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U. S. NAVAL TECHNICAL MISSION TO JAPAN

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From: Chief, Naval Technical Mission to Japan.
To : Chief of Naval Operations.
Subject: Target Report - Preventive Medicine and Public Health
Organization and Facilities in the Japanese Navy.
Reference: (a) "Intelligence Targets Japan" (DNI) of 4 Sept. 1945.

1. Subject report, covering Questionnaire "G" and Target
M-09 of Fascicle M-1 of reference (a), is submitted herewith.

2. The investigation of the target and the target report
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M-09

**PREVENTIVE MEDICINE
AND
PUBLIC HEALTH ORGANIZATION
AND FACILITIES IN THE JAPANESE NAVY**

**"INTELLIGENCE TARGETS JAPAN" (DNI) OF 4 SEPT. 1945
FASCICLE M-1, TARGET M-09 AND QUESTIONNAIRE "G"**

NOVEMBER 1945

U.S. NAVAL TECHNICAL MISSION TO JAPAN

SUMMARY

MEDICAL TARGETS

PREVENTIVE MEDICINE AND

PUBLIC HEALTH ORGANIZATION AND FACILITIES IN THE JAPANESE NAVY

The public health problems incident to a large civilian population turnover have not yet become distressing in JAPAN. Interference with the water supply and distribution systems from bombing has caused gastro-intestinal epidemics of a localized and not serious nature. Venilant epidemic diseases have not appeared although the situation has potentialities fraught with danger.

A mass chest X-ray program for the diagnosis of tuberculosis was interrupted by the war, with an "immunization" technique that should be further investigated.

General chemotherapy is on the homeopathic side, and therapeutic blood substitutes have not been adequately employed or developed as demanded by the exigencies of war.

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REFERENCES

A. Japanese Personnel Who Assisted in Gathering Documents:

1. Vice Adm. I. ISHIGURO, (MC) IJN, DMO of Third Naval District and CO of SASEBO Naval Hospital.
2. Comdr. H. TAWARA, (MC) IJN, Executive Officer, SASEBO Naval Hospital.
3. Vice Adm. YASUYAMA, (MC) IJN, CO of OMURA Naval Hospital.
4. Vice Adm. HORIUCHI, Director Medical Bureau, Navy Ministry, TOKYO.

B. Japanese Personnel Interrogated:

1. Personnel listed in Reference "A" above.
2. Personnel listed in Reference "B" of Target Report M-01 of Fascicle M-1.

C. Reports of Other Investigating Committees:

1. Periodic Reports on the Activities of the Committee for the Technical and Scientific Survey of Japanese Activities in Medical Sciences. Chief Surgeon's Office, GHQ, SCAP, AFPAC (Advance Echelon).
 - a. Intra-Arterial Shock Injection Treatment, CHIBA - AON.
 - b. Blood-Forming Substance from Bone Marrow, NIIGATA - AON.
 - c. Mass Chest X-rays, TOHOKU, Prof. Y. KOGA - AON.
 - d. Labor's Suitability and Strength, NRC - TOKYO - AON.
 - e. War-time Prenatal Care, NRC - TOKYO - AON.
 - f. Blood Transfusion Substitutes, NRC - TOKYO - AON.
 - g. Group X-ray Photography, NRC - TOKYO - AON.
 - h. Powder Colloid of Whole Blood, Dr. MIYAGAWA, IDI, TOKYO - AON.
2. Monthly Reports of the Public Health and Welfare Section of GHQ, SCAP.
3. Report of the (USPHS) Medical Section of the UNITED STATES Strategic Bombing Survey in JAPAN.

LIST OF ENCLOSURES

- (A) List of Manuals of the Japanese Naval Medical Corps Concerned with Preventive Medicine.
- (B) Epidemic Diseases in Japanese Navy with serums and vaccines used quarantine regulations.
- (C) Excerpt from the KYUSHU Report of the Medical Section. (Compare with present Report.)
- (D) List of Documents Forwarded to NMRI, BETHESDA, MD.

INTRODUCTION

The question of public health hazards and conditions as they may affect the personnel of the Navy will undoubtedly be sufficiently commented upon and reported by the various U. S. naval base medical officers. This report is concerned with public health organization and administration in the Japanese Navy in the recent past, and with certain broader considerations involving Japanese medicine and the civilian population.

This investigation deals principally with the subject within the confines of the Japanese Navy since there has been a full coverage of the broader aspects of public health organization in JAPAN by other investigating committees. The reports of other agencies are referenced for further information.

THE REPORT

1. Population Turn-Over Health Problems

There have been no great mass movements of populations in JAPAN. The evacuation of a few of the large cities has provided the best examples of migrating peoples, but in these instances the people have had definite objectives, going to stay with friends or relatives in the mountain or inland districts, sending their families to the ancestral villages, or locating in resorts and hotels. There has been no mob or mass evacuation of destitute refugees streaming across the countryside as in EUROPE. A great deal of travelling to and fro existed, and still exists. Trains are excessively overcrowded, as are all forms of public transportation. Families are returning to their homes from the country, artisans and laborers, office workers and the demobilized military are over taxing all transport facilities.

This movement of people is, on the whole, of an orderly nature. The breakdown in highway vehicular transport has funneled all classes of people into one hopper that pours into the rail-borne carriages. Some families are rebuilding on the sites of their burned out homes, erecting paper, straw, mud, and galvanized iron shelters until more permanent structures can be constructed.

The health hazards therefore are those incident to:

- a. Destitute and homeless victims of bombing.
- b. Inadequately housed victims of bombing.
- c. Malnourishment - relatively on a national scale.
- d. Overcrowding - skin and filth diseases.
- e. Close body contact in transportation - air-borne infections of all kinds.
- f. Break down of public utilities.

Here the loss of light, power, and heat has touched less on the civilian population than interference with the water supply system and the food transportation, marketing, and distribution systems. Malnutrition has been mentioned, partly as a result of the population turn-over, and partly due to the enforced drastic curtailment of food and the strict rationing system adopted by the Japanese government.

Water-borne epidemics have occurred in many areas (SASEBO, NAGASAKI, YOKOSUKA, NAGOYA, etc.), caused by water contamination usually following the air raids. The enteric diseases have been most prominent, among which bacillary dysentery has been the commonest.

In WAKAYAMA Ken, an as yet undiagnosed epidemic characterized chiefly by a painless haematuria has appeared. Several cases of typhus have been reported in the central and southern areas of the main island, but have not been confirmed.

Louse infestation among the poorer classes is widespread and the flea-population increasing.

2. Plague

In this connection, however, no cases of plague have been reported, nor were there any cases last year, as far as can be discovered. In view of the disorganization of society in the cities of the east coast, with relaxation of public health supervision, poor reporting, and an inadequate number of civilian medical personnel, cases of plague and other infectious diseases may have passed unremarked. In NAGASAKI, for instance, three deaths were recorded for a seven-day period recently, but 22 cremations and burials took place.

3. Routine Public Health X-ray Findings

The Japanese public health program (tuberculosis control) was expanded about five years ago. The decision was made to X-ray chests of all Japanese between the ages of 16 and 25. The equipment used was the standard Japanese X-ray apparatus described below, fluoroscopic image being photographed from a fixed mount by a Contax Camera, using rolls of 35mm film.

The usual roentgen machine is as follows:

	Deep Therapy High Voltage	Ordinary Film and Fluoroscopy Low Voltage
Output	180 K.V.	60 to 80 K.V.
Type	Kenetron Console Controls	Kenetron Console Controls
Tubes	SIEMEN's mounted in an oil cooled head	SIEMEN's mounted in an oil cooled head

For further data, see NavTechJap Report, Index No. M-AA "Organization, Administration, and Facilities of the IJN Medical Corps."

4. Chemotherapy Procedures

In chemotherapy, the Japanese Navy and civilian medical personnel have at their disposal the following sulfa drugs:

- a. Sulfanilamide
- b. Sulfathiazole
- c. Sulfaguanadine
- d. Sulfapyridine

No penicillin is locally available, although research was underway on the problem of preparation, and crude extracts of molds were in use for topical application, more as an experiment than as a proved therapeutic.

Streptomycin, gramicidin and the anti brotics are unknown.

In chemotherapy, the doses used by the Japanese medical men are small, and duration of treatment is short. Parenteral preparations are available for almost all therapeutic agents, and are religiously employed. Blood-sulfa concentrations are in only a few university hospitals where the colorimetric equipment and trained personnel are available.

5. Blood Substitute Preparations

a. The best blood substitute developed by the Japanese is the vial of plasma, (samples submitted) dried, and sealed in vacuum, which is mixed before administration with 250 cc of sterile water for intravenous use. As noted, the maximum production of the Navy's plasma plant, was 10 vials per day, the army and civilian requirements being met from their own respective sources.

b. The other blood substitutes for intravenous use in civilian hospitals, and used by the Navy and Army were:

- (1) RINGER LOCKE'S solution - usually 50 to 200 cc being administered.
- (2) N. saline - in similar amounts.
- (3) Whole blood transfusions, direct or indirect in 50 to 100 cc amounts (by actual observation) although it has been stated that as much as 250 cc is transfused in grane cases.
- (4) 25% glucose solution - usually in 50 cc.
- (5) 3-6% polyvynil alcohol solution (experimental) for use in 100 to 200 cc amounts.

It can be safely stated, hence, that no new substitute preparations have been developed or were in use, and that therapy for the restoration of the volume of circulating fluid was extremely inadequate and backward.

6. Supplementary Questionnaire "G".

a. Prevention of schistosomiasis and tsutsuga mushi is by indoctrination of the population living in the disease areas. Educational measures are taken to publicize preventive measures, chiefly with regard to contact and exposure to infection. A vaccine for immunization is available for "B" encephalitis, but is not given routinely unless an epidemic occurs. (See NavTechJap Reports, Index Nos. M-10 and M-11).

c. No body armor has been indentified as ground force equipment. A bullet-proof vest of the cotton-padded, sleeveless type with over-lapping steel plates was available aboard combat ships for the protection of gunners, observers, etc., who were not shielded at their battle stations. Such jackets protected the torso front and back, and were secured by tapes, opening down the front. The body was covered from shoulders to pubis.

This type vest was also issued to the Air Corps, and used at the desire and discretion of the personnel. No directive or order was issued compelling its use. In practice, however, the air crews seldom if ever drew such equipment, preferring an equal weight of gasoline to extend their flying time, as this gave them more life-expectancy than the protection afforded by the body-armour.

d. Protective clothing was available, chiefly against gas-attack. (See description of items in reference to equipment, NavTechJap Report Index No. M-C - "Japanese Chemical Warfare".)

e. The sanitary facilities of ships were adequate as to construction, save for the ventilation. In operation, the sanitary conditions aboard combatant naval vessels were extremely poor. Toilets were odorous, dirty, and ill-kept. Baths were also in similar disrepair. Galleys were untidy and dirty, cooking utensils were greasy, food was left exposed, garbage was not properly cared for, and no attempt was made at fly control, save by trapping. (See NavTechJap Report, Index No. M-AA.)

f. The Japanese Naval Medical Corps, from roentgenologists to ship's surgeons, seemed unaware that there were any hazards attached to the use of radar. No particular precautions were taken for radar operators, either in clothing, shielding, or verbal instruction.

g. For data relative to life in the jungle see NavTechJap Report, Index No. M-01.

h. Research relative to increasing the tolerance of personnel to heat and cold was conducted by a committee of university physiologists. The report of their research and recommendations is included in "Aero, Surface and Submarine Medicine and Research in the Japanese Navy", NavTechJap Report Index No. M-06, in the section on submarine medicine.

ENCLOSURE (A)

LIST OF MANUALS OF THE JAPANESE NAVAL MEDICAL CORPS
CONCERNED WITH PREVENTIVE MEDICINEA. Latest Textbooks, Training Manuals and Orders.

24 January 1945	Medical #98: "Items concerning investigation of weight changes among seamen".
2 February 1945	Medical #122: "Items relating to physical examination of trainees at time of withdrawal from ship or unit, or at time of induction into school or unit".
10 February 1945	Medical Secret #19: "Items concerning general prostration from abnormal diet".
12 March 1945	Medical #231: "Standards for detecting unusual variations in tests for color blindness".
15 February 1945	Medical #167: "Monthly physical examination and bodily weights and measures of non-commissioned officers".
20 March 1945	Medical #266: "Items concerning quarantine".
30 March 1945	Medical Affairs II #3: "Items concerning general prostration resulting from abnormal diet".
7 April 1945	Medical Affairs II #7: "Elimination of lice and intestinal worms".
1 April 1945	Medical Affairs II #4: "Handling of medical documents in special medical cases".
25 April 1945	Medical Affairs II Secret #4: "Preventive measures against eruptive typhus".
4 June 1945	Medical Affairs II #35: "Diagnosis of Eruptive Fever".
2 June 1945	Medical #497: "Preventive medicines and disinfectants for contagious diseases".
6 July 1945	Medical Affairs II #55: "Simple methods of exterminating maggots (flies)".
6 July 1945	Medical Affairs II #56: "Methods of prompt diagnosis of eruptive typhus".
11 July 1945	Medical Affairs II Secret #13: "Prevention of malaria through internal medicine".
23 July 1945	Medical Affairs II Secret #14: "Treatment of sick and wounded naval personnel".
20 July 1945	Medical Affairs Secret #168: "Medical treatment of crews of Japanese ships".

NOTE: All the foregoing items are in Annex 1, NavTechJap Document No. ND-10-7501.3.

ENCLOSURE (A), continued

B. Reports on All Research Enterprises.

"First Aid Treatment for Battle Wounds" - Capt. (Med) TOMITA.

"Important Skin Diseases in Wartime" - Comdr. (Med) NAKAUCHI.

"Methods of Cultivating of Greenogen (青素) and Clinical use of its Basic Fluid (TN: Penicillin?)" - Lt. Comdr. (Med) HASHIMOTO.

"External Use of Greenogen Fluid" - Lt. Comdr. (Med) HAYAKAWA.

"Utility Value of Greenogen" - Lt. Comdr. (Med) KIMOTO.

"Criticism of the plan of classification of dysentery germs as proposed by the JAPAN Science Society (Nippon Gakujutsu Shinkokai), and the plan of classification of dysentery germs used by the Navy" - Capt. (Med) KAWAI and Lt. Comdr. (Med) MATSUBARA.

NOTE: The foregoing are in Annex 2, NavTechJap Document No. ND 10-7501.8.

ENCLOSURE (B)

EPIDEMIC DISEASES IN THE JAPANESE NAVY
SERUMS, VACCINES, AND QUARANTINE REGULATIONS

A. List of important contagious diseases taken note of by the Japanese Navy.

1. Contagious diseases prevalent every year Period of prevalence

Enteric Fever	Summer
A-type Paratyphus	Summer
B-type Paratyphus	Summer
Dysentery (Bacterial Dysentery)	Summer
Epidemic Cerebro-spinal Meningitis	January to May
Diphtheria	Winter
Typhus	Winter
Scarlet Fever	From time to time

2. Other contagious diseases to be noted, arising from intercourse with foreign countries.

Dengue Fever
Malaria (the spread of malaria is not to be feared in JAPAN proper)
Cholera
Plague
Smallpox (in the home Navy, hardly necessary to be considered)

B. Regulations for isolation of sick, segregation of persons suspected of having contagious disease, and quarantine.

1. Isolation

- a. Naval Regulations for prevention of contagious diseases.
(Medical Regulations, pp 579-598)
- b. Regulations for enforcing prevention of contagious diseases.
(Medical Regulations, pp 651-676)

ENCLOSURE (B), continued

2. Quarantine

- a. Harbor quarantine law (Medical Regulations, pp 723-728)
- b. Regulations for enforcing quarantine law (Medical Regulations; pp 729-736)
- c. Items relating to hygiene and sanitation in the regulations of each naval district (In SASEBO, the SASEBO Naval District Regulations See Appendix, p.66.

3. In particular, isolation and quarantine are carried on according to the daily orders of the Naval Stations, depending upon necessity.

C. Against what diseases are immunizations given?

1. Enteric fever - paratyphus A and B triple mixture preventive liquid. At regular times (June, December), during epidemics, and according to circumstances.
2. Cholera preventive liquid. When cases occur, or when (personnel) are going abroad.
3. Smallpox. When cases occur, or when going to a post in CHINA.
4. Tuberculin.
5. Epidemic Cerebro-spinal meningitis preventive liquid. When cases occur.
6. Tetanus serum. In cases of unclean wounds.
7. Gas Ulcer serum. In cases of unclean wounds.
8. Streptococcus vaccine. (in cases of) Septicaemia.
9. Gonococcus vaccine.
10. Plague. When going to post abroad (MANCHURIA, North CHINA).

D. What treatments (specific) are used for each contagious disease?

1. There are no specific treatments. For dysentery "zerufaguanijin" (TN: Sulfa guanijin?) is used.
2. Serums and vaccines used in prevention and treatment of disease.
 - a. Serums are for the most part manufactured in laboratories outside of the Navy, whence the Navy obtains them.
 - b. Use of serums and vaccines:
 1. Serum used in treating epidemic spinal meningitis.
 2. Tetanus prevention serum.
 3. Serum used for prevention of gas ulcers.
 4. Diphtheria serum.
 5. Serum for treatment of jaundice haemorrhage spirochete (Wairu Wire /?/ TN).
 - c. At the time of vaccination - when entering the Navy, changing post to a foreign country, becoming a patient - the vaccines are usually obtained from sources outside the Navy. Method of vaccination is effected as described in the volume of Medical Regulations:

p.701 - Method of vaccination.
p.706 - Regulations for executing method of vaccination.
p.717 - Rules for the vaccination operation.

ENCLOSURE (B), continued

Table of Various Serums and Vaccines

<u>ITEM</u>	<u>REMARKS</u>	<u>EFFECTIVE TIME</u>
Smallpox Vaccine	1 supply (for 5 persons)	2 months
Refined Smallpox #2	1 adult 0.5 milligrams	1 month
Refined Smallpox #3	child (6 adults)	1 month
	3 milligrams	
Liquid Diphtheria Serum	1500 immunity units	
#3	3 milligrams	1 year
Strong A Liquid Diphtheria	6000 immunity units	
Serum #2	5 milligrams	1 year
Strong A Liquid Diphtheria	12,000 immunity units	
Serum #3	10 milligrams	1 year

APPENDIX

Detailed Excerpts from SASEBO Naval Base (Regulations).

Chapter VI Items Concerning Hygiene and Sanitation.

- Item #67: The contagious diseases covered by these detailed regulations are: cholera, plague, smallpox, dysentery (including children's dysentery), enteric fever, typhus, scarlet fever, diphtheria, measles, recurrent fever, epidemic cerebro-spinal meningitis, A-type paratyphus and B-type paratyphus. Contagious diseases and epidemic diseases other than the afore-mentioned will be specified when there is necessity of using these detailed regulations in connection with them.
- Item #68: Quarantine will be effected in connection with the cholera and plague mentioned in the previous item. When the other contagious diseases necessitate quarantine it will be specifically designated. The Harbor Affairs Department will enforce the quarantine mentioned in the previous item, according to the SASEBO Naval District Regulations for prevention of epidemics (quarantine).
- Item #69: Ships attached to the Navy will, upon entering the harbor, make a report to the Naval District concerning health conditions on the ship. If there are contagious disease patients or persons who have died from those diseases on board, or if there is fear of contagious disease virus, these conditions must be reported to the Naval District before entering the harbor, by wireless or signal. Suspected symptoms of cholera or plague must be reported.
- Item #70: Ships attached to the Navy, which have departed from or passed through places where there is an outbreak of cholera or plague, or after there has been an occurrence of cases of those diseases, must report these conditions to the Naval District before entering the harbor, in accordance with Item #2.
- Item #71: When there is an occurrence of symptoms indicative of cholera or plague either on ships in harbor which are attached to the Navy or in (Naval?) offices on shore, and when there are sudden deaths whose suspected cause is these diseases, the actual circumstances must be immediately reported to the Naval District.
- Item #72: When a report of cholera or plague or their suspected symptoms is to be made in accordance with the provisions of the two preceding items, all except highly important business must be set aside, and

ENCLOSURE (B), continued

furthermore, intercourse with the said ships and offices must be cut off, and as soon as circumstances permit, a Naval Medical Officer must be sent out by the Naval District and a formal inspection must be made. In the case of contagious diseases other than cholera and plague, depending upon the spread of the epidemic, cessation of communication must be ordered. While the ships are being isolated for disinfection, all communication except for the most important business must be set aside. While the ships are cut off from communication, permission for supply of fuel, water and provisions, or for communication liaison and other unavoidable business must be obtained from the Naval District, and furthermore, all such matters must be carried on through the intermediacy of the Harbor Affairs Department.

Item #73: When sudden deaths have occurred on ships not attached to the Navy, but which are in the second District (excluding area north of an imaginary line drawn between the southeast tip of HIRASE and the third landing place), a report must be made immediately to the Harbor Affairs Department. Furthermore, the exact circumstances of the deaths must be reported to the Harbor Affairs Department and to the SASEBO Police Station.

Item #74: When there are contagious disease patients or patients suspected of having contagious disease symptoms on ships within the limits of the waters of the Naval Base, other than ships attached to the Navy, the parties concerned, needless to say those who have been eyewitnesses or those who have heard of the conditions, must straightway inform the Naval District, or the Harbor Affairs Department, the Kempei tai (Military Police) or the nearest Police Station.

Item #75: Ships attached to the Navy but having no Medical Officer aboard, and ships not attached to the Navy (when their purpose in entering the harbor is official business) will, when they fall under the following numbered categories, have the Harbor Affairs Department put a quarantine into effect:

1. If they come to port from foreign ports or FORMOSA without having come through a Japanese port where quarantine was affected.
2. If they come to port from or via places where there have been outbreaks of contagious diseases.
3. If they have had communication with ships infected with contagious disease virus.
4. When there are on board persons who had contagious diseases during the voyage, or persons suspected of having them, or corpses.
5. When there is suspicion of contagious diseases as specified in Item #73 of these Detailed Regulations.
6. When it occurs that there is a notification (of contagious disease) within the second District (excluding area north of an imaginary line drawn from the southeast point of HIRASE to the third landing place), as provided for in Item #74 of the Detailed Regulations.

ENCLOSURE (B), continued

- Item #76: Aside from (exclusion of) the circumstances provided in category #5 of the preceding Item, quarantine is carried out at quarantine anchorage. Ships which have not gone through quarantine and disinfection are forbidden to anchor except in quarantine anchorage. Quarantine anchorage is within the line drawn between MARU SAKIBANA and DOIBANA and a point 40 metres and 1000 metres distant from those two points respectively.
- Item #77: When ships have been quarantined by the Harbor Affairs Department according to Item #73, a report must be made to the Naval District according to a separately specified form. (see p.73)
- Item #78: After quarantine has been effected by the Harbor Affairs Department, once it has been decided that no obstacle exists to prevent debarkation of crew and unloading of cargo, a report to that effect should be conveyed to the captain of the vessel concerned. When there are cholera and plague patients, or dead persons, or suspicion of contagious disease infection aboard ship, communication with other ships or with the shore is cut off, and unloading of cargo is forbidden. Furthermore, specimens necessary for disease inspection must be sent immediately to the Naval Hospital.
- Item #79: When it is necessary to disinfect ships as provided in the previous Item, this must be done according to the SASEBO Naval District ship disinfection procedure. When it is a matter of private ships or boats, the SASEBO Police Station must be informed by the Harbor Affairs Department, and entrusted with the disposal of the matter.
- Item #80: The period of isolation of ships is reckoned from the time disinfection is completed, five days isolation for cholera, ten days for plague. However, in cases where an extension of time is considered necessary, the isolation is not subject to (these) limitations.
- Item #81: When there is an epidemic of contagious disease in the SASEBO area, and when liberty is forbidden to ship's forces, there will be hoisted on the signal pole of KOGO SAKI Lookout, a flag marked Q by day, and two lights, red and white, by night, and incoming ships will be so informed. When communications are cut off on account of the outbreak of contagious disease on incoming ships, or ships at anchor, such ships will hoist signals as just described to their mastheads.
- Item #82: It is forbidden to throw the excrement of persons having contagious diseases, or anything suspected of being infected with contagious disease, or any other thing harmful to health, into the waters of a Naval Base, the rivers and canals that drain into those waters, and needless to say into any part of a Naval Base whatsoever. Ships on which there are occurrences of cholera, plague, or symptoms suspected of being those two diseases; or ships on which there are numerous occurrences of enteric fever, A-type paratyphus, or dysentery; must in addition to following the foregoing instructions, not throw into the waters of the Naval Base the excrement even of healthy persons, until after disinfection.
- Item #83: In accordance with Item #24 of the Naval Base and Naval Station Regulations, the Prefectural Governor must consult with the CinC of the Naval District on matters concerning health. The most important of these are as follows:

ENCLOSURE (B), continued

1. Matters concerning the prevention and disinfection of all types of contagious diseases.
2. Items concerning the establishment, repair and maintenance of water systems, sewers, canals, public toilets and dumps.
3. Items concerning the establishment and maintenance of slaughter-houses, dairies, domestic-animal enterprises, poultry yards, manufacturies of animal fat and fish oil, tanneries, fish-markets, other provision markets, poor farms and cemeteries.
4. Matters concerning the establishment and maintenance of places of industrial enterprise, parks, contagious-disease hospitals, isolation hospitals and other similar places.
5. Matters concerned with establishment and maintenance of health conditions in factories, and the use of water power drawn by factories from rivers and streams within the Naval Base.
6. Matters concerned with the health of the general public, in addition to the matters just listed.

Method of Making Reports in Accordance with Item #72 of the
SASEBO Naval Base Detailed Regulations.

Quarantine Report

1. Name of the ship (In the case of ships not attached to the Navy, the name of the company or captain must be reported).
2. Name of port of departure. Date of departure.
3. Name of port of destination. Date of arrival.
4. Number of crew.
5. Number of passengers.
6. Place where water and provisions were taken aboard.
7. Type of cargo and where loaded.
8. Number of persons aboard, if any, who have contagious diseases or are patients suspected of having them.
9. If there have been any persons on board, either during the voyage or while in port, who are specified by the preceding #8, give name of disease and number of cases.
10. If there has been communication during the voyage or in port with some ship having patients specified on the preceding item, or suspected of having such, give date, place, and the name of ship.
11. If vessel has stopped at another port for quarantine and disinfection, the name of the port, the date, items recorded on permit.

ENCLOSURE (B), continued

12. Disposition.

Date
Inspecting Medical Officer's Position Name Seal
Seal of SASEBO Naval Harbormaster.

(Second Form)

Ship's Name				List of Patients		
Name of Disease	Date of Occurrence	Place of Embarkation	Date of Embarkation	Address Prior to Embarkation	Occupation	Name

Remarks: In the case of military personnel, write in the margin above the 'Name of Disease' his station and position.

Date
Inspecting Medical Officer's Position Name Seal

ENCLOSURE (C)

EXCERPTS FROM THE KYUSHU REPORT OF THE MEDICAL SECTION
 (Compare with Present Report)

Public Health Organization and Facilities (M-09)

The Naval Medical Corps employs the following prophylaxis immunization:

1. Cholera - A vaccine similar to ours in potency and dosage is used for immunization, if an epidemic threatens or a cholera area is the scene of operations. No routine use.
2. Triple Typhoid - (Eberthella, and Paragraph A and B) two injections ($\frac{1}{2}$ cc and 1 cc) are considered to produce immunity and are given routinely to all admitted to the Naval Service. A yearly booster ($\frac{1}{2}$ cc) is then continued (The Army has included "garthers" bacillus in this typhoid vaccine, making a 4-in-1 mixture).
3. Plague - No serum or vaccine has been available to the Navy Med. Corps. (We believe the Army has a vaccine but the Japanese N.M.D.'s had never heard of a Japanese Immunization for plague).
4. Dysentery - (See above Triple T) They have produced an oral vaccine for the SHIGELLA and FLEXNER type but it is of little value, and not used. (No specimens requested due to its apparent ineffectiveness).
5. Meningococcus - No prophylaxis known. Have horse serum (anti-meningo) used for passive immunity and therapy during epidemics.
6. Tsutsugamushi Disease - (Japanese River Fever, Japanese Scrub Typhus) No prophylactic or immunizing agent known or in use. No therapeutic serum or vaccine known or used by Navy; cases in Naval Personnel relatively unheard of.
7. Anthrax - No immunizing vaccine or therapeutic serum known to the Naval Medical Corps.

ENCLOSURE (C), continued

8. Diphtheria - Toxin-antitoxin used for immunization of Naval Personnel but only during epidemics. Anti-diphtheritic serum (horse) used for treatment.
9. Tetanus - No active immunizing agent (Have never heard of toxoid). Use anti-tetanic serum for wounded and in therapy.
10. Typhus - No prophylactic agent available. (The pathologist and bacteriologist had never heard of chick embryoculture vaccine).
11. Tuberculosis - No vaccines or recent experimental procedures known - B.C.G. Not used in Navy.
12. Smallpox - Cowpox vaccination is routine with re-vaccination during outbreaks.

Public health practices encountered so far in the Japanese Navy have been restricted to naval base areas and naval hospitals and regulations for naval personnel. In the areas under their authority the senior medical officers are responsible for public health procedures and report all "communicable diseases" to the local health authorities who are responsible for the subsequent procedures themselves.

Their techniques of isolation, segregation of contacts, quarantine, etc. are very strict and carefully executed in all those diseases which they consider reportable as of epidemic importance. (An up-to-date list of these will be submitted later.) Vector control in the Navy is (1) local, in and around Naval establishments and hospitals, and very limited in the field, if a Naval Landing party and doctor is put ashore. No great effort is made regarding rat control save rat extermination, poisoning, trapping, etc. Some draining, ditching and Paris green or oil spraying is done for control of anopheline larvae. No program against the adult save mosquito netting. No good insect repellent is available. To kill the albopictus larvae the Navy Medical Corps "anti-epidemic special unit" (Boeki han) was trying out a coaltar derivative called which is a trade name, the chemical composition of which was unknown. It formed a milky solution when added to water and was deemed effective in 1:3000 parts concentration. No "anti-malarial" units or field epidemiological units are an organized part of the Navy Medical Corps.

Public Health Measures are chiefly confined to the diagnosis and care of infectious diseases among naval personnel. (To this end it is interesting to note that Japanese naval hospital laboratories have been chiefly concerned with bacteriological, serological (WASSERMAN, KAHN, WIDAL, serum agglutination) and routine blood and urinalyses. They have been so crowded with sick and wounded for the past two years they have had no time for blood chemistries, much less for research work. Water, milk, and foods are tested also.

The clinicians state that V.D. has declined in the Japanese Navy during the war. Lectures on the dangers of venereal infection are given the personnel by the Medical Officers. All men patronizing "Houses of Consolation" are given a rubber sheath and a tube of mercury ointment. Instructions are to wash the penis after exposure, retain 1/3 of the tube of ointment intraurethrally for several minutes and massage the remainder on the organ. No care is taken of scrotum, groins, lower abdomen, thighs, or hands. (As far as we can discover). All five venereal diseases are recognized and diagnosed. Treatment will be reported later.

An occasional case of plague does occur on the Japanese mainland. The OSAKA-KOBE area is regarded as the endemic area and has an occasional outbreak. Routine X-rays (apparently chest) are made of every entrant into the Naval

ENCLOSURE (C), continued

service on 35 mm Contax film, and cases to be re-rayed are collected into groups and sent to the nearest Naval Hospital for examination from time to time. The Japanese have available for chemotherapy the following drugs:

1. Sulfanilamid
2. Sulfa Thiazole
3. Sulfa Guanadine
4. Pyridine

The dosages seem inadequate to produce adequate blood concentrations and blood levels are not checked routinely during treatment. So far no hospital laboratory seen has been equipped for such tests. A great variety of proprietary sulfa drug solutions for intravenous use are employed in the naval hospitals. The JNMO's insist that the use of smaller doses by the intra arterial route is effective and they apparently employ it without hesitation. The technique is as follows: The sites of election are the carotid and femoral arteries. An ordinary intravenous needle is used and inserted vertically through the iodined skin into the artery and the syringe contents quickly injected. A few seconds digital pressure is applied over the puncture. No infections are suffered and no complications or reactions noticed save for an immediate sensation by the patient of heat below the level of injection (which is transient).

The Japanese have developed no blood substitute preparations for naval medical use. Normal saline, Ringer-Locke's, and glucose (25% - 22 cc to 50 cc) are the commonest blood substitutes. Although plasma is known and used when available, the supply is scanty and does not play an important part in therapy. Whole blood transfusions are given to gravely ill patients but no blood bank system has been developed.

ENCLOSURE (D)

LIST OF DOCUMENTS FORWARDED TO NMRI
BETHESDA, MARYLAND

NavTechJap Document No. ND 10-7501.3, Annex #1 on Training

<u>20 March 1945</u>	Medical #266 "Items Concerning Quarantine"
<u>2 June 1945</u>	Medical #497 "Preventive Medicines and Disinfectants for Contagious Diseases"