

BYM 12/19

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Dr. C.M. Dunham, Div. of Biology & Medicine, Washington, D.C. DATE: December 15, 1950

FROM : E. L. Van Horn, Area Manager, Brookhaven Area *ELV*

SUBJECT: HOSPITAL PLAN

Attached is the hospital plan which you requested, on your recent visit to Brookhaven.

326 US ATOMIC ENERGY	
US DOE ARCHIVES	
JUN 20 1950	
COMMISSION	
RG	<i>Division of Biology Medicine</i>
Collection	<i>3354</i>
Box	<i>8</i>
Folder	

MEDICAL DEPARTMENT

The Major Premise

According to files in the medical department, it was recognized as far back as April of 1947 that top flight medical care must be provided for the employees of the Laboratory, for individuals connected with the Laboratory through the operation of subcontractors and for dependent families of Brookhaven personnel.

The following pages will attempt to show progress which has been made in the project of providing this medical coverage, and will offer for consideration certain basic operating policies which seem pertinent to the existing situation.

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MEDICINE, HEALTH & SAFETY 10-3

THE MEDICAL STAFF:

The physicians and surgeons who will practice in the hospital will be organized as a medical staff. The word "staff" is here defined as a group of doctors practicing in the hospital and comprising the BNL employed physicians, attending physicians who practice in the surrounding communities, consultants in special fields of medicine who practice within a radius of 40 miles of the Laboratory, and senior consultants, those specialists who practice in New York or in the medical schools of Associated Universities, Inc.

A president of the medical staff will be appointed and will be supported by standing committees as follows:

1. Executive Committee, consisting of the heads of the various clinical divisions to coordinate the activities and policies of the various departments.
2. Qualifications Committee to review the qualifications of attending physicians (non-BNL employed) applying for membership on the medical staff.
3. Medical Records Committee to supervise and appraise the medical records in order to see that they are maintained at the required standard.

The membership of the medical staff will be restricted to physicians and surgeons who are graduates of approved medical schools and legally licensed to practice in New York State.

A fixed and definite plan for making appointments to the medical staff will be established. A copy of the application for appointment to be filled out by all physicians who wish to practice at Brookhaven is attached.

The medical staff will initiate and adopt rules, regulations and policies governing the professional work of the hospital. These rules will specifically provide (a) that medical staff meetings will be held at least once a month; (b) that the medical staff review and analyze at regular intervals their clinical experiences in the various departments of the hospital and that the medical records of patients will be the basis for such review and analysis.

Accurate minutes of all staff conferences will be maintained.

MEDICAL RECORDS:

Accurate and complete medical records will be written for all patients, a complete medical record being one which includes identifying data, complete personal and family history, history of present illness, physical examination, special examinations such as consultations, clinical laboratory, x-ray, and other examinations, provisional or working diagnosis, medical or surgical treatment, pathological findings, progress notes, final diagnosis, condition on discharge, follow-up, and in the case of death, autopsy findings.

A competent medical records librarian has been employed who will establish the medical records system by and with the advice of a consultant on medical who for 11 years has been medical records librarian of the Doctor's Hospital in New York City. The medical records system will be so set up as to completely conform to the standards acceptable to the American College of Surgeons.

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CLINICAL LABORATORY:

Under competent medical supervision there has been established a complete clinical laboratory providing chemical, bacteriological, serological and pathological services as detailed in Appendix A. The chief technician is fully qualified to supervise all technical activities of the clinical laboratory and reports directly to the physician in charge of laboratory activities. The supporting technicians are also fully trained in clinical laboratory technic to the extent that each of them could carry on the duties of the laboratory in the absence of the chief laboratory technician.

X-RAY LABORATORY:

A fully equipped x-ray laboratory has been activated. It is under the supervision of a competent medical radiologist serving as one of the BNL consultants and as a consulting physician to the medical department. A fully trained x-ray technician who is also a registered nurse has been employed. The equipment is a most modern Westinghouse installation and offers a scope of x-ray service far beyond that ordinarily found in a hospital of less than one hundred beds. Proper protection for the operator and patient is assured.

OUT PATIENT OR CLINICAL DEPARTMENT:

Medical service for ambulatory patients is organized as a definite out patient department for the hospital under the supervision and direction of a qualified physician. A fully equipped treatment room has been activated and is supported by four physicians' private examining rooms and a branch of the clinical laboratory. Physical examinations are given in this department, which is at present treating an average of forty patients per day and examining ten.

PHYSICAL THERAPY:

A Physical therapy unit has been activated with modern diathermy, ultra-violet, infra-red and whirlpool apparatus. No trained physical therapy technician has been employed, but the chief nurse and one of the BNL staff physicians are specifically qualified to render physical therapy treatment.

PHARMACY:

A fully stocked pharmacy under the immediate supervision of a registered pharmacist and under the general supervision of a staff physician has been opened. The pharmacist has immediate supervision over (a) the preparation of injectable medication and sterilization of all preparations he himself prepares; (b) the routine manufacture of pharmaceuticals; (c) the dispensing of drugs, chemicals and pharmaceutical preparations; (d) the filling and labeling of all drug containers issued the nursing units from which medication is to be administered; (e) the periodical inspection of all pharmaceutical supplies of all nursing units; (f) the maintenance of an approved stock of antidotes for emergency use; (g) the dispensing of all narcotic drugs and a perpetual inventory of them; (h) specifications for purchase of all drugs, chemicals and pharmaceutical preparations used in the treatment of patients.

THE NURSING STAFF:

A well organized department of nursing has been established under the most competent supervision and direction for the efficient administration and rendering of nursing services. Eight registered staff nurses have been employed, five of whom are domiciled in the apartment area adjacent to the hospital. The director of the nursing

service is a qualified administrator who as a major in the Army Nurse Corps served as chief nurse in two large general hospitals in the E.T.O. The nursing staff has been selected with great care over a period of seven months and is extremely flexible.

DIETARY DEPARTMENT:

A graduate dietitian, a member of the American Dietetic Association, has been employed. During the early days of the hospital she will operate from the larger of the ward kitchens which has been adequately equipped for the feeding of fourteen patients. She is assisting the Architectural Planning group in designing the permanent dietary which will be ready for operation before the first of the year. This dietitian is fully qualified to render the efficient administration of the general food service and direct the scientific diet of the patients.

MEDICAL LIBRARY:

The medical library as a branch of the BNL Research Library is developing. Ample facilities have been provided to house a complete library of medical texts, periodicals, and reference works. Two study or work rooms are being furnished adjacent to the library stack room. The medical librarian is an employee of the medical department, fully qualified to efficiently carry on her duties. A staff physician is in charge of the medical library and serves as the medical department representative on the BNL Library Committee.

PHYSICAL PLANT:

The medical department at present comprises an out patient ward or clinic, three hospital wards of fourteen beds each, an x-ray laboratory and a clinical laboratory. In addition to the above, construction on an eleven-bed ward for communicable diseases is approximately 75 percent complete and the construction of two rooms of surgery with central supply and a sterilizing room is approximately 60 percent complete. Both surgery and the isolation ward will be completed by December 1. One ward building has been set aside for the dietary department but this project is still in the drafting board stage. Temporary but adequate dietary facilities have been established in the ward kitchens.

MEDICAL DEPARTMENT PERSONNEL - Oct. 1, 1948:

The Acting Chairman, Medical Department
Hospital Administrator
Acting Senior Clinician
Staff Physicians (2)
Resident Physician (1)
Nursing Staff (8)
Dietitian (1)
Laboratory Technicians (4)
X-ray Technician (1)
Medical Librarian (1)
Orderly (1)
Administrative and Clerical (5)
Matrons and Janitors (3)

As an interesting analysis of the services which the BNL hospital is prepared to offer in relation to those offered by 50 bed and 250 bed hospitals averaged throughout the country, the following table is submitted. This analysis was based on a survey made by the U. S. Public Health Service in 1947.

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	<u>Under 50 beds</u>	<u>BNL</u>	<u>Over 250 beds</u>
Blood Bank	7.5%	No	81.5%
Cancer Clinic	1.5	No	55.6
Central Supply Room	20.9	Yes	84.7
Clinical Laboratory	63.2	Yes	98.7
Dental Dept.	7.6	No	61.7
Electrocardiograph	33.2	Yes	94.7
Electroencephalograph	1.0	No	36.1
Medical Library	17.8	Yes	95.0
Medical Records Dept.	34.6	Yes	96.5
Mental Hygiene Clinic	0.9	No	27.3
Metabolism Apparatus	55.5	Yes	95.5
Occupational Therapy	3.5	No	30.6
Out Patient Clinic	32.1	Yes	80.7
Pharmacy	12.4	Yes	96.0
Physical Therapy	16.0	Yes	84.7
Social Service Dept.	2.6	No	64.2
X-Ray Diagnosis	79.7	Yes	99.2
X-Ray Therapy	13.0	Yes	85.7

It will be noted that the special services which the BNL hospital plans and is prepared to offer go far beyond the national average for hospitals of 50 beds or less, and in fact compare favorably with the national average of hospitals having in excess of 250 beds. In addition, BNL will offer an isolation ward service for communicable diseases, which is entirely contrary to standard practice in small hospitals.

PROPOSED HOSPITAL POLICIES:

The following individuals or groups of individuals will be eligible for admission to the hospital:

- BNL employees
- Dependent families domiciled with employees
- Employees of subcontractors living on the site
- Employees of the local AEC staff and dependent families domiciled with them
- Official visitors
- Research patients
- Emergency cases from the surrounding community

camp cases & emergency cases

Emergency only & transfer

Specifically excluded are families of subcontractors' employees

The hospital shall reserve the right to refuse admission when it is obvious that adequate facilities for the treatment of the injury or disease are not available, i.e., brain surgery, tuberculosis, etc.

Emergency maternity care will be provided eligible patients while on the site.

BNL and local AEC employees may receive without charge simple diagnostic examination in the out patient clinic. If the injury or illness is occupational connected, treatment either in the clinic or in the hospital will be handled as a compensation case. If the injury or illness is non-occupational connected, treatment subsequent to diagnosis will be provided at published rates. Patients other than employees, whether treated in the clinic or in the hospital, will be charged for services rendered, both diagnostic and therapeutic.

Health exams only

Charges for hospitalization will be made on the "inclusive" rate plan, as follows:

DOE ARCHIVES

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1 day	\$ 20.00	6 days	\$105.00
1½ days	30.50	6½	111.50
2	40.50	7	118.50
2½	50.50	7½	122.50
3	59.50	8	127.00
3½	67.50	8½	131.50
4	75.00	9	136.00
4½	82.50	9½	140.50
5	90.00	10	145.00
5½	97.50	Each day over 10	4.50

Physicians other than BNL employees who practice in the surrounding community may refer to and treat eligible patients in the hospital, as follows:

Community physicians practising in the hospital shall be divided into two categories: consultants, i.e., specialists called in by BNL staff physicians, and attending physicians.

Applicants for appointment to the hospital staff as attending physicians will submit their qualifications as per sample form attached and will be passed upon as to eligibility by the chairman of the medical department and the Qualifications Committee. Upon attaining status, ~~personal physicians of eligible patients will have the privilege of referring eligible patients to the hospital and treating them during hospitalization in accordance with the terms of their appointment.~~ Attending physicians will be under the general supervision of the senior clinician and shall conform to the rules and regulations as established by the medical staff. Laboratory consultants will be paid by BNL. Attending physicians and consultants other than appointed BNL consultants will bill the patient direct for services rendered.

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The facilities of the hospital will be made available to the community when it is determined that an actual emergency exists. The word "emergency" may apply to an individual case, such as a serious automobile accident near the site, to local community disaster, or to individual cases urgently requiring hospitalization when beds are not available in the community hospitals. Contagious diseases (quarantinable under New York State law) from the community, other than eligible patients, will not be accepted.

Final decision in individual cases shall rest with the chairman of the medical department or his delegate.

Individuals who are eligible for out patient and hospital care may have prescriptions filled in the pharmacy. This will apply to prescriptions of physicians employed by the Laboratory and also to prescriptions of outside physicians for use by eligible patients. Patients who are hospitalized will receive required medication and drugs as part of the inclusive rate plan. Out patient prescriptions will be billed to the patient on the basis of cost plus a 50 percent mark-up. Drugs, medication or proprietaries will be dispensed by the pharmacist only on the prescription of a physician. The pharmacy will not be obligated to fill prescriptions of attending physicians which require ingredients that are not in stock.

The H. K. Ferguson Company resident physician may be appointed to the medical staff and will be in direct supervision of hospitalized Ferguson employees. However, it is specifically emphasized that the Ferguson physician will be bound by the regulations of the medical staff and under the immediate direction of the senior clinician.

~~Physicians employed by the Laboratory shall make no off-site calls.~~

DOE ARCHIVES

The services of the clinical laboratory will be available to local physicians in their diagnosis, examination and treatment of eligible patients. Charges for this service when rendered on an out patient basis shall be made in accordance with the published schedule of rates. Clinical laboratory services will be afforded hospitalized patients as part of the inclusive rate plan.

Routine physical examination x-rays will be provided without charge. X-ray services to hospitalized patients will be provided in the inclusive rate plan. All other x-ray services, except those connected with occupational connected injury or illness, if on an out patient basis will be charged for in accordance with published rates.

BROOKHAVEN NATIONAL LABORATORY
Associated Universities, Inc.
General and Research Hospital

Application for Appointment to the Medical Staff

Name in full:..... Date.....

Office address:..... Telephone.....

Residence address:..... Telephone.....

Place and date of birth:..... Citizenship.....

Premedical education: College or University.....

 Date of graduation.....Degree.....

Medical education: Medical school.....

 Date of graduation.....Degree.....

Internship: Hospital..... Date.....

.....
.....

Licensure: State or Province..... Date.....

.....

Graduate training following internship:

Institution	Date
Residencies.....
or
fellowships.....

Assistantships.....

Teaching appointments.....

Postgraduate education.....

Membership on other hospital staffs (past and present)
.....
.....

Membership in medical societies.....

Fellowship in American College of Surgeons..... Date.....

Fellowship in American College of Physicians..... Date.....

Specialty.....Certification by specialty board.....
(Name of board)

References.....

.....

(Give on a separate sheet a list of scientific papers or essays, and of national scientific meetings attended during the previous three years.)

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Application for Appointment to the Medical Staff -- Continued

The undersigned applies for membership on the medical staff of BROOKHAVEN NATIONAL LABORATORY GENERAL AND RESEARCH HOSPITAL and for privileges of practice as indicated below:

General practice.....
 (Includes general medicine, diagnosis, non-operative obstetrics,
 minor surgery, first aid in emergencies)

..... Major or minor work desired

General medicine.....

Medical specialties.....
 (Indicate medical specialties)

.....

.....

General surgery.....

Surgical specialties.....
 (Indicate surgical specialties)

.....

.....

Other services.....
 (As anesthesia, pathology, radiology)

In making application for appointment to the medical staff of the BROOKHAVEN NATIONAL LABORATORY GENERAL AND RESEARCH HOSPITAL I agree to abide by the by-laws of the medical staff and by such rules and regulations as may be from time to time enacted. Moreover, I hereby declare that I shall not engage in the practice of the division of fees under any guise whatsoever. In complying with this principle, I understand that I am not to collect fees for others referring patients to me, nor permit others to collect fees for me, nor to make joint fees with physicians or surgeons referring patients to me for operation or consultation, nor permit any agent or associate of mine to do so.

Further, I agree to comply with the principle that all physicians and surgeons participating in the care of a patient shall render separate statements and issue separate receipts.

 (Signature of applicant) M.D.

Appointment recommended.....Appointment not recommended.....Appointment de-ferred.....
 Privileges limited to.....

Date.....

 Chairman of Medical Department

Appointed by

DOE ARCHIVES

Date.....

Remarks.....

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Proposed out patient charges for clinical laboratory and x-ray services based on the schedule presently in effect at Oak Ridge.

These charges average 25 percent less than the current rates in effect in the three nearby hospitals.

Local hospitals

CLINICAL LABORATORY

URINALYSIS EXAMINATIONS:

Urinalysis	1.00
Quantitative Albumin	1.00
Quantitative Glucose	1.00
Bence Jones Protein	1.00
Urobilinogen	1.00
Mosenthal Test	2.00
Concentration-Dilution Test	2.00
P.S.P. (Phenolsulphophthalein Test)	2.00
Occult Blood	1.00
Friedman Test	10.00

HEMATOLOGIC EXAMINATIONS:

Blood Count-Complete, RBC, WBC, DIFF	3.00
Separate Items	1.00
RBC, or WBC, or HGB	
Malaria Smear	1.00
Sedimentation Test	2.00
Reticulocyte Count	2.00
Bone Marrow Examination	5.00
Fragility Test	3.00
Coagulation Test (Bleeding and Clotting Time)	2.00
Clot Retraction Study	2.00
Platelet Count	3.00
Prothrombin Time	3.00
Blood Indices	2.00
Hematocrit	1.00
Blood Grouping	1.00
Cross Matching	3.00
RH Factor	2.00

Blood Transfusion When No Donation is Forthcoming to Blood Bank to Replace Blood Drawn from Bank Exclusive of Cross Matching Charge

Pint	25.00
1/2 Pint or Less	15.00

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DOE ARCHIVES

CHEMISTRY EXAMINATIONS:

Blood Chemistry (Glucose, calcium, phosphorus, chloride, NPN, Urea, Uric Acid Creatinin) each single examination.	3.00
Glucose Tolerance Test.	7.50
Urea Clearance Test	5.00
Phosphatase	5.00
CO ₂ Combining Power	5.00
Sulfonamide Blood Level	3.00
Total Protein Including Albumin	
Globulin Ratio.	5.00
Icterus Index	2.00
Liver Function Test	
Cephalin, Bromsulphalein, Hippuric Ac (Each single exam.)	3.00
Gastric Analysis (Histamine).	5.00

SEROLOGIC EXAMINATIONS:

Kahn Test	1.00
Wassermann Test	2.00
Heterophile Antibody Test	3.00
R. H. Antibody Titer.	10.00

SPINAL FLUID EXAMINATIONS:

Cell Count, Differential, Globulin.	2.00
Smear Only.	1.00
Culture	3.00
Spinal Fluid - Quant. Protein	2.00
Chemistry	
Chlorides.	3.00
Glucose.	3.00
Chemistry, Combination of Two	5.00
Coloidal Gold.	2.00
Spinal Wassermann.	2.00

BACTERIOLOGIC EXAMINATIONS:

Cultures Including Smear.	3.00
*(Exceptions:-see below)	
*Blood Culture.	5.00
*Stool Examination-Culture.	5.00
Smears Alone.	1.00
Gastric Washing for TB.	3.00
TB Concentration.	3.00
Pneumococcus Typing	3.00
Semen Examination	3.00
Dark Field Examination.	3.00
Stool-Parasites & Ova including occult blood.	3.00
Stool-Occult Blood Only.	1.00
Agglutination Tests	3.00
Note: When culture is ordered no extra charge for smear	
B.M.R.	5.00
E.K.G.	7.50

TISSUE EXAMINATION: 5.00

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X-RAY

HEAD AND NECK

Skull	\$ 10.00
Skull, including paranasal sinuses	20.00
Paranasal sinuses	10.00
Encephalography	25.00
Encephalography, including preliminary skull	35.00
Ventriculography	20.00
Sella Turcia	10.00
Eye for Foreign Body	10.00
Eye for localizing foreign body (extra)	25.00
Mastoids (a) regular	10.00
Mastoids, including petrous pyramids	15.00
Nose	5.00
Maxilla and Facial Bones	10.00
Mandibles, each	10.00
Esophagus (only)	10.00
Sialography (without medium)	10.00
Optic Foranina	10.00
Neck for soft tissue	5.00

CHEST

Lung - Posterior Anterior Only	7.50
Lung - Posterior Anterior Only (O.B.)	5.00
Thorax-ribs - regular chest, 2 plates	10.00
Thorax-ribs - regular chest, 1 plate	7.50
For 4 x 10 Stereo in Groups	3.00
Sternum	5.00
Lungs, stereo, post.-anterior, lateral	10.00
Lungs, fluoroscopic exam. (alone)	5.00
Heart, complete fluor. & radio. studies	10.00
Heart, single teleo-roentgenogram	5.00
Chest for thymus, fluoroscopy & fliza	5.00
Bronchography (with medium instillation) (preceding surgery)	20.00

SPINE AND PELVIS

Spine, cervical	10.00
Spine, thoracic	10.00
Spine, lumbar	10.00
Spine, sacrum and coccyx	10.00
Spine, lumbar and pelvis	15.00
Spine, any 2 of above areas	15.00
Spine, entire	20.00
With cervical spine	25.00
Myelography	15.00
Pelvis	10.00
Stereo	15.00

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DOE ARCH

UPPER EXTREMITIES

Shoulder Girdle	\$ 5.00
Clavicle	5.00
Shoulder Joint	5.00
Humerus	5.00
Elbow	7.50
Forearm	7.50
Wrist	5.00
Hand	5.00
Finger	5.00

LOWER EXTREMITIES

Hip	7.50
Hip - stereo	10.00
Femur	7.50
Knee	7.50
Semilunar Cartilage of both knees	15.00
Tibia and Fibula	5.00
Ankle	5.00
Foot	5.00
Toes	5.00

GASTRO - INTESTINAL

Gastro-Intestinal tract by barium meal (with or without prelim. film of abdomen)	25.00
Gastro-Intestinal tract by barium meal-enema	35.00
Gastro-Intestinal tract-barium meal, gallbladder (dye) and colon (enema)	50.00
Stomach and duodenum only	15.00
Stomach, duodenum, gallbladder (with dye)	30.00
Gallbladder by dye method	15.00
Fistulae - contrast study	10.00
Colon and gallbladder (with dye)	25.00
Cholangiogram	20.00
Kidney in situ (operating table)	10.00

UROLOGICAL

Genito-urinary, simple KUB	5.00
Pyelography, intravenous (with injection of medium)	20.00
Pyelography, retrograde	15.00
Cystography	10.00
Urethra-cystography	15.00

APPENDIX A

URINE:

Qualitative and quantitative albumen
Qualitative and quantitative sugar, including micro technic
Acetone diacetic acid
Beta-oxybutyric
Indican
Bile pigmentation
Bile acids
Urobilin
Calcium
Occult blood
Concentration and dilution test of Fishberg
Bence-Jones protein
PSP test
Urea nitrogen (in urine)

GASTRIC ANALYSIS, TOFFER METHOD

BLOOD:

Sedimentation rate, Wintrobe and Landsberg method
CEC
Hematocrit
Mean corpuscular volume
 hemoglobin calculations
 concentration calculations
Coagulation time, Lee and White method
Bleeding time, Dukes method
Clot retraction time
Reticulocyte counts
Platelet counts
Prothrombin determination, Quick's method
Urea clearance
Glucose tolerance tests
Insulin tests
Sulfonamid level (blood and urine)
Calcium, Clark and Collip method
Serum chloride, Van Slyke method
Van den Bergh
Total cholesterol
Free cholesterol and cholesterol esters
Cephalin flocculation
Serum carbon dioxide content
Iron and hemoglobin determination in whole blood
Non-protein nitrogen (Pregl method)
Benzidine test for serum hemolysis
Determination of sugar in blood and biological fluids
 (modified Benedict)
Urea nitrogen (Nesslerization procedure)
Uric acid
Phosphate
Bromsulphalein
Serum bromide
Thiocyanates
Creatinine

BACTERIOLOGY:

Organism:

Staphylococci aureus, citreus, albus	Blood plate, sugar media, coagulase test for virulence
Streptococi	Blood plate, sugar media, litmus milk
Pneumococcus	Blood plate, sugar media, stain
Klebsiella pneumonia	Capsule stain, agar, litmus milk, broth (no typing sera)
Neisseria intracellulosis	Blood plate, sugar media (agar) chocolate agar (no typing sera)
N. Catarrhalis	Blood plate, sugar media
N. Gonorrhoeae	Chocolate agar (oxydase test), direct smear
Hemophilus influenzae	Blood plate, nitrate reduc- tion, indole production
Colon-Aerogenes group	Endo medium, triple sugar medium, desoxycholate media, gelatin, sugar media
Typhoid group	Endo agar, triple sugar, brilliant green agar (no typing sera)
Dysentery group	Blood agar, sugar media, desoxycholate agar (no typing sera)
Salmonella	(no typing sera)

Equipment lacking: vacuum pump for anaerobic cultures.

Technician experience weak on anaerobes.

No special media for B diphtheriae or B tuberculosis.

No typing sera for streptococcus

pneumococcus

typhoid

dysentery group

brucella abortus

typhus fever

Rocky Mountain spotted fever

SEROLOGY:

Set up: Davidsohn presumptive test for infectious
mononucleosis (washed sheep cells)

Blood grouping and Rh testing
slide method for grouping and Rh cross matching
tube incubation for Rh

To be set up:

Kahn flocculation tests
Kolmer complement fixation tests

Facilities available for post-mortem examination