REPORT

OF THE

COMMISSIONER

OF HEALTH

OF

SEATTLE

1917

Report

of the

Department of Health and Sanitation

Seattle

1917

Report of the Department of Health and Sanitation

of the City of Seattle, Washington, embracing the work of the department and the vital statistics for the calendar year nineteen hundred and seventeen

LOWMAN & HANFORD CO.
SEATTLE

Index

	Page
AREA OF SEATTLE	Fly Leaf
ANNEXED TERRITORY, DATES OF	Fly Leaf
BIRTHS AND BIRTH RATE	22
BIRTHS, TABULATION	21
DEATHS: By Age Periods, Monthly, 1917	13
By Age Periods, 1909 to 1917	18
Classification by Age Periods, 1917	14
Classification by Months, 1917	10
From Infectious Diseases	8
Principal Causes of	9
Condition, Color, Sex	13
Death Rate, 1907 to 1917	9
Death Rate, Under One Year	18-19
Death Rate, Under Fire Years	18
Death Rate from Tuberculosis	20
From Tuberculosis, Classification and Age	47
From Tubercolosis, at Firland	57
DISEASES: Cases Quarantined, 1917	35
At Isolation Hospital	35
EXAMINATION FOR HEALTH CERTIFICATES	50
EXAMINATION FOR AUTO DRIVERS LICENSES	50
FIRLAND SANITORIUM	51
MARRIAGES	21
REVIEW BY COMMISSIONER OF HEALTH	23
Hospital, Seattle City (Emergency)	24-26
Dairy and Food Division	28
Quarantine and Infectious Disease Division	23
Sanitation Division	29
Tuberculosis Division	23

	Page
DIVISION REPORTS BY DIVISION CHIEFS:	39
Child Welfare	92
Garbage	60
Hospital, Seattle City (Emergency)	70
Dispensary	79
Prescriptions	76
Treatments, Dispensary	76
Treatments of Prisoners by Internes	77-79
Tabulated Reports	96
Hospital Training School, Nurses	89
Laboratory, Chemical	38
Laboratory, Bacteriological	81
Dairy and Food Inspection	87
Dairy and Food Inspection, Tabulated Reports	90-91
Public Markets	95
Plumbing Inspection, Tabulated Report	108-109
Plague Work	31
Quarantine and Infectious Disease	35
Cases Quarantined, Tabulation	35
Isolation Hospital, Tabulation	36
Fumigations, Tabulation	44-50
Tuberculosis Control	45
Cases, Tabulation	49
County Visiting Nurse Report	47
Children Treated	47
Deaths, Relation to Total Deaths	47
Deaths, Classified by Ages	50
Drivers' Examinations, Automobile	48
Fumigations	47
Tabulation, Cases in Children	50
Health Certificates, Examination for	

	Page
Firland Sanitorium	51-59
Admission	51-52
Admissions and Discharges	53-54
Classification, Adult Cases	54-55
Classification, Children's Cases	55-56
Complications, Adult Cases	55
Condition After Leaving Firland	54
Classification, Adults on Admission	54
Deaths, at Firland	57
Discharged Cases, Length of Stay	55
Dental Work, Adults	55
Dental Work, Children	56
Hospital Days by Months	57
Object	52
Social and Educational Methods	58
Reasons for Discharge of Patients	54
Tabulated Record of Cases	56
Sanitation	57-107
Vital Statistics	7-22

The Officers of the Health and Sanitation Department During the Year 1917 Were as Follows:

J. S. McBride, M. D.	Commissioner of Health
Miss May S. Loomis, R. N.	Supervisors of Nurses, Seattle City Hospital
Miss Berta Kennedy, R. N.	
Paul A. Turner, M. D.	Medical Supervisors, Seattle City Hospital
T. H. Buckner, M. D.	
Robert M. Stith, M. D.	Chief Medical Inspector, In Charge Tuberculosis Control
Mrs. Edna L. Robinson, R. N.	Head Nurse, Firland Sanatorium
Herbert E. Coe, M. D.	1st Asst. Medical Inspector, In Charge Contagious Division
W. C. Lippincott, M. D.	
W. C. Lippincott, M. D.	2nd Asst. Medical Inspector, in Charge Child Welfare Division
T. W. Lough	Pharmacist
A. A. Braymer	Secretary and Deputy Registrar
A. U. Simpson, M. D.	Bacteriologists
O. J. West, M. D.	
Albert Jacobson	City Chemist
M. T. Stevens	Chief Sanitary Engineer
John Winship	Market Master
J. F. McGee	Chief Quarantine Officer
F. E. Smith, D. V. M.	Chief Meat Inspector
James McIntyre	Chief Plumbing Inspector
C. L. Murray	Superintendent of Garbage

LAND AND WATER AREA OF THE CITY OF SEATTLE

LAND AREA, DECEMBER 8, 1910

	Acres	Square Miles	Date Annexation Ord. was passed
Original city, including Seattle harbor, tide lands and Lake Union shore lands as platted	17,461	27.28	
South Seattle	570	.89	October 20, 1915.
Southeast Seattle	3,365	5.26	January 7, 1907.
Ravenna	480	.75	January 15, 1907.
South Park	529	.83	May 3, 1907.
Columbia	605	.94	May 3, 1907.
Ballard	2,300	3.60	July 24, 1907.
West Seattle	6,710	10.49	July 24, 1907.
Rainier Beach and Dunlap	2,560	4.00	September 12, 1907.
Lake Washington shore lands	412	.64	Filed March 21, 1908.
Georgetown	1,170	1.82	April 11, 1910.
Laurelhurst and Yesler	1,319	2.06	December 1, 1910.
Total	37,481	58.56	

WATER AREA

	Fresh Water Acres	Fresh Water Sq. Mi.	Salt Water Acres	Salt Water Sq. Mi.
Lake Washington (portion inside limits)	5,800	9.06		
Lake Union	688	1.08		
Green Lake	314	.49		
Duwamish River	370	.58		
Govt. Canal from Salmon Bay to Lake Washington	68	.11		
Salmon Bay Waterway			269	.42
Elliott Bay, inc. East Waterway, West Waterway and Smith's Cove, from Alki Point to West Point			3,754	5.87
Outer Harbor, Duwamish Point to Five Mile Point			4,134	6.46
Puget Sound (portion inside limits)			7,588	11.84
Total	7,240	11.32	15,745	24.59
Total Water Area	22,985	35.91		
Total Land and Water Area	60,466	94.47		

Seattle, Washington, December 31, 1917.

To The Honorable Mayor and City Council, The City of Seattle:

Gentlemen:

I have the honor to submit you herewith the annual report of the operations of the Department of Health and Sanitation for the year 1917, together with the Records of the Vital Statistics Division, as complied in this office for the City of Seattle under the state law.

TOTAL DEATHS AND DEATH RATE

A glance at the records of death as compiled from the certificates filed during the year shows an increase of 90 deaths, from 2443 in 1916 to 2533 in 1917. This is an increase of only 3.6% over 1916 while the Official Estimated Population of the Census Bureau as of July 1, 1917 is 366,445 or an increase of 17,806 or 5.1% over 1916. There is no doubt whatever of the increase in population having exceeded these figures and we can therefore view with pride the fact that our deaths were so low.

Based on these figures, our official death rate was 6.91 per 1000 for 1917 as against 7.06 for 1916 and 7.44 for 1915. With this low death rate we have no fear of any other city of 100,000 population or over successfully disputing our claim to having the lowest death rate in the world, the record we have held since the Census Year 1910.

A full review of the vital statistics records will be found in the report of that division which immediately follows.

VITAL STATISTICS DIVISION

Dr. J. S. McBride,

Commissioner of Health.

Dear Doctor:

Herewith I place in your hands a review of the Vital Statistics for the year 1917, together with the standard tabulations of same as adopted for publication by this department.

DECREASES

A comparison of the causes of deaths for 1917 with those for 1916 according to the International Classification, shows many decreases as well as increases. Of the decreases which should be especially mentioned are Cancer from 242 in 1916 to 233 in 1917, Cerebral Hemorrhage from 156 to 140 and Bronchopneumonia from 58 to 46. The marked increases which should be noted are Tuberculosis from 255 to 278, External Violence from 149 to 169, Bright's Disease from 128 to 143, Pneumonia from 96 to 110, Suicides from 54 to 64, Diseases of the Arteries 42 to 54 and Syphilis from 25 to 44. The total deaths increasing from 2443 in 1916 to 2533 in 1917.

In regard to the increase in Syphilis, this is probably due to the fact that in the County Hospital and also the Seattle City Hospital a Wasserman is taken of each patient, probably causing many more death certicfiates to be classified into this cause.

In the Infectious Disease group we find Measles increased six while Whooping Cough decreased six and Diphtheria remained the same with 7 deaths. The extra death in this group was of Scarlet Fever.

	Deaths 1916	Deaths 1917
Measles	10	16
Scarlet fever	0	1
Whooping cough	16	10
Diphtheria	7	7

Typhoid Fever must be mentioned in this group with an increase from 10 in 1916 to 18 in 1917, but in this connection we must mention that the greater proportion of these cases are sent to our city for hospital treatment from the surrounding country, practically every case having an origin outside the city.

Influenza must also be mentioned in this group, although not usually treated as an infectious disease, with a decrease from 42 to 21.

PRINCIPAL CAUSES OF DEATH.

Organic heart disease	286
Tuberculosis (all forms)	278
Cancer	233
*External violence	169
Bright's disease	143
Cerebral hemorrhage	140
Congenital debility	115
Pneumonia	110
Suicides	64
Diseases of arteries	54
Acute endocarditis	53
Diabetes	47
Broncho pneumonia	46
Syphilis	44
Appendicitis	37
Intestinal obstruction	37
Congenital malformations	35
Senility	34
Homicides	26
Influenza	21

*Exclusive of suicides and homicides.

The Census Bureau places our Official Estimated population as of July 1, 1917, at 366,445, making our death rate for the year 6.91 per thousand population.

CRUDE DEATH RATE FOR THE CITY OF SEATTLE FOR THE YEARS 1907 TO 1917, INCLUSIVE

Based upon the Official Estimated Population of the Bureau of the Census as of July 1st of each year:

Year	Estimated Population	Net Deaths	Rate Per 1,000
1907	188,435	2,040	10.82
1908	210,438	1,953	9.27
1909	222,491	2,225	10.00
1910	240,872	2,462	10.22
1911	259,615	2,244	8.64
1912	277,420	2,262	8.15
1913	295,226	2,472	8.37
1914	313,029	2,537	8.10
1915	330,834	2,462	7.44
1916	348,639	2,443	7.05
1917	366,445	2,533	6.91

The International Classification of the Causes of Deaths by Months, with Ages, Sex, Color and Conjugal Condition; the International Classification by Age Periods and Total Deaths by Age Periods from 1909 to 1917 inclusive, follow:

INTERNATIONAL CLASSIFICATION OF DEATHS

1917.

	I. GENERAL DISEASES	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1	Typhoid fever	0	0	2	1	1	2	2	2	2	0	4	2	18
4	Malaria	0	0	0	0	0	0	0	0	0	1	0	0	1
6	Measles	0	4	7	4	1	0	0	0	0	0	0	0	16
7	Scarlet fever	0	1	0	0	0	0	0	0	0	0	0	0	1
8	Whooping cough	0	1	1	2	2	2	0	1	0	0	0	1	10
9	Diphtheria	0	0	0	0	0	2	0	1	0	2	2	0	7
10	Influenza	3	5	2	5	0	1	2	0	1	0	1	1	21
14	Dysentery	0	0	0	0	0	0	0	1	0	0	1	1	3
18	Erysipelas	0	1	0	0	1	1	0	1	0	0	0	0	4
20	Purulent infection and septichaemia	1	1	0	1	1	1	4	3	1	1	0	1	15
27	Beriberi	0	0	0	1	0	0	0	0	0	0	0	0	1
28	Tuberculosis of the lungs	19	20	13	19	20	17	11	10	12	12	22	20	195
29	Acute miliary tuberculosis	2	1	2	2	1	1	0	0	0	0	0	1	10
30	Tuberculous meningitis	3	4	5	4	5	4	7	9	2	3	2	1	49
31	Abdominal tuberculosis	1	1	1	1	0	1	1	2	0	2	1	1	12
32	Pott's disease	0	0	3	0	0	0	1	0	1	0	0	1	6
34	Tuberculosis of other organs	0	0	0	1	1	0	1	1	0	2	0	0	6
36	Rickets	0	0	0	0	0	0	0	0	1	0	1	0	2
37	Syphilis	3	3	9	3	7	5	1	2	3	3	3	2	44
39	Cancer and other malignant tumors of the buccal cavity	1	1	0	0	1	0	0	0	0	1	0	0	4
40	Cancer and other malignant tumors of the stomach—liver	7	9	10	5	6	7	5	11	10	10	5	12	97
41	Cancer and other malignant tumors of the peritonaeum, intestines, rectum.	3	1	2	4	2	0	1	1	1	1	5	2	23
42	Cancer and other malignant tumors of the female genital organs	2	3	2	4	6	3	2	2	1	3	5	3	36
43	Cancer and other malignant tumors of the breast	0	2	3	2	2	4	1	1	0	0	1	3	19
44	Cancer and other malignant tumors of the skin	0	0	0	0	0	0	1	0	2	1	1	0	5
45	Cancer and other malignant tumors of other organs or of organs not specified	1	3	3	2	6	6	2	7	3	5	5	6	49
46	Other tumors	0	0	0	0	0	0	0	1	0	0	0	0	1
47	Acute articular rheumatism	0	1	1	1	0	1	2	2	1	0	0	1	10
48	Chronic rheumatism and gout	0	0	1	2	0	1	0	0	0	0	1	0	5
50	Diabetes	2	0	8	3	5	6	0	3	4	4	7	5	47
51	Exophthalmic goiture	1	0	1	1	3	1	0	2	0	1	2	0	12
52	Addison's disease	0	0	1	0	0	1	1	0	0	0	0	0	3
53	Leuchaemia	0	0	0	0	0	1	0	1	0	1	1	1	5
54	Anaemia-chlorosis	3	0	1	2	1	2	1	3	1	2	0	0	16
55	Other general diseases	1	0	0	1	0	0	2	0	0	0	0	0	4
56	Alcholism	0	1	1	1	0	1	2	2	0	0	0	0	8
58	Other chronic occupation poisoning	0	0	0	0	0	0	0	0	1	0	0	0	1
59	Other chronic poisonings	0	0	0	0	0	0	2	0	0	0	0	0	2
	II. DISEASES OF THE NERVOUS SYSTEM													
60	Encephalitis	0	0	0	0	0	1	0	0	0	0	0	1	2
61	Simple meningitis	1	2	2	2	0	1	0	0	1	0	0	1	10
62	Locomotor ataxia	0	1	0	1	0	1	0	0	0	4	0	0	7
63	Other diseases of the spinal cord	0	1	3	2	0	3	0	0	1	1	0	0	11
64	Cerebral haemorrhage apoplexy	10	14	17	9	15	11	15	7	8	12	11	11	140
65	Softening of the brain	0	0	1	0	0	0	0	0	0	0	0	0	1
66	Paralysis without specified cause	3	1	3	0	1	1	0	2	0	1	0	1	13
67	General paralysis of the insane	0	0	2	1	0	0	1	0	1	1	0	1	7
68	Other forms of mental alienation	0	0	1	0	1	0	0	0	0	0	0	0	2
69	Epilepsy	0	2	0	1	1	0	0	0	1	2	0	0	7
71	Convulsions of infants	0	1	1	0	0	1	0	0	0	0	1	1	5
74	Other diseases of the nervous system	0	0	1	1	0	1	1	1	1	0	1	2	9
76	Diseases of the ears	1	3	0	0	2	1	1	0	0	1	0	1	10

INTERNATIONAL CLLASSIFICATION OF DEATHS—Cont.

	III. DISEASES OF THE CIRCULATORY SYSTEM	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
77	Pericarditis	0	0	0	0	0	0	0	0	0	0	0	2	2
78	Acute Endocarditis	0	1	5	2	5	6	3	6	9	7	5	4	53
79	Organic diseases of the heart	28	21	24	19	30	17	18	24	20	24	19	42	286
80	Angina pectoris	1	2	0	1	1	1	0	2	1	2	0	0	11
81	Diseases of the arteries, atheroma aneurysm	2	2	5	5	5	4	5	3	2	4	5	12	54
82	Embolism and thrombosis	0	0	0	1	0	0	1	2	0	0	1	0	5
84	Diseases of the lymphatic system	0	1	0	0	0	0	0	0	0	0	0	0	1
	IV. DISEASES OF THE RESPIRATORY ORGANS													
87	Diseases of the larynx	0	0	1	0	0	0	0	0	0	0	0	0	1
88	Diseases of the thyroid body	0	1	0	0	0	0	0	0	1	0	0	0	2
89	Acute bronchitis	0	0	2	1	1	0	0	0	0	1	0	0	5
90	Chronic bronchitis	1	1	2	0	1	0	0	0	0	0	2	1	8
91	Broncho pneumonia	10	7	3	3	3	2	2	0	1	4	5	6	46
92	Pneumonia	10	10	11	15	7	8	6	4	7	5	15	12	110
93	Pleurisy	3	2	0	0	2	0	1	0	0	0	1	1	10
94	Pulmonary congestion pulmonary apoplexy	0	0	0	0	0	0	0	0	1	1	1	0	3
95	Gangrene of the lungs	0	0	0	0	0	0	1	0	0	0	0	0	1
96	Asthma	0	0	0	0	0	1	1	1	0	1	0	0	4
98	Other diseases of the respiratory system	0	0	1	1	1	0	0	1	0	1	1	0	6
	V. DISEASES OF THE DIGESTIVE SYSTEM													
99	Diseases of the mouth and annexa	0	1	0	0	0	0	0	0	0	0	0	0	1
100	Diseases of the pharynx	0	0	2	0	0	2	1	1	0	0	0	0	6
102	Ulcer of the stomach	2	1	2	3	1	0	0	2	0	1	2	1	15
103	Other diseases of the stomach	2	2	1	2	1	1	0	0	1	1	1	0	12
104	Diarrhoea and enteritis (under 2 years)	3	1	1	0	3	1	1	3	4	2	3	0	22
105	Diarrhoea and enteritis (2 year and over)	1	1	2	0	1	2	1	4	1	0	1	2	16
108	Appendicitis and typhlitis	6	0	2	3	3	4	2	3	3	7	1	3	37
109	Hernia, intestinal obstruction	7	5	2	0	3	3	0	3	2	8	2	2	37
110	Other diseases of the intestines	1	0	0	1	0	0	0	0	0	1	0	0	3
113	Cirrhosis of the liver	1	1	2	1	2	4	2	0	0	2	1	1	17
114	Biliary Calculi	0	0	1	1	1	2	0	1	0	0	0	1	7
115	Other diseases of the liver	3	1	0	2	1	3	1	0	4	0	1	4	20
117	Simple peritonitis	1	0	0	0	0	0	0	0	0	0	0	1	2
118	Other diseases of the digestive system	0	1	0	0	0	0	0	0	0	1	0	1	3
	VI. DISEASES OF THE GENITO-URINARY SYSTEM													
119	Acute nephritis	0	3	2	1	1	0	0	1	2	1	1	4	16
120	Bright's disease	12	17	17	11	16	17	8	10	3	15	8	9	143
122	Other diseases of the kidneys and annexa	1	0	0	0	1	1	0	0	1	0	1	3	8
123	Calculi of the urinary passage	0	0	0	0	1	0	0	0	0	0	0	1	2
124	Diseases of the bladder	1	0	0	0	0	1	1	0	0	0	0	0	3
125	Diseases of the urethra, urinary abscesses, etc	0	0	0	0	0	0	0	0	0	0	0	0	1
126	Diseases of the prostate	1	0	1	0	1	2	0	0	1	7	0	1	14
129	Uterine tumor	1	0	0	0	3	0	0	0	0	1	0	0	5
130	Other diseases of the uterus	0	0	1	0	0	1	0	0	1	0	2	0	5
131	Cysts and other tumors of the ovary	0	0	0	0	0	0	0	0	0	1	0	1	2
132	Salphingitis and other diseases of the female genital organs	0	1	0	1	3	1	1	1	0	1	0	2	11

INTERNATIONAL CLASSIFICATION OF DEATHS—Cont.

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
VII. THE PUERPERAL STATE													
134 Accidents of pregnancy	1	0	0	0	0	0	0	1	0	3	0	2	7
135 Puerperal hemorrhage	2	0	0	0	1	1	0	0	1	0	1	0	6
136 Other accidents of labor	0	0	0	0	0	1	0	0	0	0	0	0	1
137 Puerperal septichaemia	1	0	0	0	0	0	0	1	0	0	0	1	3
138 Puerperal albuminuria and convulsions	3	1	0	0	1	1	0	1	0	1	1	0	9
139 Puerperal phlegmasia alba dolens, embolus sudden death	0	0	0	0	0	0	0	0	0	0	0	1	1
VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE													
142 Gangrene	0	0	0	0	0	0	0	0	0	1	1	0	2
144 Acute abscess	0	0	0	0	1	0	0	0	0	0	0	1	2
145 Other diseases of the skin and annexa	0	0	0	1	0	1	0	1	0	0	0	0	3
IX DISEASES OF THE BONES AND ORGANS OF LOCOMOTION													
146 Diseases of the bones	1	0	0	0	2	1	0	0	1	1	0	0	6
X. MALFORMATIONS													
150 Congenital malformations	0	5	4	2	3	3	1	2	4	4	4	3	35
XI. DISEASES OF EARLY INFANCY													
151 Congenital debility, icterus and sclerema	4	10	14	11	12	8	15	14	6	10	7	4	115
152 Other causes peculiar to early infancy	1	5	1	5	2	3	3	4	4	2	5	2	39
XII. OLD AGE													
154 Senility	4	7	2	3	6	1	0	0	4	2	1	4	34
XIII. EXTERNAL CAUSES													
155 Suicide by poison	1	0	1	1	2	0	2	2	2	1	1	0	13
156 Suicide by asphyxia	2	1	2	0	4	2	1	0	0	1	0	1	14
157 Suicide by hanging or strangulation	0	0	0	0	0	0	0	1	0	0	0	0	1
158 Suicide by drowning	0	0	0	0	0	0	0	0	1	1	0	0	2
159 Suicide by firearms	5	0	1	3	2	3	2	2	1	2	4	1	26
160 Suicide by cutting or piercing instruments	0	0	0	0	0	1	0	0	0	1	0	1	3
161 Suicide by jumping from high places	1	0	1	0	1	0	1	0	0	0	1	0	5
164 Poisoning by food	0	1	0	1	1	0	0	0	0	0	0	2	5
165 Other acute poisonings	0	0	0	0	0	1	1	0	0	1	0	0	3
166 Conflagration	2	0	1	0	0	0	0	0	0	0	0	0	3
167 Burns	0	2	1	1	0	3	0	0	1	0	1	1	10
168 Absorption of deleterious gases	0	0	2	4	1	1	0	0	2	1	2	2	15
169 Accidental drowning	1	0	1	0	1	5	6	1	2	2	1	2	22
170 Traumatism by cutting or piercing instruments	0	0	0	0	0	0	0	1	0	0	0	0	1
172 Traumatism by fall	5	2	4	3	1	3	2	1	3	3	2	2	31
173 Traumatism in mines and quarries	0	0	0	0	0	0	0	0	0	0	0	0	0
174 Traumatism by machines	0	0	0	1	0	3	1	0	0	1	1	0	7
175 Traumatism by other crushing	5	7	5	6	3	5	7	7	2	5	3	7	62
176 Injuries by animals	0	0	0	0	0	0	1	0	0	0	0	0	1
181 Electricity	0	0	0	0	0	0	0	0	1	0	0	1	2
182 Homicide by firearms	2	2	2	1	1	2	0	2	1	4	2	1	20
183 Homicide by cutting or piercing instruments	0	0	0	1	0	0	0	0	0	0	0	0	1
184 Homicide by other means	0	0	1	1	0	2	1	0	0	0	0	0	5
186 Other external violence	0	0	0	0	0	0	0	1	1	0	3	2	7
XIV. ILL-DEFINED DISEASES													
189 Cause of death not specified or ill-defined	0	0	0	0	0	0	1	0	0	1	0	1	3

DEATHS

1917

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Net Deaths	207	215	243	209	235	227	171	193	162	224	203	244	2533
Under 1 month	6	23	18	20	16	14	21	18	12	14	16	12	190
1 month to 1 year	15	14	7	10	12	9	4	5	10	10	6	4	106
1 year to 2 years	2	2	10	5	3	5	1	3	0	1	3	3	38
2 years to 5 years	6	6	6	8	3	4	4	5	4	3	6	1	56
5 years to 10 years	4	3	8	7	4	6	4	2	2	3	3	3	49
10 years to 20 years	11	7	10	2	7	11	8	11	4	12	4	10	97
20 years to 30 years	14	16	11	16	13	22	11	16	13	20	25	21	199
30 years to 40 years	28	23	27	28	25	22	31	24	16	31	23	28	305
40 years to 50 years	26	27	28	26	32	24	16	26	23	19	17	32	296
50 years to 60 years	23	30	41	27	37	38	24	33	28	43	35	41	400
60 years to 70 years	30	29	35	18	40	31	26	23	22	28	30	38	350
70 years to 80 years	28	29	29	33	23	29	11	16	12	23	26	30	289
80 years to 90 years	11	5	11	8	16	12	9	10	15	14	9	18	138
90 years and over	3	1	2	1	4	0	1	1	1	3	0	3	200

DEATHS

1917

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Total deaths	216	229	254	226	252	244	185	212	174	243	218	258	2711
Stillbirths	9	14	11	17	17	17	14	19	12	19	15	14	178
Net deaths	207	215	243	209	235	227	171	193	162	224	203	244	2533
Sex:													
Males	115	133	148	130	135	128	107	104	93	138	118	145	1494
Females	92	82	95	79	100	99	64	89	69	86	85	99	1039
Condition:													
Single	62	81	81	79	80	81	68	65	53	75	80	79	884
Married	95	85	112	88	104	89	70	87	76	102	79	106	1093
Widows	25	27	23	21	25	34	13	21	17	22	30	28	286
Widowers	17	11	20	14	20	15	10	11	8	17	7	21	171
Divorced	3	5	3	3	2	3	5	5	1	2	4	5	41
Unknown	5	6	4	4	4	5	5	4	7	6	3	5	58
Color:													
White	191	197	227	193	208	216	163	177	147	218	187	225	2349
Japanese	6	12	10	12	12	4	4	8	10	3	9	4	94
Chinese	3	4	3	4	5	3	1	3	2	0	2	6	36
Colored	7	2	3	0	10	4	3	3	3	3	5	7	50
Miscellaneous	0	0	0	0	0	0	0	2	0	0	0	2	4

NTERNATIONAL CLASSIFICATION OF DEATHS BY AGE PERIODS FOR THE YEAR 1917.

	GENERAL DISEASES	Under 1 Month	1 Month to 1 Year	1 Year to 2 Years	2 Years to 5 Years	5 Years to 10 Years	10 Years to 20 Years	20 Years to 30 Years	30 Years to 40 Years	40 Years to 50 Years	50 Years to 60 Years	60 Years to 70 Years	70 Years to 80 Years	80 Years to 90 Years	90 Years and Over	Total
1	Typhoid fever	0	0	0	0	0	3	4	7	4	0	0	0	0	0	18
4	Malaria	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
6	Measles	0	5	3	6	2	0	0	0	0	0	0	0	0	0	16
7	Scarlet fever	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
8	Whooping cough	0	7	4	0	0	0	0	0	0	0	0	0	0	0	11
9	Diphtheria	0	0	0	3	1	3	0	0	0	0	0	0	0	0	7
10	Influenza	0	1	0	2	0	1	2	0	3	1	1	10	0	0	21
14	Dysentery	0	0	0	0	1	0	0	0	0	0	0	0	2	0	3
18	Erysipelas	1	2	0	0	0	0	0	1	0	0	0	0	0	0	4
20	Purulent infection and Septichaemia	0	0	0	1	0	1	3	4	2	2	1	0	1	0	15
27	Beriberi	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
28	Tuberculosis of the lungs	0	0	0	0	1	11	46	60	28	26	13	10	0	0	195
29	Acute miliary tuberculosis	0	0	1	1	0	0	1	3	3	1	0	0	0	0	10
30	Tuberculous meningitis	0	4	9	12	7	5	5	2	4	1	0	0	0	0	49
31	Abdominal tuberculosis	0	0	0	1	0	2	3	2	1	2	0	1	0	0	12
32	Pott's disease	0	0	0	0	0	0	1	1	2	2	0	0	0	0	6
34	Tuberculosis of other organs	0	0	1	0	0	2	0	0	2	0	1	0	0	0	6
36	Rickets	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
37	Syphilis	5	3	1	0	0	0	3	12	6	6	4	3	1	0	44
39	Cancer and other malignant tumors of the buccal cavity	0	0	0	0	0	0	0	0	0	1	3	0	0	0	4
40	Cancer and other malignant tumors of the stomach, liver	0	0	0	0	0	1	1	4	14	30	31	13	3	0	97
41	Cancer and other malignant tumors of the peritoneum, intestines, rectum	0	0	0	0	0	0	2	4	3	7	6	1	0	0	23
42	Cancer and other malignant tumors of the female genital organs	0	0	0	0	0	0	1	4	9	12	6	4	0	0	36
43	Cancer and other malignant tumors of the breast	0	0	0	0	0	0	0	1	4	7	2	4	1	0	19
44	Cancer and other malignant tumors of the skin	0	0	0	0	0	0	0	0	0	0	3	0	2	0	5
45	Cancer and other malignant tumors of other organs, or of organs not specified	0	0	0	1	0	0	1	6	4	18	11	5	3	0	49
46	Other tumors	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
47	Acute articular rheumatism	0	0	0	0	2	4	0	0	1	0	1	2	0	0	10
48	Chronic rheumatism and gout	0	0	0	0	0	0	0	0	0	1	2	2	0	0	5
50	Diabetes	0	0	0	0	2	3	4	4	5	10	8	9	2	0	47
51	Exophthalmic goitre	0	0	0	0	1	1	1	5	2	2	0	0	0	0	12
52	Addison's disease	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3
53	Leuchaemia	0	0	0	0	0	0	2	1	1	0	1	0	0	0	5
54	Anaemia-chlorosis	0	0	0	0	0	0	0	0	2	7	5	2	0	0	16
55	Other general diseases	0	0	0	0	0	0	2	1	0	0	0	0	0	0	4
56	Alcoholism	0	0	0	0	0	0	1	2	3	0	2	0	0	0	8
58	Other chronic occupation poisoning	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
59	Other chronic poisonings	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2

INTERNATIONAL CLASSIFICATION OF DEATHS BY AGE PERIODS FOR THE YEAR 1917—Cont.

	II. DISEASES OF THE NERVOUS SYSTEM	Under 1 Month	1 Month to 1 Year	1 Year to 2 Years	2 Years to 5 Years	5 Years to 10 Years	10 Years to 20 Years	20 Years to 30 Years	30 Years to 40 Years	40 Years to 50 Years	50 Years to 60 Years	60 Years to 70 Years	70 Years to 80 Years	80 Years to 90 Years	90 Years and Over	Total
60	Encephalitis	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
61	Simple meningitis	0	1	3	0	1	2	2	0	1	0	0	0	0	0	10
62	Locomotor ataxia	0	0	0	0	0	0	0	2	1	3	1	0	0	0	7
63	Other diseases of the spinal cord	0	0	0	0	1	1	1	1	2	2	1	2	0	0	11
64	Cerebral hemorrhage apoplexy	3	1	0	0	0	1	0	1	8	27	35	43	18	3	140
65	Softening of the brain	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
66	Paralysis without specified cause	0	0	0	0	0	0	0	0	1	1	4	5	2	0	13
67	General paralysis of the insane	0	0	0	0	0	1	0	0	2	0	1	2	1	0	7
68	Other forms of mental alienation	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
69	Epilepsy	0	0	0	0	0	0	2	2	1	1	1	0	0	0	7
71	Convulsions of infants	3	1	1	0	0	0	0	0	0	0	0	0	0	0	5
74	Other diseases of the nervous system	0	0	0	1	0	1	0	2	1	3	1	0	0	0	9
76	Diseases of the ears	0	2	0	3	0	2	1	0	1	0	1	0	0	0	10
	III. DISEASES OF THE CIRCULATORY SYSTEM															
77	Pericarditis	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
78	Acute endocarditis	0	0	0	0	0	3	6	0	0	0	0	0	0	0	53
79	Organic diseases of the heart	0	2	0	0	2	6	13	20	28	69	61	58	26	1	286
80	Angina pectoris	0	0	0	0	0	0	0	1	3	3	4	0	0	0	11
81	Diseases of the arteries, atheroma, aneurysm	0	0	0	0	0	0	0	2	12	9	9	16	6	0	54
82	Embolism and thrombosis	0	0	0	0	0	0	0	0	1	2	1	1	0	0	5
84	Diseases of the lymphatic system	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
	IV. DISEASES OF THE RESPIRATORY ORGANS															
87	Diseases of the larynx	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
88	Diseases of the thyroid body	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
89	Acute bronchitis	0	2	1	0	1	0	0	0	0	0	1	0	0	0	5
90	Chronic bronchitis	0	1	0	0	0	0	0	0	1	2	2	1	1	0	8
91	Broncho pneumonia	1	15	6	1	2	0	3	1	0	2	3	3	7	2	46
92	Pneumonia	2	6	3	2	1	4	7	16	14	19	16	13	6	1	110
93	Pleurisy	0	0	1	2	1	0	0	0	1	3	0	1	1	0	10
94	Pulmonary congestion, pulmonary apoplexy	0	0	0	0	0	0	1	0	1	0	0	0	1	0	3
95	Gangrene of the lungs	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
96	Asthma	0	0	0	0	0	0	0	1	0	0	2	1	0	0	4
98	Other diseases of the respiratory system	1	0	0	0	0	0	2	0	0	1	0	1	1	0	6
99	Diseases of the mouth and annexa	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1

INTERNATIONAL CLASSIFICATION OF DEATHS BY AGE PERIODS FOR THE YEAR 1917—Cont.

	Under 1 Month	1 Month to 1 Year	1 Year to 2 Years	2 Years to 5 Years	5 Years to 10 Years	10 Years to 20 Years	20 Years to 30 Years	30 Years to 40 Years	40 Years to 50 Years	50 Years to 60 Years	60 Years to 70 Years	70 Years to 80 Years	80 Years to 90 Years	90 Years and Over	Total
V. DISEASES OF THE DIGESTIVE SYSTEM															
100 Diseases of the pharynx	0	0	0	0	1	1	2	1	1	0	0	0	0	0	6
102 Ulcer of the stomach	0	0	0	0	0	0	2	5	1	4	1	1	1	0	15
103 Other diseases of the stomach	0	3	0	2	0	0	0	1	2	0	1	3	0	0	12
104 Diarrhoea and enteritis (under 2 years)	0	20	2	0	0	0	0	0	0	0	0	0	0	0	22
105 Diarrhoea and enteritis (2 years and over)	0	0	0	2	0	0	0	2	6	1	3	0	2	0	16
108 Appendicitis and typhlitis	0	0	0	1	2	5	3	8	5	11	2	0	0	0	37
109 Hernia, intestinal obstruction	0	2	0	0	1	1	3	3	6	7	8	4	2	0	37
110 Other diseases of the intestines	0	0	0	1	0	0	1	0	0	0	0	0	0	1	3
113 Cirrhosis of the liver	0	0	0	0	0	0	0	0	3	4	5	4	1	0	17
114 Biliary calculi	0	0	0	0	0	0	0	0	2	3	1	1	0	0	7
115 Other diseases of the liver	0	0	0	0	0	0	1	4	2	8	2	3	0	0	20
117 Simple peritonitis	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
118 Other diseases of the digestive system	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3
VI. DISEASES OF THE GENITO-URINARY SYSTEM															
119 Acute nephritis	1	0	1	1	0	0	2	5	3	1	2	0	0	0	16
120 Bright's disease	0	0	0	0	1	2	2	13	23	20	42	27	8	4	142
122 Other diseases of the kidneys and annexa	0	0	0	0	0	0	0	1	2	2	2	1	0	0	8
123 Calculi of the urinary passage	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
124 Diseases of the bladder	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3
125 Diseases of the urethra, urinary abscesses, etc	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
126 Diseases of the prostate	0	0	0	0	0	0	0	0	2	4	3	2	2	1	14
129 Uterine tumor	0	0	0	0	0	0	1	2	2	0	0	0	0	0	5
130 Other diseases of the uterus	0	0	0	0	0	1	2	2	0	0	0	0	0	0	5
131 Cysts and other tumors of the ovary	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
132 Salphingitis and other diseases of the female genital organs	0	0	0	0	0	1	6	3	1	0	0	0	0	0	11
VII. PUERPERAL STATE															
134 Accidents of pregnancy	0	0	0	0	0	1	4	2	0	0	0	0	0	0	7
135 Puerperal hemorrhage	0	0	0	0	0	0	3	2	1	0	0	0	0	0	6
136 Other accidents of labor	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
137. Puerperal septichaemia	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3
138 Puerperal albuminuria and convulsions		0	0	0	0	2	3	4	0	0	0	0	0	0	9
139 Puerperal phlegmasia, alba dolens emolus sudden death	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE															
142 Gangrene	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
144 Acute Abscess	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2
145 Other diseases of the skin and annexa	1	0	0	0	0	0	0	0	0	1	1	0	0	0	3

INTERNATIONAL CLASSIFICATION OF DEATHS BY AGE PERIODS FOR THE YEAR 1917—Cont.

	Under 1 Month	1 Month to 1 Year	1 Year to 2 Years	2 Years to 5 Years	5 Years to 10 Years	10 Years to 20 Years	20 Years to 30 Years	30 Years to 40 Years	40 Years to 50 Years	50 Years to 60 Years	60 Years to 70 Years	70 Years to 80 Years	80 Years to 90 Years	90 Years and Over	Total
IX. DISEASES OF THE BONES AND ORGANS OF LOCOMOTION															
146 Diseases of the bones	0	0	0	0	1	2	1	1	1	0	0	0	0	0	6
X. MALFORMATIONS															
150 Congenital malformations	31	2	0	2	0	0	0	0	0	0	0	0	0	0	35
XI. DISEASES OF EARLY INFANCY															
151 Congenital debility, icterus and sclerema	97	16	0	2	0	0	0	0	0	0	0	0	0	0	115
152 Other causes peculiar to early infancy	38	1	0	0	0	0	0	0	0	0	0	0	0	0	39
XII. OLD AGE															
154 Senility	0	0	0	0	0	0	0	0	0	0	1	10	18	5	34
XIII. EXTERNAL CAUSES															
155 Suicide by poison	0	0	0	0	0	1	3	6	1	2	0	0	0	0	13
156 Suicide by asphyxia	0	0	0	0	0	1	1	6	4	1	1	0	0	0	14
157 Suicide by hanging or strangulation	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
158 Suicide by drowning	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
159 Suicide by firearms	0	0	0	0	0	1	5	8	3	6	3	0	0	0	26
160 Suicide by cutting or piercing instruments	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3
161 Suicide by jumping from high places	0	0	0	0	0	0	0	0	4	1	0	0	0	0	5
164 Poisoning by food	0	0	0	1	0	0	0	1		2	0	0	0	0	5
165 Other acute poisonings	0	0	0	0	0	0	0	1	0	2	0	0	0	0	3
166 Conflagration	0	0	0	1	0	0	0	0	0	1	1	0	0	0	3
167 Burns	0	0	0	2	1	0	2	1	1	1	2	0	0	0	10
168 Absorption of deleterious gases	0	4	0	0	2	1	0	2	2	1	3	0	0	0	15
169 Accidental drowning	0	0	0	1	5	11	1	3	1	0	0	0	0	0	22
170 Traumatism by cutting or piercing instruments	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
172 Traumatism by fall	0	0	0	2	1	1	2	8	6	2	1	5	3	0	31
174 Traumatism by machines	0	0	0	0	0	1	2	1	0	1	2	0	0	0	7
175 Traumatism by other crushing	0	1	0	1	7	3	11	13	6	9	8	1	2	0	62
176 Injuries by animals	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
181 Electricity	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
182 Homicide by firearms	1	0	0	0	0	0	6	6	5	1	1	0	0	0	20
183 Homicide by cutting or piercing instruments	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
184 Homicide by other means	1	0	0	0	0	0	2	0	1	1	0	0	0	0	5
186 Other external violence	1	1	0	0	0	0	0	4	1	0	0	0	0	0	7
XIV. ILL-DEFINED DISEASES															01
189 Cause of death not specified or ill-defined	1	1	0	0	0	0	0	0	1	0	0	0	0	0	3

AL DEATHS BY AGE PERIODS FOR THE YEARS 1909 TO 1917.

Under 1 Month	1 Month to 1 Year	1 Year to 2 Years	2 Years to 5 Years	5 Years to 10 Years	10 Years to 20 Years	20 Years to 30 Years	30 Years to 40 Years	40 Years to 50 Years	50 Years to 60 Years	60 Years to 70 Years	70 Years to 80 Years	80 Years to 90 Years	90 Years and Over	Total
158	185	57	58	49	103	277	304	288	267	228	170	70	11	2225
181	174	61	47	55	108	317	317	343	303	267	183	95	11	2462
154	144	51	70	42	95	253	294	294	286	256	208	82	112	2244
170	99	32	50	40	89	269	289	318	329	271	212	79	17	2262
153	143	56	76	44	87	254	307	308	366	292	265	111	10	2472
184	119	38	60	37	71	242	333	325	387	342	272	115	12	2537
163	100	35	38	28	82	214	295	362	380	330	292	126	17	2462
169	106	46	41	38	78	231	257	272	374	368	309	137	17	2443
190	106	38	56	49	97	199	305	296	400	350	289	138	20	2533

TH RATE OF CHILDREN UNDER ONE YEAR OF GE BASED UPON THE OFFICIAL ESTIMATED POPULATION FOR THE YEARS 1905 TO 1917 INCLUSIVE

	Population	Deaths Under One Year	Death Rate per 1000 Population
	141,681	198	1.39
	154,483	223	1.44
	188,485	286	1.51
	210,488	288	1.36
	222,491	343	1.54
	240,872	355	1.47
	259,615	298	1.14
	277,420	269	.96
	295,226	296	1.00
	313,029	303	.96
	330,834	263	.79
	348,639	275	.78
	366,445	296	.80

TH RATE OF CHILDREN UNDER FIVE YEARS ' AGE PER THOUSAND POPULATION FOR THE YEARS 1905 TO 1917 INCLUSIVE

	Population	Deaths Under Five Years	Death Rate per 1000 Population
	141,681	256	1.80
	154,483	286	1.85
	188,485	398	2.11
	210,488	384	1.82
	222,491	458	2.05
	240,872	452	1.87
	259,615	419	1.61
	277,420	351	1.26
	295,226	428	1.44
	313,029	401	1.24
	330,834	336	1.01
	348,639	362	1.03
	366,445	392	1.06

DEATH RATE OF CHILDREN UNDER ONE YEAR OF AGE PER THOUSAND BIRTHS FOR THE YEARS FROM 1905 TO 1917 INCLUSIVE.

Year	Births	Deaths Under One Year	Deaths per 1000 Births
1905	1,670	198	118
1906	1,971	223	113
1907	2,869	286	99
1908	3,379	288	85
1909	3,752	343	91
1910	4,220	355	84
1911	4,265	298	69
1912	4,397	269	61
1913	4,475	296	66
1914	4,905	303	61
1915	4,953	263	53
1916	4,765	275	57
1917	4,983	296	59

DEATHS FROM DIARRHŒA AND ENTERITIS (Under Two Years) AND DEATH RATE PER 1,000 BIRTHS (Stillbirths Excluded)

Year	Deaths	Births	Deaths per 1000 Births
1907	85	2,869	29.6
1908	73	3,379	21.6
1909	90	3,752	23.9
1910	79	4,220	18.7
1911	55	4,265	12.8
1912	52	4,397	11.8
1913	46	4,475	10.2
1914	28	4,905	5.7
1915	20	4,953	4.0
1916	17	4,765	3.5
1917	22	4,983	4.4

DEATHS FROM DIARRHŒA AND ENTERITIS—UNDER TWO YEARS—BY MONTHS FROM 1905 TO 1917 INCLUSIVE, AND DEATH RATE PER 1,000 BIRTHS.

Year	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Deaths per 1000 Births
1905	3	3	1	2	1	0	21	19	11	0	1	0	37.1
1906	1	1	0	3	5	1	11	24	8	5	1	1	30.9
1907	1	3	0	1	1	0	7	33	30	6	1	2	29.6
1908	2	2	1	3	4	2	4	23	19	6	4	3	21.6
1909	3	1	2	1	1	3	1	17	43	11	3	4	23.9
1910	1	4	5	2	3	1	7	19	20	9	4	4	18.7
1911	0	2	1	1	4	2	0	16	13	4	1	3	12.8
1912	4	1	3	3	3	1	5	10	11	5	3	3	11.8
1913	5	2	6	2	1	6	3	7	9	2	3	0	10.2
1914	2	1	2	1	1	1	4	2	5	2	3	4	5.7
1915	2	0	2	1	2	2	3	2	3	1	1	1	4.0
1916	1	3	4	1	0	2	2	1	0	2	1	0	3.5
1917	3	1	1	0	3	1	1	3	4	2	3	0	4.4

THE CITY OF SEATTLE

RELATION OF TUBERCULOSIS DEATHS TO TOTAL DEATHS FOR THE YEARS FROM 1908 TO 1917

Year	Total Deaths	Tuberculosis Deaths	Per Cent
1908	1,953	218	11.16
1909	2,225	258	11.59
1910	2,462	292	11.86
1911	2,244	301	13.41
1912	2,262	273	12.06
1913	2,472	279	11.28
1914	2,537	269	10.60
1915	2,462	205	8.32
1916	2,443	255	10.43
1917	2,533	278	10.97

THE CITY OF SEATTLE

TUBERCULOSIS DEATH RATE PER 100,000 POPULATION FOR THE YEARS FROM 1908 TO 1917

Year	Total Deaths	No. of Deaths	Rate
1908	210,488	218	103.5
1909	222,491	258	115 9
1910	240,872	292	121 2
1911	259,615	301	115 9
1912	277,420	273	98.4
1913	295,226	279	94.5
1914	313,029	269	85.9
1915	330,834	205	61.9
1916	348,639	255	73 1
1917	365,445	278	75.8

THE CITY OF SEATTLE

BIRTH RATE OF THE CITY OF SEATTLE FOR THE YEARS 1907 TO 1917 INCLUSIVE, BASED UPON THE OFFICIAL ESTIMATED POPULATION BY THE BUREAU OF THE CENSUS AS OF JULY FIRST OF EACH YEAR

Year	Estimated Population	Net Births	Rate per 1000
1907	188,485	2,869	15.22
1908	210,488	3,379	16 05
1909	222,491	3,752	16 86
1910	240,872	4,220	17.51
1911	259,615	4,265	16.42
1912	277,420	4,397	15.84
1913	295,226	4,475	15 15
1914	313,029	4,905	15.66
1915	330,834	4,953	14.97
1916	348,639	4,765	13.66
1917	366,445	4,983	13.56

BIRTHS

1917

Month	Total Births	Male	Female	Stillbirths Male	Stillbirths Female	Net Births Male	Net Births Female	Total Net Births.
January	336	183	153	4	5	179	148	327
February	289	207	183	7	7	200	175	375
March	436	230	206	6	5	224	201	425
April	444	219	225	8	9	211	216	427
May	418	234	184	9	8	225	176	401
June	452	226	226	0	8	217	218	435
July	463	243	220	9	5	234	215	449
August	406	199	7	13	6	186	201	387
September	408	199	209	9	3	190	206	396
October	422	229	193	11	8	218	185	403
November	422	191	231	7	8	184	223	407
December	565	281	284	7	7	274	277	551
Total	5161	641	2520	99	79	2542	2441	4983

MARRIAGES IN THE CITY OF SEATTLE FOR THE YEARS 1905 TO 1917 INCLUSIVE

Month	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917
January	532	560	824	410	178	195	238	256	296	306	70	218	277
February	520	584	624	444	213	228	254	229	224	298	230	213	244
March	612	544	732	416	205	221	245	232	292	267	222	229	317
April	436	704	876	526	240	295	281	345	315	306	287	268	442
May	600	760	932	556	317	294	272	277	298	286	234	250	390
June	940	1176	968	772	422	446	446	422	492	505	432	450	467
July	736	848	554	530	193	309	317	372	352	338	301	352	367
August	696	760	612	606	254	344	344	334	402	339	284	315	389
September	812	992	542	566	319	349	343	329	390	322	306	369	385
October	846	908	552	552	329	347	334	360	383	328	272	262	386
November	704	968	618	568	290	346	354	353	384	335	297	336	437
December	860	1004	642	688	329	326	305	409	438	313	316	374	564
Totals	8294	9708	8476	6634	3289	3700	3733	3918	4266	3944	3251	3735	4665

In regard to the death rate of the City of Seattle I feel that I must again call your attention to the fact that the King County Hospital, located at Georgetown, adds to our deaths a considerable number who, previous to admittance there, were never residents of the city. Besides this, Seattle being the hospital center for the whole Puget Sound country, a considerable percentage of Seattle deaths are of those from surrounding territory coming to the city for either hospital treatment or operations.

BIRTHS

Births recorded for the year were 4,983, exclusive of still-births, the largest ever recorded for the city, exceeding the year 1916 by 218, making the birth rate 13.59 per thousand.

A hopeful sign in regard to the birth rate is found in the fact that our marriages during the year 1917 increased 929, from 3,736 in 1916 to 4,665 in 1917. However, as compared with the year 1906, when we had 9,708 marriages, a great improvement in both marriages and the Birth Rate seems possible.

Respectfully submitted,

(Signed) A. A. BRAYMER,
Deputy Registrar of Vital Statistics.

Division Review and Recommendations by Commissioner of Health

QUARANTINE AND INFECTIOUS DISEASE DIVISION

The war has very seriously handicapped this Division during the past six months. The Chief and several assistants were called into service when the war was declared and this, coupled with the fact that over a third of Seattle's physicians have left for service, necessarily makes additional private work for those who remain at home, and as the physicians in this Division are only part time men it is very evident how difficult a matter it is to get immediate action in suspicious cases as soon as reported for investigation. I therefore urgently recommend that in 1919 sufficient appropriations be allowed (as requested for 1918 but denied) for this Division so that all Medical Assistants can be employed on full time. This is the only way, in my opinion, to properly control communicable diseases in any large city.

The number of contagious disease cases quarantined during the year shows a decrease of 2,753. The fact that many thousands of soldiers and their friends coming from a number of States passed through Seattle during the latter part of the year, made it very difficult to control these diseases, as new foci were continually being discovered from this cause. Although 311 cases were treated at the Isolation Hospital during the past year, yet the accommodations were not sufficient to enable us to accept half of those desiring admittance.

I am pleased to report that funds have been voted and plans made for doubling the capacity of this building, which should be of tremendous assistance in controlling infectious diseases in the future. When space has been available during the year we have accommodated King County, the United

States Public Health Service, and the Naval Training Station by accepting their cases where quarantine at home was impossible. A proper isolation hospital for the control of communicable diseases is one of the very best investments any municipality can make, for it enables the authorities to institute absolute quarantine, which is particularly difficult in hotels, apartment houses, and among those who are either negligent or disbelievers, and persist in subjecting their neighbor's children to contagion.

The proper control of these children's diseases will continue to be difficult and unsatisfactory until such time as the School Board discontinues their present system and reports the absent child to this department for investigation to determine if they are suffering from a communicable disease or not.

TUBERCULOSIS DIVISION

The work of this Division has not been marked by any particular new activity during the past year. We were content to render the greatest possible assistance to those unfortunates coming to our attention, with the limited accommodations at our command.

Firland Sanitorium has been filled to capacity, with a waiting list as usual, which condition I hope to remedy during the coming year by building an out-door pavilion. This increased space will furnish accommodations for all the open, indigent cases and also enable us to accept those in the first stages of tuberculosis, where they cannot afford to remain at a private sanitarium, and should thereby be of tremendous assistance in controlling tuberculosis.

Considerable difficulty was experienced during the summer months when our well caved in, thus necessitating the drilling of a new one. This new well has been drilled to a depth of 540 feet where water in sufficient amount to supply the present institution was obtained. However, Cedar River water, piped from the city limits, is necessary to safeguard this institution, for wells are never dependable, especially in case of fire.

The addition of 1,500 chickens to the farm should not only show a saving but will give the very sick patient an egg which he can eat and relish, which is quite necessary in the treatment of this disease. A very complete report showing the work accomplished in our tuberculosis division will be found in this report.

The results I believe are very commendable, considering the fact that none but positive or open cases in the last stages of the disease were accepted at the Sanatorium. The Clinics, combined with the Visiting Service, though not as spectacular, yet are deserving of as much credit, if not more, than the Sanatorium end. Here the diagnosis is made and advice given regarding the protection of others, and the visiting nurses then proceed to follow up these cases to see that instructions are carried out, lending whatever nursing care is urgent.

Dr. Robert M. Stith, Chief of this Division, resigned on July 31, 1917, to enter the service of the War Department, since which time I have been forced to assume the details of the entire Tubercular Division.

CITY HOSPITAL

The City Emergency Hospital continues to hold a very important position in regard to furnishing emergency medical and surgical aid for the maimed and injured, and with the tremendous amount of manufacturing and shipbuilding purposed and under way its usefulness will be even more apparent the coming year. The addition of an ambulance has very materially added to the efficiency of this institution. This service should certainly be continued and an appropriation for another machine allowed in the 1919 budget.

The removal of our main office to the third floor of the Public Safety Building has increased the capacity of our hospital by 30 beds, a much needed addition. It has also enabled us to remove the entire outdoor Clinic from the hospital floor to quarters provided for them on the third floor. This will not only give us sufficient quarters in which to

care of these indigent and tubercular patients but will ve the hospital of a very serious menace.

Both our Medical Supervisor and Supervisor of Nurses for war service early in the summer. Fortunately, I been able to fill these positions so that the high standard anded in these positions has been maintained. It has impossible ot secure the necessary Internes and as a t we have been forced to get along with one where e are needed. Our Training School has been developed we now have our full quota of nurses. The building of w City and County Hospital under City control, as ed in our last two Annual Reports, is an urgent neces- and should be undertaken whenever finances will permit. During the past nine months 58 men, unable to pass the ical examination for war service or pay for surgical assist- to correct these defects, were operated upon in our Hospital and were physically fitted for service in the and navy. Many of these were British, French or dian subjects, but as we are all allies no distinction was , and these boys are now in training for service at ront.

Furthermore, much assistance has been rendered physi- and members of sanitary corps who have recently joined rmy and navy by allowing them the privilege of visiting City Hospital during operations, together with what mation could be obtained from X-Ray, Laboratory, and ious diseases at the Isolation Hospital.

DENTENTION HOSPITAL

On November 9th your order to have all disorderly ns arrested by the Police and immediately turned over is Department for medical examination to determine her or not they were affected with any venereal diseases, ut into effect. The necessary amendments to strengthen hen existing ordinance were duly passed by the City cil, and I am pleased to report that not a single person een ordered released by either our Superior, Federal or

State Courts, although a number of attempts were made by the legal fraternity to secure their freedom.

We have examined to date, 169 women and found 132 suffering from veneral diseases. These are being housed and treated on the second floor of the Public Safety Building adjacent to our City Hospital, thus making it especially convenient for treatment and also reducing to a minimum the overhead expense, by having all cooking and administrative work done by the present hospital facilities and personnel.

On December 3, 1917, the order to bring in all disorderly men and have them examined was put into effect. These men are being kept in the City Stockade under Police supervision, medical attention being given by the same staff of specialists who treat the women, with male nurses in constant attendance.

The care of these interned women is entirely under the supervision and control of the Health Department, being held in quarantine as having contagious or infectious diseases. Specialists and trained nurses administer to their wants and they are segregated according to the nature of disease and character of patient.

Sewing for the hospital and the preperation of Red Cross bandages is given them to do as a means of keeping them occupied in a beneficial manner. These articles can be perfectly sterilized in our large sterilizer at Firland and made absolutely safe for use.

Although innumerable ideas have been advanced and some States have taken steps to control these diseases, yet I believe this method instituted in Seattle of forcible detention without parole until they are entirely cured, or safe to be released, is a pioneer movement in this country.

The presence of thousands of soldiers in training camps in and near Seattle created a sentiment throughout the community in favor of strict regulation of venereal disease and clearly demonstrated to our citizens the absolute necessity and wisdom of adopting and enforcing more rigid regulations

along the line of venereal prophylaxis than could possibly have been carried through in a century in time of peace.

In addition to the isolation feature of this system it is forcing many who are suspicious of themselves to consult physicians for tests and treatments if found necessary, fearing detention by us for months if arrested.

Some follow-up movement should be organized whereby those who have no relatives to direct and control them when released, can be so assisted that they may become useful citizens and not repeaters. I think the Federal Government should come to our assistance and detain this certain class after release by us, at least during the period of the war, entirely as a war measure, and thus lessen the financial burden of municipalities located close to cantonments. This additional detention would afford an opportunity for them to be taught useful trades and would also result in the curing of many of those addicted to drugs.

The old method of arresting and imposing a nominal fine, and driving them from pillar to post, was most reprehensible and should be abolished as a disgraceful practice and a failure. Further regulations are under way whereby venereal diseases will be made reportable by physicians during the coming year. I believe the groundwork is laid which, if carried out, affords us an opportunity to accomplish much with this heretofore difficult health problem.

DAIRY AND FOOD DIVISION

Early in the year the milk and meat divisions were combined under one head and thus far the change has worked out very satisfactorily. It prevents duplication of visits and tends to broaden the inspector's experience, increasing his efficiency and making him more valuable to the department.

The milk supply has been maintained at its previous high standard. The sanitary conditions under which milk is produced have been very materially improved. even under the trying circumstances brought about by the condensaries offering unheard-of prices for milk. As no sanitary

regulations are required of the farmer producing milk for the condensary, but very rigid ones demanded of those producing milk for consumption in the City of Seattle, naturally the difficulties connected with milk inspection are increased. A supply must be found to meet the demand and under such circumstances pressure is always brought to bear that if recognized would soon lower the standard. The standard, however, has been maintained, and the distributor has found ways and means to comply with the ordinance.

Considerable improvement in the quality of pasteurized milk has been accomplished by the building of five new plants during the past year. These have installed complete up-to-date equipment and some have added laboratories with trained workers in charge, which must of course improve the city milk supply.

The building of a municipal abattoir, recommended in my two previous annual reports, is becoming more necessary every year and undoubtedly will be requested by the War Department in the near future as a protection to food supplies furnished to soldiers in the cantonment zones. While the three large slaughter houses under absolute inspection furnish the bulk of meat consumed in Seattle, yet there is the ever present unscrupulous dealer who takes advantage of ante mortem inspection to market a certain class of meat from animals unfit for human consumption. A municipal slaughter house would remedy this condition.

SANITATION DIVISION

The results accomplished with regard to the installation of sewers has fallen below the standard of former years. A number of sewers serving large districts were postponed by the City Council until next year, for economical reasons. These should be ordered installed at the earliest possible moment as they are necessary, and an extremely urgent health measure for the protection of the home owner in these particular districts.

The purity of our water supply has been maintained at

its usual high standard. A new ordinance passed by the City Council during the year will enable us to further protect this purity. The removal of the entire town of Cedar Falls to a location outside the watershed will be consummated early in the year 1918, thus eliminating a menace which has received our most earnest efforts for the past year and a half. When this is completed the last permanent danger of pollution to our water supply will have been removed, after which proper patrol and inspection will be sufficient to give us the required protection.

The large influx of mechanics to Seattle to work in our shipbuilding plants and other industries, has necessitated our devoting some time and energy towards the matter of proper ventilation and living conditions both in the plants and in their living quarters. The management in these industries have shown splendid co-operation as regards conditions in the restaurants—proper plumbing, sufficient light, and other requirements, realizing that unhealthy employees cannot possibly build the necessary number of ships to win the war. It is unfortunate that it should become necessary to have a war in order to make Capital realize, from an economical standpoint, that a sick employee is a liability instead of an asset. It would appear that the prevention of disease is at least coming into its own and that every dollar properly expended in this cause brings in returns ten-fold.

I submit herewith the following detailed reports covering the work of each branch of this Department for your consideration.

Respectfully submitted,

(Signed) J. S. McBRIDE, M. D.,
Commissioner of Health.

Seattle, December 31, 1917.

Dr. J. S. McBride,
Commissioner of Health,
Seattle, Washington.

Dear Sir:

Permit me herewith to submit a report of the Contagious Disease Division of the Department of Health and Sanitation for the year 1917. This report is written in conjunction with Dr. H. E. Coe, who was Chief of the Division until called to service in the navy on April 3, 1917, at which time you promoted me to the position of Chief of the Division.

The incidence of contagious diseases in the City of Seattle during 1917 has shown a decrease in comparison with preceding years excepting in the case of German Measles, which was rarely found in the city previous to the summer of this year, but which during the last few weeks of the year assumed almost the nature of an epidemic in some of the grade schools.

None of the cases of German Measles is known to have had serious consequences, and in fact the disease in practically all cases was so mild and the rash so transitory, that there has frequently been some difficulty in persuading parents and patients of the need of following out the regulations of quarantine provided by the State law. Like Measles, German Measles has proven difficult to control, owing to the fact that contagiousness precedes the rash.

A number of cases of German Measles in a nearby cantonment has probably been one cause of the presence of this disease in our city.

The occurrence during the year of two cases of diphtheria diagnosed a few hours before death, or post mortem, calls attention to the need of early medical care in cases of severe sore throat, and the urgent need of administration of large doses of antitoxin in suspicious cases without waiting for a

culture report. It would be well, likewise, in this connection to urge upon physicians the futility of absolute reliance on one negative culture in a suspected case, and the perfect propriety of instantly reporting a case which is clinically diphtheria, without consuming the time necessary for growing one or two or sometimes three throat cultures.

Typhoid Fever shows a marked diminution over the years prior to 1914 and, while not as low as in 1915 and 1916, is a very creditable showing, considering the fact that when it occurs in our city it can practically always be traced to an origin outside the city. We must also bear in mind that thousands of artisans with their families have moved to Seattle during the past eighteen months from inland States where typhoid is prevalent.

By putting in the hands of one doctor the investigation of all typhoid cases, the more careful tracing of the source of this disease has been accomplished.

The occurrence of a few cases of smallpox in the city during the last few weeks of the year has led to an effort to discover the source of the same but this has not been found, and we are left with the presumption that some one suffering from a very mild attack of the disease has been at large without quarantine and probably without diagnosis.

In each case where a school child has been found suffering from smallpox the school attended by such child has been fumigated and all contacts have been vaccinated, and in case of refusal, have been quarantined for two weeks. As in preceding years, all cases of smallpox in Seattle have been promptly moved to the Isolation Hospital.

In certain districts when necessary the section of the city in question was canvassed from door to door. In this work the Health Department received the hearty co-operation of the School Medical Department. There was no case of severe smallpox in the city this year.

It would seem highly desirable that measures be adopted by School Board whereby all school children should be vac-

cinated. It would be highly commendable likewise if corporations employing large numbers should see their way to insist on vaccination of employees.

The occurrence of a few isolated cases of Anterior Poliomyelitis (20 cases in all in 1917, 16 of them in the last three months of the year) calls to our attention the need of constantly keeping on the lookout for this condition. All these cases, save two, were treated at the Isolation Hospital and quarantined six weeks. Contacts were isolated for two weeks.

Your securing from Dr. Rosenau a generous supply of his serum for the treatment of this disease has given us our first ray of hope for an accurate treatment. The few cases in which serum was used, however, were not diagnosed until paralysis had developed and the results obtained, while very satisfactory, were not a fair test of the efficacy of the treatment. In case of an epidemic where early symptoms would create a strong suspicion of the presence of the disease and the routine examination of the spinal fluid could be made, great progress in treatment would doubtless be noticed. These cases would have to be placed in the hands of an expert.

The meetings of the Medical Inspectors have this year been held only on call, and the scientific programs of former years have not been carried out because of the stress of work which the Medical Inspectors have been carrying, both in private practice and in the Health Department.

The Isolation Hospital at Firland has offered the best means of keeping down the incidence of communicable diseases. A tabulated report of the cases treated there is appended to this report.

The removal to this hospital of all cases of smallpox and Anterior Poliomyelitis, as well as all the other cases of major infectious diseases which could not be properly quarantined in their private quarters, has been a large factor not only in the assurance of proper treatment but in stopping the spread of infections, and the promised enlargement of the Isolation Hospital will make it a still greater benefit in the

control of infectious diseases and be an ultimate saving to tax-payers and a physical uplift to the community.

In reviewing the year's work too much praise cannot be given for the faithfulness of the doctors in the community who serve as Medical Inspectors for the Contagious Disease Division. These men have served as outpost defenders of the health of the city.

The Bacteriological Laboratory has suffered a great loss in the resignation of Dr. A. U. Simpson, who was called to the Army on July 31st, 1917. His organization of the Laboratory, and systemizing of the work has been of great help to his successor in charge. The work of the laboratory has increased and its usefulness in the diagnosis and prevention of disease has continued to grow. The isolation in the City Hospital of women infected with venereal diseases has been an arrangement very fortunate for the health of Seattle, and the physical welfare or soldiers, sailors, and shipyard employees in and near Seattle, as well as our private citizens. This, however, has greatly increased the work, not only of the hospital attendants but also of the laboratory, whose report will show you the volume of examinations made in the last twelve months.

The removal of the executive office, clerks, and laboratories to new quarters, and the concentration in the same building and on the same floor of all the Divisions of the Health Department, has greatly simplied the workings of the Contagious Disease Division.

In closing permit me to pay a tribute to the cheerful faithfulness of the clerical officers who have without stint and complaint devoted themselves to the numerous tasks set before them. Let me likewise express my deep appreciation of your hearty and wise counsel during the year just passed.

Respectfully submitted,

(Signed) Walter C. Lippincott, M. D.,
Chief of Quarantine Division.

TABLE SHOWING THE NUMBER OF NEW CASES OF EACH DISEASE QUARANTINED DURING THE YEAR 1917.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Smallpox	6	3	1	0	2	3	7	6	3	1	0	12	44
Scarlet fever	35	24	23	20	15	26	8	16	24	35	34	25	285
Diphtheria	3	3	4	1	2	9	1	11	11	25	30	13	113
Chickenpox	130	169	242	242	191	99	44	20	10	42	107	116	1412
Whooping cough	171	147	161	154	216	100	73	34	16	17	8	5	1102
Mumps	7	20	25	27	55	24	21	3	9	12	21	27	251
Measles	572	796	660	567	253	64	29	10	5	10	15	91	3072
Typhoid fever	7	3	1	2	2	8	5	16	15	16	12	8	95
Erysipelas	2	5	2	2	6	1	3	0	1	0	4	5	31
Meningitis	0	0	0	0	0	0	0	0	0	0	2	0	2
Diphtheria carrier	0	0	0	0	0	2	0	0	0	0	7	0	9
German measles	0	0	0	0	0	14	3	3	4	3	21	92	140
Infantile paralysis	0	1	0	0	0	0	2	1	0	6	5	5	20
	983	1171	1119	1015	742	350	196	120	98	167	266	399	6576

TABULATION OF CASES, CONTACTS AND SUSPECTS CARED FOR AT ISOLATION HOSPITAL WITH NUMBER OF PARENTS

1917

No. of Patients	Disease	Total Days Care	Average Days Care
1	German measles	2	2.0
1	Spinal meningitis	15	15.0
14	Infantile paralysis	349	24.9
4	Whooping cough	112	4.0
6	Mumps	81	13.5
8	Chicken pox	122	15.3
37	Diphtheria	920	24.9
42	Smallpox	446	10.6
12	Erysipelas	104	8.8
9	Measles	2301	24.7
93	Scarlet fever	1976	21.2
311		6428	20.6
Parents	On Account of Critical Condition of Children with		
1	Smallpox	4	4.0
3	Infantile paralysis	55	18.3
1	Diphtheria	1	1.0
316	Total cared for	6480	20.6

FUMIGATIONS
1917

	Fumigation for Smallpox—Private	Smallpox Isolation Hospital	Scarlet fever	Diphtheria	Whooping Cough	Measles	Erysipelas	Meningitis	Tuberculosis	Infantile Paralysis	Special	Total Number of Houses Fumigated	Total Number of Rooms Fumigated
January	0	0	34	1	1	0	0	0	58	0	1	95	379
February	0	5	29	3	0	0	0	0	46	2	0	85	354
March	0	1	47	1	0	1	0	0	50	0	3	103	310
April	0	0	26	3	0	0	0	0	68	0	4	101	467
May	3	5	41	2	0	0	1	0	0	0	0	47	161
June	0	3	33	6	0	0	0	0	59	0	3	103	363
July	0	6	29	6	0	0	0	0	58	9	3	108	489
August	0	2	24	11	0	0	0	0	0	0	3	44	194
September	0	0	29	1	0	0	0	0	0	0	3	35	103
October	0	0	27	0	0	0	0	0	71	10	5	113	487
November	0	0	61	31	0	0	0	0	42	3	5	149	429
December	0	8	50	24	0	0	0	1	35	3	1	122	580
Totals	3	30	430	89	1	1	1	1	487	34	28	1105	4316

Seattle, December 31, 1917.

Dr. J. S. McBride, M. D.,
Commissioner of Health,
City.

Dear Sir:—

I submit you herewith a tabulated report of the work of the Bacteriological Laboratory for the year 1917.

Respectfully yours,

O. J. West, M. D.,
Bacteriologist.

TABULATED REPORT OF THE BACTERIOLOGICAL LABORATORY
1917

Examinations	Jan.	Feb.	Mch.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Throat cultures, diphtheria	578	461	613	379	487	426	405	494	678	1075	1276	716	7588
Diphtheria, positive	4	8	29	4	10	36	28	20	35	58	89	70	391
Widals for typhoid	376	350	331	302	298	315	277	394	449	609	492	496	4689
Widal, positive	7	3	4	2	4	10	7	18	10	16	9	8	98
Sputum for tuberculosis	296	274	308	343	302	206	191	185	204	167	257	186	2919
Sputum, positive	64	71	68	54	78	63	45	49	58	43	61	33	687
Wassermann for syphilis	286	257	277	219	236	260	205	201	195	161	278	325	2900
Wassermann, positive	80	73	69	60	64	74	51	74	60	47	128	105	885
Cedar River water samples	10	8	11	20	29	24	34	20	8	23	14	13	214
Water samples from wells, springs, etc., both inside and outside of city	36	25	11	20	131	180	164	141	133	104	62	8	1015
Water samples with bacilli	9	6	1	9	50	65	63	15	37	36	18	3	312
Miscellaneous examinations and tests	48	77	47	103	71	23	43	50	85	71	233	333	1184
Bacteria Count													
Market milk for bacteria	235	292	323	247	300	280	175	168	209	234	166	178	2797
Bacteria over 200,000	10	15	21	22	26	45	23	18	30	5	30	17	262
Market cream for bacteria	3	0	70	5	0	1	0	0	0	2	6	0	87
Bacteria over 500,000	1	0	7	1	0	0	0	0	0	0	1	0	10
Certified milk for bacteria	20	5	31	30	17	17	22	15	20	10	21	15	223
Bacteria over 10,000	0	0	3	7	0	2	4	0	0	1	1	0	18
Total examinations and tests	2063	1925	2224	1827	2103	2027	1737	1852	2211	2662	3142	2506	26279
Dogs with clinical rabies	5	3	5	3	2	0	0	1	0	0	2	0	21
Dogs with rabies, laboratory test	2	2	2	2	2	0	0	0	0	0	2	0	12
Persons bitten by dogs	5	0	5	7	6	0	4	1	2	1	7	1	39
Persons bitten by rabid dogs	3	0	4	2	2	0	0	0	0	0	0	0	18
Persons given anti-rabid treatment	2	0	1	1	1	0	0	0	0	0	0	0	5

December 31, 1917.

Dr. J. S. McBride,
Commissioner of Health,
Seattle, Washington.

Dear Sir:—

Permit me herewith to present to you a report of the work done in the Child Welfare Division of the Department of Health and Sanitation for the year ending December 31, 1917.

The work this year has continued along the same line as last year with a few minor alterations in detail.

During the days set apart through the United States by the National Children's Bureau as Baby Week, the Child Welfare Division participated in an exhibit which attracted considerable interest. This exhibition was housed free of rental charge in the Assembly Room of The Bon Marche Department Store, the latter rendering very valuable assistance in the matter of decorations and other details which deserve our hearty thanks. The exhibit was held May 1st to 4th inclusive and was conducted in conjunction with the various women's organizations of the city whose activities along these lines are so well known. Addresses were made by members of the Health Department and Doctors outside of the Department. Booths were arranged by the Milk Division, illustrating milk and dairies, by the Sanitation Division, by the Laboratory, and by the Child Welfare Division. Booths were also arranged by the Public Library of the City, the Home Economic Department of the University of Washington, the Mother's Training School, the Parent-Teachers Association and the State Board of Health. All of the booths and exhibits pertained explicitly to the care and treatment of babies and small children. The exhibit seemed to excite a wholesome interest in the subject and was well attended.

The work in the Children's Boarding Homes of the City was caried out along the same lines as last year. On the

whole, there has been a general raising of the standards of these homes, an improvement in their hygiene, and a bettering of the condition of the child boarders. The matrons of the homes have in almost all instances felt it a privilege to counsel with the nurses and Doctors of the Division and have been ready to follow the suggestions made to them.

During the course of the year 13 homes have voluntarily discontinued to board children: 2 homes have had their permits revoked, and 22 new permits have been issued. Starting therefore with 141 registered homes at the beginning of the year, we find the number at the close of the year is 148.

At the commencement of the year, those homes contained a total of 670 children and at the end of the year there is a total of 832 child boarders in the city.

The policy of giving each of these child boarders a physical examination during the course of the year with a notation of mental or physical defects has been continued. All such defects were called to the attention of the parents or guardians, through the matron or landlady; the correction, where possible, was urged. Our records fail to show us how many of these little ones received the benefit of corrective treatment; but in the homes which kept a record of these cases we gain information which leads us to believe that a very considerable percentage of the cases wherein the need of some definite treatment was pointd out received the benefit of such treatment.

The baby clinics held during the year showed if anything a slight decrease in attendance; but were of real service to the community. During the year three clinics a week were held in the quarters of the city hospital. They were attended by physicians who more or less specialize in pediatrics and who volunteered their services. These clinics were attended to a large extent by children and infants whose parents could not afford private medical care and where medical care was needed.

In addition to these three clinics this Division of the Department held four outside clinics each week—one in Ballard, one at the University Public Library, one at the Jewish Settlement and one at the Deaconess Settlement in Rainier Valley. All these were attended by the Doctors employed in the Child Welfare Division except that the clinic in the Jewish Settlement in December was turned over to a physician in private practice who volunteered his services for this work.

All seven of the clinics were regularly attended by the Nurses employed in the Child Welfare Division.

The clinics in the out-lying districts, particularly the ones at Ballard and the University, were distinctly diagnostic clinics; and all seven of the clinics were conducted on this basis just as far as was permitted by the financial conditions of the parents bringing their little ones. These outside clinics in no case have equipment for treatment; but do have equipment for diagnosis. In each case where a physical defect was found the patient was referred to the family physican for surgical or medical treatment and we have definite knowledge that, in a large percentage of the cases thus referred, the treatments indicated were instituted. In cases where investigation showed that the parents or guardians were unable to finance such treatments the nurse made arrangements for free treatment in the City Hospital or some one of the other hospitals of the city.

In this work the Children's Orthopedic Hospital never failed to respond to our call for aid and that institution deserves to have more than a passing word of commendation for its ready willingness to render aid through its medical staff and its well appointed quarters.

During the course of the year the following number of cases passed through the various baby clinics:

Central Clinics at Health Department	736
Ballard Clinic	61
University Clinic	104
Jewish Settlement Clinic	48
Deaconess Settlement Clinic	250
Total	1199

It seems certain that if the public were better informed regarding the existence and purpose of these clinics a wider field of usefulness for the improvement of the health of Seattle's children could be opened up for rich and poor alike.

During the year the nurses have visited all cases of birth whose certificates were not signed by a physician, excepting those cases attended by Japanese Mid-wives where the difficulty of a foreign language made usefulness practically impossible. Reference to the files show that a very small percentage of births are attended by mid-wives in Seattle.

It is very fortunate that under an act of the last legislature the practice of midwifery in the State of Washington is now regulated in such a manner as to prevent any one in the future from entering the practice of this profession without satisfactory credentials and an examination in the fundamentals of the subject.

While the act is not retro-active, it does make it illegal for any midwife to care for the complications of confinement and the puerperium.

Especially fortunate are the provisions regarding opthalmia in the new-born. It is hoped that the provisions of this law may be scrupulously observed and that the officers holding the authority may unswervingly carry out the penalties provided for.

It would appear that in Seattle in the near future we may be compelled to establish prenatal clinics supplemented by hospital obstetrical care and here again we would have to be very zealous in guarding against the bane of some of our sister cities in the East—Medical pauperization of the working classes.

The other lines of activity of the Child Welfare Division are so varied as to defy classification. They consist in the following up of cases in conjunction with the Juvenile Court, the Medical Department of the Public Schools, the Police Department, the Charity Organization Society and other welfare organizations.

It has been urged by the National Children's Bureau that in this time of war especial efforts must be put forth to advance the welfare of the child life of the nation. The vital statistics of our city pertaining to children (given in another section of this volume) show a steady general improvement in the physical condition of Seattle's children. It is hoped that during the coming year, in spite of adverse conditions, the birth rate may not show a decrease, and that the death rate of children may continue in its downward direction. The efforts in this direction by the Milk Division, the Contagious Division, the Tuberculosis Division, the Sanitation Division and the Child Welfare Division can not help having a most gratifying effect on the babies and children of the city and thus in a most unnoticeable but also in a most effectual manner tend to create a marked and permanent improvement in the physical condition of our future citizenship.

Permit me to thank you for the large part you have played in an advisory capacity in accomplishing a year's work which cannot be reviewed with anything but satisfaction.

Respectfully submitted,

(Signed) Walter C. Lippincott, M. D.,
In Charge Child Welfare Division.

Statistical Report of the Tuberculosis Division of the Health Department

Includes the Report of the Tuberculosis Clinics, Visiting Nurse Work, Firland Sanatorium, and Examinations for Health Certificates.

J. S. McBride, M. D.
Commissioner of Health,
Superintendent.

TABULATION OF CASES OF TUBERCULOSIS FOR 1915, 1916 AND 1917.

	1915	1916	1917
Total number of new cases recorded	648	656	629
Number of males	396	409	414
Number of females	252	247	215
	648	656	629
CONJUGAL STATE:			
Number of cases, single	349	315	246
Number of cases, married	227	254	298
Number of cases, widowed	26	17	20
Number of cases, separated	12	20	17
Number of cases, marital state unknown	34	50	48
	648	656	629
REPORTED BY:			
Physicians	344	342	328
Death certificates	83	92	115
Primary cause			
Secondary cause			
Visiting nurses	15	9	18
Charity Organization Society	6	2	4
City medical dispensary	59	40	30
Family	16	13	21
Friends	31	32	23
Self	22	24	19
Hospitals	18	33	27
Sanatoria	17	19	12
Other	13	18	24
Health certificate clinic	5	10	5
Jitney drivers' examinations	1	0	0
Anti-Tuberculosis League	18	19	3
	646	656	629
KINDS OF TUBERCULOSIS:			
Pulmonary	565	564	535
Glandular	11	13	13
Meningeal	35	33	42
Peritoneal	12	16	15
Acute miliary	4	6	10
Bone	4	12	6
Other	17	12	8
	648	656	629
DISEASE BY AGE PERIODS:			
0 to 5 years	34	26	33
5 to 10 years	12	17	19
10 to 20 years	43	62	50
20 to 30 years	211	193	163
30 to 40 years	174	166	151
40 to 50 years	71	74	87
Over 50 years	64	73	70
Unknown	39	45	56
	648	656	629
NATIVITY:			
Native born	347	341	328
Foreign born	232	226	197
Unknown	69	89	104
	648	656	629
EXPOSURE:			
Domestic	124	111	70
Extra domestic	15	14	12
Unknown	509	531	347
	648	656	629

	1915	1916	1917
RACE:			
White	560	582	559
Black	19	14	17
Yellow	56	54	46
Red	1	3	1
Brown	4	0	4
Unknown	8	3	2
	648	656	629
HOUSING:			
Poor	151	175	118
Good	324	278	292
Unknown	173	203	219
	648	656	629

Tuberculosis cases recorded during the year 1917 700

Of these 53 were old cases returned to City.
18 were cases moving from King County to the City.
629 were new cases.
700

Tuberculosis cases on record December 31, 1916 629

Total number of cases on record during 1917 1329

Deaths from tuberculosis in City during 1917	278	
Deaths from tuberculosis as contributary cause	5	
Deaths of tuberculosis cases from other cause	8	
Cases of tuberculosis leaving city during 1917 (Includes those sent to sanitoria in King County)	251	
Cases tuberculosis moving from city to points in King County	17	
Cases tuberculosis whose addresses were lost	45	
Cases diagnosed as tuberculosis with later change of diagnosis	8	
Total removed from record during 1917		612
Cases of tuberculosis on record December 31, 1917		717

Cases of Tuberculosis on record December 31, 1917, first recorded—

	1916	1917
1909	1	2
1910	4	4
1911	7	6
1912	14	12
1913	38	36
1914	104	86
1915	195	146
1916	266	167
1917	0	258
	629	717

DEATHS FROM TUBERCULOSIS IN SEATTLE FOR 1917, BY AGES AND CLASSIFICATION.

	0-5	5-10	10-20	20-30	30-40	40-50	50-60	Over 60	Unknown
Pulmonary	0	1	10	48	59	29	27	20	1
Acute miliary	2	0	0	1	3	3	1	0	0
Meningeal	25	6	6	5	3	3	1	0	0
Abdominal	1	0	2	3	2	1	2	1	0
Pott's disease	0	0	0	1	1	2	2	0	0
White swelling	0	0	0	0	0	0	0	0	0
T. B. other organs	1	0	2	0	1	1	0	1	0
Disseminated	0	0	0	0	0	0	0	0	0
Total	29	7	20	58	69	39	33	22	1

Cases of tuberculosis not reported until receipt of death certificate		110
Cases of tuberculosis reported previous to receipt of death certificate		168
Total deaths from tuberculosis for the year 1917		278
Deaths from tuberculosis classified by sex:		
Males	183	
Females	95	
		278

TUBERCULOSIS DISPENSARY WORK FOR 1917.

	1914	1915	1916	1917
Total number of cases examined	559	792	668	619
Total number found tuberculosis	144	227	201	180
Total number found non-tubercular	415	470	346	321
Total number not diagnosed	0	95	121	118
Contact cases examined:				
Found non-tuberculous	0	321	155	211
Found tuberculous	0	0	5	3
Children examined at dispensary	0	230	175	218
Found tuberculous	0	13	15	16
Cases requiring removal of tonsils and adenoids	0	32	35	57
Known to have had operation as advised	0	20	13	26

CLASSIFICATION OF TUBERCULOSIS CASES FOUND IN CHILDREN.

	1915	1916	1917
Pulmonary	7	4	7
Peritoneal	1	0	1
Glandular	2	7	5
Eye	2	1	0
Psoas abscess	0	1	0
Bone and joint	1	2	2
T. B. abscesses	0	0	1

PULMONARY TUBERCULOSIS IN CHILDREN CLASSIFIED AS TO STAGES.

	Boys			Girls		
Stage	1915	1916	1917	1915	1916	1917
I	4	0	3	2	0	1
II	0	1	0	5	1	3
III	0	1	0	0	1	0

CLASSIFICATION CASES TUBERCULOSIS (NON-PULMONARY) IN ADULTS ATTENDING THE DISPENSARY 1915, 1916 AND 1917.

	1915	1916	1917
Peritoneal	1	1	0
Glandular	6	2	1
Eye	1	0	0
Skin	1	1	0
Kidney	1	1	0
Bone and joint	1	2	1

CASES OF TUBERCULOSIS UNDER OBSERVATION BY THE VISITING NURSES, DECEMBER 31, 1917.

Number of positive cases (bacilli in sputum) under supervision		559
Number of suspicious cases		88
		647
Number of positive cases able to work	267	
Number of positive cases able to work (part time)	103	
Number of positive cases unable to work	97	
Number of positive cases confined to bed	34	
Number of positive cases in hospitals or sanitoria	15	
Number of positive cases whose physical condition is unknown	43	
		559
Supervised cases who object to nurses visiting		14
Number who have had sanitorium treatment		127
Number receiving charitable aid		

RECORDS OF VISITS MADE BY NURSES.

	1915	1916	1917
Number of first visits made to patients	787	714	529
Number of subsequent visits to patients	6243	5594	5888
Number of reference visits	500	558	794
Number of visits for fumigation	244	245	262
Number of visits to physicians	0	311	328
		Days	Days
Time off duty for illness, all nurses		22	8½
Time on duty in contagious department		62½	21½
Time in which nurses were not relieved for vacations		0	42
			72
Average visits per day after deducting time lost		24	21
Average visits per nurse, after deducting time lost		8	7

RECORD OF FUMIGATIONS.

	1914	1915	1916	1917
Total number of houses fumigated (Tuberculosis)	416	659	691	624
Total number of rooms fumigated (Tuberculosis)	1540	2544	2872	2431
Total number of extra fumigations of houses due to patients moving	0	301	183	137

LABORATORY WORK IN RELATION TO TUBERCULOSIS.

	1915	1916	1917
Total number specimens sputum examined	3266	3475	2919
Number found positive	610	721	689
Number found negative	2656	2754	2230

REPORT OF TUBERCULOSIS VISITING NURSE OF KING COUNTY.

Tuberculosis cases recorded during the year 1917		116
Of these		
19 were old cases returned to the county.		
97 were new cases.		
116		
Tuberculosis cases on record December 31, 1916		84
Total number of cases on record during 1917		200
Deaths from tuberculosis during the year	28	
Cases of tuberculosis leaving county	42	
(Eighteen of these transferred to City V. N.)		
Number of cases sent to Firland by County V. N.	16	
Number of cases released to County Hospital	3	
Number of cases released by change of diagnosis	2	
Total removed from record during 1917		91
Cases of tuberculosis on record December 31, 1917		109

	1916	1917
Total number positive cases on record	171	200
Total number released	87	91
Total number under observation end of year	84	109

SUSPICIOUS CASES UNDER OBSERVATION.

Number of cases January 1, 1917		62
Number of cases added during year		87
		149
Discharged:		
Non-tuberculous	54	
Left county	2	
Moved to city	4	
Diagnosed tuberculosis	16	
Total discharged cases		76
Number suspicious cases December 31, 1917		73

	1916	1917
Total number suspicious on record	134	149
Number suspicious cases released	72	76
Number suspicious cases on record at the end of the year	62	73
Total positive and suspicious cases under observation December 31, 1917		192

TUBERCULOSIS CASES ADMITTED TO HOSPITALS.

Firland Sanatorium	22
Of these	
16 were admitted by County Visiting Nurse.	
6 through City Tuberculosis Dispensary.	
Pulmonary Hospital, Riverton	2
King County Hospital	3
Total	27
Classification tuberculosis deaths in King County:	
Pulmonary	24
Abdominal	2
Meningeal	2
Total	28

	1916	1917
County patients examined at City Tuberculosis Dispensary	176	201
Cases referred to County Hospital, treatment for eczema	0	1
Cases referred to County Hospital for confinement	0	1
Children who were advised to have tonsils and adnoids removed	11	8
Known to have had operation performed	9	4
Total number of visits during year	1083	1245

EXAMINATIONS FOR HEALTH CERTIFICATES.

	Male			Female		
	1915	1916	1917	1915	1916	1917
White	1689	1495	1480	1615	1677	1941
Black	46	35	45	16	2	6
Yellow	345	235	201	47	17	14
Red	1	0	0	0	0	0
Brown	0	0	4	0	0	0
Total number examined for health certificates				3761	3461	3692
Those examined had the following employment:						
Waiters	349	350	405	611	520	701
Cooks	432	368	317	142	126	78
Helpers	472	326	270	75	31	74
Candy makers	103	114	106	294	294	143
Candy packers	0	0	15	0	0	350
Shrimp pickers	0	1	2	85	20	13
Nut packers	1	1	14	8	42	69
Bakers	222	169	170	71	65	41
Dairy workers	74	5	14	8	0	3
Dispensers	0	0	43	0	0	45
Others	429	430	374	384	598	445
Defects found on physical examination not requiring rejection:						
Heart lesions	15	17	2	16	10	3
Goitre	9	12	1	189	355	350
Enlarged tonsils	19	35	26	59	118	99
Skin eruptions (non-contagious)	25	28	23	66	109	87
Enlarged glands	0	0	22	0	0	26
Refused certificates because of:						
Tuberculosis	3	1	3	1	2	2
Gonorrhoea	2	2	2	0	0	0
Syphilis	3	4	9	0	0	5

Examination for health certificates for automobile drivers (Ordinance No. 34159):

Number examined	1874	338	205	16	4	13
Refused certificate on account of physical defects				35	2	0
Total number of examinations made in this department						4529

FIRLAND SANATORIUM

J. S. McBride, M. D., Commissioner of Health, Superintendent.
John E. Nelson, M. D., Resident Physician.
Dr. Frank H. Pratt, In Charge of Dental Work.
Edna L. Robinson, R. N., Sup't. of Nursing.
Ester E. Bakenhus, R. N., Assistant.
Visiting Medical Staff—Tuberculosis Division.
W. S. Griswold, M. D.
Mabel Seagrave, M. D.
Howard J. Knott, M. D.
Medical Visiting Staff—Isolation Hospital.
Walter C. Lippincott, M. D., In Charge of Contagious Division.

Dr. R. M. Stith on July 25th, 1917, resigned his position In Charge of Tuberculosis Division and Medical Supervisor of Firland Sanatorium, and entered active war service as Lieutenant in the Washington Coast Artillery Medical Corps. The years of loyal energetic service which he has devoted to the tuberculosis work has placed Firland Sanatorium among the leading institutions of it's kind. The tuberculosis field can ill afford to lose the services of so valuable a man and we sincerely hope that when the war is over Dr. Stith will resume his former position.

Dr. Paul A. Turner resigned from the Tuberculosis Visiting Staff, April 1, 1917, to enter active war service.

Dr. Herbert E. Coe resigned his position In Charge of the Contagious Disease Division April 6, 1917, to enter active war service and was succeeded by Dr. Walter C. Lippincott, who has been connected with this division since 1914.

FIRLAND SANATORIUM HOSPITAL

Is at Richmond Highlands on the Everett Interurban about six miles north of Seattle city limits.

For admission of patients apply to the Central Office, Tuberculosis Control, 303 Public Safety Building—Main 6000, Local 126.

Visiting days are Thursdays and Sundays, 1 to 5 p. m., also all legal holidays, 1 to 5 p. m. Patients are allowed but three visitors on any one visiting day.

Visitors are required to register name and address in visiting book and receive a pass card before being admitted to the wards.

Patients on the dangerous list may have visitors any time of the day or night.

Inquiries regarding patients may be made at Sanatorium Phone, Long Distance, Richmond 191.

ADMISSION OF PATIENTS.

Is in charge of the admission bureau, in the Central Office, 303 Public Safety Building.

The requirements for admission are:

1. A definite diagnosis of Pulmonary Tuberculosis, confirmed by a positive laboratory report from the Department of Health Laboratory.

2. A bona fida resident in Seattle or King County for at least a year prior to applying for treatment, certified to by affidavits from two responsible citizens of Seattle.

When the above requirements are satisfactory, the case is placed on the waiting list and as vacancies occur cases are selected, the basis of selection being:

1. State of disease—advanced receive preference.
2. Financial condition—the poor receive preference.
3. Social condition—the number of children dependent or exposed, calls for preferential treatment.

OBJECT OF SANATORIUM

Primarily, the duty of the Sanatorium is the care of the advanced case of pulmonary tuberculosis until it is no longer a source of infection to the home or community. The home relieved of the burden and the charges of caring for the sick individual is able to secure and maintain a normal standard

of living which in itself is an absolute necessity in order to protect the health of the remaining members of the family.

Secondarily, the duty of the Sanatorium is the restoration to health and activity of as large a number of individuals as possible, and the teaching of the necessity of living continuously a proper hygienic life, for if proper living is not firmly implanted in the individual's mind his restored health will be of short duration after leaving the Sanatorium. And finally, teaching those patients who have not a fitting occupation, one that is satisfactory for an arrested case of tuberculosis.

Provisions should be made for more available bed space not only for the needy advanced cases of tuberculosis but especially the early or incipient cases most of whom, under the proper Sanatorium treatment, would be fully restored to health and again enter the ranks of the workers. For many of these at the present time must remain untreated until becoming advanced cases before being able to secure Sanatorium care.

Number of patients in residence January 1, 1917	134
Number of patients admitted during year 1917	158
Total treated during year 1917	292
Number of patients discharged during year 1917	147
Number of patients in residence December 31, 1917	145

Of the number receiving hospital care in 1917:
2 had been in hospital between 6 and 7 years.
2 had been in hospital between 4 and 5 years.
10 had been in hospital between 3 and 4 years.
37 had been in hospital between 2 and 3 years.
79 had been in hospital between 1 and 2 years.
79 had been in hospital between 6 months and 1 year.
83 had been in hospital less than 6 months.

The following table shows the admission and discharges for several years at Firland:—

	1915	1916	1917
In hospital January 1	79	149	134
Admitted	316	176	158
Number receiving hospital care	395	325	292
Discharged alive	72	96	76
Discharged dead	95	95	71

Average length of stay of discharged cases:—

	1915	1916	1917
All discharged cases	4 months 25 days	6 months 11 days	8 months 9 days

Admissions and Discharges for the Year 1917—

	Males	Females	Totals
Number of patients January 1, 1917	98	35	134
Number admitted during year 1917	113	45	158
Number discharged alive year 1917	52	24	76
Number discharged dead year 1917	51	20	71
Number remaining January 1, 1918	109	36	145

REASONS FOR DISCHARGES OF PATIENTS FROM SANATORIUM.

Discharged by order of physician in charge		37
Arrested cases, able to work	30	
Able to be cared for by relatives	5	
Transferred to city hospital for operation	1	
Transferred to Seattle General Hospital for operation	1	39
Refused to remain		
Went home to die	3	
Thought they were able to work	7	
Tired of institutional life	17	
Dissatisfied with treatment	7	
Dissatisfied with diet	3	
Went home to be with children	2	

CONDITION OF PATIENTS AFTER LEAVING SANATORIUM

Total number of cases discharged		76
Re-admitted	5	
Working part or whole time	41	
Dead	10	
Disease progressing	3	
Unimproved	3	
Admitted to other sanatoria	2	
Left city	10	
Lost	2	

CLASSIFICATION OF ALL ADULT CASES ON ADMISSION, TREATED IN 1917.

	Males	Females	Totals
Stage I	2	0	2
Stage II	92	29	121
Stage III	95	38	133
Tuberculosis non-pulmonary	1	1	2
	190	68	258

Complications Occurring in Adults Cases Treated during 1917—

Tuberculosis		Non-Tuberculosis	
Ankle	1	Chronic nephritis	10
Elbow	1	Syphilis	13
Hand	1	Albuminaturia	8
Spine	1	Empyema	1
Larynx	15	Appendicitis	5
Cervical glands	2	Hemorrhoids	20
Peritoneum	2	Otitis media	14
Intestines	5	Hernia	2
Rectal fistulae	12	Epilepsy	1

REPORT OF DENTAL WORK ON ADULTS.

	Fillings					
	Cement	Temporary	Amalgam	Extractions	Scaling	Treatments
1916	22	19	3	40	6	12
1917	53	12	26	104	23	32

Adults, Condition on Discharge—

	Males	Females	Totals
Arrested	4	0	4
Apparently arrested	3	4	7
Quiescent	13	6	19
Improved	14	5	19
Unimproved	6	5	11

NUMBER OF CHILDREN TREATED DURING 1917.....34

Admission of Children.

Must be residents of Seattle or King County.

Diagnosis must be confirmed by clinic physician.

Family must be unable to provide proper care elsewhere.

Positive sputum is not required.

It is particularly desired to care for those anemic or under nourished children with positive evidence of infection and living in an unhygienic surrounding.

Classification on Admission of all children treated in 1917—

	Males	Females
Stage I	2	1
Stage II	5	1
Stage III	0	1
Other forms:		
Bronchial glands	15	6
Tuberculous spine	1	0
Tuberculous abscess	0	1
Tuberculous peritonitis	0	1
	23	11

Complications Occurring in Children Treated in 1917—

Tuberculosis		Non-Tuberculosis	
Knee	1	Otitis media	2
Peritoneum	1	Tonsils, adenoids	6

REPORT OF DENTAL WORK ON CHILDREN.

	Fillings			
	Cement	Temporary	Extractions	Treatments
1916	12	2	7	1
1917	12	4	6	6

Children, Condition on Discharge—

	Males	Females	Totals
Apparently quiescent	9	3	12
Improved	1	0	1
Unimproved	1	0	1
Dead	1	1	2

Average Length of Stay, All Discharged Cases, Children—

	1916	1917
Discharged—dead	4 months, 15 days	1 month, 4 days
Discharged—home	12 months	16 months, 26 days

TABULATED RECORD OF CASES AT FIRLAND, 1917.

Conjugal state	171	single.
	90	married.
	8	widowers.
	9	widows.
	14	separated.
Kind	273	pulmonary.
	16	glandular.
	1	peritoneal.
	2	other.
Age	10	0- 5 years.
	17	5-10 years.
	32	10-20 years.
	87	20-30 years.
	56	30-40 years.
	60	40-50 years.
	30	over 50 years.
Nativity	166	United States.
	126	foreign.
Citizenship	181	United States.
	21	first papers.
	90	none.
Race	278	white.
	5	black.
	5	yellow.
	1	red.
	3	brown.
Exposure	87	domestic.
	20	extra domestic.
	185	unknown.
Housing	124	congested district and poor housing.
	140	good housing.
	28	unknown.

TABULATED RECORD OF CASES AT FIRLAND, 1917—Continued.

Social Condition:

With family	165
Children exposed	200
Without family	51
Wanderers	76

Cases Cared for at Firland:

	Patients	Days Hospital Care
City	246	40,634
County	46	8,865

Origin of County Patients:

Sent to Firland by county visiting nurse	40
Sent to Firland (county cases) from Tuberculosis Dispensary	6
	46

Number of Patients and Hospital Days by Months:

	Patients	Hospital Days
January	134	4289
February	139	3911
March	140	4346
April	143	4265
May	149	4391
June	131	3747
July	122	3716
August	125	3910
September	133	3966
October	133	4227
November	137	4264
December	144	4476
Total		49499

Number of Cases at Firland less than One Month:

Discharged	6
Died	20

DEATHS AT FIRLAND, 1917

Males	51
Females	20
Total	71

Age of Death:

0 to 5 years	1
5 to 10 years	1
10 to 20 years	5
20 to 30 years	19
30 to 40 years	28
40 to 50 years	9
50 to 60 years	7
Over 60 years	1

Conjugal State:

Single	40
Married	24
Widowed	3
Widowers	2
Separated	2

Number of patients employed on salary	9
Number of patients employed without salary	15

SOCIAL AND EDUCATIONAL METHODS

It is becoming a well recognized fact that entertainments and amusements of varied kinds play an important part in the modern treatment of Tuberculosis. By diverting the individual's mind from his physical ailments he becomes more contented and indirectly lends much valuable assistance to those interested with the Sanatorium of this disease.

These amusements must of necessity be somewhat varied in order to reach the different individuals and it requires eternal vigilance and tact combined with good judgment to find the particular subject in which each one is most liable to become permanently interested. Many prefer some trade, and with proper equipment many useful occupations are learned which not only afford healthful exercise but assist them in making a living after discharge, at something which will be suitable for an arrested case of tuberculosis.

In this regard we have had installed a radio outfit which is very interesting to the male patients, and also affords them an opportunity of having the code and becoming self-sustaining after release from the institution. Many of these patients have passed the examination and received first grade licenses as radio operators. This gives them an occupation to follow which is satisfactory in every way for an arrested case of tuberculosis.

Another class prefers the care of livestock. These are given expert training in the care of chickens, and hog raising, at the ranch where 1,500 chickens are kept to supply the institution with fresh eggs. The hogs are being raised entirely from the kitchen waste properly sterilized before feeding.

We also have our own cobbler, newsboy, carpenter, barber and librarian, and a magazine called "Pep," which is edited, printed and managed entirely by the patients. This furnishes light employment to many of them. It contains some valuable articles on Tuberculosis, and also fur-

nishes much amusement to the other patients in the institution.

In the way of mental relaxation Sanatorium entertainments are frequently furnished. These entertainments are held in the hospital building so that practically all bed patients may be present. During the fall and winter there are weekly concerts, consisting chiefly of vocal and instrumental music given gratis by different musical clubs of the city, and vaudeville performances given by theatrical troupes.

A moving picture machine was presented to the institution through the kindness of Seattle people, which enables the Sanatorium to have "Movies" at frequent intervals. The very best films and skilled operators are furnished the institution free at any time by the different Film Companies and Operators' Union. During the summer months we have a number of concerts given in the open-air pavilion, by bands and orchestras from the city. Special entertainments with home talent are given on the different holidays, and when a patient is discharged a small reception is held in his or her honor. Besides this, constant amusement is obtained by the patients from their Victrola.

December 31, 1917.

Dr. J. S. McBride, M. D.,
Commissioner of Health,
Seattle, Wash.

Dear Sir:

It is my privilege to submit to you herewith the report of the City Hospital and Hospital Dispensary for the year ending December 31, 1917.

CHARACTER OF THE HOSPITAL

The Hospital is essentially a charity and emergency Hospital. It gives first aid treatment whenever called upon, and treats all destitute patients free of charge, who have been residents of the city for less than six months, all other charity patients who need hospital care are referred to the King County Hospital. Patients requiring hospital treatment who are unable to afford the services of a private physician, but who are able to pay a certain amount for their care, are admitted and required to pay not over $10.00 a week. If first aid is given a patient who is able to pay, a bill is presented.

Men and boys who were turned down for military service owing to slight physical deformities were admitted and operated upon so that they could qualify for service.

EQUIPMENT

The Hospital in the fourth floor of the Public Safety Building, has a capacity of about 90 beds. There are several wards—a woman's ward with 17 beds; two men's Medical wards with 8 and 5 beds respectively, one men's Surgical ward with 17 beds, an Obstetrical ward with 8 beds, a children's ward with 5 beds and 5 receiving wards with from 4 to 6 beds each which are used for the isolation of certain cases.

There are two padded cells, in which beds are placed

when required. The operating room, anæsthetizing room and sterilizing room, are in the west end of the floor. These are equipped so that any kind of surgical work may be performed. The X-Ray room, laboratory, kitchen and dining room are in the east end of the floor. The Drug room has been moved to the third floor and is well arranged and equipped.

HOSPITAL DISPENSARY

The Hospital Dispensary is a free clinic for the poor and any patient unable to pay for the services of a private doctor is treated free of charge. No patient able to pay a physician is treated, with the following exceptions: If a patient able to pay comes to the dispensary demanding emergency treatment, he is given only whatever first aid treatment is necessary. He then is asked to pay a reasonable amount for service and told to go to a private physician. No special physician or surgeon is ever recommended.

DEPARTMENTS

The dispensary has been moved to the third floor of the Public Safety Building and practically occupies about half of the floor on the south side of the building.

There are two reception rooms, one for men and women, respectively. Eleven good-size examination rooms have been arranged and well-equipped with furniture and modern equipment for the treatment of the various cases. These rooms are arranged one for Genito-Urinary cases; one for Men's Medical examinations; two for Surgical Dressings rooms for men; one operating room; one Medical room for women; one Gynecological and Surgical Dressing room for women, one Dental room, two Eye, Ear, Nose and Throat rooms, and a Children's room.

The Surgical and Medical clinics are held daily. Genito-Urinary clinic meets Monday, Wednesday and Friday at 8:00 A. M.; Eye, Ear, Nose and Throat clinics, Tuesday, Thursday and Friday at 9:00 A. M.; Dental clinic, Tuesday, Thursday and Saturday at 8:00 A. M.; Gynecological and

Obstetrics clinic, Tuesdays, Wednesdays and Fridays at 9:30 A. M.; Children's clinic Monday, Wednesday and Saturday at 11:00 A. M. There is no special Skin clinic and these cases that demand special attention, other than the regular medical care are referred to the office of the specialist who has been appointed to that service.

Any cases that can not wait until the day and hour appointed for the various clinics are cared for when necessary in the general clinic and then referred to the regular days to which they should attend.

DISPENSARY STAFF

With the exception of the Medical, Surgical and Pediatric clinics the visiting staff is the same as that corresponding service in the hospital. The Hospital medical and surgical staffs are consultants to the dispensary when necessary. Doctors Joseph Shiley and Ira N. Gates have conducted the Medical and Surgical clinics for another year with much success and excellent results. The Pediatrics clinic was conducted by Doctor Jay I. Durand and later by Doctor Petersen and Doctor Houston and the institution especially extends its thanks for the constant and punctual attendance and thoroughness of their examinations and it also wishes to express its appreciation of the services Dr. O. T. Dean has given in the Dental department.

METHOD OF HANDLING PATIENTS

When a patient comes to the dispensary, he is interviewed by a graduate nurse at the desk who determines whether or not the case is a suitable one for dispensary treatment. If he is to be treated, a history of the case is made out by the nurse. This history contains a record of the family and past history as well as the present illness. The financial condition of the patient is also thoroughly investigated and recorded. He then awaits the call of his number from the department to which he has been assigned. It is

required that each patient be thoroughly examined after which the doctor records his findings, together with the treatment given on the back of the history card. Each card is returned to the office for inspection, indexing and filing. No patient is ever allowed to handle the records. The records are filed by number and the patient always retains his number card. There is a name index and a diagnosis cross-index. No record missing.

AMBULANCE SERVICE

The ambulance service has been very efficient during the past year. We have one well-equipped ambulance that answers any emergency call to any part of the city. There is only one cot in the ambulance but, when necessary, two patients can be transferred. There is in the ambulance a lungmotor, emergency kit with all necessary instruments, medicine and dressings for any emergency case and also padded emergency splints for fractures. They can be temporarily applied for the transportation. The ambulance is driven by the Police department and kept in the Police garage. With the cooperation of the Police department, the new patrol carries a stretcher also, and a good many calls are made by the patrol and the patients very comfortably transferred. When the ambulance is out and the second emergency call comes in, a doctor always accompanies the patrol.

VISITING STAFF

The Hospital has a visiting staff of physicians and surgeons who serve without pay for a period of two months each. The appointments are made by the Commissioner of Health. The department and the men who have given their services during the past year, are as follows:

Surgery: Chief of Staff: Drs. H. A. Shaw, John Hunt, R. D. Forbes, M. G. Sturgis, J. C. Moore, C. W. Sharples.

Associate Surgeons: Drs. W. C. Woodward, H. D. Dudley, E. C. Lee, W. C. Speidel, James Thompson, H. C. Kantner.

Brain and Cord Surgery: Chief of Staff: Dr. Alfred Raymond.

Associate Surgeons: Drs. F. M. Carrol, W. C. Speidel, H. J. Davidson.

Medicine: Chief of Staff: Drs. J. W. Crooks, F. P. Gardner, Y. C. Parker, W. S. Griswold, A. G. Snow, K. Winslow.

Associate Physicians: Drs. J. M. Osborn, H. B. Haskell.

Gynecology and Obstetrics: Chief of Staff: Drs. R. J. O'Shea, C. B. Ford, C. E. Hagyard, H. G. Lazelle, C. E. McClure.

Associate Gynecologists and Obstetricians: Drs. W. C. Kantner, A. H. Peacock, G. A. Dowling, G. G. Thompson, I. B. Greene.

Pediatrics: Drs. G. B. McCullough, J. B. Manning, J. I. Durand, J. R. Peterson, D. H. Houston, F. C. Parker.

Nervous and Mental Diseases: Drs. D. A. Nicholson, A. P. Calhoun.

Skin Diseases: Drs. F. A. Black, F. S. Palmer, L. B. Baldwin.

Eye, Ear, Nose and Throat: Drs. A. W. Hawley, W. F. Hoffman, F. Bentley, C. Ballance, Copeland Plummer, B. E. Cohoon.

Genito-Urinary Diseases: Drs. J. S. Thomas, E. Jansen, F. L. Ashton, A. H. Peacock, W. Ray Jones.

Consulting Dental Surgeon: Dr. O. T. Dean.

Consulting Radiologists, Dr. Harold B. Thompson.

In addition to the above staff, the Health Department employs a dentist, Dr. Frank Pratt, who holds a clinic three times a week at the hospital.

The visiting staff of physicians and sugeons are assisted by three internes who serve for a period of one year. Each interne is required to be a graduate of a class "A" medical school, and to have a licence to practice medicine and surgery in the State of Washington. In addition to their duties in the hospital, the internes are required to treat city prisoners at the Jail and Stockade.

RECORDS.

Each patient admitted to the hospital is entered by a number in a book required by law, and the necessary forms filled out. Histories are filed by the same number, and this also appearing on the same file. The name file contains a summary of the history of the case, and on the back of this is a form each patient, or nearest relative is asked to sign, on admittance, giving consent to any treatment deemed necessary, and to a necropsy in case the patient dies in the institution. If the patient refuses to sign this form, only such treatment is given for which consent can be gained.

A cross file contains a record of the diagnosis of every case treated.

Following is the report of the number of the different diseases treated in the hospital during 1917. The classification closely follows the international method:

I.	GENERAL DISEASES:	
1	Typhoid fever	6
4	Malaria	5
6	Measles	4
10	Influenza	12
18	Erysipelas	3
19	Acute anterior poliomyelitis	1
20	Purulent infections and septicaemia	4
25	Mycosis fungoid	1
26	Pellagra	1
28	Tuberculous of the lungs:	
	a Chronic pulmonary phthisis	48
30	Tuberculosis meningitis	3
31	Abdominal tuberculosis	2
32	Psoas abscess (tuberculosis)	3
33	White swellings:	
	a Tuberculosis of the hip	3
34	Tuberculosis adenitis	1
37	Syphilis (all stages)	45
38	A. Soft chancre:	
	a Chancroid of the penis	2
	B. Gonococcus infection:	
	a Gonococcic arthritis	8
	b Gonococcic bubo	3
	c Conococcic epididymitis	10
	d Gonococcic bartholins abscess	1
	e Gonococcic endocarditis	1
	f Gonococcic ophthalmia	4
	g Gonococcic pyosalpinx	11
	h Gonococcic urethritis	10
	i Gonococcic vaginitis	1
40	Cancer and other malignant tumors of the stomach and liver:	
	a Carcinoma of the stomach	5
	b Carcinoma of the liver	3

41	Cancer and other malignant tumors of the peritoneum, intestines and rectum:	
	a Carcinoma of the rectum	1
44	Cancer and other malignant tumors of the skin	2
45	Cancer and other malignant tumors of other organs not specified:	
	a Cancer of the prostate	1
	b Sarcoma of the arm	1
46	Other tumors:	
	a Desmoid tumor	1
	b Haemorrhagic cyst	1
47	Acute articular rheumatism	29
50	Diabetes mellitus	2
51	Exophthalmic goitre	3
54	Anaemia:	
	a Pernicious anaemia	1
55	Other general diseases:	
	a Acromegly	1
	b Adiposis	1
	c Autointoxication	10
	d Haemophilia	1
	e Haemorrhagic herpetic purpura	1
	f Polycythemia	1
	g Ptomain poisoning	3
6	Alcoholism:	
	a Alcoholism, acute	103
	b Delerium tremens	16
58	Other occupational poisonings:	
	a Arsenic	1
	b Mercurial	1
59	Other chronic poisonings:	
	a Morphinism	12

II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE

61	Simple meningitis	2
62	Locomotor ataxia	1
63	Paralysis agitans	1
64	Cerebral haemorrhage:	
	a Apoplexy of the brain	5
67	General paralysis of the insane	2
68	Other forms of mental alienation:	
	a Insanity, varieties not specified	74
69	Epilepsy	18
71	Convulsions of infants (under 5 years)	1
72	Chorea	1
73	Neuralgia and neuritis:	
	a Hysteria	9
	b Sciatica	3
74	Other diseases of the nervous system:	
	a Neuraesthenia	8
75	Diseases of the eyes and their annexa:	
	a Conjunctivitis, acute	1
	b Glaucema, chronic	1
76	Diseases of the ears:	
	a Otitis media	10

III. CIRCULATORY SYSTEM:

78	Acute endocarditis	2
79	Organic diseases of the heart:	
	a Cardiac dilitation	3
	b Endocarditis, chronic	17
	c Myocarditis, chronic	10
80	Angina pectoris	2
81	Diseases of the arteries, atheroma, aneurysm, etc.:	
	a Aneurysm	1
	b Arteriosclerosis	4
	c Atheroma of the aorta	1
83	Diseases of the veins (varices, haemorrhoids and phlebitis):	
	a Haemorrhoids	2
	b Varicocele	16
	c Varicose veins	5
84	Diseases of the lymphatic system:	
	a Lymphadenitis	2
	b Lymphangitis	4
85	Haemorrhage, other diseases of the circulatory system:	
	a Epistaxis	3

IV. DISEASES OF THE CIRCULATORY SYSTEM:

86	Diseases of the nasal fossae:	
	a Adenoids	85
	b Coryza	1
	c Deflected septum	3
88	Diseases of the thyroid body:	
	a Goitre	4
89	Acute bronchitis	7
92	Pneumonia (lobar)	24
93	Pleurisy:	
	a Empyema	1
	b Pulmonary edema	1
	c Pleurisy, acute fibronous	6
96	Bronchial asthma	10

V. DISEASES OF THE DIGESTIVE SYSTEM:

99	Diseases of the mouth and annexa:	
	a Dental caries	3
	b Pyorrhoea and stomatitis	1
	c Ranula	1
	d Vincents angina	1
100	Diseases of the pharynx:	
	a Peritonisillar abscess	5
	b Tonsillitis, acute	8
	c Tonsils, hypertrophied	87
102	Ulcer of the stomach	6
103	Other diseases of the stomach (cancer excepted):	
	a Indigestion, acute	3
	b Gastritis, acute and chronic	6
105	Disrrhoea and enteritis:	
	a Gastro-enteritis	2
	b Duodenal ulcer	4
108	Appendicitis:	
	a Acute and chronic	30
109	Hernia, intestinal obstruction:	
	a Inguinal:	
	1 Direct and indirect	28
	2 Bilateral	6
	3 Strangulated	1
	b Intussception	1
	c Intestinal obstruction, chronic	1
110	Diseases of the intestines:	
	a Constipation	9
	b Fistula in ano	3
	c Ischio-rectal abscess	4
	d Perineal abscess	1
	e Rectocele	1
	f Ulcer of the rectum	2
114	Biliary calculi	5
115	Other diseases of the liver:	
	a Cholecystitis	3
117	Simple peritonitis	4
118	Other diseases of the digestive system:	
	a Pancreatitis, acute	1
	b Subphrenic abscess	1

VI. DISEASES OF THE GENITO-URINARY SYSTEM:

119	Nephritis, acute	7
120	Nephritis, chronic	26
122	Other diseases of the kidney and annexa:	
	a Perinephritic abscess	1
	b Pyelitis	1
	c Pyonephrosis	1
	d Sarcoma of kidney	1
123	Calculi in the urinary passage:	
	a Nephrolithiasis	3
	b Stone in the ureter	1
124	Diseases of the bladder:	
	a Cystitis, acute	2
	b Cystocele	1
	c Retention of urine, acute	3

125 Diseases of the urethra, urinary abscess, etc.:	
a Foreign body in urethra	1
b Rupture of the urethra	2
c Stricture of the urethra	1
126 Diseases of the prostate:	
a Hyperthrophy of the prostate	2
127 Nonveneral diseases of the male genital organs:	
a Hydrocele	4
b Hypospadias	1
c Undecended testicle	1
128 Uterine haemorrhage (nonpuerperal):	
a Menorrhagia	1
129 Uterine tumor (noncancerous):	
a Uterine fibroids	1
130 Other diseases of the Uterus:	
a Cervicitis	1
b Endotritis	5
c Dysmonorrhoea	1
d Prolapse of the uterus	2
e Retroversion of the uterus	4
131 Cysts and other tumors of the ovary:	
a Cysts of the ovary	2
132 Salpingitis and other diseases of the female genital organ:	
a Abscesses:	
1 Bartholin gland	2
2 Tubo-ovarian	1
3 Pelvic	1
b Pelvic peritonitis	2
c Salpingitis	17
d Ulceration of the labia	1
VII. THE PUERPERAL STATE:	
134 Accidents of labor:	
a Normal labor	52
b Abortion	33
c Placenta praevia (labor at term)	1
136 Other accidents of labor:	
a Laceration of the corvax	1
138 Puerperal albuminuria and convulsions:	
a Postpartem eclampsia	2
b Toxemia of pregnancy	1
VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE:	
143 Furuncle:	
a Carbuncle	2
144 Acute abscess:	
a Abscess of the thigh	1
145 Other diseases of the skin and annexa:	
a Eczema, seborrhoea	1
b Erythema multiforms	1
c Dermatitis, acute	1
d Dobe's itch	1
e Ingrowing toenail	1
f Ulcers, chronic	3
IX. DISEASES OF THE BONES AND ORGANS OF LOCOMOTION:	
146 Diseases of the bones (tuberculosis excepted):	
a Mastoiditis	4
b Necrosis of the jaw	1
c Sinusitis, frontal	3
147 Diseases of the joints:	
a Anthritis	3
148 Amputation of leg	
149 Other diseases of the organs of locomotion:	
a Hammer toe	2
b Lumbago	2
X. MALFORMATIONS:	
150 Congenital malformations:	
a Phimosis	2
b Emlarged thymus	1
c Club feet	1

XI. EARLY INFANCY:	
151 Congenital debility, icterus, sclerema:	
a New born	48
b Premature birth	3
XII. OLD AGE:	
154 Senility	10
XIII. EXTERNAL CAUSES:	
155 Suicide by poison (suicide and attempted suicide):	
a B-chloride of mercuy	9
b Tincture of iodine	1
c Lysol	5
d Morphine	1
e Paregoric	1
f Phenol	7
156 Suicide and attempted suicide by asphyxia:	
a Gas poisoning	6
157 Suicide by hanging or strangulation:	
a Hanging	1
158 Suicide by drowning	1
159 Suicide and attempted suicide by firearms	6
160 Suicide and attempted suicide by cutting or piercing instruments	3
164 Poisoning by food:	
a Ptomaine poisoning	4
b Toad stool	1
165 Other poisonings (suicide excepted):	
a Acetanlid	1
b Anacain	1
c Arsenic	3
d Bi-chloride of mercury	3
e Bromidia	1
f Chloral	1
g Lysol	3
h Morphine	4
i Opium	3
j Turpentine	1
k Veronal	1
166 Conflagration:	
a Extensive burns	1
167 Burns (conflagration excepted):	
a Burns	14
168 Absorption of deleterious gases (conflagration excepted):	
a Illuminating gas	6
b Smoke	2
169 Accidental drowning	1
170 Traumatisms by firearms	23
171 Traumatisms by cutting or piercing instruments	10
172 Traumatisms by fall:	
a Abrasions	1
b Concussion	7
c Contusions	19
d Dislocations	4
e Fractures	59
f Lacerations	13
g Sprains	5
h Traumatic lymphangitis	1
173 Traumatisms in mines and quarries:	
a Fractured skull	1
174 Traumatisms by machines	1
175 Traumatisms by other crushings (vehicles, railroads, landslides):	
a Automobile accidents:	
1 Abrasions	6
2 Burns	1
3 Concussion	10
4 Contusions	54
5 Dislocations	5
6 Fractures	68
7 Lacerations	35
8 Punture wound of lung	1
9 Ruptured ileum	1
10 Ruptured liver	1
11 Sprains	11
b Landslides	1
c Street cars	18
d Other vehicles	44

176	Injuries by animals	1
177	Starvation:	
	a Starvation	3
	b Syncope	2
182	Homicide by firearms:	
	a Abdomen	3
	b Chest	2
	c Eye	1
	d Head	1
	e Leg	2
183	Homicide by cutting or piercing instruments	1
185	Fractures (cause not specified):	
	a Femur	1
	b Pott's fractures	2
	c Tibia	5
	d Skull	1
	e Sprains	2
186	Other external violence:	
	a Abrasions	1
	b Concussion	1
	c Contusions	21
	d Fractures	17
	e Lacerations	17
	f Septic wounds	7
	g Sprains	2
189	Cause of conditions not specified or illdefined:	
	a Asthenia	1
	b Exhaustion	5
	c No diseases	4
	d Shock	1
	e Syncope	4

Following is the report of the number of different diseases seen in the dispensary during 1917. The classification closely follows the International method:

I. GENERAL DISEASES:

1	Typhoid fever	2
4	Malaria	3
6	Measles	12
8	Whooping cough	9
9	Diphtheria	1
10	Influenza	41
18	Erysipelas	4
19	Other epidemic diseases:	
	a Chicken pox	3
	b Mumps	3
20	Purulent infections and septicaemia	3
28	Tuberculosis of lungs	4
31	Abdominal tuberculosis:	
	a Tuberculous peritonitis	1
32	Pott's diseases	1
33	White swelling:	
	a Tuberculosis of hip	3
	b Tuberculosis of knee	1
34	Tuberculosis of other organs:	
	a Tuberculous adenitis	4
36	Rickets	5
37	Syphilis:	
	a Primary	18
	b Secondary	22
	c Tertiary	216
	d Hereditary	4

38	Gonorrhoea:	53
	a Soft chancre:	5
	1 Chancroid	3
	2 Chancroidal bubo	1
	3 Venereal warts	
	4 Ulcer of the penis	9
	b Gonococcus infection:	1
	1 Gonorrhoeal arthritis	15
	2 Gonorrhoeal balanitis	1
	3 Gonorrhoeal epididymitis	1
	4 Gonorrhoeal ophthalmia	6
	5 Gonorrhoeal paraphymosis	228
	6 Gonorrhoeal salpingitis	3
	7 Gonorrhoeal urethritis	
	8 Gonorrhoeal vaginitis	2
39	Cancer and other malignant tumor of buccal cavity:	1
	a Carcinoma of lip	6
	b Carcinoma of tongue	1
40	Cancer and other malignant tumors of stomach and liver:	
	a Carcinoma of stomach	6
43	Cancer and other malignant tumors of the breast	
44	Cancer and other malignant tumors of the skin:	1
	a Carcinoma of skin	2
46	Other tumors (tumors of the genital organs excepted):	5
	a Condyloma anus	1
	b Chondroma	1
	c Cyst Sebaceous	1
	d Fibroma	7
	e Haematoma	27
	f Lipoma	6
	g Papilloma	5
47	Acute articular rheumatism	5
48	Chronic rheumatism and gout	1
50	Diabetes mellitus	1
51	Exophthalmic goitre	
53	Lauchaemia	2
54	Anaemia, chlorosis	1
55	Other general diseases:	1
	a Autointoxication	
	b Acromegaly	61
	c Ptomain poisoning	1
56	Alcoholism (acute and chronic):	
	a Alcoholism, acute	2
	b Delerium tremens	
59	Other chronic poisoning:	
	a Morphinism	2

II. DISEASES OF THE NERVOUS SYSTEM AND ORGANS OF SPECIAL SENSE:

62	Locomotor ataxia	5
64	Cerebral haemorrhage, apoplexy	5
66	Paralysis without special cause	2
67	General paralysis of the insane	17
68	Other forms of mental alienation	51
69	Epilepsy	1
71	Convulsions of infants	3
72	Chorea	4
73	Neuralgia and neuritis:	
	a Hysteria	7
	b Neuralgia:	1
	1 Neuralgia of sciatic nerve	3
	2 Neuralgia of other nerves	2
	3 Neuritis, including multiple neuritis	
74	Neurasthenia	
75	Diseases of the eyes and annexia:	
	a Abscess of orbit	
	b Blepharitis	
	c Blind eye	
	d Cataract	
	e Cyst, meibonian	
	f Chalazion	
	g Conjunctivities:	
	1 Conjunctivities, acute	
	2 Conjunctivities, chronic	
	3 Conjunctivities, granular	
	4 Conjunctivities, suppurative	

h Episcleritis	1
i Foreign body in eye	55
j Glaucoma, chronic	1
k Iritis	6
l Keratitis	6
m Neuritis, optic	4
n Aphthalemagic	1
o Refractive errors	12
p Strabismus	2
q Trachoma	1
r Stye	4
s Ulcers of cornea	10
t Vitreous	1
76 Diseases of the ears:	
a Abscess of ear	2
b Cerumen impacted	12
c Eustachian tube congestion	1
d Foreign body in auditory canal	1
e Otitis media, externa and interna	55

III. DISEASES OF THE CIRCULATORY SYSTEM:

78 Acute endocarditis	3
79 Organic diseases of the heart:	
a Endocarditis, chronic	50
b Myocarditis, chronic	14
81 Diseases of the arteries:	
a Arteriosclerosis	9
83 Diseases of the veins:	
a Haemorrhoids	18
b Varicocele	3
c Varicose ulcers	2
d Variocose veins	12
84 Diseases of the lymphatic system:	
a Adenitis	25
b Lymphanitis	1
85 Haemorrhage and other diseases of the circulatory system:	
a Epistaxis	7

IV. DISEASES OF THE RESPIRATORY SYSTEM:

86 Diseases of the nasal fossae:	
a Adenoids	19
b Deviation of Septum	8
c Polypus-nasal	1
d Ozena	1
e Rhinitis	31
f Ulcers of septum	4
87 Diseases of the larynx:	
a Edema of glattis	1
88 Diseases of the thyroid body:	
a Goitre (exaphthalmic excepted)	8
89 Bronchitis, acute and sub-acute	139
90 Bronchitis, chronic	27
92 Pneumonia, lobar	2
93 Pleurisy, acute and chronic	17
96 Asthma, bronchial	22
98 Other diseases of the respiratory system (tuberculosis excepted):	
a Fibrositis	1
b Hay fever	2
c Lung abscess	1

V. DISEASES OF THE DIGESTIVE SYSTEM:

99 Diseases of the teeth and gums:	
a Diseases of the teeth and gums	158
b Other diseases of the mouth and annexa	7
100 Diseases of the pharynx:	
a Abscess, peritonsillar	14
b Foreign body in throat	2
c Hypertrophied tonsils	72
d Tonsillitis, acute and chronic	75
e Uvula elongation	1
f Pharyngitis, acute and chronic	30
101 Diseases of the esophagus:	
a Stricture of esophagus	1
102 Ulcer of the stomach	6

103 Other diseases of the stomach:	
a Foreign body in stomach	1
b Gastritis, acute and chronic	69
c Gastralgia	1
d Indigestion	10
e Pyloric stenosis	1
104 Diarrhoea and enteritis, under 2 years:	
a Gastro-enteritis	16
105 Diarrhoea and enteritis, 2 years and over:	
a Gastro-enteritis	24
107 Intestinal parasites:	
a Ascaris lumbericoides	3
b Tenia saginata	3
108 Appendicitis and Typhlits:	
a Appendicitis	21
109 Hernia, intestinal obstruction:	
a Hernia:	
1 Inicisional	1
2 Inguinal	23
3 Strangulated	1
4 Umbelical	2
110 Other diseases of intestines:	
a Abscess, ischio-rectal	4
b Constipation	133
c Fissure	2
d Fistula in ano	3
e Prolapse, rectum	1
f Proctitis	1
g Rectal ulcers	2
113 Hepatic cirrhosis	2
114 Biliary calculi:	
a Cholelithiasis	6
115 Other diseases of the liver:	
a Cholecystitis	2
b Catarrhal jaundice	2
117 Simple peritonitis:	
a Abdominal adhesions	1

VI. DISEASES OF THE GENITO-URINARY SYSTEM:

119 Acute nephritis	1
120 Bright's disease:	
a Chronic nephritis	71
122 Other diseases of the kidneys:	
a Haematuria	146
b Pyelitis	1
123 Calculi of the urinary passage:	
a Renal calculus	1
124 Diseases of the bladder:	
a Anuria	4
b Cystitis, acute and chronic	30
c Cystocele	1
d Stone in bladder	1
e Retention of urine	2
125 Diseases of the urethra, urinary abscess:	
a Rupture urethra	1
b Stricture	14
c Urinary abscess	1
126 Diseases of the prostate:	
a Hypertrophy	10
127 Nonvenereal diseases of the male genital organs:	
a Hydrocele	8
b Impotentia	1
c Phymosis	5
d Ulcer of penis	2
128 Uterine haemorrhage (non-puerperal):	
a Metorrhagia	2
129 Uterine tumors (non-cancerous):	
a Fibreids	3
130 Other diseases of the uterus:	
a Cervix lacerations	3
b Endometritis and metritis	14
c Menopause	5
d Prolapse uterus	5
e Retroversion	6

131 Cysts and other tumors of ovary:	
a Ovarian cyst	1
132 Salpingitis and other diseases of the female genital organs:	
a Abscess:	
1 Bartholin gland	
2 Pelvic	1
b Ovarian neuralgia	1
c Salpingitis	1
d Vulvitis	8
133 Non-puerperal diseases of the breast:	1
a Abscess	
b Fissure	1
c Mastitis	1
	1
VII. THE PUERPERAL STATE:	
134 Accidents of pregnancy:	
a Abortion	
b Normal pregnancy	1
136 Other accidents of labor:	32
a Relaxed perineum	
143 Furuncle:	1
a Carbuncle	
b Furuncle	5
144 Acute abscess	62
145 Other diseases of skin and annexa:	53
a Acne	8
b Bromidosis	1
c Chilblain	1
d Cicatrices	1
e Corn	1
f Clavis	2
g Cuban itch	1
h Dermatitis, acute and chronic	0
i Dermatitis, medicinal	21
j Eczema, all forms	2
k Erythema, nodosum	74
l Ganglion	2
m Herpes	2
n Ichthyosis	9
o Impetigo	1
p Ingrowing nail	18
q Intertrigo	5
r Leucoplakia	1
s Paronychia	1
t Pediculosis	12
u Poison ivy	4
v Psorasis	3
w Puritis ani	6
x Ringworm	3
y Scabies	0
z Sycosis	38
aa Ulcer, chronic	4
bb Urticaria	16
	8
IX. DISEASES OF THE BONES AND ORGANS OF LOCOMOTION:	
146 Diseases of the bones (tuberculosis excepted):	
a Coxitis	
b Mastoiditis, acute and chronic	1
c Periostitis	6
d Osteomyelitis	4
e Sinusitis	2
147 Diseases of the joints (tuberculosis and rheumatism excepted):	3
a Arthritis, acute and chronic	
b Ankylosis	41
c Bursitis	1
d Contracture of tendon	2
e Tenosynovitis	1
f Genu valgum	9
149 Other diseases of locomotion:	1
a Hammer toe	
b Fibrositis	1
c Germ varum	1
d Lumbago	1
e Myositis	39
f Mes planis	3
	7

X. MALFORMATIONS:	
150 Congenital malformation (stillbirths not included):	
a Deformity of jaw	1
b Nevus	1
c Phymosis	1
g Undescended testicle	1
XI. EARLY INFANCY:	
152 Other diseases peculiar to early childhood:	
a Adhesians of labia	1
b Granuloma naval	1
XII. OLD AGE:	
154 Senility	3
XIII. AFFECTIONS BY EXTERNAL CAUSES:	
155 Attempted suicide and suicide by poison:	
a Bi-chloride of mercury	1
b Carbolic acid	1
c Iodine	1
d Strychnine	1
156 Attempted suicide by asphyxia:	
a Illuminating gas	1
161 Suicide by jumping from high places	1
164 Poisoning by food	1
165 Other acute poisonings:	
a Morphine	1
166 Conflagration:	
a Contusions	1
b Dislocation	1
c Fractured rib	1
d Shock	1
167 Burns	58
168 Absorption of deleterious gases (conflagration excepted):	
a Illuminating gas	2
170 Traumatism by firearms	18
171 Traumatisms by cutting or piercing instruments:	
a Lacerations	116
172 Traumatisms by fall:	
a Concussions	2
b Contusions	56
c Dislocations	6
d Fractures	63
e Infected wounds	2
f Lacerations	100
g Sprains	27
h Ruptured ligament	1
i Shock	1
174 Traumatisms by machines:	
a Contusions	7
b Fractures	2
c Lacerations	14
175 Traumatisms by other crushings (vehicles, railways, landslides, etc.):	
a Automobiles:	
1 Abrasions and contusions	151
2 Concussion	1
3 Dislocation	2
4 Fractures	41
5 Lacerations	166
6 Shock	4
7 Sprains	14
b Street cars:	
1 Abrasions	4
2 Contusions	7
3 Fractures	1
4 Lacerations	4
c Other vehicles:	
1 Abrasions	9
2 Dislocations	1
3 Contusions	31
4 Fractures	15
5 Lacerations	47
6 Shock	2
7 Sprains	1

176 Injuries by animals:	
a Contusions	2
b Dog bite	18
c Horse bite	1
d Insect bite	1
e Lacerations	1
177 Starvation:	
a Syncope and fatigue	26
b Malnutrition	9
c Starvation	3
178 Excessive cold:	
a Frost bite	1
b Ulcer of hand	1
179 Effects of heat:	
a Heat exhaustion	1
181 Electricity (lightning excepted):	
a Electric burn	1
b Electric shock	1
185 (A) Dislocation, cause not specified	1
(B) Fractures, cause not specified	3
(C) Sprains, cause not specified	7
186 Other external violence:	
a Contusions	60
b Fractures	133
c Lacerations	34
d Dislocations	285
e Foreign bodies	2
f Septic wounds	17
g Sprains	113
XIV. ILL-DEFINED DISEASES:	
188 Sudden death	2
189 Ill-defined conditions:	
a Exhaustion	3
b No disease	2
	77

NUMBER OF TREATMENTS GIVEN CITY PRISONERS BY INTERNES.

	Number of Treatments Given at Stockade	Number of Treatments Given at City Jail	Total
January	416	84	500
February	269	50	319
March	214	29	243
April	298	40	338
May	242	18	260
June	191	55	246
July	291	19	310
August	450	34	484
September	286	21	307
October	312	39	351
November	406	38	444
December	282	54	336
	3657	481	4138

OPERATIONS ON APPLICANTS FOR MILITARY SERVICE.

Hernia	14
Varicocele	7
Amputation of toes	4
Tonsillectomy and adenoidectomy	22
Varicose veins	5
Thyroidectomy	1
Hydrocele	3
Haemorrhoids	2
	58

MONTHLY HOSPITAL REPORT, 1917.

	Jan.	Feb.	Mch.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Number of patients admitted	162	134	165	170	153	146	159	150	149	143	140	152	1823
Number born	6	7	5	4	4	3	1	3	3	5	5	3	49
Number of patients discharged	160	145	170	170	155	157	153	151	148	143	147	141	1840
Number of patients died	10	12	5	17	9	16	13	9	10	10	12	12	135
Number of days bed care	1466	1168	1332	1187	922	701	820	876	884	902	1082	853	12193
Number of operations	37	34	32	28	27	16	22	28	31	31	20	22	333

NUMBER OF PATIENTS IN HOSPITAL EACH MONTH.

	Male				Female				Total Patients
	Medical		Surgical		Medical		Surgical		
	Over 15	Under 15	Over 15	Under 15	Over 15	Under 15	Over 15	Under 15	
January	65	1	43	16	30	3	35	12	205
February	54	1	57	10	15	2	33	7	157
March	58	1	60	9	15	3	38	12	199
April	51	4	78	12	18	4	22	9	199
May	58	0	67	11	19	0	28	1	182
June	56	2	63	6	17	1	19	3	170
July	56	4	57	5	20	5	22	5	176
August	45	0	61	11	21	1	24	5	172
September	44	0	81	6	25	0	29	6	176
October	42	8	56	0	10	6	18	6	165
November	45	7	52	2	20	10	29	2	162
December	66	5	47	4	15	3	18	1	167
Totals	640	33	722	101	233	38	315	69	2151

NUMBER OF TREATMENTS GIVEN IN THE SURGICAL CLINIC, 1917.

	Male			Female			
	Over 15	Under 15	Total	Over 15	Under 15	Total	Total Surgical
January	503	41	544	42	6	48	592
February	558	27	585	28	7	35	620
March	425	36	461	37	2	39	500
April	416	34	450	49	9	58	508
May	413	31	444	55	10	65	409
June	449	21	470	32	8	40	510
July	510	38	548	23	14	37	585
August	376	39	615	45	14	59	674
September	324	18	342	32	10	42	384
October	289	21	310	42	1	43	353
November	247	28	475	31	5	36	511
December	191	7	198	38	8	46	244
Total	4501	341	4842	454	94	548	5390

NUMBER OF TREATMENTS GIVEN IN THE MEDICAL CLINIC, 1917.

	Male			Female			
	Over 15	Under 15	Total	Over 15	Under 15	Total	Total Medical
January	336	11	347	48	1	49	396
February	272	2	274	41	1	42	316
March	211	1	212	71	1	72	284
April	198	2	200	39	1	40	240
May	199	0	199	80	2	82	281
June	205	4	209	49	0	49	258
July	172	2	174	53	3	56	230
August	172	4	176	58	3	61	237
September	153	9	162	44	6	50	212
October	196	1	197	40	2	42	239
November	193	2	195	54	2	56	251
December	169	5	174	26	6	32	206
Total	2476	43	2519	603	28	631	3150

NUMBER OF TREATMENTS GIVEN IN OTHER CLINICS, 1917.

	Skin	Dental	Eye, Ear Nose and Throat	Genito Urinary	Gyneco-logical	Pediatric
January	36	29	112	329	18	101
February	69	36	125	253	36	67
March	48	48	108	250	23	66
April	37	20	88	236	18	52
May	27	23	108	239	29	90
June	13	10	74	145	13	63
July	15	27	77	293	11	48
August	26	36	85	192	21	49
September	24	31	79	176	12	41
October	32	31	69	212	12	71
November	28	40	57	152	8	49
December	37	28	49	147	10	39
Total	392	359	1031	2534	211	736

SUMMARY OF ALL TREATMENTS GIVEN IN THE DISPENSARY, 1917.

	Jan.	Feb.	Mch.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
New clinic cases	439	344	365	330	411	345	381	405	323	317	288	233	4181
Old clinic cases	1174	978	962	869	895	741	815	715	636	702	608	527	9622
Total treatments	1613	1322	1327	1199	1306	1086	1196	1120	959	1019	896	760	13803

PRESCRIPTIONS ISSUED FOR HOSPITAL AND DISPENSARY PATIENTS

Number of prescriptions filled by hospital druggist	5389
Number of prescriptions refilled	1536
Total	7925
Number of X-ray pictures taken for hospital and dispensary	1230

REPORT OF SPECIAL HOSPITAL FOR VENERAL DISEASES.

(Nov. 10th to Dec. 31, 1917.)

	Women	Men		
Syphilis only	83	4		
Syphilis and gonorrhoea	20	3		
Gonorrhoea only	28	2		
Chancroids only	1	0		
No report given, bailed out before examination completed	3	1		
No diseases	37	6		
Number treated	122	9		
Number diseased and not treated, bailed out before reports were returned	10	0		
Total examined and reported			184	
Number diseased			181	
Number not diseased			43	
				468

Respectfully submitted,

(Signed) H. T. Buckner, M. D.,
Medical Supervisor.

Seattle, Washington, December 31, 1917.

Dr. J. S. McBride,
Commissioner of Health,
Seattle, Washington.

Dear Sir:

I respectfully submit herewith the report of the Division of Dairy and Food Inspection for the year 1917:

INSPECTIONS

Stock yards	242
Slaughter houses	319
Meat and fish markets	4161
Sausage factories	324
Commission houses	1609
Docks	261
Depots	11
Express offices	51
Meat wagons	183
Cold storage plants	14
Public market stalls (farmers)	342
Miscellaneous	344
Total	7861

STOCK INSPECTIONS.

Ante Mortem

Cattle	3208
Calves	39
Sheep	8943
Hogs	3690
Total	15880

Post Mortem

Beef	5281
Veal	8891
Mutton	10401
Pork	5948
Total	30521

CONDEMNATIONS

Number pounds of beef	26349
Number pounds of veal	12039½
Number pounds of pork	1376
Number pounds of poultry	410
Number pounds of fish	60375
Total	104737½

EXAMINATIONS OF DAIRY CATTLE.

Number of herds	293
Number of animals	3596
Number of reactors	209
Percentage of reactors	5.8

Eleven horses were tested with Mallein for the detection of Glanders but no reactions were obtained.

The percentage of reacting animals has remained practically the same for three years. Dairy herds are constantly being changed. New stock is being introduced to replace animals which are no longer valuable from the standpoint of milk production. It is mainly in the purchase of new stock where the danger lies. Every assistance which we could give to dairymen in the purchase of new stock has been given, and some protection at least has been afforded.

Post mortem work in connection with Bovine Tuberculosis control in the dairy stock has been carried on regularly as reactors have been found. Failure to demonstrate lesions in reactors has resulted in less than 1% of all animals slaughtered during the year, and we feel that the tuberculin test has been accurately administered and interpreted. No serious criticism has been offered in regard to this work and in most cases we have had the co-operation of the dairymen to the fullest extent.

The need of a municipal abattoir and a central inspection station for the examination of country products was taken up at length in the 1916 report. High prices of all meat products has placed many unscrupulous dealers in the business of buying unprofitable dairy cows and veal calves of questionable

quality, which are slaughtered in the country and brought in and offered for sale at our city markets. Much of this material is uninspected and we regret our inability, under the present system, to give more protection to the consuming public.

Certain demands will be made on us in the near future to inaugurate a system of inspection that will cover the entire situation. It is our belief that a system can be worked out that will afford not only the protection to which the consumer is entitled but that it may be accomplished at minimum expense.

One large packing plant under our supervision in the city has undergone considerable improvement during the year. Progress is being made in other improvements as required and a higher standard maintained. The quality of cattle, sheep and hogs slaughtered at this particular packing house is invariably very satisfactory. Stock arriving is well cared for. Much care and judgement is exercised in the purchase of live stock and a very small per cent of condemnations result. There is, however, a considerable loss in edible products which could be saved if the proper methods were employed.

By-products such as tallow, tripe, sausage casings, etc., are very valuable but are wasted if not cared for while fresh. Federal authorities have instructed all packing plants to save as much edible fats as possible, as well as other edible products, and it must be reported that large quantities of these products are wasted as food because all scraps, trimmings, stomachs, and a large part of the intestines are simply rinsed in cold water and cooked up in one steam tank, the end products being non-edible tallow and fertilizer. Better methods, carried out in a systematic manner, will produce by-products of greater value, save much edible fat, and at the same time tend to improve sanitary conditions.

The owner of this packing plant has already made application for Federal inspection. Some alterations will have to be made to bring the building and equipment up to the Government standard. Should these improvements be made and inspection granted by Federal authorities it will be a

great step in the growth and development of this house, and will also relieve the City of a considerable burden.

MILK AND DAIRY INSPECTION.

The milk supply of Seattle is keeping pace with the rapidly increasing population. Estimates on the daily consumption for the past five years is as follows:

	Gallons
1913	18000
1914	19000
1915	20500
1916	21500
1917	26500

This is exclusive of sweet cream, of which there is approximately 2000 gallons shipped at the present time. The increase of 5000 gallons of milk daily in 1917 over the 1916 figures is due to several factors, chief of which is the increase in population. The campaign of education by means of advertising has had its influence in bringing the attention of the public to the fact that milk is not a beverage but a food of definite value. While it has increased in price to a considerable extent during the past twelve months it still forms an important part of the diet, and no substitute has been found for it.

Another factor which has had a tendency to increase consumption is the fact that dairy products are cheap in comparison with other food products and have shown a smaller per cent of increase over former prices.

The enactment and enforcement of the prohibition law has also had its influence in increasing the use of milk. The per capita consumption in Seattle is now approximately .57 pints and this shows a decided increase over the per capita consumption of former years when milk was considered cheap.

The bulk of Seattle's milk supply comes from King County with 20,865 gallons. Snohomish County ships 3,548 gallons, Pierce County 2,049 gallons, and Kitsap County 70 gallons. 73% of this milk is pasteurized and 27% is sold raw.

Each advance in the retail price of milk has resulted in a temporary decrease in consumption of about 10%, but the normal consumption was quickly resumed, however, in each instance.

The supply is adequate to meet the demand at present and no immediate famine is anticipated. The supply for the future, however, is not so certain. High prices of feeds and correspondingly high prices of beef, has induced many dairymen to dispose of their herds to the butcher and engage in other lines of work. In some localities the cow population has been depleted to an alarming extent. Should these conditions continue the future supply will surely be jeopardized.

The milk division has kept a fairly close check on the milk and cream shipped into the city. During the year of 1917, 3,264 samples were taken for chemical analysis, and 2,967 for bacteriological analysis. These samples were taken from wholesale and retail wagons, shippers, certified producers, stores, restaurants, hospitals, and schools.

As a result of these analyses certified milk retains its place of preeminence. Samples of certified milk are taken every week and both chemical and bacteriological examinations are made. Results of such examinations are mailed on a card for the purpose to each producer and to each member of the Certified Milk Commission, so that each producer is kept advised at all times just what results the other producers are obtaining. This creates some friendly competition and probably has some influence on the results.

The average per cent of butter fat in certified milk for the year was 6.16; average per cent of solids not fat, 9.35; average bacteria count 5200. We believe that our certified milk ranks as high as that of which any city can boast. A shipment of five samples from our five producers to Brooklyn, N. Y., in May, 1917, in competition with milk shipped from various cities of the United States and Canada, one sample tied for first place and all five samples scored above 95 per cent. The milk travelled 3000 miles, was on the road one week, and was tested and scored ten days after the cow pro-

duced it. That is an accomplishment in the production of sanitary milk, and too much credit cannot be given to the dairymen who have the intelligence to obtain such results. We readily form the conclusion that in the production of real sanitary milk, methods are superior to equipment, and machinery cannot be substituted for brains.

The scoring contests conducted by a representative of the U. S. Department of Agriculture have given our dairymen the rating to which they are entitled in the various grades of milk on the market. Three such contests were held during the year; one in February, one in May, and one in October. The results obtained at these contests is averaged with the results of analyses of all samples taken between the dates on which the contests are held, and the results of such averages is the dairy rating for the year. We appreciate the co-operation of the Department of Agriculture in this work. It has helped us in many ways and the immediate result of each contest has been to reveal the weak spots in our system of inspection, as well as in the system of production. Investigation has been made in many cases where low scores were given and invariably the cause for the low score was determined. The average score of certified milk for the year was 96.10 per cent. Raw Market milk was 89.80 per cent. This average is higher than any previous average and shows a disposition on the part of producers and dealers to improve their product.

While these averages prove that the quality of our milk supply has been maintained and slightly improved, there has been a disposition on the part of some to disregard the provisions of the state law and city ordinance. The number of dairymen or dealers who will resort to the pump or hose to make up a shortage or add unfair profits to their business is becoming smaller each year, but we are sorry to admit that this class is not yet extinct. Considerable effort has been exerted during the past few months to bring dealers of this type to realize that the practice is not profitable in the long run, and some success has attended our efforts.

The average per cent of butter fat in raw market milk

for the year was 4.10 per cent; average per cent of solids not fat, 9.09 per cent; average per cent of butter fat in pasteurized milk, retail, 3.65 per cent; solids not fat, 8.85 per cent.

The average per cent of butter fat in all samples was 3.85 per cent, and solids not fat, 9.01 per cent.

The following table gives a summary of the bacterial content of the 2967 samples submitted for such examination:

10,000 and under 45%	10,000 to 50,000 31%	50,000 to 100,000 10%
100,000 to 200,000 7%	200,000 to 500,000 5%	500,000 and over 2%

Average per cent of butter fat in all samples of cream was 23.33 per cent; average bacteria count, 301,366.

The sweet cream supply of the city should receive more attention. While the average bacteria count is below the State standard, it is still too high and an effort will be made during the coming year to supervise the production and handling of this product so that better results will be obtained.

SUMMARY.

Number of dairies supplying milk and cream to Seattle	1350
Approximate number of cows in dairies	14000
Number of gallons of milk condensed daily	26500
Average score of retail dairies	75.60
Average score of dairy farms	67.64
Number of samples sent tc chemist	3264
Number of samples sent to bacteriologist	2967
Number of inspections of dairies	1629
Number of inspections of milk plants	339
Number of inspections of milk wagons	1887
Number of inspections of milk trains	193
Number of inspections of stores	43
Number of inspections of auto trucks	40
Number of inspections of restaurants	116
Number of samples of milk below standard	425
Number of samples of milk containing adulterants	75
Number of samples of milk above bacterial standard	231
Number of arrests	35
Number of convictions	33
Total amount of fines	$945.00
Number of dairies closed	9

The City of Seattle is consuming more milk and milk products each year; not only a larger quantity but more per capita. Workers in the shipyards are taking now approxi-

mately 10,000 bottles per day. It is evident that the territory from which the city draws this supply will have to be extended. In those districts where condensaries are located competition is keen between the condensaries and the city dealers; so much so that the producers are showing a tendency to disregard the regulations imposed by the Department of Health and Sanitation, as they can sell their milk to the condensaries where little or no regulations are imposed. Now, the attitude of sanitarians who are held responsible for conditions in the extra-cantonment zones is to make inspection still more rigid throughout the dairy districts, and unless the same requirements are imposed upon the producers shipping milk to the condensaries, it will result in a serious shortage of our milk supply. Some uniformity of inspection should be worked out in cooperation with the army sanitarians in order that the city supply be not endangered.

The quality of milk cannot be judged by the cream line alone. Any milk that contains even a limited number of disease producing organisms is promptly condemned. The milk business is conducted primarily because milk is a valuable food product, and the fear of an epidemic spread by the use of milk has created a suspicion in the minds of the public regarding the healthfulness of all milk. This public suspicion is a serious handicap to the dairy business and any procedure which will remove this suspicion and stimulate the increased production and consumption of milk will be of great economic benefit to the dairy industry as well as to the consumer.

Respectfully submitted,

(Signed) Fletcher E. Smith, D. V. M.
Dairy and Food Inspector.

Seattle, Washington, December 31, 1917.

Dr. J. S. McBride,
Commissioner of Health,
Seattle, Washington.

Dear Sir:

Please find below, a summary of work done by the Chemical Laboratroy during the year, 1917.

	Number
Milk samples analyzed (complete)	1239
Milk samples analyzed (butter fat)	2161
Water samples analyzed	102
Liquor samples analyzed	228
Miscellaneous analyses	208
Total analyses	3938

Respectfully submitted,

A. Jacobson,
City Chemist.

Seattle, Washington, December 31, 1917.

Dr. J. S. McBride,
Commissioner of Health,
City.

Dear Sir:

I herewith submit you the tabulated report of the Municipal Public Markets for the year 1917.

Respectfully submitted,

(Signed) John Winship,
Market Master.

PUBLIC MARKETS

	No. of Farmers Pike Place Market	No. of Farmers Westlake Market	No. of Farmers Pine Street Market	Total Number of Farmers	Total Cash Received
January	2381	0	93	2474	$247.40
February	1918	0	85	2003	200.30
March	2368	0	108	2476	247.60
April	2418	0	101	2519	251.90
May	3011	0	104	3115	311.50
June	3784	0	104	3888	388.80
July	4939	0	100	5039	503.90
August	5773	7	52	5832	583.20
September	5217	14	562	5793	579.30
October	5141	14	289	5444	544.40
November	3922	12	205	4139	413.90
December	3361	7	354	3722	372.20
	44233	54	2157	46444	$4644.40

December 31, 1917.

Dr. J. S. McBride,
Commissioner of Health,
Seattle, Washington.

Dear Sir:

I herewith submit my annual report of the work done in the Garbage Division during the year 1917:

During the year conditions have been very unusual. Many of the young men who have been with our organization for years have been drafted into the National Army; many have quit the garbage business and entered the shipyards, attracted by a higher wage scale; and the high price of all farm products has caused many of the men to take up farming for a livelihood. These conditions have caused us to close the year's work with only about 55 per cent of the membership of our 1916 organization.

The breaking in of new men always causes some confusion. The fact that living expenses have gone higher by leaps and bounds as compared with the small increase in the wages of these men during the year 1917, has been discouraging to them. Yet I feel that we have had their cooperation to a degree which has given the city a just measure of efficiency in this work.

Weather conditions were very good during the year, and we were benefited in a degree by the completion of some steet improvement work during the year.

The increase in population in Seattle during the past year, caused by the great commercial development, has caused the amount of waste to increase at least 7 per cent. A part of that additional tonnage can be accounted for by the fact that many of our school houses and apartment houses have discontinued burning oil and have been burning coal since September, 1917.

The removal and equipping of our blacksmith shop with up to date machinery has enabled us to put the old wagons in

good repair and we will soon be in a position to commence work on new ones which are very badly needed, due to increased tonnage.

The disposition of all waste material by putting same into sanitary fills has been continued with success during the year. Your attention is called to the table here attached.

We have continued to pick and market junk from the waste. The price of materials recovered from the garbage greatly depreciated during the last four months of 1917. However, we were enabled to close the year's work with a nice profit to the City.

The gross amount received from junk during the year 1917 was	$7,376.35
The total expense of assembling, sorting and delivery was	2,300.00
Leaving a total net of	$5,076.35

The following is an estimate of the City, Park, and private property filled during the year 1917—

		Cu. Yds.
Fill No. 10	First Avenue South and Dakota Street, private property	17,000
	Ninth Avenue South and Horton Street, city property	3,000
	Ninth Avenue South and Horton Street, private property	3,000
	Second Avenue South and Spokane Avenue, private property	10,000
	Sixteenth Avenue West and Thorndyke Street, city property	4,500
Fill No. 3	Ballard Avenue and Twenty-eighth Northwest, private property	4,500
	Ballard Avenue and Twenty-eighth Northwest, city street	2,500
Fill No. 2	Foot of Wallingford Avenue on Lake Union, city	3,000
	Green Lake Boulevard, Green Lake Station, city	15,000
	Columbia City Library, city	10,000
Fill No. 5	East Madison Street and Boulevard, city	8,000
Fill No. 6	South side Union Bay, city	10,000
Fill No. 8	East end viaduct on north side Union Bay, city	6,500
Fill No. 1	South end Lake Union, city	20,000
	Roy Street between Eigh and Ninth North, 1-5 city, 4-5 pruvate	25,000
Fill No. 7	Third North and Crocket Street, city	4,500
	West Seattle, 1-3 private, 2-3 city	5,000
Total		151,500

FINANCIAL

Departmental allowance for 1917	$245,720.00	
City Council raised salaries and prices for teams, to take effect May 15, 1917, and the amount allowed by reason of this higher scale of wages amounted to	26,000.00	
Total allowance	$271,720.00	
Total cost of garbage collection and disposal		$278,574.43
Less revenue from junk sold during year		7,376.35
Net expenditure		$271,198.08

The department estimate for the garbage work for 1917 was $10,000 more than the tax levy allowance. Had the amount of this estimate been granted, and had the emergency requiring the increase of wages and team allowance not arisen, the department would have finished the year well within the budget allowance.

Respectfully yours,

(Signed) C. L. Murray,
Superintendent Garbage Div.

December 31, 1917.

Dr. J. S. McBride,
Commissioner of Health.

Dear Sir:

I hand herewith the tabulated report of the plumbing Division for the year 1917:

Number of first inspections	2790
Number of re-inspections	1656
Number of final inspections	2152
Number of gas inspection tests	1219
Number of plumbing permits issued	2714

Respectfully,

(Signed) James McIntyre,
Plumbing Inspector.

December 31, 1917.

Dr. J. S. McBride, M. D.,
Commissioner of Health,
Seattle, Washington.

Dear Sir:

I have the honor of submitting the following report of the Nurses Training School connected with the City Hospital for the year 1917.

On January 1st, there were in the school 18 pupil Nurses. Of this number 1 was a graduating nurse making up lost time; 5 in the Senior class; 7 Intermediate; 3 Juniors and 2 probationers. Eleven Probationers were admitted during the year Of this number one was dismissed for cause, three left of their own accord, the other seven remaining in the school. The one graduate nurse and five Seniors have during the year finished their course, leaving in the school December 31st, 18 pupil nurses. Three graduate nurses have been employed in the hospital throughout the year, one supervisor of nurses, one clinic nurse and night supervisor. Regular lectures and classes have been held during the year. The following doctors have kindly given their time to these lectures: E. H. Smith, D. A. Nichlson, W. C. Lippincott, B. E. Cahoon, G. S. Peterkin, John Nelson, C. W. Sharples, H. T. Buckner, C. B. Ford, J. R. Peterson, Park Weed Willis.

In June the graduating exercises were held in the Council Chambers in the City-County Building. No new activities were undertaken during the past year but would suggest during the coming year the addition of one more graduate nurse for relief work and supervising operating room, which would very much add to the efficiency of the school.

Respectfully submitted,

(Signed) Berta E. Kennedy, R. N.,
Supervisor of Nurses.

SANITATION DIVISION

December 31, 1917.

Dr. J. S. McBride,
Commissioner of Health,
City.

Dear Sir:

In submitting a resume of the activities connected with this division during 1917 permit me to report that sanitary inspection has been interfered with to such an extent, due to emergency demands in other branches, that this report is less satisfactory than that for any previous year since the organization of the department. I believe, however, after a general survey of the city, that the routine work of keeping the city clean and free from objectionable and deleterious material has been fairly well maintained, so that I still feel proud of the city's sanitary condition and appearance. How long this condition can be maintained with our present force remains to be seen. Taking the city at 60 square miles in area, if divided equally it would give each man an area of 6.67 square miles of territory to patrol. However, in some districts this area has had to be increased, owing to the unequal density of population, while in other districts it was decreased. Even this attempt at equalization leaves a somewhat unbalanced arrangement due to the nationality, character of business, improvements, etc.

Owing to the demands upon the time of the Chief Sanitary Engineer for engineering assistance in other branches of the department, I have not had time to give the necessary encouragement to the unusual personal efforts of the district inspectors. This encouragement to my mind seems necessary, as the individual inspector must receive encouragement.

The sanitation of a city is a thankless job and becomes very monotonous after a time, making it necessary to vary the methods of accomplishing results. This is brought about by giving the men special assignments. If it is observed that a man is apparently not getting results in some particular line

of work, it is not always an indication of lack of interest or a want of a sense of duty, but is rather the result of the monotony of the grind, and a tendency to permit conditions to become so familiar that they do not seem so obnoxious to him as to an outsider or one not so familiar with the work. When this is observed by the head of the division, the thing that seems to be overlooked is taken up as a special subject, and by concentrating on this particular subject confidence and enthusiasm is re-established and the men are once more fortified against the temptation to become careless and overlook conditions requiring attention.

It must be understood that sanitation is a science and a business, and is as important in establishing a healthful atmosphere and reducing the death rate as any other branch of the work. In this connection I might say that there has been a splendid spirit of cooperation among the men in this division and the last year's work stands out as a very busy and profitable period.

The lowering of Lake Washington caused a dangerous condition along the entire eastern side of the city. There are many houses situated along the Lake shore in locations not accessible to the established city sewers, making it necessary to waste directly into the lake through private sewers from each house. As the water of the lake receded, all these private sewers, as well as the public sewers, were left exposed on dry land, and of course created a very objectionable and dangerous condition. This division, together with the Department of Streets and Sewers, appealed to the City Council for an appropriation to enable the Department of Streets and Sewers to extend all city sewers to deep water. The Council did not make the necessary appropriation but the Street Department finally proceeded with the work out of their maintenance fund, and the extension of these sewers has recently been completed. In the meantime, this department had succeeded in having every private sewer made safe. In many instances septic tanks were installed and the overflow carried out to four feet of water. In other cases, where septic tanks were not in-

stalled, the private sewers were carried to fifteen feet of water, which permitted the current along the shore to carry the sewage away. Since this work was completed this division has not received a single complaint about the private sewers along the lake front.

I regret to report that the large unsewered district in Rainier Valley is in the same condition as when my last report was submitted. This work was postponed by the City Council for financial reasons, which of course is a very strong argument, but notwithstanding the large assessment necessary for this improvement I feel that the sewer should be constructed, as the entire district is constantly menaced by the dangerous sanitary condition. In a great many parts of the valley the ground water level is within one foot of the surface, and in wet weather parts of the district are flooded, overflowing the cess-pools and privys, thus making the surface condition very insanitary. At present about ten acres are under water and will remain so until spring. I believe that if the City Council finds it inadvisable to construct sewers for some time to come, all the ditches in the district should be enlarged, or cleaned out, rubbish and growing vegetation removed, and a great many more ditches dug, deep enough to carry off all surface water in this particular district. There is sufficient ground water flowing at all times to convey the overflow from the cess-pools and septic tanks. This Division would then be in a position to require all buildings to be equiped with sanitary plumbing, thus doing away with several thousand privys. Of course the ditch system is but a makeshift for the disposition of sewage, but when used in connection with cess-pools and septic tanks it is a thousand times better and safer than the present condition in Rainier Valley, which retains the dangerous liquid sewage upon the premises within a few feet of the residences.

Although we met with failure in our attempt to have Rainier Valley sewered, the City Council has favored us by ordering sewers constructed in several other parts of the city that were seriously in need of them. For instance, the 20th

Ave. N. E. district is one that is also very badly in need of sewers, but has met with one delay after another, regardless of the pleadings of this department with the Council for two years. However, at last the work is finally ordered.

The 11th Ave. N. E. sewer has finally been constructed, which relieves a condition similar to that in the 20th Ave. N. E. district just mentioned.

Work has been ordered on the sewers in the Youngstown district, which will make a very much more desirable condition from a sanitary standpoint, as this district is becoming very thickly settled since the opening of the shipyards, and steel plants in that vicinity. The owners of vacant property are preparing to construct a number of small houses which will be connected with these sewers, thus avoiding the use of the old fashioned method of sewage disposal as is usually true of new districts in any city.

When the original survey of the water-front was made over a year ago, the only plumbing found was located in offices on wharves doing passenger business. All others made use of the hole-through-the-wharf method of sewage disposal. At present there is not a single industrial plant left along our entire water-front for a distance of about eight miles, that has not been fully equipped with sanitary plumbing. These changes have made it now possible for a person to walk along the water-front of the salt water boundary of our city without noticing any disagreeable odors. It certainly took a good deal of strong argument on the part of this division to get this work installed, but at last it is completed and even the owners are pleased with the results. Since this work was completed we have had very little trouble in keeping the plumbing fixtures clean, excepting with the Port Commission. They seemingly will not cooperate with this division in this, or in any other matter, and I personally have been severely criticised for not accomplishing better results with them. I hope we will have better success in the future.

One year ago we issued orders to the residents of South Park to install plumbing and cess-pools where they had

none. A few appealed for a rescinding of the order and received an extension of one year's time. Most of the others obeyed the order and did the work, so that about 90 per cent of the South Park district is now equipped with proper plumbing, doing away with about one hundred and fifty vault toilets.

We have had a similar experience at Ballard Beach. There is no public sewer to which these people could connect, and being along a sea beach where they wished to bathe, they naturally wished to keep the beach as clean as possible, and they therefore resorted to the use of vault toilets. As the cottages are very numerous and close together we have urged the installation of proper plumbing to serve each individual place and to take steps to have each building connected with the city water service. This they did not want to do on account of the fact that they occupied leased land and were not able to obtain water without laying pipes for a long distance. Finally, last May, they were given six months to comply with the order or vacate the land. The final result is that about 50 per cent of the buildings are connected and work on the balance is progressing. This district is one in which we gave the L. R. S. barrel privy a tryout, but it proved a failure because the people would not use proper precautions in its operation.

We have at different times during the past year requested the City Council to order sewers constructed, without results, in the district south of Spokane Avenue between Sixteenth Ave. S. W. and Twenty-second Ave. S. W., which is commonly known as "Pigeon Point." The City Engineering Department wishes to establish a regrade district and level this point down to a reasonable grade, which of course is necessary from a utility standoint, but from a sanitary standpoint this district is badly in need of sewers. I have talked with many of the property owners who will not consent to the regrade but are willing and anxious to pay for the construction of sewers. They fully realize that unless sewers are constructed soon they will be compelled to vacate their homes. The ground, being hard-pan formation, will

not absorb the liquid sewage from cess-pools, so a return to the old-style privy vault is the only alternative. I would greatly deplore this, as this district is becoming very thickly populated by strangers from all over the United States who are here to work in the shipyards, and not knowing how many of them may be typhoid carriers every precaution should be taken to prevent a possible outbreak of that disease from this condition.

Our worries will soon be over as regards the district adjoining the above mentioned one, known as Youngstown, for the Board of Public Works will probably let contracts for sewers in this district early in 1918. We have labored with the City Council for more than a year for these sewers, but we now feel well paid for our efforts. This part of the city, being built upon ground formation composed of clay and hard-pan, and there being many springs to contend with, the surface condition is hard to control.

Near this district, along the side hill to the north between Alki Avenue and Empire Way, are a number of small homes which should be provided with sewers. The formation here is also clay and hard-pan, with springs, which in winter causes a condition almost intolerable from a sanitary standpoint. In fact, there are many outlying districts that are sorely in need of sewers, as the population of the city is growing so rapidly that new homes are springing up faster than the public utilities can be extended to accommodate them.

As our industrial activities are increasing every day so rapidly that a considerable building program must be entered upon in order to accommodate the newcomers, I believe that you cannot too strongly urge the Council to a general sewer and water-main campaign for the coming year. The miles of sewer construction for the past year has fallen far below the previous years. In 1916 there was constructed about 19 miles of sewers as against only about 6 miles in 1917. This is not a very good showing, considering the size of this city.

A few months ago the City Council passed an ordinance providing for the drainage of private premises and this ordinance will permit us to gradually dispose of the privys in this city by compelling the installation of plumbing in houses, connected to cess-pools or septic tanks, or other approved methods of sewage disposal.

At last it looks as if we would get rid of the menacing conditions along Alki Avenue from Spokane Avenue to Sixty-third Ave. S. W., as construction work has been ordered on water-mains along the water-front of West Seattle from the steel plant at Youngstown to the bathing pavilion at Alki Point. This will be a most valuable improvement from a standpoint of sanitation and safety. The residents along the side hill have been depending upon many springs for their water supply, and aside from the fact that it gave them no fire protection it has always been a menace to the health of the community. It has required constant watchfulness on the part of the Sanitation Department to safeguard the health of the citizens along this entire front. Several disastrous fires have occurred, which the Fire Department could not reach and control, and which resulted in the burning of several cottages and the loss of the life of one child last January.

Ballard Beach is in about the same condition as to fire protection. They had several bad fires, fortunately without loss of life, but resulting in the loss of several homes. These houses are of flimsy construction and are quickly reduced to ashes when a fire is once started. We should exert every effort to have water-mains laid to this district, as I feel certain that we will witness great disasters from fire unless the condition is relieved.

The old Georgetown water system is gradually disappearing. The city has laid 8,175 lineal feet of water-mains in the past year and I am sure it is a very welcome improvement. This district has depended for years upon the Weir spring as its only source of water supply. Any unprotected spring in a large and growing city is a source of much anxiety to

those who are attempting to safeguard the public health and welfare, and the time when all such springs are abandoned will be welcomed with joy.

Our control of the Cedar River water-shed has been materially strengthened by the passage of the new ordinance which makes it possible to prevent anyone from entering the water-shed without permission. Our supervision and control of the entire area has been aided substantially by the soldiers stationed along the pipeline on guard duty. Very few tramps have succeeded in evading our inspectors, who prevent their traveling along the right-of-way of the Milwaukee Railroad which runs for a distance of about 12 miles within the limits of the water-shed.

Again I feel it my duty to call your attention to the necessity of filling the Wetmore Slough. The conditions in this section are the same as when my 1916 report was submitted,—a swampy, mosquito-breeding area of stagnant water.

We have found in our work of investigation in the cheap hotels and apartments that Seattle has some 1,000 poorly ventilated interior rooms in which there is no outside light. We have taken many samples of air from these rooms, and upon analysis they have proven bad. These rooms are all located in old hotels and apartments and it is my earnest opinion that the owners of such buildings should be compelled without delay to reconstruct them so as to give sufficient light and ventilation. At the present time almost every room in every hotel in the city is occupied, and in many places beds are placed in the corridors.

A survey of the city is now in progress in order to ascertain the number of vacant houses and their condition, preparatory to the expected influx of workmen. A committee of the Chamber of Commerce proposes to establish dormitories in the down-town district. A conference between the Building Department and this division was held and a comprehensive plan and set of rules agreed upon for the conversion of such buildings into sleeping quarters under proper sanitary regulations.

This division is now prepared to give special attention to all factories and other places as to ventilation, and an attempt will be made to better conditions where it is found necessary. It will be a slow task on account of the lack of technically trained assistants in the division, but we hope to accomplish much good.

For some reason not plainly apparent we have had very few flies during the past year. We have received communications from many parts of the United States and Canada to the effect that there were fewer flies during the past season than for years before. No one seems to be able to account for this phenomena. In Seattle, however, we have not been troubled very much with flies for several years. In fact, not since the systematic method of elimination was started in 1909. The presence of the house fly is the sanitarian's warning that there is carelessness somewhere, for every investigation made by this division in response to complaints of flies in annoying numbers, exposes negligence on the part of some one, or willful violation of the sanitary laws. If every person in the city would pay attention to the proper care of garbage, manure, and other waste materials, it would be possible to practically reduce the amount of sickness in a community to an inestimable degree.

This division has shouldered the responsibility of enforcing the ordinance prohibiting expectoration upon the walks of the city. This work should rightly be done by the Police Department and it is not fair to expect the small force of this division to assume such duties. While the police are patrolling their beats it seems to me that they should enforce ALL the traffic laws and it should not be necessary for this division to furnish men for such work. I therefore earnestly urge you to make arrangements to release our division from this burden.

The bakeries and restaurants have received very close attention during the past year and are gradually growing better. In point of equipment every month shows an improvement. We are having more fixtures of galvanized iron

installed. The owners at first protested against the expense of these fixtures but they have found that the decreased amount of labor required, and the improved appearance of their kitchens, is an asset which offsets the extra initial expense. It will not be many years until restaurants and bakeries will be fully equipped with sheet metal fixtures throughout.

It is my opinion that another year will find most of the food in our cafeterias covered, as in other restaurants, as they have all practically agreed to conform to requirements.

Our farmers' market is still overcrowded and steps should be taken to remedy this condition. I do not think that our farmers' market is of as much value from a money-saving standpoint as it was a few years ago. After comparing prices of the market, the grocer, and the huckster, I find them to be about the same. The farmers have boosted their prices until there is no object in purchasing from them except that their goods may be fresher. In some instances the grocer sells vegetables at a lower price than the farmer. If it were not that the market is paying its own way I think it would be better if it were closed and abandoned, for if prices were any higher than they are now the consumers would not buy in such quantities and the prices would soon be forced down.

The following is a tabular summary of the miscellaneous work of the division for the year 1917.

Very respectfully submitted,

(Signed) M. T. STEVENS,
Sanitary Engineer.

TABULATED REPORT OF THE SANITATION DIVISION FOR THE YEAR 1917

Complains by citizens	1648
Complaints by inspectors	9212
Total complaints	10860
Equipments installed	522
Defective plumbing installed	622
New plumbing installed	615
Sinks installed	757
Water closets installed	988
Leaders connected	97
Sewers installed	747
Cess pools installed	739
Ventilation installed	100
Drains installed	140
Insanitary basements cleaned	88
Vents installed	613
Cement floors installed	71
Insanitary premises cleaned	3896
Cans installed	3125
Manure boxes installed	28
Manure boxes repaired	49
Vaults, etc., filled	794
Privies installed	93
Permits granted	333
Total abatements	8573
Buildings ordered vacant	218
Buildings vacated	122
Buildings condemned	182
Buildings razed or burned	237
Square feet of cement floor laid	28704
Cubic yards of rubbish removed	2300
Cubic yards of manure removed	307
Cubic yards of fill made	11218
Arrests	140
Convictions	93
Verbal notices served	6875
Written notices served	4024
Final notices served	885
Total notices served	11784
First inspections	10860
Re-inspections	26622
O. K. inspections	2903
	40385

TREASURY DEPARTMENT
UNITED STATES PUBLIC HEALTH SERVICE

Seattle, Washington, December 31, 1917.

Dr. J. S. McBride,
City Health Commissioner,
Seattle, Washington.

(Through the Medical Officer in Charge.)

Sir:

I beg to submit herewith a summary of the work performed by the City and Federal health authorities during the year ended December 31, 1917.

Three plague rats were found in Seattle during the year 1917, all from the same location.

This office wishes to express hearty appreciation of the cordial co-operation of yourself and your Department.

Respectfully,

(Signed) WILLIAM A. PRYOR.

Respectfully forwarded,
Emil Krulich,
Passed Assistant Surgeon in Charge.

REPORT OF PLAGUE SUPPRESSIVE MEASURES, JANUARY 1, 1917, TO DECEMBER 31, 1917

Rat-Proofing

		Square Fee t
New buildings inspected	762	
New buildings re-inspected	1,237	
Basements concreted, N. B	345	709,712
Floors concreted, N. B	207	973,691
Yards, etc., concreted, N. B		113,749
Sidewalks concreted		500,080
Total concrete laid, N. B		2,297,232
New buildings elevated	128	
New premises rat-proofed, concrete	951	
Old buildings inspected	125	
Premises rat-proofed, concrete, O. B	98	
Floors concreted, O. B	98	131,645
Premises otherwise rat-proofed, O. B	18	
Openings screened, O. B	170	
Rat-holes cemented, O. B	150	
Wooden floors removed, O. B	101	
Doors rat-proofed, O. B	5	
Wire screening used		19,520
Buildings razed	99	

LABORATORY AND RODENT REPORT

Dead rodents received	336
Rodents trapped and killed	13,692
Rodents recovered after fumigation	1,862
Total	15,890
Rodents examined for plague infection	12,250
Rodents proven plague infected	3
Blocks poisoned	39
Poison distributed, pounds	405
Bodies examined for plague infection	68
Bodies found plague infected	0

Classification of Rodents

Mus rattus	1,729
Mus alexandrinus	3,616
Mus norvegicus	7,756
Mus musculus	2,789

Water-front

Vessels inspected and histories recorded	652
Vessels fumigated	144
Sulphur used, pounds	152,590
New rat-guards installed	322
Defective rat-guards repaired	478
Fumigation certificates issued	144
Canal zone bills of health issued	8
Port sanitary statements issued	1,960

Miscellaneous Work

Rat-proofing notices sent to contractors, N. B	691
Letters sent in re rat complaints	107
Health lectures delivered	27