Neumann has ascribed many so-called ranulae to cystic dilatation of the ductus lingualis.

In conclusion, it remains only to note that Durham gives persistence of the sinus praecervicalis as one other possible cause of median cervical fistulae. The sinus praecervicalis, you will remember, is a cleft formed by the sinking of the lowermost arches and disappears in later embryonic life through a coalescence of ridges. Durham states that fistulae arising through persistence of the sinus praecervicalis are lined with squamous epithelium. A distinction between these two forms of cervical fistulae may be considered a refinement, which must remain undetermined.

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AMERICAN RED CROSS CHILD WELFARE CLINICS IN GREECE.—A number of infant welfare clinics have been established in Greece by the American Red Cross. Many young Greek women are being instructed in the care of children and taught how to distinguish the various types of diseases. The course covers a period of six weeks, and on the completion of the work, those who take it are expected to work among the poor inhabitants of Athens, instructing mothers how to care for their children.

EPIDEMIC WORK AT THE BOSTON CITY HOSPITAL.

BY GERTRUDE L. FARMER AND JANET SCHOENFELD.

Department of Medical-Social Work.

DURING the autumn of 1918, the Boston City Hospital passed through what has probably been its most trying experience since the opening in 1864.

Already handicapped by war conditions, seriously weakened in both its administrative, medical, and nursing personnel, the influenza epidemic brought in addition hundreds of terribly sick and dying patients crowding into the wards. In its capacity as a municipal institution the hospital had to meet this situation as best it might.

During the last of September and the first of October, when the epidemic was at its height, our small group of medical-social workers, realizing the terrific struggle through which the hospital administration was passing, was led to offer its services in the wards, although some of us were untrained as nurses.

We soon realized, however, that our best service would be in facilitating the discharges of those patients (most of them non-influenza cases) in physical condition suitable for discharge, yet detained in the wards, thus adding to the burden of the nurses, and deterring them from their paramount task of caring for the critically ill, at the same time continuing the exposure of these patients to the danger of infection. Quarantine had kept relatives and friends strictly apart, and days and weeks saw these convalescent patients with their discharges unfulfilled, and they a needless tax upon an over-wrought hospital. The breaking down of the hospital machinery for discharge added to their number.

This emergency period lasted about three weeks. In most instances our visits to the homes and elsewhere brought about speedy discharges. In a few cases home conditions were found to be so deplorable that plans had to be delayed.

Difficulties found among the patients awaiting discharge ranged from a simple arrangement of transportation, or the procuring of suitable clothing so as to enable the patient to leave the hospital, to the more complex problem of providing convalescent care for a homeless man, for an attempted suicide, chronic care for

the mentally deranged, and the rehabilitation of whole families stricken with influenza, where the death or serious illness of one or both parents had led to the breaking up of a hitherto normal family group. Did space permit, many instances could be cited illustrative of this phase of our work.

About the middle of October we were called upon to help in the work of the so-called Mayor's Emergency Committee, under the Health Commissioner, Dr. Woodward. This involved an attempt at one medical-follow-up home visit to each of the upwards of 5,000 patients who had been under the home nursing care of the District Nursing Association during a certain period. The work involved even in this simple plan was enormous, and could not be very effective. Much good, however, was no doubt accomplished.

It seemed to us that if we had felt it expedient to help the district nurses to follow up their influenza cases, we could do no less for the patients who had been cared for in our own hospital during the height of the epidemic (only 32 of the above patients had been treated in our wards).

Another consideration was the fact that physicians were predicting the probable occurrence of certain after effects due to the epidemic: phthisis, ear troubles, heart disease, etc.

Our own work had already shown us the social disabilities which too often followed in the wake of the epidemic.

In November, 1918, therefore, we decided to undertake intensive follow-up work for the 993 patients with a diagnosis of influenza or pneumonia, or both, who had been discharged from the main hospital and the South Department from September 11th to October 31st. Of this number 38% had died in the wards. What conditions existed in the homes as a result of this loss? Were other members of these families ill at home? How were they being provided for? These last considerations led to our deciding to include in our work the families of those patients who had died in the hospital.

From the list of the 993 patients we eliminated the following:

Patients with residence outside Boston.....11
 Patients with residence outside Massachusetts.14
 Patients admitted from other institutions...31
 (Including Canton School for Crippled

Children, Home for Destitute Catholic Children, Boston State Hospital, Charles Street Jail).

Patients in military service.....86
 Previously in care of the District Nursing Association32
 Doctors, nurses, private patients, etc.....92

It was felt that these 266 persons were obviously provided for, and should not be included in our investigations.

VISITING.

During November and December under one of our workers, Miss Gormley, assisted by two other members of our staff, and two of the students from the Boston School for Social Workers, 727 addresses were visited, and much data collected. We received valuable assistance in these initial visits from the District Nursing Association and the Women's Motor Ambulance Corps of the Red Cross, as well as from a member of our own committee who lent us the use of her car.

Of the 727 addresses visited no information was available in 20%:

1. 63 addresses, 9% of those visited, had given wrong addresses on admission.
2. 80 patients, 11%, or their families, had moved and could not be traced.

Information was often obtainable by consulting relatives, friends, landladies, either by interview or letter, where it was not possible to reach the patients themselves. In this way reports were obtained on 584 patients. This represented a group of 554 families.

RESULTS OF VISITING.

Our contact with these 554 families brought us in touch with 1006 individuals who had been ill with influenza, pneumonia, or both; 594 persons had received hospital care, ten of these at the Massachusetts General, Peter Bent Brigham, and Children's Hospitals, the remaining 584 at the Boston City Hospital, while 412 had been under treatment at home. Many of those treated at home, especially in the case of young children, apparently had not been ill enough to require the services of a physician.

The total number of patients admitted and discharged from the Main Hospital and South Department are shown in Chart I.

The distribution of cases by families is shown on Chart II. It is of interest to note that about 30% of the persons we came in touch with were men living alone in lodging or rooming houses.

CHART I.

Patients Treated in the Boston City Hospital for Influenza, Pneumonia, or Both, during the Height of the Epidemic, Sept. 11, to Oct. 31, 1918.

RECORDS OF PATIENTS	TOTALS		MALES		FEMALES	
	No.	%	No.	%	No.	%
Totals	993	100	682	100	311	100
Died in wards..	380	38	243	35	136	44
Discharged	613	62	439	65	175	56
Main Hospital ...	641	100	345	100	296	100
Died in wards..	270	42	140	41	130	44
Discharged ...	371	58	205	59	166	56
South Department	352	100	333	100	19	100
Died in wards..	110	31	104	31	6	32
Discharged	242	69	229	69	13	68

CHART II.

Distribution by Methods of Care Provided for Patients Who had Influenza, Pneumonia, or Both, in Families Visited in the Course of this Investigation.

CASES REPORTED IN FAMILIES	NUMBER OF FAMILIES IN WHICH CASES OCCURRED	NUMBER OF CASES	NUMBER OF CASES TREATED IN	
			Hospitals	Homes
Totals	*554	1006	†504	412
One case	357	357	357	0
Two cases ...	78	156	86	70
Three cases ..	46	128	53	75
Four cases ...	30	120	38	82
Five cases ...	25	125	36	89
Six cases	10	60	15	45
Seven cases ...	4	28	4	24
Eight cases ..	4	32	5	27

* 584 individuals treated in B.O.H. represent 554 families.

† 10 individuals were treated in other hospitals.

CHART III.

Subsequent Records of Patients Who had been Treated for Influenza, Pneumonia, or Both, and were Discharged Alive from the Boston City Hospital, Sept. 11, to Oct. 31, 1918.

RECORDS OF DISCHARGED PATIENTS	TOTALS		MALES		FEMALES	
	No.	%	No.	%	No.	%
Total number patients discharged	*272	100	171	100	101	100
Entirely well ..	168	62	111	65	57	56
In care of private doctor	19	7	10	6	9	9
In care of other dispensaries ...	19	7	8	5	11	11
Further supervision at B.C.H.	63	*23	42	24	21	21
Died at home ..	3	1	0	0	3	3

* No available reports on 341 patients who were discharged to their homes.

CHART IIIa.

Records of Other Members of Discharged Patients' Families Found to have been Ill with Influenza, Pneumonia, or Both, and who were Cared for in their Own Homes.

RECORDS OF MEMBERS OF FAMILIES	TOTALS		MALES		FEMALES	
	No.	%	No.	%	No.	%
Totals	222	100	91	100	131	100
Entirely well ..	143	64	55	61	88	67
In care of private doctor ...	11	5	5	5	6	4
In care of other dispensaries ...	6	3	4	5	2	2
Further supervision at B.C.H.	49	22	22	24	27	21
Died at home ..	13	6	5	5	8	6

CONDITIONS FOUND AMONG THE PATIENTS DISCHARGED TO THEIR HOMES.

In the case of the 613 patients who were discharged relieved, efforts were made:

1. To determine their physical condition;
2. Where necessary to provide, or see that provision was made for further adequate medical care, either in our own Out Patient Department, with private physicians, or elsewhere.

Medical conditions found in hospital patients are shown in Chart III.

The medical condition of members of these families who had been treated at home is shown in Chart IIIa.

RESULTS FOUND IN THE FAMILIES OF THOSE WHO HAD DIED IN THE WARDS.

The families of those who had died in the wards were visited in order to determine the needs of other members of their families, medically and socially. Of the 380 addresses visited, information was obtained in 312 instances. This 312 represents 286 families. 53 of the 286 must be eliminated because they were found to be single men living alone in lodging houses.

In addition, 60 of the 286 were found to be families where there was no other member ill with influenza and where there was no social situation. In the remaining 173 families, 190 individuals were found to have been ill with influenza, pneumonia, or both. The following results were found:

Well entirely	107
Died at home	19
In care of private doctor	10
In care of other dispensary	9
Under B.C.H. supervision	45

MEDICAL SITUATIONS AND HOW THEY WERE MET.

The medical follow-up included inquiry by telephone or letter from private doctors, other dispensaries, and two or more visits to individuals. If an individual showed any after-effects and, according to investigation, he was under no other medical supervision, he was urged to report to the Boston City Hospital Out Patient Department. This group numbered 157 persons.

The classification of after-effects as they were recorded on first visit to the patient is shown on Chart IV. In many instances the after-effects as noted were found on further examination by our physicians in the Out Patient De-

CHART IV.

Number of Patients Who Reported Specific After-Effects.

AFTER-EFFECTS	HOSPITAL AND HOME CASES			HOSPITAL CASES			HOME CASES		
	Totals			Totals			Totals		
	No.	%		T's	M.	F.	T's	M.	F.
Total patients ..	206	100		101	60	41	105	42	63
Total after effects ..	349			187	130	57	162	74	88
Ear	12	6		10	5	5	2	1	1
Eye	3	1		2	2	0	1	0	1
Nose-throat	14	7		6	4	2	8	3	5
Cough	74	31		44	33	11	30	17	13
Sweats	25	12		9	6	3	16	8	8
Excessive fatigue	3	40		33	33	12	38	17	21
Mental	19	9		11	8	3	8	2	6
Sleeplessness ..	18	9		8	7	1	10	5	5
Short breath ..	18	9		14	10	4	4	3	1
Muscle, joint pains	16	8		5	4	1	11	2	9
Intestinal troubles	7	3		0	0	0	7	3	4
Undernourished ..	60	29		33	18	15	27	13	14

No definite after-effects noted on 25 individuals.

partment to be only slight symptoms of a much more serious condition. The subsequent diagnoses as found on medical records later were as follows:

1. Empyema.
2. Loss of hair.
3. Phthisis.
4. Tonsillitis.
5. Cardiac conditions.

Other physical conditions, such as chronic bronchitis, mitral disease, arthritis, that may not have in any way been influenced by influenza, were brought to the attention of the individual and proper medical care provided.

In a number of cases it was found that individuals were suffering from some after-effects which they considered slight. They could not be persuaded to report to a free clinic, yet to their own minds their symptoms did not warrant the expenditure of any money for medical care with a private doctor. To illustrate, Mr. McL. has a cough, excessive fatigue, sweats, sleeplessness. He claims "When I need a doctor I know where to get one, but now I have better use for the money." He could not be persuaded to come to the clinic or attend any other evening clinic that would not interfere with his work.

No effort has been made to classify the ages of the 993 patients except in the case of the South Department. This classification of 352 shows that the greatest age incidence was in males between the ages of twenty and forty years. While this group is far too small to be

of much significance, it does agree with the findings throughout the country, that influenza seems to attack a person in the prime of life.

SOCIAL SITUATIONS AND HOW THEY WERE MET.

The social problems that were met with were many and varied. Including:

Providing needed convalescent care: The coöperation of the Boston City Hospital Convalescent Home, Chickering House, St. Luke's, Wellesley, were secured for this purpose.

Material Relief: Mothers' Aid, Provident Association, Associated Charities, Churches, American Red Cross, Federated Jewish Charities, Adult Poor Department, Catholic Charitable Bureau, St. Vincent De Paul Society, State Board of Charity, and our own Special Relief Fund. All these agencies aided in the adjustment of these situations.

Providing for children was made possible with the coöperation of Baby Hygiene Association, Society for the Prevention of Cruelty to Children, Children's Friend, Children's Institutions Department, Home for Little Wanderers, Children's Aid Society.

Specialized Medical care was provided by the Boston Consumptives' Hospital, Norfolk State Hospital, Psychopathic Hospital.

The Dietetic Bureau undertook to teach proper preparation of food to families where this need was evident.

The Housing Commission received reports on conditions that were in violation of the housing laws of the State. Unsanitary living conditions found in homes, not due to housing, were reported to the Board of Health.

Other agencies who coöperated were Young Men's Christian Association, Tufts Dental School, Boston Lying-In Hospital, District Nursing Association, and Prenatal Nurse.

Many families were entirely wiped out, others had lost members of their families and had been unable to make the necessary adjustment. To illustrate:

Johnnie B., fourteen years old, had been in the hospital three months with pneumonia. He was ready for discharge and the doctor reported this situation to the social worker. When she visited, she found the step-father and two of six children ill with influenza at home. Two other children had died of the dread disease the previous week. Having no income during the illness of the father, the body of the first child who had died remained for three days on

the kitchen table until this condition was brought to the attention of the Board of Health Nurse. The family were loaned money for burial by the church for both children. Being so in debt the mother desired to go to work, but this arrangement would not prove to the best advantage of Johnnie, who needed his mother's care when he returned home. The house they lived in had been condemned. Before Johnnie's return home another better tenement was found and the family moved. Because of their indebtedness to the church, they refused further aid. Finally they were persuaded to allow social service to advance loan for coal, provisions and clothing, to be paid in small installments. By this time the father was able to return to work, and the mother continued to remain at home and care for her children. With the help of the Dietetic Bureau, she is being shown how best to buy and prepare food for her family. The District Nurse calls daily to dress Johnnie's open wound, and he reports to the Out Patient Department every week, in the Red Cross car. A Children's Aid Society Home Library was installed and Johnnie's forced leisure hours are being utilized in reading good wholesome books.

Another situation that illustrates something of the constructive work done in the White family. Mrs. White and her two children were all patients in the hospital. Mr. White was overseas fighting for his country. As soon as Mrs. White was fit to leave the hospital, arrangements were made for her to receive convalescent care at the Boston City Hospital convalescent home. The two children have been placed by the Children's Mission with the help of the Red Cross, and when they are entirely well again, this soldier's family will be reunited ready to receive him.

In our visiting, we found that a father, mother and two children had died of influenza, leaving a two weeks old baby the only living member of the family, in the care of grandparents, well meaning but ignorant. The Baby Hygiene Association Nurse is supervising the feeding, and from recent reports the baby is "doing nicely."

SUMMARY OF OUR MEDICAL FOLLOW-UP WORK.

From September 11th to October 31st, 1918, 993 influenza patients were discharged from the Boston City Hospital.

62% were "discharged relieved."

38% had died in the wards.

As these patients were not studied as a group on admission, it is not known how many of the 38% had been moribund at the time. We do know that many patients were admitted in that condition.

With from 1 to 8 influenza patients in each family this brought us in contact with 1006 persons in 554 families.

Of those "discharged relieved," 62% were found to be entirely well and leading normal lives by the end of December, that is, from about 2 to 3 months after discharge.

1% had relapsed and died at home.

37% showed after effects.

Of other members of the families of this group 64% were entirely well, 6% had died at home, and 30% showed after effects.

In the 173 families of those patients who had died in the wards, 190 persons had had influenza. Of these 56% were entirely well, 10% had died, and 34% showed after effects.

While our figures show a similarity in the final results of both hospital and home treatment, no conclusions are possible as to the comparative value of the different methods of treatment. It is fair to assume that patients admitted to the hospital may have been more seriously ill.

While in many instances we were obliged to allow too long a time to elapse between the time of discharge and our initial visits, on the whole we were successful:

1. In securing adequate medical after care for the majority of those patients who showed after effects.

2. In many instances some form of social readjustment was needed and was supplied.

Practically all of the classification and tabulation involved in this study was done by Miss Schoenfeld as part of a required study for the Boston School for Social Workers. She also had charge of the visiting and intensive social case work necessary to complete the study during January and February.

It is apparent that there is a considerable amount of work involved in this sort of intensive medical-social after care, also a good deal of expense. While the disease has not again reached the height it did in September and October, there has been a steady flow of admissions, and two wards have been kept filled most

of the time. It has been a matter of great regret to us that we have not been able to undertake the same intensive work for all the influenza patients. We have, however, done what we could to relieve the worst conditions and provide some medical after care.

INFLUENZA AS A FACTOR IN PRECIPITATING LATENT PSYCHOSES AND INITIATING PSYCHOSES, WITH A BRIEF HISTORY OF THE DISEASE AND ANALYSIS OF CASES.*

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INFLUENZA as an epidemic has occurred since the early ages. Hippocrates and Livy refer to an epidemic in 412 B. C., which is claimed by medical historians¹ to be in all probability this same entity. There is mention of epidemics in the sixth century in which the symptoms of debility, cough, and headache were the principal factors. In the eighth and tenth centuries similar epidemics were described.

Positive knowledge regarding the epidemics is dated by Wilson² to 1510 when Europe was swept by a great pandemic and, during the past four hundred years, upwards of seventy epidemics have occurred, some of which have been pandemic.

It has been known under various names, two of which are in common usage, Influenza and La Grippe. The name Influenza is supposed to have been derived from the Italians who at that time believed the stars had an influence on the disease. La grippe is claimed to be derived from the Polish "Grypka."¹

Some interesting descriptions are found in the literature relating to the various epidemics. In Miss Strickland's "Life of Mary Stuart" is found the following description of a disease called the "New Acquaintance."

"Immediately upon the Queen's arrival here she fell acquainted with a new disease that is common in this town called here the 'New Acquaintance,' which also passed through her whole household sparing neither lord, lady, or damoiselle—not so much as either French or English. It is a pain in their heads that have

it and a soreness in their stomach, with a great cough; it remaineth with some longer, with others shorter time as it findeth apt bodies for the nature of the disease.

"The Queen kept her bed six days; there was no appearance of danger, nor many that die of the disease except some old folk."³

Dr. Rush, of Philadelphia,⁴ in describing the epidemic of 1789-90, states "that members of the first Congress which met in New York complained on arriving in Philadelphia of colds, which they attributed to travelling by night in public stages. The malady spread so widely it was soon recognized as influenza. Thousands of people suffered in Philadelphia without being confined to the house. Perpetual coughing was heard in every street of the city. Buying and selling was rendered tedious by the coughing of the farmer and merchant in the market places. It even rendered divine services scarcely intelligible in the churches."

Delirium accompanying influenza has long been recognized and is often an early and alarming symptom. Knapp, quoting from Schweich "Die Influenzie," states in the epidemic of 1590 in Germany some of the victims were violently insane and wandered over the hills in their delirium.⁵ Huxham refers to the delirium accompanying the disease in the epidemic of 1737.¹

Bonnet of Bordeaux observed one case of acute mania following the epidemic of 1837, and Crichton-Browne one case of acute dementia following the epidemic of 1874.⁶ Petriquin,⁷ referring to the epidemic of 1837, records several patients tormented by melancholy ideas and four or five suicides were accomplished at the hospital in Paris. Rush, referred to by Mariet,⁷ in speaking of the epidemic of 1789-91, mentions several persons were stricken with symptoms of insanity and one attempted suicide; he also speaks of several having had hallucinations of sight.

In connection with the pandemic of 1889-92, we find isolated reports which are more or less numerous in describing the pandemic of 1889-92 and considerable discussion by the French, Dutch, English, and German, relative to psychoses associated with influenza.

Kirn of Freiburg⁸ collected data on 54 cases and concludes that where delirium occurs with hallucinations and delusions during the febrile period, the patients recover from the same and are rarely found to have an hereditary predispo-

* Read before Worcester District Medical Society, April 16, 1919.