STRESS

Medical and Legal Analysis of Late Effects of World War II Suffering in The Netherlands

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THE CIVIL MEDICAL SERVICES IN THE NETHERLANDS DURING WORLD WAR II

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Introduction

In addition to the problem of the overwhelming number of sources requiring time-consuming cultivation, the broad theme of this symposium, 'War: the past and the future', also forces the historian to set limitations and to emphasize specific aspects of his subject. Firstly, the required explanation of the functioning of the civil medical services during wartime has to be confined to the Dutch situation. Comparative contemplations in which parallels and differences will be described and analysed alongside developments in other countries will have to be deferred to a later date (1). The Dutch colonies will also be excluded for now, because of the different organization of the medical services in the tropics and the different problems with which they were confronted.

The second limitation concerns the decade of the 1940s. The time and space available do not allow a full discussion of the situation before, during and after the Second World War. With regard to my assignment, to elucidate the functioning of the civil medical services, I would like to emphasize the first phase, that is, the years around 1940. For that reason, the problems of the period around 1945, such as repatriation (2) and the organization of health care in the post-war years (3), are excluded from the picture. Thus the main question concerns the response of the medical and health care services to the threat and events of war at the time of the outbreak of World War II.

A third limitation has been applied to the subject of food. Although the themes of food and health are closely linked, topics such as food supply in wartime, quantitative and qualitative changes in food parcels, medical aspects of the distribution of food and the medical care of the undernourished and the starving each require a separate and specialized speaker (4). In any case, in this lecture the emphasis will be placed mainly on organizational problems rather than the variety of clinical problems within medicine or psychiatry.

Mobilization and health care organization

In order to get a clear picture of the functioning of the medical services during wartime, it is necessary to know the degree to which the various organizations were prepared for war. The facts concerning this situation are derived from the general literature on the years 1937-1940 and that relating specifically to the mobilization (5). In addition, certain medical periodicals such as the 'Nederlands Tijdschrift voor Geneeskunde' (Dutch Journal of Medicine), the 'Tijdschrift voor Sociale Geneeskunde' (Journal of Social Medicine), the 'Geneeskundige Gids' (Guide to Medicine) and the 'Het Ziekenhuiswezen' (The Hospital System) were referred to.

Almost all of the organizations in question were part of the established structures at the time in The Netherlands: on a national level, the Department of Health (still under the wing of the Ministry for Social Affairs), with a Medical (Chief) Inspector, and on a local level in the large cities, Municipal Medical and Health Care Services. Since the abolition in 1933 of the so-called (Provincial) Health Committees there had been a weakening at the regional level that had worked to the advantage of the municipal services (6). When, in August 1939, mobilization was proclaimed, this infrastructure of health care was supplied from two sides: on the one hand, by military organizations such as the Dutch Red Cross (which since 1933 had been charged with the overall care of sick and wounded civilians and soldiers within an evacuation area during war)(7) and, on the other hand, by the Committee for the Evacuation of Civilians which included, as of October 1939, a sub-committee for health care.

This latter committee was charged with the preparations for and the execution of an eventual evacuation of seriously ill civilians receiving medical treatment at home and patients in medical institutions. In the refugee areas, where the population could potentially increase by 40% to 50%, the committee had to optimalize conditions for hygiene and health. However, they were soon confronted with insurmountable organizational problems, caused mainly by the total lack of any coordination between the activities of the various organizations concerned with the affairs of mobilization. Moreover, much valuable time, including the time gained by the commission through the delay in the actual evacuation, was for the most part lost to the collection of administrative and statistical facts and the drawing up of an inventory of available accommodations. Both weak points in pre-war health care (lack of both coordination between services and uniformity of medical administration) would be considerably reinforced by the end of the war.

An important and often neglected part of an evaluation of the measures for evacuation - and also important for a description of post-war changes in health care - is the reorganization ongoing during the thirties. Early in 1940 an extensive report by the 'committee for the study of health care organization' was published. The committee had been established in January 1936, in an attempt to achieve closer cooperation between the private and public institutions involved in these matters and to coordinate the activities of such organizations (8). A bill for the promotion of public health accompanied the report. The aim of these attempts towards reorganization was 'the consolidation and concentration of forces'. During these years, in all fields of public health, various associations, unions and federations were founded: cooperation was the device and leading principle in this development.

However, as a result of the advent of war in May 1940, most of these organizations had insufficient time to realize their aims of coordination and cooperation. As an example we can cite the case of the 'Association of Directors of Medical and/or Health Care Services in The Netherlands', which was founded early in 1939. At long last the municipal services could achieve a uniformity in their activities, which included their responsibilities during mobilization. All of these good intentions were frustrated by the violence of the war, and also by an accidental accumulation of changes in management and accommodations.

Illustrative of the status quo of medical organizations in The Netherlands on the eve of the Second World War are the well-known complications surrounding the introduction of the Sickness Benefit Fund. After the failure of several government initiatives, the lingering problem constituted a much discussed topic within the Central Organization of Sickness Insurance Funds, trade unions and the Dutch Society for the Advancement of Medicine. On 4 May 1940 an extraordinary meeting of the Society

opted not to support the formulated proposals. At that time a vacuum was created in which the occupying forces could proclaim the Decree on Sickness Funds (9). This financial arrangement for sickness costs was of great importance for the organization of both medical care for a large part of the population and the civil medical services. Thus, the execution of the decree in November 1941 removed an important barrier to the creation of the primary health care system, while at the higher levels of health care the balance between private medical specialists and institutional medical care moved in the direction of the former (10).

Medical themes in the period of mobilization

In addition to the incidental interest which would increase in importance during wartime in certain aspects of medicine and health care, such as the skillfulness of general practitioners in minor surgery (11), most of the problems that became central issues during the period of mobilization can be categorized under three headings: the prevention and treatment of infectious diseases, the medical aspects of air-raid precautions and the dangers of chemical warfare. Of course, these interrelated themes were of importance not only for the civilian but also for the military medical services.

In the 'Nieuwe Rotterdamse Courant' (New Rotterdam Newspaper) of 15 December 1939 the recently appointed Medical Chief Inspector, Cornelis Banning (1894-1964), and the Director of Public Health Care, C. van den Berg, presented a summary of the 'measures that had been taken in the field of public health in the context of the mobilization of our own country and the war in many countries of our continent'. A campaign against typhus had been organized; the depots for serums, in particular against diphtheria and typhus, were well stocked; thanks to the health centres, tuberculosis was under far better control than in 1914; for the fight against spotted fever simple mobile delousing furnaces were being constructed; the campaign against smallpox was to be regulated by a new law, and the Committee for the Evacuation of Civilians had solved most of the problems that would emerge as a result of an unexpected evacuation (12). However, at least a few critical remarks must be made about these reassuring activities.

The first concerns the uncoordinated approach to the prevention and treatment of a number of important infectious diseases, as described by Koolhaas Revers in his study of the evacuations in The Netherlands (13). This applied particularly to the salmonelloses (typhus and paratyphoid fever), which were of special importance in the pre-war campaign against infections because of the need to improve the sanitary infrastructure such as the water supply, the sewerage system and the production of food and milk. During the thirties there had been undeniable progress in these fields, although the process of improvement still had a long way to go. As a

consequence, the carriers of typhoid bacteria constituted a serious threat to public health in times of evacuation and war. The Committee for the Evacuation of Civilians and the Medical Chief Inspector could not agree upon the way in which the evacuation of these patients was to be realized: either together with their families and the people of the district, or individually so that the reunion of the family would take place some days after evacuation. The consequence was that during the evacuation of May 1940, these patients, insofar as they were involved, 'disappeared in the sudden whirlpool of human refugees'. Fortunately, as far as we know, this had no serious effects on public health – at least not during the evacuation period. During the years of occupation, however, the free movement of germ carriers did have a harmful effect (14).

Not only the disputes on strategies for the medical aspects of evacuation had a negative effect, but also the different opinions on problems of a medical-technical character. The discussion which started around the beginning of the 1940s between the above-mentioned Inspector Banning and Anton Vedder (1904-1964), a lecturer in Public Health at Amsterdam University, may be regarded as illustrative of the situation (15). In a contribution on the epidemiologic dangers of the evacuation of civilians published in the 'Tijdschrift voor Sociale Geneeskunde', Vedder (who was not familiar with the secret plans of the government) made a plea for early and, more particularly, compulsory measures in the fight against epidemics. They included compulsory and mass vaccination against diphtheria and enforced internment during the war of registered carriers of typhoid fever, patients with tuberculosis and prostitutes with venereal diseases. Vedder also wanted to restrict the freedom of movement of vagabonds in order to prevent the spread of the clothes louse and thus the spread of spotted fever (16). In particular, Vedder's opinion that vaccination against typhoid fever was 'in practice technically unworkable; besides it was expensive and not efficacious' and, therefore, that compulsion was the only solution was seriously criticized by Banning, who considered mass vaccination against typhoid as both possible and necessary. Such a conflict of views among representatives of the medical sciences caused the government all kinds of dilemmas, which did not improve its readiness to make decisions.

The fight against venereal diseases was a special question among all these problems. Shortly before the war a new system of controlling and fighting the diseases had been introduced in The Netherlands, a system based on the principle of voluntary participation. Because of the inadequate results, some wished to obtain more authority from the government in order to be able to move towards compulsory treatment and, possibly, compulsory admission to hospital (17). Such a measure was implemented in October 1940, although only for so-called 'anti-social' people. One year later, the occupying forces extended this category to

cover prostitutes which meant, in opposition to the feelings of the Dutch people, that the detestable system of the regimentation of prostitutes was again introduced. However, it appears that this measure was never seriously enforced.

In general, it has to be concluded that the years around 1940 constituted an important period in the prevention of infectious diseases, especially as a result of the analyses – which took place at all levels – of possible mechanisms of control, such as compulsory registration and the regulation of vaccination. The first mechanism, extension and intensification of the obligation to register, was particularly emphasized by the director of the Institute for Preventive Medicine at Leyden, Jan Pieter Bijl (1880-1979), formerly a teacher of hygiene at the Higher Army School and therefore well-informed on military organization (19). Shortly after the Dutch capitulation, this call for special alertness was repeated, especially with respect to the dangers of spotted fever and typhoid fever; in addition, scabies now received separate mention (20). The second mechanism, the regulation of vaccination, became a fact in 1939. The demand for vaccination became an enforced system of vaccination as a result of the Vaccination Law of December 1939. This law resulted in several new burdens for and alterations in the administration of the civil medical services.

The two other themes to engage the attention of the medical profession, namely air-raid protection and chemical warfare, can best be described in combination. In 1937 both themes acquired a more medical dimension when the Dutch Society for the Advancement of Medicine, following an initiative of the Inspector for the Protection of the Civil Population against air-raids and the Inspector of the Army Medical Service, decided to establish a committee to deal with the matter of chemical warfare. This institution organized courses for physicians throughout the whole country in order to acquaint them with the pathology of and therapy for intoxication by gases and to enable them to render effective help, provide the authorities with useful information for the organization of such help and train assistants (21). With respect to the gases used, it is certain that the Amsterdam pharmacologist, Ernst Laqueur (1880-1947), was the most important supplier of 'expert instruction to the authorities'. However, the number of participants in the several courses he organized is not mentioned in the sources.

Additional information was provided by the Dutch Chemical Society, which in 1939 delivered an extensive report on gases for warfare and possible protection against them (22). Little was heard about the possibility of bacteriological warfare. As far as can be seen only in the period around 1935 did this subject receive attention. Remarkable, but in relation to the developments we have just described also understandable, is the fact that the danger of bacteriological warfare was used as an

additional argument for a compulsory vaccination campaign against the most important infectious diseases. Moreover, it has to be stressed that, in the same way as the gases, bacteriological armament played a decisive role in the dissolution of the boundaries between military and civilian medicine and health care (23).

The problems under consideration were discussed in special meetings of the several sections of the Dutch Society for the Advancement of Medicine (24). A good example is the October 1937 meeting of the Groningen section, at which a retired lieutenant-colonel spoke. His discourse included the message that in view of the number of physicians who would have to be mobilized, all the remaining colleagues would have to participate in the organization for air-raid protection if it was to become in any way effective (25). Evidence of similar special meetings can be found in the programmes of medical associations and societies.

The need for medical-technical propaganda was further fulfilled by booklets (26) and medical periodicals (27), including the international literature to which they referred (28). Such sources were concerned chiefly with the medical problems which had arisen during the Spanish Civil War and the Polish campaign. In the 'Geneeskundige Gids' of February 1940, physicians were offered a survey of the medical measures which had been taken in connection with the protection against air-raids in England (29).

With respect to the medical enlightenment of laymen, a distinction has to be made between the general population and civilians who joined the First Aid Societies. Special literature became available to the first group at an early stage. One popular book, which was to appear in many editions, was 'Bommen op Nederland' (Bombs on The Netherlands). In this book the fact that air-raid protection was first of all a matter of self-defence and only secondly the responsibility of the medical services or other public institutions was pointed out to the readers. Among the somatic effects of a bombardment, the book listed burns and poisoning by war gases as the most important. Furthermore, it warned emphatically against the products of fear and excitement, which would affect many – particularly the nervous – and magnify the general state of confusion: apoplexy, attacks of hysteria, abortion and premature birth (30). The enlightenment campaign further included booklets (31) and, starting in 1937, the bimonthly periodical 'Luchtbescherming' (Air-raid Protection), in which medical aspects were also discussed. In November 1939 the Association of Welfare Physicians published a booklet which presented a comprehensive course on air-raid protection. An important chapter in this publication dealt with 'Some elementary knowledge of first aid for gas poisoning' (32).

However, after the Second World War, the prevailing opinion was that the organization of self-defence in the medical sense of the word had been inadequate, with all subsequent consequences. After the Second World War evidence of the failure gave rise to the foundation of the Civil Defence

Organization (33). The First Aid Society played a major role in this reorganization. It is regrettable that a systematic survey of the role of the First Aid Society, especially during the month of May 1940, has never been made (34). During the period of mobilization, special propaganda was organized by this medical relief organization. Particular emphasis was placed on the dangers of bombardment and the use of poisonous gas (35). The same vagueness can be detected with respect to the functions of other relief organizations, except the first aid societies. However, some incidental notices appearing in the medical press confirm the fact that significant initiatives must have been taken. Early in 1940 in Groningen, for example, a provincial committee for the medical care of civilians in wartime was founded; on their own initiative, they started to train all women from the municipalities of the province of Groningen in 'simple first aid' (36).

The hospital system during mobilization and in wartime

The previously mentioned lack of coordination in the health care system at the end of the thirties became more apparent as hospitals began to be mobilized. Many different claims on the available beds in individual hospitals were made by the Red Cross and the army medical services, who sought accommodation for their sick, wounded and convalescent soldiers (37), by the air-raid protection organization, who wished to make arrangements for the emergency rescue of air-raid victims and those suffering from gas poisoning, and by the Committee for the Evacuation of Civilians. Moreover, each of these organizations had its own solution for the inevitable shortage of beds that would soon manifest itself. For the military medical organizations interested in civilian hospital beds, the existing number of beds in Holland was taken as a fixed determinant; in contrast the air-raid protection authorities had a plan in which the municipalities would have to find new hospital accommodations for the relief of sick and wounded civilians. The centralized organization of the first and the decentralized set-up of the second, requiring close cooperation with the municipalities, added an extra dimension to the problems of coordination described above. Finally, early in 1940 the solution of these problems became the task of a new sub-committee of the Committee for the Evacuation of Civilians, generally known as the Hospital Committee. However, because of the German invasion of May 10, 1940, the committee did not have the opportunity to complete this task. Thanks to the short duration of the fighting and the ability of some local authorities to improvise in crisis situations, as in Rotterdam and Dordrecht, the extent and severity of this lack of organization in the civil medical services was for the most part disguised.

The above-mentioned organizations took an index of hospitalisation of 5‰ as their starting point for calculation of the number of hospital beds required for the care of civilians during wartime. This calculation resulted

in a total of 12,270 beds for all places of refuge together, but not even half of this number could be provided by the existing institutions. The shortage was aggravated by the rules imposed on hospitals by the Red Cross: immediate expansion of the admission capacity by 25%, and the reservation of two-thirds of the total number of beds for the sick and wounded servicemen. The remaining beds were for civilian use. It is remarkable that this assumption of the priority of military medical care over and above civilian health care did not give rise to fundamental debates (38). Only by changing the strategy for post-operative and chronic patients, sharpening the indications for surgical procedures and, the most effective measure, founding casualty stations was the calculated shortage of beds relieved. Schools, public buildings, country houses, storage spaces, etc. in the immediate neighbourhood of urban centres were used for this purpose (39).

Mobilization even had direct consequences for the internal organization of hospitals in the larger municipalities. The formation of so-called central hospitals by the Red Cross introduced the idea of a centralized strategy which was difficult to combine with the longstanding relative autonomy enjoyed by hospital boards and directors. For the 'fortress Holland' such hospital centres were planned in Amsterdam, Haarlem, The Hague-Leyden, and Rotterdam. Details will have to be omitted here (40).

With some exceptions, such as the Dordrecht hospitals which received the wounded from the battlefields of the southern front, the civilian hospitals of Maastricht (41), and the hospitals of Zuid-Beveland and Walcheren in Zeeland which unexpectedly had to care for wounded soldiers from the Peel Division and the French forces (42) , the hospital system was put under far less pressure to provide for the care of sick and wounded soldiers and for a much shorter time than anticipated. Even in fortress Holland, by the end of May 1940, only 2,275 of the 40,000 available beds appeared to be in use (43).

An interesting case study illustrating the effects of mobilization and war on not only the military but also the civilian aspects of the local hospital system is offered by the hospitals along the line Rotterdam, Delft and The Hague. On the one hand, they were confronted with a relatively large number of wounded military personnel, a result of the battle along the Maas and around the airports (44). On the other hand, the civil medical services were confronted with problems of unexpected magnitude and complexity caused by the bombardment of Rotterdam on May 14, 1940. In Rotterdam itself, the bombing resulted in the total devastation of the town centre, including the municipal and several other hospitals, while Delft and The Hague had to cope with a stream of refugees from the burning town. Examination of the detailed accounts in the annual reports of the various municipal authorities involved, the historical literature on this calamity and the reports drawn up by local hospital physicians (45) gives

us a preliminary impression that the flexibility of the health care organizations and institutions was far greater than had been anticipated by the civilian and military authorities. It was not the execution of the more-or-less detailed strategies drawn up before the war but direct improvisation which seems to have been the guiding force behind all of the medical assistance provided during the five days of battle (46).

Medicine and health care during the war and the occupation

With regard to the functioning of the civil medical services during the occupation, I will confine myself to a short discussion, focussing on four points, namely the medical profession, the general pattern of disease, medical science and mental health care (47).

Relatively, much has been written on the fortunes of the medical profession during the years 1940-1945 as a result of the both remarkable and important role of physicians in the resistance movement (48). The foregoing period, however, is no less interesting because of the problems with which representatives of the medical profession were confronted in the context of mobilization. Passing over the problems around the temporary replacement of medical practitioners (which gave rise in September 1939 to passage of the law 'concerning medical provision for civilians in the case of war or threat of war'), attention should be drawn to the attitude of Dutch physicians during the mobilization. This attitude shows that even at this early date, it was already possible to conclude that the manner in which physicians related to war differs from that in which civilians related to war. In October 1939 the editor-in-chief of the 'Nederlands Tijdschrift voor Geneeskunde', Gerard Abraham van Rijnberk (1875-1953), became spokesman for his colleagues through his public protest against the forced inactivity of mobilized medical students and physicians (49). The feelings among medical students were so strong that they even culminated in January 1940 in the beginnings of organized resistance (50).

A second striking feature was the reaction in the medical press to the return of the mobilized physicians. A gain for the medical profession was the considered opinion, because during mobilization they had been confronted with the 'medical care of controlled groups of people' and in this way had become acquainted with social medicine, that is 'the care of populations banded together in groups'. The idea of social medicine could only benefit from these experiences. Moreover, it was expected that the fresh approach of returning colleagues would challenge the conservatism of the Dutch Society for the Advancement of Medicine, which was in danger of losing control 'in affairs which are of the greatest importance to us'. Obviously, they had the troubles connected with the introduction of the Sickness Benefit Fund in mind (51).

Although not directly related to – but also not without significance for –

the subject under consideration, mention should be made of the numerous suicides among physicians. It is possible to gain the impression, which must be confirmed or rejected by closer research, that this problem was of great importance during the first days of the war (52). In addition to the effect on medical care, the population was apparently also deeply affected by these suicides while physicians believed that the image of the medical profession had been damaged (53).

The picture of the functioning of the civil medical services would be distorted if we confined ourselves solely to a discussion of physicians and medical specialists. The heaviest responsibility was borne by the nurses who managed the routine affairs of health care institutions or worked for district nurse organizations, the health centres, etc. They managed to achieve continuity in the organizations they served, in spite of the overall shortages and growing hunger and the physical affliction which came to trouble most nurses (54). The Women's Aid Corps, founded in June 1943, for welfare and social work should also be mentioned in passing (55).

The question arises as to how the functioning of medical services during the occupation was influenced by alterations in the pattern of disease, i.e. in their frequency, as well as the progression of these diseases. Without overstepping the boundaries imposed at the beginning of this paper, the most important shifts should not be totally ignored. For example, in the literature on internal medicine published during and shortly after the war, mention is made of a lower pulse rate and blood pressure; an increased number of cases of angina pectoris, acute nephritis and rheumatic diseases; a decrease in the number of diabetes patients (56); a manifest increase in occupational diseases, ascribed to the use of a variety of surrogate materials (57); sub-clinical changes in microscopic blood patterns (58); an increase in several surgical disorders, such as abscesses of the tongue and peritonsils, volvulus, ileus, gastric and duodenal ulcers, gallstones, polyps of the bladder and anal fissures; and fewer cases of acute appendicitis and kidney, urethral and bladder stones (59), etc. Pediatricians observed not only an increase in infectious diseases and bowel disorders, but also a rise in the frequency of prolapsed anus and rectum, intestinal intussusception, broncho-pneumonia and nocturnal enuresis (60); dermatologists reported on an unprecentend explosion of skin diseases, including scabies and pediculosis (61); dentists remarked on the reduction in caries but also a marked rise in the number of oral infections and denture problems (62), and gynaecologists published on the frequent disorders of the menstrual cycle (war amenorrhoea), fertility problems and the frequency of prolapsed uterus (63).

In analysing the statistics for infectious diseases, one has to take into account the fact that in the years before the outbreak of the war the Dutch health care system achieved remarkably favourable figures for both morbidity and mortality - despite the criticism of the organization. The

turnaround resulting from the outbreak of war was all the more striking because it changed the trend of figures that had already started to decline (64). With the exception of Weil's disease, the number of infectious diseases increased strikingly. The number of notifications (!) of bacillary dysentery increased five-fold between 1940 and 1943, diphtheria became one of the most deadly diseases among wartime infections, and spotted fever developed into a major problem when, at the end of the war, all kinds of refugees and repatriated labourers mingled with the civilian population (65). The increase in tuberculosis was dramatic and almost cancelled out the 'profit', due largely to the activities of the health centres, which had been made during the interbellum (66). After the war the battle against tuberculosis would become a major priority of health care (67).

The greatly altered pattern of disease was accompanied by more general changes in medical practice. Here too, we will confine ourselves to only a few aspects but try to make clear that, in many regards, a wartime medical practice functioned in a totally different way. Some of these changes are difficult for the historian to grasp, such as the altered relationship between physician and patient. Moreover, these changes were complicated by alterations in the availability and the actual use of health care facilities during the war. The relative reduction in the number of physicians, the shortage of medication (68), and the lack of facilities for intra-mural treatment resulted in a variety of shifts: for example, delayed consultation of the physician, delayed or inadequate use of the medication prescribed and delayed or inadequate surgical treatment (home operations!), with a corresponding aggravation of the disease condition; and a more somatic-reductionist treatment of complaints. As diagnosticians, the physicians themselves were confronted with the changing boundary between physiological variations and pathology, new relations between the symptoms of a certain disease, and various changes in the pattern of complaints. Thus, for example, in addition to the previously mentioned change in the blood pattern, they had to recognise a physiological pollakiuria and polyuria; they could not exclude the diagnosis of appendicitis in a patient who was also suffering from diarrhoea. Many patients presented their massive weight loss as a symptom of carcinoma. The second aspect concerns the influence of social-demographic shifts on morbidity statistics. For example, some people ascribed the reduction in the incidence of diabetes to elimination of the Jewish population from the statistics, since the prevalence of this disease was greater among the Jewish than the general population.

Finally, in this context medical science should be mentioned. Boerema correctly concluded in 1947 'that the very exceptional wartime conditions caused reactions in the physiology and pathology of the human organism, which deepen considerably our knowledge of the aetiology and the pathology of some diseases' (69). In truth, it has to be added that

awareness of such insights and knowledge was mostly achieved after the war, when they were integrated into general medical knowledge. The same holds for the evolution of medical science in general, which did not cease during the Second World War (70). The disruption of scientific communication on an international level, the termination of academic exchange in Holland itself, and the orientation of the general practitioner toward more important matters than post-graduate education and scientific progress led inevitably to a decrease in the level of medicine in The Netherlands. After the war this lack of knowledge was combatted by the production of special volumes in which the most important medical advances since 1940 were summarized (71).

The fourth and last theme of this section is wartime mental health care. A discussion of this subject was put off until now, as a direct consequence of the fact that the only aspect of the psychiatric problems of the Second World War evaluated in detail is their post-war manifestations. A survey of the literature on this theme justifies the conclusion that the effects of the occupation on mental health at that time has scarcely been studied. All interest has been directed towards long-term effects or secondary reactions (72).

An inventory of interest in mental health care during the mobilization also turns up few results. Most of the interest came from the psychiatric clinic of the well-known Leyden professor, E.A.D.E. Carp, who during the thirties produced several publications about war and psychiatry (73). In 1939 Carp wrote a more popular pamphlet published by the Roman Catholic Charitable Association in 's-Hertogenbosch on the 'Organization of the psychiatric service for the civilian population and preventive measures against feelings of panic' (74). In the same period, his assistant Grelinger informed the military physicians about 'the so-called war neurosis and the organization of the medical-psychiatric service in times of war' (75). The role and function of the 'committee on psychic influences of the actual symptoms of our times', which seems to have led a dormant existence in the ministry during the war, remains unclear. Early in 1946 this committee submitted an official report to the minister of social affairs; but nothing further was heard of it (76).

As far as the war years themselves are concerned, it might be of interest to point out an opinion which was propagated by the Groningen neurologist-psychiatrist, Bartstra (77). In his view, when studying experiences of stress, it is essential to take careful note of the nature of the stress as well as the period of the war and the geographical context within which these experiences took place. For the northern provinces, for example, Bartstra characterized the occupation as a period of relative relaxation in comparison to the years of mobilization, quite in contrast to the situation in the west of The Netherlands. For this reason, according to Bartstra, the nature and frequency of many psychiatric disorders could show consider-

able differences. Even experiences described on the basis of literature on the First World War as written, for example, by his colleague Meerloo (78) or on the basis of the situation in England, which was officially in a state of war but not occupied, may not, Bartstra claimed, be automatically applied to the Second World War or the Dutch situation, respectively.

The conclusions of Bartstra prompt, at the very least, caution about drawing generalizations from local or regional studies of the psychic effects of the violence of war. For example, this caution may be applied to the publication of Vroom, who collected the facts for his 'psychiatric and phenomenalistic study of responses to airplane bombardments' from the population of Den Helder (79). More general and contemplative studies flowed during the war from the pens of Van der Horst, Drooglever Fortuyn and others (80).

Medical experience drawn from the war and historiography

The expectation that after the war people would carefully detail the experiences of the medical services and individual physicians, and use them as a basis for the organization and reorganization of post-war health care was to be fulfilled only very partially. Moreover what applies for the general historiography of the Second World War also applies for medical-historical literature: namely, that this historical period has been studied from the rather one-sided perspective of collaboration and resistance (81). With respect to medical-historical literature, this is revealed especially by the extensive accounts of the organized resistance of physicians (82).

In contrast, in the medical literature itself, the effects of the war period on post-war morbidity became a prevalent theme. Physicians of the post-1945 period only rarely got down to the task of writing a detailed description and analysis of their wartime experiences. For this reason, the exceptions should be mentioned expressly here.

First place has to be given to a volume published in 1947 under the title 'Medical experiences during wartime' (83). In fact the book dates from as early as 1943, when the contributors responded to a request from the Groningen surgeon, Ite Boerema, later a well-known professor in Amsterdam, to 'record their medical experiences during the occupation and to publish them quickly after the end of the war' (84). Although the fact that the contributors were mainly Groningen specialists resulted in certain limitations, the value of this report as a medical-historical source is beyond dispute. Regrettably, no counterpart was produced by the general practitioners of the war period; and there is little doubt that the biographical writings of physicians who practised during the Second World War are in themselves incapable of filling this lacuna (85). The other studies referred to above appeared as follow-ups to Boerema's volume, including a detailed analysis of the figures for the Rotterdam

'hunger clinic', or were highly specialized reports based purely or partially on the statistics of the Second World War (86).

With regard to the context within which this discussion of civilian medicine during the Second World War is to be considered mention should be made of the symposium 'devoted to questions on civil defence and health care in times of war and in the case of major disasters', which was organized in May 1954 (87). The fact that this symposium was held under the auspices of the Dutch Society for the Advancement of Surgical Sciences confirms the impression that, after the liberation, there was a change in emphasis in the study of the relationship between war and medicine from the field of internal medicine, which had predominated during the period of mobilization because of the threat of gas poisoning and the fight against infectious diseases, to the field of surgery. Willem Fredrik Suermont (1890-1976) justly concluded in his opening address to the 1954 symposium that in wartime and times of great disasters 'the majority of the patients belonged in the field of several surgical specialities' (88). However, the direct impulse behind the 1954 symposium was recent experiences during the flooding of The Netherlands in February 1953. Moreover, there was a lack of clarity and an uncertainly about the activities of the Civil Defence Organization, an organization which had been founded shortly before, in July 1952, but which did not play a role of any importance during the flooding (89). At the international level, the Geneva Convention for 'the protection of civilians in times of war' (August 1949) played a background role. What was brought to the fore by the participants at the symposium of 1954, which from a certain point of view may be regarded as the precursor of this symposium 'War, the past and the future', was certainly extremely valuable from a medical point of view (90).

The lessons of 1940-1950

Finally, the organizers of this symposium demanded from the speakers a view of the future. What are the lessons of the years 1940 to 1950, the years of World War II, on the functioning of the civil medical services? Aside from the genuine reluctance on the part of historians to meddle too much in future visions, the question seems to me to be intended for the consideration of jurists rather than physicians. The very real insight achieved by the medical sciences and the far-reaching changes which have altered post-war health care at all levels make it impossible to draw 'instructive' comparisons between the situation of the forties and now. The conclusion that things have gone wrong or, alternatively, that things have progressed in an extremely effective and efficient way provides no single directive for future activities. The above-mentioned work of Boerema was also intended as a source 'from which physicians can draw in the unlikely event of repetition of a situation, such as that which occurred in the years

1940-1945, in order to prevent problems of health care insofar as possible through knowledge of the difficulties encountered in those years' (91).

I think that the only exception that can be made is the field of medical ethics. Shortly after the war Eeftinck Schattenkerk described some ethical decisions which had to be made during wartime as an individual physician. No support could be found in a medical-ethical code on such issues as the relief of enforced labourers or patriots during their deportation, the maintenance of medical confidentiality when confronted by the enemy (including the problems of collaborating colleagues), the medical examination of forced labourers and the inflicting of illnesses in order to escape enforced labour, etc. (92). In the period just before the war, for example, Dutch physicians were involved in eugenic research, which must indicate a certain kind of naivety with regard to the application of the insights acquired under the national-socialistic system (93). During the war a unique medical-ethical controversy occurred: the 'physicians action' of March 1943, in which, as Boerema later reported, 'the physicians en bloc threatened the enemy with the abdication of their duty towards the individual in order to keep the medical care of the entire population at the level of high ethics which they considered justified according to their consciences as physicians' (94). A careful analysis of such developments and accounts, including the rules for medical ethical questions established by the resistance organization 'Medical Contact', would without a doubt contribute significantly to an actual or future contemplation of the ethics of medical practice in wartime (95).

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Summary

This study of the civil medical services during World War II focuses on the years around 1940, thus the period of mobilization and the first years of the war. The most striking aspect of health care in the period of mobilization was the lack of cooperation and coordination, which greatly complicated the policies of military and civil authorities. Moreover, these organizations held different views on the strategies which had to be followed. The priorities were the prevention of infectious diseases, by vaccination and (compulsory) isolation of infected people or germ carriers, and the expansion and partial reorganization of hospitals.

The medical profession limited their interest almost exclusively to the problems which would result from chemical warfare and bombardments. With the help of courses, special meetings and medical literature, they tried to prepare themselves for war. Because of the short duration of the fighting (May, 1940) and the long period of occupation, the very real problems of the general medical practitioner concerned shifts in the pattern and course of diseases, difficulties in diagnosis and limitations in therapy. Scientific communication was restricted.

During and after the war very few studies appeared on the civil medical services and the effects of war. In the field of mental health care, in particular, most interest was directed towards the long-term and secondary effects of the war. Physicians did recognize that the most serious medical problems in wartime are in the field of surgery, while politicians became aware of the need for Civil Defence organizations. The only lessons that can be learned from the Second World War come from the field of medical ethics, and concern the conduct of individual doctors in wartime.