were so reduced that they had to be kept for cases where the Wassermann was positive. This was particularly so during the first two years of the War and practically everywhere except in Egypt. In Central France, 20 women interneers could not be treated, through lack of salvarsan and distilled water. As iodides could not be found, many cases of tertiary syphilis had to be treated with bismuth and mercury (France, Germany, Kenya).

The anti-syphilitic drugs in most general use were salvarsan, neo-salvarsan, mercury and bismuth. A few cases in Tripolitania were given penicillin; when used for a patient (Italian), spirochetes disappeared nine hours after the first injection. The patient, apparently recovered after eight days, left hospital, but returned a few days later with a fresh chancre. In several camps syphilitics were isolated in huts with separate wash-basins and baths, until no longer contagious.

Gonorrhoea was treated with anti-gonococcal serum, sulphur derivatives and sulfathiazol (Great Britain). In Egypt, cases which had resisted sulphamide treatment (German PW) were given penicillin.

### Deathrate.

Only three deaths were recorded : an Italian PW in Kenya (1943) and, in a Czechoslovak civilian camp, two elderly German women with syphilitic symptoms, unspecified in the reports.

### Skin Diseases.

By order of frequency : scabies, eczema (simple, chronic, weeping), impetigo, psoriasis, pyodermatitis, erythema, dermatitis (some occupational), and mycosis.

They were most frequent in France, particularly from 1945; a great deal of scabies (over 1,000 cases) in camps south of Paris (lack of soap and vitamins). One German PW died from septic scabies in 1945. Open sores of amputation stumps were slow in healing. Impetigo, particularly in labour detachments and in assigned residence camps in Central France; 75 % of the children in these camps had pyodermatitis. Dermatitis amongst PW in the mines at Méricourt; the Delegate asked that they should be exempted from work until complete recovery. Simple and weeping eczema, psoriasis amongst German PW near Auxonne; erythematic sores of the legs, amongst PW of a commando attached to Rennes camp, attributed by the German MOs to lice. The Delegates thought the lesions were due to lack of socks, broken footwear and abundance of gorse and heather, causing scratches to fester.



Germany:- a fair amount of pyodermatitis in the North (Hamburg and Lubeck). Impetigo amongst British PW, starting in a mild form and then spreading over the body, lasting two or three months (symptom of avitaminosis ?). Cases of ringworm, attributed by the Polish MO to conditions in the hair-dressing "saloon". Dermatitis in the Hamburg area caused by bug and flea bites. Dermatitis of the arms and wrists through handling cement. Occasional burns caused by handling gasoline. Scabies epidemic in 1947; 1 sycosis.

Ceylon: From 1945 to 1946, amongst inmates of three Italian pioneer camps, 56 cases of an affection which resisted treatment and was apparently contagious, called by Italian MOs "epidermofizia". A similar case was reported in Great Britain in 1947.

Corsica : much septic scabies; open sores following amputation of the toes. Lice in abundance; no disinfectants; no body-linen.

Egypt : Up to 40 % of camp inmates suffered from septic eczema, pyodermatitis, or dermatitis.

United States : A fair amount of psoriasis, pityriasis and eczema. 80 % of German and Italian PW suffered from mycosis pedis. Dermatitis due to poison ivy; common in some areas; it is painful but not dangerous and disappears within a few days, without after-effects.

British India : About 100 dermatitis, particularly in the Central group and the North-West (Quetta); also 6 cases of ring-worm on record.

Palestine : Frequent scabies, due to malnutrition, and a fair amount of tinea.

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M A L A R I A

AFRICA (North)

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Algeria.

In 1943 there were a great many cases in most camp infirmaries for German and, particularly, Italian PW. The MO of a French camp stated that 90 % of his patients had malaria; of these 95 % were mild and 5 % acute.

In another camp, from August 13 to November 30, 1943, of 307 PW (representing the average strength), 225, i.e. 73.2 % had contracted malaria. From December 1, 1943, to May 13, 1944, for an average of 266 inmates, 121 (45.4 %) and of 144 hospital cases, 117 (82.2 %) suffered from malaria, mostly mild cases and relapses amongst men working on the land. Some already had enlarged spleen, oedema of the legs, digestive trouble, etc. A German PW doctor in a foreign workers' camp, in Southern Algeria, suggested that PW suffering constant relapses should be sent to Djelfa, where they could have better hospital treatment, or be replaced by men not affected.

In 1945 and 1946, amongst German and Italian PW, only two were reported to have repeat attacks, one having had 20 since his arrival a few months before, and the other 16. Blood tests for haematozoon and plasmodium were seldom practised. The Ducros Military Hospital reported a case with plasmodium vivax (parasite of tertian fever). Amongst German PW, 10 acute cases were reported which, it was feared, might cause the disease to spread on account of the quantity of flies in the camp. Five deaths occurred.

All patients were treated with quinine, or its derivatives, but the supply was insufficient to allow preventive treatment.

The total figure over about four years was 475 cases (mostly relapses) and 2 deaths (death-rate 1.05 %).

Morocco.

From 1942 to 1947, reports mention 436 cases and 2 deaths. In a foreign workers' camp, many patients had frequent, acute attacks. Most of them came from a French camp; 115 German PW were sent to Meknès Military Hospital, where blood tests gave the following results :

8 cases with plasmodium vivax (tertian fever);  
2 " " " praecox;  
2 " tropical malaria;  
6 " clinical malaria.

There was not enough quinine available to allow preventive treatment.

#### Tunisia.

Malaria was considered to be the commonest illness in all German and Italian PW camps. From 1943 to 1945, about 180 cases were on record, half of whom were former sufferers. No deaths. Several men had contracted the disease in 1942 and 1943, during the Tunis campaign, or in the labour detachments of Libya and Tripolitania.

In a mine-lifting camp at Sfax, in January 1947, the camp doctor reported a recrudescence amongst German PW.

#### Tripolitania.

At least 200 cases were recorded from 1943 to 1944 : 100 among Italian, German and Libyan PW, who carried the disease from Sicily, and a further hundred chronic cases, which responded to treatment with atebrine and plasmochine.

To summarize:- North Africa, about 1,406 cases and 2 death during the war years. Death-rate 0.49 %.

#### AFRICA (Central and South)

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Malaria was still more frequent in Central and South Africa than in the North. PW had usually contracted the disease in Abyssinia, and especially in the Belgian Congo, where the disease is rife.

#### Italian Somaliland.

In 1942, a single case (Italian PW Camp).

#### East Africa.

Many cases of haematuria and haemoglobinuria amongst the malaria patients in Italian PW and internee camps (Tanganyika).

From 1941, preventive measures were taken, and the co-operation of the internees was sought - wearing of trousers and shirts with long sleeves at nightfall, to avoid mosquito bites. The internees displayed little interest, but, with the help of drainage works and DDT every three months, the number of cases decreased.

	1945	-	<u>342</u>	cases	(5	haemoglobinural	fever);
February	1946	-	<u>152</u>	"	(25	"	" );
March	1946	-	<u>149</u>	"	(92	"	" );

When the Delegate last visited the camp (April 1946), there were still 67 recurrent cases. Natural or synthetic quinine was issued freely at the British Military Hospital, where a great many patients were under treatment.

Total : 710 cases, including 125 haemoglobinural fever; 28 deaths (7 in 1943, 21 in the following years), many due to haemoglobinural fever. Death-rate 3.94 %.

#### Kenya.

The figures were highest in this area. Malaria is fairly common in Kenya, but is usually contracted elsewhere; it is even maintained that the Nairobi district is in general free.

Of 1,575 cases admitted to Nairobi Hospital in 1942, 360 were pre-capture cases.

During the Delegate's visits (January to Autumn 1943) to eight PW camps and labour detachments and to an internee camp, he reported over 10,000 cases, with only 2 deaths. In a hospital of East African Command, of 46 patients, 6 had acute malaria (3 pernicious fever) said to be of recent date. Following this report mosquito nets were issued to all inmates.

A marked decrease in the number of cases occurred in August 1944. In a camp for Italian workers (South of Nairobi) quinine, or a substitute, was issued daily as a preventive measure, and in August 1944, the Delegate found here ten cases only.

In 1945, in a camp for Italian collaborators, 8.8 % cases were reported for the first half-year, and 2.4 % for the second half-year.

Total for Kenya : 10,376 cases and 3 deaths (1 due to haematurial fever). Death-rate : 0.028 %.

#### Eritrea.

Chronic malaria was common amongst Italian PW in 1942, 1944 and 1946. Quinine, atebrine and plasmoquine were in adequate supply.

A few Greek military internees were being treated in May-Habar Military Hospital in 1945.

Rhodesia.

From 1942 to 1946, amongst Italian internees (Salisbury, Lusaka, Fort Victoria, Gatboma, Umuwuma) malaria was common; many cases were merely relapses. According to the Italian MOs, nearly all internees coming from Abyssinia were ill. Steps were taken to prevent the disease from spreading, especially as it appeared to be a "type unknown" to the country. A European sergeant and 18 natives were detailed to fill all water-holes; every week oil was sprayed within an 1 1/4 mile radius of the camps. The outside walls of all buildings were weather-proofed (lime and sand). These precautions, despite the rainy season, proved an effective check :

1942	-	637	cases
1943	-	510	"
1944	-	214	"
1945	-	97	"
1946	-	2	"

i.e. a total of 1,460 cases (including 2 haemoglobinurial fever). Seven deaths occurred (1 Italian in 1944; six in a Polish refugee colony at Rusapa, including 1 woman of 36 from chronic malaria and myocarditis, 1 man of 53 from chronic malaria and pernicious anaemia, and 1 woman of 62 from cerebral anaemia).

The number of cases fell during 1945 and 1946, with no fresh patients but only some relapses amongst farm-workers, who had usually to be treated in camp. The MOs remarked that internees were inclined to think they had malaria, when they were merely suffering from colds or slight bronchitis.

In Victoria Internment Camp (1946) there were only two cases among 56 patients; the largest number of cases being reported from Gatooma Camp :

259	-	Gatooma Camp;
243	-	Victoria "
219	-	Salisbury "
126	-	Umuwuma "
19	-	Lusaka "

Bulawayo Hospital had 594 patients.

Total for Rhodesia : 1,460 cases - 7 deaths (2 women).  
Death-rate : 0.47 %.

Belgian Congo.

In 1943, a few chronic cases in Ngule Italian and German internee camp were in charge of an Italian internee doctor.

Total for Central and South Africa : 12,548 cases (including 128 haemoglobinurial fever), 38 deaths. Death-rate 0.30 %.

AUSTRALIA

=====

From 1941 to 1944, in New South Wales (Cowra, Loveday, Murchison Camps) about 100 German, Italian, and in particular Japanese PW (Hay Camp) were treated in camp infirmaries or hospitals.

A good many cases of recurrent malaria amongst Italian and Japanese civilians from Dutch Guinea. At Cowra Camp in 1943, 37 men and 28 women (Japanese) were treated.

Total : 165 cases (28 women).

AUSTRIA

=====

In 1947, only one case, out of 6,820 inmates, in a political detainee camp (American Zone).

BELGIUM

=====

In 1945, a few cases amongst German PW in American or British hands.

In 1946, six cases (German PW) sent from Le Mans to an American Hospital in Belgium; another, from Beverloo Military Camp (Bourg Léopold) was treated in a Belgian hospital.



## BURMA

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Reports from 1946 to 1947 record 1,560 cases, malaria being apparently one of the principal diseases in Burma. Treatment was usually given in hospital, in malaria wards where, from September 1946, mepacrine, the specific used in the British forces, was given, and checked the disease. In the Japanese SEP and PW Camp, where 577 cases were recorded in June, the figures dropped as follows :

July . . . . .	325
August . . . . .	251
September. . . . .	97
October. . . . .	76
November . . . . .	85
December . . . . .	82

## CEYLON

=====

Malaria is common in the Island, where it claims many victims. Few of the inhabitants are immune, despite preventive measures and the general use of mosquito nets. Application of DDT has caused the number of cases to decrease slightly.

From 1944 to 1945, about 70 cases only were recorded in the Italian Auxiliary Pioneer Camps. Some of the men had contracted the disease before their arrival (from Africa or India), others in Ceylon itself. PW with more than 6 to 8 relapses were put up for repatriation.

## CORSICA

=====

By order of prevalence, malaria came second.

From 1944 to 1947, many cases were recorded in German and Italian PW Camps. A number of men came to Corsica from Sardinia, Elba or Russia, where they had contracted the disease. It was estimated that 60 % of German PW from Elba were affected (85 % with plasmodium vivax, 15 % with plasmodium falsiparum). In most cases the attacks were of a recurrent and mild nature; a few cases of pernicious malaria were treated at Ajaccio and Bastia Military Hospitals. In the former, 19 cases were recorded

in March 1946, 25 in April and 30 in May - one death only (PW with oedema). Of 30 PW in a detachment, 27 had attacks about every tenth day.

The ICRC sent a first consignment of 80,000 quinine tablets, and a second of 30,000 (0.50 gr. each) in April 1947.

In a general report on camps in Corsica (June 27 and July 10, 1946) the Delegate stated that an average of 3 to 4 out of 20 men were ill with malaria, either newly acquired or contracted in North Africa or Elba; they suffered from several attacks monthly, each lasting one or two days. No preventive treatment was given, as a rule; the regulation issue of 0.25 gr. quinine was not made to workers in unhealthy districts. Owing to shortage, quinine was only given to declared cases. During the American occupation, the MOs put aside large quantities of DDT for use in contaminated areas.

In a report entitled "Study of the Malaria Problem among PW in Corsica" (April 1947), Dr. Krieg, ICRC Delegate, emphasised the number of cases amongst German PW who had been in Corsica for more than year. Some had been infected before landing, others during their detention in the summers of 1945 and 1946. Those who came from countries where malaria had been stamped out for some time, stood up well to the first attacks. There were cases of relapse (some men had ten to thirty), and in spite of treatment, complications ensued, which were the more serious owing to the patients' poor condition. A German PW doctor stated that chronic cases suffered also from nephritis, broncho-pneumonia, gastro-enteritis, mental disorders, and, more commonly, poor circulation, heart trouble and high blood pressure; this last was sometimes 17-19 cm amongst young men of 20 to 30. In anaemia, deficiency in red corpuscles attained the high figure of 2 million. As attacks became more frequent, the intervals of freedom were generally shorter.

In Dr. Krieg's thought, the causes of prevalence amongst PW in Corsica were inadequate preventive measures and absence of systematic therapy. This applied especially to men in distant labour detachments where it was difficult to send drugs and to give thorough treatment to patients in the initial period, when it is most likely to have effect. He added that certain detachments need not have been installed in unhealthy and uninhabited areas, (e.g. the Dell'Oro Camp, near Ajaccio). In many detachments, the use of mosquito nets and the sprinkling of ponds with oil would have prevented the disease from spreading to such a degree. Quinine was particularly effective when given to healthy persons, or those who had only rare attacks; a daily dose of 0.50 gr. to 1 gr. prevented relapses. All unhealthy areas should be cleared, especially from June to November; men who suffered from complications, or had more than six relapses, should be sent home.

In 1947, malaria was still the chief complaint in camps, and a good number of cases were being treated at Ajaccio Hospital. Several chronic cases were reported from Bastia reconstruction camps.

Total. - The reports give only a few figures; but the disease was common; there must have been, say 600 to 800 cases. One death reported.

CZECHOSLOVAKIA  
=====

In 1946, amongst 705 camp inmates, 9 cases (one at Hazibor and eight at Kurim).

EGYPT  
=====

From 1942 to 1946, about 1,397 cases (of which 162 primary). Nearly half this figure applied to the year 1944.

By September 1942, malaria was so prevalent amongst German, Italian and Libyan PW (345 cases) that a British specialist was sent to investigate. From 10 to 12 malaria patients were admitted to hospital weekly; slight cases were treated in infirmaries, the others sent to hospital. Ten percent of the Libyans apparently suffered from chronic malaria, contracted before capture; about 152 had their first attacks in camp.

In 1943, 300 cases were recorded, mostly amongst Italian PW from Sicily; at this time there was a shortage of quinine, atebrine and plasmochine.

In 1944, malaria continued to be prevalent amongst German and especially Italian PW; most cases were relapses of disease contracted in Sicily or North Africa. Primary cases were comparatively few (10 out of 65). The Italian doctors tested a new treatment; patients were given garlic (4 gr. daily) instead of quinine; after six days, temperature had become normal and, more interesting still, there was no trace of anaemia. After eight days, red corpuscles rose from 3 million to 5 million. Ten chronic and a few primary cases were treated; observation was continued for six months and no relapses were recorded.

FRANCE  
=====

In PW and internee camps, about 247 cases were recorded from 1940 to 1948.

In 1940, very few cases occurred in the Argelès-sur-Mer Alsatian Refugee Camp.

In 1943 (November-December), in occupied France a few cases amongst British and South Africans in a Front-Stalag (Central France).

In 1945, after the liberation, labour detachments in American hands, and German internee camps (Loiret, Aisne, Oise, Orne, Moselle, Eure-et-Loir) reported about 124 cases, mostly slight, but a few tropical. One German doctor was treated for recurrent malaria in a Metz camp.

In the Loiret, in 1946 and 1947, 104 cases were recorded amongst a group of Austrian PW awaiting repatriation; they had brought the disease from Morocco. Twelve German patients were found in three PW repatriation trains arriving at Tuttlingen, Breitzenheim and Weissenau.

In 1948, six cases of recurrent malaria (three with frequent attacks) were reported from a detachment at Sisteron (S.E. France) and from the Vosges. In a detachment in the Ariège, three out of nine German PW had attacks; the doctor was called in only to compel them to return to work. Following representations by the Delegate, it was decided that the men should be examined and, if found unfit, should be repatriated.

Total for France - about 247 cases.

#### GERMANY

=====

Only about 200 cases in all, mostly recurrent and contracted in countries where the disease is endemic (Greece, Italy, Sardinia, North and South Africa, etc.).

In 1941 and 1942, about 30 cases were reported from Thuringia and Bavaria (French and Yugoslav PW). The Yugoslav senior MO stated that 12 % of the illnesses among his men were due to malaria; many were having their third or fourth attack. He said that 5 to 6 grams of quinine at least were necessary per man and asked for a thousand tablets (0.20 to 0.25) to prevent Winter relapses.

During 1943, only a few cases of recurrent malaria were recorded in May and November, amongst French, Polish, Belgian, American and British PW in Wurtemberg and Baden. It was said that in a labour detachment in Wurtemberg half the men were affected, the number of cases rising and falling in turn. On the day of the Delegate's visit, 20 men were under treatment, mostly for tertian fever. No Indians were reported to suffer from after-effects. All camps asked for quinine.

In 1944, in the Stalags and Oflags of Pomerania, amongst Polish PW, over 100 cases were reported, alleged to be due to mosquitoes from a forest marsh. German guards and officers were said to have also suffered the previous Summer. The Polish MO asked for quinine, for issue as a preventative. In Silesia, British PW from Italy and Sardinia, already suffering on arrival, were not given suitable drugs, or only in insufficient quantities. The MO of a labour detachment (Brux) told the Delegate that some 8-10 men were constantly in the camp infirmary; they had no proper treatment during their first five months in Germany; for the last four weeks only they had been given atebrine. In addition, most of the British PW worked at great depths in soft-coal mines, where the temperature was high. The MO considered that the sudden changes of temperature were most harmful to the men, in their poor state of health. In his opinion, only those who were free from malaria should be put on this job. In Pomerania, the Delegate saw British PW laid up, with high fever, but who were not being given the proper drugs.

In October 1945, after the Armistice, two cases of recurrent malaria (one German, one Hungarian) were reported from Breitzenheim Camp (French Zone).

In a Rhineland (French Zone) transit camp, where 3,440 men passed, a few cases only were recorded in October, 1946.

A few cases also occurred in a camp near Göttingen (British Zone), in 1948.

Total for Germany - about 200 cases, mostly recurrent.

#### GREAT BRITAIN =====

In 1941, a German PW camp reported 21 cases, all from a West African port. When given aspirin the men asked to have the same treatment as in the German Merchant Navy (atebrine and plasmochine); they also wanted a German naval doctor.

In 1943, 339 German and Italian PW, who had fallen ill in Africa, were treated as follows : 3 gr. quinine daily for 2 days, mepacrine for 6 days; 5 days interval; then plasmochine for 5 days. The doctor said that with this treatment there were no relapses, at least amongst men who were afterwards transferred to other camps. They added that the drugs left no toxic symptoms.

In 1944, relapses were reported amongst German, Italian, Belgian and Austrian PW; in all about 60 cases, none of them serious.

One single case was recorded in 1946.

Total : about 421 cases, mostly recurrent; very few primary.

GREECE  
=====

In 1944, in a camp for Yugoslav PW and internees in Salonika, where malaria is endemic, ten cases were reported. For May and June, in three Italian internee camps (55 inmates) about 85 % suffered from malaria, as a consequence of three years stay in Greece; two cases were of the tropical variety. As, in general, medicaments were not available, patients-particularly the tropical cases-were removed to Salonika.

Total : 56 cases (2 tropical).

GUIANA (British)  
=====

A medical orderly in Manzaroni Camp died suddenly of malaria on May 13, 1944. All the internees (German, Japanese, Finnish, British and Swiss) were therefore given preventive treatment.

HUNGARY  
=====

One case recorded in 1944, a British internee who had escaped from Germany early in the year.

INDIA (British)  
=====

Malaria is considered the most prevalent disease in India.

In September and October, 1941, Delegates reported about 50 cases in West Bengal camps (near Calcutta) and in Northern India (near Dehra-Dun). At this time, preventive measures had already been ordered; bunks were supplied with mosquito nets, fatigue squads filled in small ponds and sprayed oil on water surfaces. The Italian doctor in charge refused to issue quinine as a remedy, except in positive cases.

In 1942, 6,450 cases were recorded, particularly in Central India (Bhopal) :

January. . . .	894	May . . . . .	623
February . . .	720	June. . . . .	803
March. . . . .	543	July. . . . .	990
April. . . . .	520	August. . . .	1357

Of these, 1,100 were considered to be primary, and the remainder relapses. 20 % were due to plasmodium falsiparum (irregular fever), 80 % to plasmodium vivax (tertian fever). Many patients had contracted the disease in East Africa, but in 90 % the origin was local.

During the Summer of 1942, large-scale measures were taken; the drainage system was improved and mosquitoes were systematically destroyed by PW squads, in the marshes and in standing water near the camps. Precautions (spraying, mosquito nets, etc.) were also ordered inside camps which, it was hoped, would reduce the risk of infection. In September 1942, the MOs had at their disposal 300 lb of quinine and this had to last out the Summer, whatever the number of patients.

In the Kangra Valley camps, where the disease was less prevalent and severe, 300 cases were recorded, mostly recurrent, with only 28 primary.

The internee camps of Premnagar (Dehra-Dun) and Deoli-Ajmer had 42 cases amongst interned German civilians. One death from pericarditis.

The Delegate, according to a press report of May 13, 1945, said there had been 13,100 cases in 1942; of these 3,070 were primary and 10,030 recurrent. The figures are based on a list supplied by Italian PW doctors.

In 1942, seven deaths recorded, two in West Bengal Camps, one in Northern India and four in Central India (4 tertian fever, 2 cachexic and one pericarditis).

In 1943. (January to March), the number of cases in Central India (where the disease was so common as to affect 60-80 % of the native population) was 2,347, including 470 primary and 1,877 recurrent. The figures applied only to patients under treatment, and not to all cases. The disease was apparently most frequent in September and October, during the monsoon. Medical reports spoke of a new form of the disease in these areas, unaccompanied by fever, while blood tests revealed the presence of plasmodium.

The figures from April to October, 1943, were as follows :

April	210	primary	697	recurrent
May	285	"	464	"
June	567	"	620	"
July	498	"	880	"
August	302	"	749	"
September	386	"	798	"
October	410	"	800	"
	-----		-----	
	2,658	"	5,008	"
	=====		=====	

Of the above 60 % were malignant tertian fever, 40 % light cases. There were also, in 1943, 7 cases of haemoglobinurial fever, (two fatal); one man was sent home and the remaining four, at the request of the Italian doctors, were removed to a better climate. In November, 310 cases were admitted to hospital in the South (Bangalore), while amongst Japanese and Italian internees at Satara, Deoli-Ajmer and Dehra-Dun, 100 cases were recorded, with 7 deaths (2 cerebral, 1 cachexic, 3 with heart trouble, 1 haemoglobinurial). Italian malaria patients at Deoli-Ajmer included 23 men, 13 women and children.

The figures for January-March, 1944, show 33 primary and 6 recurrent cases amongst Italian PW in the Bangalore district, reflecting the local climate. It had been arranged that PW from these camps should be moved to Central India; the Delegate described this plan as medically unsound, malaria being both epidemic and endemic in that part of the country.

Reports on the Central India camp hospital, for May-November, 1944, spoke of 844 primary and 951 recurrent cases. In April, 1,229 officers were moved from Northern to Central India; many contracted the disease and 14 % = 566 (226 primary, 340 recurrent) were admitted to the Northern wards. In the Southern wards were 688 malaria patients (365 recurrent, 323 primary). In the officers' wards were 186 cases (161 primary and 25 recurrent). Five deaths occurred; three were attributed to malignant tertian fever and two to cerebral malaria.

Of 4,836 laboratory tests carried out, 1,647 were positive and 3,189 negative.

In the Italian Working Detachment of Quetta, 6 cases were reported (1 each in May, June, September, 3 in August), mostly recurrent.

From March 26 to August 22, 1945, the Central India camp hospital had 266 cases, 175 of them recurrent. From November 10, 1944, to March 25, 1945, 502 cases (254 recurrent). In the Southern wards, 1,739 blood tests were made; 539 patients were treated (468 primary, 71 recurrent). Amongst Italian PW in camps near Yol, there were 529 cases (including 3 mild tertian fever); these were the only new cases recorded for 1945. A list of "prevalent disease", dated May 5, 1945, indicates :



- 21 clinical malaria;
- 25 recurrent;
- 83 new mild tertian fever;
- 105 recurrent tertian fever;
- 12 new cases;
- 1 recurrent malignant tertian fever.

In 1946, in a hospital for two Central India camps, of 840 patients there were 91 cases.

In face of abundant data, the reader may find it difficult to form an exact idea of the prevalence and distribution of the disease in India. The main points are as follows :

During the War (October, 1941 - June, 1945) some 65,000 PW were held in British India, chiefly Italians, with a few German and Japanese. They were all treated alike. Considerable differences arose, however, in the camps, particularly as regards climate. The camps were first divided into six groups; two of these were soon abandoned, leaving the following.

- (1) - The Central Group, comprising 16 to 20 camps, with the largest number of PW (21,500 on a average), was situated in Bhopal, where the heat is oppressive, especially between April and October. The neighbourhood of lakes, rivers and marshes has for many years caused malaria to be endemic and acute (in some villages all the inhabitants are said to be affected). The term "Malaria Group" applied to these camps was therefore justified.
- (2) - The Southern Group, Bangalore region, had a far more tolerable climate and fairly moderate temperature throughout the year. Health conditions were therefore far better than in the Central group.
- (3) - The North Eastern Group, near Dehra-Dun, with a short period of heat and drought just before the monsoon. During the other months, the evenings and nights are cool and refreshing.
- (4) - The Northern Group, near Yol, located in the hills where the climate is pleasant throughout the year.

In Group 1, over 70 % of the men suffered from malaria. In Dr. Wenger's opinion, this figure was below the average, as the lists handed to him referred only to patients in hospitals and infirmaries, and did not include minor cases cared for in the hutments. The figures supplied by Italian PW doctors were usually higher than those given by the British authorities.

According to ICRC reports, 21,872 cases were recorded in this Group, practically two-thirds of which were recurrent; a great many patients had contracted the disease in East Africa. It was most prevalent in 1942 and 1943. Cases were on the whole slight, but there were some complications, leading to 11 deaths (5 malignant tertian fever, 3 haemogloburinal fever, 2 cachexic, 1 cerebral).

In Group 2, the number of PW was practically the same, namely 20,900, but 349 cases only were reported during the years 1942 to 1944. Of these 33 were primary, and no deaths occurred.

In Group 3, (average number : 10,227 PW) Delegates reported 300 cases (28 primary) and 2 deaths from tertian, one in 1942 and another in 1943.

In Group 4 (civilian internees, with an average of 12,614), records gave 148 cases (one-third primary) and 8 deaths (one cachexic) in 1942; 3 cerebral, 3 cardiac and one malignant tertian, in 1944.

In the camps lying west of Calcutta, there had been about fifty cases and two deaths (1 cerebral, 1 cachexic), before evacuation in 1942.

#### Pakistan.

In 1949, the Delegate noted 6 recurrent cases in the Neutral Internment Camp of Attock Fort.

To resume - there were 22,719 cases at least in British India. About 7,000 were primary. 23 deaths (deathrate 0.092 %).

	<u>Cases</u>	<u>Deaths</u>
Central India	21,872	11
Southern	349	-
North-East	300	2
North	148	8
Calcutta	50	2

#### Causes of deaths:

- 5 Malignant tertian;
- 6 Cachexic;
- 5 Cerebral;
- 2 Haemogloburinal;
- 2 Tertian;
- 2 Cardiac.

#### DUTCH EAST INDIES =====

##### Java.

In 1946, a large percentage of the patients in hospital, particularly in the internee camps, had malaria. Women and

children were also affected, as a rule in a mild form only. 30 cases in the Japanese SEP Camp and War Criminals Prison at Hollandia had been infected in Balavan Camp, Sumatra.

In September 1949, ten mild cases recorded in Indonesian camps; in October it was said that one-half of the Indonesians in Javanese prisons were being treated in hospital and prison infirmaries.

Dumatra.

On October 3, 1946, four cases out of 399 men in the Japanese SEP labour camp at Balavan

IRAQ  
=====

In 1946, three PW camps, with 2,600 inmates, reported :

March	2 cases (1 recurrent);
May	5 "
June	2 "
July	4 " 1 recurrent.

Total : 13 cases (2 recurrent, 11 primary).

ITALY  
=====

In May 1941, a Greek PW was treated in Servigliano Camp infirmary.

In 1942, Delegates found about 275 cases in five camps (British, South African, Australian, New Zealand and Yugoslav PW). Over half were recurrent or chronic. The surrounding district was said to be free from malaria, but mosquitoes were still found. The Delegate met a professor of bacteriology who was inspecting the hospital and making tests for haematozoons; he ordered mosquito nets to be placed in the window frames. At this time, quinine was short and issued only once a month.

In May 1943, numerous cases were reported in a camp for British, Palestinian, Egyptian, South African and Yugoslav PW. The patients and the British PW doctors claimed that many had suffered first attacks in the camp. No mosquitoes were found in the camp, but the Delegate noticed that a pamphlet on the prevention of malaria had been issued to the Italian officers.

During April and August, 1944, at a British camp in Southern Italy, 2 German PW had to be sent for treatment to a British Military Hospital, which already had other German patients.

From May to July, 1946, four British camps recorded some 30 cases amongst German PW.

Total : 307 cases (about half recurrent).

#### JAPAN

=====

In 1943, a fair number of cases amongst British, American and Australian PW in Hoten-Mukden Camp, Manchuria. Several deaths, following complications.

#### MALAYA

=====

In 1946, 44 Japanese PW were being treated in the Malaria Ward of Kluang Hospital. Administration of mepacrine greatly reduced the number of cases.

In 1947, at the Japanese SEP Hospital Nee Soon, out of 31 Japanese patients there were 2 cases.

#### NETHERLANDS

=====

Towards the end of 1946, two German PW were treated in Utrecht Hospital.

#### PALESTINE

=====

From 1943 to 1945, according to the Italian doctors, there had been a fair number of cases, but very few in PW camps.

About fifty cases (5 primary) amongst Italians; a few, including two officers, were sent to hospital.

Some cases in civilian internee camps, one a woman of fifty. A child suffered from temperature, probably of malarial origin. Both were treated in the infirmary. There was plenty of quinine and atebrine.

Late in 1948, in the Arab PW Camp at Sidonia (Acre Fortress), one case was admitted to the infirmary; an Italian PW in Sarafend Camp also fell ill.

In March, 1949, Dr. Krikorian reported a few cases of recurrent malaria in Jericho Camp.

#### RHODES

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In 1945, in a British transit camp, a few cases (pre-capture) amongst Italian PW. Mosquitoes were present in the area.

In July, 1945, one of the main camps reported 26 recurrent cases, mainly in Leros Island.

#### UNITED STATES

=====

In several German and Italian PW camps, from May to November, 1943, there were a fairly large number of cases, chiefly from North Africa. 124 were treated in camp or military hospitals, where all beds had mosquito nets.

Of the 450 cases recorded in 1944, a fair proportion had brought the disease from Sardinia or North Africa. Many German PW claimed to have contracted malaria in camp, which the American MOs did not believe. In April, 1944, over one hundred German patients had come from the same camp in Africa; the cases were not serious and were only admitted to hospital when feverish. About one hundred German PW were treated in Atlanta Camp Hospital for recurrent malaria; the district is healthy, but there are occasional mosquitoes likely to transmit the disease. Some men had repeated attacks; two had 15 and 18 respectively. Atebrine proved useful; the patients asked for more and complained that the treatment was too short. They also objected to being sent back to camp after less than nine weeks' treatment and asked to

be looked after by German doctors. The American MOs thought that the effect of atebrine was temporary only and that it merely delayed the access of fever.

During 1945, there were 600 cases amongst German PW who had contracted the disease in Italy, Sardinia and North Africa; several, however, had their first attack in camp. From a labour detachment in Florida, the German doctors reported that the men were in good health and that all needful precautions were taken; all had mosquito nets and were given quinine or a derivate such as atebrine; these precautions proved effective.

From 1943 to 1946, about 1,370 cases were recorded in the United States, mostly recurrent, although patients denied this, doubtless because these were their first attacks in the U.S.A.

#### VENEZUELA =====

In May, 1942, of the 86 Italian seamen detained after scuttling their ship (first interned in San Esteban Prison) 14 were admitted to Puerto Cabello Hospital with malaria.

In Cuertel-Navaran Camp, one suspected case - an army dentist who complained of a daily temperature of 40° and claimed repatriation.

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#### SUMMARY =====

Reports gave 43,288 cases and 70 deaths (deathrate 0.15 %). These figures are, however, below the mark, as they refer only to patients in camp infirmaries or hospitals, and do not include the mild cases requiring one or two days' treatment in the hutments.

#### Morbidity was considerable :

British India (slightly over half total)	22,719
Central and South Africa (over 10,000 in Kenya)	12,548
Burma . . . . .	1,560
North Africa. . . . .	1,406
Egypt . . . . .	1,397

United States . . . . .	1,370
Corsica . . . . .	600
Great Britain . . . . .	421
Italy . . . . .	307
France . . . . .	347
Germany . . . . .	200
Australia . . . . .	165

In other countries the number of cases in camp fell below 100.

Deathrate :

Low, justifying the general view that the disease causes much illness, but is rarely fatal. Altogether, some 70 deaths :

South Africa	38	(0.30 %)
British India	23	(0.15 %)
North Africa (5 in Algeria)	17	(1.05 %)
Corsica	1	
Guiana	1	

In Japan, several deaths were due to complications.

Analysis of deaths

17	haemogloburinal (South Africa, India)
16	cachexic
15	cerebral
12	tertian (especially India, North Africa)
3	cardiac
1	pernicious anaemia
6	cause not stated

Primary and recurrent cases.

Over two-thirds of the total figure were recurrent cases. In South Africa, Italy and Iraq, however, the proportion was about even.

Many patients had frequent attacks (even after treatment), some as many as 15 to 20 in the space of a few months. As a rule, the attacks were mild and short - 2-3 days-(tertiary and quartan fever). Barely 5 % pernicious symptoms.

Blood tests for haematozoons and parasites were seldom carried out. 4,836 tests gave 1,647 positive and 3,189 negative results. In India, South Africa and Corsica, where parasites were sometimes identified, plasmodium vivax was predominant.

India - 80 % plasmodium vivax (tertiary fever)  
20 % " falsiparum (daily temperature and  
intermittent fever)

Corsica - 85 % plasmodium vivax  
15 % " falsiparum

North Africa - France - Greece -

A few cases of plasmodium immaculatum (tropical form).

### Complications.

Even after treatment, these occurred amongst patients having suffered numerous attacks and whose physical condition was poor. The principal complications were nephritis, anaemia, cardiac and circulation trouble, blood pressure (17 to 19 pressure frequent amongst PW between 20 and 30 years of age).

### Prophylaxis and treatment.

In countries where malaria is endemic, suitable precautions were taken in the camps and their neighbourhood, sometimes to a distance of some miles - drainage works, destruction of mosquito larvae, sprinkling water surfaces with oil. Holes were filled in and sprinkled, walls washed with disinfectant or weatherproofed with sand and lime. DDT was sprayed in infected areas (quarterly) in East Africa, in large quantities in Corsica by the U.S. forces. Bunks were provided with mosquito nets. Attempts to make PW wear long trousers and sleeved shirts were usually unsuccessful, the men preferring to take the risk (South Africa). PW labour in unhealthy areas, particularly in June and November, was prohibited.

Quinine treatment was inadequate, owing to lack or shortage of the drug. The Delegates were often asked for a supply. Being so scarce, quinine was administered only to patients and not as a precaution. The ICRC doctor in Corsica observed that no preventive treatment, in the shape of the daily 0,25 gr., was being applied, even in contaminated areas; the drug was only given to declared cases. Had the issue been adequate, many cases (relapse in particular) would have been avoided, especially with proper treatment of the first onset, which responds very quickly.

Quinine was the commonest specific; atebrine, plasmo-  
chine and mepacrine were also given, with good results. German



PW preferred atebrine, which American MOs believed to be a palliative merely deferring attacks. Mepacrine was particularly used in the British Forces. Treatment in Great Britain was often: 3 gr. quinine daily for 2 days, mepacrine for 6 days, then 5 days rest; lastly, plasmochine for 5 days. British MOs claimed that this prevented recurrence (subject to patients being sent to other camps) and had no toxic after-effects.

Italian PW doctors in Egypt gave patients 4 gr. garlic daily; after six days, temperatures fell and the attack left no trace of anaemia. 10 chronic and a few primary cases were treated in this manner; six months later no relapses had been registered.

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TYPHOID AND PARATYPHOID FEVER

Cases of typhoid and paratyphoid were recorded in many PW and internee camps. While common in Egypt, France, Austria, Poland and Czechoslovakia, where epidemics occurred, they appeared sporadically in most other countries.

AFRICA (North)  
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From 1942 to 1944, some 40 cases of typhoid and 5 paratyphoid were reported amongst Italian, German and Libyan PW; eleven cases proved fatal. Many PW contracted the disease in labour detachments. As a rule, its course was normal and free from complications; one German PW only suffering from paratyphoidal abscess which was slow to heal. Reports, as from April, 1943, state that most of the men were vaccinated; some showed mild vaccinal reaction.

AFRICA (South)  
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In 1943, three cases of typhoid amongst German internees were confirmed by bacteriological tests they were traced to a native temporary employee; their course was mild. Precautionary measures were taken : all internees were vaccinated (two 0,50 cc and one 1 cc TAB injections); workers in kitchens and food stores were subjected to serological tests; water and milk were tested. Despite systematic vaccination, carried out whenever an internee was employed outside the camp, an Italian PW, vaccinated eighteen months before, had a slight attack of typhoid in 1947.

ARABIA (Saudi)

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In 1942, an Italian corporal died from typhoid, perforation of the bowel and peritonitis.

AUSTRIA

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Early in 1941, a typhoid epidemic broke out in a labour detachment near Linz. Over 100 cases and 67 deaths - a heavy percentage. All patients were sent to Linz Hospital. The epidemic was attributed to faulty drains; the men, quartered in a factory, had to use latrines that were easily obstructed and overflowed, so that the PW had to walk in sewage. Eight cases were treated with eubasine (4-6 tablets daily), but for a few days only, the German MO having to discontinue the treatment, as the patients complained of nausea. Conservative non-specific treatment was applied, with heart tonics whenever complications were feared. It was not possible to ascertain whether patients had been previously vaccinated, their pay books bearing no entries to that effect.

Faeces of 1,200 men who had been in contact with the sick were tested, and 15 proved carriers of Eberth bacilli; this led the MO to conclude that one of these men had been the source of the epidemic. He admitted, however, that typhoid was endemic in Linz and the neighbourhood. The Delegate pointed out that, whatever the cause of the epidemic, the spread of the disease and the heavy deathrate were doubtless due to the faulty drainage system. After September, 1941, there were a few sporadic cases only, also a few paratyphoid cases amongst Belgians and Poles.

In 1944, another epidemic occurred, once more in a labour detachment (Floridsdorf, near Vienna). Four French PW and 250 Italian military internees were sent to hospital in Vienna for paratyphoid B. The outbreak was attributed to the consumption of bad horse flesh. All the patients recovered.

In 1946, one case was reported from Reichenau Discharge Centre (French Zone). A train with PW from Yugoslavia brought one case of typhoid; he was sent to Innsbruck Hospital and subsequently died. Another case was reported in the British Zone and treated in Graz Hospital. No cases in the American Zone, where the majority of PW and political detainees had been vaccinated.

Total : 356 cases (including 254 paratyphoid B) and 68 deaths, i.e. deathrate 19 %. 15 germ carriers were detected.

BURMA  
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In September and October, 1946, 3 cases of typhoid amongst Japanese PW.

CHINA (Non-Occupied)  
=====

In 1944, a report on the Catholic Mission at Lanchow (Kansa Province) stated that typhoid had been widespread amongst the population. Some cases, and a few deaths amongst the German sisters of the Mission, which applied for vaccine to the American Red Cross.

CORSICA  
=====

No cases on record until 1946, when about 20 paratyphoid A and B were reported; 2 deaths. Patients were sent to Ajaccio Military Hospital. Camp doctors stated that, by order prevalence, typhoid took seventh place.

CZECHOSLOVAKIA  
=====

During the Summer of 1945, an epidemic occurred in the Carlsbad and Marienbad districts. Several German nurses fell ill, and some deaths followed.

In 1946, besides a few sporadic cases in camps, an epidemic broke out in Dubi Civilian Camp; this lasted several

months and affected about 175 Sudeten Germans, men, women and children. Eleven deaths occurred. In June, there were still 32 convalescent German PW in Kurim Hospital.

In January 1947, a paratyphoid epidemic was reported at a civilian assembly camp. It lasted two months; all the 34 patients (14 men, 15 women, 5 children) recovered. In the late Summer of 1947, another slight epidemic occurred in a camp for sick aged persons; it ended in September, after causing 3 deaths. In October, 3 cases of paratyphoid (one para B, a man of 50) were under treatment in a hospital for German civilians.

In 1948, the Delegate noted that two germ-carriers had been discovered (one woman and one man in the camp for sick aged persons). Both were isolated.

The reports show a total of 178 cases of typhoid, 37 paratyphoid and 14 deaths. Two germ-carriers. Deathrate 6.5 %.

#### EGYPT

=====

Typhoid was most prevalent in this country; from 1941 to 1946, records show 658 cases of typhoid, 81 paratyphoid and 10 deaths (deathrate 1.35 %).

In 1941 : In addition to a few sporadic cases in Italian PW and internee camps, an epidemic broke out in September amongst Italian PW of three camps in close proximity. Many patients said they had been vaccinated before capture. In the opinion of the British MO, the vaccine used had apparently had little effect, probably because exposed to light and badly stored. The epidemic was rapidly checked. Cases were mostly slight and convalescent in three to four weeks. On the outbreak of this first epidemic, all PW, including those already inoculated in Italy, were vaccinated in both hospitals and camps.

In 1942 : A slight epidemic in a camp for Italian PW was traced to the vegetables sold in the canteen; measures were taken immediately, and 5 cases in all were recorded. All patients and suspects were strictly isolated.

From October to December, an epidemic occurred in an Egyptian camp for Italian PW; 15 cases were sent to the 15th General Hospital; there were three deaths. The Delegate was assured that all PW had been vaccinated, but the men denied this.

Ninety German PW were sent to hospital. for typhoid contracted in the front line; bacteriological tests showed 60 to be positive; the remaining 30 were diagnosed, from symptoms only, as being half typhoid and half paratyphoid B. Examination of all camp inmates disclosed 5 germ-carriers, who doubtless infected some patients in camp. All the usual precautions were taken : improvement of sanitary installations, periodic analysis of water, repair of latrine drainage, and vaccination of all new arrivals, including those vaccinated by the Germans themselves during the previous twelve months. The epidemic was mild, with little or no complications.

Another epidemic occurred late in December, 1942 : 70 cases amongst PW from the German desert forces, mostly slight, with on the whole few complications. There were, however, three deaths. Mass tests disclosed 6 germ-carriers, some belonging to the kitchen staff.

Total for 1942 : 180 typhoid, 45 paratyphoid, 6 deaths.

1943 : This was the peak period. Early in the year, many cases of typhoid and paratyphoid (A and B).

About 400 typhoid and 19 paratyphoid patients amongst Italian and German PW already suffering on arrival or convalescent. All patients were at once sent to hospital; suspects were isolated, and all PW were vaccinated a first or second time. Few complications; 5 cases of haemorrhage, <sup>one</sup> perforation of the bowel and one pulmonary infarct. Two deaths. The epidemic was quickly checked. One German internee had apparently not been vaccinated.

In Helouan PW Camp, opened on May 18, 10 cases occurred.

By June, the epidemic appeared to have been stamped out. However, in September, 8 cases of mild paratyphoid were reported from Fayed PW Camp; one death occurred. No cases from October to December.

Total for 1943 : 410 typhoid, 27 paratyphoid A and B, 3 deaths (one from paratyphoid B). Deathrate 0.68 %.

In 1944 : 70 typhoid, 2 paratyphoid A, amongst Italian PW. The cause remained unknown. Some 12 cases amongst PW working outside camp; 2 slight cases in labour detachments, and 2 paratyphoid arrived from Italy. Late in the year, during the transhipment of two vessels, 42 cases of exanthematic typhus were reported; 41 of these later proved to be typhoid, and one murine typhus (German PW).

Total for 1944 : 111 typhoid, 2 paratyphoid A.

In 1945 - PW were all vaccinated, and 2 cases only were recorded - one a wounded German PW in 19th General Hospital, the other a German internee from Yemen, who died of typhoid in a camp near Khartum.

In 1946 - A few cases occurred in the German PW ward of an Egyptian hospital.

General total : 658 typhoid, 81 paratyphoid (44 A; 37 B). 10 deaths (one paratyphoid B). Deathrate 1.35 % (but this does not include the two epidemics, the number of cases then not being given). Eleven germ-carriers detected.

#### FRANCE

=====

At the close of 1940, in Southern France, 239 typhoid patients, most of them from the Spanish, German and Austrian refugee camps of St. Cyprien, were being treated at St. Louis Hospital, Perpignan. Two deaths occurred. A number of cases in Argeles Camp Hospital came from amongst the 12,000 Alsatians refugees in the area. All refugee women and children were vaccinated.

As from 1945, single cases were reported from the departments Seine-et-Oise, Eure-et-Loir, Aube, Sarthe, Vienne, Rhône, and Bouches-du-Rhône. Three or four cases amongst German and Hungarian PW in the Moselle district. In an assigned residence centre (men, women and children) near Poitiers, 4 cases were recorded. During the Summer of 1945, two small epidemics broke out : 84 cases in the North (American camp), and 46 Germans and Italians treated in Lamargue Naval Hospital, Toulon. No deaths occurred; the epidemics were mild and quickly checked.

In December, in a camp near Metz, 2 German doctors were convalescent after typhoid.

In January, 1946, in Souges Camp Hospital (Gironde), a few typhoid convalescents and 25 suspects. Isolated cases were reported from the Marne, Drôme, Jura and Vosges departments. Analysis of water in the last-named revealed paratyphoid germs.

In 1947, typhoid continued to decrease - 4 cases (2 paratyphoid A) in a labour detachment in the Basses Alpes; no deaths. In June, in a camp hospital for German PW, at St.

Etienne, 3 paratyphoid cases (2 A) were sent to Lyautey Hospital, Marseilles.

Total (according to reports) : 406 typhoid, 5 paratyphoid (including 4 A) and an epidemic in the South West which caused 2 deaths, Low deathrate : 0.48 %.

#### GERMANY

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Sporadic cases only; the small number was largely due to regular vaccination.

In 1940, the first case was a Pole in an East Prussian camp. Eight cases were reported amongst French, Polish and British PW in Pomerania, East Prussia, and Danzig. One death occurred.

In February, 1941, a few cases amongst British, French and Polish PW in Bavaria; 3 paratyphoids in Wurtemberg.

In 1942, very few cases : 2 in a Strasburg hospital and some amongst British PW near Danzig. 60 medical personnel in East Prussia, Saxony, Wurtemberg and Thuringia were vaccinated with 180 cc vaccine, given by the ICRC, through its Delegate. As from 1943, these vaccinations were repeated.

Typhoid reached a peak in 1945, namely, 44 cases amongst German and Hungarian PW. The epidemic started in a labour detachment near Heringsdorf (British Zone); it was quickly stamped out, and no deaths occurred.

In July 1947, no cases on record. A camp near Coblenz (American Zone) was only a few miles from a contaminated area (civilian population) and the swimming pool was closed.

Total : 55 cases of typhoid - 3 paratyphoid - one death. Deathrate, 1.72 %.

#### GREAT BRITAIN

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In June 1942, two Italian PW were suffering from paratyphoid on arrival and were sent to hospital. All contacts were vaccinated. Vaccination is, of course, the rule in Great Britain.



## HUNGARY

=====

In 1945, in an internee camp, out of 138 patients, 28 had typhoid. Two deaths.

## INDIA (British)

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From 1941 to 1945, in spite of generally unfavourable health conditions, the reports mention only 150 cases of typhoid and 19 paratyphoid in Italian PW and internee camps (12 paratyphoid B, 6 A, 1 C). 35 deaths (31 typhoid and 4 paratyphoid). Deathrate: 23.3 %.

The majority of cases occurred in the Central India Group (Bhopal), where the heat is overpowering and the climate damp. In 1942 alone, out of an average of 21,500 PW, there were some 60 cases, while three to four cases only were registered in the following years. In June, 1945, three convalescent cases. Of the above 60 cases, ten were fatal.

In the Southern Group (over 600 miles South of Bombay, often called the "Garden of India" and one of the best climates in the country), morbidity was lower. 27 cases (including 6 paratyphoid A and 1 C). The deathrate was high, however, 13 cases being fatal (2 paratyphoid). Many patients came from a labour detachment with an apparently faulty water supply, although, according to the Camp Commander, repeated analyses had revealed no trace of microbes. The authorities did all possible to prevent the spread of epidemics. All the men in this Group (total 22,900) were vaccinated in March, 1943.

In North-East Group (Dehra-Dun), with 10,230 inmates, 18 cases of typhoid and 2 of paratyphoid were treated in the Group Hospital; 10 suspects were placed under observation (motion tests). Four deaths.

In the Northern Group (Himalayas) and the Kangra Valley, there were a few isolated cases and minor epidemics - 20 cases of typhoid (2 deaths) and 10 paratyphoid. Six deaths (4 typhoid, 2 paratyphoid).

In 1943 - 1944, in Deoli-Ajmer and Dehra-Dun internee camps, 5 Italians had typhoid and 2 died.

The majority of patients were treated in PW wards of British Military Hospitals. The symptoms were invariably those of ordinary typhoid. Pulmonary symptoms were fairly common (broncho-pneumonia with slow resorption). Widal tests were

positive in serious cases, even for paratyphoid; in a very few cases of paratyphoid A they were negative. This, and the blood test, were also positive in a case of paratyphoid C.

#### ITALY

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From 1941 to 1946, about 30 cases were recorded, with 2 deaths. Although these were sporadic, British and New Zealand PW asked to be vaccinated. Many having already been vaccinated elsewhere, six or twelve months earlier, this step seemed unnecessary, particularly in view of the state of public health and the isolation of the PW camps. The authorities, while discountenancing immediate vaccination, agreed that PW who insisted should be vaccinated at their own risk. The two deaths were of a French internee, who died in 1944 at Cuneo Holy Cross Hospital (Northern Italy), and a German (1946) in an American camp.

In 1946, a slight epidemic broke out in a labour detachment; 16 patients were treated in an American hospital; most of them came from Northern Italy.

During 1943, a very serious epidemic broke out in the neighbourhood of a Gaullist and Yugoslav camp, but no cases occurred in the PW camps themselves.

#### JUGOSLAVIA

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From September to December, 1945, some fifty German PW were admitted to hospital with typhoid.

In 1946, five German and Austrian PW were nursed in hospital close to camps. In May, 1946, a German doctor vaccinated all Austrian PW in labour detachments.

#### MALAYA

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In 1946, the central camps sent 18 cases of tropical typhoid to the Japanese Military Hospital. In 1947, seven cases of typhoid from Southern camps were sent to the same hospital.

MEXICO

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In August 1942, a report says that, before the vaccination of the Italian and German internees in Perote CI Camp, there had been about 100 cases.

NORWAY

=====

Men (chiefly Poles) in labour detachments were vaccinated in 1944, and after that, every year. In the Summer of 1945, a German PW camp near Trondhjem had a slight paratyphoid epidemic. No deaths occurred.

In 1948, at Nyton PW Camp, there was an epidemic of paratyphoid B during the Summer. No deaths.

PALESTINE

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From 1941 to 1949, there were 10 cases and 2 deaths (a German civilian aged 50, who refused vaccination, and an Italian priest, in a Government Hospital).

In 1942, all internees in camp, German and other, were vaccinated.

In 1948, Sidonia Arab PW Camp (Acre Fortress) had 9 cases, who were nursed in the infirmary; one Jewish PW was also in a hospital. Blood tests were made for all; the disease followed its normal course. Contacts were vaccinated and, at the Delegate's request, the water supply was analysed.

In March 1949, a slight epidemic of paratyphoid broke out in a Jericho camp. No deaths occurred. The cases were not, however, confirmed by laboratory tests. From March 1949, a daily average of 5,000 persons were inoculated against typhoid.

Total : 10 cases of typhoid - 1 slight epidemic of paratyphoid in 1949 - 2 deaths.

POLAND

=====

When in Warsaw, in October 1939, Dr. Marcel Junod learned that an epidemic had broken out in the city and that about 1,800 persons were sick, two-thirds of them Jews. Inhabitants living on the banks had been drinking water from the Vistula, which always contained Eberth bacilli. The drainage system, which had been severely damaged the bombardment, had been repaired, and drinking water was again available. Mass vaccination was being carried out. By November 22, 240,000 persons had been vaccinated; the remainder were to be inoculated by Christmas. Reports make no mention of other cases during the war.

In 1943, seven deaths were reported (Government Hospital, Lemberg). Two were consecutive to vaccination (French and Belgian NCOS).

UNITED STATES

=====

In 1943, one German had paratyphoid and 4 Italians typhoid on arrival; they were sent to hospital and were convalescent when seen. Four cases of complication due to vaccination were reported amongst German, Italian and Japanese PW in McCoy Camp.

S U M M A R Y

=====

Delegates recorded in PW and internee camps 2,281 cases of typhoid, viz. 1,854 typhoid and 427 paratyphoid (326 B, 1 C, and about 100 A). These figures certainly give no true picture, as many cases escaped the Delegates' notice, and references to epidemics of varying importance (particularly in Egypt and France) quoted only approximate numbers. (For instance, the 1,800 civilian inhabitants reported to be in hospital at Warsaw, in October, 1949, did not appear in the total figure).

Morbidity was greatest in Egypt, followed by France, Austria, Czechoslovakia, India, etc.

Egypt	658	typhoid	81	paratyphoid	(44 A - 37 B)
France	406	"	5	"	(4 A - 1 B)
Austria	102	"	254	"	(para B)
Czechoslovakia	178	"	37	"	(30 B - 7 A)
British India	150	"	19	"	(12 B - 6 A - 1 C)
Mexico	100	"			

In Germany and Yugoslavia, some sixty cases only were recorded, and still less in other countries. Most were isolated cases.

The course of the disease was the usual one. Diagnosis was often based on symptoms and not always confirmed by laboratory tests. Widal tests for serious cases were always positive, both for typhoid and paratyphoid, with the exception of a very few cases of paratyphoid A. This, and the blood test, were both positive for the only case of para C (India).

Complications were few - one paratyphoid abscess (North Africa), one perforation of the bowel with general peritonitis (Saudi Arabia), a few intestinal haemorrhages and pulmonary complications, one infarct (India).

It was not always possible to trace the source of the disease: faulty sanitary installations, bad drains (especially in labour detachments), germ carriers. Some thirty carriers, at least, were found in Austria, India, Egypt, Czechoslovakia and South Africa. In Egypt, an epidemic was attributed to vegetables sold in a canteen. An epidemic of paratyphoid in Austria (254 cases) was said to be due to the consumption of bad horse flesh.

Immediate precautions were always taken : repairing of latrines, analysis of water and milk (water tests in the Vosges, France, 1945, disclosed paratyphoid bacilli), isolation of germ-carriers and their separation from other PW until complete disappearance of bacilli in faeces. In addition, all contacts were vaccinated a first or second time.

Inoculation (TAB injections) was not practised on a sufficiently wide scale, particularly during the first two years of the War, when the supply of vaccine was inadequate. Some was provided by the Scapini Mission (French). In 1942, the ICRC through its Delegate sent 180 cc which allowed 60 medical staff in North Germany to be vaccinated, likewise the kitchen staff and storekeepers. By degrees, all PW in labour detachments and PW and internees in camps were inoculated. From 1943 to 1944, most PW had been vaccinated; many a second time, from 1943 onwards. A few cases of vaccinal reaction, mostly mild, but 4 men were seriously affected and, in Poland, 2 NCOs (French and Belgian) died.

Men vaccinated a few months earlier, (e.g. an Italian PW in South Africa, and two German doctors) contracted the disease. The British MO in Egypt attributed inefficacy of the vaccine used to bad storage conditions and/or exposure to light. A PW who refused to be vaccinated contracted the disease and died in Palestine, whereas those who had been inoculated only had slight attacks.

Treatment was conservative and non-specific; heart tonics were administered in a few cases, to prevent pulmonary complications. In 1941, during a serious epidemic at Linz (Austria), the German MO prescribed eubasine, which could not be tolerated and had to be discontinued.

Deaths : For 2,281 cases, 150 deaths, about twenty of which were paratyphoid cases (15 para B). Deathrate : 6.54 %. The deathrate according to countries was as follows :

British India	35 deaths	23.3 %
Austria	68 "	19 %
Czechoslovakia	14 "	6.50 %
Egypt	10 "	1.35 %
France	5	0.48 %

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EXANTHEMATIC TYPHUS

AFRICA (North)  
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Exanthematic typhus was rare in North African PW camps.

Algeria (1942 and 1944) : 3 cases amongst Italian PW.

Morocco : 1 cases in June 1944, another early in 1946 (an Italian PW from Casablanca, sent to the isolation ward of the Municipal Hospital).

Total : 5 cases.

AUSTRIA  
=====

In February 1942, one case (British PW) was admitted to Graz Hospital, where he died.

In 1942, two cases. One died (French Zone), the other (political deportee camp, American Zone) recovered.

Total : 3 cases - 2 deaths.

BURMA  
=====

October, 1946, 24 cases amongst Japanese PW.

CZECHOSLOVAKIA  
=====

In September 1946, an epidemic broke out in Dubi internee camp; it lasted until May 1947. 184 cases were recorded; 173 patients recovered, and 11 died.

In 1947, in Doubrowa PW camp, a PW war-invalid (shell splinters in lung and foot) contracted typhus.

Total : 185 cases; 11 deaths. Deathrate 5.94 %.

#### EGYPT

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In 1943, 10 probable cases in Helouan Camp (Italian PW).

During trans-shipment of two steamers (see above, p.73 ), in 1944, 42 cases were reported; they were later found to be typhoid, with one mild case of murine typhus (a German PW). Nevertheless, in view of their number, the camp commandant ordered the men (all Germans) to be disinfected. All German and Italian PW having been vaccinated in the course of 1943, the three principal camps in Egypt reported no single case for the six months ending March, 1944.

Total : 10 cases, plus 1 murine typhus.

#### FRANCE

=====

No case recorded until 1945 and the early part of 1946.

In April, 1945, a few cases amongst German PW just arrived in American camps in Northern and South-West France; 7 cases in the Sarthe. Precautions taken prevented the spread of the disease.

In July, 1945, a German PW was sent from Issigny Camp to Carentan Hospital (Calvados); in an American camp at Crotoy-Attichy (Northern France), 80 Germans fell ill. The epidemic was quickly stamped out; by August 16, one patient only remained under observation.

Two serious epidemics were reported in September and November, 1945. The first occurred in the Annamite Camp at St. Médard-en-Jalles (Gironde). According to the French commandant responsible for PW in this area, the epidemic was due to two German PW convoys from former French camps, near



Rennes and Le Mans. These men were in a poor state of health and infested with lice, but were not apparently responsible for carrying virus to the Bordeaux area. The virus was already present in St. Médard camp, the inmates of which - several hundred invalid PW awaiting repatriation - were in no better state of health than the new arrivals. As the camp MOs at Le Mans and Rennes had found no manifest cases or suspects, the epidemic apparently developed in the Annamite camp. The cases being comparatively mild, diagnosis was difficult and was sometimes possible only after a period of weeks. For this reason, precautionary measures were often inadequate, and mistakes were made, even by civilian doctors and specialists, who were misled by the sudden appearance of fresh symptoms. Cases were sometimes diagnosed as typhoid or bacillary dysentery. Some of the patients were taken to Germignan Hospital, others to Souges Hospital, where five huts were installed for them. Special tests were made at the Robert Piqué Hospital (Bordeaux).

At least 400 cases and 52 deaths, were registered. By November 13, about one hundred cases were under treatment and as many were convalescent. The death-rate was about 13 %. The Delegate was told that in October the number of deaths had reached a peak of some 30 in one day.

By January 18, 1946, some twenty patients were still under treatment; 3 deaths were recorded between January 1 and February 18. The Weill-Felix tests were positive for all patients and convalescents, as well as for 7 French camp guards, 1 German doctor (Souges Camp) and 13 German nurses (one of whom died, aged 58). In March, two cases were reported in the Marne, and two at Epinal Military Hospital (Vosges).

The second epidemic broke out at the end of November, 1946, in a labour detachment (Lot-et-Garonne). The germs had apparently been introduced by the camp spokesman from St. Médard, sent to fetch Red Cross relief supplies; 70 men in the labour detachment sickened and contaminated at least 200 others. There were 57 deaths. The Delegate believed that a few kilos of DDT would have prevented this disastrous incident. 190 patients were taken to Germignan Hospital and 76 to Fumel (Landes). The whole of the South-West region was placed in quarantine, to the end of February, 1947.

Total for France : 757 cases; 109 deaths; deathrate 14.39 %.

#### GERMANY =====

Cases were most numerous during the last quarter of 1941, and particularly in 1942. PW of all nationalities were

affected, the French principally, followed by the Yugoslavs, Belgians, British and Poles.

The PW doctors and medical personnel who attended the Russian PW for delousing purposes, and men in camps situated close to Russian camps, were most exposed to contagion.

By the end of 1941, 71 cases were recorded in Silesia, Saxony, and the Hanover and Danzig areas, as follows :

20 British  
15 French  
10 Yugoslavs  
4 Poles  
22 Russians.

They included 19 British medical orderlies and 5 doctors (2 Polish and 3 French). The French had been detailed from an Oflag near Dresden, where they had been unoccupied owing to their Jewish origin, to give their services in a Russian camp. They returned to the Oflag a few days later (not to a camp hospital) with temperatures of 40° - 41° C (= 104° - 106° F).

In the infirmary, they were treated by the German MO for "influenza". Eight days later, on the insistence of the French PW doctor and the camp spokesman, another German MO was called in; on his advice, the patients were removed to the ward for exanthematic typhus at Elsterhorst Hospital, and put in the charge of a French doctor (the only one who, at the time, had been vaccinated).

Of the 71 cases on record, 14 died, viz.

7 French  
4 British (including 1 doctor, 2 medical orderlies)  
2 Yugoslavs  
1 Polish doctor

The deathrate, by the close of 1941, was 19.7 %.

In December, 1941, when two ICRC doctors visited the camps, labour detachments and hospitals in the Dresden area, several hospitals were found to be in quarantine. This was not raised until Jan. 17, 1942; admission was therefore granted only to Delegates who had been vaccinated, and subject to disinfection after each visit. The Delegates paid particular attention to Elsterhorst Hospital where, on Dec. 13, 1941, there were still 15 cases (the 5 French doctors and 10 Russian PW). At this time most of the doctors and medical orderlies had not yet been vaccinated.

Records for Jan.- June 1942 showed 604 cases and 136 deaths (deathrate 22.5 %). Most of the cases were Russians (some 300), followed by the French (143), the Yugoslavs, British, Poles and Belgians.

The following were infected by contact with the Russians : six doctors (one British and 5 Yugoslav) 41 medical staff (31 French, 9 Yugoslavs, 1 German). Among the dead were 4 doctors (1 British, 1 Yugoslav, 1 French, 1 Jew) and 3 medical orderlies (2 Yugoslavs, 1 German). The German caught the disease in a Russian camp, and after a few days illness died in Ettmannsdorf Hospital (Bavaria). Two medical orderlies (a Yugoslav and a Frenchman) detailed to a Russian labour detachment from which two cases had just been removed, fell ill. Neither had been vaccinated, contrary to the assurance given by the Supreme Command that no unvaccinated doctors or medical staff would be called upon to attend Russian PW.

In January 1942 vaccine was supplied by the Scapini Mission to a few camps, the quantity being sufficient to inoculate about 90 persons (doctors, medical orderlies and kitchen staff).

Early in February, three deaths occurred amongst 35 Russians admitted to a hospital in Silesia. The Senior MO reported that on their arrival all were in a state of advanced cachexy following the feverish stage; on the grounds of positive Weill-Felix reactions, all had been classified as cases of general debility. He added that deaths took place on the tenth day of the illness, after acute dehydration due to excessive polyuria. Hypertonic glucose serum was useful in some cases; subcutaneous injections with blood from 15-day convalescents had apparently no effect, whereas the same injections, with blood from later convalescents was fairly satisfactory.

In 1942 (end of February), vaccination was begun in earnest. The Germans inoculated a Yugoslav doctor in North Austria; the French Government sent vaccine with which a French PW doctor inoculated a colleague, a Yugoslav orderly and himself. The Scapini Mission repeatedly sent supplies of vaccine, in particular for the delousing squads, and the doctors and personnel (Polish and French PW) attending the Russians. From the end of March, 1942, most of the doctors and orderlies who looked after the Russians seem to have been vaccinated by the Germans, but not all. Thus, a doctor who had not been vaccinated or called upon to take precautions, such as shower-baths, was detailed to attend typhus patients in a Russian labour detachment; he contracted the disease. The same applied to another doctor, a Yugoslav Jew, who died.

Two doctors and two orderlies (1 Pole, 3 French), though inoculated with Weigel vaccine, suffered slight attacks. This vaccine was mostly used for French and Belgian PW in Westphalia, in the Posen area, and in Pomerania.

In 1942, figures for the second half-year were slightly higher than for the first, and amounted to 702 cases, with a lower deathrate of 80 = 11.3 %.

During this period, most of the sick were Russians, but the Delegate was not told their exact number. In Russian PW camps in East Prussia, half the inmates were apparently affected, followed by the French (284 cases), Yugoslavs (113), Belgians (52), Germans (19), British (5) and Poles (2).

The total of 702 included 9 doctors (6 French, 2 Poles, 1 Yugoslav), 10 orderlies (5 French, 5 British), who had attended to the Russians; 2 doctors (French and Yugoslav) and 4 French orderlies died (one orderly with meningitis). As in the earlier period, the delousing squads for Russians were the first victims, and, in their turn, spread the disease in camps. Thus, 160 French, 50 Belgians and 2 Yugoslavs in a Stalag near Berlin were infected by French germ-carriers who had worked near the Russians; 13 deaths occurred. This Stalag was placed in quarantine only after the German MO himself fell ill and left. The Russian doctor in charge was inexperienced, insufficiently qualified and much overworked.

In August, 1942, most of the doctors, medical orderlies and kitchen staff had been inoculated with Durand-Giroud vaccine. Vaccination was also carried out in labour detachments and in several camps, particularly after contact with the Russians, or when PW worked with them.

In November, fresh vaccinations were carried out in several hospitals (including orderlies inoculated early in the year). In December, the ICRC furnished a Hanover Stalag with vaccine (from the Zurich Hygiene Institute), sufficient to inoculate 2,000 prisoners of all nationalities. The British PW doctors did not show themselves eager to vaccinate their men, on the grounds that this was the concern of the German authorities.

At the close of 1942, 51 litres of vaccine were supplied by the Scapini Mission and 7 litres by the ICRC; this quantity allowed the vaccination of all French PW at Küstringen, near Berlin. A PW doctor in the Mayence district, who had a large stock of vaccine (7,000 injections) practised, on the suggestion of the Delegate, extensive inoculation in labour detachments, and re-vaccination in some cases.

In 1943 a decrease in the number of cases was apparent; the reports spoke only of 48 cases and 7 deaths (deathrate 14.50 %). These figures did not, however, include cases amongst the Russians and Yugoslavs, for whom no exact numbers were given.

The 48 cases included 26 British, 14 French, 8 Yugoslavs; the deaths were 4 British and 3 French. One of the French died in a Thuringian hospital after a negative Weill-Felix test, but this had been made in the early stages (fourth day). An Irish doctor, formerly in the colonies and well acquainted with the disease, had diagnosed the case as exanthematic typhus; the post-mortem revealed encephalitis.

In February, a short but dangerous epidemic occurred in a Westphalia Stalag, amongst Russian and Yugoslav PW; the latter came from a Russian labour detachment, which was infested with lice. From this time on, Northern Austria was free, with the exception of a single case of the ordinary type, with negative tests, in a camp with French, American and Russian PW only.

In May, 1943, the French Government ordered the re-vaccination of all who had been inoculated in 1942, and the inoculation of all persons who had been in contact with PW from Central and Eastern Europe. In the Autumn, sufficient vaccine being available, practically all PW were vaccinated. No Americans fell ill, although they had not been inoculated in their camps.

In 1944, cases were more numerous (596); there were 12 deaths (deathrate 2.01 %). Most of the sick were Russians. Out of the total the following had not been vaccinated :

Russians	182
French	5
Jugoslavs	3
Italians	5
Pole	1
Germans	2

It was discovered that the inmates of a Pomeranian Oflag had not been inoculated, nor had the Poles sent from Warsaw to a camp near Hamburg. Doctors sometimes had difficulties in practising inoculation; thus, in a Thuringian Stalag in April, 1944, a French doctor who had given first injections in various labour detachments, was refused permission by the Germans to make the second injections three weeks later; these were to be given in August only, by which time the vaccine stocks in camp, where there was no cold storage, would have become useless. The doctor finally obtained satisfaction.

Early in February, 1945, 1,200 Russians and 90 Jugoslavs from labour detachments near the combat zone and sent to a Stalag near Mayence, all showed symptoms on arrival. The men were isolated in barracks at Landau, and 39 died (30 Russians, 9 Jugoslavs). British, French, Indian, American and Dutch PW in the same camp were not affected; the majority had, it is true, been vaccinated.

From March, 1945, very few cases were recorded, and only a few suspects, in the British Zone and French Zone (Tuttlingen Discharge Centre). Here the doctors asked for vaccine, which was sent by the ICRC Delegation in Paris.

Summary for Germany

Total : 3,311 cases; 288 deaths. Deathrate 8.69 %.

<u>Year</u>	<u>Number</u>	<u>Deaths</u>	<u>Doctors and</u> <u>orderlies ill</u>		<u>Doctors and</u> <u>orderlies died</u>	
			D.	O.	D.	O.
Oct. 1941	71	14	5	19	2	2
1942	1,306	216	21	53	7	8
1943	48	7	--	--	--	--
1944	596	12	--	--	--	--
1945	1,290	39	--	--	--	--
	<u>3,311</u>	<u>288</u>	<u>26</u>	<u>72</u>	<u>9</u>	<u>10</u>

Deathrate 8.69 %

By nationalities :

<u>Cases</u>				<u>Deaths</u>			
<u>Doctors</u>		<u>Medical personnel</u>		<u>Doctors</u>		<u>Medical Personnel</u>	
French	16	French	37	French	3	French	4
Jugoslav	5	Jugoslav	9	Jugoslav	3	Jugoslav	3
Poles	3	Pole	1	Pole	1	British	2
British	2	British	24	British	2	- - -	-
- - -	-	German	1	- - - -	-	- - -	1
Total	<u>26</u>		<u>72</u>		<u>9</u>		<u>10</u>

Deaths by nationalities

French	118
Jugoslavs	52
Germans	22
Russians	13
British	9
Poles	5
Belgians	2
Unknown	68 (probably Russians, judging by statistics from other sources)
	<u>288</u>

Division according to districts

Silesia . . . . .	488
Pomerania . . . . .	256
Thuringia . . . . .	287
Berlin District . . . . .	195
Hamburg-Lubeck District . . . . .	104
Bavaria . . . . .	53
Northern Austria. . . . .	51
East Prussia. . . . .	46
Southern Austria. . . . .	40
Baden-Wurtemberg. . . . .	22
Saxony. . . . .	10
Posen . . . . .	3
Danzig. . . . .	1
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Partial total	1,556

HUNGARY

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In 1944, vaccination was practised in the majority of Polish PW camps (Jewish officers and men), and in the Polish internee camps.

In 1945, in an internment camp in the South (Russian Zone), 22 cases and 2 deaths were recorded.

INDIA (British)

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In 1943 : 16 Italian PW in the Southern Camp Group were admitted to the British Military Hospital, where they all died.

A Central Group Hospital reported a single case, plus 1 murine typhus.

In 1944 : 20 cases in the Bikaner Group. 4 deaths.

In 1945 : in late August, 1 case in the Central Group Hospital.

Total : 39 cases (plus 1 murine typhus); 20 deaths.  
Deathrate 51.28 %.

ITALY

=====

In 1941 : 1 certain and 7 doubtful cases in a Greek PW camp at Servigliano (Rome).

In 1945 : 17 cases and 1 death in an American labour detachment.

In 1946 : In a British camp near Rimini, 1 German PW from Taranto under treatment.

Total : 26 cases; 1 death. Deathrate 3.84 %.

JUGOSLAVIA

=====

In 1945, a PW from the Zagreb area, where a centre of infection existed, was admitted to hospital; other cases were also being treated there. According to the two German and Yugoslav MOs in charge, the deathrate up to September 18 was less than 5 %. In September, when visiting the district PW hospital at Indja, the Delegate observed a German doctor suffering from a feverish rash, probably exanthematic typhus, of which there were some 50 cases. The deathrate did not exceed 2 %.

Throughout the Winter of 1945-1946, 2 cases only were recorded amongst German PW; the epidemic was therefore subsiding. The camp MO was apprehensive of a fresh outbreak, on the grounds that the emergency precautions taken until October would be more difficult to apply in Winter. In spite of his misgivings, there was no increase; this was doubtless due to thorough delousing and widespread vaccination.

Total : 54 cases. Deathrate, about 5 %.

PALESTINE

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In 1942 - One death (Italian priest) in a Government Hospital.

In 1944 : All male internees vaccinated in the German civilian camps. In May, none of the internees, whether German or not, had contracted the disease.



POLAND

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In October, 1939, Dr. Marcel Junod, when passing through Warsaw shortly after the bombardment, was informed that four cases were under treatment. The disease has always been endemic in Poland. To combat it, Professor Richter, of Warsaw, ordered the delousing of all slum dwellers; he asked for the proper apparatus, of which too few were available locally.

In May 1942, most PW had been inoculated with vaccine supplied by the Scapini Mission. By March, 1943, MOs were able to practise re-vaccination. During the Winter, in a camp under German control, there were 14 cases amongst Polish, French and Belgian PW, with 2 deaths. All the patients came from a labour detachment. The doctor said they had been very badly cared for in Tarnopol Camp, which was short of medicaments and had been slow in receiving the vaccine supplied by the ICRC.

In 1946, 22 further cases were reported, but no deaths. The German MO stated however that there had been very many sick of exanthematic typhus during the Winter of 1946-1947. Of the 1,005 inmates, nearly one-third had fallen ill, i.e. 330 cases, of whom some 20 died.

Total : 370 cases and at least 20 deaths. Deathrate : 5.94 %.

SUMMARY

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Delegates' reports record 4,808 cases and 456 deaths (deathrate : 9.4 %), but this is certainly not a true picture, since the figures for Russian PW were hardly ever given.

Exanthematic typhus was found in many camps, both in belligerent countries and in occupied territories; it was particularly common in Germany, France, Poland and Czechoslovakia :

	<u>Cases</u>	<u>Deaths</u>	<u>Deathrate</u>
Germany	3,311	288	8.69
France	757	109	14.39
Poland	370	22	5.94
Czechoslovakia	185	11	5.94

The number of cases in other countries : Yugoslavia, British India, Burma, Hungary, Italy, Egypt, North Africa,

Austria, Palestine - never exceeded fifty and the deathrate kept low, with the exception of British India, where it reached 51.28 %. In these countries, the cases were isolated rather than epidemic. Two cases of murine typhus were recorded, one in Egypt, the other in India.

The disease was most prevalent among the French, followed by the Yugoslavs, British and Poles. The Italians, Japanese and Greeks were rarely affected.

### Areas

France - The two worst epidemics occurred in South-Western camps (Gironde - Lot-et-Garonne).

Germany. - The majority of cases occurred in Silesia, Pomerania, East Prussia, Thuringia, Bavaria, Saxony and Northern Austria. In the last-named, the neighbourhood of Russian PW camps led to numerous cases amongst the doctors and medical personnel of other nationalities detailed to the Russian sick.

### Contagion

In Germany, 26 doctors (16 French, 5 Yugoslav, 3 Polish and 2 British) and 72 medical orderlies (37 French, 24 British, 9 Yugoslav, 1 Polish and 1 German) contracted typhus at the end of 1941 and during the first six months of 1942, when vaccination was infrequent.

Deaths : 9 doctors (3 French, 3 Yugoslav, 2 British and 1 Polish); 10 medical orderlies (4 French, 3 Yugoslav, 2 British and 1 German). In addition, 2 German doctors (not vaccinated) fell ill while treating typhus cases, one in South-West France in 1945, the other in Yugoslavia.

### Vaccination.

This only became general as from January 1942. Doctors, medical orderlies and kitchen staff were the first to be inoculated, particularly those in contact with Russian PW, or in charge of delousing operations. In the course of 1942, and in 1943, the Scapini Mission and the ICRC supplied vaccines (Durand-Giroud, from the Zurich Hygiene Institute), especially in Germany. Early in April 1942, practically the whole medical service had been vaccinated. The Germans stated that duly inoculated doctors and medical staff only were sent to attend Russian PW, but this was apparently not always the case. Thus, one French and one Yugoslav doctor were both infected in a Russian camp. Neither had been vaccinated; the Yugoslav died.

From August 1942, many PW in labour detachments and camps had been vaccinated. By November, some of those vaccinated early in the year could be re-inoculated. No after-effects were reported. Two doctors (French and Polish), and two medical orderlies (Polish) were, however, affected, in spite of inoculation, with typhus in a mild form. Weigel vaccine had been employed in their case; it was in common use for Belgian and French PW in Pomerania, Posen and Westphalia.

In December, 1942, the ICRC dispatched sufficient vaccine to a Hanover Stalag to inoculate 2,000 PW of all nationalities; it also provided 7½ litres of vaccine for French PW at Küstringen (Berlin). The vaccine came from the Zurich Hygiene Institute (director, Prof. Mooser). Further, a PW doctor in the Mayence district, who had a large stock (7,000 injections) practised, on the suggestion of the Delegate, mass vaccinations in labour detachments, and some re-vaccination.

In 1942, the ICRC also issued vaccine for French and Belgian PW at Tarnopol; the consignment was much delayed before reaching the camp.

Supplies were also sent to the French Zone, at the request of the MOs at Tuttlingen Discharge Centre.

#### Weill-Felix Tests

The results of this test were always positive, except in one instance, when it was made too early (fourth day).

#### Treatment

The reports make no reference to treatment, except in connexion with an epidemic in Silesia (February, 1942). The MO who attended Russians arriving in Germany in an advanced stage of cachexy reported that deaths, in most cases, occurred on the tenth day, after acute dehydration due to abundant polyuremia. Treatment with hypertonic glucose serum was helpful; subcutaneous injections with blood from 15-day convalescents had apparently no effect, whereas similar injections of blood from more advanced convalescents were fairly satisfactory.

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DYSENTERY and PARASPRUE

AFRICA (North)

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Delegates who visited Italian and German PW camps, from 1942 to 1947, reported about 554 cases of dysentery, of which over half were amoebic. Six deaths, namely (1943) 2 Italians in Algeria (one chronic), 3 in Tunisia (one with complications) and (1944) 1 in Morocco. Deathrate 1.08 %.

Algeria.

Some 50 cases. One man from a labour detachment was in hospital several months, with amoebic dysentery, deficiency oedema, and serious cachexy (attributed to malnutrition). He managed to recover. Some cases of amoebic hepatitis (2 deaths). One Italian PW died from chronic dysentery.

Morocco.

In Summer 1942, dysentery reached a peak with some 200 cases; amongst them were several convalescent after an epidemic which broke out in the previous Autumn at Bou-Arfa. Patients spent several months in Meknès Hospital, on special diet. Others from the foreign workers' camp near Oujda arrived in very weak condition; one died shortly after admission.

Tunisia.

Early in 1943 a slight epidemic : about 100 cases, and 3 deaths. The majority were men from French labour detachments. At the end of 1943, there was a decided decrease.

In 1947, an outbreak was reported among the civilian population and records showed some 200 cases in Italian and German PW camps. When the Delegates last visited the camps (close of 1947) only a few cases were reported.

Tripolitania.

In 1941, British PW recovering from dysentery arrived from Cyrenaica. They had endured great hardship, were very emaciated and their wounds healed with difficulty. A university professor and skin specialist treated them by a method of his

own (application of fresh blood to the sores) which gave good results.

In 1945, four serious cases were admitted to Benghazi Hospital from a German PW company.

#### AFRICA (Central and South)

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##### Southern Rhodesia.

586 cases recorded amongst German and Italian internees (Salisbury, Gatooma, Fort Victoria, Unwuma), almost all amoebic and chronic amoebic; some sixty with hepatic complications. Many of the internees came from Abyssinia. The most serious epidemic (amoebic) occurred at Salisbury (308 cases), and was probably caused by germ-carriers amongst the internees. The camp had the same water supply as Salisbury town, where no case was reported at the time; the sewage system could not be held responsible, as this water was not used for irrigation purposes; the fruits and vegetables were the same as for the municipal and military hospitals. No case occurred elsewhere and flies were scarce.

The internees preferred yatrem and were most reluctant to accept emetine, which they believed "to provoke liver trouble"; their unwillingness may have contributed to the duration of the epidemic.

The number of cases fell in the Autumn of 1942. In 1943, however, about fifty cases were reported amongst internees, including one German doctor. Examination of the faeces revealed neither bacilli nor amoebiasis; the epidemic had no serious consequences.

##### South Africa.

In 1941, one hundred cases, mostly amoebic, amongst Italian and Germans; several were very serious.

In 1942, an outbreak (with Flexner bacilli) was caused at Bavianspoort Camp by Germans from Tanganyika.

##### Kenya.

Between 1943 and 1945, there were 14 bacillary, 71 amoebic and a few chronic cases, the last-named contracted previous to internment.

Sudan.

In the Summer of 1941, a sharp epidemic occurred (Shiga bacilli, amoebic) which particularly affected Abyssinian and Italian PW.

In 1942, a few amoebic cases were recorded. The bacillary form (Flexner and Shiga bacilli) was often followed by pellagra, which does not occur after amoebic dysentery.

Total for Africa (Central and South) : 822 cases.  
Two serious epidemics.

AUSTRIA

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In 1942, a serious epidemic broke out in Northern Austria; it seems to have affected 75 % of all French, Polish and Yugoslav PW. Most cases were amoebic. The epidemic lasted three weeks only; there was only one death. The outbreak was attributed to the lack of drainage in most labour detachments.

In 1944, 7 American Air Force officers, shot down over Hungary, fell ill and were sent to Vienna from Budapest Prison, first to the Municipal Hospital, later to the Robert Koch Hospital. All seven recovered.

BELGIUM

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After the Armistice and until 1946, 20 German PW were reported ill in two American camps, and 856 in three British camps - a total of 926 cases, with the very heavy deathrate of 21.5 %. The figures do not include the epidemic causing 200 deaths, to which the following paragraph refers.

In November 1945, an epidemic broke out in a British camp, following reductions in food rations and cold weather. 200 deaths occurred between Dec. 1945 and Jan. 1946. Morbidity fell in February, after rations had been increased. On January 30, 1946, there were still 300 patients being treated with sulfaguanidine (228 tablets of 0.50 centigrams, taken at the rate of 60 tablets the first day, 60 the second, 30 the third, 18 the fourth, fifth and sixth, 12 the seventh and eighth).

In March, 1946, an epidemic occurred in another British camp but was already checked by April, thanks to sulfaguanidine (7 tablets thrice daily), and to the precautions taken : drainage repaired, latrines under guard and all prisoners compelled to rinse their hands in a disinfectant solution after use.

Total : 926 cases, 200 deaths. Deathrate 21.5 %.

#### BURMA

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In 1946, 3 cases only - one amoebic - were recorded in Japanese PW camps.

#### CORSICA

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Dysentery was frequent in many German and Italian PW camps; the doctors believed that half the number of inmates had been affected. Most of the cases were mild and yielded readily to the usual treatment with sulfaguanidine. Eight Italian PW died, however, in Ajaccio Military Hospital, from apparent dysentery, complicated with oedema and cachexy. Other cases of dysentery, with bloody faeces and early death, were also recorded among German and Yugoslav PW. A fair number of bacillary cases led to apparent avitaminosis.

From 1946 onwards, the number of cases showed a marked decrease (12 cases in hospital in March, 2 in April and 2 in May, all German PW). In a general report on German PW camps in Corsica (June, 1946) the Delegate wrote that cases still occurred and that dysentery was third by order of prevalence. Accurate diagnosis was usually not possible, owing to the absence of laboratory equipment, even of a microscope. 17 post-mortems were practised; the bowel coating was found to be very thin and covered with small ulcers, varying in size from a pinhead to a shilling; in some cases they involved the whole thickness of the bowel.

## CZECHOSLOVAKIA

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In 1946-1947, 200 Flexners occurred in a German PW camp and an assembly centre.

Throughout the Winter of 1945-1946, dysentery was the principal cause of deaths.

In July, 1947, another outbreak in a hospital for German civilians; it affected men, women and children. Faeces tests showed that eight days' treatment with guanacil eliminated the bacilli, but the better food no doubt improved the patients' stamina and helped their recovery.

## EGYPT

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Most German, Italian and Libyan PW camps were affected, chiefly the Italian. In 1942, the peak was reached with 572 cases; later years showed a marked decrease, with barely fifty cases in 1946. There were no real epidemics and few serious cases; amongst the total of 1,335 reported by Delegates, 3 deaths only occurred: a deathrate of 0.22 %.

Laboratory tests gave the following figures :

- 323 amoebic
- 305 bacillary
- 131 Shiga bacilli
- 30 Flexner bacilli (3 deaths)
- 10 general.

Mild cases were usually treated in the camp infirmaries, serious cases in hospital. In most instances there were no complications, only 2 abscesses of the liver. About fifty cases were recurrent amoebic, contracted before arrival in camp.

Amoebic cases were usually treated in isolation tents, with commodes; pans and contents were disinfected with lysol.

## FRANCE

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Dysentery was one of the commonest diseases; the Delegates reported no less than 11,000 cases, and at least 300 deaths,



i.e. deathrate of about 2.72 %. In most instances, the origin could not be determined, through lack of apparatus and perhaps of time, so that the figures recorded might have included cases of simple diarrhoea. Nearly all the 11,000 cases occurred during the year 1945.

In 1941, during the occupation, a single mild epidemic only was reported from the British internee camp at St. Hippolyte du Gard; in October 1942, there were a few cases amongst natives of Senegal, Madagascar and Martinique in a Front-Stalag (Basses-Pyrénées).

By the end of March, 1945, a few weeks before the Armistice, dysentery had already made an appearance in German PW camps; many of the inmates had introduced it from Germany and fell an easy prey, owing to bad state of health.

Morbidity was greatest in Central France - some 5,000 cases. In many of the camps, holding 5,000 to 6,000 PW each, 25 to 50 % of the inmates were reported sick, but the disease was, as a rule, not serious and responded to sulphamide treatment. The deathrate was low : 0.4 %.

In July-August, 1945, in North and North-East France, figures were lower, viz. 2,662 cases, and epidemics were not serious (deathrate 0.22 %). Most of the patients (German and Austrian PW) recovered in a very few days; many camp MOs observed, when the epidemic died down, that the worst cases were among the under-nourished.

The disease was apparently stamped out in this region by the end of September; a fresh outbreak (about 600 cases) occurred, however, in December. No deaths.

In March, 1945, there was a serious outbreak near Paris, totalling 1,159 cases. It proved difficult to check as medicaments were short, tanalbine and bismuth only being available. A slight epidemic affected 5 to 20 % of the men in a neighbouring camp. In the Summer, serious outbreaks were reported, especially among the under-nourished : 33 men died. The physically fit seem to have overcome the disease fairly easily. Medicaments were apparently plentiful, except sulphamides, which were exhausted.

In the Summer of 1945, a serious epidemic occurred in an Austrian, Hungarian and German PW camp in North-West France. The deathrate was heavy : 1,615 cases and 160 deaths, i.e. 10 %. This outbreak continued until October in the Morbihan, where the last batch of PW from Germany, and Czechs landed at Lorient, had been sent; a few cases of enteritis had been wrongly diagnosed as ordinary summer diarrhoea. The new arrivals - from 1,200 to 1,400, all in poor general condition - were contaminated, and 10 to 12 fresh cases were reported daily. Several had slight fever, with mucus and blood in the faeces and variable pulse - the usual symptoms of dehydration.

Isolation proved to be impossible owing to lack of space; the sanitary arrangements were very poor and the rations bad - all of which helped to extend the epidemic. Treatment was primitive and consisted usually of dieting. Tanalbine and bismuth did not prove satisfactory, and laxatives apparently had a bad effect generally on the serious cases. No medicinal charcoal being available, wood charcoal was given, which inflamed the mouth. Medicaments such as hydrochloric acid, iron and vitamins were unfortunately lacking. When sulphamides (sulfaguanidine, eubasine, daganan) at last became available, the situation entirely changed. Recovery was, however, very slow - patients were extremely emaciated and many complications occurred: articular pains, oedema appearing four or five days, or even later, after recovery from dysentery, oedemas affecting the face and the back, sometimes the whole body, especially the legs, when the patient could stand. These symptoms were in part attributed to previous malnutrition. The epidemic lasted from July 5 to September 30 and caused 7 deaths, 6 in hospital and one in the infirmary.

In the South-West and South of France (Landes) slight epidemics of the bacillary form; only a few deaths.

In an assigned residence centre (Vienne) an epidemic of amoebic dysentery, confirmed by hospital and laboratory tests on some of the patients sent to Poitiers Hospital, was checked by specific treatment. There were, however, 45 deaths out of 845 cases (deathrate 5.32 %).

In September, many deaths were caused by an epidemic in South-East France, during the period when American food supplies were not yet available. From October, 1945, when food parcels were once more issued, no more deaths occurred, although the cases were as numerous and as serious as during the earlier period.

In North-East France, where sanitary installations were most primitive - the faeces of 300 patients had to be removed each day in pails - the last cases for 1945 were recorded. At the close of October, the epidemic seemed to be checked. In December, 1945, and January, 1946, however, 643 cases were reported in Northern France, due to the pollution of water by sewage. One death occurred (German medical orderly).

#### GERMANY =====

Given the number of camp inmates, the figures for dysentery were relatively low. From 1940 to the end of 1944, a few epidemics of varying importance were recorded. The reports mention some 600 cases, with 10 deaths. Deathrate : 1.68 %.

Most cases occurred in the year 1940 amongst French, Belgian and Polish PW in the Berlin and Dresden areas. An epi-demic during the Summer was stamped out in two to four weeks; another, in the Autumn, was of longer duration and also affected some 20 Indians. 300 patients had Flexner bacilli. One death occurred.

In 1941, fifty cases were reported (Flexner bacilli) in British PW camps in the same area; there was also one amoebic case with abscess of the liver. Six deaths.

During the Summer of 1942, a fair number of dysentery cases with Flexner bacilli were reported amongst French, Belgian, Yugoslav, British and Polish PW. Most of these small outbreaks were rapidly checked. One French PW died.

An epidemic of 140 cases, but of a mild form, was reported from the Berlin area early in 1943; it was attributed to polluted drinking water.

In 1944, a similar epidemic near Mayence was due to defective latrines. Another fairly serious epidemic followed in December; it caused 2 deaths (French PW). Serious cases were treated in the infirmary, minor cases were left amongst the other PW. A French doctor informed the Delegate that in November 1944, an epidemic of about 50 cases had occurred in a labour company, immediately after a bombardment.

After the Armistice, in October 1945, an epidemic broke out in a German PW camp at Breitzenheim (French Zone); the neighbouring camps were placed in quarantine.

350 out of 600 cases reported in Germany had Flexner bacilli; the amoebic form was second in importance, Ten deaths included 6 British, 3 French and 1 Polish PW.

#### GREAT BRITAIN

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From 1941 to 1944, the reports speak of some 60 cases, mostly German and Italian PW infected overseas, particularly in Africa. Only one amoebic case was recorded; the remainder were bacillary (Shiga bacilli, usually). No deaths.

On arrival, all patients were isolated without treatment for five days, then given sulfaguanidine (British Army formula - 63 gr. in 7 days). To prevent the formation of sulphamide crystals in the kidneys, without simultaneous over-dilution of the blood, abundant diuresis was induced and five pints of

liquid given daily. Progress was checked by means of barium hydroxide enemata, a rectosigmoid radioscopy and ten negative faeces tests, beginning five days after the final dose of medicament. If sigmoid ulcerations persisted, cultures were made from swabs of the ulceration with a sigmoidoscope. This treatment is said to have led to a high percentage of recoveries. Faeces tests made after recovery showed bacilli in about 10 % of cases only. Some bacilli, however, responded less easily than other varieties to this treatment.

#### GREECE

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In May 1941, several hundred cases were recorded in a camp at Corinth.

In 1944, a few cases in a camp for Yugoslav PW and internees at Salonika. One death.

#### INDIA (British)

=====

Dysentery is endemic throughout the country; it was observed in practically all PW camps, morbidity varying greatly according to the district.

From October 1942 until early in 1949, some 5,000 cases were recorded in camps, with the relatively small figures of 26 deaths, or a deathrate of 0.52 %.

These figures are far from representing the total of cases occurring in camps; they were noted by the Delegates when visiting, and were given them by camp MOs and PW spokesmen.

The greatest number of cases was reported in the Italian PW camps in Central India, near Bhopal, 600 metres above sea-level. Here the heat is overpowering; hygienic arrangements are poor, especially the water supply. The figures given were 2,800, for an average camp strength of 21,500. There were few deaths, 9 in all (bacillary in all instances). Deathrate 0.32 %.

Systematic measures prevented the epidemics from spreading, and were more thorough than in more favourably situated camps, all possible technical and scientific means being applied. The usual medicaments were issued, but many patients

complained that short supply often obliged them to purchase drugs for their own account,

Distinctions were not always made between the various forms of dysentery, but in Central India about one half of the cases were classified, as follows :

Amoebic primary .	620
Bacillary . . . .	453
Common. . . . .	354
Flexner . . . . .	87
Schmitz . . . . .	30
Shiga . . . . .	21
Sonne . . . . .	16

Finally, 5 cases of hookworm dysentery were recorded, in 1942 and 1944.

Turning to the Southern Group (Bangalore), situated at some distance from the coast (where the climate is one of the best in India), we find from 1941 to the end of 1944, 550 cases, for an average total of 20,900 PW and internees. There were 10 deaths (9 bacillary). Deathrate : 1.81 %. Men coming to this group from labour detachments, where supervision was less strict, were often germ-carriers.

249 laboratory tests gave the following figures :

Amoebic primary .	231
Bacillary . . . .	1
Shiga . . . . .	1
Flexner . . . . .	11
Sonne . . . . .	4
Schmitz . . . . .	1

About one hundred patients did not respond to the usual treatment; some were given amoebiazol (an Indian preparation, said to be a specific) and others - amoebic cases in particular - an Indian remedy containing bismuth. The latter, however, proved harmful for the kidneys (one patient died after administration) and was replaced by emetine hypochloride, in the form of injections or enemas.

In October 1941, a small inland group of camps, some 200 miles from Calcutta, recorded 455 cases. Following the Japanese advance in Burma, the inmates were shortly afterwards evacuated and the camps shut down.

In the North-Eastern Group (Dehra Dun), with about 10,000 inmates, where the climate is good and the hot season of short duration, 66 cases were registered, (29 amoebic and 37 bacillary). Six of the latter died.

The Northern Group (Kangra Valley), altitude 1,400 metres, on a Southern spur of the Himalayas, enjoyed an excellent

climate, in which tropical diseases never become epidemic. From 1942 to January 1945, with an average of 12,000 PW, records showed 460 cases. This relatively low figure was due to the smaller number of fresh arrivals; it consisted of :

Flexner	173
Common	91
Amoebic	48
Shiga	26
Bacillary	21(7 with blood discharge).

Contrary to the experience in the other Groups, Flexners were the most numerous. The disease was rapidly checked, thanks to excellent camp discipline and wise precautions. Thus, all cases of diarrhoea were at once sent to hospital, for detection of chronic germ-carriers. Nine of these were thus revealed.

In March 1949, 131 cases were recorded at Attock Fort, an Indian PW camp in Pakistan. At the time of the visit, the patients were on the way to recovery, though still suffering from secondary anaemia; for this, the MOs asked for T.C.F. vitamin B.

#### Civilian Internee Camps.

In these camps, with an average of 800-1,200 inmates, dysentery was infrequent; there were 317 cases in all, and the deathrate was low, viz. 0.31 %.

In the Central Camp of Premnagar-Dehra Dun, for detainees of various nationalities, Italians and Germans in particular, there were 219 cases (9 amoebic, 12 bacillary, the rest non-specific). No deaths.

For 1942 to 1944, Deoli Ajmer Transit Camp had 38 cases. Several of these were recurrent and were difficult to treat, owing to lack of medicaments. One German civilian, from the Dutch East Indies, died early in December 1942. In 1944, a few amoebic cases were reported in the Italian and Japanese compounds.

Internee camps at Satara, New Delhi and Purandhar had about 60 cases amongst Italian and Japanese detainees, but none were serious. In Satara Camp 2 Germans (48 and 51 years), 29 women and one child were affected. According to the spokesman, regulations had been disregarded and drinking water was not always boiled.

To resume : 5,000 cases were reported by Delegates from October 1941 to March 1949. In over 2,000 of these, tests were made to ascertain the pathogenic cause. The results were as follows :

Amoebic	936	(14 in civilian camps)
Bacillary	492	(12 in civilian camps)
Common	445	
Flexner	271	
Shiga	48	
Schmitz	31	
Sonne	20	

The amoebic form was the commonest; 200 cases were recurrent; others were complicated by abscess of the liver. The 26 deaths (25 PW in camp infirmaries, one internee) were bacillary cases.

In his General Report for India (April, 1944), Dr. Wenger stated that he had seen hundreds of chronic cases who, for months and even years, had suffered from inflammation of the bowels, leading to possibly fatal haemorrhage. He added that abdominal operations (for appendicitis, haemorrhoids, rectal fistula, etc.) were commonest amongst patients suffering from chronic diarrhoea.

#### Hill Diarrhoea and Sprue.

During the War, these ailments were mentioned only in reports on India, since they occurred nowhere else. Camp MOs designated them by the term "para-sprue", both having the same symptoms.

In the Northern Group (especially in the Kangra Valley district, despite its favourable climate) the Delegates recorded the following cases of sprue:

In 1941 (Jan. 1-Sept. 20)	41	
In 1943 (Jan. - Oct.)	43	
In 1944 . . . . .	113	(1 in Premnagar CI Camp)
In 1945 (Jan.1 - Sept.20)	61	(52 sprue and para-sprue,
	-----	9 hill-diarrhoea)
Total :	258	

Sprue was most prevalent during the monsoon and the following weeks; it reached a peak in 1944 with

31 cases	in November
26 "	in October
16 "	in December
11 "	in January.

During the other months the number never exceeded 9.

Most of the patients (Italian PW) recovered after treatment and diet. Two died from aplastic anaemia; others were repatriated, many with serious symptoms of secondary anaemia,

which gravely affected their general health. Some cases resisted all treatment for months, and became chronic.

Dr. Wenger agreed with the British MO that parasprue was "an individual and constitutional reaction to a specific climate". He pointed out, in support of his theory, that of 13,000 men in one camp group, 1 % only had been affected, while all lived in the same conditions. These figures were not higher than those for Europeans and Indians living in hill stations. Dr. Wenger concludes by saying that the number of cases recorded in this group was no indication that the climate was particularly unfavourable or that living conditions were bad. Such a conclusion was not borne out by actual facts.

Additional proteins would, it is thought, be a useful preventative.

#### IRAQ =====

About 40 cases reported between 1942 and 1946; most of them were of the bacillary type; 2 were common. No deaths.

#### ITALY =====

Very little dysentery.

In May 1941, an outbreak occurred in a Yugoslav officers' camp at Bogliano; the MO thought it was due to the poor quality of the drinking water.

In 1942, a few cases, mainly amoebic, occurred in Yugoslav PW camps.

In 1943, several amoebic cases amongst British and American PW in Caserta Hospital.

In April 1944, one case in a German PW camp in Southern Italy; sent to the British Military Hospital.



JAMAICA

=====

In 1942, some cases in an internee camp for men. In a women's camp, one woman doctor and two nurses (one from Basle), suffered from chronic dysentery. No serious cases.

JAPAN

=====

In 1942, in Manchukuo and Korea, 29 cases and 17 deaths were reported among British and American PW. From October, 1943, all PW were apparently vaccinated, and no more deaths were recorded.

JAVA

=====

In 1946, several cases were reported from internee camps. Two amoebics amongst Japanese PW.

In 1946, a fair number of dysentery patients, from a British camp, were in Batavia Hospital.

JUGOSLAVIA

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In 1945, about one hundred bacillary cases, none of them serious, were recorded amongst German PW.

In 1946, most of the patients in a PW hospital had dysentery. Opium and dieting sufficed to cure 80 cases.

MALAYA

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In 1943, a report on a Japanese camp speaks of 282 cases of recurrent amoebic dysentery; recovery was slow, owing to inadequate treatment.

In 1947, 34 amoebic cases amongst Japanese SEP at Nee Soon.

NORWAY

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In the Summer of 1945, a brief outbreak occurred in the German Staff PW camp at Marienborg (South of Trondhjem). There were 27 cases in all. Another outbreak, also mild, was reported in 1947. The Delegate was told that in 1943 a sharp outbreak had caused 78 deaths amongst Yugoslav PW.

PALESTINE

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Amoebic dysentery was apparently frequent in July, 1941.

In 1943, eight Italian PW treated in hospital.

In 1946, three cases in a camp for Italian collaborators.

In 1948, an outbreak in a Jewish camp for Arab PW, at Djalil was quickly stamped out.

POLAND

=====

In Rawa-Ruska Front Stalag and a Lemberg labour detachment, cases of dysentery and dysenteric diarrhoea were fairly numerous amongst French and Belgian PW; outbreaks,

usually of common dysentery, were speedily checked. Patients had to stay in bed for four to six days; the after-effects caused debility and emaciation. These outbreaks were attributed to inferior bread and contaminated water supplies.

In 1947, ten cases were recorded amongst Germans near Katowice.

#### UNITED STATES

A few sporadic cases occurred in Italian and German internee camps.

In California, some Japanese PW were found to be germ-carriers.

#### SUMMARY

Dysentery was one of the commonest diseases in PW and internee camps, but morbidity varied greatly as between countries, or even districts.

The reports show a total of about 22,000 cases and 650 deaths, or a deathrate of 2.92 %.

Morbidity was particularly marked in France and British India, the number of cases being as follows :

France . . . . .	11,000
British India. . . . .	5,000
Egypt. . . . .	1,335
Belgium. . . . .	926
South Africa . . . . .	822
Germany. . . . .	600
North Africa . . . . .	554
Malaya , . . . .	316

In other countries the total never exceeded 200 and was usually well below that figure.

Laboratory tests, when made, indicated that the amoebic form was commonest. In India, some 2,000 tests were made and the results were as follows :

Amoebic	956 (300 recurrent)
Bacillary	492
Flexner	271
Shiga	48
Schmitz	31
Sonne	20

In North Africa and Egypt, however, the amoebic and bacillary forms were practically equal in numbers.

In Germany and Czechoslovakia, Flexners were most frequent. In Great Britain, of 300 cases from overseas, one only was amoebic, the remainder having Shiga bacilli. In Southern Rhodesia, almost all cases were amoebics, about one quarter of these being chronic.

As a rule, epidemics were quickly checked and were not serious. On several occasions, however camp MOs found that a mild outbreak included serious cases.

There were few complications; besides one hundred instances of amoebic hepatitis and abscess of the liver in India, Egypt and South Africa, the following were noted : articular pains, anaemia, oedema and cachexy (France). In the Sudan, dysentery (Flexner and Shiga bacilli) was followed by pellagra. Some twenty cases of bacillary dysentery in Corsica showed symptoms of avitaminosis.

Epidemics were usually traced to the pollution of water by latrines, owing to lack or deficiency of drainage, particularly in labour detachments (Austria). A mild outbreak among PW in Poland was attributed to poor quality bread and contaminated water supplies. Many germ-carriers were discovered in India, Rhodesia and the United States; they were isolated and the usual strict precautions were taken to avoid contagion (see above). In November 1944, about fifty cases occurred in a German labour company, after a heavy bombardment.

Treatment was usually by sulphamides; in the early days of the war, these were often not available and were replaced by tanalbine, bismuth and simple dieting. Emetine, daganan, guanacil and sulfaguanidine all proved useful; the last-named was administered according to the U.S. Army formula (228 tablets of 0.50 gr. for the complete cure). In Rhodesia, PW objected to emetine, on the grounds that it caused abscess of the liver; patients were given yatrem and this, according to the British MOs, prolonged the epidemics. Failing sulphamides (India), amebiazol was given. In Yugoslavia 180 cases were said to have been successfully treated by opium and dieting.

For 22,000 cases, the deathrate was 2.92 %. Belgium, (200 deaths, number of cases not given), had apparently the highest percentage.

Figures for other countries were as follows :

France	2.72 %
Germany	1.66 %
North Africa	1.08 %
India	0.52 %
Egypt	0.22 %

In Corsica, post-mortems in 17 cases disclosed ulcers of various sizes, sometimes involving the whole thickness of the bowel.

Hill diarrhoea and sprue were reported from India only. 258 Italian PW and one internee in Northern camps were affected. Two deaths occurred from aplastic anaemia. Deathrate 0.77 %.

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D I P H T H E R I A

AFRICA (North)

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Algeria.

From 1943 to 1945, the number of cases did not exceed 60. One German PW suffering from post-diphtheric paralysis was sent to Laveran Hospital, Constantine, where he was treated with serum and recovered.

Morocco.

In December 1944, a outbreak occurred in a German PW camp. Although mild, it lasted some time.

AUSTRIA

=====

In 1945, a few cases in Northern Austria, where diphtheria is endemic, were treated in the isolation ward for Italian PW in a Vienna Hospital.

In 1946, one case in a political detainee camp, American Zone.

In 1947, two cases (Austrian internees who had been vaccinated).

BELGIUM

=====

During 1945, after the Armistice, about 60 cases were reported in British and American camps. The patients were nursed in camp hospitals. No deaths.

In 1946, ten cases were sent to the British Hospital at Ostende. In April, 14 cases were treated in Beverloo Hospital. In March, a slight epidemic (45 cases) occurred in an American

Labour Service Group; patients were sent to Liège Hospital. The epidemic was of short duration and not serious.

In September, in a Belgian camp at Erbisoeul (Hainaut), out of 550 patients there were 100 cases of diphtheria. They were sent to Beverloo Hospital. No paralysis; no deaths.

#### CZECHOSLOVAKIA

=====

In 1947, a slight epidemic (about ten cases) in a German civilian assembly camp. One death.

In 1948, in a camp for aged and sick Germans, six cases were recorded, one a child aged 12.

Total : 16 cases, one death, Deathrate 6.2 %.

#### EGYPT

=====

In 1943, some 140 cases (6 paralytics) and one death. About 40 patients were treated in the 6th General Hospital, the remainder in camp hospitals.

In 1944, 7 cases amongst German PW, and 2 very serious amongst Italian PW, one of whom died.

Summary : 149 cases amongst German and Italian PW, 6 with nervous complications; 2 deaths. Deathrate : 0.13 %.

#### FRANCE

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In December 1940, a number of cases were reported among Alsatian refugees at Angèlès-sur-Mer camp hospital.

In June, 1942, a few British internees with mild diphtheria were sent to Val-de-Grâce Military Hospital.

In November, 1944, several PW, whose diagnosis proved difficult to confirm, were sent to an American military hospital North of Paris.

In late June, 1945, about 100 cases were reported amongst German, Austrian and Italian PW and internees, all from the Northern and Central departments, where several camps had been placed in quarantine. Three deaths.

In an assigned residence centre (Vienne), a serious outbreak amongst the children, infants in particular. Nasal diphtheria of a particularly virulent type with heart failures. Many failed to respond to serum treatment. The epidemic spread to the Poitiers Maternity Hospital and caused a great many deaths, especially amongst German internees (men, women and children). By the end of August, there was a decided improvement when mass vaccination - for children in particular - was begun.

In September, a few cases (12 with paralysis) were recorded amongst German PW at Nogent-le-Rotrou Hospital.

A minor epidemic, with 24 cases, occurred in an American camp (Côtes-du-Nord).

In 1946 and 1947, there were 70 cases in various districts (Charente-Maritime 12; Langres 30; Seine-et-Marne 10; Oise 8; Sarthe 4; Pas-de-Calais 3; Vosges 3). Seven germ-carriers were detected, two in an administrative centre in the North, and the rest in Tarn-et-Garonne.

Total : The reports mention 210 cases and three deaths, but these figures do not include the "epidemics" to which frequent reference was made, particularly that in the Vienne department, which was extremely serious, but for which no figures were made available.

Of the 210 cases mentioned, 12 developed paralysis, one particularly serious, since the patient was unable to move without assistance. Another developed grave heart trouble. Of the deaths, one occurred in the Doubs, the others in Sarthe and Dordogne (German and Austrian PW). Deathrate : 1.43 %.

#### GERMANY =====

Diththeria was one of the commones contagious diseases in German camps, but never led to mass epidemics; the death-rate kept low.



In 1940, Delegates mention 4 cases, one was acute, but the patient (Polish PW) recovered.

In January 1941, some 15 cases amongst British PW; by February, the epidemic was dying out.

From February to October 1941, there were some 100 cases, as against 500 in the months October to December, in nearly all camps in the Hamburg and Lubeck areas.

In December 1941, the Delegates reported 170 cases in Silesia amongst British, French, Polish and Belgian PW, not including those in labour detachments. British PW were particularly susceptible; they were treated in Neukölln Hospital (Berlin). Complications occurred in some thirty cases (paralysis of the arms or legs, eye muscles and soft palate); others developed nephritis. Such cases were most frequent in labour detachments, where patients remained too long without proper treatment, either because the diagnosis was not confirmed, or else was delayed (the results of laboratory tests in Berlin were not known for five or six days), or because the affection had been mistaken for sore throat. Seven British PW who had been given serum at the start developed polyneuritis. In most camp hospitals PW doctors were not allowed by the German MOs to inject more than 8-10,000 units, which the French and British doctors considered to be clearly inadequate. Nervous symptoms were treated with benerva and strychnine. At this time, most men in labour detachments - and in fact a great many in camp - had not yet been vaccinated. Some British PW doctors asked the German MOs to vaccinate all new arrivals, but this was refused.

In 1941, 16 deaths occurred; one in February (PW in a labour detachment, who had not had proper treatment), the remainder in October, November and particularly in December, during the epidemic in Silesia.

In 1942, large-scale vaccination was started and led to a rapid decrease in number, there being 176 cases only in the course of the year, with 8 post-diphtheric paralyses and 9 deaths. Cases were recorded mainly in North Germany, Pomerania, the Hamburg, Lubeck and Danzig areas and the neighbourhood of Berlin. The highest figures were found, near Berlin, amongst French, Belgian and Yugoslav PW from Rawa-Ruska (Poland). 15 certain and 60 doubtful cases were detected.

Reports show 18 cases in Hanover and several in Bavaria, both regions where diphtheria is endemic. Whereas the British PW remained extremely prone to the disease, the British doctors believed that many complications - and even deaths - might have been avoided if the Germans, who were fully aware of this susceptibility, had allowed freer use of serum.

In Westphalia and the Ruhr, a slight epidemic caused 9 deaths, (including 3 British, 1 French, 2 Yugoslavs). One of

the Yugoslavs, who had been treated too late in his labour detachment, died shortly after admission from diphtheric abscess of the throat; the other, an officer, died the day after admission from internal complications.

In 1943, isolated cases were recorded in various Stalags in East Prussia and the Lubeck district; about 23 cases in all, which ran a normal course, except for a younger PW who suffered from heart trouble, and another, who had paralysis of the lower laryngeal nerve (negative tests).

In several Bavarian Stalags, a few complications : paralysis of the soft palate, vocal cords and extremities. As a rule, all the men in labour detachments were, like previous cases, treated too late, and the doses of serum were inadequate (10,000 units only - see above).

In 1944, no epidemics; 16 cases only recorded during the year; no deaths. One French PW suffered from paralysis of the extremities. Eight PW in camps near Berlin were found to be germ-carriers. At the close of the year the Delegate was assured that all PW had been vaccinated.

In 1945, reports mention 11 cases, mostly mild; five were British; Two deaths near Mayence, attributed by the doctors to insufficiency of serum injections.

In 1946, 16 cases in the British and 7 cases in the American Zones. All followed a normal course.

Summary : from 1940 to 1946, about 1,086 cases recorded in Germany with 36 deaths. Deathrate : 3.33 %. Morbidity and deathrate were highest in Silesia, the Hamburg area and North Germany. A good many PW, particularly British, who were very susceptible, developed nervous complications; out of 40 cases of post-diphtheric paralysis, 30 were British. Eight germ-carriers were detected near Berlin.

All the deaths occurred in 1941 and 1942. The death-rate amongst the British was scarcely higher than amongst the French, Poles and Belgians.

#### GREAT BRITAIN =====

In 1945, five cases only in a German PW camp were mentioned; in February, 1946, there were three, with one death. Another death occurred in October 1947.

Total : Nine cases; two deaths.

## ITALY

=====

Late in 1942, a fairly widespread but mild epidemic occurred in a British PW camp. One British PW died in a military hospital in Northern Italy. All contacts were inoculated; germ-carriers were isolated and remained in quarantine until bacilli had been completely eliminated.

In 1942, about a hundred cases amongst Yugoslav and British PW from Southern Italy were treated in Caserta Hospital; in March, a few patients only were still under observation. Some cases were reported from two neighbouring camps (one where diphtheria was endemic), mostly amongst British PW, 27 of whom developed post-diphtheric complications. According to the camp MOs, paralysis occurred in one case out of three. Seven deaths were recorded.

In 1944-1945, the disease occurred sporadically amongst German, Lithuanian and Italian PW in American and British camps in Southern Italy.

In 1946, according to the German doctor in a British camp, there were 130 cases, out of 6,000 German and other PW.

Total : According to reports, 231 cases, 8 deaths. Deathrate 3.46 %. Nervous complications occurred in about 30 cases. British PW were the most frequent victims.

## JAPAN

=====

In 1942, ten cases in a Tokyo camp. All died.

In 1943, in the same camp, 5 cases and 3 deaths, amongst British, Indian and African PW, who reached hospital with serious vitamin deficiency. Many other cases amongst British, American and Australian PW were reported during the year, with six deaths.

The deathrate in Japan was heavy; 13 deaths out of 15 cases.

In May 1944, in a Mukden camp, germ-carriers were detected and an epidemic checked.

#### NORWAY

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In 1946, there were nine cases amongst child patients in Hamar Hospital.

#### POLAND

=====

In February, 1943, in a labour detachment near Lemberg, two French PW were ill, and about 30 cases were recorded amongst French and Belgians from Rawa-Ruska. A French PW who fell ill in a labour detachment was not, in spite of the French doctor, sent to hospital; although the diagnosis was positive, serum was given too late. Death took place immediately after arrival in hospital.

In November 1943, ten cases with symptoms of paralysis, which gradually yielded to treatment with serum.

Total : 42 cases; one death. Deathrate : 1.58 %.

#### SUMMARY

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In the course of the Delegates' visits to camps in countries at war or in occupied territories, 2,060 cases were recorded. This number is a minimum.

#### Morbidity.

The highest figure - 1,080 - was recorded in Germany, followed by Italy (231), Belgium (230), France (210), Egypt (149). Whereas diphtheria is often said to occur sporadically, it appeared in France, Italy and Germany in particular, in the form of mild epidemics, of a dozen cases. These were sometimes more serious, but never affected large numbers. British patients were the most numerous - their proneness to the disease is well known.

Thirty germ-carriers were detected and isolated in Germany, France and Italy. Detection prevented an epidemic in Japan.

### Deathrate.

72 deaths were recorded; deathrate : 3.4 %. Figures were particularly high during the two first years of the war, when a great many men had not been vaccinated. Those for the British were scarcely higher than for other nationalities. The deathrate was highest in Italy and Germany (3.46 % and 3.33 % respectively); the rate for other countries was about 1 %, often less. For Japan, where the exact number was not stated, out of 15 cases 13 deaths occurred.

### Complications.

Complications caused by paralysis (see details above) were the most frequent; about 100 such cases were recorded, half amongst British subjects. PW from labour detachments were the most affected, doubtless because they were treated too late and the serum doses were insufficient, the German MOs considering 8 to 10,000 units to be sufficient. In Italy, according to the camp MOs, paralysis occurred in one case out of three. Other complications reported were : nephritis, heart trouble, abscess of the throat. In an assigned residence centre in France a serious and fatal epidemic of nasal diphtheria broke out amongst children, many of whom did not respond to the serum treatment.

In general, diphtheria left no after-effects. One man suffered from motor disability of the legs; permanent kidney and heart trouble was also reported.

### Treatment.

There was apparently plenty of serum and it was used in all countries, but often too late and in insufficient quantities, particularly in Germany. Nervous symptoms (polyneuritis) were successfully treated with benerva and strychnine.

### Vaccination.

Inoculation was generally practised as from 1942, when a marked decrease in the number of cases and deaths was observed. British PW doctors who asked German MOs for all PW to be given preventive treatment on arrival in camps, were refused permission. At the close of 1944, the Delegates were assured that all PW in Germany had been vaccinated.

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NERVOUS AND MENTAL DISORDERS

AFRICA (North)

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Between 1943 and 1946, some 20 German and Italian PW were sent to military hospitals at Algiers and Blida, for treatment of various nervous diseases, including :

- 1 tabes {incurable)
- 1 Aran-Duchenne's disease (progressive muscular atrophy)
- 1 facio-scapulo-humeral amyotrophia
- 1 lumbar spondylitis
- 1 neuritis of the arms (both hands paralyzed)
- 2 polyneuritis of the arms and legs, circulatory disturbances

In addition, several PW from the Ouanza mines presented symptoms of diffuse encephalitis, accompanied by anaesthesia and lethargy; 5 cases of this type were brought to the attention of the senior MO, for diagnosis and determination of the cause.

Mental diseases were few, and none required confinement in a mental home. However, the German doctor of a French camp in Tunisia had to be sent to hospital for severe mental disturbances; so did an Italian PW suffering from psycho-motor excitement, accompanied by delusions, and 3 PW with mental disturbances resulting from war (head) injuries.

One Italian PW suffering from mental depression committed suicide.

AFRICA (Central and South)

=====

Kenya.

In 1942, 1943 and 1944, 75 mental cases were treated by an Italian psychiatrist. Amongst them were a few psychopaths (melancholia), neuropsychopaths, and cases of hysteria (German and Italian PW).

Several violent mental cases in a camp for Italian civilian evacuees were sent to a mental ward (Italians, Hungarians and French). 15 cases were isolated, but remained in the camp where they did not receive adequate treatment.

Southern Rhodesia.

The following nervous diseases were noted :

1 paralysis of the legs (probably of specific origin Italian)  
1 epilepsy.

A few cases of neurasthenia and depression, particularly among the Italian civilian internees.

Numerous mental cases in the German and Italian internment camps. Over 250, including 23 Italians, had to be sent to the mental hospital at Pretoria, and 130 to another mental hospital, under the care of two Italian specialists. Six of these cases were diagnosed as syphilitic. In a labour detachment, two young Italians had sudden attacks of violent dementia; one, during a seizure, killed a co-worker. One German internee committed suicide.

Several of these patients were given shock treatment. This was never found to produce harmful results; either it had no effect on the patient, or the results were satisfactory. Most of the cures, including six cases of schizophrenia, were obtained by this method.

AUSTRALIA

=====

Between 1941 and 1947, the German and Italian PW and internee camps recorded one cerebral tumor (German PW), 55 cases of psychasthenia (Italian and Javanese), and many cases of periodic mental disturbance.

Numerous mental cases, particularly amongst the Italian officers, had to be confined in mental hospitals or homes. These included 4 schizophrenics (1 German, 3 Italian).

One suicide (psychotic German).

AUSTRIA

=====

In 1946, after the Armistice, in a detention camp for Austrians at Bregenz (French Zone), 2 mental cases, one of whom was violent and fired at an officer,

In Weissenstein civilian internee camp (British Zone), 5 nervous diseases amongst 1,770 Austrian internees. The British Zone frequently recorded a particular form of "inflammation of the nerves", which made its appearance in the autumn of 1946 and began to disappear early in 1947.

In 1947, in the same zone : 1 schizophrenic, and one paranoiac, both in Klagenfurt mental home.

#### BELGIUM

=====

Out of 343 patients, many cases of psychosis; 7 of these (German PWs) were light and treated in the camp itself; more serious cases were sent to a hospital in the province of Limburg.

#### BURMA

=====

In 1946 and 1947, from June to November, 246 nervous disorders were recorded, as follows :

29 in June  
20 in July  
17 in August  
51 in September  
65 in October  
65 in November

In 1947, 49 mental cases.

#### BERMUDA

=====

In 1943, in an internment camp for men, one German presented symptoms of mental disturbance with persecution mania. His wife claimed that he was not at all mentally deranged, but was suffering from sinusitis.



CANADA

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In 1942 and 1943, the following were reported :

- 2 cases of nervous disease (captain and engineer of the German Mercantile Marine). Both were admitted to St. Anne's Military Hospital, Montreal.
- 2 epileptics (one German with a shell splinter in the skull - operation considered)
- 1 cerebral tumor (under observation at St. Anne's, Quebec)
- 1 disease of the spinal cord (a Pole).

Numerous mental cases, including two Czechs who had been in mental homes prior to the war.

- 2 cases of schizophrenia
- 10 cases of barbed wire disease, one of whom, according to the spokesman, complained of blindness, of which there was no evidence.

In 1944-1945, the camp MOs were anxious about the mental state of the internees, which was deteriorating under the strain of long internment. Many had to be sent to a mental hospital, including :

- 32 paranoiacs
- 6 dementia praecox (Italians and Germans)
- 5 schizophrenics (Italians and Germans)
- 7 hypochondriacs (German merchant seamen).

CEYLON

=====

In 1944-1945, in Italian pioneer camps, numerous cases of neurasthenia, including a captain of the medical corps who had to be sent to Colombo Hospital.

Many mental cases, whose recovery was unlikely in the camp atmosphere and the trying climate, were also sent to hospital.

## CORSICA

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According to the camp MOs, barbed wire disease and mental disorders took eighth place in the order of frequency of illnesses.

From March to May 1946, of 195 patients at Ajaccio hospital, 32 were mental cases (German and Italian PWs).

## CZECHOSLOVAKIA

=====

Between 1946 and 1949, a home with 69 German children had 13 idiots and 5 imbeciles; the rest were feeble-minded.

An assembly centre had 46 cases of nervous disease and close on 400 mental cases, requiring transfer to a mental home. Of a total of 879 patients in the assembly camp for sick and aged Germans, 62 were feeble-minded, 11 schizophrenics, and 18 had various mental ailments (1 man and 17 women); 3 died of cerebral disease (one a man of 57, and 2 women aged 34 and 60).

At the beginning of 1949, in the same camp, one case of cerebral disease (woman of 69), and 3 cases of encephalo-malarial apoplexy (women of 70, 83 and 87).

In February 1949, 3 children having become a danger to their companions were sent to a mental home at Opava.

## EGYPT

=====

From 1941 to 1945, the following nervous diseases were recorded :

- 1 progressive amyotrophie of the legs (in hospital)
- 1 progressive paralysis of the arms and legs (following disease contracted in Macedonia ?)
- 1 cerebral tumor, and one spinal injury (both died in hospital)

The following cases were registered in Egyptian camps:

In 1942 : 48 mental cases, including 8 officers, of whom 4 Italian MOs, and a few catatonic psychasthenics.

In 1943, in internment camps at Fayed, many cases of asthenia, psychasthenia and neurasthenia. The number of moral offences increased steadily. Since the opening of the camp, 10 cases of dementia, three attempted suicides amongst German PWs, and some severe psychoses amongst Italian PW officers were noted.

In 1944, in Helouan internment camp, three-fourths of the internees were neurasthenic. In May, one of them committed suicide by throwing himself from a second-floor window.

In 1945, in Embabah camp (Italian civilian internees), some cases of psychasthenia, apparently due to prolonged captivity.

#### FRANCE

=====

From 1942 to 1944, in occupied France, few nervous diseases :

- 1 case of paralysis with aphasia (British civilian internee pre-war case)
- 1 case of Menière's vertigo, with a pontocerebellar tumor (man of 60)
- 1 case of tabes with paralysis of the leg (36-year old patient).

All of these were treated in hospital.

There were quite a number of mental cases, especially amongst civilian internees : 2 Brazilians, 2 British, and Indians from a Vienna hospital; 6 schizophrenics had to be committed to mental homes in Paris and Nancy.

During the years 1944 and 1945, after the liberation, nervous diseases were more frequent :

- 1 Jacksonian epilepsy with frequent seizures, following a brain injury (German PW)
- 52 neuropathological cases sent to the hospital of St. Eulien
- 1 cerebral tumor (woman in an assigned residence camp near Poitiers)

Some cases of hysteria and epilepsy in a supervised centre for women in the Haute Garonne.

At Châlons-sur-Saone, cases of nervous depression were frequent in camp and were attributed to prolonged detention.

The chaplains of these camps said that they met many PW who were thinking of suicide.

Camps in Northwest and Southern France recorded 174 cases of spastic paralysis (lathyrism), 1 tumor of the medulla, 1 retrobulbar neuritis in an SS man (multiple sclerosis ?).

Amongst the mental cases were recorded :

- 2 psychoses (German PW; Cher)
- 21 psychoses (Charente maritime)
- 2 schizophrenics (Sarthe)

All were sent to mental hospitals.

In 1947 the following were repatriated by hospital-train : 2 mental cases, 2 dangerous psychotics (under the care of German orderlies); 10 non-violent psychotics; 2 cases of dementia (under the care of a German MO), and 2 schizophrenics from Fontainebleau Hospital.

#### GERMANY

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In 1941 and 1942, the following nervous diseases were noted in the Stalags and Oflag for French, British, Polish and Belgian PW in Prussia, Pomerania, Westphalia and Thuringia :

- 1 multiple sclerosis
- 1 paralysis of the arms, following gunshot wound
- 1 Recklinghausen's disease (British PW)
- 1 cerebral tumor
- 1 cerebral abscess, following chronic otitis
- 2 amaurotic tabes.

Several cases of limb paralysis amongst French and Polish PW in a labour detachment in Westphalia, who were exposed to acid vapours in an artificial silk factory.

Three cases of epilepsy (neurasthenic Yugoslavs)

2 cases of feeble-mindedness (French and Yugoslav)

4 cases of general paralysis (one a Yugoslav doctor).

Mental disturbances occurred, particularly in the Oflag amongst Polish, Belgian, French and British PW. Over 30 had to be sent to civilian mental homes, or to the military infirmaries, particularly in Thuringia, where there was a mental department. According to French PW doctors, such cases were due

prolonged internment, malnutrition, lack of recreation, and the strict isolation in which these men were kept, especially in the Oflag. A German senior MO in one Oflag claimed, on the contrary, that the above camp conditions were not determining factors, for many PWs had significant histories. At most, life behind barbed wire might have aggravated or revived dormant psychoses :

- 15 schizophrenics
- 2 catatonic schizophrenics
- 1 deranged air-pilot (American), who was shot by a guard
- 3 suicides by hanging among French PW and British officers (long-standing mental cases).

In 1943 and 1944, more than 120 mental cases were treated in mental homes or in the psychiatric wards of the military infirmaries. Amongst these were :

- 35 schizophrenics (one French officer)
- 3 cases of typical barbed-wire disease in an Oflag (French and Greek PW)
- 1 dementia praecox (British PW, died)
- 10 mental cases with total loss of memory (French and Belgian)

Many of these cases were given electric shock treatment with cardiazol.

Several cases of psychosis amongst Jugoslavs in the Northern Austrian camps; these, said the camp MO, were often malingerers. The MO maintained that only 4 % were barbed wire cases, and that true psychoses were even fewer.

In 1945, after the Armistice, the following were noted amongst the German PW who entered the French Occupation Zone :

- 52 nervous diseases, in Dietz Camp (political prisoners)
- 6 psychoses, of which 5 unbalanced (camp psychosis type), and one severe case which seemed amenable to treatment.

In the British Zone, 24 neurological cases, and in a camp for Generals, much mental irritability; in addition, a good deal of mental depression amongst the younger officers.

In the American Zone, in 1946, 120 neurological cases, including some severe progressive paralyses (last stages), and several paralyses of the legs, amongst PW who could have got about if they had wheel chairs. In a civilian prison for young offenders, 4 epileptics.

Approximately 100 cases of violent dementia, resulting from war injuries, were given shock treatment.

Many suicides amongst the SS men.

GREAT BRITAIN

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During the years 1943 to 1948, only a few nervous diseases were registered :

- 1 myelitis, with paraplegia (48 year old Ukrainian, died in 1947)
- 1 Parkinson
- 92 cases of paralysis of varying degrees (German PWs)
- 1 neuritis of the arm (German PW)

There were many cases of neurasthenia, hysteria, depression and psychosis, more frequent amongst Italian than amongst German PWs. Many were sent to hospital and treated by British specialists. One officer, two NCOs and 102 other ranks (all German) had the most up-to-date treatment (malarial and occupational).

Two Japanese in camp suffered from general paralysis. The mental state of Italians and Germans over 60 was seriously affected by prolonged detention in camp and absence of news from relatives. Many of these were, however, apparently pre-disposed.

9 serious mental cases and 2 schizophrenics were sent to mental homes.

Out of 673 patients in a PW military hospital, 61 Germans were in the neurology ward and 30 in the psychiatric ward.

The medical mission which was sent to the Channel Islands in 1945 saw several cases of general paralysis and psychasthenia. Amongst 71 PW examined, many cases of nervous disease were noted.

In 1943, an Italian PW committed suicide by throwing himself from the top of a staircase. According to the coroner's inquest, the suicide was due to religious mania. A German MO suffering from nervous trouble attempted suicide and was taken to hospital.

Suicides and attempted suicides were relatively more frequent in Great Britain than elsewhere. According to the ICRC Delegates, the causes did not lie in the living conditions, which were always good, but in the excessive duration of captivity and the absence of news from next of kin. About 60 suicides were recorded in the course of visits to 56 camps between 1943 and 1948.

GUIANA (Dutch)

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In Copieweg Family Camp, there were many nervous cases amongst men, women and children, attributed to prolonged internment, and still more to continual molestation by the guards.

INDIA (British)

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In the Southern Group (Bangalore), there were during the years 1942, 1943 and 1944, approximately 330 cases of nervous disease, 29 of which were selected for repatriation by the Mixed Medical Commission (MMC). About 110 were neuropaths and neurasthenics; the other 220 were mental cases, of whom about 40 were schizophrenics and 15 mentally depressed. The majority were admitted to the mental wards of hospitals, where they were under the care of Italian specialists. Many were treated by the cardiazol-shock method, but were first given occupational and recreational therapy. The Delegate saw patients employed in the workshops and brought away the impression that this method should be more widely used in the camps. Another successful mode of treatment, was to send patients to hospital for the shortest possible time, returning them quickly to their camp and friends. This system of early return is recommended by the Swiss school of psychiatry. One death was recorded in 1943 (Italian PW suffering from psychosis).

In the Central Group (Bhopal), where the heat is overpowering and the climate extremely moist, 500 cases of nervous disorder were recorded between 1942 and 1946. Besides about 50 cases of psychasthenia, hysteria and epilepsy, there were numerous psychotics (200 in 1943), manics and schizophrenics. 40 percent of the latter displayed symptoms of chronic irritation, and 60 per cent had persecution mania. These mental patients, including 20 officers, were treated in Group hospitals, where there were no mental specialists.

During 1943, there were noted : 4 attempted suicides and one suicide by hanging (PW with depressive psychosis). One Italian PW was stabbed by a companion in the course of a political discussion. Of 69 Italian PWs repatriated for mental disorders in 1944, one attempted to escape during his return to Italy. He was wounded and subsequently died. Another hung himself in the train lavatory.

In the Northern Group (Dehra-Dun), where the climate is much better (near the hills), about 200 cases of nervous disease were noted :

- 1 hemiparesis
- 1 diabetic psychosis
- 1 optic atrophy (unknown origin)
- 1 cerebral thrombosis
- 2 hysterias
- 1 epilepsy

The remainder were mental disorders :

- 25 schizophrenics
- 2 progressive dementias
- 1 manic-depressive psychosis
- 1 acute confusional psychosis
- 7 hallucinatory psychoses

Many of these patients, confined to the mental wards, were treated by modern methods (cardiazol-shock). In 1944, many were treated by an Italian specialist from Rome, a colleague of Professor Carletti, who first applied shock treatment to schizophrenics.

In 1944 and 1945, in the Northwestern Group (Pakistan - Yol), quite a large number of nervous cases were found - some 379 in the year 1943 alone. Besides 148 neurological cases, one spondylitis, 73 neuro-surgical cases, 32 psychasthenics, 63 nervous depressions, and 67 minor nervous disorders, numerous mental disorders were registered, including :

- 2 obsessional neuroses
- 2 anxiety neuroses
- 22 confusional neuroses
- 2 feeble-minded
- 39 cases of barbed wire disease

325 patients were in the psychiatric ward of the Camp Hospital, and 1935 presented mental symptoms.

One Italian PW committed suicide in 1943.

The Delegate added that the camps in this group had a much better climate than elsewhere, and the mental cases from other groups were sent here; this accounts for the greater number of cases.

In the civilian internment camps of Dehra-Dun and Satara, only a few psychoses (9 amongst the Italian internees). On the other hand, there were quite a few neurasthenics, many suffering from over-excitement, or depression.

Two women had facial paralysis of unknown origin; one man was similarly affected, owing to alcoholism. Another was under treatment for morphinism.



In a report dated May, 1944, on the health situation during 1943 in camps in British India, Dr. Wenger, ICRC Delegate, drew attention to the frequency of nervous and mental diseases and their causes and made suggestions for combating them.

We believe it will be of interest to quote the following portion of his report :

During the year 1943, or more specifically, during its first ten months, mental disorders treated were as follows :

Southern Camp Group	228 cases
Central Camp Group	236 "
Northern Camp Group	200 "
Northwest Camp Group	379 "

These figures give an incomplete picture, many patients being transferred from one Group to another, for purposes of assembly and later repatriation. The South and Northwest Groups were chosen as points of concentration, because of the more favourable climate.

The greater part of the mental cases in hospital are serious : schizophrenia, paranoia, hypochondria, manic-depressive psychosis, etc. The kind of mental disorder bears only a very limited relationship to captivity. These diseases are chiefly endogenous, that is, they depend upon individual constitution, and most of them would have become manifest sooner or later, quite independently of captivity.

Another group are quite different : neurasthenia, psychasthenia, nervous disturbances and depression. During 1943, in the Northwest Group alone there were treated :

73 neurasthenics
32 psychasthenics
63 nervous depressions
67 minor nervous cases
4 obsessional neuroses
3 anxiety neuroses
22 confusional neuroses

These depended, in large measure, on the environment and the conditions in which PW are forced to spend the long period of captivity. The writer is convinced that conditions - personal and material - in these camps, which are in all respects good, do not favour nervous disorders.

The primary cause, in our opinion, is the climate; secondly, the absence of regular work. It is well-known that prolonged stay in a tropical climate is injurious to many Europeans; the constant heat and the glare of the sun's rays is harmful to their nervous systems. A frequent result is persistent insomnia, functional disorders of the heart and digestive system, and mental symptoms such as those described above.

'It is also recognized that the absence of regular and useful work has a similar effect on the morale of many PW. Some may find an occupation in the camp, working for the community or their own benefit, but the remainder become accustomed to sheer indolence. Persons of unbalanced temperament at this point often begin to have fits of depression and acquire obsessions, which lead to the symptoms mentioned above.

It should be noted that the British authorities encouraged voluntary work in all their camps; they put large areas of arable soil at the disposal of PW, made it possible for them to work at their trades, and facilitated handicrafts or similar activities.

One successful experiment was tried in the Southern Group where for a long period PW did farm work, to the satisfaction of everyone. One camp in the Central Group had a similar organization: 20 Italian PW operated a farm, which they greatly improved. Working quite independently they needed practically no supervision. It is unfortunate that many of the PW who, for psychological reasons, particularly needed regular occupation, did not take part in the farm work. Far more PW should work, especially on the land; they would thus be usefully employed and derive recreation and satisfaction, since they could probably provide for their own needs. This happened in a camp in the United States, where PW officers started a farm, with the financial assistance of the ICRC Delegate, and succeeded in repaying later all the money advanced. A large proportion of mental disorder must be attributed to the lack of regular work.

This, coupled with factors such as the climate, explains why mental disorders are more frequent in the camps in India than in other parts of the world - in Europe particularly - even if we bear in mind that Italians, with their Southern temperament, their sensitivity and their unstable emotional make-up, are more prone to them than men from Northern countries.

So-called "barbed wire disease", very common during the first World War, was infrequent, because the men were given useful and regular work to do, in areas with favourable climates. The writer would describe the kind of mental illness often found in PW camps in India, in general terms, as "tropical psychosis due to idleness".

Most of the mentally affected PW are not included in the figures given above. Generally, they are quartered in different wings of the camps, and are frequently given medical treatment; but they are sometimes so suspicious of the people around that they no longer seek medical advice. There are a large number of such cases amongst the 630 men interned in one of the camps (Camp 6, Southern Group), and amongst the 1,600 cases of chronic disease, as well as amongst the invalids in the Central Group. According to the superintendents (not according to the Medical Officers), the chronic patients in hospital included 150 partially, and 91 completely deranged mentally.

We need hardly say once more that the Central Group is least favoured in regard to climate. In no other Group are there so many men who are nervous and over-wrought. Many men in good health are dissatisfied and malcontent, although they would agree that their living conditions are good, and that their treatment by the British authorities is all that could be asked for. This dissatisfaction is less obvious to the superior British authorities, who are unable to speak the men's language and have little direct contact with the great majority. The peculiar situation in the camps is also due to the fact that the monarchist PW are anxious to collaborate with the Allies, but fear that open complaints may jeopardize such cooperation, while the Fascists wish, by their collective discipline, to show that they are the "better Italians".

#### IRAQ

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In a camp for Italian PWs, one captain committed suicide by hanging, during the night. He was neurasthenic, owing to the absence of news from his family in Northern Italy.

#### ITALY

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Between 1941 and 1945, there were recorded :

- 1 neuritis of the arm
- 27 cases of nervous symptoms following diphtheria  
(British PW)
- 1 hematomyelia (cancer) with paralysis of the legs  
(New Zealander, who died in hospital)
- 2 epileptics (a Yugoslav and a Frenchman)

In several camps, mental disturbances were frequent amongst British PWs. One of these, in Bologna civilian internee camp, had a psychotic seizure; another, aged 38, had to be sent from prison to a mental home at Milan, suffering from stupor, bewilderment and inability to sign a parcel receipt. One case of schizophrenia (British PW) and one paranoiac, in a camp near Turin.

In 1945, after the Armistice, an American hospital near Mantua registered 6 Germans with mental disturbances, whom the Italian camp MO was anxious to send to a mental hospital.

In 1946, a British hospital recorded 34 cases of mental disorder, including 19 German PW, 7 Yugoslavs, 4 Italians, 2 "Volksdeutsche", 1 Russian, and 1 Pole.

#### MALAYA

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In 1946, at the Japanese Military Hospital, 16 nervous and 14 mental cases.

#### NORWAY

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At Hamar Hospital, amongst 120 patients (17 women and 8 children) there were, in 1946, 35 mental and nervous patients.

Out of 170 patients in a hospital for German merchant seamen at Wickhammer, 16 were nervous cases.

#### PALESTINE

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Between 1942 and 1948, many neurasthenics and neuro-paths. In a female detention camp at Serona, the women were very nervous; there was a good deal of hysteria. In a Jerusalem hospice, many of the women were depressed, particularly because of separation from their husbands, who were interned at Jaffa. In a detention camp at Latrun, a great number of neuroses.

Mental cases : one woman of 59, suffering from schizophrenia, had to be sent to hospital.

In 1948, in a PW camp at Sidonia (Acre Fortress), there were 5 mental patients amongst the Arabs in Jewish hands.

UNITED STATES  
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Between 1943 and 1945, the following nervous diseases were cited :

- 1 disease of the spinal cord (German PW)  
    various paralysees and cerebral thromboses
- 13 neuro-surgical cases (one cerebral tumor; grafting  
    of nerves following nerve lesions)
- 1 cerebral tumor (not operated)
- 1 prolapse of intervertebral disc (German PW)

A few neuropaths, psychasthenics and hysterics. .

Mental diseases :

- 278 psychoses (12 amongst German PW)
  - 1 dementia praecox (Italian)
- Many cases of paranoia (including one German PW)
- Several cases of schizophrenia.

Most of these cases, particularly the schizophrenics were treated at the Matson General Hospital (principal mental hospital). They were under the care of Italian-speaking doctors.

2 psychotics committed suicide (a German PW, just prior to his repatriation, and a case of dementia praecox, who committed suicide in his room during the night).

SUMMARY  
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Diseases of the cerebro-spinal system were infrequent in the prisoner and civilian internee camps, but mental disorders were common.

Delegates' reports show :

- 9 cerebral tumors (6 German PW, the remainder French British and Italian). They occurred in France, U.S.A., Germany, Australia, Egypt and Canada.
- 1 tumor of the medulla (German PW in France)
  - A few cases of myelitis, with paresis or paralysis of the limbs (Canada, Great Britain, U.S.A.)
- 1 hematomyelia (New Zealander, who died in an Italian hospital in 1943)
- 1 prolapse of intervertebral disc (German PW in U.S.A.)
- 2 cases of spondylitis (North Africa, India)

- 1 multiple sclerosis
- 1 Recklinghausen's disease (British PW)
- 1 Aran-Duchenne's disease (North Africa)
- 1 Parkinson (German PW in Great Britain)
- 4 tabes (2 amaurotic).

Paralysis of limbs and hemiplegia were noted in Great Britain, in particular (92 cases). In Germany (Westphalia), some French and Polish PW working in an artificial silk plant and exposed to acid vapours, had limb paralyses which deteriorated rather quickly. In France, more than a hundred German PW got spastic paralysis, due to lathyrism. In Czechoslovakia, in a camp for aged sick Germans, there were 3 cases of encephalomalarial apoplexy (women of 70, 83 and 87). In North Africa, 5 cases of diffuse encephalitis, with anaesthesia and lethargy (Italian PWs working in the Ouanza Mines). The Delegate asked the Senior MO of the hospital to investigate the origin and causes.

Cases of neuritis, particularly of the arms, were noted in Norway, U.S.A., Italy, and Great Britain. In Austria, the existence was confirmed of a special form of "inflammation of the nerves", which made its appearance in Autumn, 1946, and was already disappearing early in 1947. Two facial paralyses of unknown origin in women internees in India, and one case in a man, probably caused by alcohol.

Epilepsy was rather frequent in Germany (7 cases amongst French, Polish, and Belgian PWs). A few cases amongst French and Yugoslav PW in Italy, Rhodesia, Northern India, and France, particularly in a supervised residence camp in the Haute-Garonne.

2 cases of Jacksonian epilepsy, one in Canada, following penetration of the skull by a shell splinter (requiring operation), and one with frequent seizures in France (German PW, after a brain injury).

Cases of neurasthenia, melancholia, psychasthenia, and unstable temperament were encountered, particularly in India. Here, out of 330 nervous cases, 110 were neurasthenic. They were also met with in the Channel Islands and Ceylon, where an MO had to be sent to hospital in Colombo. A number of hysteria cases amongst women in civilian internee camps in France and India.

According to a French PW doctor, these depressive states are due to protracted internment, absence of news from relatives, lack of recreation and strict isolation, especially in the Oflag. Contrarily, the Senior MO at one Oflag claimed that these conditions were not the determining causes, since the histories of many PW were significant. At most, conditions of existence behind barbed wire might aggravate or uncover latent psychoses.

Mental diseases have been frequent: some 2,300 cases, as follows :

India	800 - 900	Czechoslovakia	418
U.S.A.	278	Rhodesia	152
Germany	161	Kenya	90
Egypt	78	Great Britain	59

Elsewhere, the number of mental cases was below 50. Italian and, secondly, German PW were the most frequently affected.

Mental disorders, in order of frequency, were :

Schizophrenia (185) - especially in India (65); Germany (52); the United States (25); Czechoslovakia (11); France (10).

Paranoia : 34, about half of them in Canada (Germans and Italians). Several cases amongst Germans in the United States and the British Zone of Austria.

Dementia praecox : 6 in Canada (Italians and Germans); 2 in India; 1 in Germany (British PW, who died).

General paralysis : 6 cases : 4 in Germany (1 Yugoslav doctor), 2 in Great Britain (Japanese civilian internees). In 1945, Delegates saw several cases in the Channel Islands.

Dementia was common (118 cases), particularly in Germany, Egypt, France, Rhodesia (a man killed by a fellow PW who had a seizure), in Great Britain and Italy. Many cases of manic depressive psychosis and of hallucinatory psychosis in Central India and in civilian internee camps.

"Barbed wire disease" : at most 20. A few in Germany, in the Oflags (French and Belgians); 10 in Canada. The disease seems to have been much less frequent than during the first World War, when 10 per cent of the men were stated to be affected. This time, the condition was attributed principally to the fact that the men "felt they were doing useless work".

Suicides : 75 PW committed suicide, and 9 attempted suicide; most of them were neurasthenic or psychotic.

7 suicides by hanging, in Iraq, Canada, and India (an Italian PW repatriate hung himself in the train lavatory).

1 man threw himself out of the window (Helouan Camp, Egypt).

2 psychotic Italian PWs committed suicide in the U.S.A., one due for repatriation, the other in his room during the night.

1 German PW in Great Britain, threw himself from the top of a staircase during an attack of religious mania.

In France the chaplains reported meeting many men with suicidal intentions.

9 attempted suicides : 4 by German PW and 5 by Italians (Canada, Egypt, India). In Great Britain, a German MO suffering from serious mental disorder, attempted suicide and had to be sent to hospital. In Great Britain, suicides and attempted suicides were relatively more frequent than anywhere else. The Delegates believed this was due, not to the living conditions, which were always good, but to protracted captivity and lack of news from home.

### Treatment

Most mental cases were taken to hospital mental wards, or to mental homes. Many were treated by the cardiazol-electro-shock method. In Rhodesia, Germany, Great Britain and India particularly, this method was often employed - never with any injurious effect; results were either negative or satisfactory. Any cures made were obtained by this treatment. In Great Britain, the specialists also applied malarial and occupational therapy. In India, Italian PW were under the care of an Italian psychiatrist, a colleague of Professor Carletti. Shock treatment was often preceded by occupational and recreational therapy. A Delegate who saw this system in operation brought away the impression that it should be more generally applied. Another successful mode of treatment was to keep patients in hospital for only a short time, sending them back as quickly as possible to the company of their comrades. The "rapid return" method has been in use in Switzerland for some time.

### Mortality

Twelve deaths occurred : 4 Italians, 3 Germans, 3 Czechs, 1 British and 1 Ukrainian succumbed to the aggravation of nervous symptoms : cerebral tumor, tumor of the medulla, hematomyelia, dementia praecox and myelitis.

3 PW were killed, one by a comrade who went mad, another was stabbed during a political argument, and the third, an American airman, was killed by a guard.

Lastly, there were 75 suicides and 9 attempted suicides.

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## VITAMIN DEFICIENCIES

### (Hypo and Avitaminosis)

#### AFRICA (North)

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##### Algeria

In August and September, 1943, PW captured during the Libya and Tunisia campaigns reached Algeria in a very exhausted state; they were emaciated, with obvious symptoms of avitaminosis. Professor Lacroix, of Algiers, who examined them, advised the addition of barley to the usual diet; the results were excellent and the men rapidly gained weight.

In the following years - 1946 in particular - many German PW from French camps and labour detachments (especially the Ouanza mines), were admitted to Blida and Constantine hospitals suffering from hunger oedema, emaciation, cachexy and anaemia. Most of these German and Italian PW had lost from 10 to 15 kilos in three or four weeks.

Instructions were given in a French camp at Ste. Hélène that any man who had lost over 19 kilos in three weeks should be sent to Laveran Military Hospital, Constantine. The debility of many of these men was striking; several could hardly stand and recalled the photographs of Buchenwald Camp. One German PW suffering from hunger oedema, died 24 hours after entering Blida hospital.

##### Morocco

In 1942, 20 cases of hunger oedema were recorded amongst German PW in a French camp by the camp MO, who stated that individual weight charts often showed serious declines.

##### Tunisia

In a labour detachment of Géryville Camp, the Delegate saw 20 PW returning from work, stripped to the waist. They were extremely emaciated and three had oedema of the legs and face.

In January 1947, one death occurred from debility and malnutrition, at Arvèze Hospital.

AFRICA (Central and South)  
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Southern Rhodesia

From February 1 to August 31, 1943, 35 cases were registered and treated in Fort Victoria hospital (Italian internees).

Sudan.

In 1942, 1943 and 1944, hospitals recorded 200 cases of avitaminosis, with hemeralopia and skin disease. Diagnosis proved difficult; the causes may have been the excessive heat, sand storms and wind.

AUSTRIA  
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The first convoy of 993 men repatriated Austrian PW (November 17/30, 1945), included 27 cases of hunger oedema.

In the French Zone (July 1946) a camp MO reported that serious under-feeding had caused 12 hunger oedemas amongst German PW.

BELGIUM  
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In September/October 1945, deficiency symptoms were reported in two Belgian camps amongst German and Austrian PW suffering from wounds and minor affections.

Eleven cases were sent to hospital, at Ostende from British camps. In Vilvoorde Camp, 1,800 German PW were considered to be under-nourished, their weight not being up to insurance standard. They were given appropriate treatment.

CORSICA

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In 1944, the MOs in Corti Citadel, Leuco, Corticiavari and Tatto Camps, reported hunger oedema, with acute diarrhoea, as one of the commonest ailments amongst the German and Italian PW. At Leuco, three-fourths of the sick suffered from avitaminosis due to poor food and faulty hygiene.

In 1946, a fair number of cases occurred in a camp near Ajaccio, amongst German and Polish PW, particularly those from Marseilles, Hyères and Aubagne. Of the last-named, one-third had serious oedema and were sent to hospital; a great many recovered only slowly, in spite of extra food.

CZECHOSLOVAKIA

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In 1946, most of the patients in a hospital near Prague, who were underfed and weighed from 30 to 40 kilos, suffered from avitaminosis and cachexy. The convalescents seen by the Delegate were practically all cases of deficiency disease, with serious oedema of the legs and face.

EGYPT

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Early in 1942, several German, Italian and Libyan PW in three large camps and in hospitals, especially new arrivals from the combat zone, suffered from a "pellagra type" of avitaminosis, and many from hemeralopia, caused by lack of vitamin A. Recovery was fairly rapid, probably owing to the eggs provided by the canteen.

The 19th General Hospital reported a few very advanced cases of avitaminosis, due to prolonged food shortage in the desert, where many had wandered without sufficient food or drink. One arrived in a dying condition and succumbed to uraemia.

Patients were given extra meat, vegetables and fruit and, from July 1942, the number of cases decreased.

In 1943, several Italian PW were still being treated for avitaminosis, after diarrhoea. The Delegate felt, however, that the Italian MO exaggerated the cases, as he was unable to point to a single one when asked to do so.

FRANCE

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In 1941, the 5,140 internees (including 200 small children) in Rivesaltes Civilian Camp, were all much weakened. The deathrate was high, owing in particular to food shortage, harsh climate and broiling sun. In Gurs Camp, amongst 4,580 internees (mostly German Jews), hunger oedemas were frequent and an average of four deaths weekly was recorded. The Delegate came to the conclusion that most of the inmates received less than one-fifth of the normal meat and fat ration. In some compounds he saw inmates in a state of exhaustion; they were human wrecks, who could hardly stand upright. Even the camp staff and the nurses were clearly under-nourished.

In November 1944, numerous cases of hunger oedema in Villemin Hospital, Paris, amongst the nursing staff and the German wounded and sick.

From 1945, practically all German PW camps, particularly in Southern France, but also in the North (Oise, Pas-de-Calais) had numerous cases; deaths amongst German and Italian PW were frequently attributed to under-feeding. Out of 262 inmates in Gurs Camp, 72 were in the camp hospital with hunger oedema and in an advanced stage of general asthenia. In the Pas-de-Calais, the younger men (Austrians and Germans of about 19) were extremely emaciated. The frequency of oedema was confirmed by the French doctor.

In June 1945, in these camps and in others in Central France (Vienne in particular), also in the assigned residence centre La Chauvinerie (strength 3,644), the MOs estimated that half the internees were in the sick wards with hunger oedema. The number of cases increased, although food rations were said to be the same as those of the French forces.

In July 1945, very serious cases were reported from Villemin Hospital, amongst men from the labour detachments in Vincennes gas-works and Cormeilles. 170 cases of oedema from a German PW camp in Mayen were in the infirmary. Reports from an American camp (Northern France) mentioned 77 cases of asthenia, including 65 officers, all over 50 years of age, whose pulse had fallen below 40. In another camp near Marseilles, hunger oedema was frequent amongst Hungarians and Italians. 200 primary or secondary cases were found in an Orleans camp, following dysentery which the men had contracted elsewhere.

In September 1945, the reports mentioned 1,200 cases in the North and in Alsace; one man died, aged 38. In many camps the state of the men was such as to recall the worst pictures of Dachau and Bergen-Belsen. Matters reached such a pitch that the German MOs decided to keep whatever medicaments they had for patients who were expected to recover.

At Brienne-le-Château (Aube), a ward was set aside for 600 German, Austrian and Hungarian PW who had reached the extreme limit of emaciation and asthenia, to such a degree that they could not remember their own names or where they had been captured. 300 died in the Military Hospital from under-feeding and dysentery.

A labour detachment near the Swiss frontier sent eight cases to St. Louis Camp (Alsace), where one died from prolonged malnutrition. In North-West France (Morbihan and Finistère), one hundred German, Austrian and Hungarian PW suffered from avitaminosis; also in Rennes Camp, where one-fifth of the men were apparently in the same state.

In November 1945, three-fourths of the deaths at Cormeilles camp were attributed to under-feeding, at this date there were still in this camp 317 men suffering from denutrition, whose lives were in danger.

The figures below are those of Villemin Hospital, where many cases of cachexy and starvation were treated.

<u>Date</u>	<u>Number of cases</u>	<u>Cachexy</u>	<u>Deaths</u>
August 1945	210	47	28
September 1945	192	44	37
October 1945	255	50	18

On November 2, there were 152 patients (Germans and Italians) still in this hospital suffering from starvation cachexy (82), oedema (19), deficiency disease (51).

By the end of November 1945, relief supplied by the ICRC averted a catastrophe, and cases of oedema decreased. Diets were arranged practically everywhere and the men were given up to 3,300 calories. In December 1945, however, a Belfort camp still had 250 cases of serious cachexy with deficiency oedema.

In January 1946, an increase of avitaminosis was reported in Indre-et-Loire, where American food supplies had ceased to arrive.

In February 1946, 400 German PW in the Gironde, all under 18 years of age, underfed to the verge of starvation, were a distressing spectacle. In March 1946, 130 cases were admitted to Rennes infirmary.

In August 1946, avitaminosis had apparently disappeared except in a few camps, particularly in the Aube and Landes areas, where a few cases were recorded; it was again reported, however, whenever rations were cut. This happened at Mont-de-Marsan (Landes); the spokesman said that the men were "practically starving", that they had lost 5 kilos each in one month,

were much emaciated, with flabby muscles and swollen abdomen; they were not allowed to go on the sick list.

Summary : about 14,000 cases of vitamin deficiency in France, with 400 deaths. Deathrates 2.85 %.

#### GERMANY

=====

In October 1941, the Delegates visiting Oflags in Pomerania, Saxony, Westphalia and Northern Austria, noted lessened stamina amongst French, British, Polish and Belgian PW. Several cases of oedema; many skin infections; sores were long in healing. Over 30 cases of optic neuritis were recorded, with accommodation paralysis, corneal ulcers, and four cases of retinitis; all these symptoms were attributed by specialists to avitaminosis. Other Oflags reported cases of gingivitis and decalcification. In several, there was a sort of general impetigo, gradually spreading over the body; it lasted two or three months before finally healing. The MO considered the affection related to avitaminosis. The spokesman and cook in several of these Oflags said that food rations were inadequate, and that many French, British, Polish and Belgian PW had lost from 15 to 17 kilos, several even 30 kilos in a few weeks.

In Stalags and labour detachments in Prussia, Pomerania, Hanover, Silesia and Bavaria, malnutrition was evident. Avitaminosis was revealed by septic and suppurating sores, slow healing of wounds, oedema of the face and legs, keratosis, gingivitis and a fair number (31) of furunculosis, with no fever, but torpid or "bizarre", as the German MOs qualified them.

From 1942 to 1944, PW doctors observed a good deal of malnutrition amongst French, Yugoslav, British, Belgian, Greek, Polish and American PW in Pomerania, Schleswig-Holstein, Hanover, Saxony, Silesia and Thuringia, with symptoms of avitaminosis (retinitis, decalcification, shadows on radiographs, hemeralopia, keratitis, deficiency oedemas). In a tuberculosis sanatorium in Prussia, the patients had lost 4 to 5 kilos; all seemed under-nourished; cases of cachexy were numbered by dozens amongst French and Polish PW, many of whom suffered acute pains.

British PW from Greece and Crete in the South Berlin area, who had been on starvation rations while at Salonika (a cup of hot water with a little polished rice) reached camp in a deplorably emaciated condition, with oedemas of the limbs and face, nervous symptoms, articular pains, etc. All were given furunculine, dextropur and liver extracts which seemed to have much improved them. About 100 Polish PW from Warsaw reached Silesia in a similar condition; twenty died who could have been saved with proper food.

Early in 1945, hunger oedema became common amongst Polish officers, of whom 1,400 (out of 1,950) in one camp came from Warsaw. Many PW from labour detachments in East Prussia and Pomerania were clearly suffering from avitaminosis; many died on admission to hospital, or shortly afterwards. This refers to French, Polish, Yugoslav, British and American PW.

In August, 1945, after the Armistice, of 4,000 Hungarians in a British camp, many had bleeding gums, bone pains, muscular atrophy and slow-healing wounds. Many of the younger men were below standard; lads of 16 looked like boys of eight. In a political internee camp (Rhineland) with 3,618 inmates (including 177 women and 14 children) the senior MO diagnosed 532 hunger oedemas; some were quite typical, while others malleolar or palpebral. Epidemics would thus have made rapid progress. In December 1945, a camp in the American Zone, opened in July, received six under-nourished German PW sent home from the Russian Zone.

In 1946 and 1947, cases of hunger oedema were still reported, but were much fewer. In January, 1948, a few occurred in a PW and internee camp at Nuremberg (American Zone); the men had come from the South of France. Patients, were treated in hospital with calcium, vitamins A, B, and C and given some 3 to 4,000 calories daily.

Most of the detainees in Sarrebrück and Dietz (French Zone), civilian prisons were excessively pale and emaciated.

Cases of oedema in the British Zone had 2,960 calories daily and extra diet for those who were more than 25 % below weight. Several thousand cases amongst the men returned from Russia.

In 1948, a single case of hunger oedema in a labour detachment (transferred to Strasburg camp), 16 in a women's prison at Dietz, and a few amongst war-invalids in the British Zone.

Summary : About 3,000 cases of vitamin deficiencies were reported by Delegates in Germany, with 30 deaths. Deathrate 1 %.

GREECE  
=====

In May, 1941, the Delegate reported that the food situation in Corinth Camp was deplorable : PW were seriously undernourished and had no bread at all. This was, however, also the case for the civilian population of the town.

In Kokine and Polytechnica Hospitals, rations were inadequate, even for the nursing staff. In September 1941, the Delegate saw many cases of oedema (feet, hands and face) amongst PW whose heart and liver were, however, sound, their condition being due solely to lack of food containing sufficient albuminoids. They were given neither meat, fish nor bread; some lived almost exclusively on onions, others (British PW) on a slice of bread and thin rice soup. All had oedema of the legs and face and muscular pains. Cases of beri-beri with nervous symptoms, were also fairly numerous.

#### INDIA (British)

=====

Very little vitamin deficiencies.

In 1942, Kangra Valley and Northern Group camps reported that PW from the Sudan showed symptoms of avitaminosis.

One serious case (German) was reported from the internee camp hospital at Deoli-Ajmer.

#### PALESTINE

=====

In 1949, Dr. Krikorian, in a report on Jericho Camp, stated that many children, mostly under three years of age, were underfed, thin, pale, anaemic, with dry skins and xerophthalmia. About a hundred were sent daily to Akaba Clinic for treatment.

#### POLAND

=====

In 1946 and 1947, the Delegates reported that PW sent to Warsaw from the mines, where basic rations barely amounted to 1,000 calories, suffered from hunger oedema, dystrophy and blindness due to avitaminosis. In a land detachment 24 men (Germans and one Hungarian) out of 435 were in a wretched



condition, covered with lice and with acute oedema of the face and legs.

## SUMMARY

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Avitaminosis was to be found in many countries at war and in occupied territories. In PW and internee camps it was particularly prevalent in France, Germany and Greece.

France - In 1941, civilian internees in South-Western camps suffered greatly, as did the staff and the nurses, from food shortage (rations cut down to one-fifth). An average of four deaths weekly.

As from 1945, much denutrition in all districts amongst German, Austrian and Hungarian PW. In November, 1945, supplies received from the ICRC averted a disaster and the number of vitamin deficiencies fell promptly. In January, 1946, when U.S. supplies ceased to arrive, numbers increased slightly; the situation apparently became normal by the end of the year, except in two departments.

Out of 14,000 recorded cases, 400 died (deathrate 2.85 %).

Germany - Some 3,000 cases amongst PW and internees; 30 only were fatal. In 1941, the position was unfavourable in most areas; British PW from Greece and Crete, Polish PW from Warsaw were chiefly affected.

A good deal of avitaminosis still, after the Armistice, amongst Hungarian PW. From 1946 on, rations increased from 1,000 to 3,000, or even 3,300 calories, and fewer cases were reported; in 1948, there were hardly any at all (British and French Zones).

Details of other countries (Greece, Egypt, Belgium, Sudan, Poland, Palestine, Czechoslovakia) will be found above.

Deathrate in France : 2,85 % - in Germany and most other countries : 1 %.

Therapy - Extra barley was found useful in Algeria. The sale of eggs incanteens had good results. Yeast, dextropur, calcium, liver extracts and vitamins A, B, and C, were issued, when available, but increased food rations, especially albuminoids, proved a sovereign remedy.

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B E R I - B E R I

BELGIUM  
=====

In April 1946, about ten cases amongst PW in a British camp.

BURMA  
=====

In 1946, 68 cases in Japanese PW camps were sent to hospital (48 from June to October, 20 from November to December).

CZECHOSLOVAKIA  
=====

During 1946, a few cases in Kutin Camp.

FRANCE  
=====

Two cases, one in 1945 (Austrian PW in South-East France) one in 1946 (German). In March 1947, a few cases in the Nièvre district amongst German PW.

GERMANY  
=====

In November 1941, 91 cases of beri-beri were reported amongst British PW in four labour detachments near Berlin; the

majority were convalescent when seen by the Delegates. Some of them apparently went back to work too soon, with consequent oedema and pains in the legs two days after their return.

Of these cases, 55 were supposedly due to malnutrition in the camp at Salonika, which they had just left, and where the daily ration consisted of a bowl of thin soup, one slice of bread, and a cup of hulled rice. According to the Delegate, PW from Greece or Crete were easily recognised by their exhausted appearance. One of the infirmary MOs, by way of test, sent half the beri-beri patients to a Berlin hospital and kept the other in the infirmary. The latter, who received British Red Cross food parcels recovered long before those in hospital. The parcels were of great assistance in speeding up convalescence.

An Indian doctor in one of the labour detachments, though apparently not very familiar with the disease, drew attention to the excellent effect of medicaments such as iron, kaolin, dextropur, furunculine and liver extracts which, he said, all hastened recovery.

Of the British PW from Salonika, many suffered from the nervous disorders which accompany the disease: paralysis of the leg muscles, reduction or absence of plantar or tendinous reflexes, sharp muscular pains, partial insensibility of the skin, oedema of the face or limbs, mental symptoms somewhat similar to those caused by ethylism.

In 1942, several wounded PW coming from Greece and Crete, and suffering, the German MO said, from diphtheria and polyneuritis, were successfully treated in Nagold Hospital with vitamin B and additional milk, fish, meat and soja. By the end of the year, only nine remained who had not completely recovered; there was no trace of oedema, but the ulceration above the ankles was slow in healing and there was still some paresis.

GREECE  
=====

In September, 1941, a great many cases with oedema and nervous symptoms.

INDIA (British)

=====

In 1941, a few cases in the Italian PW camps of the Calcutta area. They were treated with vitamins supplied by the ICRC.

From 1942 to 1943, 27 cases (including 4 women and children) amongst civilian internees in Northern India. In 1944, one death (due to heart failure).

JAPAN (Korea)

=====

From 1942 to 1945, 31 cases causing 5 deaths, were recorded by Delegates amongst British, Australian and American PW. In 1943, 19 cases occurred. The disease is endemic in Japan.

JAVA

=====

In September 1946, six cases amongst Japanese in hospital in an internee camp, and a few cases in a Japanese SEP camp and War Criminal Prison.

MALAYA

=====

The largest number of cases, viz. 122, occurred in Malaya. All the sick were Japanese, as follows :

July 1946 . . . . .	33
July 1946-Jan.1947	41
During 1947 . . . . .	48

MOROCCO

=====

In 1946, numerous cases in a French camp for German PW, where food was especially poor.

SUMMARY

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The reports record about 500 cases amongst British, American, Australian and Italian PW. Five deaths in Japan-Korea and one in India. 122 cases in Malaya, 91 in Germany, 68 in Burma.

The Japanese were the principal victims, followed by Germans and British. Several PW showed serious nervous symptoms, particularly the British sent to Germany from Salonika, where they had suffered from malnutrition.

Vitamin B seems to have given some good results; supplies were sent by the ICRC to India.

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B I L H A R Z I A S I S

AUSTRALIA

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In 1944, one case in the German compound of Tabura (Victoria) internee camp.

FRANCE

=====

In 1941, five cases in the camp hospital, Front Stalag St. Médard (Gironde), amongst French and Colonial PW. In 1942, one case (North African) in a Vosges camp.

SOUTHERN RHODESIA

=====

In 1942, six cases among Italian internees in Fort Victoria Camp.

In August 1945, one case (Italian PW) in Gatooma Camp.

Total : 14 PW and internees with bilharziasis (caused by distoma heamatobia).

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C H O L E R A

GERMANY

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No case recorded. In 1942, in a Westphalia hospital, the MO had vaccinated all personnel against cholera, and asked for vaccine to inoculate all PW, should an epidemic occur, similar to the outbreak in Hamburg following heavy air attacks. His request was satisfied.

CHINA

=====

In 1942, one case, a Japanese woman in a German and Japanese internee camp at Peipeih. She recovered.

INDIA (British)

=====

In spite of the general morbidity and the high death-rate in this country (about 25,000 to 80,000 deaths per annum), relatively few cases occurred in PW and internee camps. The deathrate was high however.

In 1941, in Central India, 10 cases, all of whom died. The epidemic was due to polluted water.

In 1942, 18 cases amongst Indian coolies, also in a Central India camp; but none amongst PW, who had all been vaccinated and put under medical supervision. The infection among the coolies had probably been introduced from a town some 50 miles distant where cholera had broken out. Twelve coolies died.

In 1943, eight cases amongst Italians in the Central Group Hospital; all were fatal.

In the Northern Group (Dehra-Dun), nine cases occurred amongst Italian PW; five deaths. According to the British Senior MO, the diagnosis was not confirmed by laboratory tests; nevertheless, all medical and kitchen personnel were vaccinated. Drinking water had to be boiled and fruit stewed. The latrines were carefully disinfected, and sufferers from diarrhoea were isolated.

In 1944, in the Northern Group (Kangra Valley), nine Italian PW in the mental ward contracted cholera. Five of them died.

Summary : The reports recorded 55 cases and 40 deaths.

	<u>Cases</u>	<u>Deaths</u>
India : Central Group (PW)	36	30
India : Northern Group (coolies)	18	10
China	1	-
	<u>-----</u> 55	<u>-----</u> 40

Deathrate : 72.7 %.

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E R Y S I P E L A S

FRANCE

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In 1944, a British internee at the Palace Hotel infirmary, Vittel.

In 1945, 13 cases (including two women) in an American internee camp, near Paris.

In 1946, from March to April, seven cases in hospital, in the Landes.

Total : 21 cases.

GERMANY

=====

In 1941, a few cases amongst British and Polish PW (North and Pomerania, in particular). The Delegates often noticed PW suffering from erysipelas who were not isolated, owing to lack of room. In September 1941, they saw a British PW dying of facial erysipelas in a bed next to a tuberculous patient.

In 1943, two cases (Belgian and British PW) were treated in Graudenz Prison infirmary. The same year, an epidemic occurred in two East Prussian Stalags amongst French, Belgian, Yugoslav and Polish PW. About ten cases in all.

In 1944, numerous cases in the Nuremberg-Langwasser Hospital (French, Belgian and British PW). Two cases of erysipelas (American and Polish PW) were treated with cibazol in Threysa Hospital.

For other countries, isolated cases only were recorded :

Australia : In 1943, one Japanese prisoner.

Belgium : In 1945, one German PW in a British camp.

Great Britain : In 1945, one German and one Italian PW.

India : Two Italian internees (Premnagar-Dehra-Dun)  
Italy : In 1946, several cases amongst Yugoslav PW and  
Italian (War Crime) prisoners.  
Jugoslavia : In 1946, six Austrians in Frecko Hospital.  
Poland : In 1947, two German PW.  
Southern : In 1944, two German PW in Salisbury Camp, and  
Rhodesia three cases in a refugee colony.

Summary : 60 cases, at least, mostly in France (21).

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M A L T A      F E V E R

This disease was recorded by the Delegates in two areas only, in Corsica and France. The total number of cases did not exceed 180; most of the sick were Germans.

CORSICA

Delegates spoke of the effects of the disease in various parts of the Island.

In December, 1946, over a hundred cases, from camps all over the Island, were assembled in Ajaccio and Bastia hospitals (German and Italian PW).

In 1947, these hospitals still had about fifty German PW patients. The local doctors said the disease came seventh by order of prevalence.

FRANCE

In 1947, 12 cases, all German PW in South-Eastern camps. Five were sent to hospital at Lyons, where Professor Solier tried a new treatment. Four were treated at Grenoble and three in a Chambéry hospital.

According to information supplied to Dr. de Morsier, by Dr. Lafleur, a hospital train which, in August 1947 took German PW from Marseilles to Weissenau (French Zone), carried "a certain number of cases", mostly from Corsica.

ITALY

In 1943, in Cuneo Prison Camp, a French internee was said to have had Malta fever and Pott's disease.

F I L A R I A S I S

This disease which is found in all tropical countries, and particularly in Brazil, Africa, Egypt, India and China, was observed during the War in the following :

FRANCE  
=====

In 1942 : 20 cases of filariasis haematobia amongst invalided North Africans in Northern France.

5 cases of filarial scabies amongst invalided North Africans in a Front-Stalag at Châlons-sur-Marne.

2 cases of guinea-worm filariasis amongst invalided North Africans in the Front-Stalag Epinal (filaria in the conjunctive tissue).

Total : 27 cases, all North Africans. All had the characteristic symptom of chylous urine.

HUNGARY  
=====

In 1944, in a camp for British and American PW, a U.S. airman in hospital with severe head wounds and burns was found to be suffering from filaria haematobia.

Total number of cases : 28 (27 in France, 1 in Hungary).

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## L A T H Y R I S M

This disease is a common affection in North Africa. Manifest symptoms are essentially spastic paraplegia, frequent locomotor ataxy, but without the other tabes symptoms. It is caused by vegetable poisoning and occurs frequently in periods of food shortage, especially among the Kabyles, who eat quantities of a certain kind of vetch ("everlasting pea", *lathyrus latifolius* ).

### FRANCE

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In May 1946, Delegates in Germany (French Zone) who were visiting camps and transit centres for German repatriates, heard for the first time, that during the previous six months, 70 cases of lathyrism had been recorded amongst German PW returning from France.

In June, 1946, Delegates found 94 cases of spastic paralysis, amongst 294 patients in St. Eulien Hospital (N.E. France). In view of this large number, Dr. Rôland Marti asked for further particulars. The German senior MO stated that he also had reported on this "paralysis epidemic". The Army Medical Service had ordered eight patients to be sent to Paris for examination. The nerve specialist diagnosed food-poisoning, caused by the bean flour added to the bran used for the prisoners' soup. The disease was lathyrism, which can sometimes be usefully treated by liberal dosing with vitamin E.

In December 1946, while attending the examination of patients in hospital at Poitiers (assembly centre for repatriates from West and Central France, leaving by hospital train), the Delegate found 10 cases of lathyrism, two with spastic paralysis of the legs. The men had been working on the land (Gironde), where they had been fed for five months on vetches (*lathyrus*). The Delegate reported to the Medical Service, asking that the diet be changed, as it might lead to serious nervous affections and chronic spastic paralysis.

In November 1946, when visiting a mine-lifting detachment at Sélestat (Upper Rhine), the Delegate had called attention to an excess of vetch peas in food rations. In the same month, another report stated that rations issued by the Naval Base (Charente Inférieure) to 638 men of a naval detachment, included one hot meal only per day and consisted mostly of vetch peas.

From March 1947, no further cases of lathyrism were reported; vetch peas were no longer issued.

Total for France in 1946 : 174 cases amongst German prisoners.

The patients were all men in their prime, from 30 to 40 years old, engaged in clearance work or agricultural labour. They were apparently all in good condition, with no digestive trouble and complained only of their "physical disability" which, in most cases, had come on fairly suddenly.

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LEPROSY

AFRICA (South)

In January 1944, two Italians in Zonderwater Camp Hospital were sent to the Pretoria Leper Home.

AUSTRALIA

In 1944, the German and Japanese internee camps at Tatura-Victoria reported one case - a Japanese, who was sent to a coast hospital.

FRANCE

In June 1941, there were 18 cases, as follows :

- 5 invalided North Africans, Front-Stalag, Châlons-sur-Marne;
- 7 cases at Epinal (Vosges), including 2 Indians with Hansen bacilli in nasal cavity;
- 5 Annamites at St. Médard (Gironde);
- 1 Senegalese at Bayonne.

In July, the above were all sent to non-occupied France.

GERMANY

Early in 1944, a Senegalese PW from a labour detachment of Graudenz Prison (East Prussia), who had contracted leprosy, was in isolated quarters, awaiting removal to Neukölln Hospital, Berlin.

**GUIANA (British)**

=====

Ten internees from Manzaroni Camp (3 Germans, 2 Italians, 2 Japanese, 1 Finn, 1 Swiss, 1 British) were being treated in Mahaica Hospital, where the only doctor was a young Indian born in Guiana.

Dr Moll visited the leper hospital on April 5, 1944, to see a German native of Haguenau, from Manzaroni Camp, who had been admitted the same day. The patient stated that he had been in poor health since Christmas, 1943 (headaches and stomach trouble). Shortly after New Year, he consulted the camp doctor who treated him for slight ailments. As his health did not improve, he was more thoroughly examined by another doctor and, a few weeks later, was found to have contracted leprosy; on April, 1944, he was sent to the hospital, where he was quite satisfied. The patient had lived in British Guiana since 1933; from 1918 to 1932, he had resided in French Guiana where, the doctors thought, he contracted the disease.

**INDIA (British)**

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In 1942, 1 Japanese and 1 German in a camp for Italian, German and Japanese civilians (Deoli-Ajmer, Northern India).

In 1943-1944, two Japanese in New Delhi internee camp.

**JAVA**

=====

In 1949, an Indonesian officer, detained in prison for several months, was being given chaulmoogra oil for leprosy.



SUMMARY

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The 37 cases reported in various countries concerned :

17 North Africans;	1 British;
6 Japanese;	1 Finn;
4 German;	1 Swiss;
4 Italian;	1 Indonesian.
2 Senegalese;	

The figures, by countries, were as follows :

France	18	Germany	1
British Guiana	10	Australia	1
British India	4	Dutch East Indies	1
South Africa	2		

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LEUCAEMIA

FRANCE

=====

In 1946, 2 German PW in hospital trains from France to Germany had myelo-leucaemia.

In July 1947, a case of chronic myelo-leucaemia in Fontainebleau district hospital.

GERMANY

=====

In 1942 and 1943, 5 cases of myelo-leucaemia in Hanover, Westphalia and Silesia, amongst French, Belgian, Polish and Jugoslav PW; 1 chronic leucaemia (British). 2 deaths (1 French, June 1942, 1 Belgian, July 1943).

GREAT BRITAIN

=====

In 1945, 7 German PW : 4 acute leucaemia; 2 myelo-leucaemia (one with retropharyngeal abcess); 1 lymphoid - leucaemia).

6 deaths, i.e. all except one case of acute leucaemia.

INDIA (British)

=====

In 1943, the internee camp of Deoli-Ajmer (North India) reported 1 Italian died of myelo-leucaemia.

In Vol, 2 Italian PW died from lymphoid-leucaemia in 1943 and 1945, and a third from myelo-leucaemia in 1944.

In Northern India (Kangra Valley) one death from myelo-leucaemia in 1943.

# SOUTHERN RHODESIA =====

In 1943 - 1 case of myelo-leucaemia (German PW).

# UNITED STATES =====

In a Kansas camp, the ICRC Delegate saw a German PW suffering from acute leucaemia. His condition was hopeless.

Total figures : 23 cases and 13 deaths, as follows :

13 myeloid	7 deaths
5 acute	3 "
3 lymphoid	3 "
3 chronic	0 "
-----	-----
23	13

The figures, by countries, were as follows :

British India	5 cases	5 deaths (Italian PW)
France	3 "	- "
Germany	6 "	2 " (French and Belgian PW)
Great Britain	7 "	6 " (German PW)
S. Rhodesia	1 "	- "
United States	1 "	(dying condition)

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BUERGER'S DISEASE

(Thrombo-angitis obliterans)

AFRICA (Central and South)

Bueger's disease was commonest in this country.

In January, 1943, 12 cases (Italians) amongs 534 patients in Kenya hospitals.

In the internee and evacuee camp, East Africa Command, the Delegate saw six men, passed for repatriation by the Mixed Medical Commission. All had sustained a leg amputation. In August, 14 cases in an Italian internee camp.

Total : 32 cases, all Italians. 6 amputees.

EGYPT

In 1944, in Italian PW Camp No. 305, an Italian Captain asked the ICRC for angioxyl, which was supplied. The Delegate asked that the PW should be examined and, if possible, treated by a British Medical specialist then resident in Egypt.

GERMANY

In 1941, a few cases in a Pomeranian hospital. In several, an experienced surgeon successfully removed the lymphatic iliac glands (French, Belgian, Polish and Yugoslav PW).

INDIA (British)

=====

In 1944, an Italian PW (Italian Compound, Southern Group) was treated in the British hospital, following leg amputation.

In May, 1945, in the Kangra Valley Hospital, two Italian PW were treated by periarterial sympathectomy.

Total : 36 cases (principally Italian PW) recorded by Delegates, including 32 in South Africa.

Delegates gave the nationality of patients but no "racial" particulars. When it first became known forty years ago, the disease was supposed by confined to the Jewish race. During two World Wars, however, the number of cases has greatly increased amongst non-Jews; some writers concluded that its origin might be due to physical or emotional shock. According to Leriche "the history of Buerger's disease is closely linked with that of man's misfortune".

In opposition to Buerger, the disease is now attributed to suprarenal disorder. Histological examination of the suprarenals have shown their condition to be abnormal in cases of Buerger's disease. Removal of one suprarenal, by Leriche in 1923, was completely successful, and similar cases have been reported.

Leriche, while successfully operating in this way, stressed the fact that unilateral suprarenalectomy could succeed only if thrombosis was not too advanced and communication was still possible through the collaterals above and below the thrombus, ensuring return to the arteries and normal circulation.

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CEREBRO - SPINAL MENINGITIS

From 1940 to 1946, Delegates reported 14 cases and 1 death.

FRANCE  
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In 1945-1946, 3 cases (2 German and 1 Polish PW). One case was detected in a barracks near St. Quentin; all occupants were removed and disinfected. The other two cases (one in a camp east of Paris) were treated in the district hospital of Seine-et-Marne. No deaths.

GERMANY  
=====

In 1940, 2 cases amongst French, Polish and Belgian PW in Silesia, Saxony, Bavaria, Westphalia, Wurtemberg and Posen. One death (a French-African). When seen, all patients were on the road to recovery.

In 1941, 1 convalescent in Pomerania who had some difficulty in walking.

In 1942, 1 doubtful case in quarantine (Silesia).

In 1943, 1 case in Westphalia (French PW).

In Germany, as soon as the diagnosis was confirmed, all contacts were examined and six germ-carriers discovered.

INDIA (British)  
=====

In 1943, 1 case (Italian PW) in the Central Group (Bhopal). An epidemic had broken out in a neighbouring town and had caused 14 deaths.

<u>Total</u> :	France	3	
	Germany	10	(one death)
	India	1	

TUBERCULAR MENINGITIS

Throughout the War, the Delegate recorded 26 clear cases only and 23 deaths.

CORSICA

=====

In December 1944, at Ajaccio Military Hospital, a German PW was still being treated at the time of visit.

DENMARK

=====

In January 1944, a British civilian internee, aged 48, died.

FRANCE

=====

In 1943, in a Front-Stalag near Rennes, an Indian died from bacillary meningitis.

GERMANY

=====

From 1941 to 1945 - 22 cases, amongst prisoners in various camps - Saxony, Westphalia, Thuringia, Lübeck, Berlin - and two officers' camps in the Hamburg and Westphalia areas. All cases, except one who was still under treatment, proved fatal. The deceased included, 7 French, 5 British, 3 Poles, 3 Jugoslavs, 1 Belgian.

In 1945, two children, aged 2 and 3 (British and American) died in a Wurtemberg internee camp.

During the first half of 1945, several deaths were recorded in Altengrabow Hospital amongst Yugoslav and Dutch prisoners, from bacillary meningitis.

#### UNITED STATES

=====

In 1945, a case was passed for repatriation by the Mixed Medical Commission (Colorado).

The Delegates mentioned numerous cases, some 300, about which no precise details were given except for the four following :

Germany - 1 meningococcus (French PW)  
          2 staphylococcus (Belgian PW)

Kenya - 2 syphilitics with pachy-meningitis (Italian PW)

No forms are mentioned in the records for Silesia, Wurtemberg (French and British), France, Great Britain (Germans), Norway (Yugoslavs) and the U.S.A. (Germans).

#### SUMMARY

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	<u>Cases</u>	<u>Deaths</u>
Corsica	1	-
Denmark	1	1
France	1	1
Germany	22	21
United States	1	--
	-----	-----
	26	23

Details of type will be found above.

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N E P H R I T I S

The reports make frequent reference to nephritis, especially in France and Germany, but as a rule they give no particulars, often not stating even whether the cases were acute or chronic. It is therefore difficult to assess the causes of the disease, or to say if it was due to living conditions in camp.

AFRICA (North)

From 1944 to 1947, 11 cases are recorded, chiefly in Algeria. Two chronic cases were treated in Algiers and Blida Hospitals, and one acute case in Géryville Hospital. The patients were all German or Italian PW. One case only was reported in Morocco, at Ram-Ram camp.

AFRICA (Central and South)

In 1943, 9 cases in an Italian evacuee camp in Kenya, and one in an Italian PW camp, East Africa Command; lastly, one in an Italian internee camp in Rhodesia (1944).

AUSTRALIA - BELGIUM - CANADA - CORSICA

From 1942 to 1946, only a very few cases were reported from German PW and internee camps in these countries.

CZECHOSLOVAKIA

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In 1947 and 1948, in a camp for the aged sick and at Svatiborice, 10 cases amongst persons of 62 to 87 years of age.

EGYPT

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In 1941, 12 German PW treated in the 6th General Hospital, Th. illness was attributed to the climate.

In 1942, 10 cases were reported amongst German PW, one with uraemia and enlargement of the prostate, another, an acute case, with oedema of the glottis.

From 1944 onwards, only a very few cases amongst Italian PW. The camp doctors said that nephritis (which had never been common in Egypt) showed a marked decrease.

FRANCE

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In 1945, a few cases reported in a labour detachment (Loiret) and a civilian internee camp (Oise). At Villemain Hospital, near Paris, 29 acute cases were put down by the doctors to general malnutrition which, by weakening resistance to infections, frequently led to kidney disorder. The numerous cases in the Lyautey Hospital (Marseilles) were attributed to the great differences between day and night temperature.

In an Orleans camp, within one month, 10 acute cases were reported amongst German and Austrian PW, as were a few acute and chronic cases in a camp near Chartres. In the hospital of Nogent-le-Rotrou (Eure et Loir), 74 German PW suffered from "kidney trouble". In Brittany and the Loire Inférieure, many cases originated in labour detachments. Two acute cases occurred amongst German PW in a camp at Gap; both died in December 1945.

In February 1946, 21 cases occurred in the Basses-Pyrénées. Nephritis was considered to be the commonest disease in this area, as it was in Eastern France. Numerous cases were admitted to Sédillot Hospital (Nancy) and to the German PW Hospital at Metz, where the patients could not have proper diet. In

June 1946, ten acute cases were treated in St. Eulien Hospital, and 65 in the Bonaparte PW Hospital at Auxonne; some of them were severe.

Other cases were 26 German PW repatriated in May, and 15 Austrian PW sent home in October, 1946, all by hospital train.

In 1947, some 20 cases were sent home in three hospital trains to Tuttlingen. In April, reports showed 34 cases in Vénissieux Hospital and one case (scarlet fever convalescent) at Fontainebleau Hospital, then under British management.

In 1948, a few cases were recorded in the Sarthe and a few at Metz, one of whom died in July from blood-poisoning.

Total : 307 cases and 3 deaths.

#### GERMANY

=====

In 1941, in the Danzig area, 20 British PW were treated. The camp doctors said that the British were particularly prone to the disease. A few acute cases were noted amongst French, Yugoslav and Polish PW in two Hanover camps. A fair number of cases in a military hospital for French and Polish PW (Magdeburg), seven of whom had come from labour detachments, with oedema of the face and legs. Records show 150 cases (2 acute) in Stalags in Silesia and North and South Austria. In Westphalia, several cases reported, with much hypertension, and pleural, peritoneal or pericardial exudation. After apparent recovery, these men showed traces of albumen for some considerable time.

In 1942, most of the cases were again registered in North Germany (Danzig, Schleswig-Holstein), the majority, as before, British. A few French PW were affected, in Thuringia, and sent to a military hospital.

From 1943 to 1945 there were several cases amongst Yugoslav, French and Dutch PW in a Berlin Stalag. Many cases in an Oflag near Hamburg were attributed to bad sanitation.

In 1946-1947, cases amongst German PW of the British and French Zones were nursed in the camp hospitals.

The reports quote at least 177 cases, but no deaths.

GREAT BRITAIN  
=====

In 1942, one German PW, aged 23, died in a PW Military Hospital from nephritis and diabetes. In the following years, a few cases were reported in Winter; in February, 1947, some chronic cases with hypertension and myocarditis. Two deaths occurred from blood-poisoning.

INDIA (British)  
=====

In 1945, 4 acute and 9 chronic cases in the Northern Group camps.

ITALY  
=====

In 1942, many patients at Udine (No 5 Military Hospital) particularly British PW.

In 1943, a fair number of cases in a camp near Turin, amongst Yugoslav and French PW. In a military hospital at Rome, four Italian and British PW were treated for nephritis.

NORWAY  
=====

In 1946, from April to December, 19 cases under treatment in Hamer Hospital.

POLAND  
=====

In 1947, 12 cases reported amongst German PW in labour detachments, mines in particular.

JUGOSLAVIA

=====

In 1945, many cases at Osijek-Maka-Mama Hospital, several serious. There was a marked decrease in December, doubtless due to the fact that when swelling began the patient was at once sent to hospital. Thus, the deathrate, which reached 20 % in September, 1945, fell in December to 5.7 %.

SUMMARY

=====

The reports record 577 cases, but this figure is certainly too low.

Morbidity was highest in France (307) followed by Germany (177). The remaining 93 occurred in the other countries in a practically uniform manner.

The British patients were the most numerous; British PW were considered to be particularly liable.

Deathrate : six deaths only were reported, three in France and three in Great Britain. Five died of uraemia and one also suffered from diabetes. For details see above.

Acute cases numbered only 60 (10 %). Accessory symptoms included oedema, hypertension and anasarchis. (See above)

Etiology : Causes were said to be insanitary conditions (Hamburg); climate (Egypt, Marseilles) and malnutrition (Northern France). Details above.

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RETROBULBAR-NEURITIS

EGYPT  
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101 cases were reported in 1944, 1945 and 1946 (German PW), as follows :

1944	. . . . .	48
1945	. . . . .	25
1946	. . . . .	28

They nearly all came from Camp No 306 and were admitted to the 15th and 19th General Hospitals. The patients had mostly been through exhausting desert warfare. Some however came from Greece and Italy. The origin of the disease was unknown; according to some, PW doctors, it was probably due to some undefined vitamin deficiency, or else to remote after-effects of bacillary dysentery. In fact, 90 % of the patients had had dysentery, whereas the case history of others made no mention of this disease.

One patient started in November, 1943, with eye trouble (atrophy of the optic nerve in the temporal area) followed by paralysis of the abductors; soon afterwards, weakening of the leg muscles, with loss of sensibility, and (in April 1944) sudden and total deafness of both ears.

In other cases, the first symptom was bi-tonal voice production (paresis or paralysis of the vocal cords), followed by eye trouble (sick headache on reading) and, in some instances, complete blindness. One fourteen-months patient was unable to read more than one or two pages, after which he could no longer distinguish print. Field of vision variable; for some almost normal, for others reduced up to 1/16 of normal. In another case, the skin of arms and legs had become insensible, so that the patient could pull out hairs without pain. As a rule, these patients suffered from severe headaches, especially in the day-time, which the doctors attributed to excessive sunlight.

Some of the patients apparently improved after taking vitamins, but in most cases this treatment had no marked effect. No satisfactory treatment had as yet been found. In Camp No 306 all prisoners, whether suspect or not, were given daily doses of yeast.

According to some MOs in Egypt, this form of neuritis, even if left unattended, makes no progress beyond a certain point and remains stationary. The greatest difficulty is its detection, which should be as early as possible. One German PW

doctor of this camp believed that depression and low morale, due to captivity, had a serious effect upon the patients' condition, and that repatriation would be the best cure.

From April 1946, reports from Egypt stated that this form of neuritis showed a marked decrease, the number of cases greatly diminishing.

FRANCE  
=====

In July 1947, Fontainebleau Hospital, under British management, reported a case of retrobulbar-neuritis of the left eye (German PW, also suspected of disseminated sclerosis). According to the camp MO, none of the other symptoms reported for cases in Egypt were apparent and the case could not be considered as similar.

To resume : Retrobulbar-neuritis was recorded in Egypt only; total, 101 cases.

Details as above.

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P E L L A G R A

AFRICA (North)

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In 1944, 2 cases (Italian PW), one in Algeria and another in Morocco.

AFRICA (Central and South)

=====

South Africa:

In 1941, one case (Italian internee in Zonderwater Camp).

In 1944, one case (German internee).

Sudan :

In this area pellagra is looked upon as the commonest disease; it usually follows Shiga or Flexner bacillary dysentery, but rarely the amoebic type. It is characterized by symptoms of skin, digestive, and nervous trouble, especially amongst consumers of stale hulled maize.

From 1942 to 1944, 400 Italian PW from Eritrea were admitted to hospital, together with 70 cases of dysentery. A great many suffered from erythema, caused by the sun, bleeding crevasses of the tongue, mouth, groin and feet. The patients also had swollen stomachs, which is considered a certain indication of pellagrous avitaminosis; none however showed spasmodic or paralytic symptoms. All were treated with yeast and raw liver, with good results.

EGYPT

=====

In 1942, four camps for Italian, German and Libyan PW reported 30 cases which, according to the camp doctors, were



very characteristic. Several improved after the addition of vegetables, fresh fruit and extra meat to their usual diet. The Delegate saw several patients and was doubtful whether the disease really was pellagrous avitaminosis.

INDIA (British)

=====

Two cases in 1945, in Northern camps.

JUGOSLAVIA

=====

In 1947, two cases in Petrenja Camp.

Total : 438 cases, the great majority (400) in the Sudan; 30 cases only in Egypt.

For details, see above.

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P L A G U E

The only reference to plague occurs in the reports on Corsica, but no cases were recorded in PW Camps.

CORSICA

=====

A mild epidemic of bubonic and septicaemic plague occurred in Ajaccio Military Hospital, from May 15 to July 20, 1945. Eleven cases in all and 7 deaths. Although the epidemic did not spread to PW camps, the MO asked, by way of precaution, to be supplied with vaccine for inoculation purposes; this was done.

GERMANY

=====

In September 1943, the MO of a hospital in Westphalia, feared an epidemic as a consequence of severe bombardment like that at Hamburg; he therefore applied for vaccines against plague and cholera.

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P O L I O M Y E L I T I S

From 1940 to 1947, the records show 100 cases of poliomyelitis, with 8 deaths.

AFRICA (North)  
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In 1946, there were 3 cases (one German PW in an Algerian military hospital and two others at Bizerta Hospital). The last-named were repatriated in February, 1947.

AFRICA (Central and South)  
=====

Southern Rhodesia

In March and September 1942, four cases were reported amongst Italian and German internees; a child was given electric treatment in Salisbury Camp, and three other cases (woman and two children) were sent to Johannesburg for electrotherapy.

CZECHOSLOVAKIA  
=====

In July 1945, four German mentally deficient children in camp were treated for sequelae of infantile paralysis.

FRANCE  
=====

In 1946 : 5 cases (German PW). Two were sent to the PW Section, Montmuzard Hospital (Dijon) and another transferred

from Bar-le-Duc to Baccarat Hospital; the three others belonged to a labour detachment of Lens Camp (Nord); one died in September 1947. From an assigned residence centre at Noë (Haute-Garonne) one case (young woman) of (old) infantile paralysis.

#### GERMANY

=====

In 1942 : 15 cases, including 7 post-encephalitic Parkinsons, amongst French and Belgian PW in a Berlin hospital. In Berlin, too, there were 2 French PW treated for sequelae of infantile paralysis and one Belgian PW from Wurtemberg for poliomyelitis.

In 1943 : 5 cases amongst French PW in East Prussia (treated by a German MO in a Russian hospital).

Total : 23 cases, as above.

#### GREAT BRITAIN

=====

Two German PW (aged 22 and 33) died in hospital from poliomyelitis; one in August, the other in September, 1947.

#### ITALY

=====

In 1943, 28 cases, including one from a Yugoslav and gipsy camp in Teramo Province (Central Italy).

In 1945, in Terni civilian internee camp (British management) a girl of 15 was treated for infantile paralysis in a small local hospital; she required an orthopaedic corset.

In 1946, 25 Yugoslavs from a labour detachment were sent to an American hospital for poliomyelitis; 5 of them died. About the same time, one case (German protected personnel) was also treated in an American hospital.

SUMMARY

Poliomyelitis was most frequent in Italy (55 cases) followed by Germany (23), and Rhodesia (8). In other countries a few isolated cases. Sequelae were commonest in Germany (9 cases), Czechoslovakia (4), and Rhodesia (3).

Eight deaths in Great Britain (2), France (1), Italy (5), as above.

By nationalities :

Jugoslavs	53	cases	5	deaths
Germans	19	"	3	"
French	14	"		
Belgians	9	"		
Italians	5	"		

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S C A R L E T   F E V E R

AFRICA (North)

At Géryville Camp (Algeria) there was a mild epidemic of scarlet fever in February, 1947.

AFRICA (South)

Zonderwater Camp Hospital recorded two cases (Italians) in November, 1944.

CZECHOSLOVAKIA

In 1946, one child, sent to hospital from a German internee camp.

FRANCE

From 1942 to 1946, about forty cases.

In 1942, 1 British internee, in the contagious diseases ward, Palace Hotel, Vittel.

In 1945, 25 cases which, the Delegate was informed, were treated in the Chancs Military Hospital, near Pont d'Ain (Germans and Austrians).

In 1946, 11 sporadic cases, at Alençon Hospital (1) Lyautey Hospital, Marseilles (1), Eure-et-Loir (2), near Chartres (4), Orne (1), Gavranche Auxiliary Hospital, near Clermont-Ferrand (2) - all German and Austrian PW.

GERMANY

=====

In 1941, March to November, ten cases in a Wurtemberg Oflag, but only one death (French PW). The other cases were spread over Pomerania, East Prussia and Southern Austria. A Vienna hospital for contagious diseases treated four French, Belgian and Polish officers from a neighbouring Oflag.

In 1942, from February to November, twenty cases amongst French, Yugoslav, Polish, Belgian, British and Russian PW; few complications. No epidemics, but isolated cases in Pomerania, Thuringia and Westphalia, and the Danzig, Berlin and Mayence areas; they were treated in adjoining hospitals, particularly at Neukölln and Threysa. The British were not especially affected and the disease was not, in their case, "severe". The French suffered most. The evolution was normal; as from October, morbidity declined.

In 1943, the disease became more prevalent, and about 100 cases were reported from the Berlin, Hamburg and Nuremburg areas, in Bavaria, Westphalia and Wurtemberg, amongst French, Belgian, Polish, Yugoslav, British, American and Russian PW. No genuine epidemic occurred during the Spring and Summer; records show however that 29 American PW fell ill in Stalags of the Berlin area. In May, 1943, 30 American PW from Italy, first sent to Bavaria, then to Berlin, were ill on arrival; 52 were placed in quarantine. Treatment was given in the infirmary by two qualified Russian doctors; the patients nevertheless asked for an American doctor.

In June, 1943, the doctor of a camp near Nuremburg reported a mild epidemic amongst French, Belgian and Yugoslav PW; a few cases were notified, from July to November, amongst Polish, British and India PW in Westphalia.

In 1944, 4 cases only were on record from January to November, one a British PW in the Danzig area. Other PW contracted the disease in Saxony and Thuringia. In an internee camp at Wurzach, a New Zealander of 45 died. This camp apparently received, from November 1943 to March 1944, about fifty cases.

In 1945, a few German PW contracted the disease in a camp in the British Zone.

Total : about 248 cases and 2 deaths.

GREAT BRITAIN

=====

In 1946, May, 1 case in a German PW Camp.

In 1947, 1 case.

ITALY

=====

November 1944, 2 cases (German and Italian) at a British General Hospital, Southern Italy.

In 1945, 1 case (German PW) in the isolation ward of the German Hospital, Grumo (British management).

POLAND

=====

August 1942, 2 cases (French and Belgian PW) in a Front-Stalag near Warsaw, and 1 case at Rawa-Ruska Front-Stalag.

Summer 1943 : a few cases amongst French PW in Lemberg Camp.

SUMMARY

=====

The Delegates reported some 300 cases and 2 deaths. No serious epidemics, except 100 cases in Germany, in 1943 (see above).

Germany :	<u>248</u>	cases
France :	<u>36</u>	"

Otherwise sporadic cases only.

Morbidity was greatest amongst the French, American and Germans. The British were not particularly exposed.

Symptoms were never grave; albumine in the urine is only recorded once.

Deaths : two only (see above).



S C U R V Y

AFRICA (Central)

=====

British Somaliland

In July 1941, a few cases amongst Italian PW in a transit camp.

Sudan

In 1942, numerous cases amongst Italian PW, with gingivitis, intestinal haemorrhage, diarrhoea, etc.

In 1944, very many cases in an Italian PW camp (Astrara-Saoud), mostly without gravity.

AUSTRIA

=====

In Southern Austria, a French PW died a few days after admission to the civilian hospital (grave oedema, profuse haemorrhage, purple skin patches, scorbutic ulcers of arms).

EGYPT

=====

In 1942, 3 cases (German and Italian PW) were successfully treated by strict diet, extra meat, fruit and vegetables.

GERMANY

=====

In 1945, Dr. Landolt visited two British camps, one in Holstein (2,000 Hungarian boys and youths, aged from 12 to

20, enrolled in the Wehrmacht), and another near Oldenburg (2,000 cadets aged 18 to 20).

In the first, the Delegate reported acute general malnutrition and numerous cases of scurvy. In the second camp, scurvy was widespread, and accompanied most unsatisfactory living conditions, food and clothing.

Dr. Pingeon, in December 1945, reporting on a camp for political detainees of German and other nationalities in the Rhineland, recorded 150 cases. With the help of vitamin C, provided by the ICRC, the number was reduced to 63. In the same camp, 532 cases of hunger oedema were reported.

About 30 cases, including several nurses, were reported in Silesia, amongst Poles from Warsaw.

#### INDIA (British) =====

In 1942, several cases (Italian PW) in the Kangra Valley camps.

#### SUMMARY =====

Scurvy was most prevalent in Occupied Germany, especially amongst Hungarians. It occurred also in camps for political detainees and Warsaw Polish forces. Many cases in the Sudan. One death.

Altogether, some 180 cases, plus the Hungarians and Italians.

In Europe, at least, scurvy was apparently less widespread in PW camps than in the years 1914-1918.

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SPIROCHETOSIS ICTERO-HEMORRHAGICA

FRANCE

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In August 1947, a PW doctor at Saumur reported three cases, traced to rats, and stated that six similar cases had occurred the previous month.

GERMANY

=====

Three cases : a French PW in Thuringia (died May 1941). Of the two others (in a British, Belgian and Yugoslav PW camp near Danzig) one recovered completely, the other suffered from after-effects (kidney trouble).

Total : 12 cases, as detailed above.

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T E T A N U S

In comparison with figures for the first World War, tetanus was infrequent.

EGYPT

=====

When visiting the HQ Hospital (formerly 4th General Hospital) on April 13, 1946, the Delegate saw one severe case in the Italian Section; the patient was making favourable progress.

FRANCE

=====

In a British hospital (German and Austrian PW) in Calvados, 3 cases and 1 death (Austrian PW, September, 1945).

In a German PW hospital (Northern France), 1 very severe case. By October, 1945, however, the patient was out of danger.

In a hospital at a German PW camp in South East France (May 1946), 2 cases out of 7,624 PW hospitalized.

In 1947, 1 case in Fontainebleau district hospital.

Total cases : 7.    Death : 1.

GERMANY

=====

From 1941 to 1946, 420 cases were reported in various camps situated in Pomerania, Hanover, Baden and near Nuremberg.

Five deaths.

	<u>Cases</u>	<u>Deaths</u>	<u>Nationalities</u>
1941	20	1	
1942	127	4	Franch 170 (3 deaths) Jugoslavs 140 (1 death)
1943	97	-	Belgians 47 Polish 25 (1 death)
1944	94	-	British 7
1945	51	-	Nationality
Date un- known	31	-	unknown 31
	---31--- 420	---5--- 5	----- 420 (5)

GREAT BRITAIN

In February 1947, 1 German PW died in the 162nd Military Hospital.

INDIA (British)

In 1943, 1 death (Italian civilian, near Delhi)

SUMMARY

Germany	420 cases	5 deaths
France	7 "	1 death
Egypt	1 case	- "
India	1 "	1 "
Great Britain	1 "	1 "
	---1--- 430 cases	---1--- 8 deaths

The dead included : 3 French, 1 Yugoslav, 1 German,  
1 Pole, 1 Italian, 1 Austrian

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T R A C H O M A

AFRICA (North)  
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Morocco.

In September 1944, 1 case (Italian PW in Meknès civilian hospital).

AFRICA (Central and South)  
=====

South Africa.

In 1941, 110 cases amongst Italian internees in Zonderwater Hospital; 80 of these were admitted with chronic trachoma, contracted before capture in East Africa.

Kenya.

30 cases amongst 438 Italians visited in hospital; 12 were Italian civilian evacuees. All were isolated.

Southern Rhodesia.

2 Italian internees in Extension Camp, Fort Victoria; treated by a specialist.

Total : 142 cases in Central and South Africa.

AUSTRALIA (South)  
=====

In January 1943, 3 cases : Italians and German internees in the same camp and one Japanese from another camp of the same group.

## AUSTRIA

=====

In March 1941, several cases were isolated in a Vienna Hospital (Polish, French and Spanish PW). All were treated with albucide (2 tablets three times daily). All recovered without after-effects.

## EGYPT

=====

From 1941 to 1944 : 300 cases in camps.

In 1941, a few cases only amongst Italian, Albanian and Greek PW.

In 1942, a fairly large number, particularly amongst Italians and Libyans; they were treated in eye-clinics with protargol, mercurial salts and sulphate of copper. Brushing of the cornea was not practised. Several cases were much improved by simply adding vitamins to the usual diet (milk, eggs), which is evidence that hypovitaminosis plays a part in the etiology of trachoma.

In September 1942, a new treatment is mentioned, namely "three irrigations per diem". This was introduced by an Egyptian professor in Cairo, and had apparently excellent results in 180 cases (Libyans). Up to the present, no particulars regarding this new treatment are available (see below).

A British oculist came regularly twice a week to see new cases and prescribe; treatment was carried out by Italian PW doctors and a British camp MO.

The number of cases decreased early in 1943; this was apparently due to strict precautions and systematic treatment. By February there were only 30 Libyans affected, several of whom suffered from complications.

## FRANCE

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In 1941, some 240 cases were reported from Front-Stalags in North, North-West and South-West France, also in the Paris area, amongst natives of North Africa, Senegal,

Madagascar, Annam, Indo-China and other colonies; two white doctors were also affected. Several were sent to an eye-hospital, severe cases to that of Auxerre (Yonne) (cases of granular conjunctivitis - trachoma ?, 40 % of whom had pterygium and chalazions). German doctors in some Front-Stalags (North-West) said that one-fifth of the men had trachoma, mostly mild and without complications; four men (North Africans and Senegalese) suffered from ulceration of the cornea.

Most of these 240 cases recovered, without after-effects, following treatment with albucide (2 tablets three times daily) or daganan.

In 1942, cases decreased; a few North Africans were treated at a hospital for colonial diseases in South-West France "with the most modern medicaments",

In 1944, cases were reported amongst Indian PW in the Vosges, and near Paris. In Vittel Camp (mostly British internees) 26 cases occurred amongst British Jews and North Africans.

Summary : 270 cases recorded, but to these should be added the "numerous cases" often mentioned in the reports.

#### GERMANY

=====

From 1941 to 1945, 332 cases in camps. The majority were sent to Sandbostel Hospital (Hamburg-Lübeck), where all PW trachoma patients in Germany (Poles, Jugoslavs, French, Belgians, Italians, but no British or Americans) were assembled.

Many came from camps South of Berlin; Dresden, Hanover (105), Lübeck, Nuremberg (10), Wurtemberg, Thuringia and Schleswig-Holstein.

The patients were often isolated in separate hutments and were regarded as contagious, even after the acute period. They were finally declared unfit for service. Treatment given by a PW Yugoslav eye-specialist was much appreciated. The highest figure was reported amongst Jugoslavs (259 out of 303), who, together with a few Poles, were apparently the cause of this epidemic, having contaminated 50 French, Belgians and Poles, including a Polish doctor (infected while giving treatment) and an Italian doctor.

Patients were treated with albucide, which apparently cured many and produced no after-effects. The MO asked for sulphonamides, but these were apparently refused.



Two other hospitals (Baden, and South of Berlin) had two cases (Indian PW). Here, as in Strasburg Hospital (French, Belgian and one Russian PW), sulphate of copper and sulphamides were successfully applied.

In 1944, 8 cases in a Thuringia eye-clinic (4 Italians, 2 French, 2 Jugoslavs).

After the Armistice in 1945, in a camp hospital, British Zone, 13 cases (German PW) were given sulphamide treatment. All were recovering in August, 1945.

Total for Germany : 332 cases.

#### GREAT BRITAIN

=====

Two cases: an Italian admitted to hospital in 1944, and in July 1947, a German from another camp.

#### GUIANA (Dutch)

=====

In 1943, 27 cases in a German internee camp. The inmates of a neighbouring camp, fearing contagion asked to be examined by an oculist.

#### ITALY

=====

In August 1942, three acute cases (Tripolitan Jews from Villa Oliveto internee camp) were seen in Arezzo Hospital. In May 1943, when visiting Greek internees in North Italy, a Delegate was told that a patient (woman from Modena province) was being regularly visited by the hospital doctor. Treatment was not, however, adequate and the Delegate undertook to provide medicaments not available in Italy.

## POLAND

=====

In a report to the General Government on the prevention of trachoma, the Delegate referred to a trachoma clinic near Cracow, built twenty years ago, which is the only hospital of its kind in Europe. In June 1940, the Delegate here saw 150 child patients. The clinic served as a trachoma research centre. Yugoslav PW who had contracted the disease in labour detachments were sent there by the German authorities.

## SUMMARY

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During the War, some 1,300 cases were recorded in PW and internee camp.

The disease was commonest in Germany (332), Egypt (300), France (270), Poland (150), South Africa (142). Few complications and little contagion, probably owing to prompt isolation. Four doctors were however infected in Germany.

Treatment : albucide, dagenan and other sulphamides, sulphate of copper, protargol and mercurial salts, all of which apparently gave good results, some cases even being cured without after-effects. Vitamins were useful.

With regard to the successful treatment practised by an Egyptian professor (see above), Dr. Sansonnens, a Palestine Delegate, discussed the point with Professor Tobghy, of the Cairo Faculty of Medicine; he stated that, in view of the fact that in Egypt and the Near East trachoma was always associated with super-infection (Koch-Weeks or Morax-Axenfeld bacilli), he employed sulphamides, in particular sulfadiazine or sulfathiazol, and penicillin as an anti-biotic. The treatment gave excellent results; the super-infection, which was the most dangerous symptom, was easily overcome, within 5 or 6 days. Further, sulphamides apparently had a curative effect upon trachomatous lesions of the cornea (pannus); they should be given internally (not by collyrium) in doses of six tablets per diem. For external treatment Professor Tobghy recommended atrophin, hot fomentations, applications of nitrate of silver (1 %), or sulphate of copper (1 %) and, for chronic sufferers who are germ-carriers, administration of bactericidal rather than bacteriostatic drugs. Professor Tobghy had not obtained the satisfactory results described by others from the use of lutazol-ophtalmol (in tablets or by sub-conjunctival injections); he also considered these to be painful and traumatic.

Great interest is shown today in many quarters in the treatment of trachoma; thus, Dr. Freyche, head of the Epidemiological Section of the World Health Organisation, gave some interesting particulars.

Dr. Freyche is convinced of the beneficial effect of sulphamides and anti-biotics in super-infection and corneal complications;; their influence on the virus is less certain. All writers agree, however, that radical cure by this means alone requires prolonged treatment and is not without risk; it involves long periods in hospital, and the percentage of failures is high : 30 to 40 %.

A simple and inexpensive treatment was practised by Dr. Parlange in 1949 (See "Maroc médical", 1949, 28- 724 - Nov.). Patients in Murat Hospitals (Fez) were treated with ox gall (slightly antisepticized by a mercurochrome solution for preservation); this is applied with a brush and is much less painful than the usual practice. Ox gall has proved to be an excellent local remedy; it is well borne by patients of all ages, causes no reaction and is without counter-indications; it is said to be most efficacious: rapid absorption of granulations within 3 or 4 days, softening of tarsal cartilage and early healing of lesions. Its mode of action is still uncertain, it may be due to the antiseptic, vitaminic or biochemical influence of one or several constituents. It remains to be shown whether relapses do not occur. Time will show the real value of this therapy.

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S M A L L P O X

From 1941 to 1949, records show 17 cases only, two of which were fatal.

AFRICA (South)

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In 1942, 3 cases (Italians newly arrived in Zonderwater Camp). They believed that they had never been vaccinated.

AUSTRALIA

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In August, 1941, 2 cases - an Italian and a German - who were admitted to Hay Camp Hospital, N.S.W.

EGYPT

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In 1945, 2 cases, a Libyan in the 4th General Hospital and an Italian internee in Fayed, just returned after leave. No further cases occurred, but all the internees were revaccinated, including those inoculated in 1942, either in the smallpox ward or in the camp hospital.

FRANCE

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In 1945, 1 case reported in an assigned residence centre near Poitiers (German PW with atypical chickenpox, suspected smallpox. No certain diagnosis being possible, all internees in the camp were revaccinated.

Four cases amongst children in a German, Polish and Yugoslav internee camp at Hénin-Liétard (North).

#### INDIA (British)

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Although smallpox is common in India, 4 cases only were reported from 1942 to 1945 (Italian PW camps, Calcutta and Bhopal districts). Two deaths occurred; one (a PW from a Camp in the South) from haemorrhagic smallpox in 1945.

#### PALESTINE

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In 1944, an Italian PW contracted a mild attack of smallpox and made a successful recovery.

#### SUMMARY

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17 cases in all (10 Italians, 6 Germans, 1 Libyan);  
2 deaths (Italians in India);  
5 cases in France; 4 in British India; 3 in South Africa; 2 in Egypt; 2 in Australia;  
1 in Palestine.

Reports state that in Germany all prisoners of war of war were vaccinated as from 1941, and in Japan as from November, 1943.

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The following diseases occurred very rarely in PW camps, but seem to deserve at least passing mention.

#### ACTINOMYCOSIS

In 1944, 2 cases (German internees, 1 man, 1 woman) in Deoli-Ajmer Camp (Northern India).

#### VINCENT'S ANGINA

In 1943, 20 cases amongst German PW in the United States. One death.

A few sporadic cases, none of them serious, occurred in Australia, Germany and Great Britain.

#### BOTULISM

In 1942, 6 cases in Germany - 1 in Saxony (a British PW who died), 1 in Westphalia, 4 amongst French, Belgian and Yugoslav PW in the Hamburg area.

In 1943, 3 cases in a camp for French, Belgian and Yugoslav PW in Silesia.

### ECHINOCOCCAL CYST

In 1943, 2 cases (cyst on the liver) in an Italian PW camp (Bhopal, Central India).

1 case (cyst on the lungs) - an Australian PW in Germany, (Nuremburg district).

### RECURRENT FEVER

(Spirilla Obermeieri)

In 1941, 1 case in Great Britain (German PW in a labour detachment).

In 1944, 6 cases in unoccupied China (Vicariat of Lanchow, in assigned residence) amongst Germans, who were treated with neosalvarsan, no appropriate medicaments being available.

5 cases (tick fever) in South Africa (Italians in Zonderwater Camp).

In 1948, 1 case in Great Britain (German PW).

### TROPICAL FEVER

In 1941, numerous cases amongst Dutch internees in Buchenwald Camp, Germany.

In 1945, 5 cases in Leros PW Camp (Dodecanese); the patients, treated by a German doctor, suffered from open sores.

In 1946, 18 cases amongst Japanese in the Japanese Military Hospital, Kuala-Lumpur, Malaya.

LEISHMANIASIS

In 1944, 2 cases in Algeria (Italian PW, both in hospital).

NEBLUOLIA

In 1943, 1 case reported in the infirmary, Camp No 10 (Italian and Finnish internees) at Loveday, South Australia.

HYDROPHOBIA

In 1942, 1 case in an internee camp, Kangra Valley, Northern India.

LEAD POISONING

In 1942, a few cases in Wurtemberg (Germany) amongst French, Polish and Belgian PW employed in a lead works at Heilbronn.

In 1946, 25 cases amongst German PW from the Cor-meilles-en-Parisis camp (France), employed in a chemical works. They were notified by the Delegate to the Medical Officer.



### SILICOSIS

In 1945, in an assembly centre in France (Douai Wire-Mill), out of 2,000 internees, one case (German, also suffering from tuberculosis).

In a Westphalian labour detachment (Germany), 3 cases amongst Poles employed in a factory where dust was abundant.

A few cases amongst German PW in Camp No 186 (Great Britain).

One case of silico-tuberculosis in an internee camp at Sin-le-Noble (France).

In 1948, several cases among German PW in Thiers-la-Grange Camp, in the mining district of Northern France.

### TRENCH FEVER

In 1945 one case at the General Hospital, Indianapolis, (United States) (German PW; second relapse) of trench fever, due to *Rickettsia quintana*.

When visiting Jugoslavia in December 1945, Professor Mooser heard that there were several cases of trench fever amongst German and Italian PW in Osijek Hospital.

### " INFLAMMATION of KNEECAP "

(Housemaid's Knee ?)

In September 1948, 30 German PW in Stalin Camp, Czechoslovakia, were suffering from "inflammation of the kneecap" (no lesions or albumen in urine). These men were employed in the Hedwig Mine and apparently worked on their knees.

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UNIDENTIFIED DISEASES

In the main camp at Rhodes (Dodecanese), 80 PW suffered from a disease unknown to British and German MOs, the symptoms of which were somewhat similar to those observed in deficiency oedema. According to the German camp doctor, exemption from work or, better still, 3 or 4 weeks in bed, were sufficient to make the symptoms disappear.

In 1945, at an assigned residence centre near Poitiers (France), a disease designated as "camp fever" broke out. Neither the French MO nor the internee doctors were satisfied with this name for the epidemic, which gradually involved the whole camp (3,000), including the internee doctors. The infection was presumed to be due to lice; this could not however be proved. Initial symptoms were a temperature of 38 to 39 cent., remaining at a peak for 10 to 12 days; pains in the joints; bones painful to pressure; relaxed state of joints; metabolic trouble; swollen face; diarrhoea. Patients were extremely depressed and apathetic, showed great loss of weight and anaemia; they left hospital after ten days in an emaciated condition. In order to confirm diagnosis, one patient was sent to Poitiers Hospital.

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FINAL REMARKS

This report does not call for conclusions, which it could hardly yield. Its sole purpose is to give those interested in the subject a general idea of health conditions in PW camps during the second World War, without having to refer back to the many thousands of reports on camp visits made out by Delegates of the International Committee. There is, it must be admitted, in these two hundred odd pages, no more than a part of the interesting or useful points which could have been quoted, and certain questions might have deserved fuller development. Had this been done, however, the report would have failed in its object and been still more tedious.

Although precise details are often lacking, it may safely be concluded that, considering the very large number of prisoners concerned - 10 to 12 million, of whom at least 5 million were protected by the Geneva Conventions - the rates of morbidity and mortality (excluding internal or contagious diseases and surgical cases) were not on the whole excessive. Epidemics were neither frequent nor serious, doubtless owing to vaccination before or during the War. If health conditions in camps were "satisfactory", this was certainly due, in the first place, to the Geneva Conventions, which were applied by most Detaining Powers so far as the circumstances of war allowed. We should further stress the importance of camp visiting. In giving ICRC Delegates opportunities of conversing with prisoners - usually without witnesses - of recording complaints and submitting them to the proper authorities, suggesting improvements, ascertaining that the sick were given adequate treatment, that precautions were taken against the outbreak or spread of epidemics, that the necessary medicaments, sera or vaccines were available, - camp visits were a source of valuable information and an extremely valuable means of control. The general state of health in camps made gradual but evident progress after Delegates' visits.

In this, as in many other fields, the services of the International Committee of the Red Cross deserve recognition.

Dr. E. COTTIN

September, 1950.

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